CLERK OF THE BOARD OF SUPERVISORS

EXHIBIT/DOCUMENT LOG

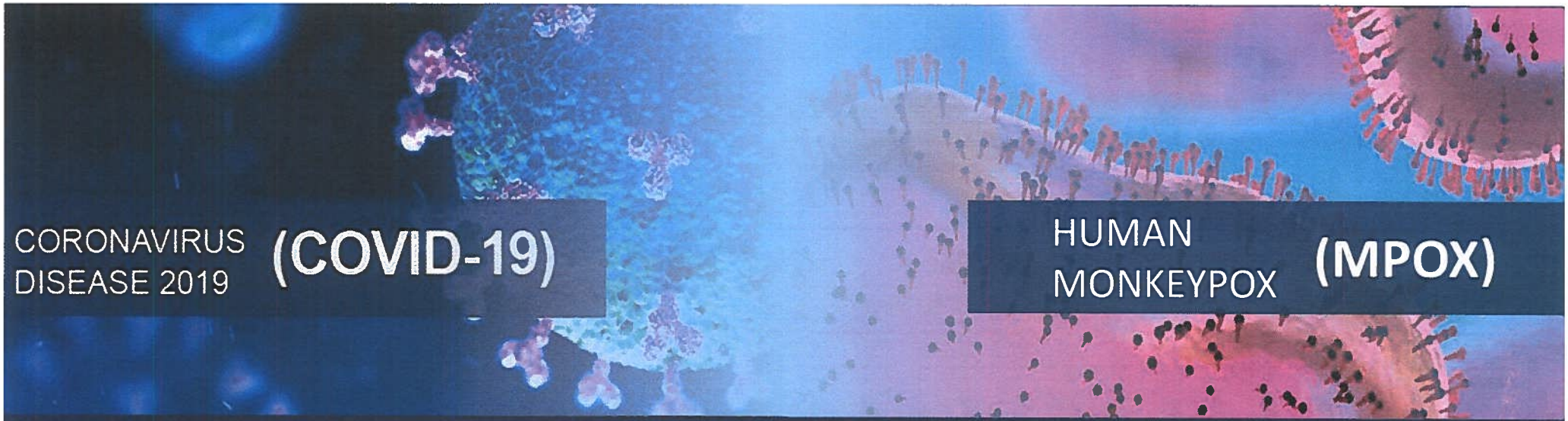
MEETING DATE & AGENDA NO. 10/11/2022 #13

STAFF DOCUMENTS (Numerical)

No.	Presented by:	Description:
1	Staff	21 page PowerPoint Presentation
2		
3		
4		

PUBLIC DOCUMENTS (Alphabetical)

No.	Presented by:	Description:
A	Mike Borrello	154 Page Document
B	Sarah	1 Page with photos
C		
D		
E		
F		
G		



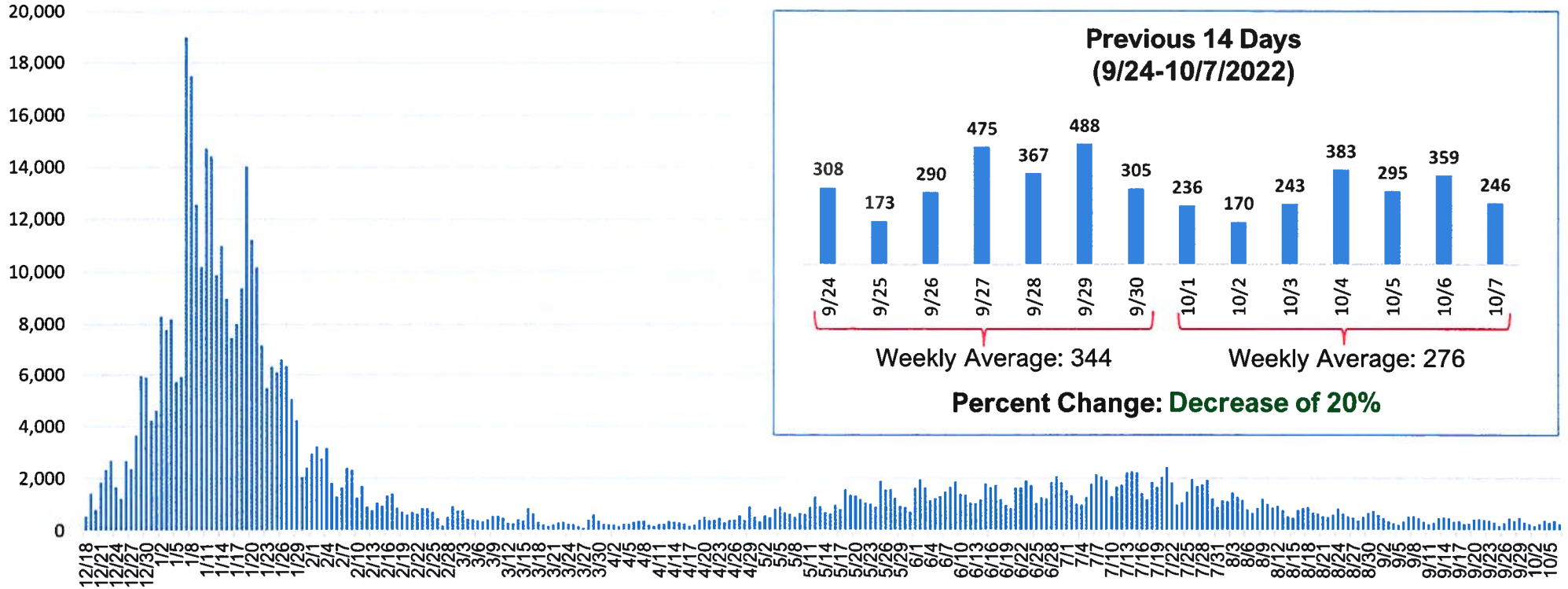
Item #13:

County of San Diego COVID-19 and MPOX Update

October 11, 2022

COVID-19 Cases

COVID-19 Cases Among San Diego County Residents
New Cases by Date Reported Since December 15, 2021



Data through 10/7/2022
Updated 10/10/2022

Percent Change – Two Weeks

Metric and Date Range	September 24 – September 30	October 1– October 7	% Difference
Case by Report Date (7-day daily average)	344	276	↓ 20%
Hospitalizations Census (7-day daily average, COVID-19 confirmed only)	202	168	↓ 17%
Deaths (7-day daily average, 14-day lag, data through 10/3/22)	1/day	1/day	No Change

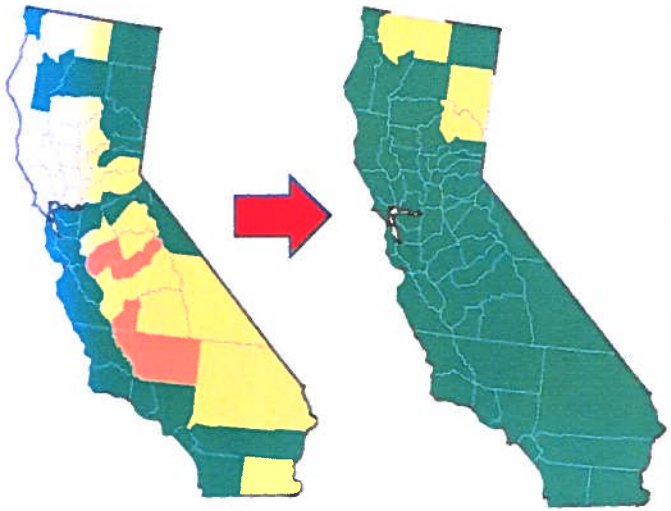
Data through 10/7/2022, Updated 10/10/2022

CDC COVID-19 Community Levels

As of October 7, San Diego County = LOW

September 12, 2022
Last BOS Meeting

October 7, 2022
Updated



COVID-19 Community Levels

Assignment Based on Highest Metric Among: 1) Case Rate, 2) New COVID-19 Hospital Admissions, and 3) Percent of Staffed Inpatient Beds Occupied by COVID-19 Patients

Community-level prevention strategies
(as recommended by state or local authorities)

Low	Medium	High
Limited impact on healthcare system, low levels of severe disease	Some impact on healthcare system, more people with severe disease	High potential for healthcare system strain; high level of severe disease
• Administer vaccines with equity • Ensure access to testing • Community outreach and education	• Enhanced prevention measures in high-risk congregate settings • Protect people at high risk for severe illness or death by ensuring equitable access to vaccination, testing, treatment	• Consider setting-specific recommendations for prevention strategies based on local factors (indoor masking)

Data as of 9/29/2022. Data are preliminary and subject to change.
Source: CDC COVID-19 by County, https://www.cdc.gov/coronavirus/2019-ncov/your-health/covid-by-county.html, accessed 8/11/2022.

Vaccinations in San Diego County

Vaccination Status of San Diego County Residents

Doses Received
9,294,685

Doses Administered*
7,933,385

Primary Vaccine Series**
(Previously known as Fully Vaccinated)

Eligible Population (6 months of age or older):
3,343,827 San Diegans

2,685,031

80.3%

Primary Vaccine Series and Boosted***

Booster Eligible Population^:
2,462,965 San Diegans

1,467,090

59.6%

*May not include all administered doses and individuals vaccinated due to reporting delays. Total doses administered includes extra doses (booster doses and additional doses). Data sources include vaccines that have been recorded in California Immunization Registry (CAIR2), and data provided by Veterans Affairs and Department of Defense. This includes doses from Federal Pharmacy Program and Federally Qualified Health Centers. Doses administered by some tribal providers, some prisons and federal detention facilities do not report to CAIR2. Includes all doses administered in San Diego County as well as doses administered to San Diego County residents vaccinated outside of San Diego County.

**Primary Series, previously known as fully vaccinated, is based on receiving either a single dose of Johnson & Johnson or both doses of Moderna or Pfizer, therefore completing the recommended vaccination series. However, individuals are not considered to have completed their series until two weeks after receiving their last dose of the vaccine series, as defined by the Centers for Disease Control and Prevention (CDC).

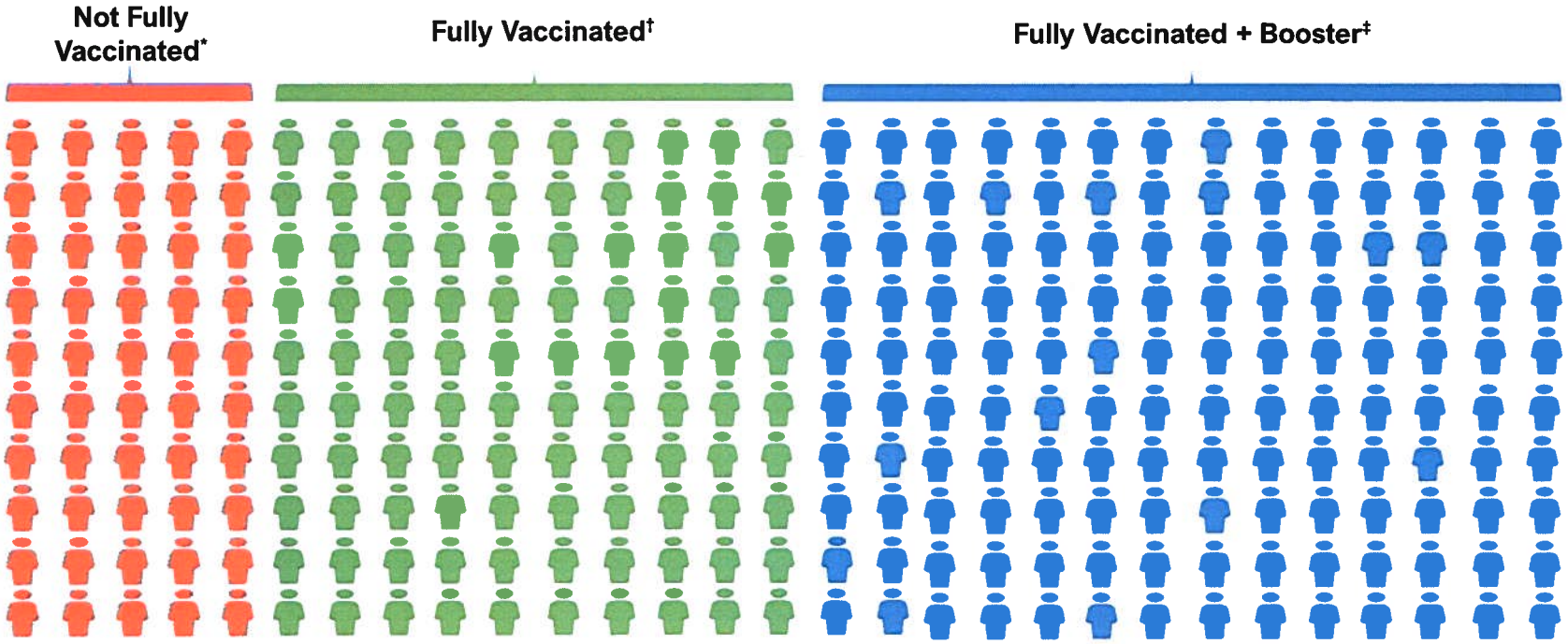
***Booster doses include only doses recorded in CAIR2 (excludes Veterans Affairs and Department of Defense).

^Booster Eligible Population is updated each week and is the number of San Diego County residents who have completed their primary series and eligible to receive a booster dose. As of 5/18/2022, individuals are eligible for a booster dose if 1) they are 5 years of age and older, AND 2) at least 5 months have passed after the vaccination date of the second mRNA dose (Moderna or Pfizer-BioNTech) or at least 2 months have passed since the first Janssen/Johnson & Johnson dose.

The San Diego Immunization Registry (SDIR) transitioned to the California Immunization Registry (CAIR2) on Monday, April 25, 2022.
Eligible Population for the primary series expanded to 6 months and older as of 6/17/2022. The Estimated eligible Population in San Diego County is 3,343,827 individuals, which is the total estimated San Diego County population as estimates are calculated by years. Population estimates are California Department of Finance 2021 Population Estimates, July 2021 release.

Updated 10/6/2022, data through 10/5/2022

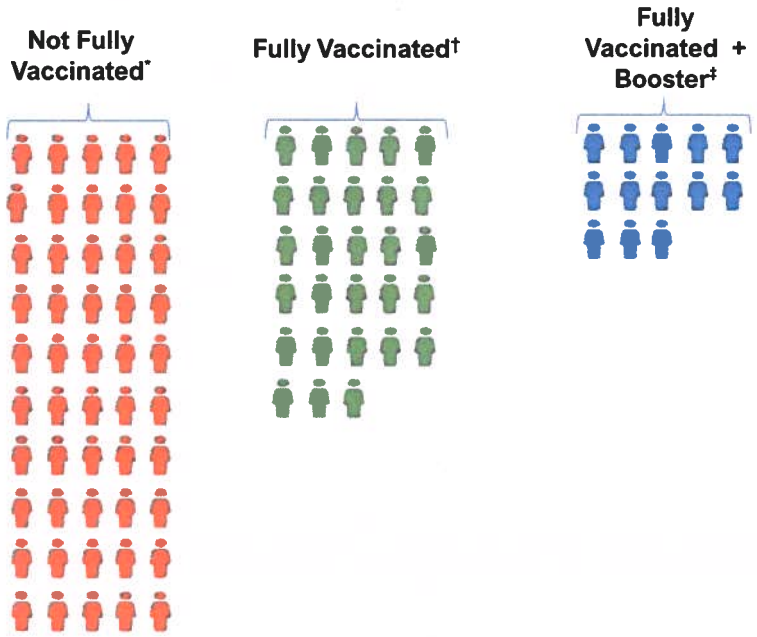
Population by Vaccine Status



* Not fully vaccinated includes individuals with one dose of the two-dose series, no doses, or unknown vaccination status. Individuals who are not yet eligible for the vaccine are also included.
† Fully vaccinated, is based on receiving either a single dose of Johnson & Johnson or both doses of Moderna or Pfizer, therefore completing the recommended vaccination series. However, individuals are not considered to have completed their series until two weeks after receiving their last dose of the vaccine series, as defined by the Centers for Disease Control and Prevention (CDC).
‡ Booster doses include only doses recorded in CAIR2.

Deaths by Vaccine Status

Cumulative Deaths by Vaccination Status from January 1, 2022 - July 31, 2022 (by date of death)



Key Take Aways

- The absolute number of deaths does not account for the population size
- The smallest group (population) is the not fully vaccinated, yet they have the highest absolute deaths, and death rate
- Rates account for group size
- The highest death rate is among individuals not fully vaccinated

Death rate for not fully vaccinated residents is ***5 times higher*** than fully vaccinated + booster residents

Dates: 8/14-9/10/2022

Not Fully Vaccinated* Death Rate (per million – 12+ yrs)	Fully Vaccinated† Death Rate (per million – 12+ yrs)	Fully Vaccinated + Booster‡ Death Rate (per million – 12+ yrs)
0.94	0.34	0.18

* Not fully vaccinated includes individuals with one dose of the two-dose series, no doses, or unknown vaccination status. Individuals who are not yet eligible for the vaccine are also included.
† Cases who first tested positive (based on specimen collection date) greater than or equal to 14 days after receiving the final dose of COVID-19 vaccine.
‡ Cases who first tested positive (based on specimen collection date) greater than or equal to 14 days after receiving a booster dose of COVID-19 vaccine at least 2 months after a J&J vaccine or 5 months after a Pfizer or Moderna vaccine series.

New CDPH Guidance

Mandatory Masking Requirements

Effective **September 23, 2022**, in alignment with the California Department of Public Health's (CDPH) announcement and San Diego County's low community level for COVID-19, the following is **recommended**:

- People may choose to mask at any time based on personal preference.
- People with symptoms, a positive test, or exposure to someone with COVID-19 should wear a mask.
- Masking in homeless shelters, emergency shelters, cooling centers, and State and local correctional facilities and detention centers have been shifted to masking recommendations in these settings, when CDC community level is low.

The County is maintaining the masking requirements in specified high-risk settings, consistent with CDPH and CDC recommendations. Face coverings are **required** for everyone in the following settings, regardless of vaccination status:

- All healthcare settings, including long-term care settings and adult and senior care facilities.

Testing Requirements

Effective **September 17, 2022**, all COVID-19 screening testing requirements are removed from CDPH Health Officer Order.

Vaccination Requirements

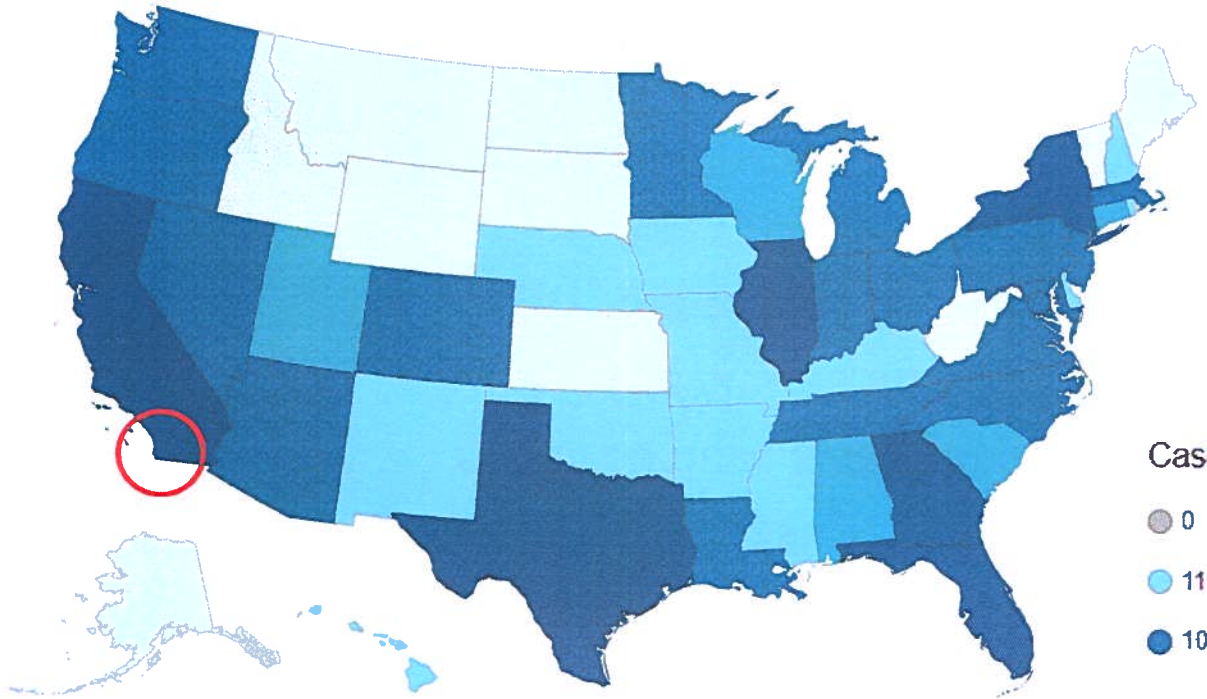
Effective **September 17, 2022**, where vaccines were required, they will continue to be required.

BE COVID SAFE

- Wash your hands
- Wear a mask
- If you have symptoms:
  - Stay home and isolate according to CDC/CDPH guidance
  - Get tested
  - Ask your provider if you are a candidate for treatment
- Follow current isolation and quarantine guidance
- Don't go to the emergency department for COVID-19 testing
- Get all recommended doses of the COVID-19 vaccine
- Get the influenza vaccine

www.coronavirus-sd.com

MPOX - 2022 U.S. & California Cases



Territories PR

U.S. Cases
26,577
California Cases
5,136
San Diego County Cases
429

Case Range

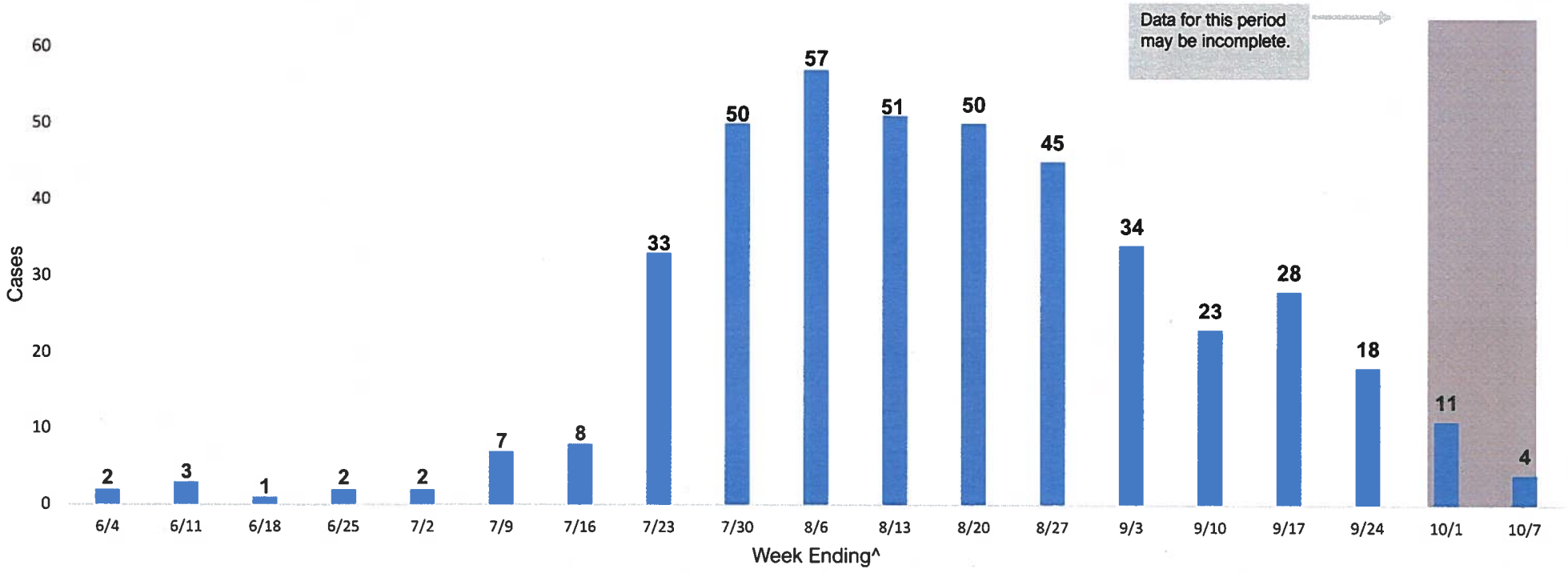
- 0
- 1 to 10
- 11 to 50
- 51 to 100
- 101 to 500
- >500

CDC

CDC: Data as of October 7, 2022
CDPH: Data as of October 7, 2022
San Diego County: Data as of October 9, 2022
All Data Accessed on October 10, 2022
2022 U.S. Map & Case Count | Monkeypox | Poxvirus | CDC
Monkeypox Data (ca.gov)

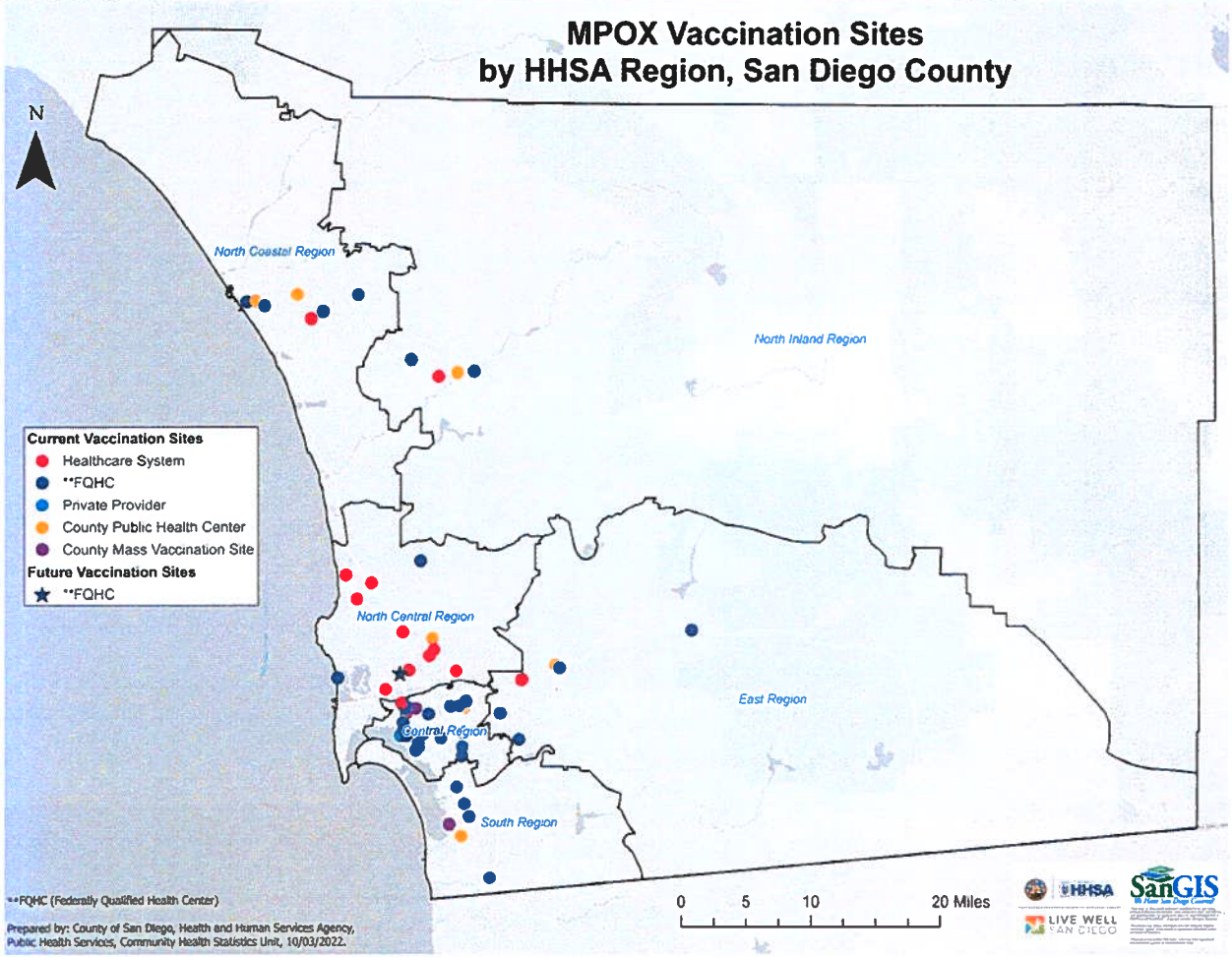
MPOX Cases by Episode Date

Confirmed and Probable MPOX Cases* by Episode Date†
San Diego County Residents, N=429



Data are provisional and subject to change as more information becomes available.
*A confirmed case has tested positive specifically for monkeypox virus. A probable case has tested positive for orthopoxvirus with no suspicion of other recent orthopoxvirus exposure and is pending confirmatory testing.
† Episode date is defined as the earliest of the following dates: onset, specimen collection, diagnosis, death, and report received.
^Data for the most recent weeks may be incomplete as cases that may have occurred during this time period might not yet be reported.
Data through 10/8/2022, Updated 10/10/2022

Vaccine Ecosystem



Hospital System Sites

FQHC Sites

Private Providers

County Clinics

MPOX Vaccinations Schedule

NEW MPOX Vaccinations Schedule by Day page

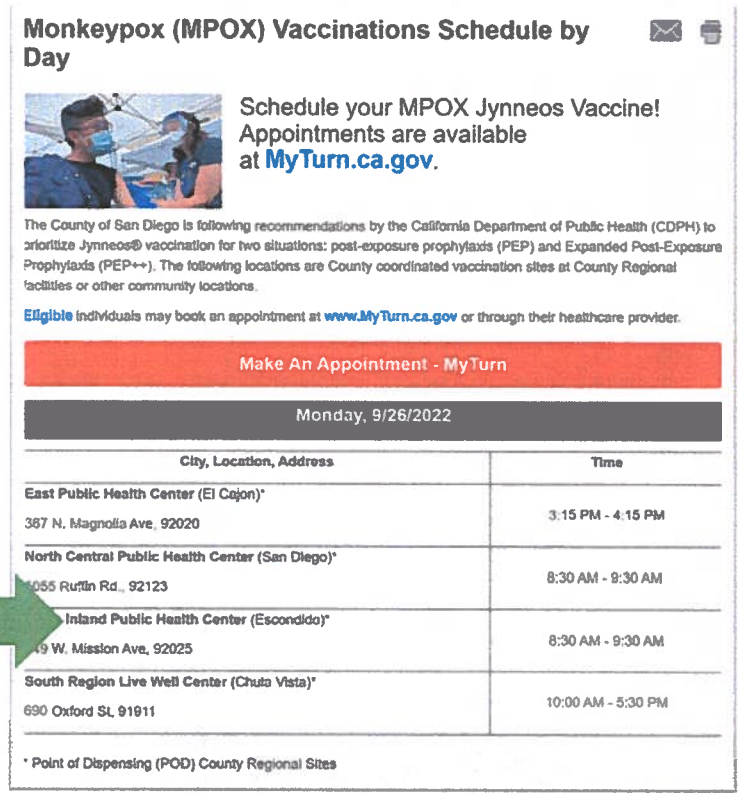
- MPOX Jynneos Vaccine
- Lists County coordinated vaccination sites
- Organized with a section for each day of the week
- Appointments must be made via MyTurn.CA.gov
- Link to new page is available on the MPOX homepage:

  SanDiegoCounty.org/MonkeypoxSD

NEW

Website Landing Page

Vaccination Clinic Schedule



Vaccine Summary

Each vial now represents 1 to 5 doses administered via intradermal (instead of one dose administered subcutaneously).

- 35,608 vials requested from CDPH.
- 10,057 vials allocated by CDPH and received by the County.[1]
- 7,903 vials allocated/distributed.^
- 14,965 doses administered (cumulative).

[1] The number of vials received was allocated from the California Department of Public Health (CDPH) to respond to the current MPOX outbreak. These vials are then distributed to public and community/hospital vaccination sites.

^The number of vials distributed to healthcare systems, FQHC, and County clinics.

Data as of: October 9, 2022
Updated: October 10, 2022

Education & Outreach: Metrics

- LGBTQ+
- Business
- Community/Faith-Based Organizations
- Education
- Government
- Healthcare
- Homeless
- Long-Term Care/Residential Facilities
- Military and Veterans
- Older Adults

40 Telebriefings Scheduled/Conducted

4,941 People Reached Directly via Telebriefings

21 Community Presentations Conducted

1,774 People Reached via Community Presentations

19,397 People Reached via E-blasts

171,587 MPOX website views

6,668 People Signed Up to Receive Updates via Text

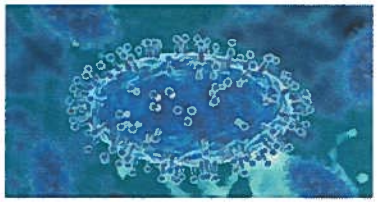
8,000 Fliers Distributed

As of September 29, 2022

Communication Efforts

About

Transmission, symptoms, treatment, exposure, prevention, and frequently asked questions (FAQs)

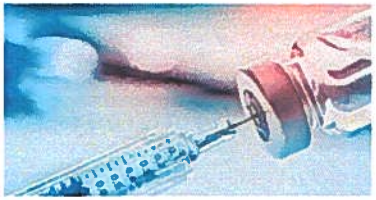


Local Cases

Cases and Test, Trace, and Treat (T3) dashboard

Vaccine

Vaccine eligibility, cumulative vaccine summary, and FAQs



Healthcare Professionals

Action items and resources

Local Health Emergency

Multiple languages available

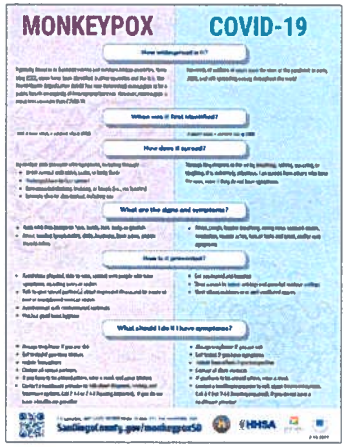
Educational Materials

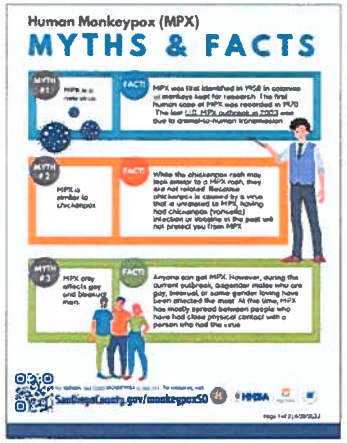
FAQs, flyers, and social media

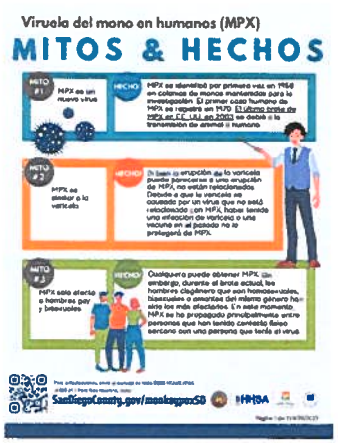
Events

Town halls and telebriefings

For updates, text COSD MONKEYPOX to 468-311. For resources, visit:
SanDiegoCounty.gov/monkeypoxSD







Social Media Efforts

5,183

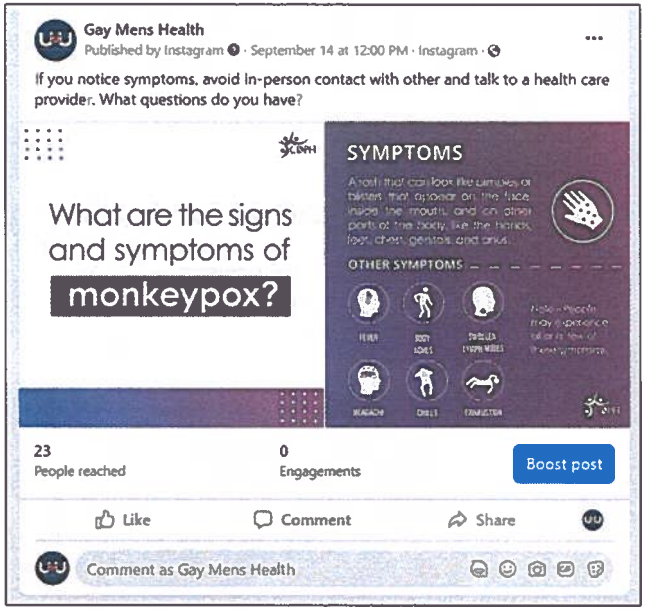
- Outreach to the population of focus through online social media and networking site posts

400,712

- Impressions via advertising applications

23,436

- Contractor MPOX website related to advertisements



Data range: 8/1/22 – 9/15/22

High Impact Prevention Contractors: Metrics

1,899	• Individual outreach with members of the population of focus
608	• Educational materials distributed
22	• Hours of staff training

Data range: 8/1/22 – 9/15/22

Coordination & Collaboration Efforts

HIV Planning Group MPOX

Taskforce

Foot Team MPOX

Vaccinations for Persons Experiencing Homelessness

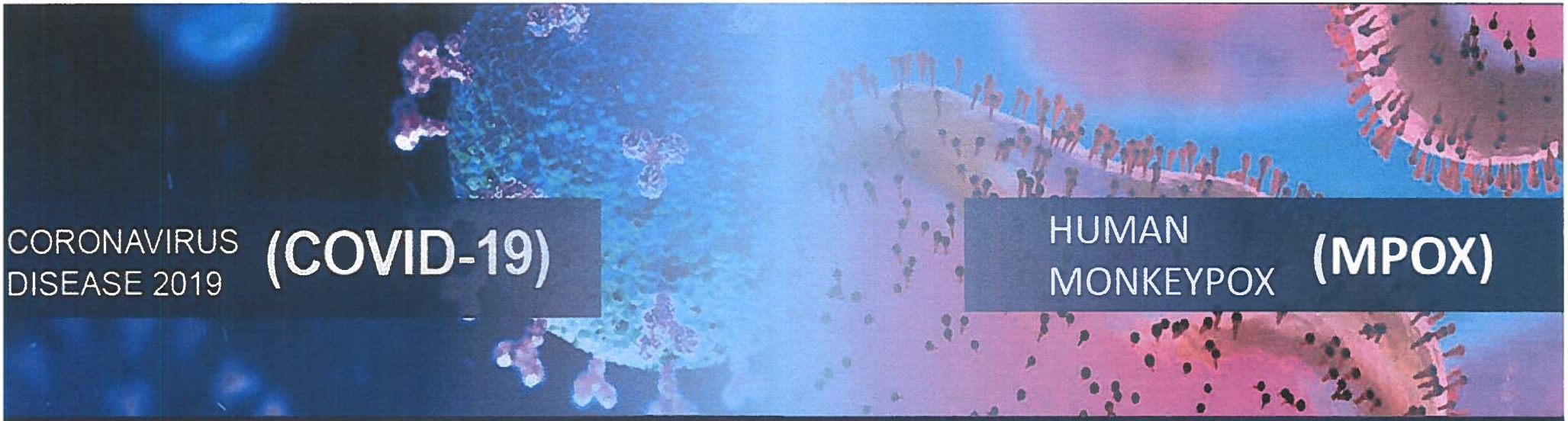
Safety Net

MPOX

Testing and Treatment

Recommendations

1. **Receive an update** on the COVID-19 response.
2. **Adopt a resolution entitled** *Resolution Authorizing Continuance of Teleconferenced Public Meetings Pursuant to Government Code Section 54953.*
3. **Receive an update** on the MPOX response and find that there is a continuing need for the local health emergency for MPOX until no longer needed.



Item #13:
County of San Diego COVID-19 and MPOX Update

October 11, 2022

OFFICIAL RECORD
Clerk of the Board of Supervisors
County of San Diego

Exhibit No. A

Meeting Date: 10/11/2022 **Agenda No.** 13

Presented by: Mike Borrello

COVID-19 Vaccine Injury; a Compendium of Authoritative Resources

Prepared by: Mike Borrello[1]

11 October, 2022

The information in this report is neither misinformation nor disinformation, nor is it intended to disparage beliefs or opinions of others. This report simply consolidates facts and information gathered from authoritative sources on the COVID-19 vaccines to provide a more complete and balanced perspective of COVID-19 vaccine harms.

[1] Email contact: maborrello@roadrunner.com

Introduction

This report is intended to supplement information reported by San Diego County Health and Human Services (SD HHS) regarding the COVID-19 pandemic, particularly current information county health authorities never address in their monthly COVID-19 report: **injuries and deaths associated with the COVID-19 vaccines**. SD HHS typically presents their report at the first monthly regular meeting of the County Board of Supervisors. County covid reports since the start of the COVID-19 pandemic have largely focused on: (1) "The number of COVID-19 cases" in San Diego County and (2) the percentage of population that has complied with vaccination programs. To date and from the declaration of the COVID-19 'emergency' , SD HHS has never provided any data or metrics addressing the safety, risks and efficacy of the COVID-19 vaccines within their jurisdiction nor any reports of injury or death caused by these vaccines – even if these number were determined to be zero. As a resident of the county, and one who has become actively involved in the pursuit of truth, I've personally encountered enough individuals that have been injured or likely killed by COVID-19 vaccines to convince myself of the reality COVID-19 vaccines do cause harms that are not acknowledged by SD HHS nor the FDA or CDC. This report serves as one voice for many of the injured, and for those unfortunate few in SD, unknown names that died from vaccine side effects and for their family and friends that continue to grieve their loss.

COVID-19 vaccinations began in December of 2020. After hundreds of millions of doses in the US, there is solid evidence continuing to accumulate from published, peer reviewed studies in well-respected scientific and medical journals: the COVID-19 vaccines have indeed caused injury and death, and in significant and unprecedented numbers. Numbers that, from prior FDA policies, would have normally evoked immediate hold on vaccinations, and a recall followed by a full blown investigation, not to mention making the 6 o'clock news. But the federal government, public health, and their iron grip on the media continues on a misguided, if not ethically and morally corrupt mission to perpetuate a universal state of emergency when there is no emergency, and to continue vaccinating the entire American populace come hell or high water. Vaccination with a vaccine that clearly 'wanes' over several months' time, one that was designed to target a now extinct variant of the virus, and one that now has negative efficacy and confirmed long term adverse effects[2] [3]. They are now encouraging COVID-19 vaccines for infants – as young as 6 months since June of this year with thousands of adverse events already reported. Mainstream media has failed citizens, siding with corporate narrative over the health and welfare of Americans. Other countries, like the UK are finally publishing about vast injuries[4] incurred. The COVID-19 pandemic and in particular the response by Public Health Officials will turn out to be the largest widespread health disaster in world history.

Summary of changes in the vaccine injury report for October

The vaccine injury report starts on page 14 following consolidated news updates. All categorical and specific adverse events noted in the report continue to increase in number as vaccine doses increase, now exceeding 624 million in the USA with the most significant increases being inflammatory, thrombogenic or neurogenic in origin. Deaths associated with the COVID-19 vaccines are now over 31,000.

Only one new category has been added to the report, asthma (see item 36). At least several of the specific adverse event queries have been update/modified. It was realized the search function could be used across the entire database of events and that some codes, relevant to the category were not being utilized. So some of the reports have substantially increased, but at least one, intracranial brain hemorrhage/brain bleed decreased in reports since it was discovered some of the codes were not actually applicable. The reader is encouraged to go through the entire report

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[2] Dar-Odeh N et al, **Long-term adverse events of three COVID-19 vaccines as reported by vaccinated physicians and dentists, a study from Jordan and Saudi Arabia**. Hum Vaccin Immunother. 2022 Dec 31;18(1):2039017. doi: 10.1080/21645515.2022.2039017. Epub 2022 Mar 3. PMID: 35240939; PMCID: PMC9009903.

[3] https://dailysceptic.org/2022/03/20/vaccine-effectiveness-hits-as-low-as-minus-300-as-ukhsa-announces-it-will-no-longer-publish-the-data/

[4] https://www.christianitydaily.com/articles/14539/20220108/uk-newspaper-publishes-data-on-covid-vaccine-deaths-injuries-and-more-via-full-page-spread.htm

since additional tables have been added that compare covid vaccines to all vaccines, and these reveal some remarkable results. The main problem I face now is that publications addressing adverse reactions to COVID-19 vaccines have SKYROCKETED. It's apparent I'll need to start working on the next report as soon as I present a report to County. There is just not enough time to research, read and sort out ciattions for reference. In Pubmed[5] using the search string:

(covid-19 vaccines) AND ((adverse effects) OR (adverse events) OR (side effects) OR (injury))

Results in 2,911 papers in 2021 and 3,550 in 2022. So far that's an increase of about 22%

This 'newsletter' (this section of the document before the report) leads with what I consider a very important paper I recently read from Italian researchers. While many have publicly argued that the COVID-19 vaccines are properly not vaccines, this paper prosecutes the matter in excruciating detail. Lawyers that are handling vaccine cases should be aware of this publication and using it to their advantage, and Public Health Officials (Listen up San Diego!!) that are just following their overlords should cease and desist all COVID-19 vaccine activity. They are NOT vaccines.

A drug by any other name ... would smell as fraud[6]

Researchers[7] in Varese, Italy have published a paper, in the International Journal of Molecular Science, that for the first time, systematically argues the so-called COVID-19 vaccines are indeed better characterized as pharmaceutical drugs. Their main point: the endogenous production of the S-Protein, induced by the injections, exhibits a 'complex pharmacology' undergoing a systemic rather than localized disposition. They claim the mis-classification of these injections are putting patient safety at risk. While the injections were intended to be a localized intramuscular treatment, there's clear evidence now from post-market surveillance indicating systemic distribution of the S-Protein throughout the body of injected subjects. S-Protein has been detected in the blood of some patients days or weeks after injection and is known to have caused life threatening illness such as thrombocytopenia and myocarditis. They reference a paper published months ago offering evidence of long term residence of vaccine mRNA and S-Protein in lymph glands at least 60 days after injection that puts the matter more simply:

> *"Adverse Effects Following COVID-19 Vaccination: Too Much S-Protein, for Too Long and/or in the WRONG Place?"*

Unlike many disjointed or incomplete assertions made before arguing that COVID-19 vaccines are not properly vaccines, this paper assembles a firm and complete indictment on why they are not vaccines. This publication deserves widespread attention not only by the medical community and public health officials, but by authorities that should use this information to take immediate enforcement actions prohibiting the vaccines.

[5] https://pubmed.ncbi.nlm.nih.gov/

[6] Yes a parody on the line from Shakespeare's Romeo and Juliet. Sorry.

[7] Cosentino, M.; Marino, F. **Understanding the Pharmacology of COVID-19 mRNA Vaccines: Playing Dice with the Spike?** Int. J. Mol. Sci. 2022, 23, 10881. https://doi.org/10.3390/ijms231810881

Late Breaking News from Florida

Mission:
To protect, promote & improve the health of all people in Florida through integrated state, county & community efforts.

Florida HEALTH

Ron DeSantis
Governor

Joseph A. Ladapo, MD, PhD
State Surgeon General

Vision: To be the Healthiest State in the Nation

Guidance for mRNA COVID-19 Vaccines
October 7, 2022

Florida continues to emphasize that health care providers review all data to evaluate risks and benefits unique to each patient when determining any health care services to provide, including the administration of COVID-19 vaccines containing Messenger RNA (mRNA) which both the Pfizer-BioNTech and the Moderna vaccines utilize.

The Florida Department of Health (Department) conducted an analysis through a self-controlled case series, which is a technique originally developed to evaluate vaccine safety. This studied mortality risk following mRNA COVID-19 vaccination. This analysis found there is an 84% increase in the relative incidence of cardiac-related death among males 18-39 years old within 28 days following mRNA vaccination. Individuals with preexisting cardiac conditions, such as myocarditis and pericarditis, should take particular caution when considering vaccination and discuss with their health care provider.

As such, the Florida Department of Health has issued the following guidance:

Based on currently available data, patients should be informed of the possible cardiac complications that can arise after receiving a mRNA COVID-19 vaccine. With a high level of global immunity to COVID-19, the benefit of vaccination is likely outweighed by this abnormally high risk of cardiac-related death among men in this age group.

The State Surgeon General now recommends against the COVID-19 mRNA vaccines for males ages 18-39 years old.

Individuals and health care providers should also be aware that this analysis[1] found:

- Males over the age of 60 had a 10% increased risk of cardiac-related death within 28 days of mRNA vaccination.
- Non-mRNA vaccines were not found to have these increased risks among any population.

Floridians are encouraged to discuss all the potential benefits and risks of receiving mRNA COVID-19 vaccines with their health care provider. The risk associated with mRNA vaccination should be weighed against the risk associated with COVID-19 infection.

The Department continues to stand by its Guidance for Pediatric COVID-19 Vaccines issued March 2022, which recommends against use in healthy children and adolescents 5 years old to 17 years old. This now includes recommendations against COVID-19 vaccination among infants and children under 5 years old, which has since been issued under Emergency Use Authorization.

[1] These data are preliminary and based on surveillance and death certificate data, not medical records.

Why is San Diego, California behind?

Medical Examiners, Morticians and Cause of Death

Presently medical examiners or coroners commonly determine cause and manner of death without an autopsy examination. Some death certificates generated in this way may not state the correct root cause and manner of death. One recent study[8] recognizing this issue determined that about one third of cases considered report an incorrect cause of death. It demonstrated even experienced forensic pathologists can generate erroneous death certificates for cases that are not autopsied and it pointed out that non-natural or atypical causes of death can easily be missed. The San Diego County Medical Examiner's Office explains that deaths of a sudden and unexpected nature must be investigated by their office according to California Government Code Section 27491 and the Health and Safety Code 102850[9]. But if the death occurs after a brief illness or in a hospital the attending physician may attribute cause as natural having occurred as an outcome of the illness, and so the COD by superficial examination and without autopsy.

In pre-covid times this process might have been acceptable, but in 2020 the landscape changed drastically. We are in a state of emergency stemming from a pandemic presumably caused by a novel, dangerous contagion. In this new landscape it's critical to know, with high confidence, the root cause of death. Was death *due* to covid, the infection itself? Or was the death due to other causes; perhaps an underlying illness that covid infection merely aggravated? These questions are not new, but without autopsy, they cannot be properly answered, and as such the statistics of covid caused fatalities may be significantly over estimated.

Secondly we must consider another risk. The suggested panacea for the contagion, the covid vaccines. Regardless of whether they are truly 'safe and effective' or not, the fact is the global administration of these vaccines has further modified that landscape. With nearly 70% of the global population vaccinated we have diminished, virtually eliminated a proper control group. Millions have received the vaccines, and even without doubt, autopsy should be brought back as a routine procedure and vaccination status should be a variable of consideration.

The motivating reason NOW to have routine autopsy are the increasing number of reports by morticians that are either unable or having difficulty infusing embalming fluid into their corpses. Then subsequently discovering the cause: unusually long and fibrous clots blocking the vessels[10]. The embalmers claim the clot formations are unlike anything seen before the covid era. The constituents of these clots have been analyzed by mass spectrometry and determined they are not composed of materials expected from natural, postmortem clotting. In other words these clots probably existed before the subject's death and may have even been the underlying root cause of death. But if that is so, that would be an *unnatural* death, and so by law and policy should be addressed by the medical examiner.

The unfortunate situation however is there is no law or policy requiring a morticians to report to the Medical Examiner's office any findings of unusual nature in the subjects they prepare for burial. On the contrary, laws limit or else forbid sharing of information between these parties. So in this new landscape spawned by the pandemic, legacy process could be perpetuating further injury and death by hiding the mechanisms and assuming they do not to exist. In most minds the vaccines are safe and effective, so why bother? Consider in the news NOW, the historically high excess deaths across the globe that still have no firm explanation. Autopsy would be a step in the right direction. Policies that require morticians to report unusual findings would be a step in the right direction.

Prior vaccine injury reports submitted to the county have speculated that many vaccinated people could be ambulatory with these undetected clots in their vasculature, but not necessarily expressing life threatening symptoms if the victim does not stress activity. The body is an amazing system that adapts to adverse conditions to maintain homeostasis. But more minor symptoms like brain fog might manifest – and be tolerated. But if an individual in this

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[8] Nashelsky MB, Lawrence CH. Accuracy of cause of death determination without forensic autopsy examination. Am J Forensic Med Pathol. 2003 Dec;24(4):313-9. doi: 10.1097/01.paf.0000097857.50734.c3. PMID: 14634467.

[9] https://www.sandiegocounty.gov/content/sdc/me/families/theprocess.html

[10] https://www.theepochtimes.com/mkt_app/embalmers-have-been-finding-numerous-long-fibrous-clots-that-lack-post-mortem-characteristics_4696015.html

condition exerts themselves to extreme oxygen demand, such as the case of many of these young athletes, circulatory turbulence and mechanical stresses could lead to an embolus and sudden stroke or pulmonary embolism.

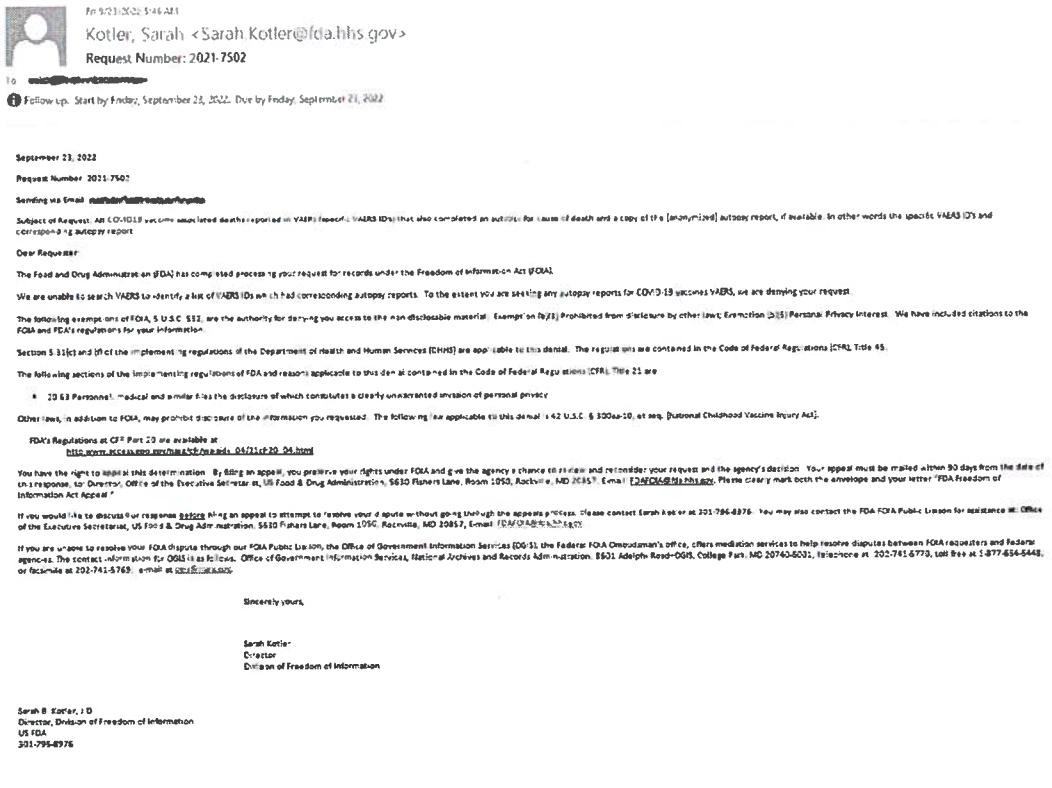
The study that examined these unusual clots further determined they cannot be easily broken down and eliminated by natural body enzymes such as plasmin. So they may exist for months or years - literally physiological time bombs. Perhaps the rash of many sudden deaths in the last year that is occurring in young athletes were caused by these clots. In fact some were uncovered, extracted in surgery that experienced events but survived. But for those that didn't survive, the phrase on the death certificate: "as determined by autopsy" seems to be nearly non-existent nowadays.

Even before the covid era there was concern and criticism over the lack of autopsies. ProPublica's Postmortem[11] sums the problem up:

> *"Hospital autopsies have become a rarity. As a result, experts say, diagnostic errors are missed, opportunities to improve medical treatment are lost, and health-care statistics are skewed."*

ProPublica produced a video short summarizing the issue: America's deeply flawed system of death investigation, explaining that in 1971 hospitals were no longer required to perform autopsies, once required in 50% of deaths. It seems cost was the main motivating factor. PBS Frontline produced actually produced a series[12] : *Post Mortem Death Investigation in America* to raise public awareness and action. But there were no changes.

In the latter part of 2021 I submitted a freedom of information request (FOIA) requesting data on autopsy reports associated with VAERS ID's and nearly a year later received this reply by email denying my request on the grounds that they are unable to complete it:



Fri 9/23/2022 5:46 AM

Kotler, Sarah <Sarah.Kotler@fda.hhs.gov>

Request Number: 2021-7502

To [redacted]

Follow up. Start by Friday, September 23, 2022. Due by Friday, September 23, 2022.

September 23, 2022

Request Number 2021-7502

Sending via Email [redacted]

Subject of Request: All COVID-19 vaccine associated deaths reported in VAERS (specific VAERS IDs) that also completed an autopsy for cause of death and a copy of the [anonymized] autopsy report, if available. In other words the specific VAERS ID's and corresponding autopsy report

Dear Requester:

The Food and Drug Administration (FDA) has completed processing your request for records under the Freedom of Information Act (FOIA).

We are unable to search VAERS to identify a list of VAERS IDs and its associated corresponding autopsy reports. To the extent you are seeking any autopsy reports for COVID-19 vaccines VAERS, we are denying your request.

The following exemptions of FOIA, 5 U.S.C. 552, are the authority for denying you access to the non-disclosable material: Exemption (b)(3) Prohibited from disclosure by other laws; Exemption (b)(6) Personal Privacy Interest. We have included citations to the FOIA and FDA's regulations for your information.

Section 5.31(c) and (f) of the implementing regulations of the Department of Health and Human Services (DHHS) are applicable to this denial. The regulations are contained in the Code of Federal Regulations (CFR), Title 45.

The following sections of the implementing regulations of FDA and reasons applicable to this denial are contained in the Code of Federal Regulations (CFR), Title 21 are

- 20.63 Personnel, medical and similar files the disclosure of which constitutes a clearly unwarranted invasion of personal privacy

Other laws, in addition to FOIA, may prohibit disclosure of the information you requested. The following law applicable to this denial is 42 U.S.C. § 300aa-10, et seq. (National Childhood Vaccine Injury Act).

FDA's Regulations at CFR Part 20 are available at
http://www.accessgpo.gov/nara/cfr/waisidx_04/21cfr20_04.html

You have the right to appeal this determination. By filing an appeal, you preserve your rights under FOIA and give the agency a chance to review and reconsider your request and the agency's decision. Your appeal must be mailed within 90 days from the date of this response, to: Director, Office of the Executive Secretariat, US Food & Drug Administration, 5630 Fishers Lane, Room 1050, Rockville, MD 20857. E-mail: FDAFOIA@fda.hhs.gov. Please clearly mark both the envelope and your letter "FOIA Freedom of Information Act Appeal."

If you would like to discuss our response before filing an appeal to attempt to resolve your dispute without going through the appeals process, please contact Sarah Kotler at 301-796-8976. You may also contact the FDA FOIA Public Liaison for assistance at: Office of the Executive Secretariat, US Food & Drug Administration, 5630 Fishers Lane, Room 1050, Rockville, MD 20857, E-mail: FDAFOIA@fda.hhs.gov

If you are unable to resolve your FOIA dispute through our FOIA Public Liaison, the Office of Government Information Services (OGIS), the Federal FOIA Ombudsman's office, offers mediation services to help resolve disputes between FOIA requesters and Federal agencies. The contact information for OGIS is as follows: Office of Government Information Services, National Archives and Records Administration, 8601 Adelphi Road-OGIS, College Park, MD 20740-6001, Telephone at 202-741-5770, toll free at 1-877-684-6448, or facsimile at 202-741-5769; e-mail at ogis@nara.gov.

Sincerely yours,

Sarah Kotler
Director
Division of Freedom of Information

Sarah B. Kotler, JD
Director, Division of Freedom of Information
US FDA
301-796-8976

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[11] https://www.propublica.org/article/without-autopsies-hospitals-bury-their-mistakes

[12] https://www.pbs.org/wgbh/pages/frontline/post-mortem/

At the time I submitted, and out of curiosity I searched the FDA FOIA submission data base to see if others had inquired regarding autopsy. At that time, no other requests. But on September 29 of this year Zachary Stieber of the Epoch times published an article[13] describing the Epoch Times had submitted a similar FOIA, and they were also denied. But the reason the FDA gave was that they are "barred from releasing medical files". But the Epoch Times says they have a source in the drug industry who says that's bunk - the FDA can release a redacted copy. So it appears the FDA is just stonewalling. Indeed they do not want more incriminating information released.

Starting in 2021 thousands started receiving an experimental vaccine that, by all accounts outside of official regulatory agency reports, did not undergo sufficient testing. According to Our World in Data, almost 70% of the world's population received at least one dose of COVID-19 vaccines. That's almost 13 billion doses with about 4.5 million doses continuing to be administered each day. Mankind has changed the landscape of the human biosphere without adequate monitoring and introspective, skeptical prudence. It's about time to bring autopsies back. The San Diego Medical Examiner needs to bring this need to the policy makers for immediate action.

"Chance favors the prepared mind" -- Louis Pasteur

References

[1] Lii Jye Tan, Cai Ping Koh, Shau Kong Lai, Woon Cheng Poh, Mohammad Shafie Othman, Huzlinda Hussin, **A systemic review and recommendation for an autopsy approach to death followed the COVID 19 vaccination**, Forensic Science International, Volume 340, 2022,111469, ISSN 0379-0738, https://doi.org/10.1016/j.forsciint.2022.111469 https://www.sciencedirect.com/science/article/pii/S0379073822002997

Vaccines & Eugenics – just a conspiracy theory?

It seems the topic of vaccines and eugenics go hand in hand. Not just recently regarding COVID-19 vaccines, but going back decades. Accusals that the purpose of vaccines are population control; that the vaccines serve to either kill or else sterilize specific targeted populations. Before covid it was easy to dismiss such an argument from the outcome. The difference now, and why I'm even taking the time to mention it, is the scale of the covid vaccine campaign. The magnitude of the COVID-19 vaccine campaign for once lends plausibility like never before. Consider current estimates report at least 68% of the world's population has received at least one dose of a COVID-19 vaccine. So for the moment, and disregarding all other aspects necessary for a *legitimate* conspiracy, numbers indeed support feasibility of a planetary depopulation campaign.

But there are other aspects of this vaccine campaign that might further raise concern: the fervor by which public officials and institutions endorse vaccination in spite of recent data that counters evidence of safe and effective. Is it just a conspiracy theory?

The intent of this report is to present facts surrounding COVID-19 vaccine injury and death and not to delve down other rabbit holes that distract from that focus. But before stepping away, I'll leave the reader with one source I recently encountered that gave me pause and consternation, and why I'm even writing this.

Just about the time the first COVID-19 vaccines began deployment, two online investigative journalists began publishing extremely well researched and cited articles; a three part series[14] questioning motives behind these covid vaccines can be linked here:

The Johns Hopkins, CDC Plan to Mask Medical Experimentation on Minorities as

[13] https://www.theepochtimes.com/exclusive-fda-withholding-autopsy-results-from-people-who-died-after-getting-covid-19-vaccines_4763765.html

[14] https://unlimitedhangout.com/reports/investigative-series/

"Racial Justice"

Palantir's Tiberius, Race, and the Public Health Panopticon

Developers of Oxford-AstraZeneca Vaccine Tied to UK Eugenics Movement

In his recently published book, *The Psychology of Totalitarianism*. Mattias Desmet explains that apparent 'conspiracy theories' are more likely 'opportunity theories' [my paraphrasing]. In the case of the COVID-19 vaccines perhaps we are seeing a eugenics movement taking advantage of vaccine injury and death to achieve their goals of population control or race extermination – not that they deliberately laid plans to cause the pandemic and subsequent vaccine rollout. Make no mistake. History tells us eugenics movements have existed and led to thousands if not millions of deaths. In Nazi Germany neither the victims nor the perpetrators saw the big picture until it all came crumbling down. Are we as blind as they were?

The death of medicine and freedom to practice in California – AB 2098 signed into law

Just as soon as Gavin Newsom signed AB 2098 into law, Drs. Mark McDonald, a Los Angeles psychiatrist, and Jeff Barke, an Orange County primary care physician, filed a lawsuit based on the unconstitutionality of the new law. Both the freedom to exercise free speech and the honored privacy between doctor and patient are at stake. Doctors that don't toe the line and endorse vaccines as the sole solution for treating coronavirus infection will lose their license. If they and their patients see fit to use a therapy the state doesn't agree with, the doctor can be arrested and fined. The Red State Press[15] hit the nail on the head by comparing pivotal lines from both the constitution and the bill:

> *Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances.*

But California law makers wrote:

> *The Federation of State Medical Boards has released a statement warning that physicians who engage in the dissemination of COVID-19 vaccine misinformation or disinformation risk losing their medical license, and that physicians have a duty to provide their patients with accurate,* ***science-based information****.*

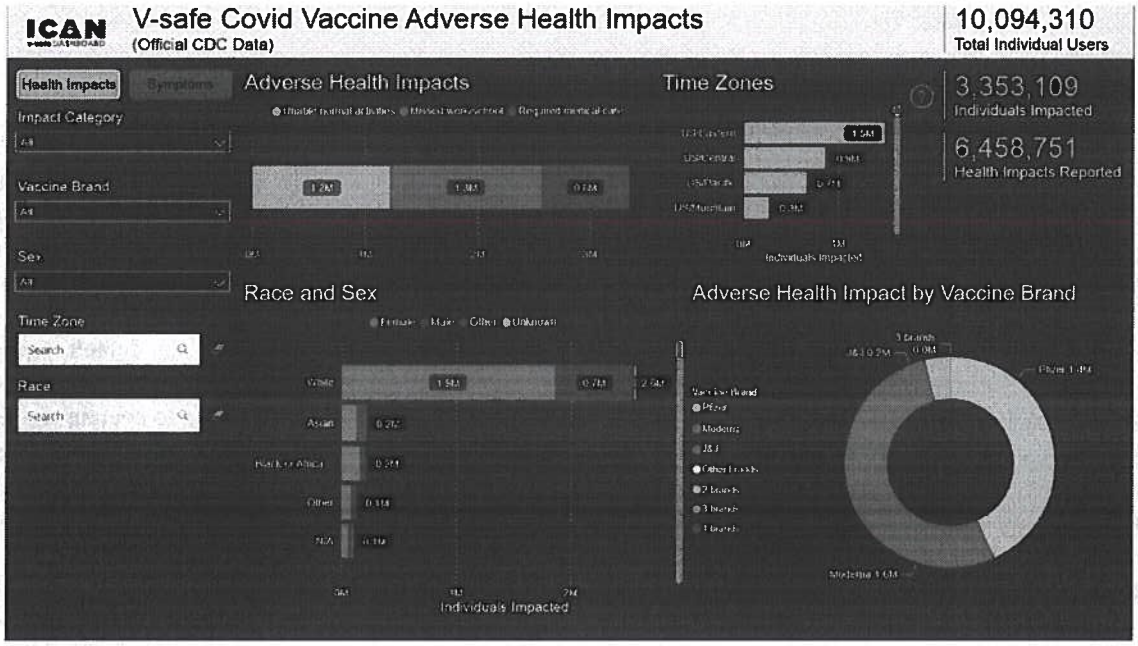
In doing so these law makers have implied that only science dictated by the state is acceptable in deciding what is and is not *misinformation*. With their science there can be no debate, no question.

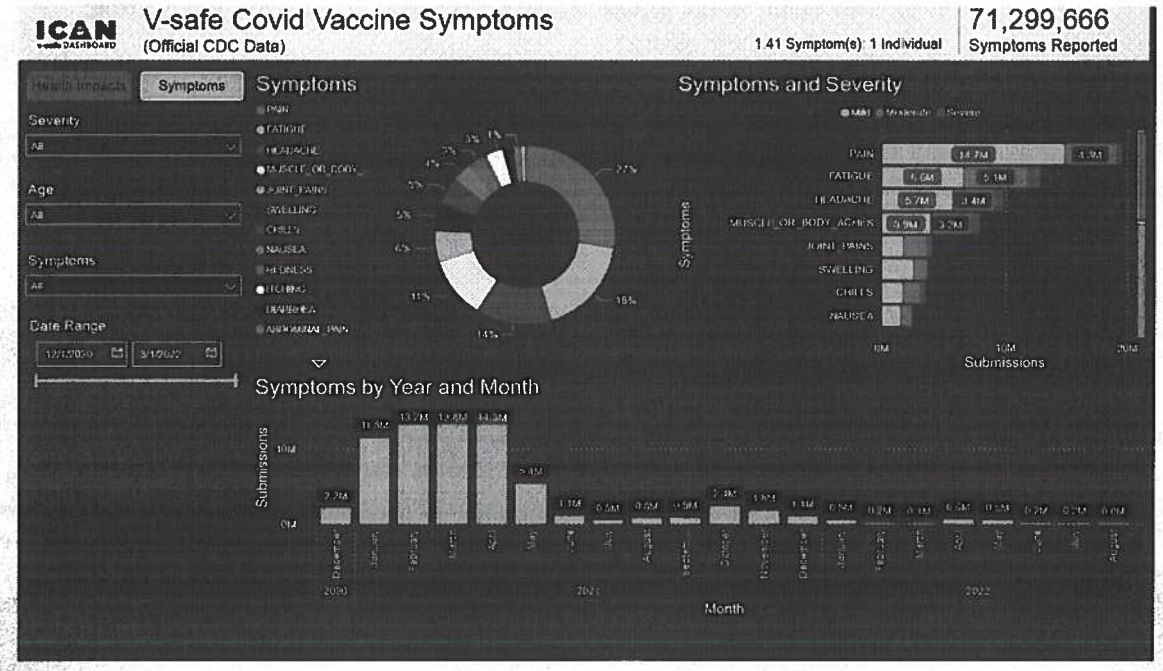
Only in a totalitarian state could such a law be conceived and passed. This act seals the fact that California has crossed a line and is on the road to totalitarian rule. And local jurisdictions shamefully say NOTHING. No lawsuits. Not even a letter. Rather than standing up and doing the right thing for their citizens they remain silent and 'align' with the state; they actually create their own 'frameworks' to disgustingly follow the leader in lock step.

[15] https://redstate.com/bobhoge/2022/10/06/first-lawsuit-drops-against-californias-doctor-muzzling-anti-free-speech-bill-ab-2098-n638663

Release of V-safe data by the CDC reveals hundreds of thousands of Americans required Medical care after COVID-19 vaccinations

According to an October 3 article in the Epoch Times, the Centers for Disease Control released data revealing for the first time to the public, reported adverse events from COVID-19 vaccinations contained in their V-Safe tracking system. Indeed a nonprofit organization, Informed Consent Action Network (ICAN) was able to finally obtain this data only after suing the CDC. The data can now be publicly accessed at: https://www.icandecide.org/v-safe-data/ . The raw data can be downloaded for analysis in 5 .csv files or viewed on dashboards provided by ICAN. The following screenshots illustrate these dashboards.





ICAN's victory has considerable significance as it reveals that hundreds of thousands, nearly a million people in the

US, had to seek medical attention multiple times after receiving the vaccines. This database, separate from VAERS, provides an independent source that corroborate the injuries reported in VAERS. Recall that public health officials raised considerable objections that VAERS is not a reliable source to determine causation. One of the Bradford Hill criteria for establishing causation calls for independent corroborating sources – the V-safe data fulfills that requirement.

But after reviewing how V-safe[16] operates, it appears it might actually be less reliable than the VAERS system since it depends solely on reports by vaccine recipients through a cell phone app.
According to FAQ from the CDC website, people without cell phones are excluded from participating in V-safe:

> *"If I don't have a smartphone, but I got a COVID-19 vaccine, can I still participate in v-safe?"*
>
> *"No. Currently, v-safe is designed to be accessed using a smartphone with a touchscreen, text messaging service, and internet access."*

Recall VAERS data can be received by a variety of sources patients, patient advocates including family and friends, nurses, hospital administrators, doctors or pharmaceutical companies since the system can be accessed by the public on any computer including smartphones. V-safe on the other hand requires the vaccine recipient themselves to enroll and restricts access through the cell phone.

Considering that restriction, any vaccinated recipient that died from the vaccine could not, by default, report that event! The only exception might be a parent reporting the death of their child since parents are permitted to enroll children on their own phones. Indeed the recent data dump received by ICAN does not seem to contain any reports of death or serious injury other than the "more common adverse event" categories which are less deleterious than what VAERS reports. The dashboard provides broad categorization: "unable normal activities", "missed work/school" or "required medical care". At least those first two categories reflect death.

Regardless of the V-safe sanitized levels of detail, the numbers reporting in any of the three categories listed above are indeed astounding and can be seen directly from the dashboard. We can immediately raise a number or questions:

1. Were local public health authorities having access to V-safe data also realizing the magnitude of these reports?

2. If so did they raise an official concern, maybe a letter or phone call to the CDC?

3. Given the magnitude of reports, was there any action or hesitation by local officials to suspend vaccination campaigns until the CDC addressed the issue?

4. Lastly why, now after this disturbing result has been made public, and no further threat of the virus have these vaccinations been allowed to continue?

If any of those questions were asked I heard none of it in either public discourse or the media.

When do we call it negligence to perform duty and uphold the oath of office (or appointments)?

Especially since now that children are being assaulted with an experimental pharmaceutical drug. Children as young as 6 months of age. I'll say it once more. The NIH, CDC, FDA, HHS and local public health agencies are broken. Who will be the first authoritative voice to step forward and set the dominos of truth in motion? Leadership ceases to be legitimate when it fails to uphold the oath to the people they serve.

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[16] https://www.cdc.gov/coronavirus/2019-ncov/vaccines/safety/vsafe.html

COVID-19 Travel Restriction Update. Hey where's the USA?

To appreciate the state of our nation with regards to liberty, consider the following list

Source:
https://www.traveloffpath.com/countries-without-any-travel-restrictions-or-entry-requirements/
As of October 4, 2022, 110 countries –

- No tests before arrival
- No tests upon or after arrival
- No countries banned due to covid-19
- No quarantine periods
- No vaccine requirements

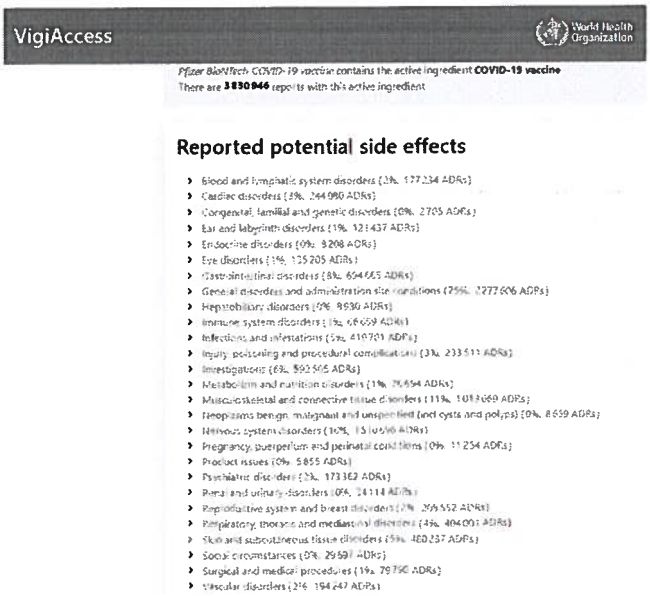
Afghanistan	Brunei	French Guiana	Lebanon	Norway	Tahiti
Albania	Bulgaria	Gabon	Lesotho	Oman	Thailand
Anguilla	Cambodia	Georgia	Liechtenstein	Panama	Trinidad and
Antigua & Barbuda	Canada	Germany	Lithuania	Poland	Tobago
Argentina	Cape Verde	Gibraltar	Luxembourg	Portugal	Turkey
Armenia	Cayman Islands	Greece	Madagascar	Romania	United Kingdom
Aruba	Congo	Grenada	Madeira	Rwanda	Uzbekistan
Australia	Cook Islands	Guadeloupe	Malaysia	Samoa	Vanuatu
Austria	Costa Rica	Guatemala	Maldives	Saudi Arabia	Vietnam
Bahamas	Croatia	Hungary	Malta	Serbia	Yemen
Bahrain	Curaçao	Iceland	Martinique	Slovakia	
Barbados	Cyprus	Ireland	Mauritius	Slovenia	
Belarus	Czechia	Israel	Mexico	South Africa	
Belgium	Denmark	Italy	Moldova	South Korea	
Belize	Dominica	Jamaica	Mongolia	St Kitts & Nevis	
Benin	Dominican Republic	Jordan	Montenegro	St. Lucia	
Bhutan	Egypt	Kazakhstan	Morocco	St. Vincent and	
Bonaire	El Salvador	Kosovo	Namibia	Grenadines	
Bosnia and	Estonia	Kuwait	Netherlands	Sudan	
Herzegovina	Finland	Kyrgyzstan	New Zealand	Sweden	
Botswana	France	Latvia	North Macedonia	Switzerland	

Note that countries noted to once have the *harshest* restrictions like Canada, Australia and New Zealand are ON this list. They have freely opened travel into and out of their countries. But the United States of America is NOT on this list. We no longer lead the world in terms of freedom to travel; a right specifically afforded by the constitution of the United States.

Online tools, other resources in researching vaccine injury outside of VAERS

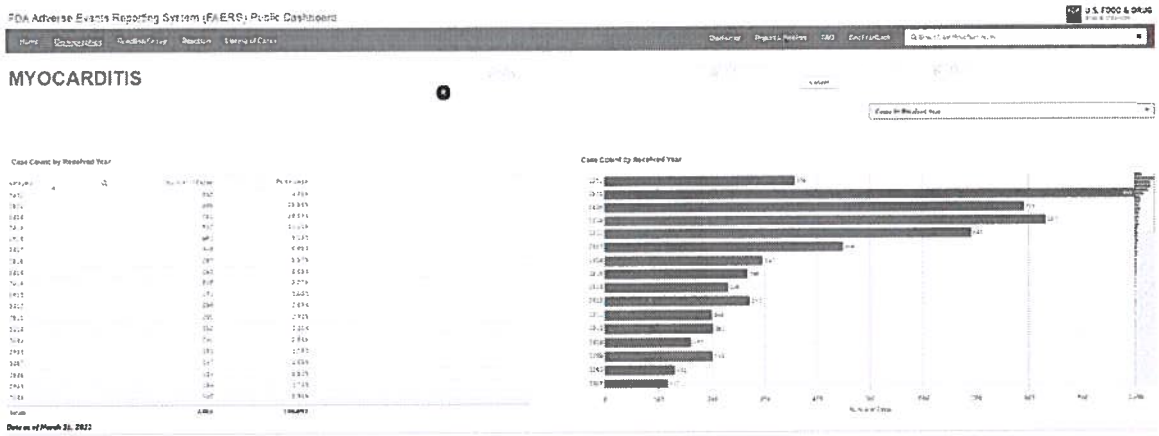
Vigiaccess

Public access site: VigiAccess https://vigiaccess.org/
VigiAccess is maintained by the World Health Organization and providing global scale access to adverse event reports for all medications including specific COVID-19 vaccines. It is very limited regarding detailed case information demographics, etc. only the numbers of events, at least on the public site. Only numbers and percentages are given in drop down categorized adverse events that are sorted according to highest incidence. An example of the search: covid-19 vaccines Pfizer is shown below.



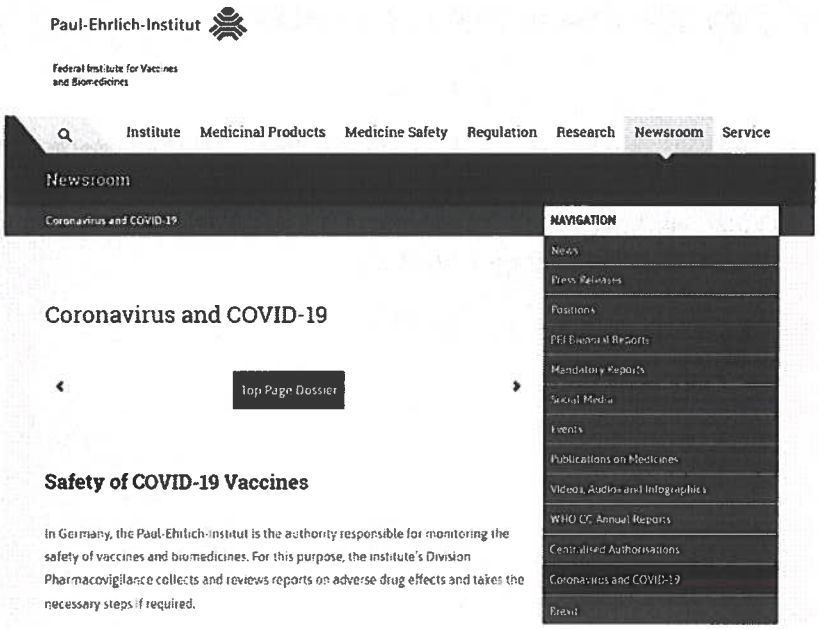
FAERS

FDA Adverse Event Reporting System (FAERS) https://www.fda.gov/drugs/questions-and-answers-fdas-adverse-event-reporting-system-faers/fda-adverse-event-reporting-system-faers-public-dashboard is another resource for all medications, maintained by the FDA. The advantage in FAERS is being able to associate. FAERS allows search by reaction.



Paul- Ehrlich-Institute

Germany's surveillance webpage for covid-19 vaccines. Reports only; no raw data: https://www.pei.de/EN/newsroom/dossier/coronavirus/coronavirus-content.html?nn=164146&cms_pos=6



REACT19

During the research for recent publications involving COVID-19 vaccine injuries, I came across a group that also consolidates peer reviewed publications involving categorical vaccine injuries called REACT19[17]. The website is a wealth of resources focusing mainly on the wellness and treatment of people either suffering from long term effects of COVID-19 or COVID-19 vaccine induced illness. The specific link to the publications list is https://react19.org/1250-covid-vaccine-reports/ . This link will be included as a permanent fixture in any future covid vaccine injury reports.

This vaccine injury update and attached report delivered to the San Diego Board of Supervisors and San Diego Health and Human Services on October 11, 2022, by

Mike Borrello

"What you see and what you hear depends a great deal on where you are standing. It also depends on what sort of person you are."

— C.S. Lewis, The Magician's Nephew

[17] https://react19.org/

COVID 19 VACCINES INJURY REPORT

Mike Borrello October 11, 2022

1. United States Department of Health and Human Services (DHHS), Public Health Service (PHS), Centers for Disease Control (CDC) / Food and Drug Administration (FDA), Vaccine Adverse Event Reporting System (VAERS) 1990 - 09/30/2022, CDC WONDER On-line Database. Accessed at http://wonder.cdc.gov/vaers.html on Oct 8, 2022 4:56:00 PM

Common to all VAERS queries herein and unless otherwise specified:

(1) Vaccine products considered include the following COVID-19 vaccines:

(a.) Janssen
(b.) Moderna
(c.) Novavax
(d.) Pfizer-BioNtech
(e.) Moderna bivalent
(f.) Pfizer-BioNtech bivalent
(e.) unknown

(2) All locations under jurisdiction of VAERS reporting

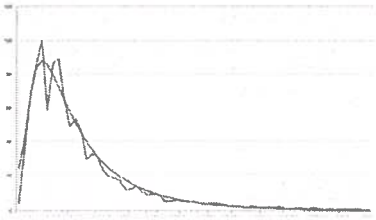
(3) Onset interval of event relative to vaccine administration, unless otherwise noted in the following reported data, is recorded as percentage occurring within the interval of 2 days as a basis for inferring temporal correlation.

Temporal correlation, if present, usually has *structure*. The expected structure in a pharmacodynamic system involves the occurrence of a discrete event (in this case vaccine reaction) and is typically exponential in nature. Hickey and Rancourt explain in a paper[18]; briefly:

> *The other important discovery is what the researchers refer to as "decay time." That is the time in which the risk of an adverse event "decays," or decreases. While there was a very high peak for adverse reactions found within the first five days post injection, that risk then persists before decreasing by about half approximately every two weeks (Figure S5). However, this phenomenon was still measurable up to 60 days post injection. "The fact that this is tied to the time since the injection, and not time alone, proves that this is due to the injection – it proves a causal relationship. If it were just accidental, if people just happened to die within those 60 days, then you would not get that decay of probability, it would be uniform," says Dr. Rancourt.*
>
> *Dr. Rancourt notes that he and Dr. Hickey are the first to show this exponential decay. "It's robust in that it happens to every adverse event [in the VAERS dataset] and it's consistent across all three manufacturers so it's a common feature seen across the data."*

[18] Nature of the toxicity of the COVID-19 vaccines in the USA

I believe by 'uniform' Rancourt means that the number of adverse events over time, on the average would be flat. Flatness would indicate independence of the event from vaccine injection, so definitely not causation. But that's not what is seen in VAERS data. Rancourt and Hickey suggest a suitable model as 'exponential', but considering that events cannot realistically happen 'instantaneously' a more practical model might rather be a temporal Weibull model as illustrated in the following graph.



Weibull model fit to pharmacodynamic response

An opinion paper by Cosentino and Marino [19] claims the COVID-19 mRNA vaccines cannot be rightly called vaccines. According to their pharmacodynamics, pharmacokinetics and influence of S-Protein molecular interactions on multiple targets in multiple organ systems they should rather be considered pharmaceutical drugs. In other words they behave more like a systemic drug, interacting with more than just immune system response. The authors further mention these [unintended] responses are causing harm, adverse effects and they give examples such as Vaccine Induced Thrombocytopenia that's been a proven VAERS signal and treated in many papers and case studies.

Typically the causality between drugs and observed adverse reactions has depended on the Bradford Hill criteria; a nine point checklist[20]. But there are debates in the epidemiology community saying these criteria are outdated, possibly too strict. Cosentino and Marino point out that the World Health Organization (WHO) considers accepts a less strict assessment stressing only two points:

> *"...On the contrary, the WHO guidelines for causality assessment of an adverse event following immunization (AEFI) state that "two critical questions in the revised WHO causality algorithm, namely: "Is there evidence in published peer reviewed literature that this vaccine may cause such an event if administered correctly?" and "In this patient, did the event occur within a plausible time window after vaccine administration?". It is important to consider the background rates for the occurrence of an event of interest and then after a population has received vaccine, determine if the observed rate of that event is in excess of the background rates"*

So it's important to note at this point that this report, and prior reports submitted to San Diego County Public Record and HHS indeed attempt to fulfill this criteria for causality or at least raise a concern that should be addressed by HHS. This is being done by providing the significant VAERS case numbers, temporal metrics, and citations of publications that examine the specific adverse events.

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[19] Cosentino, M.; Marino, F. Understanding the Pharmacology of COVID-19 mRNA Vaccines: Playing Dice with the Spike? Int. J. Mol. Sci. 2022, 23, 10881. https://doi.org/10.3390/ijms231810881

[20] https://en.wikipedia.org/wiki/Bradford_Hill_criteria

VAERS presently does not provide query of adverse events at the county level; the finest granularity possible in the database is at state level.

On September 5, 2022 a local journalist Marco Cáceres published an opinion article[21] in an online publication The Vaccine Reaction, sponsored by the National Vaccine Information Center. Cáceres focused on San Diego County suggesting HHS is ignoring the many cases of vaccinated and 'fully boosted' in the county that are becoming ill, presumably from vaccine side effects. Citing KUSI news reports, Cáceres noted "41 percent of people in San Diego County who recently died of COVID were fully vaccinated and boosted. Cáceres concluded:

> *"The point is that out of the total 104,288 COVID cases, more than 68,000 San Diegans who dutifully got their shots became infected with SARS-CoV-2 (about 65 percent) and out of 2,417 COVID hospitalizations, approximately 1,600 of them (about 66 percent) involved fully vaccinated or fully vaccinated and boosted people. And between 41 and 67 percent of the 88 COVID deaths occurred in people who were either fully vaccinated or fully vaccinated and boosted."*

I have personally attended many County Board of Supervisors meetings where Wilma Wooten, San Diego County's Public Health Officer, gives a monthly 'covid update' and provides recommendations to the board. The information KUSI reported and that Cáceres further researched is regularly omitted by Wooten possibly motivated by political reasons to continue the false state of emergency in San Diego and continued ARPA funding. I've furthermore suggested that opinion, motive in person before the board of supervisors.

The figures in this report, as noted above, and unless otherwise specified address all locations in VAERS queries to provide a suitable comparison with the number of doses of vaccine across the nation as updated above.

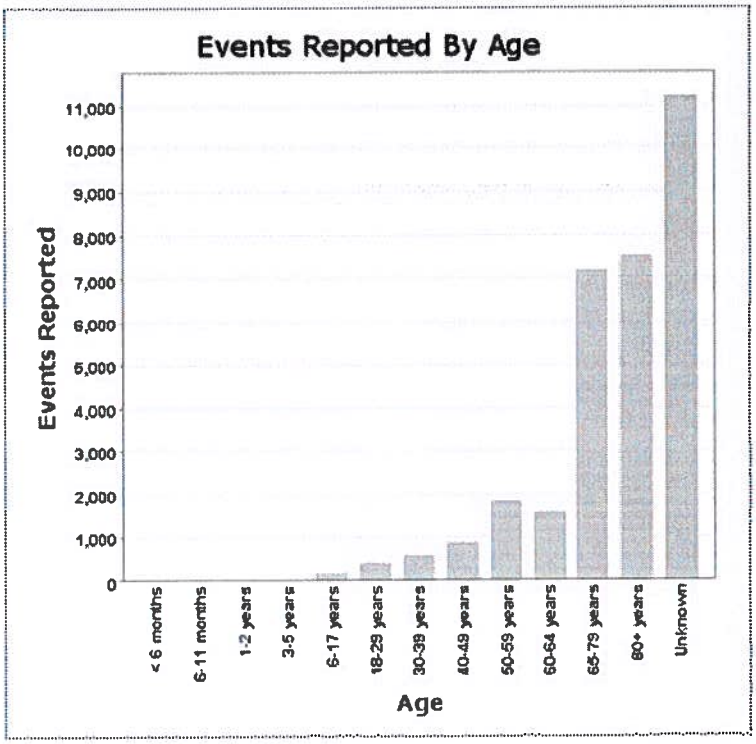
The COVID-19 vaccines collectively account for nearly 83% of ALL deaths reported in VAERS for ALL the vaccines combined over the 30 year period VAERS has been in existence. But covid-19 vaccines haven't been in existence for even 2 years. Neither the FDA, CDC, NIH nor any Public Health Agency, nationally or local has bothered to address this elephant in the room - one of MANY issues surrounding the COVID-19 vaccines.

[21] https://thevaccinereaction.org/2022/09/lots-of-vaccinated-boosted-san-diegans-die-from-covid/#comment-133978

Vaccine	Events Reported	Percent (of 40,968)
COVID19 (COVID19 (PFIZER-BIONTECH)) (1200)	21,706	52.98%
COVID19 (COVID19 (MODERNA)) (1201)	9,724	23.74%
COVID19 (COVID19 (JANSSEN)) (1203)	2,741	6.69%
PNEUMO (PREVNAR13) (1141)	990	2.42%
PNEUMO (PREVNAR) (1001)	980	2.39%
POLIO VIRUS, ORAL (ORIMUNE) (17)	790	1.93%
INFLUENZA (SEASONAL) (NO BRAND NAME) (44)	778	1.90%
VACCINE NOT SPECIFIED (NO BRAND NAME) (999)	696	1.70%
HIB (ACTHIB) (256)	611	1.49%
HIB (HIBTITER) (35)	591	1.44%
DTP (NO BRAND NAME) (2)	567	1.38%
HEP B (ENGERIX-B) (38)	542	1.32%
ROTAVIRUS (ROTATEQ) (1096)	513	1.25%
HEP B (RECOMBIVAX HB) (25)	470	1.15%
PNEUMO (PNEUMOVAX) (30)	441	1.08%
DTAP + HEPB + IPV (PEDIARIX) (1082)	417	1.02%
HPV (GARDASIL) (1098)	388	0.95%
DTAP (INFANRIX) (286)	359	0.88%
MEASLES + MUMPS + RUBELLA (MMR II) (26)	353	0.86%
INFLUENZA (SEASONAL) (FLUZONE) (7)	350	0.85%
POLIO VIRUS, INACT. (POLIOVAX) (9)	329	0.80%
DTP (TRI-IMMUNOL) (22)	313	0.76%
HEP B (NO BRAND NAME) (110)	313	0.76%
ROTAVIRUS (ROTARIX) (1124)	312	0.76%
HIB (PEDVAXHIB) (129)	298	0.73%
POLIO VIRUS, INACT. (NO BRAND NAME) (232)	269	0.66%
POLIO VIRUS, INACT. (IPOL) (1030)	268	0.65%
POLIO VIRUS, ORAL (NO BRAND NAME) (118)	255	0.62%
DTAP + IPV + HIB (PENTACEL) (1125)	234	0.57%
DTP + HIB (TETRAMUNE) (250)	220	0.54%
DTAP (TRIPEDIA) (242)	205	0.50%
COVID19 (COVID19 (UNKNOWN)) (1202)	201	0.49%
HIB + HEP B (COMVAX) (287)	196	0.48%
ZOSTER LIVE (ZOSTAVAX) (1097)	189	0.46%
DTAP+IPV+HEPB+HIB (INFANRIX HEXA) (1139)	178	0.43%
VARICELLA (VARIVAX) (269)	178	0.43%
HPV (NO BRAND NAME) (1102)	172	0.42%
HIB (NO BRAND NAME) (111)	161	0.39%
DENGUE TETRAVALENT (DENGVAXIA) (1195)	151	0.37%
PNEUMO (NO BRAND NAME) (120)	140	0.34%
DTAP (DAPTACEL) (1064)	137	0.33%
INFLUENZA (SEASONAL) (TIV DRESDEN) (1186)	118	0.29%
ZOSTER (SHINGRIX) (1192)	118	0.29%
INFLUENZA (SEASONAL) (FLUVIRIN) (262)	115	0.28%
DTAP (NO BRAND NAME) (258)	110	0.27%
RABIES (NO BRAND NAME) (57)	105	0.26%
HIB (HIBERIX) (916)	90	0.22%

Many of the VAERS queries reported herein were further substantiated by separate research from peer reviewed medical and scientific journals available for free public download. These studies provide further observations, analysis and evidence of the presence and significance of these adverse events from clinical and scientific experts. This report is a work in progress as the VAERS numbers will be updated monthly, and new citations added as publications are brought to my attention.

2. **Number of deaths associated with the three COVID-19 vaccines: 31,330;** 26% of these deaths occurred within 2 days after injection. Of these reported deaths, **639** have been reported having occurred in California. Given that San Diego is the 2nd largest populated county among 58 counties in California, the likelihood is that some of those deaths were reported within San Diego County. But County HHS does not report this number in their monthly presentations. From VAERS, the number of deaths, all locations according to age groups are plotted below on the left, where age data was available.



Reported deaths all COVID-19 vaccines, all locations

3. According to the CDC (https://covid.cdc.gov/covid-data-tracker/#vaccinations_vacc-total-admin-rate-total) as of October 8, 2022 about 624 million doses of the COVID -19 vaccines have been administered over a period of about 22 months. This includes 1st, 2nd doses, & boosters.

4. For the 14 seasonal influenza vaccines, there have been about 3.7 billion doses administered over 42 years[22]. For these vaccines, the reported deaths number much lower than the deaths from influenza vaccines: reporting a much lower death count: **2,211** deaths.

Contrasting the numbers: covid vs the 14 flu vaccines:

COVID-19	vs	FLU	
31,330	**vs**	**2,211**	**deaths**
0.624	**vs**	**3.7**	**billion doses**
1.8	**vs**	**42**	**years**
50	**vs**	**< 1**	**deaths/million doses**

So the COVID-19 vaccines are more than 50 times deadlier than the influenza vaccines.

5. It's believed by at least several researchers that adverse events reported in VAERS are severely under-reported. This position is well justified because of the dearth of information that would otherwise provide evidence of reporting compliance. While the CDC mandates reporting of vaccine associated deaths, there's no apparent system for enforcing or monitoring. Many suggest that reported numbers could only represent 1% of actual adverse events whether the reporter,

[22] https://www.cdc.gov/flu/prevent/vaccine-supply-historical.htm

for some reason, fails to report the event believing there is a connection between the vaccine and the event or else failing to make any connection. Healthcare providers and manufacturers, are required to report deaths and life threatening events. But I am personally aware that this is not being done, at least at one institution. Regardless other researchers believe that a realistic under-reporting factor (URF) is somewhere between 10 and 41[23]. **Keep this in mind; that some (unknown) URF applies to all the numbers provided in this report**. In other words the numbers reported here is certainly a lower bound for observations. But in this report, the **numbers** are only what VAERS provides. So we might expect that the death toll for covid-19 vaccines is actually between 313,300 and 1,284,530 deaths. So perhaps over a million have died from the COVID-19 vaccines.

According to VAERS data, reported deaths are largely split between the first and second doses of the vaccine

Messages:
- VAERS data in CDC WONDER are updated every Friday. Hence, results for the same query can change from week to week.
- These results are for 31,330 total events.

Vaccine Dose	Events Reported	Percent (of 31,330)
1 Dose	11,631	37.12%
2 Doses	11,710	37.38%
3 Doses	3,269	10.43%
4 Doses	344	1.10%
5 Doses	11	0.04%
6 Doses	1	0.00%
7 or more Doses	8	0.03%
Unknown	7,389	23.58%
Not Applicable	28	0.09%

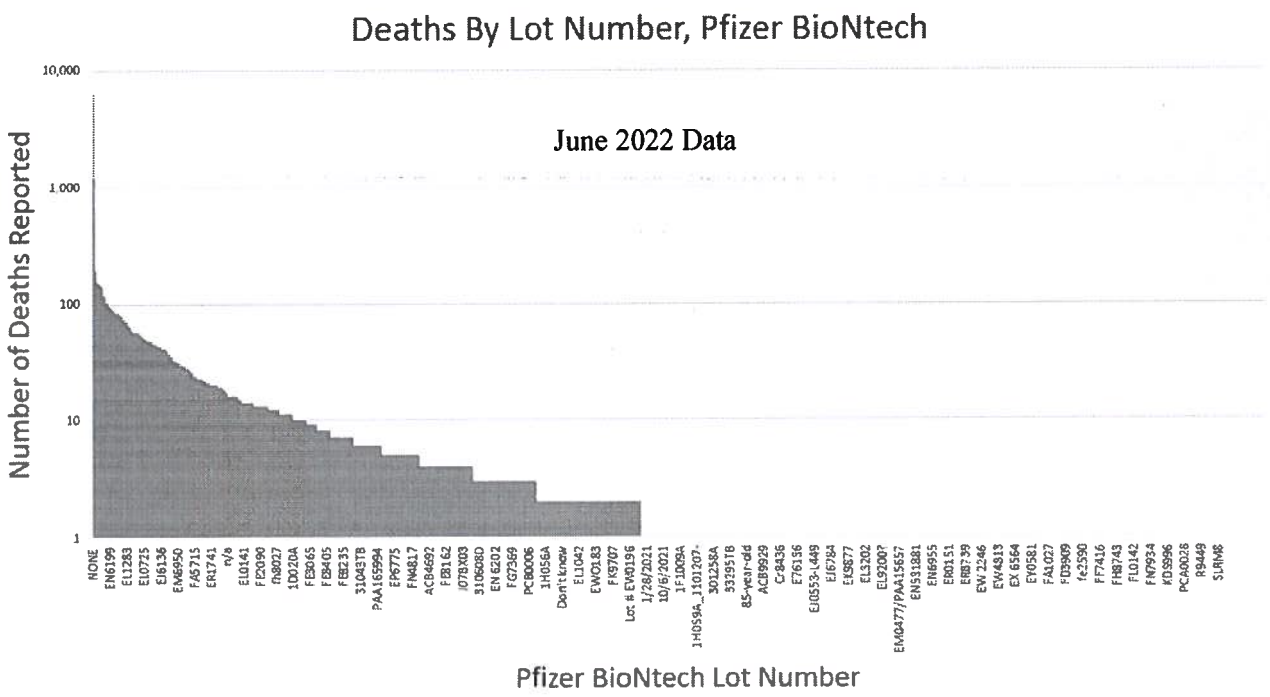
And there's a concerning disparity between the number of deaths across various vaccine lot numbers as shown by the following graphs. But it's not clear if

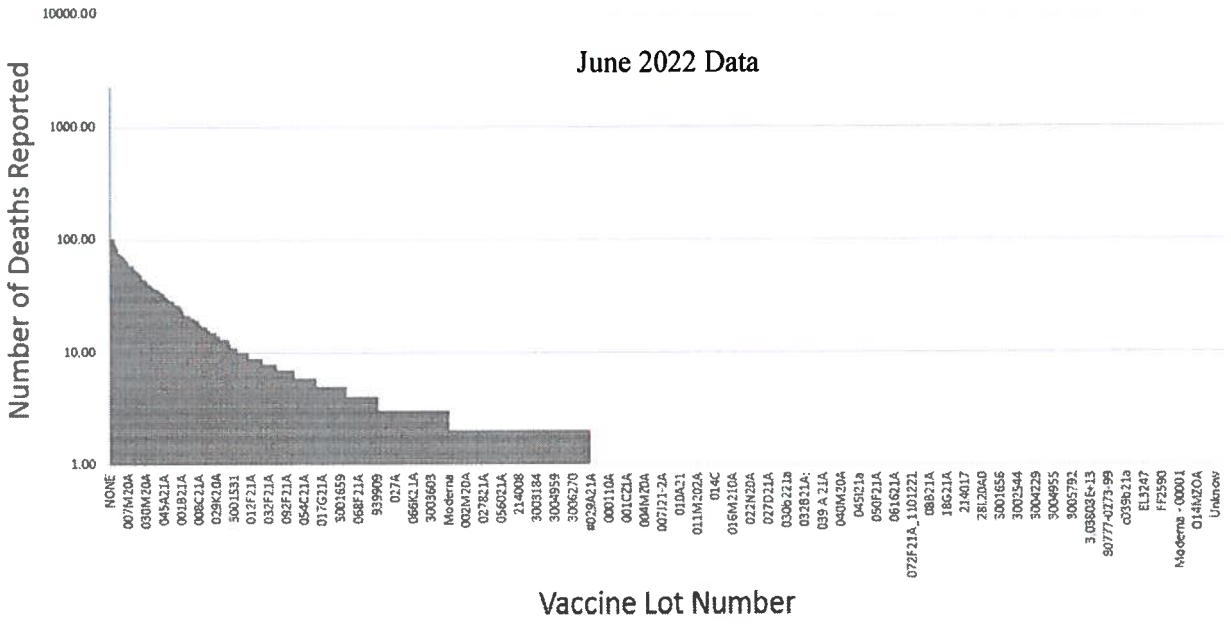
(1) the number of vaccine vials per lot is the same or

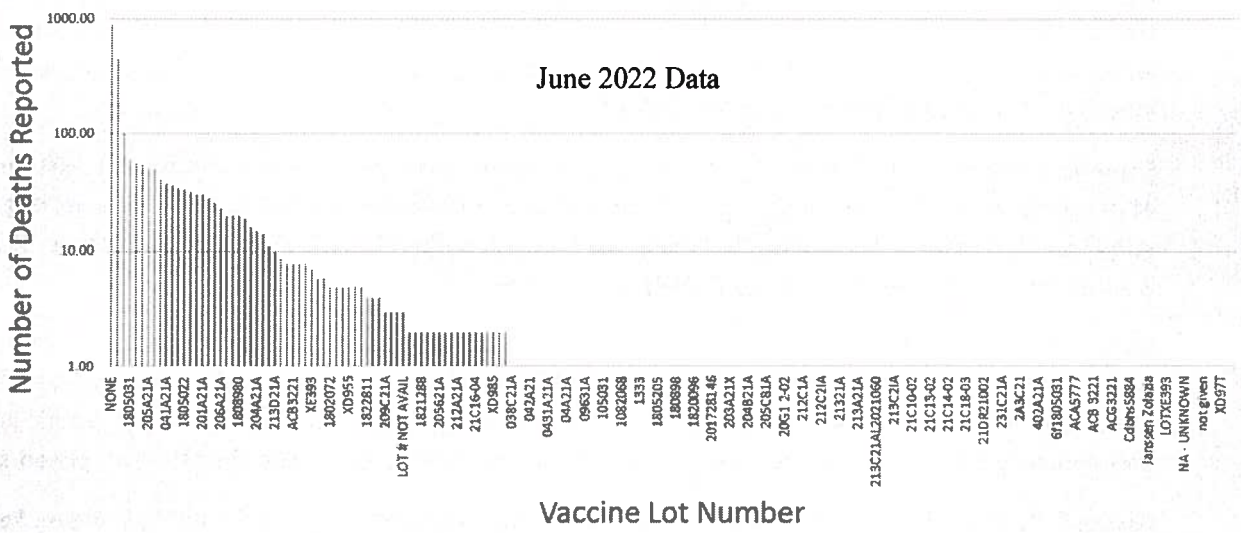
(2) that the number of administered doses per lot is somewhat uniform.

If the lot size and administration of vaccines are somewhat consistent, the data shown below as the frequency of deaths attributed to lot numbers might suggest at least part of the problem is a serious quality issue: that something in the manufacturing process is yielding particular lots that are causing harm[24]. Or it might be variability in the way end point customers are storing, handling or dispatching vaccines. In any event it does not appear officials have any concern to investigate the matter.

[23] Steve Kirsch Latest VAERS estimate: 388,000 Americans killed by the COVID vaccines
[24] https://www.nutritruth.org/single-post/covid-truths-hot-lots-deadly-batches-of-vaccines


Deaths By Lot Number, Pfizer BioNtech
June 2022 Data
Number of Deaths Reported
10,000
1,000
100
10
1
Pfizer BioNtech Lot Number


Deaths by Lot Number, Moderna
June 2022 Data
Number of Deaths Reported
10000.00
1000.00
100.00
10.00
1.00
Vaccine Lot Number

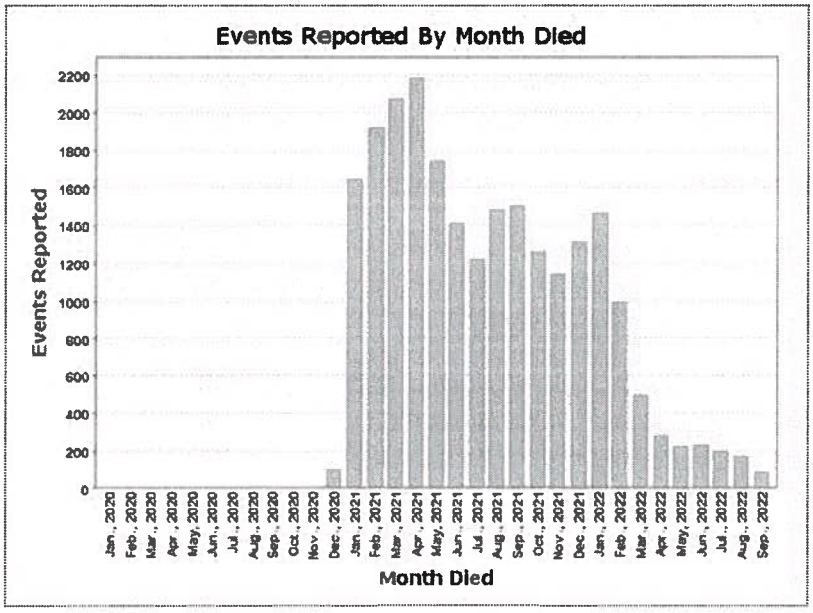


According to sex, the reported deaths associated with COVID-19 vaccines show that males are about 25% more likely to be killed by the COVID-19 vaccines.

Messages:
- VAERS data in CDC WONDER are updated every Friday. Hence, results for the same query can change from week to week.
- These results are for 31,330 total events.

Sex	Events Reported	Percent (of 31,330)
Female	13,085	41.77%
Male	16,614	53.03%
Unknown	1,631	5.21%

Many of the deaths reported in VAERS from COVID-19 are associated with cardio pulmonary events or stroke, and a hypothesis offered in the June 2022 report posits that young males are more able and tend to push the envelope of physical exertion as an explanation of higher percentage of male deaths.



Before addressing other adverse events, it's first important to note for the adverse event of death alone, there is a fundamental issue with vaccine ethics. Consider of these reported deaths, what are the chances that even 1 report of association is indeed caused by the vaccine. Then ask the question, knowing that the vaccine has the capability of killing the recipient, how is it ethical to vaccinate a population *en masse* when conceivably some people may die that never would have died from the infection, let alone be infected? The obvious answer: it is NOT ethical.

Somehow Public Health Officials have managed to convince the public that it is ethical; to kill one group of people in order to save another group. This policy is maliciously labeled by the media as "the greater good" and it condones the twisted premise that some benefit risk analysis mitigates this fact. That there is some 'acceptable' number of vaccine induced deaths.

So far no one has addressed this grievous fault in policy, or perhaps recognized its existence. The policy is one of indiscriminant sacrifice; no different than throwing the virgin into the volcano to appease the gods. At present it's only investment and profits that are being appeased. The medical and scientific literature only touch lightly on the subject of vaccine ethics, and NONE has addressed the question posed above.

Bardosh, Kevin and Krug, Allison and Jamrozik, Euzebiusz and Lemmens, Trudo and Keshavjee, Salmaan and Prasad, Vinay and Makary, Martin A. and Baral, Stefan and Høeg, Tracy Beth, **Covid-19 vaccine boosters for young adults: A risk-benefit assessment and five ethical arguments against mandates at universities** (August 31, 2022). Available at SSRN: https://ssrn.com/abstract=4206070

Kowalik M. **Ethics of vaccine refusal**. J Med Ethics. 2022 Apr; 48(4):240-243. doi: 10.1136/medethics-2020-107026. Epub 2021 Feb 26. PMID: 33637609. https://pubmed.ncbi.nlm.nih.gov/33637609/

Kowalick concludes:

> *... there is neither a moral obligation to vaccinate nor a sound ethical basis to mandate vaccination under any circumstances, even for hypothetical vaccines that are medically risk-free.*
>
> *Agent autonomy with respect to self-constitution has absolute normative priority over reduction or elimination of the associated risks to life. In practical terms, mandatory vaccination amounts to discrimination against healthy, innate biological characteristics, which goes against the established ethical norms and is also defeasible a priori.*

Other references on the ethics of vaccination ...

Cheng FK. **Debate on mandatory COVID-19 vaccination**. Ethics Med Public Health. 2022 Apr; 21:100761. doi: 10.1016/j.jemep.2022.100761. Epub 2022 Jan 24. PMID: 35097181; PMCID: PMC8784578. https://pubmed.ncbi.nlm.nih.gov/35097181/

Michelle M Mello, Douglas J Opel, MD, Regina M Benjamin, MD, Timothy Callaghan, Renee DiResta, Jad A Elharake, MPH, Lisa C Flowers, MD, Alison P Galvani, Daniel A Salmon, Jason L Schwartz, Noel T Brewer, Alison M Buttenheim, Richard M Carpiano, Chelsea Clinton, DPhil, Peter J Hotez, MD,Rekha Lakshmanan, MHA, Yvonne A Maldonado, MD, Saad B Omer, PhD, Joshua M Sharfstein, MD, Arthur Caplan, PhD, **Effectiveness of vaccination mandates in improving uptake of COVID-19 vaccines in the**

USA, The Lancet, VIEWPOINT| VOLUME 400, ISSUE 10351, P535-538, AUGUST 13, 2022 Published: July 08, 2022DOI: https://doi.org/10.1016/S0140-6736(22)00875-3

Note that a review of the article by Mello et al in Lancet was completed by David Bell for the Brownstone Institute[25]. Bell pointed out their conclusion for best managing vaccine compliance:

> *"... the best way to implement such mandates is for employers and educational institutions to threaten job security and the right to education."*

Incredulous.

Pomara C, Sessa F, Ciaccio M, Dieli F, Esposito M, Giammanco GM, Garozzo SF, Giarratano A, Prati D, Rappa F, Salerno M, Tripodo C, Mannucci PM, Zamboni P. **COVID-19 Vaccine and Death: Causality Algorithm According to the WHO Eligibility Diagnosis**. Diagnostics. 2021; 11(6):955. https://doi.org/10.3390/diagnostics1106095 https://www.mdpi.com/2075-4418/11/6/955

Maiese A, Baronti A, Manetti AC, Di Paolo M, Turillazzi E, Frati P, Fineschi V. **Death after the Administration of COVID-19 Vaccines Approved by EMA: Has a Causal Relationship Been Demonstrated?** Vaccines. 2022; 10(2):308. https://doi.org/10.3390/vaccines10020308 https://www.mdpi.com/2076-393X/10/2/308

Lv G, Yuan J, Xiong X, Li M. **Mortality Rate and Characteristics of Deaths Following COVID-19 Vaccination**. Front Med (Lausanne). 2021;8:670370. Published 2021 May 14. doi:10.3389/fmed.2021.670370 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8160119/

> Conclusion from Lv et al*: The benefits of COVID-19 vaccines outweigh the potential risks in older frail populations, and our findings do not support actions to exclude older adults from being vaccinated. However, continued monitoring of COVID-19 vaccination is still warranted.*

One more time, an underwhelming candy coated conclusion.

6. Besides associated deaths, the COVID-19 vaccines are currently associated with the following **numbers** of noted categorical adverse events. These numbers are cumulative events entered since the roll out of the COVID-19 vaccines:

Messages:
- VAERS data in CDC WONDER are updated every Friday. Hence, results for the same query can change from week to week.
- These results are for 1,432,467 total events.

Event Category	Events Reported	Percent (of 1,432,467)
Death	31,330	2.19%
Life Threatening	34,304	2.39%
Permanent Disability	58,630	4.09%
Congenital Anomaly / Birth Defect *	1,180	0.08%
Hospitalized	179,806	12.55%
Existing Hospitalization Prolonged	2,114	0.15%
Emergency Room / Office Visit **	122	0.01%
Emergency Room *	136,364	9.52%
Office Visit *	207,576	14.49%
None of the above	938,232	65.50%

7. **34,304 Life threatening events**; 39% within two days after injection.

[25] https://brownstone.org/articles/the-experts-still-pushing-coerced-jabs/

8. **58,630 Permanent disabilities**; 50% within two days after injection.
9. **179,806 Hospitalized**; 31% within two days after injection.
10. **136,364 Emergency room visits**; 52% within two days after injection.
11. **207,576 Office visits**; 47% within two days after injection.
12. By restricting the query above to children (under age 18) we see there have been **56,626** adverse events reported, with **162** deaths.

Messages:

- **VAERS data in CDC WONDER are updated every Friday. Hence, results for the same query can change from week to week.**
- **These results are for 56,626 total events.**

Event Category	Events Reported	Percent (of 56,626)
Death	162	0.29%
Life Threatening	677	1.20%
Permanent Disability	530	0.94%
Congenital Anomaly / Birth Defect *	18	0.03%
Hospitalized	4,453	7.86%
Existing Hospitalization Prolonged	122	0.22%
Emergency Room / Office Visit **	14	0.02%
Emergency Room *	5,241	9.26%
Office Visit *	7,637	13.49%
None of the above	41,948	74.08%

Of the 162 deaths, 5 were reported in California. The following 4 reports attempt to align these cases with news reports identified on the web. One case positively confirmed by VAERS ID in news report.

1. 9-Year-Old Dies Two Weeks After Taking COVID-19 Vaccine: VAERS

Details for VAERS ID: 2377304-1

Event Information			
Patient Age	9.00	Sex	Female
State / Territory	California	Date Report Completed	2022-07-21
Date Vaccinated	2021-12-13	Date Report Received	2022-07-21
Date of Onset	2021-12-27	Date Died	2021-12-27
Days to onset	14		
Vaccine Administered By	Other	Vaccine Purchased By	Not Applicable *
Mfr/Imm Project Number	NONE	Report Form Version	2
Recovered	No	Serious	Yes

* VAERS 2.0 Report Form Only
** VAERS-1 Report Form Only
"Not Applicable" will appear when information is not available on this report form version.

Event Categories	
Death	Yes
Life Threatening	No
Permanent Disability	No
Congenital Anomaly / Birth Defect *	No
Hospitalized	No
Days in Hospital	None
Existing Hospitalization Prolonged	No
Emergency Room / Office Visit **	N/A
Emergency Room *	No
Office Visit *	No

* VAERS 2.0 Report Form Only
** VAERS-1 Report Form Only
"N/A" will appear when information is not available on this report form version.

Vaccine Type	Vaccine	Manufacturer	Lot	Dose	Route	Site
COVID19 VACCINE	COVID19 (COVID19 (PFIZER-BIONTECH))	PFIZER\BIONTECH	NONE	1	SYR	UN

Symptom
ABDOMINAL PAIN UPPER
CHEST PAIN
DEATH
OROPHARYNGEAL PAIN

Adverse Event Description
Death after 2-3 days of stomach ache, sore throat and chest pain; two weeks after receiving the vaccination

Lab Data	Current Illness	Adverse Events After Prior Vaccinations

Medications At Time Of Vaccination	History/Allergies

2. 15-Year-Old Boy Died Suddenly Just 2 Days After Second Dose of Pfizer Covid-19 Vaccine

Details for VAERS ID: 1382906-1

Event Information			
Patient Age	15.00	Sex	Male
State / Territory	California	Date Report Completed	2021-06-08
Date Vaccinated	2021-05-15	Date Report Received	2021-06-08
Date of Onset	2021-06-07	Date Died	2021-06-07
Days to onset	23		
Vaccine Administered By	Other	Vaccine Purchased By	Not Applicable *
Mfr/Imm Project Number	NONE	Report Form Version	2
Recovered	No	Serious	Yes

* VAERS 2.0 Report Form Only
** VAERS-1 Report Form Only
"Not Applicable" will appear when information is not available on this report form version.

Event Categories	
Death	Yes
Life Threatening	No
Permanent Disability	No
Congenital Anomaly / Birth Defect *	No
Hospitalized	No
Days in Hospital	None
Existing Hospitalization Prolonged	No
Emergency Room / Office Visit **	N/A
Emergency Room *	No
Office Visit *	No

* VAERS 2.0 Report Form Only
** VAERS-1 Report Form Only
"N/A" will appear when information is not available on this report form version.

Vaccine Type	Vaccine	Manufacturer	Lot	Dose	Route	Site
COVID19 VACCINE	COVID19 (COVID19 (PFIZER-BIONTECH))	PFIZER\BIONTECH	EW0187	2	IM	LA

Symptom
DEATH

Adverse Event Description
Unexplained death within 48 hours

Lab Data	Current Illness	Adverse Events After Prior Vaccinations
	none noted	

Medications At Time Of Vaccination	History/Allergies
None known	Acne, no other conditions noted,None noted

3. 3 more teenagers suddenly collapse and die of cardiac arrest

Nathan Esparza, aged 16 Cardiac arrest, collapsed and died

OBITUARY

Nathan Emanuel Esparza

MARCH 18, 2005 - JULY 13, 2021

IN THE CARE OF

Eternal Valley Memorial Park & Mortuary

Nathan Emanuel Esparza, age 16, of Valencia, California passed away on Tuesday, July 13, 2021. Nathan was born March 18, 2005.

Presumed reports of Esparza's death:

Details for VAERS ID: 2459533-1

Event Information			
Patient Age	16.00	Sex	Unknown
State / Territory	California	Date Report Completed	2022-09-23
Date Vaccinated		Date Report Received	2022-09-24
Date of Onset		Date Died	
Days to onset			
Vaccine Administered By	Unknown	Vaccine Purchased By	Not Applicable *
Mfr/Imm Project Number	USMODERNATX, INC.MOD20226	Report Form Version	2
Recovered	No	Serious	Yes

* VAERS 2.0 Report Form Only
** VAERS-1 Report Form Only
"Not Applicable" will appear when information is not available on this report form version.

Event Categories	
Death	Yes
Life Threatening	No
Permanent Disability	No
Congenital Anomaly / Birth Defect *	No
Hospitalized	No
Days in Hospital	None
Existing Hospitalization Prolonged	No
Emergency Room / Office Visit **	N/A
Emergency Room *	No
Office Visit *	No

* VAERS 2.0 Report Form Only
** VAERS-1 Report Form Only
"N/A" will appear when information is not available on this report form version.

Vaccine Type	Vaccine	Manufacturer	Lot	Dose	Route	Site
COVID19 VACCINE	COVID19 (COVID19 (MODERNA))	MODERNA	NONE	UNK	OT	

Symptom
MYOCARDITIS

Adverse Event Description

Inflammation of the heart: This spontaneous case was reported by a consumer and describes the occurrence of MYOCARDITIS (inflammation of the heart) in a 16-year-old patient of an unknown gender who received mRNA-1273 (Moderna COVID-19 Vaccine) for COVID-19 prophylaxis. No Medical History information was reported. On an unknown date, the patient received dose of mRNA-1273 (Moderna COVID-19 Vaccine) (unknown route) 1 dosage form. On an unknown date, the patient experienced MYOCARDITIS (inflammation of the heart) (serious:caness criteria death). The reported cause of death was inflammation of the heart. It is unknown if an autopsy was performed. Concomitant medication list was not provided. Treatment information was not provided. Company comment: This spontaneous case concerns a 16 year old patient of unknown gender, with no reported medical history, who met with the fatal, unexpected AESI of Myocarditis, unknown days after receiving the dose of mRNA-1273 vaccine. The reporter mentioned that a cardiologist testified that mRNA vaccines cause inflammation of the heart and as a result two 16 yearolds died. They were discovered dead in bed by their parents. The reporter wanted to know the likelihood of his children having myocarditis decrease with each additional dose received. No information on patient specific risk factors, detailed clinical course, management of the event, dose number and manufacturer details was available in the report. The benefit-risk relationship of mRNA-1273 is not affected by this report. This case was linked to US-MODERNATX, INC.-MOD-2022-648153 (E2B Linked Report).; Sender's Comments: This spontaneous case concerns a 16 year old patient of unknown gender, with no reported medical history, who met with the fatal, unexpected AESI of Myocarditis, unknown days after receiving the dose of mRNA-1273 vaccine. The reporter mentioned that a cardiologist testified to a Pennsylvania senate that mRNA vaccines cause inflammation of the heart and as a result two 16 yearolds died. They were discovered dead in bed by their parents. The reporter wanted to know the likelihood of his children having myocarditis decrease with each additional dose received. No information on patient specific risk factors, detailed clinical course, management of the event, dose number and manufacturer details was available in the report. The benefit-risk relationship of mRNA-1273 is not affected by this report. US-MODERNATX, INC.-MOD-2022-648153:Reporter's case; Reported Cause(s) of Death: Inflammation of the heart.

Lab Data	Current Illness	Adverse Events After Prior Vaccinations

Medications At Time Of Vaccination	History/Allergies

Details for VAERS ID: 2459534-1

Event Information			
Patient Age	16.00	Sex	Unknown
State / Territory	California	Date Report Completed	2022-09-23
Date Vaccinated		Date Report Received	2022-09-24
Date of Onset		Date Died	
Days to onset			
Vaccine Administered By	Unknown	Vaccine Purchased By	Not Applicable *
Mfr/Imm Project Number	USMODERNATX, INC.MOD20226	Report Form Version	2
Recovered	No	Serious	Yes

* VAERS 2.0 Report Form Only
** VAERS-1 Report Form Only
"Not Applicable" will appear when information is not available on this report form version.

Event Categories	
Death	Yes
Life Threatening	No
Permanent Disability	No
Congenital Anomaly / Birth Defect *	No
Hospitalized	No
Days in Hospital	None
Existing Hospitalization Prolonged	No
Emergency Room / Office Visit **	N/A
Emergency Room *	No
Office Visit *	No

* VAERS 2.0 Report Form Only
** VAERS-1 Report Form Only
"N/A" will appear when information is not available on this report form version.

Vaccine Type	Vaccine	Manufacturer	Lot	Dose	Route	Site
COVID19 VACCINE	COVID19 (COVID19 (MODERNA))	MODERNA	NONE	UNK	OT	

Symptom
MYOCARDITIS

Adverse Event Description

This spontaneous case was reported by a consumer and describes the occurrence of MYOCARDITIS (inflammation of the heart) in a 16-year-old patient of an unknown gender who received mRNA-1273 (Moderna COVID-19 Vaccine) for COVID-19 prophylaxis. No Medical History information was reported. On an unknown date, the patient received dose of mRNA-1273 (Moderna COVID-19 Vaccine) (unknown route) 1 dosage form. On an unknown date, the patient experienced MYOCARDITIS (inflammation of the heart) (serious:caness criteria death and medically significant). The reported cause of death was inflammation of the heart. It is unknown if an autopsy was performed. No concomitant medication was reported. It was reported that mRNA vaccines cause inflammation of the heart and as a result patient was died. No treatment medication was reported. Company comment: The spontaneous case reported by a consumer, concerns a 16-yearold patient of unknown gender, with no reported medical history, experienced the serious (fatal and medically significant) unexpected AESI of Myocarditis which occurred unknown days after administration of a dose of mRNA-1273 vaccine. There is limited information regarding latency, clinical course, investigations, treatment received for the event, time and date of death, in the report. It was unknown whether an autopsy was performed. The benefit-risk relationship of mRNA-1273 Vaccine, is not affected by this report. This case was linked to US-MODERNATX, INC.-MOD-2022-648153 (E2B Linked Report). Sender's Comments: This spontaneous case reported by a consumer, concerns a 16-yearold patient of unknown gender, with no reported medical history, experienced the serious (fatal and medically significant) unexpected AESI of Myocarditis which occurred unknown days after administration of a dose of mRNA-1273 vaccine. There is limited information regarding latency, clinical course, investigations, treatment received for the event, time and date of death, in the report. It was unknown whether an autopsy was performed. The benefit-risk relationship of mRNA-1273 Vaccine, is not affected by this report. US-MODERNATX, INC.-MOD-2022-648153: reporter's case; Reported Cause(s) of Death: Inflammation of the heart.

Lab Data	Current Illness	Adverse Events After Prior Vaccinations

Medications At Time Of Vaccination	History/Allergies

One year ago: Sweden, Denmark pause Moderna COVID-19 vaccine for younger age groups

4. Healthy 16-year-old boy in California DIES after receiving second dose of Pfizer's coronavirus vaccine – VAERS ID 1466009 noted in news report:

Details for VAERS ID: 1466009-1

Event Information			
Patient Age	16.00	Sex	Male
State / Territory	California	Date Report Completed	2021-07-12
Date Vaccinated	2021-04-03	Date Report Received	2021-07-12
Date of Onset	2021-04-30	Date Died	2021-04-30
Days to onset	27		
Vaccine Administered By	Other	Vaccine Purchased By	Not Applicable *
Mfr/Imm Project Number	NONE	Report Form Version	2
Recovered	Missing	Serious	Yes

* VAERS 2.0 Report Form Only
** VAERS-1 Report Form Only
"Not Applicable" will appear when information is not available on this report form version.

Event Categories	
Death	Yes
Life Threatening	No
Permanent Disability	No
Congenital Anomaly / Birth Defect *	No
Hospitalized	Yes
Days in Hospital	8
Existing Hospitalization Prolonged	No
Emergency Room / Office Visit **	N/A
Emergency Room *	Yes
Office Visit *	No

* VAERS 2.0 Report Form Only
** VAERS-1 Report Form Only
"N/A" will appear when information is not available on this report form version.

Vaccine Type	Vaccine	Manufacturer	Lot	Dose	Route	Site
COVID19 VACCINE	COVID19 (COVID19 (PFIZER-BIONTECH))	PFIZER\BIONTECH	Er6207	1	SYR	LA
COVID19 VACCINE	COVID19 (COVID19 (PFIZER-BIONTECH))	PFIZER\BIONTECH	Er8724	1	SYR	LA

Symptom
AUTOPSY
DEATH

Adverse Event Description
My son died while taking his math class on Zoom. We are waiting for the autopsy because the doctors did not find anything. He was a healthy boy. He had a good academic index. He wanted to be a civil engineer. He was the best thing in my life.

Lab Data	Current Illness	Adverse Events After Prior Vaccinations
He had no previous symptoms. I was with him one hour before and my assistant saw him 20 minutes prior and he did not show any irregularities.	None	

Medications At Time Of Vaccination	History/Allergies
None	None/Jane

At a nation level there's now another actively updated website that keeps track of athletes believed to have died because of covid vaccination. At the time of this report there were 1354 athlete cardiac arrests or serious issues and 922 of them died after COVID-19 injection:

https://goodsciencing.com/covid/athletes-suffer-cardiac-arrest-die-after-covid-shot/

Just as we looked at deaths associated with all vaccines above, we can also look at all adverse events for all vaccines over all time. VAERS data shows that 64% of all these reports can be attributed to the COVID-19 vaccines.

Vaccine	Events Reported	Percent (of 2,320,851)
COVID19 (COVID19 (PFIZER-BIONTECH)) (1200)	876,419	37.76%
COVID19 (COVID19 (MODERNA)) (1201)	503,907	21.71%
COVID19 (COVID19 (JANSSEN)) (1203)	95,498	4.11%
VARICELLA (VARIVAX) (269)	79,868	3.44%
MEASLES + MUMPS + RUBELLA (MMR II) (26)	76,923	3.31%
PNEUMO (PNEUMOVAX) (30)	60,526	2.61%
ZOSTER (SHINGRIX) (1192)	60,339	2.60%
HPV (GARDASIL) (1098)	46,775	2.02%
ZOSTER LIVE (ZOSTAVAX) (1097)	42,574	1.83%
PNEUMO (PREVNAR13) (1141)	39,899	1.72%
INFLUENZA (SEASONAL) (FLUZONE) (7)	36,827	1.59%
HEP B (ENGERIX-B) (38)	34,084	1.47%
INFLUENZA (SEASONAL) (NO BRAND NAME) (44)	29,690	1.28%
PNEUMO (PREVNAR) (1001)	28,496	1.23%
HEP B (RECOMBIVAX HB) (25)	27,766	1.20%
VACCINE NOT SPECIFIED (NO BRAND NAME) (999)	26,842	1.16%
POLIO VIRUS, INACT. (IPOL) (1030)	25,530	1.10%
TDAP (ADACEL) (1092)	23,894	1.03%
ROTAVIRUS (ROTATEQ) (1096)	23,884	1.03%
DTAP (INFANRIX) (286)	23,273	1.00%
HEP A (HAVRIX) (268)	22,878	0.99%
POLIO VIRUS, ORAL (ORIMUNE) (17)	22,419	0.97%
HIB (ACTHIB) (256)	21,967	0.95%
MENINGOCOCCAL CONJUGATE (MENACTRA) (1090)	18,829	0.81%
INFLUENZA (SEASONAL) (FLUVIRIN) (262)	18,517	0.80%
MEASLES + MUMPS + RUBELLA + VARICELLA (PROQUAD) (1094)	18,460	0.80%
HPV (GARDASIL 9) (1170)	18,420	0.79%
INFLUENZA (SEASONAL) (FLUZONE HIGH-DOSE) (1145)	16,535	0.71%
TDAP (BOOSTRIX) (1091)	16,414	0.71%
HEP A (VAQTA) (280)	15,987	0.69%
DTP (NO BRAND NAME) (2)	15,926	0.69%
DTAP (DAPTACEL) (1064)	15,900	0.69%
HIB (HIBTITER) (35)	14,675	0.63%
DTAP (TRIPEDIA) (242)	14,560	0.63%
INFLUENZA (SEASONAL) (FLUZONE QUADRIVALENT) (1162)	14,213	0.61%
TD ADSORBED (NO BRAND NAME) (11)	14,068	0.61%
HIB (PEDVAXHIB) (129)	13,254	0.57%
DTAP + HEPB + IPV (PEDIARIX) (1082)	11,717	0.50%
INFLUENZA (SEASONAL) (FLUARIX QUADRIVALENT) (1161)	10,353	0.45%
ROTAVIRUS (ROTARIX) (1124)	10,105	0.44%
POLIO VIRUS, INACT. (POLIOVAX) (9)	9,944	0.43%
DTAP + IPV + HIB (PENTACEL) (1125)	9,244	0.40%
MENINGOCOCCAL B (BEXSERO) (1165)	9,104	0.39%
DTAP + IPV (KINRIX) (1126)	8,657	0.37%
COVID19 (COVID19 (UNKNOWN)) (1202)	8,408	0.36%
DTP (TRI-IMMUNOL) (22)	8,137	0.35%
POLIO VIRUS, INACT. (NO BRAND NAME) (232)	8,070	0.35%
HEP B (NO BRAND NAME) (110)	8,019	0.35%
MENINGOCOCCAL CONJUGATE (MENVEO) (1140)	7,674	0.33%
MEASLES + MUMPS + RUBELLA (NO BRAND NAME) (114)	7,550	0.33%
INFLUENZA (SEASONAL) (AFLURIA) (1121)	7,469	0.32%

Published research or case studies addressing vaccine injury from either journals or the media tend to report these adverse events in terms of percentages rather than absolute number of persons affected. Whether the intent is accidental or intentional, reporting of percentages tends to soften impressions on the reader of how dangerous the vaccines actually are compared to legacy vaccines. For example, given the total number of doses administered, the percentage of deaths associated with the vaccine is *less than* 0.005%. This appears to be a very small number, but since there are 624 million doses even a small percentage like this represents over 31,000 deaths! That's just not acceptable for a treatment that the recipient believes to be 'safe and effective'.

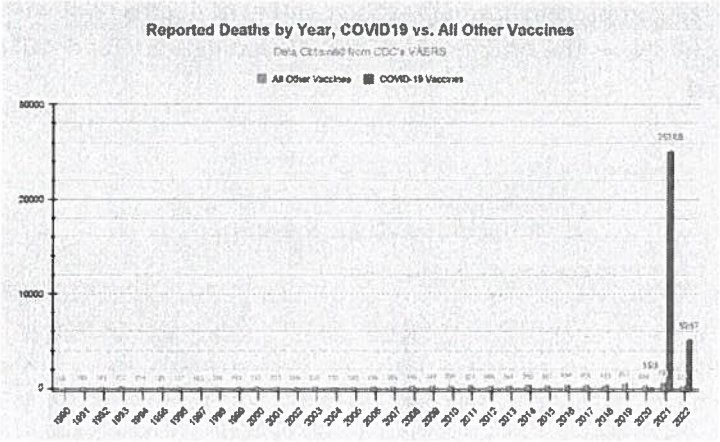
There is no consolation for the victims and friends and family that lost their loved ones – especially if they were young and fit and may have easily survived a COVID-19 infection with early therapeutic treatment –

or perhaps never infected in the first place. The magnitude of harm caused by these vaccines further exposes the unethical nature of these policies.

Since the beginning of vaccine distribution it's been difficult to establish solid evidence that COVID-19 vaccines provide benefits that exceed harms, since the number of true COVID-19 cases has been obfuscated by inaccurate PCR testing with a high rate of false positives[26] [27], and the true number of deaths caused by COVID-19 infection confounded by the fact that many were actually persons "dying with covid positive tests" rather than "dying from covid infection". Indeed the enigma of correlation vs. causation cuts both ways.

Add to this the confusion surrounding TRUE efficacy of the vaccines and the release of the phase 3 trial results earlier this year. The data sent from Pfizer to the FDA in early 2021 took a FOIA, a lawsuit and court order to get the FDA to release it. The released report[28][29], now accessible by the public, reveals that Pfizer and the FDA have committed a crime, possibly colluding to hide damaging information from the public. The data should have, at the very least, forced the FDA to black label the vaccine. But a more appropriate action would have been a recall. Yet MANY people, now children as young as 6 months old, continue to receive the vaccines! About 13 million more doses received by Americans since the last report.

To further contrast the disparity of harm between the covid19 vaccines and legacy vaccines, all adverse events from all other vaccines collectively were compared over the 32 year timeline of vaccine tracking in VAERS. The blue spike on the following graph towards the right represents this last year where the covid-19 vaccine was rolled out. This graph obtained at https://vaersanalysis.info/2022/10/7/vaers-summary-for-covid-19-vaccines-through-9-30-2022/, was last updated 9/30/2022.



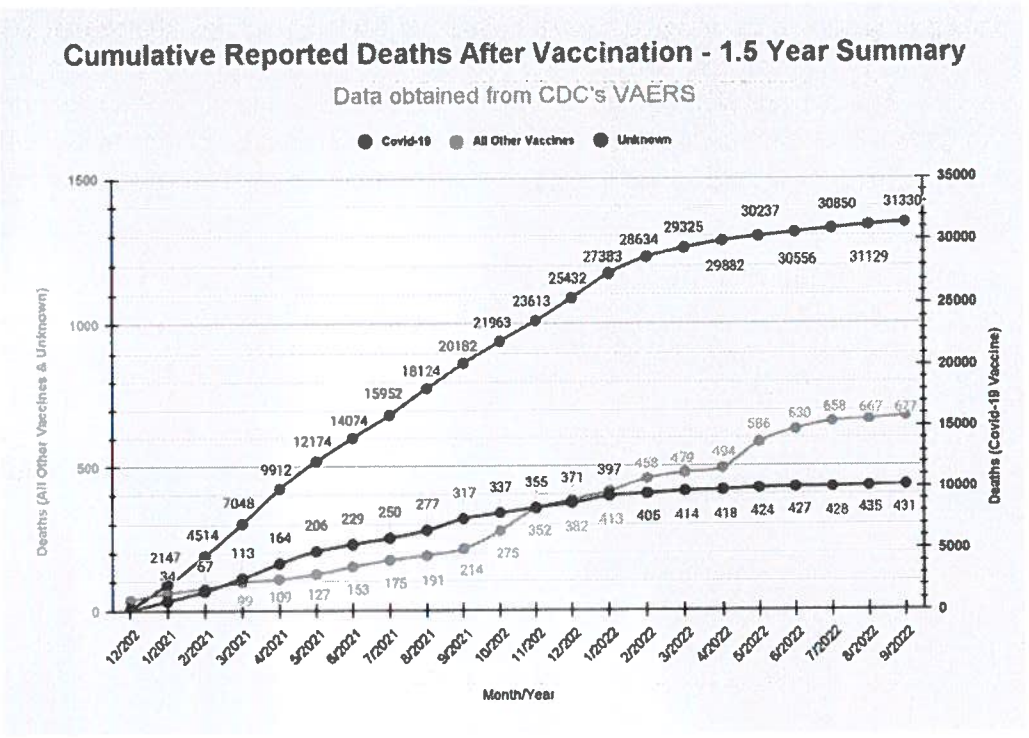
[26] Elena Surkova, Vladyslav Nikolayevskyy, Francis Drobniewski, **False-positive COVID-19 results: hidden problems and costs**, The Lancet Respiratory Medicine, VOLUME 8, ISSUE 12, P1167-1168, DECEMBER 01, 2020 https://www.thelancet.com/action/showPdf?pii=S2213-2600%2820%2930453-7

[27] Ferté T, Ramel V, Cazanave C, Lafon ME, Bébéar C, Malvy D, Georges-Walryck A, Dehail P. Accuracy of COVID-19 rapid antigenic tests compared to RT-PCR in a student population: The StudyCov study. J Clin Virol. 2021 Aug;141:104878. doi: 10.1016/j.jcv.2021.104878. Epub 2021 Jun 5. PMID: 34134035; PMCID: PMC8178956. https://pubmed.ncbi.nlm.nih.gov/34134035/

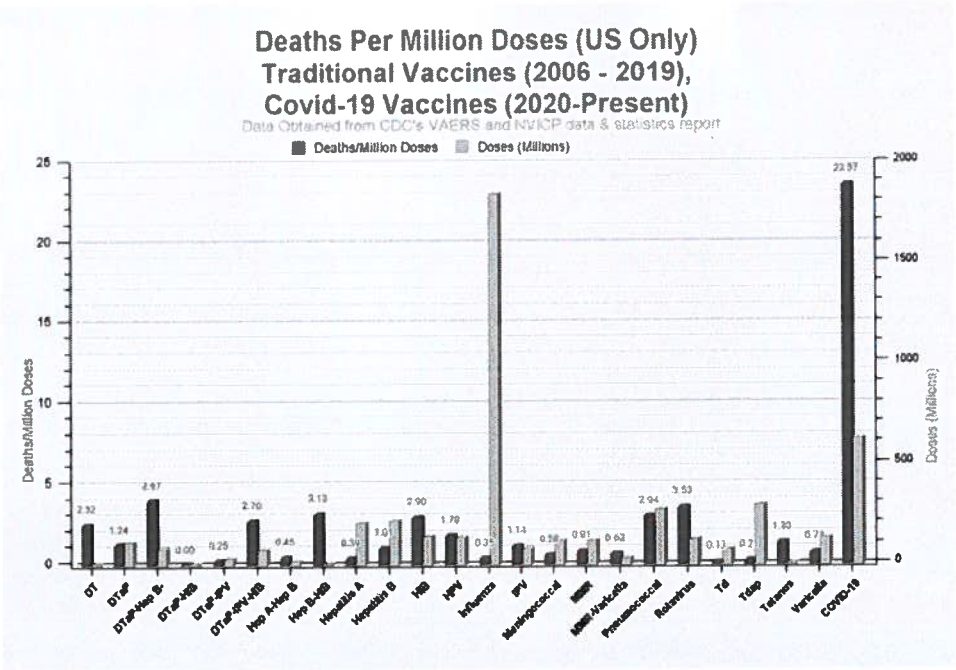
[28] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1063378/Vaccine_Analysis_Print_Pfizer_BioNTech_COVID-19_vaccine_16.03.2022_v3.pdf

[29] CUMULATIVE ANALYSIS OF POST-AUTHORIZATION ADVERSE EVENT REPORTS OF PF-07302048 (BNT162B2) RECEIVED THROUGH 28-FEB-2021

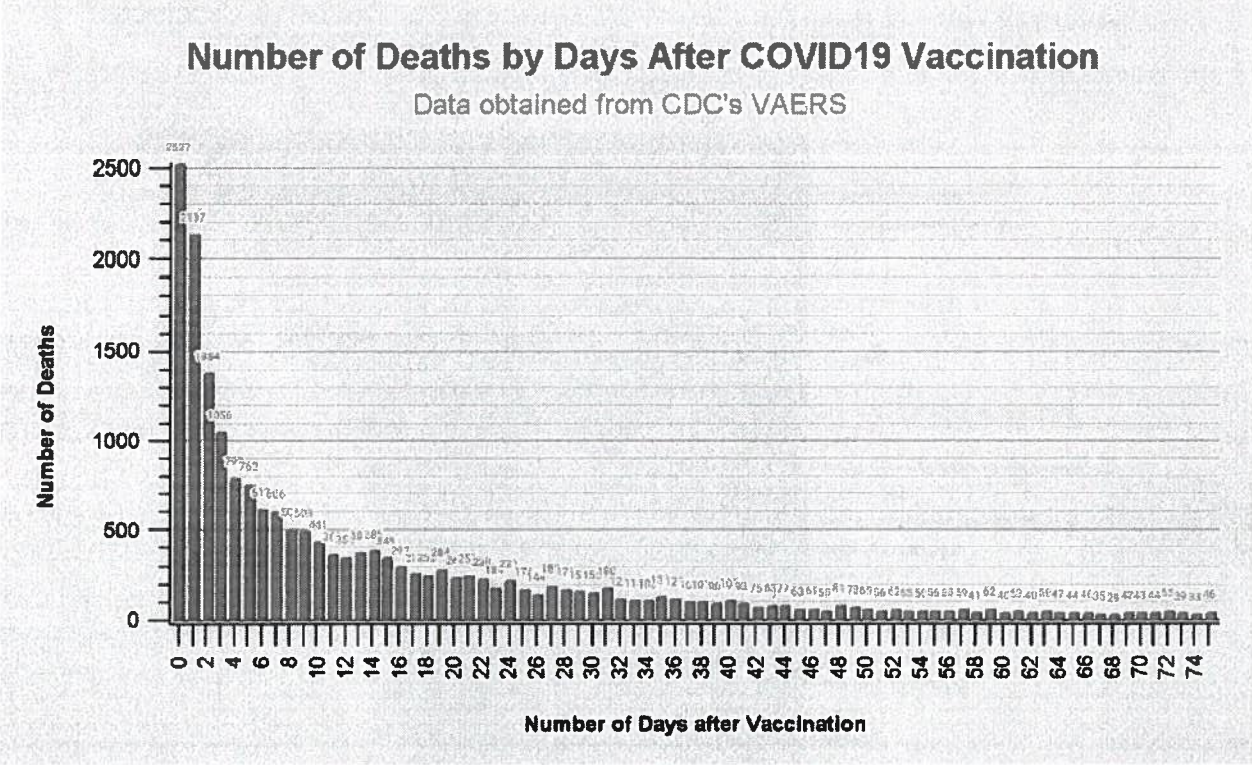
The following graphs are obtained from the same source. This graph provides a year end summary (2021) of cumulative deaths comparing the covid 19 vaccines with all other vaccines.



Perhaps a more fair comparison normalizes the number of deaths relative to number of doses. The following graph still shows the stark truth; COVID-19 vaccines are far deadlier than any other vaccine ever administered.



This graph plots the onset of death following the immunization event indicating strong correlation, a necessary (although not sufficient) condition to show causation. Roughly 1/3 of these deaths occurred within 2 days of injection.

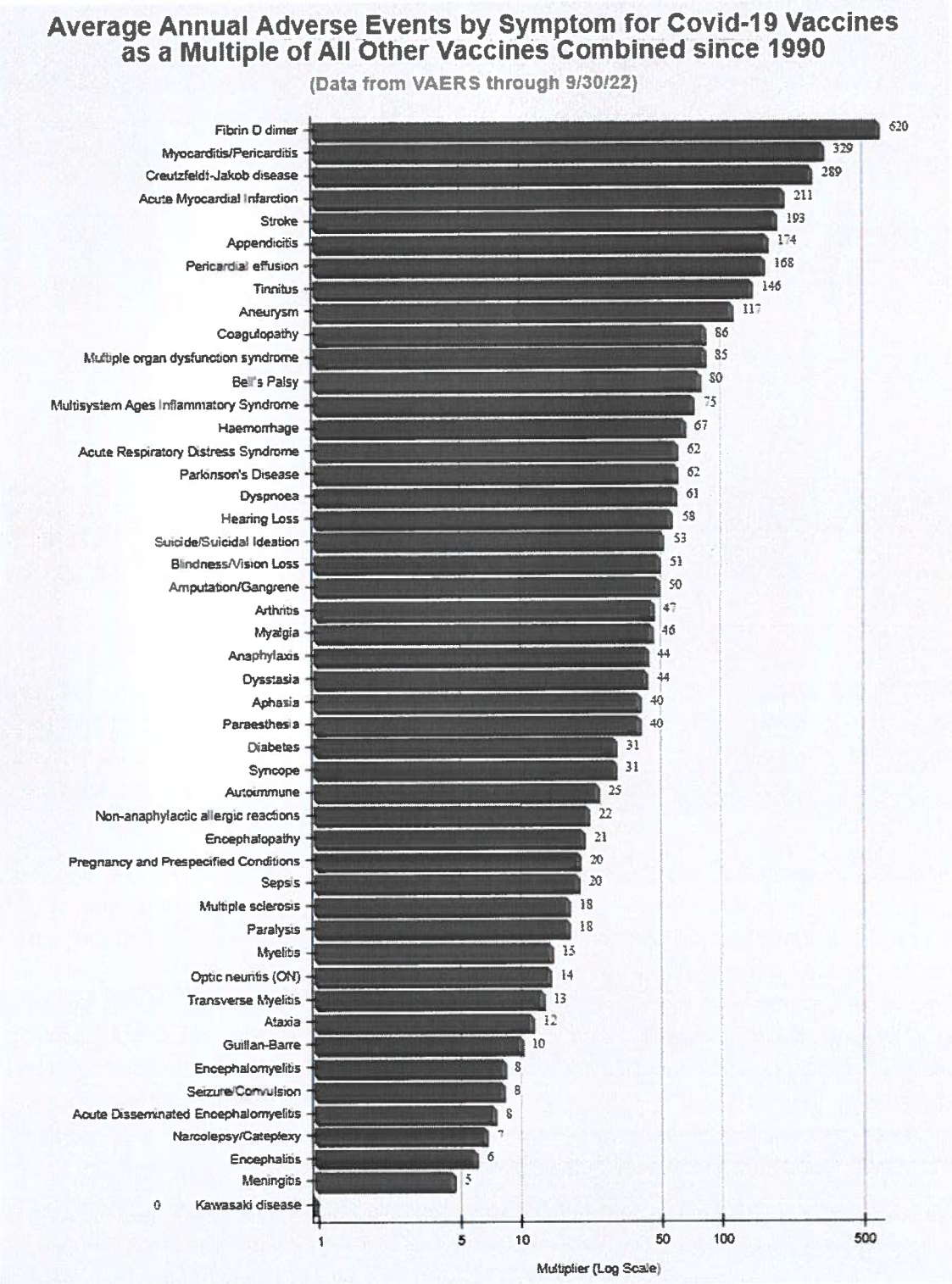


Again, to be fair, the 0th and 1st day data may be biased by reporters not knowing exactly which day death occurred so they entered either 0 or 1. This was confirmed by reading actual reports report descriptions for onset of zero and 1 data sets. The descriptions for some of these cases actually indicated longer onset intervals. Nevertheless, the preponderance of remaining reports indicate a trend showing definite temporal correlation.

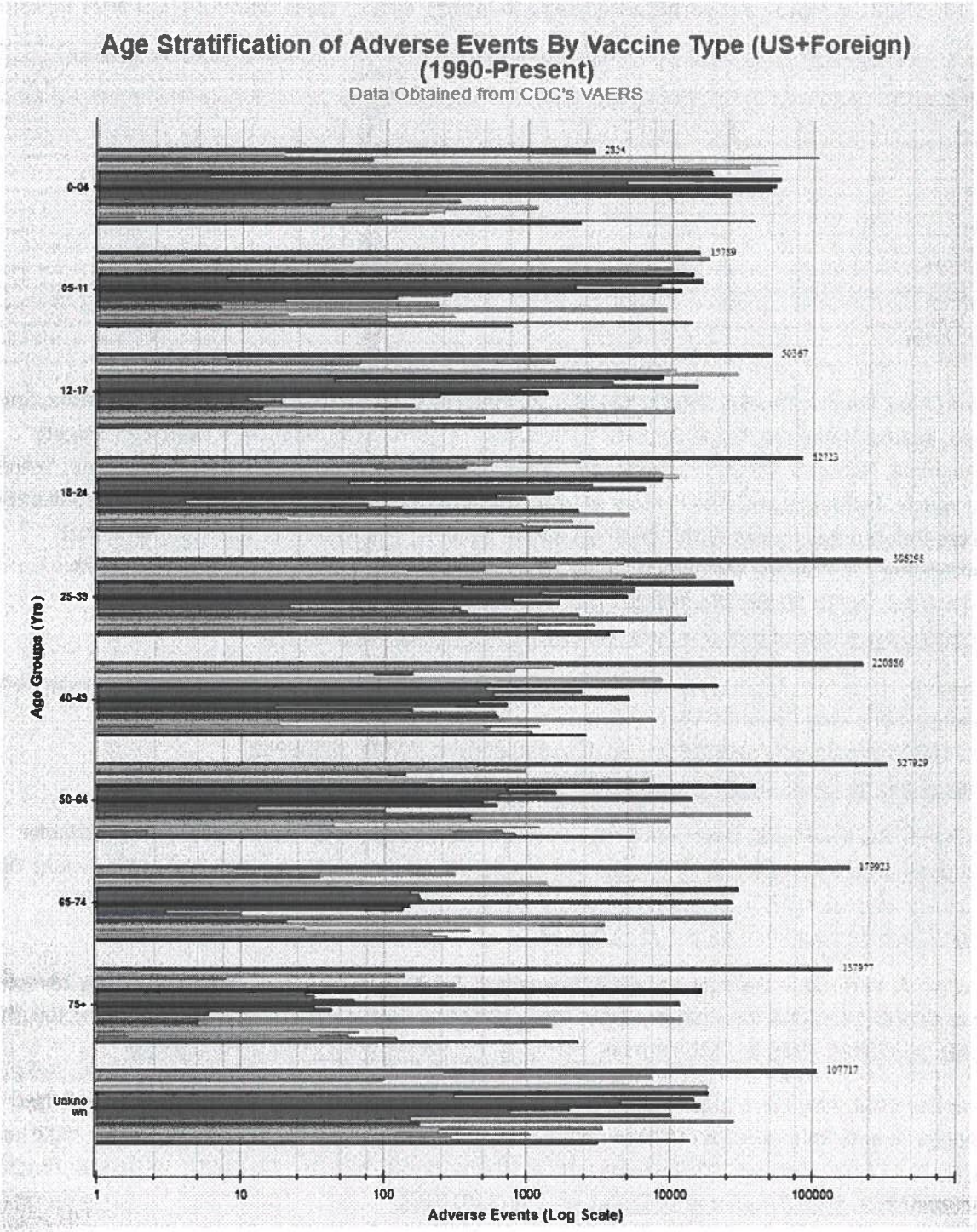
The following graph reveals D-dimer tests top the list of 'events' reported for covid-19 vaccines. This is because events reported in VAERS are not necessarily outcomes, but can be procedures performed or tests ordered by physicians. This result is probably evidence that medical doctors treating vaccine recipients are truly *anticipating* thrombogenesis from the vaccines. The doctors may not be able to publicly come out and raise objections to the COVID-19 vaccines, but we see here they are acting in interest of their patient's health! High D-dimer indicates that clotting has been triggered in the bloodstream and there is increased risk for further clotting > platelets & fibrin attaching to red blood cells, at first creating 'micro-emboli' , clot structures that flow with the blood stream. These can combine and create larger emboli, and if large enough, can cut off blood supply which can be lethal. D-dimer is clinically used to determine stroke, pulmonary embolism or deep vein thrombosis.

The analysis from the graph indicates that the COVID-19 vaccines have thus far resulted in Fibrin "D-dimer tests" having a higher frequency (X 833) over all other vaccines combined. It also wasn't clear what was meant just by the tag "Fibrin D-dimer". Does that mean high level/low level? VAERS allows query of more detailed information and it further describes this tag as "Fragment D-Dimer" which I believe just means

presence of the dimer which is presumably the byproduct of clot decomposition by the enzyme plasmin. There are other associated tags, and perhaps the FIBRIN D DIMER INCREASED tag would have been more appropriate.



The following graph compares deaths between all types of vaccines according to age group. Note that the horizontal scale is on a logarithmic scale since COVID-19 vaccine associated deaths above 18 years old would otherwise dwarf all other vaccines. Since the approval of vaccines for children down to 6 months old has happened only very recently, the younger age groups 0-4 and 5-11 are 'catching up' as did the adult injury and death for the adults did in only two months after COVID-19 vaccines were dispatched.



13. The following **numbers** consider more specific adverse events that have been reported to VAERS and associated with the COVID19 vaccines that may or may not have led to death (as of June 10, 2022). These numbers are cumulative events entered since the roll out of the COVID-19 vaccines. Published references and links that relate to these specific events connected with the COVID-19 vaccine are included as supplementary information.

14. **33,981 symptoms reported as syncope (fainting)**; 61% of cases IMMEDIATELY after injection.

Onset Interval	Events Reported	Percent (of 33,981)
0 days	20,616	60.67%
1 day	4,571	13.45%
2 days	783	2.30%
3 days	373	1.10%
4 days	273	0.80%
5 days	229	0.67%
6 days	141	0.41%
7 days	192	0.57%
8 days	128	0.38%
9 days	120	0.35%
10-14 days	424	1.25%
15-30 days	808	2.38%
31-60 days	472	1.39%
61-120 days	230	0.68%
Over 120 days	544	1.60%
Unknown	4,077	12.00%

Kazuo Imai, Fumika Tanaka, Shuichi Kawano, Kotoba Esaki, Junko Arakawa, Takashi Nishiyama, Soichiro Seno, Kosuke Hatanaka, Takao Sugiura, Yu Kodama, Seigo Yamada, Shinichiro Iwamoto, Shigeto Takeshima, Nobujiro Abe, Chikako Kamae, Shigeaki Aono, Toshimitsu Ito, Tetsuo Yamamoto, Yasunori Mizuguchi, **Incidence and Risk Factors of Immediate Hypersensitivity Reactions and Immunization Stress-Related Responses With COVID-19 mRNA Vaccine**, The Journal of Allergy and Clinical Immunology: In Practice, Volume 10, Issue 10, 2022, Pages 2667-2676.e10, ISSN 2213-2198, https://doi.org/10.1016/j.jaip.2022.07.027
https://www.sciencedirect.com/science/article/pii/S2213219822007978

Takase B, Hayashi K, Takei S, Hisada T, Masaki N, Nagata M. **Delayed Vasovagal Reaction with Reflex Syncope Following Covid-19 Vaccination**. Intern Med. 2022 May 14. doi: 10.2169/internalmedicine.9318-21. Epub ahead of print. PMID: 35569982.
https://pubmed.ncbi.nlm.nih.gov/35569982/

Kimball E, Buchwalder K, Upchurch C, Kea B. **Intermittent complete heart block with ventricular standstill after Pfizer COVID-19 booster vaccination: A case report**. J Am Coll Emerg Physicians Open. 2022 Apr 20;3(2):e12723. doi: 10.1002/emp2.12723. PMID: 35475120; PMCID: PMC9020811.
https://pubmed.ncbi.nlm.nih.gov/35475120/

Frustaci A, Verardo R, Galea N, Lavalle C, Bagnato G, Scialla R, Chimenti C. **Hypersensitivity Myocarditis after COVID-19 mRNA Vaccination**. J Clin Med. 2022 Mar 16;11(6):1660. doi: 10.3390/jcm11061660. PMID: 35329986; PMCID: PMC8949349. https://pubmed.ncbi.nlm.nih.gov/35329986/

Almohaya AM, Alsubie H, Alqarni B, Alzayad B, Alghar A, Alshahrani K, Barry M. **Acute unsolicited adverse events following BNT162b2 vaccine in Saudi Arabia, a real-world data. Vaccine**. 2022 Jan 24;40(3):477-482. doi: 10.1016/j.vaccine.2021.12.001. Epub 2021 Dec 13. PMID: 34916104; PMCID: PMC8668155. https://pubmed.ncbi.nlm.nih.gov/34916104/

Mohammed RA, Garout RM, Wahid S, Ayub F, Firas ZinAlddin LM, Sultan I. **A Survey on the Side Effects of Pfizer/BioNTech COVID-19 Vaccine Among Vaccinated Adults in Saudi Arabia**. Cureus. 2021 Nov 3;13(11):e19222. doi: 10.7759/cureus.19222. PMID: 34873547; PMCID: PMC8640570. https://pubmed.ncbi.nlm.nih.gov/34873547/

Azdaki N, Farzad M. **Long QT interval and syncope after a single dose of COVID-19 vaccination: a case report**. Pan Afr Med J. 2021 Sep 30;40:67. doi: 10.11604/pamj.2021.40.67.31546. PMID: 34804335; PMCID: PMC8590254. https://pubmed.ncbi.nlm.nih.gov/34804335/

> *We report a case of a 70-year-old man who presented to the hospital for some syncope, 3 days after his first COVID-19 AstraZeneca Vaccination. Initial electrocardiogram (ECG) showed a long QT interval (QTc = 600 milliseconds). Laboratory tests revealed elevated troponin and lack of evidence of viral infection. Further investigations revealed the vaccine-induced myocarditis and arrhythmias linked to it.*

Kim MS, Jung SY, Ahn JG, Park SJ, Shoenfeld Y, Kronbichler A, Koyanagi A, Dragioti E, Tizaoui K, Hong SH, Jacob L, Salem JE, Yon DK, Lee SW, Ogino S, Kim H, Kim JH, Excler JL, Marks F, Clemens JD, Eisenhut M, Barnett Y, Butler L, Ilie CP, Shin EC, Il Shin J, Smith L. **Comparative safety of mRNA COVID-19 vaccines to influenza vaccines: A pharmacovigilance analysis using WHO international database**. J Med Virol. 2021 Oct 28:10.1002/jmv.27424. doi: 10.1002/jmv.27424. Epub ahead of print. PMID: 34709664; PMCID: PMC8662238. https://pubmed.ncbi.nlm.nih.gov/34709664/

Hause AM, Gee J, Johnson T, Jazwa A, Marquez P, Miller E, Su J, Shimabukuro TT, Shay DK. **Anxiety-Related Adverse Event Clusters After Janssen COVID-19 Vaccination - Five U.S. Mass Vaccination Sites**, April 2021. MMWR Morb Mortal Wkly Rep. 2021 May 7;70(18):685-688. doi: 10.15585/mmwr.mm7018e3. PMID: 33956781. https://pubmed.ncbi.nlm.nih.gov/33956781/

> *Syncope after Janssen COVID-19 vaccination was reported to VAERS (8.2 episodes per 100,000 doses). By comparison, after influenza vaccination, the reporting rate of syncope was 0.05 episodes per 100,000 doses.*

The following chart reports incidence of syncope following vaccination for all vaccines sorted by largest incidence. COVID-19 vaccines account for over 66% of all vaccines for all time.

Vaccine	Events Reported	Percent (of 52,403)
COVID19 (COVID19 (PFIZER-BIONTECH)) (1200)	22,410	42.76%
COVID19 (COVID19 (MODERNA)) (1201)	8,469	16.16%
HPV (GARDASIL) (1098)	5,267	10.05%
COVID19 (COVID19 (JANSSEN)) (1203)	3,484	6.65%
MENINGOCOCCAL CONJUGATE (MENACTRA) (1090)	1,905	3.64%
HPV (GARDASIL 9) (1170)	1,562	2.98%
MEASLES + MUMPS + RUBELLA (MMR II) (26)	1,258	2.40%
TDAP (BOOSTRIX) (1091)	1,087	2.07%
HEP A (HAVRIX) (268)	1,082	2.06%
TDAP (ADACEL) (1092)	1,005	1.92%
VARICELLA (VARIVAX) (269)	911	1.74%
HEP B (ENGERIX-B) (38)	828	1.58%
HPV (CERVARIX) (1136)	682	1.30%
INFLUENZA (SEASONAL) (FLUZONE) (7)	596	1.14%
TD ADSORBED (NO BRAND NAME) (11)	556	1.06%
ZOSTER (SHINGRIX) (1192)	471	0.90%
HEP B (RECOMBIVAX HB) (25)	467	0.89%
MENINGOCOCCAL CONJUGATE (MENVEO) (1140)	460	0.88%
INFLUENZA (SEASONAL) (NO BRAND NAME) (44)	424	0.81%
INFLUENZA (SEASONAL) (FLUZONE QUADRIVALENT) (1162)	404	0.77%
PNEUMO (PNEUMOVAX) (30)	404	0.77%
VACCINE NOT SPECIFIED (NO BRAND NAME) (999)	399	0.76%
HEP A (VAQTA) (280)	385	0.73%
MENINGOCOCCAL B (BEXSERO) (1165)	363	0.69%
INFLUENZA (SEASONAL) (FLUVIRIN) (262)	344	0.66%
INFLUENZA (SEASONAL) (FLUARIX QUADRIVALENT) (1161)	334	0.64%
POLIO VIRUS, ORAL (ORIMUNE) (17)	334	0.64%
HPV (NO BRAND NAME) (1102)	296	0.56%
POLIO VIRUS, INACT. (IPOL) (1030)	282	0.54%
PNEUMO (PREVNAR13) (1141)	228	0.44%
INFLUENZA (SEASONAL) (FLUCELVAX QUADRIVALENT) (1175)	221	0.42%
HEP A + HEP B (TWINRIX) (1009)	215	0.41%
TYPHOID VI POLYSACCHARIDE (TYPHIM VI) (271)	208	0.40%
MENINGOCOCCAL B (TRUMENBA) (1169)	204	0.39%
INFLUENZA (SEASONAL) (AFLURIA QUADRIVALENT) (1177)	192	0.37%
DTP (NO BRAND NAME) (2)	169	0.32%
MENINGOCOCCAL (NO BRAND NAME) (113)	167	0.32%
POLIO VIRUS, INACT. (NO BRAND NAME) (232)	152	0.29%
DTAP (INFANRIX) (286)	150	0.29%
INFLUENZA (SEASONAL) (FLULAVAL QUADRIVALENT) (1166)	132	0.25%
INFLUENZA (SEASONAL) (AFLURIA) (1121)	129	0.25%
INFLUENZA (H1N1) (H1N1 (MONOVALENT) (SANOFI)) (1132)	126	0.24%
TDAP (NO BRAND NAME) (1104)	121	0.23%
MEASLES + MUMPS + RUBELLA (NO BRAND NAME) (114)	119	0.23%
INFLUENZA (SEASONAL) (FLUZONE HIGH-DOSE) (1145)	118	0.23%
DTP (TRI-IMMUNOL) (22)	109	0.21%
PNEUMO (PREVNAR) (1001)	104	0.20%
HEP A (NO BRAND NAME) (279)	101	0.19%
INFLUENZA (SEASONAL) (FLUMIST) (1085)	97	0.19%
ZOSTER LIVE (ZOSTAVAX) (1097)	97	0.19%

15. **4,113 symptoms reported as sudden cardiac death, cardiac death, sudden death or cardiac failure**; 35% within two days after injection.

Choi S, Lee S, Seo JW, Kim MJ, Jeon YH, Park JH, Lee JK, Yeo NS. **Myocarditis-induced Sudden Death after BNT162b2 mRNA COVID-19 Vaccination in Korea**: Case Report Focusing on Histopathological Findings. J Korean Med Sci. 2021 Oct 18;36(40):e286. doi: 10.3346/jkms.2021.36.e286. PMID: 34664804; PMCID: PMC8524235. https://pubmed.ncbi.nlm.nih.gov/34664804/

Chupong Ittiwut, Surakameth Mahasirimongkol, Smith Srisont, Rungnapa Ittiwut, Manoch Chockjamsai, Piya Durongkadech, Waritta Sawaengdee, Athiwat Khunphon, Kanidsorn Larpadisorn, Sukanya Wattanapokayakit, Suppachok Wetchaphanphesat, Surachet Arunotong, Suphot Srimahachota, Chakrarat Pittayawonganon, Panithee Thammawijaya, Derek Sutdan, Pawinee Doungngern, Apichai Khongphatthanayothin, Stephen J. Kerr, Vorasuk Shotelersuk,

Genetic basis of sudden death after COVID-19 vaccination in Thailand, Heart Rhythm, 2022, ISSN 1547-5271, https://doi.org/10.1016/j.hrthm.2022.07.019 https://www.sciencedirect.com/science/article/pii/S1547527122022664

Baronti A, Gentile F, Manetti AC, Scatena A, Pellegrini S, Pucci A, Franzini M, Castiglione V, Maiese A, Giannoni A, Pistello M, Emdin M, Aquaro GD, Di Paolo M. **Myocardial Infarction Following COVID-19 Vaccine Administration: Post Hoc, Ergo Propter Hoc?** Viruses. 2022 Jul 27;14(8):1644. doi: 10.3390/v14081644. PMID: 36016266; PMCID: PMC9413746. https://pubmed.ncbi.nlm.nih.gov/36016266/

Caturano A, Pafundi PC, Sasso FC, Dendramis G, Brugada P, Russo V. **Brugada syndrome and COVID-19 vaccines** [published online ahead of print, 2021 Aug 11]. Europace. 2021;euab211. doi:10.1093/europace/euab211 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8385984/pdf/euab211.pdf

16. **12,642 Symptoms reported as blindness, amaurosis fugax, transient blindness, unilateral blindness, or visual impairment**; 55% within two days after injection

Mahajan A, Phuljhele S. **A rare case of cortical blindness following vaccination against SARS-CoV-2.** Indian J Ophthalmol. 2022 Oct;70(10):3721-3723. doi: 10.4103/ijo.IJO_1619_22. PMID: 36190083. https://pubmed.ncbi.nlm.nih.gov/36190083/

Waseem S, Ahmed SH, Fatima S, Shaikh TG, Ahmed J. **SARS-CoV-2 vaccination and uveitis: Are they linked?** Ann Med Surg (Lond). 2022 Sep;81:104472. doi: 10.1016/j.amsu.2022.104472. Epub 2022 Aug 28. PMID: 36060437; PMCID: PMC9420081. https://pubmed.ncbi.nlm.nih.gov/36060437/

Jarius S, Bieber N, Haas J, Wildemann B. **MOG encephalomyelitis after vaccination against severe acute respiratory syndrome coronavirus type 2 (SARS-CoV-2): case report and comprehensive review of the literature**. J Neurol. 2022 Oct;269(10):5198-5212. doi: 10.1007/s00415-022-11194-9. Epub 2022 Jun 23. PMID: 35737110; PMCID: PMC9219396. https://pubmed.ncbi.nlm.nih.gov/35737110/

Sanjay S, Acharya I, Kawali A, Shetty R, Mahendradas P. **Unilateral recurrent central serous chorioretinopathy (CSCR) following COVID-19 vaccination- A multimodal imaging study**. Am J Ophthalmol Case Rep. 2022 Sep;27:101644. doi: 10.1016/j.ajoc.2022.101644. Epub 2022 Jul 6. PMID: 35818570; PMCID: PMC9258414. https://pubmed.ncbi.nlm.nih.gov/35818570/

Alhamazani MA, Alruwaili WS, Alshammri B, Alrashidi S, Almasaud J. **A Case of Recurrent Acute Anterior Uveitis After the Administration of COVID-19 Vaccine**. Cureus. 2022 Mar 7;14(3):e22911. doi: 10.7759/cureus.22911. PMID: 35399463; PMCID: PMC8986516. https://pubmed.ncbi.nlm.nih.gov/35399463/

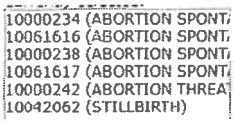
Joo CW, Kim YK, Park SP. **Vogt-Koyanagi-Harada Disease following mRNA-1273 (Moderna) COVID-19 Vaccination**. Ocul Immunol Inflamm. 2022 Apr 11:1-5. doi: 10.1080/09273948.2022.2053547. Epub ahead of print. PMID: 35404752. https://pubmed.ncbi.nlm.nih.gov/35404752/

Ishibashi K, Yatsuka H, Haruta M, Kimoto K, Yoshida S, Kubota T. **Branch Retinal Artery Occlusions, Paracentral Acute Middle Maculopathy and Acute Macular Neuroretinopathy After COVID-19 Vaccinations.** Clin Ophthalmol. 2022 Mar 31;16:987-992. doi: 10.2147/OPTH.S357359. PMID: 35392428; PMCID: PMC8980294. https://pubmed.ncbi.nlm.nih.gov/35392428/

García-Estrada, C, Gómez-Figueroa, E, Alban, L, Arias-Cárdenas, A. **Optic neuritis after COVID-19 vaccine application.** Clin Exp Neuroimmunol. 2021; 00: 1– 3. https://doi.org/10.1111/cen3.12682 https://onlinelibrary.wiley.com/doi/epdf/10.1111/cen3.12682

Nicholas Fowler, Noe R. Mendez Martinez, Bernardo Velazquez Pallares, Ramiro S. Maldonado, **Acute-onset central serous retinopathy after immunization with COVID-19 mRNA vaccine,** American Journal of Ophthalmology Case Reports, Volume 23, 2021, 101136, ISSN 2451-9936, https://doi.org/10.1016/j.ajoc.2021.101136. https://www.sciencedirect.com/science/article/pii/S2451993621001456

17. **3,601 Symptoms reported as miscarriage, stillbirth or spontaneous abortion;** 28% within two days after injection.



Noé Chartier wrote in the Epoch Times[30] September 1, 2022 that Pfizer abruptly, and without detailed explanation stopped its COVID-19 clinical trials in pregnant women after an internal email was produced as evidence in a recent court case.

Kouba I, Yaghoubian Y, Rochelson B, Shan W, Combs A, Nimaroff M, Blitz MJ. **Acceptance of coronavirus disease 2019 vaccination among postpartum women during delivery hospitalization.** J Matern Fetal Neonatal Med. 2022 Oct 9:1-4. doi: 10.1080/14767058.2022.2131386. Epub ahead of print. PMID: 36210157. https://pubmed.ncbi.nlm.nih.gov/36210157/

Sutanto MY, Hosek MG, Stumpff SK, Neuhoff BK, Hernandez BS, Wang Z, Ramsey PS, Boyd AR. **Sociodemographic predictors of COVID-19 vaccine hesitancy and leading concerns with COVID-19 vaccines among pregnant women at a South Texas clinic.** J Matern Fetal Neonatal Med. 2022 Oct 4:1-7. doi: 10.1080/14767058.2022.2128652. Epub ahead of print. PMID: 36195447. https://pubmed.ncbi.nlm.nih.gov/36195447/

Ahn KH, Kim HI, Lee KS, Heo JS, Kim HY, Cho GJ, Hong SC, Oh MJ, Kim HJ. **COVID-19 and vaccination during pregnancy: a systematic analysis using Korea National Health Insurance claims data.** Obstet Gynecol Sci. 2022 Aug 2. doi: 10.5468/ogs.22060. Epub ahead of print. PMID: 35916014. https://pubmed.ncbi.nlm.nih.gov/35916014/

The main problem with this South Korean study above is it's a *comparative* study between different COVID-19 vaccines without consideration of the *no vaccine* case. Serious side effects indeed were noted

[30] https://www.theepochtimes.com/mkt_app/pfizer-has-stopped-its-covid-vaccine-clinical-trial-in-pregnant-women-internal-email_4700143.html

among the vaccinated, but there is no *control group* cited; outcomes of unvaccinated pregnant women were not included in the comparisons. And this fact is not pointed out in any of the analyses or conclusions.

Dabbousi AA, El Masri J, El Ayoubi LM, Ismail O, Zreika B, Salameh P. **Menstrual abnormalities post-COVID vaccination: a cross-sectional study on adult Lebanese women**. Ir J Med Sci. 2022 Jul 26:1–8. doi: 10.1007/s11845-022-03089-5. Epub ahead of print. PMID: 35881229; PMCID: PMC9315076. https://pubmed.ncbi.nlm.nih.gov/35881229/

Pietrasanta C, Ronchi A, Crippa BL, Artieri G, Ballerini C, Crimi R, Mosca F, Pugni L. **Coronavirus Disease 2019 Vaccination During Pregnancy and Breastfeeding: A Review of Evidence and Current Recommendations in Europe, North America, and Australasia**. Front Pediatr. 2022 Apr 29;10:883953. doi: 10.3389/fped.2022.883953. PMID: 35573944; PMCID: PMC9099048. https://pubmed.ncbi.nlm.nih.gov/35573944/

Moro PL, Olson CK, Clark E, Marquez P, Strid P, Ellington S, Zhang B, Mba-Jonas A, Alimchandani M, Cragan J, Moore C. **Post-authorization surveillance of adverse events following COVID-19 vaccines in pregnant persons in the vaccine adverse event reporting system (VAERS), December 2020 - October 2021**. Vaccine. 2022 Apr 12:S0264-410X(22)00447-9. doi: 10.1016/j.vaccine.2022.04.031. Epub ahead of print. PMID: 35489985; PMCID: PMC9001176. https://pubmed.ncbi.nlm.nih.gov/35489985/

Edelman A, Boniface ER, Benhar E, Han L, Matteson KA, Favaro C, Pearson JT, Darney BG. **Association Between Menstrual Cycle Length and Coronavirus Disease 2019 (COVID-19) Vaccination: A U.S. Cohort**. Obstet Gynecol. 2022 Jan 5. doi: 10.1097/AOG.0000000000004695. Epub ahead of print. PMID: 34991109. https://pubmed.ncbi.nlm.nih.gov/34991109/

Bartoszek K, Okrój M. **Controversies around the statistical presentation of data on mRNA-COVID 19 vaccine safety in pregnant women**. J Reprod Immunol. 2022 Mar 4;151:103503. doi: 10.1016/j.jri.2022.103503. Epub ahead of print. PMID: 35276571; PMCID: PMC8894688. https://pubmed.ncbi.nlm.nih.gov/35276571/

Shimabukuro, Tom T et al. **"Preliminary Findings of mRNA Covid-19 Vaccine Safety in Pregnant Persons."** The New England journal of medicine vol. 384, 24 (Apr 21 2021): 2273-2282. doi:10.1056/NEJMoa2104983 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8117969/pdf/NEJMoa2104983.pdf

Maria C. Magnus, Ph.D., Håkon K. Gjessing, Ph.D., Helena N. Eide, M.D., Allen J. Wilcox, M.D., Ph.D., Deshayne B. Fell, Ph.D., and Siri E. Håberg, M.D., Ph.D. **Covid-19 Vaccination during Pregnancy and First-Trimester Miscarriage** November 18, 2021 N Engl J Med 2021; 385:2008-2010 DOI: 10.1056/NEJMc2114466 https://www.nejm.org/doi/pdf/10.1056/NEJMc2114466?articleTools=true

Bailey Wallace, M.P.H., Ashley N. Smoots, M.P.H., Christine K. Olson .D. M.P.H., Titilope Oduyebo, M.D., M.P.H., Shin Y. Kim, M.P.H., Emily E. Petersen, M.D., Jun Ju, M.S., Jennifer Beauregard, Ph.D., M.P.H., Centers for Disease Control and Prevention (CDC), Atlanta, GA. Allen J. Wilcox, M.D., Ph.D., National Institutes of Health, Durham, NC, Charles E. Rose, Ph.D., Dana M. Meaney-Delman, M.D., M.P.H., Sascha R. Ellington, Ph.D., M.S.P.H. **Correspondence: Receipt of**

mRNA Covid-19 Vaccines and Risk of Spontaneous Abortion October 14, 2021 N Engl J Med 2021; 385:1533-1535 DOI: 10.1056/NEJMc2113891
https://www.nejm.org/doi/pdf/10.1056/NEJMc2113891?articleTools=true

Joubert, E, Kekeh, AC, Amin, CN. **COVID-19 and novel mRNA vaccines in pregnancy: an updated literature review**. BJOG 2021; https://doi.org/10.1111/1471-0528.16973. 00: 1– 8.
https://obgyn.onlinelibrary.wiley.com/doi/epdf/10.1111/1471-0528.16973

Kachikis A, Englund JA, Singleton M, Covelli I, Drake AL, Eckert LO. **Short-term Reactions Among Pregnant and Lactating Individuals in the First Wave of the COVID-19 Vaccine Rollout**. JAMA Netw Open. 2021;4(8):e2121310. doi:10.1001/jamanetworkopen.2021.21310
https://jamanetwork.com/journals/jamanetworkopen/article-abstract/2783112

Kharbanda EO, Haapala J, DeSilva M, et al. **Spontaneous Abortion Following COVID-19 Vaccination During Pregnancy**. JAMA. 2021;326(16):1629–1631. doi:10.1001/jama.2021.15494
https://jamanetwork.com/journals/jama/article-abstract/2784193

Sun H. **Approximation and evaluation of the spontaneous abortion rate following COVID-19 vaccination in pregnancy**. American Journal of Obstetrics & Gynecology MFM. 2021 Oct:100510. DOI: 10.1016/j.ajogmf.2021.100510. PMID: 34656736; PMCID: PMC8516121.
https://europepmc.org/backend/ptpmcrender.fcgi?accid=PMC8516121&blobtype=pdf

Megan E. Trostle, Meghana A. Limaye, Valeryia Avtushka, Jennifer L. Lighter, Christina A. Penfield, Ashley S. Roman, **COVID-19 vaccination in pregnancy: early experience from a single institution**, American Journal of Obstetrics & Gynecology MFM, Volume 3, Issue 6, 2021, 100464, ISSN 2589-9333, https://doi.org/10.1016/j.ajogmf.2021.100464.
https://www.sciencedirect.com/science/article/pii/S2589933321001592

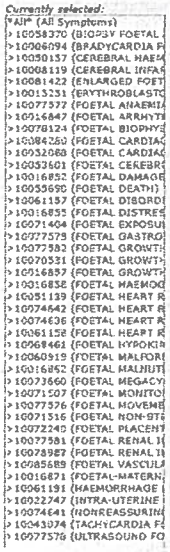
Stuckelberger S, Favre G, Ceulemans M, Gerbier E, Lambelet V, Stojanov M, Winterfeld U, Baud D, Panchaud A, Pomar L. Current Data on COVID-19 mRNA-Vaccine Safety during Pregnancy Might Be Subject to Selection Bias. Reply to Stroobandt, S.; Stroobandt, R. **Data of the COVID-19 mRNA-Vaccine V-Safe Surveillance System and Pregnancy Registry Reveals Poor Embryonic and Second Trimester Fetal Survival Rate.** Comment on "Stuckelberger et al. **SARS-CoV-2 Vaccine Willingness among Pregnant and Breastfeeding Women during the First Pandemic Wave: A Cross-Sectional Study in Switzerland**. Viruses 2021, 13, 1199". Viruses. 2021; 13(8):1546. https://doi.org/10.3390/v13081546
https://www.mdpi.com/1999-4915/13/8/1546#cite

The researched medical journal publications on miscarriage, stillbirth or spontaneous abortion associated with Covid-19 vaccines mostly agree with a similar common narrative:

1. "the scientific data suggest no evidence that the COVID-19 vaccines currently used in the United States have any negative effects on female reproductive health" and
2. Nevertheless "the CDC recommended that any American who is pregnant, planning to become pregnant, or currently breastfeeding get vaccinated against COVID-19 as soon as possible"

Some, but most do not mention that the data is lacking relative to the fact that the vaccines have only been out 11 to 12 months (or at time of publication less than that!) and the human gestational time frame is on the same order, 9 months. It takes time to collect and analyze data in this instance for cause and effect. Also not mentioned there are possible adverse events by the vaccine that could indirectly lead to spontaneous abortion or stillbirth - many of the other adverse events listed in this report (e.g. thrombocytopenia, CVST or simply death).

18. **1,176 Symptoms reported as Fetal death, anemia, arrhythmia, cardiac arrest, cardiac disorder, cerebrovascular disorder ;** 34% within two days after injection. COVID-19 vaccines account for 45% of reported gestational disorders out of all vaccines over all time. Pfizer-BioNtech has the highest effect on gestational disorder reporting 884 cases.



Vaccine	Events Reported	Percent (of 2,876)
Total	3,298	114.67%
COVID19 (COVID19 (PFIZER-BIONTECH)) (1200)	884	30.74%
COVID19 (COVID19 (MODERNA)) (1201)	307	10.67%
HPV (GARDASIL) (1098)	271	9.42%
INFLUENZA (SEASONAL) (NO BRAND NAME) (44)	228	7.93%
VACCINE NOT SPECIFIED (NO BRAND NAME) (999)	176	6.12%
TDAP (BOOSTRIX) (1091)	137	4.76%
COVID19 (COVID19 (JANSSEN)) (1203)	89	3.09%
MEASLES + MUMPS + RUBELLA (MMR II) (26)	87	3.03%
VARICELLA (VARIVAX) (269)	76	2.64%
TDAP (ADACEL) (1092)	60	2.09%
INFLUENZA (SEASONAL) (FLUCELVAX QUADRIVALENT) (1175)	59	2.05%
TDAP (NO BRAND NAME) (1104)	59	2.05%
MEASLES + MUMPS + RUBELLA (NO BRAND NAME) (114)	50	1.74%
INFLUENZA (H1N1) (H1N1 (MONOVALENT) (UNKNOWN)) (1135)	49	1.70%
HEP B (ENGERIX-B) (38)	48	1.67%
INFLUENZA (SEASONAL) (AFLURIA QUADRIVALENT) (1177)	47	1.63%
HPV (CERVARIX) (1136)	44	1.53%
INFLUENZA (H1N1) (H1N1 (MONOVALENT) (SANOFI)) (1132)	31	1.08%
HEP B (NO BRAND NAME) (110)	28	0.97%
INFLUENZA (SEASONAL) (AFLURIA) (1121)	28	0.97%
INFLUENZA (SEASONAL) (FLUZONE) (7)	28	0.97%
INFLUENZA (H1N1) (H1N1 (MONOVALENT) (NOVARTIS)) (1133)	25	0.87%
HEP A (HAVRIX) (268)	24	0.83%
COVID19 (COVID19 (UNKNOWN)) (1202)	23	0.80%
INFLUENZA (SEASONAL) (FLUVIRIN) (262)	21	0.73%
HEP B (RECOMBIVAX HB) (25)	19	0.66%
INFLUENZA (SEASONAL) (FLUARIX QUADRIVALENT) (1161)	18	0.63%
HPV (GARDASIL 9) (1170)	17	0.59%
INFLUENZA (SEASONAL) (FOREIGN) (1142)	15	0.52%
INFLUENZA (SEASONAL) (FLUZONE QUADRIVALENT) (1162)	15	0.52%
HPV (NO BRAND NAME) (1102)	14	0.49%
RUBELLA (MERUVAX II) (32)	14	0.49%
DTAP (NO BRAND NAME) (258)	13	0.45%
HEP A + HEP B (TWINRIX) (1009)	12	0.42%
INFLUENZA (SEASONAL) (FLUARIX) (1089)	12	0.42%
DTAP + IPV (UNKNOWN) (1164)	11	0.38%
INFLUENZA (SEASONAL) (TIV DRESDEN) (1186)	11	0.38%
TYPHOID VI POLYSACCHARIDE (TYPHIM VI) (271)	11	0.38%
POLIO VIRUS, INACT. (NO BRAND NAME) (332)	10	0.35%
INFLUENZA (H1N1) (H1N1 (MONOVALENT) (CSL)) (1134)	9	0.31%
YELLOW FEVER (NO BRAND NAME) (224)	9	0.31%
RABIES (RABIPUR) (1075)	8	0.28%
DT ADSORBED (NO BRAND NAME) (3)	7	0.24%
MENINGOCOCCAL CONJUGATE (MENACTRA) (1090)	7	0.24%
TD ADSORBED (NO BRAND NAME) (11)	7	0.24%
ANTHRAX (BIOTHRAX) (1008)	6	0.21%
DT + IPV (NO BRAND NAME) (1108)	6	0.21%
TETANUS TOXOID (NO BRAND NAME) (12)	6	0.21%
TDAP + IPV (FOREIGN) (1171)	6	0.21%

Moro PL, Olson CK, Clark E, Marquez P, Strid P, Ellington S, Zhang B, Mba-Jonas A, Alimchandani M, Cragan J, Moore C. **Post-authorization surveillance of adverse events following COVID-19 vaccines in pregnant persons in the vaccine adverse event reporting system (VAERS), December 2020 - October**

2021. Vaccine. 2022 May 26;40(24):3389-3394. doi: 10.1016/j.vaccine.2022.04.031. Epub 2022 Apr 12. PMID: 35489985; PMCID: PMC9001176.
https://pubmed.ncbi.nlm.nih.gov/35489985/

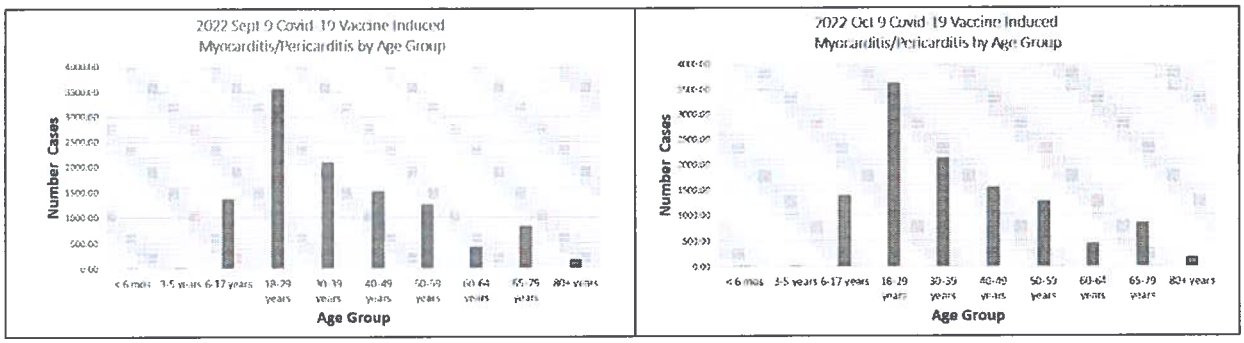
19. **329 Symptoms reported as placental praevia, infarction, hemorage, insufficiency, necrosis or other disorder;** 40% within two days after injection

Currently selected:
>10072240 (FOETAL PLACENT
>10085689 (FOETAL VASCUL
>10018981 (HAEMORRHAGE
>10035119 (PLACENTA PRAE
>10035132 (PLACENTAL DISC
>10064620 (PLACENTAL INFA
>10035138 (PLACENTAL INSU
>10035139 (PLACENTAL NECR
>10036608 (PREMATURE SEP

20. **24,788 Symptoms reported as myocarditis, pericarditis or myopericarditis;** 35% within two days after injection.

Currently selected:
>10064539 (AUTOIMMUNE MY
>10079058 (AUTOIMMUNE PE
>10014961 (EOSINOPHILIC M
>10082606 (IMMUNE-MEDIAT
>10028606 (MYOCARDITIS)
>10028650 (MYOPERICARDIT
>10034484 (PERICARDITIS)
>10059361 (PLEUROPERICAR

The charts below plot the number of myocarditis cases by age group. Current data on the right is compared to data from Aug 5 on the left. Graphs, although showing increased numbers are seeing lesser rates of increase in cardiac cases from previous months. Perhaps that is because vaccine intake has now decreased for the younger age groups either due to 'hesitation' by parents or by improved medical vigilance. (Note these graphs exclude a significant number of data of unknowns (~12,967) where the event does not include associated age group data.). Note also that for ages less than 6 years, there are only a few cases reported (7 cases). It seems that although the FDA 'approved' the vaccines, only a small percentage of Americans participated in getting their child vaccinated.



Myocarditis or any condition involving heart inflammation as a result of COVID-19 vaccine deserves special attention since it's now recognized as a 'signal' in VAERS without further question. Indications are that it is critically and permanently affecting cardio health of our youth without providing any benefit of protection that a legitimate vaccine is expected to offer.

On Jan 24, 2022 Senator Ron Johnson of Wisconsin hosted a "Covid 19 Response" panel including renowned doctors and medical experts to provide a "different perspective" on the global pandemic response. The video record is 5 ½ hours long, but it's **strongly recommended that all officials having authority over covid-19 vaccine policies take the time to view it**. Since that meeting and in lieu of the pharmaceutical companies stepping up to take responsibility, Johnson,

Braun and Hyde-Smith have begun drafting a bill to address these large numbers of vaccine injuries.[31]

One of the more striking testimonies during the Jan 24 meeting came from Dr. Peter McCullough, a world renowned cardiologist. In the meeting, McCullough mentioned damning evidence that the covid19 vaccines are causing the myocarditis and pericarditis. (index to 17:45) McCullogh mentioned about 200 papers have been published addressing the issue of COVID-19 vaccines and cases of myocarditis. Indeed McCullough, and Dr. Jessica Rose in Israel applied the Bradford Hill analysis to VAERS in a paper they co-authored[32] using other associated vaccine injury data to demonstrate causation.

McCullogh and other doctors have said it, but it's a well-known fact that myocytes (heart cells) are not replaceable:

> *"Similar to skeletal muscle tissue,* ***cardiac muscle does not regenerate to a great extent. Dead cardiac muscle tissue is replaced by scar tissue, which cannot contract****. As scar tissue accumulates, the heart loses its ability to pump because of the loss of contractile power."* From on-line Anatomy & Physiology, OSU

'Mild Myocarditis' or 'Benign Myocarditis' are oxymoron's; a phrase fabricated by vaccine proponents. It's a lie to soften the true nature of the harmful effects of the vaccine that could forever limit performance of a would-be athlete or lead to long term heart disease. An inflammation of the heart muscle (myocardium). The inflammation can kill tissue, reduce the heart's ability to pump and cause rapid or irregular heart rhythms (arrhythmias). Signs and symptoms of myocarditis include chest pain, fatigue, shortness of breath, and rapid or irregular heartbeats. In a small percentage of cases persons with myocarditis can be at risk of sudden death following strenuous activity.

Some sufferers of myocarditis may require heart surgery or a heart transplant later in life. And there are no benefits from the vaccine to balance the risk of myocarditis for the younger age groups. Especially now since the vaccines in circulation were designed for the initial Wuham strain, now extinct. The mainstream media is also culpable, promoting narratives to promote fear and cause coercion. Permanent heart damage does occur, however 'mild' the case might be – and the most vulnerable victims are our children and young adults. Does the risk of Covid-19 sequelae exceed the risk of reduced cardiac capacity for these young people? No one has offered any evidence, any calculations or rigorous analysis that warrants such a decision being made.

The paper McCullough co-authored with Rose completed peer review and was approved for publication, but the publisher, Elsevier, assigned it a "temporary removal" — without any

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[31] Countermeasure Injury Compensation Program with respect to COVID–19 vaccines

[32] Jessica Rose PhD, MSc, BSc , Peter A. McCullough MD, MPH , **A Report on Myocarditis Adverse Events in the U.S. Vaccine Adverse Events Reporting System (VAERS) in Association with COVID-19 Injectable Biological Products**, Current Problems in Cardiology (2021), doi: https://doi.org/10.1016/j.cpcardiol.2021.101011 Unpublished Preprint Here

explanation or cause.[33] One can only assume Elsevier purposely removed the publication because it went against the narrative of the political machine established to protect the vaccines or fear they would lose sponsorship or funding from pharma. This was done without consideration of the harm to people they might be causing by limiting essential information.

Here is one paper published by Oster et al addressing the harm of vaccine induced myocarditis:

> Oster ME, Shay DK, Su JR, Gee J, Creech CB, Broder KR, Edwards K, Soslow JH, Dendy JM, Schlaudecker E, Lang SM, Barnett ED, Ruberg FL, Smith MJ, Campbell MJ, Lopes RD, Sperling LS, Baumblatt JA, Thompson DL, Marquez PL, Strid P, Woo J, Pugsley R, Reagan-Steiner S, DeStefano F, Shimabukuro TT. **Myocarditis Cases Reported After mRNA-Based COVID-19 Vaccination in the US From December 2020 to August 2021.** JAMA. 2022 Jan 25, 327(4): 331-340. https://jamanetwork.com/journals/jama/fullarticle/2788346

Oster's yearlong study of vaccine rollout addressed the question: What is the risk of myocarditis after mRNA-based COVID-19 vaccination in the US? The main finding was that, of 1626 adjudicated cases of reported myocarditis, occurring within 7 days after vaccination, exceeded the expected rates across multiple age and sex strata. These rates were highest after the second vaccination in males aged 12 to 15 years (70.7 per million doses of the BNT162b2 vaccine), in males aged 16 to 17 years (105.9 per million doses of the BNT162b2 vaccine), and in males aged 18 to 24 years (52.4 and 56.3 per million doses of the BNT162b2 vaccine and the mRNA-1273 vaccine, respectively). The researchers used as their source of data, the CDC's VAERS database.

Despite persistent castigation of VAERS by vaccine proponents and mass news media narratives, Oster describes how his researchers carefully and procedurally adjudicated data to provide a confident and reliable analysis. They indeed reported the limitations, however most important to note they believe their estimates are low due to the expectation that the biases are in the direction of under-reporting:

> *"This study has several limitations. First, although clinicians are required to report serious adverse events after COVID-19 vaccination, including all events leading to hospitalization, VAERS is a passive reporting system. As such, the reports of myocarditis to VAERS may be incomplete, and the quality of the information reported is variable. Missing data for sex, vaccination dose number, and race and ethnicity were not uncommon in the reports received; history of prior SARS-CoV-2 infection also was not known. Furthermore, as a passive system, VAERS data are subject to reporting biases in that both underreporting and over reporting are possible.38 Given the high verification rate of reports of myocarditis to VAERS after mRNA based COVID-19 vaccination, underreporting is more likely. Therefore, the actual rates of myocarditis per million doses of vaccine are likely higher than estimated."*

[33] https://retractionwatch.com/2021/10/17/paper-linking-covid-19-vaccines-to-myocarditis-is-temporarily-removed-without-explanation/

Oster is one of the few that didn't candy coat his conclusions and warned that the cases are probably being under-reported.

Citations on myocarditis comprise of at least 196 papers listed here, all addressing studies and case reports of COVID-19 vaccine induced myocarditis or pericarditis. Note the term 'fulminant' indicates that the condition requires some means of intervention to ensure sufficient circulation to continue life. Covid vaccination and the outcome of heart inflammation cannot be undone. There is no antidote or treatment that will restore the heart to its original state.

Rees AR. **Viruses, vaccines and cardiovascular effects**. Br J Cardiol Editorial. 2022 May 31;29(2):16. doi: 10.5837/bjc.2022.016. PMID: 36212794; PMCID: PMC9534113. https://bjcardio.co.uk/2022/05/viruses-vaccines-and-cardiovascular-effects/

Sogbe M, Blanco-Di Matteo A, Di Frisco IM, Bastidas JF, Salterain N, Gavira JJ. **Systemic lupus erythematosus myocarditis after COVID-19 vaccination**. Reumatol Clin. 2022 Jul 28. doi: 10.1016/j.reuma.2022.06.003. Epub ahead of print. PMID: 36211224; PMCID: PMC9525201. https://pubmed.ncbi.nlm.nih.gov/36211224/

Lu J, Zhang X, Xu H, Li Z. Inspiration to mRNA-based COVID-19 vaccination: **Serious adverse case reports with hepatitis B vaccine in real-world**. Front Pediatr. 2022 Sep 23;10:888686. doi: 10.3389/fped.2022.888686. PMID: 36210931; PMCID: PMC9538941. https://pubmed.ncbi.nlm.nih.gov/36210931/

Cavalcante JL, Shaw KE, Gössl M. **Cardiac Magnetic Resonance Imaging Midterm Follow Up of COVID-19 Vaccine-Associated Myocarditis**. JACC Cardiovasc Imaging. 2022 Oct;15(10):1821-1824. doi: 10.1016/j.jcmg.2022.01.008. Epub 2022 Mar 16. PMID: 36202461; PMCID: PMC8925933. https://pubmed.ncbi.nlm.nih.gov/36202461/

The Cavalcante study is an important stake in the sand and should be done more often. It concludes:

> *"Given the novelty of COV19VAM, data on midterm and long-term risks for these patients are lacking. Our study is the first to show a side-by-side systematic comparison of dedicated CMR imaging between the initial diagnosis of acute myocarditis and the approximately 3-month follow-up. This study demonstrated normalization of left ventricular ejection fraction in all patients and resolution of myocardial edema in all patients. There was interval improvement of nonischemic fibrosis seen on late gadolinium enhancement (LGE), albeit fibrosis was still present in 80% of patients. Although this finding could represent vulnerability for adverse cardiovascular long-term events, there were no unfavorable atrial or ventricular arrhythmias seen on a 2-week event monitor placed at 3-month follow-up from the initial diagnosis. "*

Fibrosis means that heart cells, heart tissue was replaced by scar tissue that lacks the ability to contract and pump blood through the heart. *Dead tissue*. So that means reduced cardiac capacity and the latent risk of heart dis-synchronies later in life. The key question here not posed by the authors; 80%. How many of those 80% with permanent heart damage would have been just fine dealing with the infection

instead of the injury induced by the vaccine? We can never answer that question. I'll further remind the medical community: First, do no harm.

Takahashi M, Kondo T, Yamasaki G, Sugimoto M, Asano M, Ueno Y, Nagasaki Y. **An autopsy case report of aortic dissection complicated with histiolymphocytic pericarditis and aortic inflammation after mRNA COVID-19 vaccination**. Leg Med (Tokyo). 2022 Sep 29;59:102154. doi: 10.1016/j.legalmed.2022.102154. Epub ahead of print. PMID: 36191411; PMCID: PMC9519380. https://pubmed.ncbi.nlm.nih.gov/36191411/

From the autopsy:

Fig. 1. Macroscopic autopsy findings of the heart and the aorta. A: The thick pericardium was incised. The pericardial cavity contained dark red clots showing cardiac tamponade. **B:** The ascending aorta was dissected. The aortic intima was ruptured horizontally (white arrows). **C:** The heart had a white villous surface (black arrowheads). (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)

Voltarelli CL, Silva L, Longo M, Ferraria S, Martins LL, Nazar G, Magalhães T, Miyazima R, Lenci Marques G. **COVID-19-Induced Myocarditis and mRNA Vaccine-Related Pericarditis: A Case Report**. Cureus. 2022 Aug 26;14(8):e28440. doi: 10.7759/cureus.28440. PMID: 36176830; PMCID: PMC9509695. https://pubmed.ncbi.nlm.nih.gov/36176830/

Chen C, Fu F, Ding L, Fang J, Xiao J. **Booster dose of COVID-19 mRNA vaccine does not increase risks of myocarditis and pericarditis compared with primary vaccination: New insights from the vaccine adverse event reporting system**. Front Immunol. 2022 Sep 12;13:938322. doi: 10.3389/fimmu.2022.938322. PMID: 36172346; PMCID: PMC9510366. https://pubmed.ncbi.nlm.nih.gov/36172346/

Chen et al fails to ask the question, why? There's no doubt covid-19 vaccines are indeed leading to heart inflammation. No doubt. Asking the question whether it's the first, second, or third shot is a frivolous endeavor compared to the fact it's making people sick period. Consider that a person that's being gradually poisoned with arsenic. They initially build a tolerance, and so to finish them off, larger doses are required. Regardless of that being an explanation - or not, there's no discussion in the paper as to why booster doses might not be as deadly as earlier doses. Different formulation? A more important question that should be on everybody's mind - **why would a Chinese institution (that's tightly connected with the Chinese Communist Party government) be endorsing CDC recommendations in a manner to further encourage the use of COVID-19 vaccines in the United States?**

Dhaduk K, Khosla J, Hussain M, Mangaroliya V, Chauhan S, Ashish K, Gupta R, Pal S. **COVID-19 vaccination and myocarditis: A review of current literature**. World J Virol. 2022 Jul 25;11(4):170-175. doi: 10.5501/wjv.v11.i4.170. PMID: 36159608; PMCID: PMC9372786. https://pubmed.ncbi.nlm.nih.gov/36159608/

Crommelynck S, Thill P. **Pharmacovigilance for COVID-19 vaccines: A 1-year experience in France**. Infect Dis Now. 2022 Sep 21:S2666-9919(22)00210-X. doi: 10.1016/j.idnow.2022.09.018. Epub ahead of print. PMID: 36152793; PMCID: PMC9492382. https://pubmed.ncbi.nlm.nih.gov/36152793/

Zornitzki L, Havakuk O, Rozenbaum Z, Viskin D, Arbel Y, Flint N, Arnold J, Waissengein B, Wolf I, Banai S, Topilsky Y, Laufer-Perl M. **Immune Checkpoint Inhibitor-Induced Myocarditis vs. COVID-19 Vaccine-Induced Myocarditis-Same or Different?** Life (Basel). 2022 Sep 1;12(9):1366. doi: 10.3390/life12091366. PMID: 36143403; PMCID: PMC9501423. https://pubmed.ncbi.nlm.nih.gov/36143403/

The Zornitzki paper presents an important result. They claim there is a difference, albeit both harmful between infection induced and vaccine induced myocarditis. Spike protein connection? The authors suggest more study required.

Massari M, Spila Alegiani S, Morciano C, Spuri M, Marchione P, Felicetti P, Belleudi V, Poggi FR, Lazzeretti M, Ercolanoni M, Clagnan E, Bovo E, Trifirò G, Moretti U, Monaco G, Leoni O, Da Cas R, Heidecker B, Dagan N, Balicer R, Eriksson U, Rosano G, Coats A, Tschöpe C, Kelle S, Poland GA, Frustaci A, Klingel K, Martin P, Hare J, Cooper L, Pantazis A, Imazio M, Prasad S, Lüscher TF. **Myocarditis Following COVID-19 Vaccine: Incidence, Presentation, Diagnosis, Pathophysiology, Therapy, and Outcomes put into Perspective**. Eur J Heart Fail. 2022 Sep 6. doi: 10.1002/ejhf.2669. Epub ahead of print. PMID: 36065751.
https://pubmed.ncbi.nlm.nih.gov/36065751/

Khan Z, Pabani UK, Gul A, Muhammad SA, Yousif Y, Abumedian M, Elmahdi O, Gupta A. COVID-19 **Vaccine-Induced Myocarditis: A Systemic Review and Literature Search**. Cureus. 2022 Jul 28;14(7):e27408. doi: 10.7759/cureus.27408. PMID: 36051715; PMCID: PMC9419896.
https://pubmed.ncbi.nlm.nih.gov/36051715/

Kawahara H, Endo A, Yamaguchi K, Yoshitomi H, Tanabe K. **Myocarditis After the Third Dose of mRNA-1273 Coronavirus Disease 2019 (COVID-19) Vaccine.** Circ Rep. 2022 Jul 9;4(8):388-389. doi: 10.1253/circrep.CR-22-0049. PMID: 36032383; PMCID: PMC9360982.
https://pubmed.ncbi.nlm.nih.gov/36032383/

Petronzelli F, Tartaglia L, Mores N, Zanoni G, Rossi P, Samez S, Zappetti C, Marra AR, Menniti Ippolito F; TheShinISS-Vax|COVID Surveillance Group. **Postmarketing active surveillance of myocarditis and pericarditis following vaccination with COVID-19 mRNA vaccines in persons aged 12 to 39 years in Italy: A multi-database, self-controlled case series study**. PLoS Med. 2022 Jul 28;19(7):e1004056. doi: 10.1371/journal.pmed.1004056. PMID: 35900992; PMCID: PMC9333264.
https://pubmed.ncbi.nlm.nih.gov/35900992/

Dini FL, Franzoni F, Scarfò G, Pugliese NR, Imazio M. **Acute pericarditis in patients receiving coronavirus disease 2019 vaccines: a case series from the community**. J Cardiovasc Med (Hagerstown). 2022 Aug 1;23(8):551-558. doi: 10.2459/JCM.0000000000001342. PMID: 35904995.
https://pubmed.ncbi.nlm.nih.gov/35904995/

Alizadeh LS, Koch V, Yel I, Grünewald LD, Mathies D, Martin S, Vogl TJ, Rauschning D, Booz C. **A case of myocarditis after COVID-19 vaccination: incidental or consequential**? Heliyon. 2022 May 28;8(6):e09537. doi: 10.1016/j.heliyon.2022.e09537. PMID: 35655920; PMCID: PMC9142175.
https://pubmed.ncbi.nlm.nih.gov/35655920/

Iwamuro A, Sasa T, Kawai T, Taguchi M, Izuhara M, Uegaito T, Shioji K. **A 17-year-old male with acute myocarditis following mRNA-1273 vaccination in Japan**. J Cardiol Cases. 2022 Apr 26. doi: 10.1016/j.jccase.2022.03.012. Epub ahead of print. PMID: 35495897; PMCID: PMC9040371. https://pubmed.ncbi.nlm.nih.gov/35495897/

Yamamoto S, Arita Y, Ogasawara N. **Myocarditis Following the Second Dose of COVID-19 Vaccination in a Japanese Adolescent**. Cureus. 2022 Mar 25;14(3):e23474. doi: 10.7759/cureus.23474. PMID: 35475062; PMCID: PMC9035236. https://pubmed.ncbi.nlm.nih.gov/35475062/

Oh TH, Woo SH, Hong S, Lee C, Lee WJ, Jeong SK. **Clinical Features of Patients Presenting to the Emergency Department With Cardiovascular Adverse Reactions After COVID-19 mRNA Vaccination**. J Korean Med Sci. 2022 Mar 7;37(9):e73. doi: 10.3346/jkms.2022.37.e73. PMID: 35257528; PMCID: PMC8901880. https://pubmed.ncbi.nlm.nih.gov/35257528/

Won T, Gilotra NA, Wood MK, Hughes DM, Talor MV, Lovell J, Milstone AM, Steenbergen C, Čiháková D. **Increased Interleukin 18-Dependent Immune Responses Are Associated With Myopericarditis After COVID-19 mRNA Vaccination**. Front Immunol. 2022 Feb 18;13:851620. doi: 10.3389/fimmu.2022.851620. PMID: 35251049; PMCID: PMC8894592. https://pubmed.ncbi.nlm.nih.gov/35251049/

Goyal M, Ray I, Mascarenhas D, Kunal S, Sachdeva RA, Ish P. **Myocarditis post SARS-CoV-2 vaccination: a systematic review**. QJM. 2022 Mar 3:hcac064. doi: 10.1093/qjmed/hcac064. Epub ahead of print. PMID: 35238384; PMCID: PMC8903459. https://pubmed.ncbi.nlm.nih.gov/35238384/

Goyal paper:

> *Myocarditis following COVID-19 vaccination is often mild, seen more commonly in young healthy males and is followed by rapid recovery with conservative treatment. The emergence of this adverse event calls for harmonizing case definitions and definite treatment guidelines which require wider research.*
>
> AND
>
> *Only 6 patients died among 1317 of whom data was available*

Nunn S, Kersten J, Tadic M, Wolf A, Gonska B, Hüll E, Dietenberger H, Rottbauer W, Buckert D. **Case Report: Myocarditis After COVID-19 Vaccination - Case Series and Literature Review**. Front Med (Lausanne). 2022 Feb 14;9:836620. doi: 10.3389/fmed.2022.836620. PMID: 35237634; PMCID: PMC8882906. https://pubmed.ncbi.nlm.nih.gov/35237634/
Lee ASY, Balakrishnan IDD, Khoo CY, Ng CT, Loh JKX, Chan LL, Teo LLY, Sim DKL. **Myocarditis Following COVID-19 Vaccination: A Systematic Review (October 2020-October 2021)**. Heart Lung Circ. 2022 Jun;31(6):757-765. doi: 10.1016/j.hlc.2022.02.002. Epub 2022 Feb 25. PMID: 35227610; PMCID:

PMC8874750. https://pubmed.ncbi.nlm.nih.gov/35227610/

Bengel CP, Kacapor R. **A report of two cases of myocarditis following mRNA coronavirus disease 2019 vaccination**. Eur Heart J Case Rep. 2022 Jan 9;6(1):ytac004. doi: 10.1093/ehjcr/ytac004. PMID: 35169677; PMCID: PMC8755378. https://pubmed.ncbi.nlm.nih.gov/35169677/

Liuzzo G, Volpe M. **Myocarditis after BNT162b2 mRNA SARS-CoV-2 vaccine: low incidence and mild severity**. Eur Heart J. 2022 Jan 28:ehab901. doi: 10.1093/eurheartj/ehab901. Epub ahead of print. PMID: 35090032. https://pubmed.ncbi.nlm.nih.gov/35090032/

Goldman RD. **Myocarditis and pericarditis after COVID-19 messenger RNA vaccines**. Can Fam Physician. 2022 Jan;68(1):17-18. doi: 10.46747/cfp.680117. PMID: 35063975. https://pubmed.ncbi.nlm.nih.gov/35063975/

Wu B, Mittal N, Adler ED, Hong KN. **Acute myocarditis after receiving first dose of BNT162b2 mRNA vaccine**. J Cardiol Cases. 2022 Jan 7. doi: 10.1016/j.jccase.2021.12.009. Epub ahead of print. PMID: 35018202; PMCID: PMC8739668. https://pubmed.ncbi.nlm.nih.gov/35018202/

Saeed S, Käsk L, Rajani R, Larsen TH. **Incidence, clinical presentation and management of myocarditis following mRNA-based Covid-19 vaccines: A brief report**. Cardiology. 2022 Feb 1:1–7. doi: 10.1159/000522216. Epub ahead of print. PMID: 35104821; PMCID: PMC9059023. https://pubmed.ncbi.nlm.nih.gov/35104821/

Bellos I, Karageorgiou V, Viskin D. **Myocarditis following mRNA Covid-19 vaccination: A pooled analysis**. Vaccine. 2022 Mar 15;40(12):1768-1774. doi: 10.1016/j.vaccine.2022.02.017. Epub 2022 Feb 7. PMID: 35153093; PMCID: PMC8818354. https://pubmed.ncbi.nlm.nih.gov/35153093/

Khogali F, Abdelrahman R. **Unusual Presentation of Acute Perimyocarditis Following SARS-COV-2 mRNA-1237 Moderna Vaccination**. Cureus. 2021 Jul 23;13(7):e16590. doi: 10.7759/cureus.16590. PMID: 34447639; PMCID: PMC8381757. https://pubmed.ncbi.nlm.nih.gov/34447639/

Mengesha B, Asenov AG, Hirsh-Raccah B, Amir O, Pappo O, Asleh R. **Severe Acute Myocarditis after the Third (Booster) Dose of mRNA COVID-19 Vaccination**. Vaccines (Basel). 2022 Apr 8;10(4):575. doi: 10.3390/vaccines10040575. PMID: 35455324; PMCID: PMC9024648. https://pubmed.ncbi.nlm.nih.gov/35455324/

Lane S, Yeomans A, Shakir S. **Reports of myocarditis and pericarditis following mRNA COVID-19 vaccination: a systematic review of spontaneously reported data from the UK, Europe and the USA and of the scientific literature**. BMJ Open 2022;12:e059223. doi:10.1136/bmjopen-2021-059223 https://bmjopen.bmj.com/content/bmjopen/12/5/e059223.full.pdf

Chellapandian SB, Turkmen S, Salim I, Chinnakaruppan S, Mohammad J. **Myocarditis following COVID-19 mRNA (mRNA-1273) vaccination**. Clin Case Rep. 2022 Apr 18;10(4):e05741. doi: 10.1002/ccr3.5741. PMID: 35449778; PMCID: PMC9014704. https://pubmed.ncbi.nlm.nih.gov/35449778/

Power JR, Keyt LK, Adler ED. **Myocarditis following COVID-19 vaccination: incidence, mechanisms, and clinical considerations**. Expert Rev Cardiovasc Ther. 2022 Apr 18:1-11. doi: 10.1080/14779072.2022.2066522. Epub ahead of print. PMID: 35414326; PMCID: PMC9115793. https://pubmed.ncbi.nlm.nih.gov/35414326/

Power Paper:

> *Medical history has little influence on the risk-benefit profile of COVID-19 vaccination except in the case of prior myocarditis or pericarditis.*
>
> *A CDC analysis published in June 2021 determined that for every million males age 12–29 who underwent a 2-dose regimen of mRNA COVID-19 vaccine, "11,000 COVID-19 cases, 560 hospitalizations, 138 ICU admissions, and six deaths due to COVID-19 could be prevented, compared with 39–47 expected myocarditis cases after COVID-19 vaccination."" [105] This analysis was based on May 2021 rates of COVID-19 prevalence, morbidity, and mortality and served as the basis for CDC recommendations to vaccinate children age 12–15 [106]. In a more flexible risk-benefit model, Gurdasani et al. estimated that in children age 12– 17, the number of prevented COVID-related hospitalizations exceeds the incidence of mRNA vaccine-associated myocarditis as long as the incidence of COVID-19 is greater than 30/100,000 teenagers per week, a level unseen in England throughout 2021 [107].*

The fault in this analysis is that public health is attempting to treat the population as a whole "for the greater good" and by that philosophy willing to incur vaccine killed or injured cases; cases that may have managed fine from any injury from infection or even infection itself. These protective measures might improve statistical measures but can unneccesatrily sacrifice individual health.

Holland DJ, Blazak PL, Martin J, Broom J, Poulter RS, Stanton T. **Myocarditis and Cardiac Complications Associated With COVID-19 and mRNA Vaccination: A Pragmatic Narrative Review to Guide Clinical Practice**. Heart Lung Circ. 2022 Apr 6:S1443-9506(22)00105-6. doi: 10.1016/j.hlc.2022.03.003. Epub ahead of print. PMID: 35398005; PMCID: PMC8984702. https://pubmed.ncbi.nlm.nih.gov/35398005/

Mancini N, Cortigiani L, Aquaro G, Bovenzi FM. **Raro caso di miocardite ed embolia polmonare dopo vaccino a mRNA BNT162b2 [A rare case of myocarditis and pulmonary embolism after BNT162b2 mRNA vaccine]**. G Ital Cardiol (Rome). 2022 Apr;23(4):244-246. Italian. doi: 10.1714/3766.37531. PMID: 35343473. https://pubmed.ncbi.nlm.nih.gov/35343473/

Puchalski M, Kamińska H, Bartoszek M, Brzewski M, Werner B. **COVID-19-Vaccination-Induced Myocarditis in Teenagers: Case Series with Further Follow-Up**. Int J Environ Res Public Health. 2022 Mar 15;19(6):3456. doi: 10.3390/ijerph19063456. PMID: 35329143; PMCID: PMC8954790. https://pubmed.ncbi.nlm.nih.gov/35329143/

Amir G, Rotstein A, Razon Y, Beyersdorf GB, Barak-Corren Y, Godfrey ME, Lakovsky Y, Yaeger-Yarom G, Yarden-Bilavsky H, Birk E. **CMR Imaging 6 Months After Myocarditis Associated with the BNT162b2 mRNA COVID-19 Vaccine**. Pediatr Cardiol. 2022 Mar 23:1–8. doi: 10.1007/s00246-022-02878-0. Epub ahead of print. PMID: 35320390; PMCID: PMC8941830. https://pubmed.ncbi.nlm.nih.gov/35320390/

Amir paper:

> *Late CMR follow up demonstrated resolution of the edema in all patients, while **some had evidence of residual myocardial scarring**.*

So I ask, residual myocardial scarring can be considered a 'mild' effect from vaccination? NO!!!

I'll add that the death of cardiocytes, ANY necrosis of cardiac muscle tissue, which subsequently results in replacement by non-contractile collagenic tissue constitutes PERMANENT diminished reduction in cardiac capacity.

- Reduced athletic ability
- Risk for future serious cardiac events including death
- Increased risk for LVD surgery, heart transplant later in life

Singh A, Nguyen L, Everest S, Afzal S, Shim A. **Acute Pericarditis Post mRNA-1273 COVID Vaccine Booster.** Cureus. 2022 Feb 12;14(2):e22148. doi: 10.7759/cureus.22148. PMID: 35308666; PMCID: PMC8919431. https://pubmed.ncbi.nlm.nih.gov/35308666/

Fatima M, Ahmad Cheema H, Ahmed Khan MH, Shahid H, Saad Ali M, Hassan U, Wahaj Murad M, Aemaz Ur Rehman M, Farooq H. **Development of myocarditis and pericarditis after COVID-19 vaccination in adult population: A systematic review**. Ann Med Surg (Lond). 2022 Apr;76:103486. doi: 10.1016/j.amsu.2022.103486. Epub 2022 Mar 11. PMID: 35291413; PMCID: PMC8912977. https://pubmed.ncbi.nlm.nih.gov/35291413/

Ameratunga R, Woon ST, Sheppard MN, Garland J, Ondruschka B, Wong CX, Stewart RAH, Tatley M, Stables SR, Tse RD. **First Identified Case of Fatal Fulminant Necrotizing Eosinophilic Myocarditis Following the Initial Dose of the Pfizer-BioNTech mRNA COVID-19 Vaccine (BNT162b2, Comirnaty): an Extremely Rare Idiosyncratic Hypersensitivity Reaction**. J Clin Immunol. 2022 Apr;42(3):441-447. doi: 10.1007/s10875-021-01187-0. Epub 2022 Jan 3. PMID: 34978002; PMCID: PMC8720536. https://pubmed.ncbi.nlm.nih.gov/34978002/

Kang DH, Na JY, Yang JH, Moon SH, Kim SH, Jung JJ, Cha HJ, Ahn JH, Park YW, Cho SY, Yu HK, Lee SH, Park MY, Kim JW, Byun JH. **Fulminant Giant Cell Myocarditis following Heterologous Vaccination of ChAdOx1 nCoV-19 and Pfizer-BioNTech COVID-19**. Medicina (Kaunas). 2022 Mar 20;58(3):449. doi: 10.3390/medicina58030449. PMID: 35334625; PMCID: PMC8950462. https://pubmed.ncbi.nlm.nih.gov/35334625/

Paddock CD, Reagan-Steiner S, Su JR, Oster ME, Martines RB, Bhatnagar J, Shimabukuro TT. **Autopsy**

Histopathologic Cardiac Findings in Two Adolescents Following the Second COVID-19 Vaccine Dose. Arch Pathol Lab Med. 2022 Apr 8. doi: 10.5858/arpa.2022-0084-LE. Epub ahead of print. PMID: 35395076.
https://pubmed.ncbi.nlm.nih.gov/35395076/

Kounis NG, Mplani V, Koniari I. **Autopsy Histopathologic Cardiac Findings in Two Adolescents Following the Second COVID-19 Vaccine Dose: Cytokine storm, hypersensitivity, or something else**. Arch Pathol Lab Med. 2022 Apr 8. doi: 10.5858/arpa.2022-0102-LE. Epub ahead of print. PMID: 35395083.
https://pubmed.ncbi.nlm.nih.gov/35395083/

Ilonze OJ, Guglin ME. **Myocarditis following COVID-19 vaccination in adolescents and adults: a cumulative experience of 2021**. Heart Fail Rev. 2022 Apr 22:1–11. doi: 10.1007/s10741-022-10243-9. Epub ahead of print. PMID: 35449353; PMCID: PMC9023259.
https://pubmed.ncbi.nlm.nih.gov/35449353/

Cited in the conclusion of the paper by Ilonze:

> *Because fatal cases occur at any age, no case should be dismissed as just having "benign myocarditis," especially if left ventricular ejection fraction is compromised and if it occurs in older female patients.*

Karlstad Ø, Hovi P, Husby A, et al. **SARS-CoV-2 Vaccination and Myocarditis in a Nordic Cohort Study of 23 Million Residents**. JAMA Cardiol. Published online April 20, 2022. doi:10.1001/jamacardio.2022.0583
https://jamanetwork.com/journals/jamacardiology/fullarticle/2791253

> *Results of this large cohort study indicated that both first and second doses of mRNA vaccines were associated with increased risk of myocarditis and pericarditis. For individuals receiving 2 doses of the same vaccine, risk of myocarditis was highest among young males (aged 16-24 years) after the second dose. These findings are compatible with between 4 and 7 excess events in 28 days per 100 000 vaccinees after BNT162b2, and between 9 and 28 excess events per 100 000 vaccinees after mRNA-1273. This risk should be balanced against the benefits of protecting against severe COVID-19 disease.*

The statement: *This risk should be balanced against the benefits of protecting against severe COVID-19 disease* seems to be a common statement in many of the papers where the findings reveal what appears to be significant risks of harms from the vaccines. Yet none of these studies delve any further into researching what that tradeoff might be. This is irresponsible and neglectful reporting. Candi coating to get past the peer review and be published. Unethical and criminal.

Sharbatdaran A, Chahal Y, Molaei M, Bhavsar D. **A rare case of COVID-19 vaccine-induced myopericarditis in a young adult**. Radiol Case Rep. 2022 Apr 5;17(6):1916-1920. doi: 10.1016/j.radcr.2022.03.039. PMID: 35401904; PMCID: PMC8980502.
https://pubmed.ncbi.nlm.nih.gov/35401904/

Misumi I, Ogata A, Fukuda K, Sato K, Nagano M, Usuku H, Tsujita K. **Constrictive pericarditis following mRNA COVID-19 vaccination in a patient with systemic sclerosis**. J Cardiol Cases. 2022 Apr 4. doi:

10.1016/j.jccase.2022.03.014. Epub ahead of print. PMID: 35401886; PMCID: PMC8977375. https://pubmed.ncbi.nlm.nih.gov/35401886/

Yap J, Tham MY, Poh J, Toh D, Chan CL, Lim TW, Lim SL, Chia YW, Lim YT, Choo J, Ding ZP, Foo LL, Kuo S, Lau YH, Lee A, Yeo KK. **Pericarditis and myocarditis after COVID-19 mRNA vaccination in a nationwide setting**. Ann Acad Med Singap. 2022 Feb;51(2):96-100. doi: 10.47102/annals-acadmedsg.2021425. PMID: 35224605. https://pubmed.ncbi.nlm.nih.gov/35224605/

Aviram G, Viskin D, Topilsky Y, Sadon S, Shalmon T, Taieb P, Ghantous E, Flint N, Banai S, Havakuk O. **Myocarditis Associated With COVID-19 Booster Vaccination**. Circ Cardiovasc Imaging. 2022 Feb;15(2):e013771. doi: 10.1161/CIRCIMAGING.121.013771. Epub 2022 Feb 1. PMID: 35100809; PMCID: PMC8845415. https://pubmed.ncbi.nlm.nih.gov/35100809/

Miyazato Y, Yamamoto K, Yamada G, Kubota S, Ishikane M, Sugiyama M, Ueno M, Matsunaga A, Miyoshi-Akiyama T, Ishizaka Y, Ohmagari N. **Multisystem Inflammatory Syndrome in Adult after First Dose of mRNA Vaccine**. Emerg Infect Dis. 2022 Feb 11;28(4). doi: 10.3201/eid2804.212585. Epub ahead of print. PMID: 35148495. https://pubmed.ncbi.nlm.nih.gov/35148495/

Kyaw H, Shajahan S, Gulati A, Synn S, Khurana S, Nazar N, Shrestha S, Kerstein J. **COVID-19 mRNA Vaccine-Associated Myocarditis**. Cureus. 2022 Jan 7;14(1):e21009. doi: 10.7759/cureus.21009. PMID: 35154981; PMCID: PMC8820479. https://pubmed.ncbi.nlm.nih.gov/35154981/

Fronza M, Thavendiranathan P, Chan V, Karur GR, Udell JA, Wald RM, Hong R, Hanneman K. **Myocardial Injury Pattern at MRI in COVID-19 Vaccine-associated Myocarditis**. Radiology. 2022 Feb 15:212559. doi: 10.1148/radiol.212559. Epub ahead of print. PMID: 35166587; PMCID: PMC8856022. https://pubmed.ncbi.nlm.nih.gov/35166587/

Al-Rasbi S, Al-Maqbali JS, Al-Farsi R, Al Shukaili MA, Al-Riyami MH, Al Falahi Z, Al Farhan H, Al Alawi AM. **Myocarditis, Pulmonary Hemorrhage, and Extensive Myositis with Rhabdomyolysis 12 Days After First Dose of Pfizer-BioNTech BNT162b2 mRNA COVID-19 Vaccine: A Case Report**. Am J Case Rep. 2022 Feb 17;23:e934399. doi: 10.12659/AJCR.934399. PMID: 35173141. https://pubmed.ncbi.nlm.nih.gov/35173141/

Parmar K, Mekraksakit P, Del Rio-Pertuz G, Sethi P, Motes A, Hughes M, Wischmeyer J, Carbajal L, Sosa EA. **Myocarditis following COVID-19 mRNA vaccination**. Proc (Bayl Univ Med Cent). 2021 Nov 15;35(2):209-213. doi: 10.1080/08998280.2021.1990743. PMID: 35256821; PMCID: PMC8607537. https://pubmed.ncbi.nlm.nih.gov/35256821/

Chin SE, Bhavsar SM, Corson A, Ghersin ZJ, Kim HS. **Cardiac Complications Associated with COVID-19, MIS-C, and mRNA COVID-19 Vaccination**. Pediatr Cardiol. 2022 Mar 8:1–6. doi: 10.1007/s00246-022-02851-x. Epub ahead of print. PMID: 35258639; PMCID: PMC8902276. https://pubmed.ncbi.nlm.nih.gov/35258639/

Kornowski R, Witberg G. **Acute myocarditis caused by COVID-19 disease and following COVID-19 vaccination**. Open Heart. 2022 Mar;9(1):e001957. doi: 10.1136/openhrt-2021-001957. PMID: 35264415; PMCID: PMC8914394. https://pubmed.ncbi.nlm.nih.gov/35264415/

Truong DT, Dionne A, Muniz JC, McHugh KE, Portman MA, Lambert LM, Thacker D, Elias MD, Li JS, Toro-Salazar OH, Anderson BR, Atz AM, Bohun CM, Campbell MJ, Chrisant M, D'Addese L, Dummer KB, Forsha

D, Frank LH, Frosch OH, Gelehrter SK, Giglia TM, Hebson C, Jain SS, Johnston P, Krishnan A, Lombardi KC, McCrindle BW, Mitchell EC, Miyata K, Mizzi T, Parker RM, Patel JK, Ronai C, Sabati AA, Schauer J, Sexson-Tejtel SK, Shea JR, Shekerdemian LS, Srivastava S, Votava-Smith JK, White S, Newburger JW. Clinically **Suspected Myocarditis Temporally Related to COVID-19 Vaccination in Adolescents and Young Adults.** Circulation. 2021 Dec 6. doi: 10.1161/CIRCULATIONAHA.121.056583. Epub ahead of print. PMID: 34865500.
https://www.ahajournals.org/doi/epdf/10.1161/CIRCULATIONAHA.121.056583

Visclosky T, Theyyunni N, Klekowski N, Bradin S. **Myocarditis Following mRNA COVID-19 Vaccine.** Pediatr Emerg Care. 2021 Nov 1;37(11):583-584. doi: 10.1097/PEC.0000000000002557. PMID: 34731877.
https://journals.lww.com/pec-online/Abstract/2021/11000/Myocarditis_Following_mRNA_COVID_19_Vaccine.9.aspx

Alania-Torres E, Morillas-Climent H, García-Escrivá A, Vinueza-Buitrón P, Poquet-Catalá I, Zorio E, Sánchez-Lázaro IJ, Galcerá-Jornet E, Valle-Muñoz A. **Case Report: Probable Myocarditis After Covid-19 mRNA Vaccine in a Patient With Arrhythmogenic Left Ventricular Cardiomyopathy.** Front Cardiovasc Med. 2021 Oct 12;8:759119. doi: 10.3389/fcvm.2021.759119. PMID: 34712717; PMCID: PMC8545905.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8545905/pdf/fcvm-08-759119.pdf

Hryniewicki AT, Tolia VM, Nene RV. **Cardiac Tamponade After COVID-19 Vaccination**. J Emerg Med. 2021 Oct 23:S0736-4679(21)00745-9. doi: 10.1016/j.jemermed.2021.10.008. Epub ahead of print. PMID: 34996671; PMCID: PMC8536519.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8536519/pdf/main.pdf

Al-Ali D, Elshafeey A, Mushannen M, Kawas H, Shafiq A, Mhaimeed N, Mhaimeed O, Mhaimeed N, Zeghlache R, Salameh M, Paul P, Homssi M, Mohammed I, Narangoli A, Yagan L, Khanjar B, Laws S, Elshazly MB, Zakaria D. **Cardiovascular and hematological events post COVID-19 vaccination: A systematic review**. J Cell Mol Med. 2021 Dec 29. doi: 10.1111/jcmm.17137. Epub ahead of print. PMID: 34967105.
https://onlinelibrary.wiley.com/doi/10.1111/jcmm.17137

Parra-Lucares A, Toro L, Weitz-Muñoz S, Ramos C. **Cardiomyopathy Associated with Anti-SARS-CoV-2 Vaccination: What Do We Know?** Viruses. 2021 Dec 13;13(12):2493. doi: 10.3390/v13122493. PMID: 34960761; PMCID: PMC8708989.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8708989/pdf/viruses-13-02493.pdf

Kounis NG, Koniari I, Mplani V, Velissaris D, Tsigkas G. **The pathogenesis of potential myocarditis induced by COVID-19 vaccine**. The American Journal of Emergency Medicine. 2021 Nov. DOI: 10.1016/j.ajem.2021.11.016. PMID: 34799207; PMCID: PMC8585566.
https://europepmc.org/backend/ptpmcrender.fcgi?accid=PMC8585566&blobtype=pdf

Dionne A, Sperotto F, Chamberlain S, et al. **Association of Myocarditis With BNT162b2 Messenger RNA COVID-19 Vaccine in a Case Series of Children**. JAMA Cardiol. Published online August 10, 2021. doi:10.1001/jamacardio.2021.3471
https://jamanetwork.com/journals/jamacardiology/article-abstract/2783052

Shashikanth Ambati, Michael Colon, Maya Mihic, Javier Sanchez, Adnan Bakar, **"Acute Myopericarditis after COVID-19 Vaccine in Teenagers"**, Case Reports in Cardiology, vol. 2021, Article ID 8268755, 5 pages, 2021. https://doi.org/10.1155/2021/8268755
https://downloads.hindawi.com/journals/cric/2021/8268755.pdf

Yalile Perez, Emily R Levy, Avni Y Joshi, Abinash Virk, Martin Rodriguez-Porcel, Matthew Johnson, Daniel Roellinger, Greg Vanichkachorn, W Charles Huskins, Melanie D Swift, **Myocarditis Following Coronavirus Disease 2019 mRNA Vaccine: A Case Series and Incidence Rate Determination**, Clinical Infectious Diseases, 2021;, ciab926, https://doi.org/10.1093/cid/ciab926
PDF

Khogali F, Abdelrahman R. **Unusual Presentation of Acute Perimyocarditis Following SARS-COV-2 mRNA-1237 Moderna Vaccination**. Cureus. 2021 Jul 23;13(7):e16590. doi: 10.7759/cureus.16590. PMID: 34447639; PMCID: PMC8381757.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8381757/pdf/cureus-0013-00000016590.pdf

Anasua Debhttps, John Abdelmalek, Kenneth, and Kenneth Nugent **Acute Myocardial Injury Following COVID-19 Vaccination: A Case Report and Review of Current Evidence from Vaccine Adverse Events Reporting System Database** Journal of Primary Care & Community Health Volume 12, 2021
https://journals.sagepub.com/doi/pdf/10.1177/21501327211029230

Nassar M, Nso N, Gonzalez C, et al. **COVID-19 vaccine-induced myocarditis: Case report with literature review** [published correction appears in Diabetes Metab Syndr. 2021 Sep-Oct;15(5):102277]. Diabetes Metab Syndr. 2021;15(5):102205. doi:10.1016/j.dsx.2021.102205
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8270733/pdf/main.pdf

Gautam N, Saluja P, Fudim M, Jambhekar K, Pandey T, Al'Aref S. **A Late Presentation of COVID-19 Vaccine-Induced Myocarditis**. Cureus. 2021;13(9):e17890. Published 2021 Sep 11. doi:10.7759/cureus.17890
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8504680/pdf/cureus-0013-00000017890.pdf

Hajjo R, Sabbah DA, Bardaweel SK, Tropsha A. **Shedding the Light on Post-Vaccine Myocarditis and Pericarditis in COVID-19 and Non-COVID-19 Vaccine Recipients**. Vaccines (Basel). 2021;9(10):1186. Published 2021 Oct 15. doi:10.3390/vaccines9101186
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8541143/pdf/vaccines-09-01186.pdf

Calcaterra G, Mehta JL, de Gregorio C, Butera G, Neroni P, Fanos V, Bassareo PP. **COVID 19 Vaccine for Adolescents. Concern about Myocarditis and Pericarditis. Pediatric Reports**. 2021; 13(3):530-533.
https://doi.org/10.3390/pediatric13030061
https://www.mdpi.com/2036-7503/13/3/61

Li M, Yuan J, Lv G, Brown J, Jiang X, Lu ZK. **Myocarditis and Pericarditis following COVID-19 Vaccination: Inequalities in Age and Vaccine Types**. J Pers Med. 2021 Oct 28;11(11):1106. doi: 10.3390/jpm11111106. PMID: 34834458; PMCID: PMC8624452.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8624452/pdf/jpm-11-01106.pdf

Sanchez Tijmes F, Thavendiranathan P, Udell JA, Seidman MA, Hanneman K. **Cardiac MRI Assessment of Nonischemic Myocardial Inflammation: State of the Art Review and Update on Myocarditis Associated**

with COVID-19 Vaccination. Radiol Cardiothorac Imaging. 2021 Nov 18;3(6):e210252. doi: 10.1148/ryct.210252. PMID: 34934954; PMCID: PMC8686006. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8686006/

Farahmand R, Trottier CA, Kannam JP, Ho KKL. **Incidence of Myopericarditis and Myocardial Injury in Coronavirus Disease 2019 Vaccinated Subjects.** Am J Cardiol. 2021 Nov 28:S0002-9149(21)01047-X. doi: 10.1016/j.amjcard.2021.10.022. Epub ahead of print. PMID: 34852929; PMCID: PMC8627580. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8627580/pdf/main.pdf

William W. King, Matthew R. Petersen, Ralph M. Matar, Jeffery B. Budweg, Lyda Cuervo Pardo, John W. Petersen, **Myocarditis following mRNA vaccination against SARS-CoV-2, a case series**, American Heart Journal Plus: Cardiology Research and Practice, Volume 8, 2021,: https://www.sciencedirect.com/science/article/pii/S2666602221000409

Montgomery J, Ryan M, Engler R, et al. **Myocarditis Following Immunization With mRNA COVID-19 Vaccines in Members of the US Military**. JAMA Cardiol. 2021;6(10):1202–1206. doi:10.1001/jamacardio.2021: https://jamanetwork.com/journals/jamacardiology/fullarticle/2781601

> The article above reports that in "23 male patients, including 22 previously healthy military members, myocarditis was identified within 4 days after receipt of the vaccine

Dionne A, Sperotto F, Chamberlain S, Baker AL, Powell AJ, Prakash A, Castellanos DA, Saleeb SF, de Ferranti SD, Newburger JW, Friedman KG. **Association of Myocarditis With BNT162b2 Messenger RNA COVID-19 Vaccine in a Case Series of Children**. JAMA Cardiol. 2021 Dec 1;6(12):1446-1450. doi:10.1001/jamacardio.2021.3471. PMID: 34374740; PMCID: PMC8356143.: https://pubmed.ncbi.nlm.nih.gov/34374740/

Mayme Marshall, Ian D. Ferguson, Paul Lewis, Preeti Jaggi, Christina Gagliardo, James Stewart Collins, Robin Shaughnessy, Rachel Caron, Cristina Fuss, Kathleen Jo E. Corbin, Leonard Emuren, Erin Faherty, E. Kevin Hall, Cecilia Di Pentima, Matthew E. Oster, Elijah Paintsil, Saira Siddiqui, Donna M. Timchak, Judith A. Guzman-Cottrill; **Symptomatic Acute Myocarditis in 7 Adolescents After Pfizer-BioNTech COVID-19 Vaccination**. Pediatrics September 2021; 148 (3): e2021052478. 10.1542/peds.2021-052478: https://pediatrics.aappublications.org/content/early/2021/06/04/peds.2021-052478

Adriana Luk, Brian Clarke, Nagib Dahdah, Anique Ducharme, Andrew Krahn, Brian McCrindle, Trent Mizzi, Monika Naus, Jacob A. Udell, Sean Virani, Shelley Zieroth, Michael McDonald, **Myocarditis and Pericarditis After COVID-19 mRNA Vaccination: Practical Considerations for Care Providers**, Canadian Journal of Cardiology, Volume 37, Issue 10, 2021,: https://www.sciencedirect.com/science/article/pii/S0828282X21006243

Biykem Bozkurt , MD, PhD; Ishan Kamat, MD; Peter J. Hotez, MD, **Myocarditis With COVID-19 mRNA Vaccines**, Circulation. Aug 10, 2021;144:471–484. DOI: 10.1161/CIRCULATIONAHA.121.056135 PhDhttps://www.ahajournals.org/doi/pdf/10.1161/CIRCULATIONAHA.121.056135

Diaz GA, Parsons GT, Gering SK, Meier AR, Hutchinson IV, Robicsek A. **Myocarditis and Pericarditis After Vaccination for COVID-19**. JAMA. 2021;326(12):1210–1212. doi:10.1001/jama.2021.13443: https://jamanetwork.com/journals/jama/fullarticle/2782900

Carolyn M. Rosner, MSN, NP-C, MBA; Leonard Genovese , MD; Behnam N. Tehrani, MD; Melany Atkins, MD, MRMD; Hooman Bakhshi, MD; Saquib Chaudhri, MD, MBA; Abdulla A. Damluji, MD, PhD, MPH; James A. de Lemos, MD; Shashank S. Desai, MD, MBA; Abbas Emaminia, MD; Michael Casey Flanagan , MD; Amit Khera, MD; Alireza Maghsoudi , MD; Girum Mekonnen, MD, MPH; Alagarraju Muthukumar, MD; Ibrahim M. Saeed , MD; Matthew W. Sherwood , MD; Shashank S. Sinha, MD, MSc; Christopher M. O'Connor, MD; Christopher R. deFilippi , MD, **Myocarditis temporally associated with COVID-19 vaccination**, Circulation, August 10, 2021;144:502–505. DOI: 10.1161/CIRCULATIONAHA.121.055891 : https://www.ahajournals.org/doi/pdf/10.1161/CIRCULATIONAHA.121.055891

Imran Sulemankhil, Mohammad Abdelrahman, Smita I. Negi, **Temporal association between the COVID-19 Ad26.COV2.S vaccine and acute myocarditis**: A case report and literature review, Cardiovascular Revascularization Medicine, 2021,: https://www.sciencedirect.com/science/article/pii/S1553838921005789

Mahmoud Nassar, Nso Nso, Carlos Gonzalez, Sofia Lakhdar, Mohsen Alshamam, Mohammed Elshafey, Yousef Abdalazeem, Andrew Nyein, Benjamin Punzalan, Richard Jesse Durrance, Mostafa Alfishawy, Sanjiv Bakshi, Vincent Rizzo, **COVID-19 vaccine-induced myocarditis: Case report with literature review**, Diabetes & Metabolic Syndrome: Clinical Research & Reviews, Volume 15, Issue 5, 2021, 102205,: https://www.sciencedirect.com/science/article/pii/S1871402121002253

Kirsten E. Shaw, João L. Cavalcante, B. Kelly Han, Mario Gössl, **Possible Association Between COVID-19 Vaccine and Myocarditis**: Clinical and CMR Findings, JACC: Cardiovascular Imaging, Volume 14, Issue 9,
2021, Pages 1856-1861,: https://www.sciencedirect.com/science/article/pii/S1936878X2100485X

Antonio Abbate, Josh Gavin, Nima Madanchi, Christin Kim, Pranav R. Shah, Katherine Klein, Julie Boatman, Charlotte Roberts, Seema Patel, Stamatina Danielides, **Fulminant myocarditis and systemic hyper inflammation temporally associated with BNT162b2 mRNA COVID-19 vaccination in two patients**,
International Journal of Cardiology, Volume 340, 2021, Pages 119-121,: https://www.sciencedirect.com/science/article/pii/S0167527321012286

Mhd Baraa Habib, Tahseen Hamamyh, Ahmed Elyas, Mohammed Altermanini, Mawahib Elhassan, **Acute myocarditis following administration of BNT162b2 vaccine**, IDCases, Volume 25, 2021, e01197,: https://www.sciencedirect.com/science/article/pii/S2214250921001530

Kevin Watkins, Gregory Griffin, Kristen Septaric, Erin L. Simon, **Myocarditis after BNT162b2 vaccination in a healthy male**, The American Journal of Emergency Medicine, Volume 50, 2021, Pages 815.e1-815.e2,: https://www.sciencedirect.com/science/article/pii/S0735675721005362

Anna Patrignani, Nicolò Schicchi, Francesca Calcagnoli, Elena Falchetti, Nino Ciampani, Giulio Argalia, Antonio Mariani, **Acute myocarditis following Comirnaty vaccination in a healthy man with previous SARS-CoV-2 infection, Radiology Case Reports**, Volume 16, Issue 11, 2021, Pages 3321-3325,: https://www.sciencedirect.com/science/article/pii/S1930043321005549

Curtis B. Williams, Jung-in Choi, Farshad Hosseini, James Roberts, Krishnan Ramanathan, Kevin Ong, **Acute Myocarditis Following mRNA-1273 SARS-CoV-2 Vaccination**, CJC Open, Volume 3, Issue 11, 2021,

Pages 1410-1412: https://www.sciencedirect.com/science/article/pii/S2589790X21001931

John B. Dickey, Elisabeth Albert, Mai Badr, Kristin M. Laraja, Laureen M. Sena, David S. Gerson, Jason E. Saucedo, Waqas Qureshi, Gerard P. Aurigemma, **A Series of Patients With Myocarditis Following SARS-CoV-2 Vaccination With mRNA-1279 and BNT162b2**, JACC: Cardiovascular Imaging, Volume 14, Issue 9, 2021, Pages 1862-1863,: https://www.sciencedirect.com/science/article/pii/S1936878X21004861

Singh B, Kaur P, Cedeno L, Brahimi T, Patel P, Virk H, Shamoon F, Bikkina M. **COVID-19 mRNA Vaccine and Myocarditis**. Eur J Case Rep Intern Med. 2021 Jun 14;8(7):002681. doi: 10.12890/2021_002681. PMID: 34268277; PMCID: PMC8276934.: https://pubmed.ncbi.nlm.nih.gov/34268277/

Salah HM, Mehta JL. **COVID-19 Vaccine and Myocarditis**. Am J Cardiol. 2021 Oct 15;157:146-148. doi: 10.1016/j.amjcard.2021.07.009. Epub 2021 Jul 12. PMID: 34399967; PMCID: PMC8272967.: https://pubmed.ncbi.nlm.nih.gov/34399967/

Kerneis M, Bihan K, Salem JE. **COVID-19 vaccines and myocarditis**. Arch Cardiovasc Dis. 2021 Jun-Jul;114(6-7):515-517. doi: 10.1016/j.acvd.2021.06.001. Epub 2021 Jun 26. PMID: 34246566; PMCID: PMC8233865.: https://pubmed.ncbi.nlm.nih.gov/34246566/

Pepe S, Gregory AT, Denniss AR. **Myocarditis, Pericarditis and Cardiomyopathy After COVID-19 Vaccination**. Heart Lung Circ. 2021 Oct;30(10):1425-1429. doi: 10.1016/j.hlc.2021.07.011. Epub 2021 Jul 31. PMID: 34340927; PMCID: PMC8324414.: https://pubmed.ncbi.nlm.nih.gov/34340927/

Shay DK, Shimabukuro TT, DeStefano F. **Myocarditis Occurring After Immunization With mRNA-Based COVID-19 Vaccines**. JAMA Cardiol. 2021;6(10):1115–1117. doi:10.1001/jamacardio.2021.2821: https://jamanetwork.com/journals/jamacardiology/fullarticle/2781600

Verma, Amanda K. et. al., **Myocarditis after Covid-19 mRNA Vaccination, New England Journal of Medicine**, September 30, 2021 385(14):1332 https://www.nejm.org/doi/full/10.1056/NEJMc2109975

Peter D. Wong, Brian W. McCrindle, Kenny Wong, Michael Khoury, Kevin Chan, Marina Salvadori, **Clinical guidance for youth with myocarditis and pericarditis following mRNA COVID-19 Vaccination**, Canadian Pediatric Society, Sep 1, 2021 : https://www.cps.ca/en/documents/position/clinical-guidance-for-youth-with-myocarditis-and-pericarditis

Prashant D Tailor, Aoife M Feighery, Bassim El-Sabawi, Abhiram Prasad, **Case report: acute myocarditis following the second dose of mRNA-1273 SARS-CoV-2 vaccine**, European Heart Journal - Case Reports, Volume 5, Issue 8, August 2021, ytab319: https://academic.oup.com/ehjcr/article/5/8/ytab319/6339567

Office of the Chief Science Advisor, Government of Canada, **COVID-19 vaccine-associated myocarditis/pericarditis**, A report of the Chief Science Advisor of Canada, July 16, 2021, : https://science.gc.ca/eic/site/063.nsf/eng/h_98291.html

Lazaros G, Klein AL, Hatziantoniou S, Tsioufis C, Tsakris A, Anastassopoulou C. **The Novel Platform of mRNA COVID-19 Vaccines and Myocarditis: Clues into the Potential Underlying Mechanism**. Vaccine.

2021 Aug 16;39(35):4925-4927. doi: 10.1016/j.vaccine.2021.07.016. Epub 2021 Jul 13. PMID: 34312010; PMCID: PMC8275472.: https://pubmed.ncbi.nlm.nih.gov/34312010/

Dana Viskin, MD, Yan Topilsky, MD, Galit Aviram, MD, Tomer Mann, MD, Sapir Sadon, Yitzhac Hadad, MD, Nir Flint, MD, Haim Shmilovich, MD, Shmuel Banai, MD, Ofer Havakuk, MD, **Myocarditis Associated With COVID-19 Vaccination**, 25 Aug 2021 https://doi.org/10.1161/CIRCIMAGING.121.013236Circulation: Cardiovascular Imaging. 2021;14: https://www.ahajournals.org/doi/10.1161/CIRCIMAGING.121.013236

Alagarraju Muthukumar, PhD, Madhusudhanan Narasimhan, PhD, MSHA, Quan-Zhen Li, MD, PhD, Lenin Mahimainathan, PhD, Imran Hitto, MD, Franklin Fuda, DO, Kiran Batra, MD, Xuan Jiang, PhD, Chengsong Zhu, PhD, John Schoggins, PhD, James B. Cutrell, MD, Carol L. Croft, MD, Amit Khera, MD, Mark H. Drazner, MD, Justin L. Grodin, MD, Benjamin M. Greenberg, MD, MHS, Pradeep P.A. Mammen, MD, Sean J. Morrison, PhD, James A. de Lemos, MD, **In-Depth Evaluation of a Case of Presumed Myocarditis After the Second Dose of COVID-19 mRNA Vaccine**, 16 Jun 021 https://doi.org/10.1161/CIRCULATIONAHA.121.056038: https://www.ahajournals.org/doi/10.1161/CIRCULATIONAHA.121.056038

D'Angelo T, Cattafi A, Carerj ML, Booz C, Ascenti G, Cicero G, Blandino A, Mazziotti S. **Myocarditis After SARS-CoV-2 Vaccination: A Vaccine-Induced Reaction?** Can J Cardiol. 2021 Oct;37(10):1665-1667. doi: 10.1016/j.cjca.2021.05.010. Epub 2021 Jun 9. PMID: 34118375; PMCID: PMC8187737.: https://pubmed.ncbi.nlm.nih.gov/34118375/

Sung JG, Sobieszczyk PS, Bhatt DL. **Acute Myocardial Infarction Within 24 Hours After COVID-19 Vaccination**. Am J Cardiol. 2021 Oct 1;156:129-131. doi: 10.1016/j.amjcard.2021.06.047. Epub 2021 Jul 12. PMID: 34364657; PMCID: PMC8272970: https://pubmed.ncbi.nlm.nih.gov/34364657/

Ujueta F, Azimi R, Lozier MR, Poppiti R, Ciment A. **Lymphohistocytic myocarditis after Ad26.COV2.S viral vector COVID-19 vaccination**. Int J Cardiol Heart Vasc. 2021 Oct;36:100869. doi: 10.1016/j.ijcha.2021.100869. Epub 2021 Sep 7. PMID: 34514078; PMCID: PMC8421108.: https://pubmed.ncbi.nlm.nih.gov/34514078/

Rose J, McCullough PA. WITHDRAWN[34]: **A Report on Myocarditis Adverse Events in the U.S. Vaccine Adverse Events Reporting System (VAERS) in Association with COVID-19 Injectable Biological Products**. Curr Probl Cardiol. 2021 Sep 30:101011. doi: 10.1016/j.cpcardiol.2021.101011. Epub ahead of print. PMID: 34601006; PMCID: PMC8483988.: https://pubmed.ncbi.nlm.nih.gov/34601006/

Barda, Noam et. al., **Safety of the BNT162b2 mRNA Covid-19 Vaccine in a Nationwide Setting, 2021,** New England Journal of Medicine September 16, 2021 385(12):1078 https://www.nejm.org/doi/full/10.1056/NEJMoa2110475

> The study above concludes that: "*The vaccine was associated with an excess risk of myocarditis (1 to 5 events per 100,000 persons). The risk of this potentially serious adverse event and of many other serious adverse events increased substantially after SARS-CoV-2 infection*"

[34] The authors were NOT the moving party in this withdrawal of the paper. After the paper passed peer review, and was accepted, the publisher, Elsevier stopped publication with no cause or reason given.

Tracy Beth Høeg, Allison Krug, Josh Stevenson, John Mandrola, **SARS-CoV-2 mRNA Vaccination-Associated Myocarditis in Children Ages 12-17: A Stratified National Database Analysis** medRxiv 2021.08.30.21262866; doi: https://doi.org/10.1101/2021.08.30.21262866: https://www.medrxiv.org/content/10.1101/2021.08.30.21262866v1

Mevorach D, Anis E, Cedar N, Bromberg M, Haas EJ, Nadir E, Olsha-Castell S, Arad D, Hasin T, Levi N, Asleh R, Amir O, Meir K, Cohen D, Dichtiar R, Novick D, Hershkovitz Y, Dagan R, Leitersdorf I, Ben-Ami R, Miskin I, Saliba W, Muhsen K, Levi Y, Green MS, Keinan-Boker L, Alroy-Preis S. **Myocarditis after BNT162b2 mRNA Vaccine against Covid-19 in Israel**. N Engl J Med. 2021 Dec 2;385(23):2140-2149. doi: 10.1056/NEJMoa2109730. Epub 2021 Oct 6. PMID: 34614328; PMCID: PMC8531987.: https://pubmed.ncbi.nlm.nih.gov/34614328/

Shaw KE, Cavalcante JL, Han BK, Gössl M. **Possible Association Between COVID-19 Vaccine and Myocarditis: Clinical and CMR Findings**. JACC Cardiovasc Imaging. 2021 Sep;14(9):1856-1861. doi: 10.1016/j.jcmg.2021.06.002. Epub 2021 Jun 16. PMID: 34246586; PMCID: PMC8245050..: https://pubmed.ncbi.nlm.nih.gov/34246586/

Kounis NG, Mplani V, Koniari I, Velissaris D. **Hypersensitivity myocarditis and COVID-19 vaccines**. Kardiol Pol. 2022;80(1):109-110. doi: 10.33963/KP.a2021.0166. Epub 2021 Dec 2. PMID: 34856634.: https://pubmed.ncbi.nlm.nih.gov/34856634/

Nicholas S. Hendren, Spencer Carter, Justin L. Grodin, **Severe COVID-19 vaccine associated myocarditis: Zebra or unicorn?**, International Journal of Cardiology, Volume 343, 2021,https://www.internationaljournalofcardiology.com/article/S0167-5273(21)01477-7/fulltext

Guy Witberg, M.D., Noam Barda, M.D., Ph.D., Sara Hoss, M.D., Ilan Richter, M.D., M.P.H., Maya Wiessman, M.D., Yaron Aviv, M.D., Tzlil Grinberg, M.D., Oren Auster, M.Sc., Noa Dagan, M.D., Ph.D., M.P.H., Ran D. Balicer, M.D., Ph.D., M.P.H., and Ran Kornowski, M.D., **Myocarditis after Covid-19 vaccination in a large healthcare organization**, New England Journal of Medicine December 2, 2021 385(23):2132: https://www.nejm.org/doi/10.1056/NEJMoa2110737

Koizumi T, Awaya T, Yoshioka K, Kitano S, Hayama H, Amemiya K, Enomoto Y, Yazaki Y, Moroi M, Nakamura M. **Myocarditis after COVID-19 mRNA vaccines**. QJM. 2021 Dec 20;114(10):741-743. doi: 10.1093/qjmed/hcab244. PMID: 34546329.: https://pubmed.ncbi.nlm.nih.gov/34546329/

Supriya S. Jain, Jeremy M. Steele, Brian Fonseca, Sihong Huang, Sanket Shah, Shiraz A. Maskatia, Sujatha Buddhe, Nilanjana Misra, Preeti Ramachandran, Lasya Gaur, Parham Eshtehardi, Shafkat Anwar, Neeru Kaushik, Frank Han, Nita Ray Chaudhuri, Lars Grosse-Wortmann; **COVID-19 Vaccination–Associated Myocarditis in Adolescents**. Pediatrics November 2021; 148 (5): e2021053427. 10.1542/peds.2021-053427: https://publications.aap.org/pediatrics/article/148/5/e2021053427/181357

Arthur Shiyovich, Guy Witberg, Yaron Aviv, Alon Eisen, Katia Orvin, Maya Wiessman, Tzlil Grinberg, Avital Porter, Ran Kornowski, Ashraf Hamdan, **Myocarditis following COVID-19 vaccination**: magnetic resonance imaging study, European Heart Journal - Cardiovascular Imaging, 2021;, jeab230,: https://academic.oup.com/ehjcimaging/advance-article/doi/10.1093/ehjci/jeab230/6421640

Miqdad MA, Nasser H, Alshehri A, Mourad AR. **Acute Myocarditis Following the Administration of the Second BNT162b2 COVID-19 Vaccine Dose**. Cureus. 2021;13(10):e18880. Published 2021 Oct 18. doi:10.7759/cureus.18880: https://www.ncbi.nlm.nih.gov/labs/pmc/articles/PMC8599115/

Risheek Kaul et.al., **Myocarditis after COVID-19 vaccination** , IJC Heart & Vasculature Volume 36, October 2021, 100872: https://www.sciencedirect.com/science/article/pii/S2352906721001603
Javier Bautista García, , Pedro Peña Ortega, José Antonio Bonilla Fernández, Aridane Cárdenes León, Luis Ramírez Burgos, Eduardo Caballero Dorta, **Acute Myocarditis after administration of BNT162b2 vaccine against COVID-19**: Revista Española de Cardiología, 16/03/2022 https://www.revespcardiol.org/en-linkresolver-acute-myocarditis-after-administrationbnt162b2-S188558572100133X

Jitka Starekova, David A. Bluemke, William S. Bradham, Thomas M. Grist, Mark L. Schiebler, and Scott B. Reeder, **Myocarditis Associated with mRNA COVID-19 Vaccination**, Radiology 2021 301:2, E409-E411: https://pubs.rsna.org/doi/10.1148/radiol.2021211430

P. Schmitt, R. Demoulin, R. Poyet, E. Capilla, G. Rohel, F. Pons, C. Jégo, S. Sidibe, A. Druelle, F.-X. Brocq, F. Dutasta, G.R. Cellarier, **Acute Myocarditis after COVID-19 vaccination: A case report**, La Revue de Médecine Interne, Volume 42, Issue 11, 2021,: https://www.sciencedirect.com/science/article/pii/S0248866321007098

Eric Tano, Stephanie San Martin, Stephen Girgis, Yadira Martinez-Fernandez, Carolina Sanchez Vegas, **Perimyocarditis in Adolescents After Pfizer-BioNTech COVID-19 Vaccine**, Journal of the Pediatric Infectious Diseases Society, Volume 10, Issue 10, October 2021, Pages 962–966: https://academic.oup.com/jpids/article/10/10/962/6329543
Nevet A. **Acute myocarditis associated with anti-COVID-19 vaccination**. Clin Exp Vaccine Res. 2021 May;10(2):196-197 https://ecevr.org/DOIx.php?id=10.7774/cevr.2021.10.2.196

Marshall M, Ferguson ID, Lewis P, Jaggi P, Gagliardo C, Collins JS, Shaughnessy R, Caron R, Fuss C, Corbin KJE, Emuren L, Faherty E, Hall EK, Di Pentima C, Oster ME, Paintsil E, Siddiqui S, Timchak DM, Guzman-Cottrill JA. **Symptomatic Acute Myocarditis in 7 Adolescents After Pfizer-BioNTech COVID-19 Vaccination**. Pediatrics. 2021 Sep;148(3):e2021052478. doi: 10.1542/peds.2021-052478. Epub 2021 Jun 4. PMID: 34088762.:. https://pubmed.ncbi.nlm.nih.gov/34088762/

Rosner CM, Genovese L, Tehrani BN, Atkins M, Bakhshi H, Chaudhri S, Damluji AA, de Lemos JA, Desai SS, Emaminia A, Flanagan MC, Khera A, Maghsoudi A, Mekonnen G, Muthukumar A, Saeed IM, Sherwood MW, Sinha SS, O'Connor CM, deFilippi CR. **Myocarditis Temporally Associated With COVID-19 Vaccination**. Circulation. 2021 Aug 10;144(6):502-505. doi: 10.1161/CIRCULATIONAHA.121.055891. Epub 2021 Jun 16. PMID: 34133885; PMCID: PMC8340723.: https://pubmed.ncbi.nlm.nih.gov/34133885/

Onderko L, Starobin B, Riviere AE, Hohl PK, Phillips CT, Morgan RB, Welsh A, Francis SA, Afari ME. **Myocarditis in the Setting of Recent COVID-19 Vaccination**. Case Rep Cardiol. 2021 Oct 19;2021:6806500. doi: 10.1155/2021/6806500. PMID: 34712497; PMCID: PMC8548171.: https://pubmed.ncbi.nlm.nih.gov/34712497/

Joseph Mansour, Ryan G. Short, Sanjeev Bhalla, Pamela K. Woodard, Amanda Verma, Xavier Robinson

Demetrios A. Raptis, **Acute myocarditis after a second dose of COVID-19 mRNA vaccine: report of two cases** , CARDIOTHORACIC IMAGING| VOLUME 78, P247-249, OCTOBER 01, 2021 : https://www.clinicalimaging.org/article/S0899-7071(21)00265-5/fulltext.

Gilbert T Chua, Mike Yat Wah Kwan, Celine S L Chui, Robert David Smith, Edmund Chi-Lok Cheung, Tian Ma, Miriam T Y Leung, Sabrina Siu Ling Tsao, Elaine Kan, Wing Kei Carol Ng, Victor Chi Man Chan, Shuk Mui Tai, Tak Ching Yu, Kwok Piu Lee, Joshua Sung Chih Wong, Ying Kit Lin, Chi Chiu Shek, Agnes Sze Yin Leung, Chit Kwong Chow, Ka Wah Li, Johnny Ma, Wai Yuk Fung, Daniel Lee, Ming Yen Ng, Wilfred Hing Sang Wong, Hing Wai Tsang, Janette Kwok, Daniel Leung, Kin Lai Chung, Chun Bong Chow, Godfrey Chi Fung Chan, Wing Hang Leung, Kelvin Kai Wang To, Kwok Yung Yuen, Yu Lung Lau, Ian Chi Kei Wong, Patrick Ip, **Epidemiology of Acute Myocarditis/Pericarditis in Hong Kong Adolescents Following Comirnaty Vaccination**, Clinical Infectious Diseases, 2021;, ciab989,: https://academic.oup.com/cid/advance-article-abstract/doi/10.1093/cid/ciab989/6445179

Cimaglia P, Tolomeo P, Rapezzi C. **Acute myocarditis after SARS-CoV-2 vaccination in a 24-year-old man**. Rev Port Cardiol. 2022 Jan;41(1):71-72. doi: 10.1016/j.repc.2021.07.005. Epub 2021 Jul 24. PMID: 34334935; PMCID: PMC8302854.: https://pubmed.ncbi.nlm.nih.gov/34334935/

Boursier C, Chevalier E, Filippetti L, Imbert L, Roch V, Huttin O, Claudin M, Marie PY. **68Ga-DOTATOC digital-PET imaging of inflammatory cell infiltrates in myocarditis following COVID-19 vaccination**. Eur J Nucl Med Mol Imaging. 2022 Mar;49(4):1433-1434. doi: 10.1007/s00259-021-05609-4. Epub 2021 Nov 8. PMID: 34746968; PMCID: PMC8572651.: https://pubmed.ncbi.nlm.nih.gov/34746968/

Williams CB, Choi JI, Hosseini F, Roberts J, Ramanathan K, Ong K. **Acute Myocarditis Following mRNA-1273 SARS-CoV-2 Vaccination**. CJC Open. 2021 Nov;3(11):1410-1412. doi: 10.1016/j.cjco.2021.07.008. Epub 2021 Jul 14. PMID: 34308326; PMCID: PMC8278869.https://pubmed.ncbi.nlm.nih.gov/34308326/

Kadwalwala M, Chadha B, Ortoleva J, Joyce M. **Multimodality imaging and histopathology in a young man presenting with fulminant lymphocytic myocarditis and cardiogenic shock after mRNA-1273 vaccination**. BMJ Case Rep. 2021 Nov 30;14(11):e246059. doi: 10.1136/bcr-2021-246059. PMID: 34848416; PMCID: PMC8634223.: https://pubmed.ncbi.nlm.nih.gov/34848416/

Lim Y, Kim MC, Kim KH, Jeong IS, Cho YS, Choi YD, Lee JE. **Case Report: Acute Fulminant Myocarditis and Cardiogenic Shock After Messenger RNA Coronavirus Disease 2019 Vaccination Requiring Extracorporeal Cardiopulmonary Resuscitation**. Front Cardiovasc Med. 2021 Oct 29;8:758996. doi: 10.3389/fcvm.2021.758996. PMID: 34778411; PMCID: PMC8586196.: https://pubmed.ncbi.nlm.nih.gov/34778411/

Joob B, Wiwanitkit V. **Acute myocarditis after coronavirus disease 2019 vaccination**. Anatol J Cardiol. 2021 Nov;25(11):841-842. doi: 10.5152/AnatolJCardiol.2021.689. PMID: 34734821; PMCID: PMC8575404.: https://pubmed.ncbi.nlm.nih.gov/34734821/

Maeda M, Isawa T, Tada N. Definite Acute Myocarditis After Coronavirus Disease 2019 mRNA Vaccination. Circ J. 2021 Dec 4. doi: 10.1253/circj.CJ-21-0840. Epub ahead of print. PMID: 34866122.: https://pubmed.ncbi.nlm.nih.gov/34866122/

Maki H, Aikawa T, Ibe T, Oyama-Manabe N, Fujita H. **Biventricular systolic dysfunction in acute myocarditis after SARS-CoV-2 mRNA-1273 vaccination**. Eur Heart J Cardiovasc Imaging. 2022 Jan

24;23(2):e87. doi: 10.1093/ehjci/jeab206. PMID: 34601566.
https://pubmed.ncbi.nlm.nih.gov/34601566/

Dionne A, Sperotto F, Chamberlain S, Baker AL, Powell AJ, Prakash A, Castellanos DA, Saleeb SF, de Ferranti SD, Newburger JW, Friedman KG. **Association of Myocarditis With BNT162b2 Messenger RNA COVID-19 Vaccine in a Case Series of Children**. JAMA Cardiol. 2021 Dec 1;6(12):1446-1450. doi: 10.1001/jamacardio.2021.3471. PMID: 34374740; PMCID: PMC8356143.:
https://pubmed.ncbi.nlm.nih.gov/34374740/

King WW, Petersen MR, Matar RM, Budweg JB, Cuervo Pardo L, Petersen JW. **Myocarditis following mRNA vaccination against SARS-CoV-2, a case series**. Am Heart J Plus. 2021 Aug;8:100042. doi: 10.1016/j.ahjo.2021.100042. Epub 2021 Aug 9. PMID: 34396358; PMCID: PMC8349733.
https://pubmed.ncbi.nlm.nih.gov/34396358/

Sarah A. Buchan et. al, **Epidemiology of myocarditis and pericarditis following mRNA vaccines in Ontario,**
Canada: by vaccine product, schedule, and interval: medRxiv 2021.12.02.21267156; doi:
https://doi.org/10.1101/2021.12.02.21267156
https://www.medrxiv.org/content/10.1101/2021.12.02.21267156v1

Aye YN, Mai AS, Zhang A, Lim OZH, Lin N, Ng CH, Chan MY, Yip J, Loh PH, Chew NWS. **Acute Myocardial Infarction and Myocarditis following COVID-19 Vaccination**. QJM. 2021 Sep 29:hcab252. doi: 10.1093/qjmed/hcab252. Epub ahead of print. PMID: 34586408; PMCID: PMC8522388.
https://pubmed.ncbi.nlm.nih.gov/34586408/

Abbate, A., Gavin, J., Madanchi, N., Kim, C., Shah, P. R., Klein, K., . . . Danielides, S. (2021). **Fulminant myocarditis and systemic hyperinflammation temporally associated with BNT162b2 mRNA COVID-19 vaccination in two patients**. Int J Cardiol, 340, 119-121. doi:10.1016/j.ijcard.2021.08.018.
https://www.ncbi.nlm.nih.gov/pubmed/34416319

Abu Mouch, S., Roguin, A., Hellou, E., Ishai, A., Shoshan, U., Mahamid, L., . . . Berar Yanay, N. (2021). **Myocarditis following COVID-19 mRNA vaccination**. Vaccine,39(29), 3790-3793. doi:10.1016/j.vaccine.2021.05.087. https://www.ncbi.nlm.nih.gov/pubmed/34092429

Albert, E., Aurigemma, G., Saucedo, J., & Gerson, D. S. (2021). **Myocarditis following COVID-19 vaccination**. Radiol Case Rep, 16(8), 2142-2145. doi:10.1016/j.radcr.2021.05.033.
https://www.ncbi.nlm.nih.gov/pubmed/34025885

Aye, Y. N., Mai, A. S., Zhang, A., Lim, O. Z. H., Lin, N., Ng, C. H., . . . Chew, N. W. S. (2021). **Acute Myocardial Infarction and Myocarditis following COVID-19 Vaccination**. QJM. doi:10.1093/qjmed/hcab252. https://www.ncbi.nlm.nih.gov/pubmed/34586408

Azir, M., Inman, B., Webb, J., & Tannenbaum, L. (2021). **STEMI Mimic: Focal Myocarditis in an Adolescent Patient After mRNA COVID-19 Vaccine**. J Emerg Med, 61(6), e129-e132. doi:10.1016/j.jemermed.2021.09.017. https://www.ncbi.nlm.nih.gov/pubmed/34756746

Bozkurt, B., Kamat, I., & Hotez, P. J. (2021). **Myocarditis With COVID-19 mRNA Vaccines**. Circulation, 144(6), 471-484. doi:10.1161/CIRCULATIONAHA.121.056135. https://www.ncbi.nlm.nih.gov/pubmed/34281357

Chamling, B., Vehof, V., Drakos, S., Weil, M., Stalling, P., Vahlhaus, C., . . . Yilmaz, A. (2021). **Occurrence of acute infarct-like myocarditis following COVID-19 vaccination: just an accidental co-incidence or rather vaccination-associated autoimmune myocarditis?** Clin Res Cardiol, 110(11), 1850-1854. doi:10.1007/ s00392-021-01916-w. https://www.ncbi.nlm.nih.gov/pubmed/34333695

Chelala, L., Jeudy, J., Hossain, R., Rosenthal, G., Pietris, N., & White, C. (2021). **Cardiac MRI Findings of Myocarditis After COVID-19 mRNA Vaccination in Adolescents**. AJR Am J Roentgenol. doi:10.2214/AJR.21.26853. https://www.ncbi.nlm.nih.gov/pubmed/34704459

Choi, S., Lee, S., Seo, J. W., Kim, M. J., Jeon, Y. H., Park, J. H., . . . Yeo, N. S. (2021). **Myocarditis-induced Sudden Death after BNT162b2 mRNA COVID-19 Vaccination in Korea: Case Report Focusing on Histopathological Findings**. J Korean Med Sci, 36(40), e286. doi:10.3346/jkms.2021.36.e286. https://www.ncbi.nlm.nih.gov/pubmed/34664804

Chua, G. T., Kwan, M. Y. W., Chui, C. S. L., Smith, R. D., Cheung, E. C., Tian, T., . . . Ip, P. (2021). **Epidemiology of Acute Myocarditis/Pericarditis in Hong Kong Adolescents Following Comirnaty Vaccination**. Clin Infect Dis. doi:10.1093/cid/ciab989. https://www.ncbi.nlm.nih.gov/pubmed/34849657

Clarke, R., & Ioannou, A. (2021). **Should T2 mapping be used in cases of recurrent myocarditis to differentiate between the acute inflammation and chronic scar**? J Pediatr. doi:10.1016/j.jpeds.2021.12.026. https://www.ncbi.nlm.nih.gov/pubmed/34933012

Das, B. B., Moskowitz, W. B., Taylor, M. B., & Palmer, A. (2021). **Myocarditis and Pericarditis Following mRNA COVID-19 Vaccination: What Do We Know So Far?** Children (Basel), 8(7). doi:10.3390/children8070607. https://www.ncbi.nlm.nih.gov/pubmed/34356586

Dickey, J. B., Albert, E., Badr, M., Laraja, K. M., Sena, L. M., Gerson, D. S., . . . Aurigemma, G. P. (2021). **A Series of Patients With Myocarditis Following SARSCoV-2 Vaccination With mRNA-1279 and BNT162b2**. JACC Cardiovasc Imaging, 14(9), 1862-1863. doi:10.1016/j.jcmg.2021.06.003. https://www.ncbi.nlm.nih.gov/pubmed/34246585

Ehrlich, P., Klingel, K., Ohlmann-Knafo, S., Huttinger, S., Sood, N., Pickuth, D., & Kindermann, M. (2021). **Biopsy-proven lymphocytic myocarditis following first mRNA COVID-19 vaccination in a 40-year-old male: case report**. Clin Res Cardiol, 110(11), 1855-1859. doi:10.1007/s00392-021-01936-6. https://www.ncbi.nlm.nih.gov/pubmed/34487236

Facetti, S., Giraldi, M., Vecchi, A. L., Rogiani, S., & Nassiacos, D. (2021). [**Acute myocarditis in a young adult two days after Pfizer vaccination**]. G Ital Cardiol (Rome), 22(11), 891-893. doi:10.1714/3689.36746. https://www.ncbi.nlm.nih.gov/pubmed/34709227

Foltran, D., Delmas, C., Flumian, C., De Paoli, P., Salvo, F., Gautier, S., . . . Montastruc, F. (2021). **Myocarditis and Pericarditis in Adolescents after First and Second doses of mRNA COVID-19 Vaccines**.

Eur Heart J Qual Care Clin Outcomes.doi:10.1093/ehjqcco/qcab090. https://www.ncbi.nlm.nih.gov/pubmed/34849667

Gargano, J. W., Wallace, M., Hadler, S. C., Langley, G., Su, J. R., Oster, M. E., . . . Oliver, S. E. (2021). **Use of mRNA COVID-19 Vaccine After Reports of Myocarditis Among Vaccine Recipients: Update from the Advisory Committee on Immunization Practices – United States**, June 2021. MMWR Morb Mortal Wkly Rep, 70(27), 977-982. doi:10.15585/mmwr.mm7027e2. https://www.ncbi.nlm.nih.gov/pubmed/34237049

Gellad, W. F. (2021). Myocarditis after vaccination against covid-19. BMJ, 375, n3090. doi:10.1136/bmj.n3090. https://www.ncbi.nlm.nih.gov/pubmed/34916217

In brief: Myocarditis with the Pfizer/BioNTech and Moderna COVID-19 vaccines. (2021). Med Lett Drugs Ther, 63(1629), e9. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/34544112https://www.ncbi.nlm.nih.gov/pubmed/3454412

Ioannou, A. (2021a). **Myocarditis should be considered in those with a troponin rise and unobstructed coronary arteries following Pfizer-BioNTech COVID-19 vaccination**. QJM. doi:10.1093/qjmed/hcab231. https://www.ncbi.nlm.nih.gov/pubmed/34463755

Ioannou, A. (2021b). **T2 mapping should be utilised in cases of suspected myocarditis to confirm an acute inflammatory process**. QJM. doi:10.1093/qjmed/hcab326. https://www.ncbi.nlm.nih.gov/pubmed/34931681

Isaak, A., Feisst, A., & Luetkens, J. A. (2021). **Myocarditis Following COVID-19 Vaccination**. Radiology, 301(1), E378-E379. doi:10.1148/radiol.2021211766. https://www.ncbi.nlm.nih.gov/pubmed/34342500

Istampoulouoglou, I., Dimitriou, G., Spani, S., Christ, A., Zimmermanns, B., Koechlin, S., . . . Leuppi-Taegtmeyer, A. B. (2021). **Myocarditis and pericarditis in association with COVID-19 mRNA-vaccination: cases from a regional pharmacovigilance centre**. Glob Cardiol Sci Pract, 2021(3), e202118. doi:10.21542/gcsp.2021.18. https://www.ncbi.nlm.nih.gov/pubmed/34805376

Jain, S. S., Steele, J. M., Fonseca, B., Huang, S., Shah, S., Maskatia, S. A., . . . Grosse-Wortmann, L. (2021). **COVID-19 Vaccination-Associated Myocarditis in Adolescents**. Pediatrics, 148(5). doi:10.1542/peds.2021-053427. https://www.ncbi.nlm.nih.gov/pubmed/34389692

Kaneta, K., Yokoi, K., Jojima, K., Kotooka, N., & Node, K. (2021). **Young Male With Myocarditis Following mRNA-1273 Vaccination Against Coronavirus Disease-2019 (COVID-19).** Circ J. doi:10.1253/circj.CJ-21-0818. https://www.ncbi.nlm.nih.gov/pubmed/34744118

Kaul, R., Sreenivasan, J., Goel, A., Malik, A., Bandyopadhyay, D., Jin, C., . . . Panza, J. A. (2021). **Myocarditis following COVID-19 vaccination**. Int J Cardiol Heart Vasc, 36, 100872. doi:10.1016/j.ijcha.2021.100872. https://www.ncbi.nlm.nih.gov/pubmed/34568540

Kim, H. W., Jenista, E. R., Wendell, D. C., Azevedo, C. F., Campbell, M. J., Darty, S.N., . . . Kim, R. J. (2021). **Patients With Acute Myocarditis Following mRNA COVID-19 Vaccination**. JAMA Cardiol, 6(10), 1196-1201. doi:10.1001/jamacardio.2021.2828. https://www.ncbi.nlm.nih.gov/pubmed/34185046

Kim, I. C., Kim, H., Lee, H. J., Kim, J. Y., & Kim, J. Y. (2021). **Cardiac Imaging of Acute Myocarditis Following COVID-19 mRNA Vaccination**. J Korean Med Sci, 36(32), e229. doi:10.3346/jkms.2021.36.e229. https://www.ncbi.nlm.nih.gov/pubmed/34402228

King, W. W., Petersen, M. R., Matar, R. M., Budweg, J. B., Cuervo Pardo, L., & Petersen, J. W. (2021). **Myocarditis following mRNA vaccination against SARSCoV-2, a case series**. Am Heart J Plus, 8, 100042. doi:10.1016/j.ahjo.2021.100042. https://www.ncbi.nlm.nih.gov/pubmed/34396358

Kwan, M. Y. W., Chua, G. T., Chow, C. B., Tsao, S. S. L., To, K. K. W., Yuen, K. Y., . . . Ip, P. (2021). **mRNA COVID vaccine and myocarditis in adolescents**. Hong Kong Med J, 27(5), 326-327. doi:10.12809/hkmj215120. https://www.ncbi.nlm.nih.gov/pubmed/34393110

Lee, E., Chew, N. W. S., Ng, P., & Yeo, T. J. (2021). **Reply to "Letter to the editor: Myocarditis should be considered in those with a troponin rise and unobstructed coronary arteries following PfizerBioNTech COVID-19 vaccination"**. QJM. doi: 10.1093/qjmed/hcab232. https://www.ncbi.nlm.nih.gov/pubmed/34463770

Levin, D., Shimon, G., Fadlon-Derai, M., Gershovitz, L., Shovali, A., Sebbag, A., . . . Gordon, B. (2021). **Myocarditis following COVID-19 vaccination – A case series**. Vaccine, 39(42), 6195-6200. doi:10.1016/j.vaccine.2021.09.004. https://www.ncbi.nlm.nih.gov/pubmed/34535317

Li, M., Yuan, J., Lv, G., Brown, J., Jiang, X., & Lu, Z. K. (2021). **Myocarditis and Pericarditis following COVID-19 Vaccination: Inequalities in Age and Vaccine Types**. J Pers Med, 11(11). doi:10.3390/jpm11111106. https://www.ncbi.nlm.nih.gov/pubmed/34834458

Lim, Y., Kim, M. C., Kim, K. H., Jeong, I. S., Cho, Y. S., Choi, Y. D., & Lee, J. E. (2021). **Case Report: Acute Fulminant Myocarditis and Cardiogenic Shock After Messenger RNA Coronavirus Disease 2019 Vaccination Requiring Extracorporeal Cardiopulmonary Resuscitation**. Front Cardiovasc Med, 8, 758996. doi:10.3389/fcvm.2021.758996. https://www.ncbi.nlm.nih.gov/pubmed/34778411

Luk, A., Clarke, B., Dahdah, N., Ducharme, A., Krahn, A., McCrindle, B., . . . McDonald, M. (2021). **Myocarditis and Pericarditis After COVID-19 mRNA Vaccination: Practical Considerations for Care Providers**. Can J Cardiol, 37(10), 1629-1634. doi:10.1016/j.cjca.2021.08.001. https://www.ncbi.nlm.nih.gov/pubmed/34375696

Minocha, P. K., Better, D., Singh, R. K., & Hoque, T. (2021). **Recurrence of Acute Myocarditis Temporally Associated with Receipt of the mRNA Coronavirus Disease 2019 (COVID-19) Vaccine in a Male Adolescent**. J Pediatr, 238, 321-323. doi: 10.1016/j.jpeds.2021.06.035. https://www.ncbi.nlm.nih.gov/pubmed/34166671

Montgomery, J., Ryan, M., Engler, R., Hoffman, D., McClenathan, B., Collins, L., . . . Cooper, L. T., Jr. (2021). **Myocarditis Following Immunization With mRNA COVID-19 Vaccines in Members of the US Military**. JAMA Cardiol, 6(10), 1202-1206. doi: 10.1001/jamacardio.2021.2833. https://www.ncbi.nlm.nih.gov/pubmed/34185045

Murakami, Y., Shinohara, M., Oka, Y., Wada, R., Noike, R., Ohara, H., . . . Ikeda, T. (2021). **Myocarditis Following a COVID-19 Messenger RNA Vaccination: A Japanese Case Series**. Intern Med. doi:10.2169/internalmedicine.8731-21. https://www.ncbi.nlm.nih.gov/pubmed/34840235

Park, H., Yun, K. W., Kim, K. R., Song, S. H., Ahn, B., Kim, D. R., . . . Kim, Y. J. (2021). **Epidemiology and Clinical Features of Myocarditis/Pericarditis before the Introduction of mRNA COVID-19 Vaccine in Korean Children: a Multicenter Study**. J Korean Med Sci, 36(32), e232. doi:10.3346/jkms.2021.36.e232. https://www.ncbi.nlm.nih.gov/pubmed/34402230

Park, J., Brekke, D. R., & Bratincsak, A. (2021). **Self-limited myocarditis presenting with chest pain and ST segment elevation in adolescents after vaccination with the BNT162b2 mRNA vaccine**. Cardiol Young, 1-4. doi:10.1017/S1047951121002547. https://www.ncbi.nlm.nih.gov/pubmed/34180390

Patel, Y. R., Louis, D. W., Atalay, M., Agarwal, S., & Shah, N. R. (2021). **Cardiovascular magnetic resonance findings in young adult patients with acute myocarditis following mRNA COVID-19 vaccination: a case series**. J Cardiovasc Magn Reson, 23(1), 101. doi:10.1186/s12968-021-00795-4. https://www.ncbi.nlm.nih.gov/pubmed/34496880

Martina Patone, PhD; Xue W. Mei, PhD; Lahiru Handunnetthi, PhD; Sharon Dixon, MD; Francesco Zaccardi, PhD; Manu Shankar-Hari, PhD; Peter Watkinson, MD; Kamlesh Khunti, PhD; Anthony Harnden, PhD; Carol A.C. Coupland, PhD; Keith M. Channon, MD; Nicholas L. Mills, PhD; Aziz Sheikh, MD; Julia Hippisley-Cox, MD, **Risk of Myocarditis After Sequential Doses of COVID-19 Vaccine and SARS-CoV-2 Infection by Age and Sex**, Circulation. 2022; 146:743–754. DOI: 10.1161/CIRCULATIONAHA.122.059970, September 6, 2022 https://www.ahajournals.org/doi/epdf/10.1161/CIRCULATIONAHA.122.059970

Patone, M., Mei, X. W., Handunnetthi, L., Dixon, S., Zaccardi, F., Shankar-Hari, M., . . . Hippisley-Cox, J. (2021). **Risks of myocarditis, pericarditis, and cardiac arrhythmias associated with COVID-19 vaccination or SARS-CoV-2 infection**. Nat Med. doi:10.1038/s41591-021-01630-0. https://www.ncbi.nlm.nih.gov/pubmed/34907393

Patrignani, A., Schicchi, N., Calcagnoli, F., Falchetti, E., Ciampani, N., Argalia, G., & Mariani, A. (2021). **Acute myocarditis following Comirnaty vaccination in a healthy man with previous SARS-CoV-2 infection.** Radiol Case Rep, 16(11), 3321-3325. doi: 10.1016/j.radcr.2021.07.082. https://www.ncbi.nlm.nih.gov/pubmed/34367386

Shiyovich, A., Witberg, G., Aviv, Y., Eisen, A., Orvin, K., Wiessman, M., . . . Hamdan, A. (2021). **Myocarditis following COVID-19 vaccination: magnetic resonance imaging study**. Eur Heart J Cardiovasc Imaging. doi:10.1093/ehjci/jeab230. https://www.ncbi.nlm.nih.gov/pubmed/34739045

Simone, A., Herald, J., Chen, A., Gulati, N., Shen, A. Y., Lewin, B., & Lee, M. S. (2021). **Acute Myocarditis Following COVID-19 mRNA Vaccination in Adults Aged 18 Years or Older**. JAMA Intern Med, 181(12), 1668-1670. doi:10.1001/jama internmed. 2021.5511. https://www.ncbi.nlm.nih.gov/pubmed/34605853

Singer, M. E., Taub, I. B., & Kaelber, D. C. (2021). **Risk of Myocarditis from COVID-19 Infection in People Under Age 20: A Population-Based Analysis**. medRxiv. doi:10.1101/2021.07.23.21260998. https://www.ncbi.nlm.nih.gov/pubmed/34341797

Starekova, J., Bluemke, D. A., Bradham, W. S., Grist, T. M., Schiebler, M. L., & Reeder, S. B. (2021). **Myocarditis Associated with mRNA COVID-19 Vaccination**. Radiology, 301(2), E409-E411. doi:10.1148/radiol.2021211430. https:// www.ncbi.nlm.nih.gov/pubmed/34282971

Sulemankhil, I., Abdelrahman, M., & Negi, S. I. (2021). **Temporal association between the COVID-19 Ad26.COV2.S vaccine and acute myocarditis: A case report and literature review**. Cardiovasc Revasc Med. doi:10.1016/j.carrev.2021.08.012. https://www.ncbi.nlm.nih.gov/pubmed/34420869

Tailor, P. D., Feighery, A. M., El-Sabawi, B., & Prasad, A. (2021). **Case report: acute myocarditis following the second dose of mRNA-1273 SARS-CoV-2 vaccine**. Eur Heart J Case Rep, 5(8), ytab319. doi:10.1093/ehjcr/ytab319. https:// www.ncbi.nlm.nih.gov/pubmed/34514306

Takeda, M., Ishio, N., Shoji, T., Mori, N., Matsumoto, M., & Shikama, N. (2021). **Eosinophilic Myocarditis Following Coronavirus Disease 2019 (COVID-19) Vaccination**. Circ J. doi:10.1253/circj.CJ-21-0935. https://www.ncbi.nlm.nih.gov/pubmed/34955479

Vidula, M. K., Ambrose, M., Glassberg, H., Chokshi, N., Chen, T., Ferrari, V. A., & Han, Y. (2021). **Myocarditis and Other Cardiovascular Complications of the mRNA Based COVID-19 Vaccines**. Cureus, 13(6), e15576. doi:10.7759/cureus.15576. https://www.ncbi.nlm.nih.gov/pubmed/34277198

Watkins, K., Griffin, G., Septaric, K., & Simon, E. L. (2021). **Myocarditis after BNT162b2 vaccination in a healthy male**. Am J Emerg Med, 50, 815 e811-815 e812. doi:10.1016/j.ajem.2021.06.051. https://www.ncbi.nlm.nih.gov/pubmed/34229940

Witberg, G., Barda, N., Hoss, S., Richter, I., Wiessman, M., Aviv, Y., . . . Kornowski, R. (2021). **Myocarditis after Covid-19 Vaccination in a Large Health Care Organization**. N Engl J Med, 385(23), 2132-2139. doi:10.1056/NEJMoa2110737. https://www.ncbi.nlm.nih.gov/pubmed/34614329

Nagasaka, T., Koitabashi, N., Ishibashi, Y., Aihara, K., Takama, N., Ohyama, Y., . . . Kaneko, Y. (2021). **Acute Myocarditis Associated with COVID-19 Vaccination: A Case Report**. J Cardiol Cases. doi:10.1016/j.jccase.2021.11.006. https://www.ncbi.nlm.nih.gov/pubmed/34876937

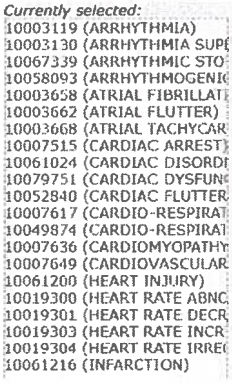
Zachary Boivin, Jennifer Martin, **Premature myocardial infarction or side effect of COVID-19 vaccine**: https://pubmed.ncbi.nlm.nih.gov/33824804/

Nicholas G Kounis et. al., **Acute Myocardial Infarction Within 24 Hours After COVID-19 Vaccination: Is Kounis Syndrome the Culprit?**: https://pubmed.ncbi.nlm.nih.gov/34702550/

Sabrina Yesmin Barsha et. al. **,A case of acute encephalopathy and non-ST-segment elevation myocardial infarction after vaccination with mRNA-1273: possible adverse effect**: https://pubmed.ncbi.nlm.nih.gov/34703815/

Chouchana, L., Blet, A., Al-Khalaf, M., Kafil, T. S., Nair, G., Robblee, J., . . . Liu, P. P. (2021). **Features of Inflammatory Heart Reactions Following mRNA COVID-19 Vaccination at a Global Level**. Clin Pharmacol Ther. doi:10.1002/cpt.2499. https:// www.ncbi.nlm.nih.gov/pubmed/34860360

21. **57,303 Symptoms reported as heart attacks, injury, cardiac arrest arrhythmia, fibrillation or other cardiomyopathy;** 55% within two days after injection



Mansanguan, S.; Charunwatthana, P.; Piyaphanee, W.; Dechkhajorn, W.; Poolcharoen, A.; Mansanguan, C. **Cardiovascular Effects of the BNT162b2 mRNA COVID-19 Vaccine in Adolescents**. Preprints 2022, 2022080151 (doi: 10.20944/preprints202208.0151.v1). https://www.preprints.org/manuscript/202208.0151/v1

Chida K, Takahashi T, Igarashi S, Fujimoto K, Ogasawara Y, Fujiwara S, Koji T, Kubo Y, Ogasawara K. **Rupture of Vertebral Artery Dissecting Aneurysm after mRNA Anti-COVID-19 Vaccination: A Report of Two Cases.** NMC Case Rep J. 2022 Apr 28;9:95-100. doi: 10.2176/jns-nmc.2022-0012. PMID: 35646499; PMCID: PMC9119691. https://pubmed.ncbi.nlm.nih.gov/35646499/

> Chida et al: *Here, we reported two cases of VADA that ruptured immediately after the administration of different mRNA antiCOVID-19 vaccines. In both cases, caliber irregularity of the VA was retrospectively identified on MRA before vaccination, suggesting that unruptured VA dissection had already developed. Then, these VADAs ruptured immediately after the vaccination.*[35]

Jeet Kaur R, Dutta S, Charan J, Bhardwaj P, Tandon A, Yadav D, Islam S, Haque M. **Cardiovascular Adverse Events Reported from COVID-19 Vaccines: A Study Based on WHO Database**. Int J Gen Med. 2021 Jul 27;14:3909-3927. doi: 10.2147/IJGM.S324349. PMID: 34349544; PMCID: PMC8326931. https://pubmed.ncbi.nlm.nih.gov/34349544/

> ***Results**: For the cardiovascular system, 4863 adverse events (AEs) were reported from BNT162b2 Pfizer, 1222 AstraZeneca, Moderna, and other COVID-19 vaccines. Common adverse events observed with vaccines under study were tachycardia (16.41%), flushing (12.17%), hypertension (5.82%), hypotension (3.60%) and peripheral coldness (2.41%). Based on disproportionality analysis (IC025 values), acute myocardial infarction, cardiac arrest, and circulatory collapse were linked to the vaccines in the age group >75 years. Hypertension, severe hypertension, supraventricular tachycardia, sinus tachycardia, and*

[35] Although this paper makes no reference to blood pressure in the case reports, see the high incidence of hypertension associated with COVID-19 vaccines in this report which appears to occur immediately after vaccination. Perhaps this was the trigger for aneurysm existing unruptured dissections.

palpitations were associated across all age groups and either gender. Amongst the investigations, abnormal ECG findings raised C-reactive protein, elevated D dimer, and troponin were reported in specific age groups or gender or all subjects.

***Conclusion**: Although cardiovascular events have been reported with the COVID-19 vaccines, the causality is yet to be established because such CVS AEs are also usually associated with the general public even without intervention. Hence, people should be administered these vaccines, and sustained monitoring of these AEs should be done.*

OK – so then why didn't the researchers design their study with a control group? Junk Science

Sun CLF, Jaffe E, Levi R. **Increased emergency cardiovascular events among under-40 population in Israel during vaccine rollout and third COVID-19 wave**. Sci Rep. 2022 Apr 28;12(1):6978. doi: 10.1038/s41598-022-10928-z. PMID: 35484304; PMCID: PMC9048615. https://pubmed.ncbi.nlm.nih.gov/35484304/

The Sun paper is in a Nature Journal and was featured in the May 4-10 issue of the Epoch Times

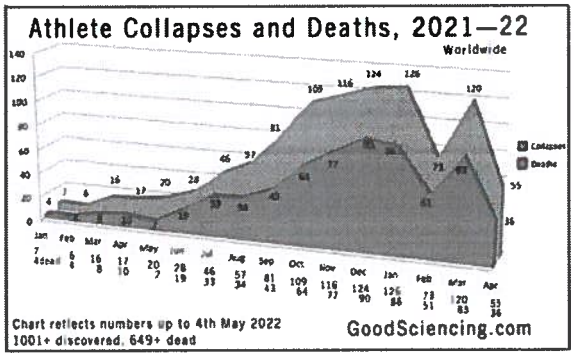
Jahnke C, Doeblin P, Tanacli R, Witt U, Schneider M, Stehning C, Pieske B, Kelle S. **Case Series of Potential Cardiac Inflammation Associated With Various SARS-CoV-2 Vaccinations Assessed by Cardiac MRI**. Front Cardiovasc Med. 2022 Apr 8;9:829392. doi: 10.3389/fcvm.2022.829392. PMID: 35463791; PMCID: PMC9024347. https://pubmed.ncbi.nlm.nih.gov/35463791/

Block JP, Boehmer TK, Forrest CB, Carton TW, Lee GM, Ajani UA, Christakis DA, Cowell LG, Draper C, Ghildayal N, Harris AM, Kappelman MD, Ko JY, Mayer KH, Nagavedu K, Oster ME, Paranjape A, Puro J, Ritchey MD, Shay DK, Thacker D, Gundlapalli AV. **Cardiac Complications After SARS-CoV-2 Infection and mRNA COVID-19 Vaccination - PCORnet, United States**, January 2021-January 2022. MMWR Morb Mortal Wkly Rep. 2022 Apr 8;71(14):517-523. doi: 10.15585/mmwr.mm7114e1. PMID: 35389977. https://pubmed.ncbi.nlm.nih.gov/35389977/

Mohamed E, Coyle P, Kumar TS, Molokhia A, Harris T. **Cardiac arrest secondary to Covid19 pneumonia post full vaccination**. Am J Emerg Med. June 19 2021 ;49:257-258. doi:10.1016/j.ajem.2021.06.027 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8214330/pdf/main.pdf

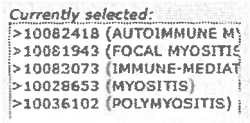
see also a list of athletes killed or injured by the vaccines:

Big List of Athletes After Jab



From: https://stevekirsch.substack.com/p/more-troubling-data-for-the-vaccine?s=r

22. **775 Symptoms reported as myositis;** 39% within two days after injection



Kim JH, Kim JH, Woo CG. **Clinicopathological Characteristics of Inflammatory Myositis Induced by COVID-19 Vaccine (Pfizer-BioNTech BNT162b2): A Case Report**. J Korean Med Sci. 2022 Mar 21;37(11):e91. doi: 10.3346/jkms.2022.37.e91. PMID: 35315602; PMCID: PMC8938612. https://pubmed.ncbi.nlm.nih.gov/35315602/

Savino G, Gambini G, Scorcia G, Comi N, Fossataro C, Stanislao Rizzo. **Orbital myositis and scleritis after anti-SARS-CoV-2 mRNA vaccines: A report of three cases**. Eur J Ophthalmol. 2022 Sep 4:11206721221123780. doi: 10.1177/11206721221123780. Epub ahead of print. PMID: 36062603; PMCID: PMC9444811. https://pubmed.ncbi.nlm.nih.gov/36062603/

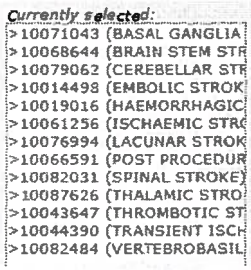
Magen E, Mukherjee S, Bhattacharya M, Detroja R, Merzon E, Blum I, Livoff A, Shlapobersky M, Baum G, Talisman R, Cherniavsky E, Dori A, Frenkel-Morgenstern M. **Clinical and Molecular Characterization of a Rare Case of BNT162b2 mRNA COVID-19 Vaccine-Associated Myositis**. Vaccines (Basel). 2022 Jul 16;10(7):1135. doi: 10.3390/vaccines10071135. PMID: 35891299; PMCID: PMC9324661. https://pubmed.ncbi.nlm.nih.gov/35891299/

Camargo Coronel A, Jiménez Balderas FJ, Quiñones Moya H, Hernández Zavala MR, Mandinabeitia Rodríguez P, Hernández Vázquez JR, Zamora Zarco S, Aguilar Castillo SJ. **Dermatomyositis post vaccine against SARS-COV2**. BMC Rheumatol. 2022 Apr 1;6(1):20. doi: 10.1186/s41927-022-00250-6. PMID: 35361289; PMCID: PMC8970647. https://pubmed.ncbi.nlm.nih.gov/35361289/

D J Theodorou, Drs, S J Theodorou, A Axiotis, M Gianniki, N Tsifetaki, **COVID-19 vaccine-related myositis, QJM: An International Journal of Medicine**, Volume 114, Issue 6, June 2021, Pages 424–425, https://doi.org/10.1093/qjmed/hcab043
PDF

M. Blaise,F. Rocher,H. Spittler,A. Sanchez,E. Lanteri,L. Coco,A. Puma,A. Martel,G. Gonfrier,T. Passeron,H. Montaudié, **Severe necrotizing myopathy after COVID-19 vaccine with BNT162b2 and regimen with ipilimumab plus nivolumab in a patient with advanced melanoma,** First published: 17 October 2021, Journal of the European Academy of Dermatology and Venerology. https://onlinelibrary.wiley.com/doi/full/10.1111/jdv.17760

23. **5,700 Symptoms reported as stroke;** 31% within two days after injection



Rahmig J, Altarsha E, Siepmann T, Barlinn K. **Acute Ischemic Stroke in the Context of SARS-CoV-2 Vaccination: A Systematic Review**. Neuropsychiatr Dis Treat. 2022 Aug 30;18:1907-1916. doi: 10.2147/NDT.S374549. PMID: 36065388; PMCID: PMC9440672. https://pubmed.ncbi.nlm.nih.gov/36065388/

Stefanou MI, Palaiodimou L, Aguiar de Sousa D, Theodorou A, Bakola E, Katsaros DE, Halvatsiotis P, Tzavellas E, Naska A, Coutinho JM, Sandset EC, Giamarellos-Bourboulis EJ, Tsivgoulis G. **Acute Arterial**

Ischemic Stroke Following COVID-19 Vaccination: A Systematic Review and Meta-analysis. Neurology. 2022 Aug 24:10.1212/WNL.0000000000200996. doi: 10.1212/WNL.0000000000200996. Epub ahead of print. PMID: 36002319. https://pubmed.ncbi.nlm.nih.gov/36002319/

Botton J, Jabagi MJ, Bertrand M, Baricault B, Drouin J, Le Vu S, Weill A, Farrington P, Zureik M, Dray-Spira R. **Risk for Myocardial Infarction, Stroke, and Pulmonary Embolism Following COVID-19 Vaccines in Adults Younger Than 75 Years in France**. Ann Intern Med. 2022 Aug 23:M22-0988. doi: 10.7326/M22-0988. Epub ahead of print. PMID: 35994748; PMCID: PMC9425709. https://pubmed.ncbi.nlm.nih.gov/35994748/

Mesa-Gamarra K, Pineda-Paternina M, Castillo E, Camargo L, Pabón A, Herrera-Pino J, Caldichoury N, Gargiulo PA, Flórez Y, López N. **Acute Thalamic Ischemic Stroke in an Older Patient Newly Vaccinated with COVID-19 Vaccine Based on Adenoviral Vectors**. Innov Clin Neurosci. 2022 Apr-Jun;19(4-6):48-50. PMID: 35958969; PMCID: PMC9341316. https://pubmed.ncbi.nlm.nih.gov/35958969/

Ferraù L, Cotroneo M, Dell'Aera C, Giammello F, Grillo F, Brizzi T, Pitrone A, Vinci SL, Musolino RF, La Spina P. **Carotid free-floating thrombus during COVID-19 vaccine era: causality or not**? Neurol Sci. 2022 Aug 3:1–5. doi: 10.1007/s10072-022-06307-1. Epub ahead of print. PMID: 35921016; PMCID: PMC9362674. https://pubmed.ncbi.nlm.nih.gov/35921016/

Wills A, Swallow G, Kirkman MA, Rajan K, Subramanian G. **Arterial and venous thrombotic stroke after ChAdOx1 nCoV-19 vaccine**. Clin Med (Lond). 2022 Mar;22(2):184-186. doi: 10.7861/clinmed.2021-0321. PMID: 35304381; PMCID: PMC8966826. https://pubmed.ncbi.nlm.nih.gov/35304381/

Kakovan M, Ghorbani Shirkouhi S, Zarei M, Andalib S. **Stroke Associated with COVID-19 Vaccines**. J Stroke Cerebrovasc Dis. 2022 Mar 4;31(6):106440. doi: 10.1016/j.jstrokecerebrovasdis.2022.106440. Epub ahead of print. PMID: 35339857; PMCID: PMC8894799. https://pubmed.ncbi.nlm.nih.gov/35339857/

Elaidouni G, Chetouani Z, Manal Merbouh CB, Bkiyar H, Housni B. **Acute ischemic stroke after first dose of inactivated COVID-19 vaccine: A case report**. Radiol Case Rep. 2022 Apr 6;17(6):1942-1945. doi: 10.1016/j.radcr.2022.02.082. PMID: 35392049; PMCID: PMC8983275. https://pubmed.ncbi.nlm.nih.gov/35392049/

De Michele M, Kahan J, Berto I, Schiavo OG, Iacobucci M, Toni D, Merkler AE. **Cerebrovascular Complications of COVID-19 and COVID-19 Vaccination**. Circ Res. 2022 Apr 15;130(8):1187-1203. doi: 10.1161/CIRCRESAHA.122.319954. Epub 2022 Apr 14. PMID: 35420916; PMCID: PMC9005103. https://pubmed.ncbi.nlm.nih.gov/35420916/

Stamenković M, Radmilo L, Jovićević M, Rabi-Žikić T, Žarkov M, Ružička-Kaloci S, Simić S, Stamenković A, Dangić J, Knezović G, Živanović Ž. **Clinical Characteristics of Patients with Acute Ischemic Stroke Previously Vaccinated Against COVID-19**. J Stroke Cerebrovasc Dis. 2022 Apr 4;31(6):106483. doi: 10.1016/j.jstrokecerebrovasdis.2022.106483. Epub ahead of print. PMID: 35447380; PMCID: PMC8977441. https://pubmed.ncbi.nlm.nih.gov/35447380/

Oshida S, Akamatsu Y, Matsumoto Y, Suzuki T, Sasaki T, Kondo Y, Fujiwara S, Kashimura H, Kubo Y, Ogasawara K. **Intracranial aneurysm rupture within three days after receiving mRNA anti-COVID-19**

vaccination: Three case reports. Surg Neurol Int. 2022 Mar 31;13:117. doi: 10.25259/SNI_1144_2021. PMID: 35509565; PMCID: PMC9062907.
https://pubmed.ncbi.nlm.nih.gov/35509565/

Cascio Rizzo A, Giussani G, Agostoni EC. **Ischemic Stroke and Vaccine-Induced Immune Thrombotic Thrombocytopenia following COVID-19 Vaccine: A Case Report with Systematic Review of the Literature.** Cerebrovasc Dis. 2022 May 5:1-13. doi: 10.1159/000524290. Epub ahead of print. PMID: 35512656.
https://pubmed.ncbi.nlm.nih.gov/35512656/

Garcia-Azorin D, Baykan B, Beghi E, Doheim MF, Fernandez-de-Las-Penas C, Gezegen H, Guekht A, Hoo FK, Santacatterina M, Sejvar J, Tamborska AA, Thakur KT, Westenberg E, Winkler AS, Frontera JA; Contributors from the Global COVID-19 Neuro Research Coalition. **Timing of headache after COVID-19 vaccines and its association with cerebrovascular events: An analysis of 41,700 VAERS reports.** Cephalalgia. 2022 May 6:333102422109923l. doi: 10.1177/03331024221099231. Epub ahead of print. PMID: 35514199.
https://pubmed.ncbi.nlm.nih.gov/35514199/

de Mélo Silva ML Jr, Lopes DP. **Large hemorrhagic stroke after ChAdOx1 nCoV-19 vaccination: A case report**. Acta Neurol Scand. 2021 Dec;144(6):717-718. doi: 10.1111/ane.13505. Epub 2021 Jul 17. PMID: 34273119; PMCID: PMC8444739. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8444739/pdf/ANE-9999-0.pdf

Diogo Goulart Corrêa, Luis Alcides Quevedo Cañete, Gutemberg Augusto Cruz dos Santos, Romulo Varella de Oliveira, Carlos Otávio Brandão, Luiz Celso Hygino da Cruz, **Neurological symptoms and neuroimaging alterations related with COVID-19 vaccine: Cause or coincidence?**, Clinical Imaging, Volume 80, 2021, Pages 348-352, ISSN 0899-7071, https://doi.org/10.1016/j.clinimag.2021.08.021.
https://www.sciencedirect.com/science/article/pii/S0899707121003557

24. **907 Symptoms reported as cerebral venous sinus thrombosis (CVST);** 38% within ten days after injection.

Cline L, Nguyen HT, Olenik A. **Cerebral Venous Sinus Thrombosis Following COVID-19 and Otogenic Infection: A Diagnostic and Therapeutic Dilemma Followed by mRNA COVID-19 Vaccination**. Perm J. 2022 Jul 20:1-7. doi: 10.7812/TPP/21.237. Epub ahead of print. PMID: 35939606.
https://pubmed.ncbi.nlm.nih.gov/35939606/

Fadul A, Abdalla E, Abdelmahmuod E, Abdulgayoom M, Ali E, Al-Warqi A, Al-Yahary H. COVID-19 **Vaccine-Induced Cerebral Sinus Thrombosis: Coincidence vs. Cause**? Cureus. 2022 Jun 29;14(6):e26436. doi: 10.7759/cureus.26436. PMID: 35915687; PMCID: PMC9337791.
https://pubmed.ncbi.nlm.nih.gov/35915687/

Eric Kowarz, Lea Krutzke, Marius Külp, Patrick Streb, Patrizia Larghero, Jennifer Reis, Silvia Bracharz, Tatjana Engler, Stefan Kochanek, Rolf Marschalek (2022) **Vaccine-induced COVID-19 mimicry syndrome** eLife 11:e74974 https://doi.org/10.7554/eLife.74974 https://elifesciences.org/articles/74974

In Kowarz et al: *In some rare cases, cerebral venous sinus thromboses (CVST) have been reported as a severe side effect occurring 4–14 days after the first vaccination and were often accompanied by thrombocytopenia. Besides CVST, splanchnic vein thromboses (SVT) and other thromboembolic events have been observed.* ***These events only occurred following vaccination with adenoviral vector-based vaccines*** *but not following vaccination with mRNA-based vaccines. Meanwhile, scientists have proposed an immune-based pathomechanism and the condition has been coined vaccine-induced immune thrombotic thrombocytopenia (VITT). Here, we describe an unexpected mechanism that could explain thromboembolic events occurring with DNA-based but not with RNA-based vaccines.* ***We show that DNA-encoded mRNA coding for Spike protein can be spliced in a way that the transmembrane anchor of Spike is lost, so that nearly full-length Spike is secreted from cells. Secreted Spike variants could potentially initiate severe side effects when binding to cells via the ACE2 receptor.***

Mele F, Tafuri S, Stefanizzi P, D Amati A, Calvano M, Leonardelli M, Macorano E, Duma S, De Gabriele G, Introna F, De Donno A. **Cerebral venous sinus thrombosis after COVID-19 vaccination and congenital deficiency of coagulation factors: Is there a correlation?** Hum Vaccin Immunother. 2022 Jul 27:2095166. doi: 10.1080/21645515.2022.2095166. Epub ahead of print. PMID: 35895937. https://pubmed.ncbi.nlm.nih.gov/35895937/

Park J, Park M-S, Kim HJ, Song T-J. **Association of Cerebral Venous Thrombosis with mRNA COVID-19 Vaccines: A Disproportionality Analysis of the World Health Organization Pharmacovigilance Database**. Vaccines. 2022; 10(5):799. https://doi.org/10.3390/vaccines10050799 https://www.mdpi.com/2076-393X/10/5/799/htm

Ding J, Song B, Xie X, Li X, Chen Z, Wang Z, Pan L, Lan D, Meng R. **Inflammation in Cerebral Venous Thrombosis**. Front Immunol. 2022 Apr 4;13:833490. doi: 10.3389/fimmu.2022.833490. PMID: 35444662; PMCID: PMC9013750. https://pubmed.ncbi.nlm.nih.gov/35444662/

Esba LCA, Al Jeraisy M. **Reported adverse effects following COVID-19 vaccination at a tertiary care hospital, focus on cerebral venous sinus thrombosis (CVST).** Expert Rev Vaccines. 2021 Aug;20(8):1037-1042. doi: 10.1080/14760584.2021.1940145. Epub 2021 Jun 17. PMID: 34092166; PMCID: PMC8220435. https://pubmed.ncbi.nlm.nih.gov/34092166/

Graf T, Thiele T, Klingebiel R, Greinacher A, Schäbitz WR, Greeve I. **Immediate high-dose intravenous immunoglobulins followed by direct thrombin-inhibitor treatment is crucial for survival in Sars-Covid-19-adenoviral vector vaccine-induced immune thrombotic thrombocytopenia VITT with cerebral sinus venous and portal vein thrombosis**. J Neurol. 2021 Dec;268(12):4483-4485. doi: 10.1007/s00415-021-10599-2. Epub 2021 May 22. PMID: 34023956; PMCID: PMC8140563. https://pubmed.ncbi.nlm.nih.gov/34023956/

Dutta A, Ghosh R, Bhattacharya D, Bhat S, Ray A, Pandit A, Das S, Dubey S. **Anti-PF4 antibody negative cerebral venous sinus thrombosis without thrombocytopenia following immunization with COVID-19 vaccine in an elderly non-comorbid Indian male, managed with conventional heparin-warfarin based anticoagulation**. Diabetes Metab Syndr. 2021 Jul-Aug;15(4):102184. doi: 10.1016/j.dsx.2021.06.021. Epub 2021 Jun 24. PMID: 34186376; PMCID: PMC8223002. https://pubmed.ncbi.nlm.nih.gov/34186376/

Sharifian-Dorche M, Bahmanyar M, Sharifian-Dorche A, Mohammadi P, Nomovi M, Mowla A. **Vaccine-induced immune thrombotic thrombocytopenia and cerebral venous sinus thrombosis post COVID-19 vaccination; a systematic review**. J Neurol Sci. 2021 Sep 15;428:117607. doi: 10.1016/j.jns.2021.117607. Epub 2021 Aug 3. PMID: 34365148; PMCID: PMC8330139. https://pubmed.ncbi.nlm.nih.gov/34365148/

Rizk JG, Gupta A, Sardar P, Henry BM, Lewin JC, Lippi G, Lavie CJ. **Clinical Characteristics and Pharmacological Management of COVID-19 Vaccine-Induced Immune Thrombotic Thrombocytopenia With Cerebral Venous Sinus Thrombosis: A Review**. JAMA Cardiol. 2021 Dec 1;6(12):1451-1460. doi: 10.1001/jamacardio.2021.3444. PMID: 34374713. https://pubmed.ncbi.nlm.nih.gov/34374713/

Casolla B, Cordonnier C. **Cerebral venous sinus thrombosis associated with COVID-19 vaccine-induced thrombocytopenia: Improvement in mortality rate over time**. Eur J Neurol. 2022 Jan;29(1):1-2. doi: 10.1111/ene.15151. Epub 2021 Oct 31. PMID: 34665505; PMCID: PMC8652860. https://pubmed.ncbi.nlm.nih.gov/34665505/

Butler-Manuel W, Rana UI, Zafar M, Gadi A, Kiani A. **Post COVID-19 Vaccine Related Cerebral Venous Sinus Thrombosis and Thrombocytopenia**. Cureus. 2022 Jan 4;14(1):e20932. doi: 10.7759/cureus.20932. PMID: 35004085; PMCID: PMC8733850. https://pubmed.ncbi.nlm.nih.gov/35004085/

Alhashim A, Hadhiah K, Al Khalifah Z, Alhaddad FM, Al ARhain SA, Bin Saif FH, Abid A, Al Gamdi O, Alsulaiman F, AlQarni M. **Extensive Cerebral Venous Sinus Thrombosis (CVST) After the First Dose of Pfizer-BioNTech BNT162b2 mRNA COVID-19 Vaccine without Thrombotic Thrombocytopenia Syndrome (TTS) in a Healthy Woman**. Am J Case Rep. 2022 Feb 9;23:e934744. doi: 10.12659/AJCR.934744. PMID: 35136010; PMCID: PMC8842441. https://pubmed.ncbi.nlm.nih.gov/35136010/

Khan E, Bavishi S, Sharma AK, Sharma VK, Goyal V. **COVID-19 Vaccine-Induced Immune Thrombotic Thrombocytopenia (VITT) and Cerebral Venous Sinus Thrombosis (CVST)- Lessons for India**. Ann Indian Acad Neurol. 2022 Jan-Feb;25(1):15-20. doi: 10.4103/aian.aian_669_21. Epub 2021 Oct 22. PMID: 35342247; PMCID: PMC8954332. https://pubmed.ncbi.nlm.nih.gov/35342247/

Tomassini L, Paolini D, Petrasso PEY, Manta AM, Piersanti V, Straccamore M, Ciallella C. **What about cerebral venous sinus thrombosis? A series of three autopsy cases**. Leg Med (Tokyo). 2022 May;56:102052. doi: 10.1016/j.legalmed.2022.102052. Epub 2022 Mar 7. PMID: 35276490. https://pubmed.ncbi.nlm.nih.gov/35276490/

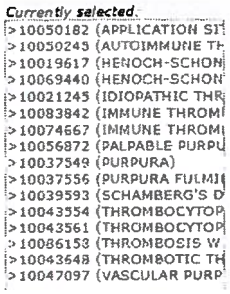
Palaiodimou L, Stefanou MI, de Sousa DA, Coutinho JM, Papadopoulou M, Papaevangelou V, Vassilakopoulos TI, Tsiodras S, Filippou DK, Tsivgoulis G. **Cerebral venous sinus thrombosis in the setting of COVID-19 vaccination: a systematic review and meta-analysis**. J Neurol. 2022 Apr 8. doi:

10.1007/s00415-022-11101-2. Epub ahead of print. PMID: 35394172. https://pubmed.ncbi.nlm.nih.gov/35394172/

de Gregorio C, Colarusso L, Calcaterra G, Bassareo PP, Ieni A, Mazzeo AT, Ferrazzo G, Noto A, Koniari I, Mehta JL, Kounis NG. **Cerebral Venous Sinus Thrombosis following COVID-19 Vaccination: Analysis of 552 Worldwide Cases**. Vaccines (Basel). 2022 Feb 3;10(2):232. doi: 10.3390/vaccines10020232. PMID: 35214690; PMCID: PMC8874972. https://pubmed.ncbi.nlm.nih.gov/35214690/

Cerebral Vein Thrombosis With Vaccine-Induced Immune Thrombotic Thrombocytopenia https://www.ahajournals.org/doi/epub/10.1161/STROKEAHA.121.035613

25. **6,116 Symptoms reported as thrombocytopenia, thrombotic thrombocytopenic purpura, VIT or purpura;** 41% within ten days after injection.



Eltayeb M, Jayakumar N, Coulter I, Johnson C, Crossman J. **Decompressive craniectomy for intracranial hypertension in vaccine-induced immune thrombotic thrombocytopaenia: a case series**. Br J Neurosurg. 2022 Aug 25:1-4. doi: 10.1080/02688697.2022.2115007. Epub ahead of print. PMID: 36004613. https://pubmed.ncbi.nlm.nih.gov/36004613/

Panagiota V, Dobbelstein C, Werwitzke S, Ganser A, Cooper N, Sachs UJ, Tiede A. **Long-Term Outcomes after Vaccine-Induced Thrombotic Thrombocytopenia**. Viruses. 2022 Aug 1;14(8):1702. doi: 10.3390/v14081702. PMID: 36016324; PMCID: PMC9415056. https://pubmed.ncbi.nlm.nih.gov/36016324/

Casini F, Magenes VC, De Sanctis M, Gattinara M, Pandolfi M, Cambiaghi S, Zuccotti GV, Fabiano V. **Henoch-Schönlein purpura following COVID-19 vaccine in a child: a case report**. Ital J Pediatr. 2022 Sep 2;48(1):158. doi: 10.1186/s13052-022-01351-1. PMID: 36056360; PMCID: PMC9437414. https://pubmed.ncbi.nlm.nih.gov/36056360/

Feng Y, Quan Y, Cassady K, Zou Z, Gao Y, Zhang X. **Clinical characteristics in immune thrombocytopenia patients after COVID-19 vaccination**. Hum Vaccin Immunother. 2022 Sep 7:2119043. doi: 10.1080/21645515.2022.2119043. Epub ahead of print. PMID: 36069667. https://pubmed.ncbi.nlm.nih.gov/36069667/

Woo EJ, Mba-Jonas A, Thomas A, Baer B, Day B, Kim Y, Gomez-Lorenzo M, Nair N. **Thromboembolic events after Ad.26.COV2.S COVID-19 vaccine: Reports to the Vaccine Adverse Event Reporting System**. Pharmacoepidemiol Drug Saf. 2022 Aug 10. doi: 10.1002/pds.5523. Epub ahead of print. PMID: 36065046. https://pubmed.ncbi.nlm.nih.gov/36065046/

Fang F, Tse B, Pavenski K. **Relapse of immune thrombotic thrombocytopenic purpura (iTTP) possibly triggered by COVID-19 vaccination and/or concurrent COVID-19 infection**. BMJ Case Rep. 2022 Jul 28;15(7):e247524. doi: 10.1136/bcr-2021-247524. PMID: 35902184. https://pubmed.ncbi.nlm.nih.gov/35902184/

Sharma K, Patel S, Patel Z, Patel KB, Shah DB, Doshi J, Chokshi P, Sharma C, Amdani MM, Parabtani A, Benani U, Konat A. **Immune Thrombocytopenia in Previously Healthy Individuals Following SARS-CoV-2 Vaccination (COVID-19 Immunization): A Descriptive Research of 70 Instances With a Focus on Biomarkers, Predictive Outcomes, and Consequences**. Cureus. 2022 Jul 1;14(7):e26480. doi: 10.7759/cureus.26480. PMID: 35923492; PMCID: PMC9342832. https://pubmed.ncbi.nlm.nih.gov/35923492/

Mouta Nunes de Oliveira P, Mendes-de-Almeida DP, Bertollo Gomes Porto V, Crespo Cordeiro C, Vitiello Teixeira G, Saraiva Pedro R, Roberto Gomes Takey P, Kegele Lignani L, Reis Xavier J, Cardoso Doria da Gama V, Amorim Filho L, Emoingt Furtado B, Santa Maria A, Dahrug Barros T, Neves Waite Freitas L, Dos Santos Pereira T, Lima Abreu D, Bernardes Ramos M, Gabe C, Arnold D, William Smith J, Nazy I, Lourdes de Sousa Maia M; **Brazillian VITT Investigative Collaboration Group. Vaccine-induced immune thrombotic thrombocytopenia after COVID-19 vaccination: Description of a series of 39 cases in Brazil**. Vaccine. 2022 Jun 16:S0264-410X(22)00761-7. doi: 10.1016/j.vaccine.2022.06.014. Epub ahead of print. PMID: 35779962; PMCID: PMC9212666. https://pubmed.ncbi.nlm.nih.gov/35779962/

Tiwari AM, Zirpe KG, Gurav SK, Bhirud LB, Suryawanshi RS, Kulkarni SS. **Case of Suspected SARS-CoV-2 Vaccine-induced Immune Thrombotic Thrombocytopenia: Dilemma for Organ Donation**. Indian J Crit Care Med. 2022 Summer;26(4):514-517. doi: 10.5005/jp-journals-10071-24184. PMID: 35656057; PMCID: PMC9067495. https://pubmed.ncbi.nlm.nih.gov/35656057/

Ribeiro MI, Pimenta I, Conde I, Gonzalez FA. **Vaccine-induced immune thrombocytopaenia and thrombosis (VITT) after COVID-19 vaccination.** BMJ Case Rep. 2022 May 19;15(5):e247346. doi: 10.1136/bcr-2021-247346. PMID: 35589271. https://pubmed.ncbi.nlm.nih.gov/35589271/

Atyabi SMH, Rommasi F, Ramezani MH, Ghane Ezabadi MF, Arani MA, Sadeghi MH, Ahmed MM, Rajabi A, Dehghan N, Sohrabi A, Seifi M, Nasiri MJ. **Relationship between blood clots and COVID-19 vaccines: A literature review**. Open Life Sci. 2022 Apr 26;17(1):401-415. doi: 10.1515/biol-2022-0035. PMID: 35582622; PMCID: PMC9055170. https://pubmed.ncbi.nlm.nih.gov/35582622/

Nicholson M, Goubran H, Chan N, Siegal D. **No apparent association between mRNA COVID-19 vaccination and venous thromboembolism**. Blood Rev. 2022 May 11:100970. doi: 10.1016/j.blre.2022.100970. Epub ahead of print. PMID: 35577626; PMCID: PMC9091073. https://pubmed.ncbi.nlm.nih.gov/35577626/

Herblum J, Frishman W. **Cardiovascular and Hematologic Complications of COVID-19 Vaccines**. Cardiol Rev. 2022 May 16. doi: 10.1097/CRD.0000000000000457. Epub ahead of print. PMID: 35576367. https://pubmed.ncbi.nlm.nih.gov/35576367/

Kanack A, Bayas A, George G, Abou-Ismail MY, Singh B, Kohlhagen M, Splinter N, Christ M, Naumann M, Moser KA, Smock KJ, Grazioli A, Wen R, Wang D, Murray DL, Padmanabhan A. **Monoclonal and oligoclonal anti-Platelet Factor 4 antibodies mediate VITT**. Blood. 2022 May 13:blood.2021014588. doi: 10.1182/blood.2021014588. Epub ahead of print. PMID: 35560046. https://pubmed.ncbi.nlm.nih.gov/35560046/

Saluja P, Gautam N, Yadala S, Venkata AN. **Thrombotic thrombocytopenic purpura (TTP) after COVID-19 vaccination: A systematic review of reported cases.** Thromb Res. 2022 Jun;214:115-121. doi: 10.1016/j.thromres.2022.04.020. Epub 2022 May 2. PMID: 35533526; PMCID: PMC9060716. https://pubmed.ncbi.nlm.nih.gov/35533526/

Lai CMB, Lee AYY, Parkin SBI. **Vaccine-induced prothrombotic immune thrombocytopenia without thrombosis may not require immune modulatory therapy: A case report.** Res Pract Thromb Haemost. 2022 May 18;6(4):e12716. doi: 10.1002/rth2.12716. PMID: 35599706; PMCID: PMC9115974. https://pubmed.ncbi.nlm.nih.gov/35599706/

Abbasi S, Alsermani A, Alsegayyir A, Altahan T, Alsermani M, Almustanyir S. **Vaccine-Induced Thrombotic Thrombocytopenia: A Case of Splanchnic Veins Thrombosis.** Cureus. 2022 Mar 26;14(3):e23507. doi: 10.7759/cureus.23507. PMID: 35494984; PMCID: PMC9038581. https://pubmed.ncbi.nlm.nih.gov/35494984/

Silva L, Pombal R, Fidalgo M, Freitas A, Barbosa M, Magalhães L, Correia M, Valente J. **Vaccine-Induced Thrombotic Thrombocytopenia: A Case Report.** Cureus. 2022 Mar 15;14(3):e23196. doi: 10.7759/cureus.23196. PMID: 35449682; PMCID: PMC9012549. https://pubmed.ncbi.nlm.nih.gov/35449682/

Dix C, McFadyen J, Huang A, Chunilal S, Chen V, Tran H. **Understanding vaccine-induced thrombotic thrombocytopenia (VITT).** Intern Med J. 2022 May;52(5):717-723. doi: 10.1111/imj.15783. Epub 2022 Apr 21. PMID: 35446471; PMCID: PMC9111818. https://pubmed.ncbi.nlm.nih.gov/35446471/

Montague SJ, Smith CW, Lodwick CS, Stoneley C, Roberts M, Lowe GC, Lester WA, Watson SP, Nicolson PLR, **Anti-platelet factor 4 immunoglobulin G levels in vaccine-induced immune thrombocytopenia and thrombosis: Persistent positivity through 7 months.** Res Pract Thromb Haemost. 2022 May 4;6(3):e12707. doi: 10.1002/rth2.12707. PMID: 35515079; PMCID: PMC9066380. https://pubmed.ncbi.nlm.nih.gov/35515079/

Kimball E, Buchwalder K, Upchurch C, Kea B. **Intermittent complete heart block with ventricular standstill after Pfizer COVID-19 booster vaccination: A case report.** J Am Coll Emerg Physicians Open. 2022 Apr 20;3(2):e12723. doi: 10.1002/emp2.12723. PMID: 35475120; PMCID: PMC9020811. https://pubmed.ncbi.nlm.nih.gov/35475120/

Kim AY, Woo W, Yon DK, Lee SW, Yang JW, Kim JH, Park S, Koyanagi A, Kim MS, Lee S, Shin JI, Smith L. **Thrombosis patterns and clinical outcome of COVID-19 vaccine-induced immune thrombotic thrombocytopenia: A Systematic Review and Meta-Analysis.** Int J Infect Dis. 2022 Mar 24;119:130-139. doi: 10.1016/j.ijid.2022.03.034. Epub ahead of print. PMID: 35339716; PMCID: PMC8942584. https://pubmed.ncbi.nlm.nih.gov/35339716/

Günther A, Brämer D, Pletz MW, Kamradt T, Baumgart S, Mayer TE, Baier M, Autsch A, Mawrin C, Schönborn L, Greinacher A, Thiele T. **Complicated Long Term Vaccine Induced Thrombotic Immune Thrombocytopenia-A Case Report.** Vaccines (Basel). 2021 Nov 17;9(11):1344. doi:

10.3390/vaccines9111344. PMID: 34835275; PMCID: PMC8622649.
https://pubmed.ncbi.nlm.nih.gov/34835275/

Shin Jie Yong, **What Autopsies of Vaccinated People (With Covid Vaccines) Show**, Microbial Instincts, Dec 17, 2021, https://medium.com/microbial-instincts/what-autopsies-of-vaccinated-people-with-covid-vaccines-show-ddc00cc16d14

Grobbelaar LM, Venter C, Vlok M, et al. **SARS-CoV-2 spike protein S1 induces fibrin(ogen) resistant to fibrinolysis: implications for microclot formation in COVID-19**. Biosci Rep. 2021;41(8):BSR20210611. doi:10.1042/BSR20210611
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8380922/
Erin Garcia de Jesús, **How antibodies may cause rare blood clots after some COVID-19 vaccines**, Science, Juky 7, 2021
https://www.sciencenews.org/article/coronavirus-covid-vaccine-antibodies-cause-blood-clots-side-effect

Theodore E Warkentin, MD, BSc(Med), FRCP(C), FACP, FRCP(Edin)Adam Cuker, MD, MSSection Editor:Mark Crowther, MD, MScDeputy Editor:Jennifer S Tirnauer, MD **COVID-19: Vaccine-induced immune thrombotic thrombocytopenia (VITT)** UpToDate
https://www.uptodate.com/contents/covid-19-vaccine-induced-immune-thrombotic-thrombocytopenia-vitt#!

Muir, Kate-Lynn, Kallam, Avyakta, Koepsell, Scott A.' Gundabolu, Krishna, **Thrombotic Thrombocytopenia after Ad26.COV2.S Vaccination**, 2021/04/14, New England Journal of Medicine, pp 1964-1965,vol 384, number 20, 10.1056/NEJMc2105869, 33852795,
https://www.nejm.org/doi/full/10.1056/NEJMc2105869

Huynh, A., Kelton, J.G., Arnold, D.M. et al. **Antibody epitopes in vaccine-induced immune thrombotic thrombocytopaenia**. Nature 596, 565–569 (2021). https://doi.org/10.1038/s41586-021-03744-4
https://www.nature.com/articles/s41586-021-03744-4

Pavord S, Makris M. **Second-dose VITT: rare but real**. Blood. 2022;139(17):2581-2583. doi:10.1182/blood.2022016118 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9047991/

Trajkovska EL, Mitevska I, Bosevski M, Nastevska CEG, Chelikikj A, Gjorgjievski A. **Vaccine-Inducted Thrombotic Thrombocytopenia and Covid-19 Vaccines: Case Series**. Pril (Makedon Akad Nauk Umet Odd Med Nauki). 2022 Apr 22;43(1):49-55. doi: 10.2478/prilozi-2022-0005. PMID: 35451293.
https://pubmed.ncbi.nlm.nih.gov/35451293/

Parveen F, Mujahid K, Yusuff S. **Vaccine-induced thrombosis and thrombocytopaenia with widespread abdominal venous thrombosis, venous ischaemia and bowel oedema**. BMJ Case Rep. 2022 Apr 6;15(4):e247996. doi: 10.1136/bcr-2021-247996. PMID: 35387789.
https://pubmed.ncbi.nlm.nih.gov/35387789/

Noyé M, Sauvage A, Toussaint M, Benoit R, Foret T, Lagrange J, Dufrost V, Regnault V, Zuily S, Wahl DG. **Microvascular manifestations revealing vaccine-induced thrombotic thrombocytopenia after COVID-19 vaccination**. J Med Vasc. 2022 Feb;47(1):36-38. doi:

10.1016/j.jdmv.2022.01.072. Epub 2022 Jan 17. PMID: 35393091; PMCID: PMC8761539. https://pubmed.ncbi.nlm.nih.gov/35393091/

Uaprasert N, Watanaboonyongcharoen P, Vichitratchaneekorn R, Trithiphen S, Akkawat B, Sukperm A, Tongbai T, Jantarabenjakul W, Paitoonpong L, Rojnuckarin P. **Prevalence of thrombocytopenia, anti-platelet factor 4 antibodies and D-dimer elevation in Thai people After ChAdOx1 nCoV-19 vaccination**. Res Pract Thromb Haemost. 2021 Sep 18;5(6):e12580. doi: 10.1002/rth2.12580. PMID: 34568726; PMCID: PMC8449289.: https://pubmed.ncbi.nlm.nih.gov/34568726/

Osmanodja B, Schreiber A, Schrezenmeier E, Seelow E. **First diagnosis of thrombotic thrombocytopenic purpura after SARS-CoV-2 vaccine - case report**. BMC Nephrol. 2021 Dec 11;22(1):411. doi: 10.1186/s12882-021-02616-3. PMID: 34895163; PMCID: PMC8665311. https://pubmed.ncbi.nlm.nih.gov/34895163/

Congiu T, Fanni D, Piras M, Gerosa C, Cau F, Barcellona D, D'Aloja E, Demontis R, Chighine A, Nioi M, Coni P, Ravarino A, Cerrone G, Aimola V, Botta C, Scano A, Orrù G, Coghe F, Van Eyken P, La Nasa G, Saba L, Suri JS, Faa G, Marongiu F. **Ultrastructural findings of lung injury due to Vaccine-induced Immune Thrombotic Thrombo- cytopenia (VITT) following COVID-19 vaccination: a scanning electron microscopic study**. Eur Rev Med Pharmacol Sci. 2022 Jan;26(1):270-277. doi: 10.26355/eurrev_202201_27777. PMID: 35049004. https://pubmed.ncbi.nlm.nih.gov/35049004/

Kragholm K, Sessa M, Mulvad T, et al. **Thrombocytopenia after COVID-19 vaccination**. *J Autoimmun*. 2021;123:102712. doi:10.1016/j.jaut.2021.102712 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8313538/pdf/main.pdf

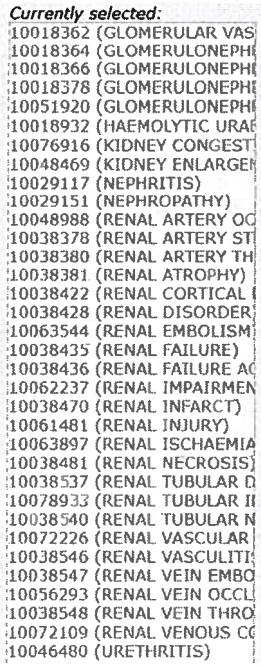
Kounis NG, Koniari I, de Gregorio C, et al. **COVID-19 Disease, Women's Predominant Non-Heparin Vaccine-Induced Thrombotic Thrombocytopenia and Kounis Syndrome: A Passepartout Cytokine Storm Interplay**. Biomedicines. 2021;9(8):959. Published 2021 Aug 5. doi:10.3390/biomedicines9080959 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8391920/pdf/biomedicines-09-00959.pdf

Gupta A, Sardar P, Cash ME, Milani RV, Lavie CJ. **Covid-19 vaccine- induced thrombosis and thrombocytopenia-a commentary on an important and practical clinical dilemma**. Prog Cardiovasc Dis. 2021;67:105-107. doi:10.1016/j.pcad.2021.05.001 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8130591/pdf/main.pdf

Wang YH, Huang LY, Chen YL, et al. ChAdOx1 **COVID-19 vaccine-induced thrombocytopenia syndrome** [published online ahead of print, 2021 Aug 25]. QJM. 2021;hcab221. doi:10.1093/qjmed/hcab221 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8499769/pdf/hcab221.pdf

Uwe Walter, Mario Fuchs, Annette Grossmann, Michael Walter, Thomas Thiele, Alexander Storch, Matthias Wittstock, **Adenovirus-Vectored COVID-19 Vaccine–Induced Immune Thrombosis of Carotid Artery, A Case Report** Neurology Oct 2021, 97 (15) 716-719; DOI: 10.1212/WNL.0000000000012576 https://n.neurology.org/content/neurology/97/15/716.full.pdf

26. **3,439 Symptoms reported as of kidney or renal failure, nephritis, Glomerulonephritis, Hemolytic uremic syndrome (HUS) or other urinary system failures;** 29% within two days after injection.



Hong LY, Lee CH, Chiu IJ. **De novo podocytopathy following moderna COVID-19 vaccine: A case report and racial disproportionality in adverse effect reports.** Front Med (Lausanne). 2022 Aug 16;9: 844004. doi: 10.3389/fmed.2022.844004. PMID: 36052319; PMCID: PMC9424543. https://pubmed.ncbi.nlm.nih.gov/36052319/

Marigliano B, Internullo M, Scuro L, Gemma S, Tavanti A, Del Vecchio LR, Romagno PF, Barbara Schito M, Pace F, Colombo GM, Guglielmelli E. **The complexity of immunology: a rare adverse event following a Pfizer-BioNTech vaccine booster shot.** Eur Rev Med Pharmacol Sci. 2022 Aug;26(16):5978-5982. doi: 10.26355/eurrev_202208_29539. PMID: 36066175. https://pubmed.ncbi.nlm.nih.gov/36066175/

Ma Y, Xu G. **New-Onset IgA nephropathy Following COVID-19 Vaccination.** QJM. 2022 Aug 3:hcac185. doi: 10.1093/qjmed/hcac185. Epub ahead of print. PMID: 35920797. https://pubmed.ncbi.nlm.nih.gov/35920797/

So D, Min KW, Jung WY, Han SW, Yu MY. **Microscopic Polyangiitis Following mRNA COVID-19 Vaccination: A Case Report.** J Korean Med Sci. 2022 May 16;37(19):e154. doi: 10.3346/jkms.2022.37.e154. PMID: 35578586. https://pubmed.ncbi.nlm.nih.gov/35578586/

Tan FS, Kabir ME, Bhandari S. **Acute interstitial nephritis after COVID-19 vaccination.** BMJ Case Rep. 2022 May 19;15(5):e246841. doi: 10.1136/bcr-2021-246841. PMID: 35589264. https://pubmed.ncbi.nlm.nih.gov/35589264/

Faour WH, Choaib A, Issa E, Choueiry FE, Shbaklo K, Alhajj M, Sawaya RT, Harhous Z, Alefishat E, Nader M. **Mechanisms of COVID-19-induced kidney injury and current pharmacotherapies.** Inflamm Res. 2022 Jan;71(1):39-56. doi: 10.1007/s00011-021-01520-8. Epub 2021 Nov 21. PMID: 34802072; PMCID: PMC8606168. https://pubmed.ncbi.nlm.nih.gov/34802072/

Caza TN, Cassol CA, Messias N, Hannoudi A, Haun RS, Walker PD, May RM, Seipp RM, Betchick EJ, Amin H, Ziadie MS, Haderlie M, Eduwu-Okwuwa J, Vancea I, Seek M, Elashi EB, Shenoy G, Khalillullah S, Flaxenburg JA, Brandt J, Diamond MJ, Frome A, Kim EH, Schlessinger G, Ulozas E, Weatherspoon JL, Hoerschgen ET, Fabian SL, Bae SY, Iqbal B, Chouhan KK, Karam Z, Henry JT, Larsen CP. **Glomerular Disease in Temporal Association with SARS-CoV-2 Vaccination: A Series of 29 Cases**. Kidney360. 2021 Sep 16;2(11):1770-1780. doi: 10.34067/KID.0005372021. PMID: 35372991; PMCID: PMC8785835.
https://pubmed.ncbi.nlm.nih.gov/35372991/

Choi JH, Kang KS, Han KH. **Two adolescent cases of acute tubulointerstitial nephritis after second dose of COVID-19 mRNA vaccine**. Hum Vaccin Immunother. 2022 Apr 6:1-6. doi: 10.1080/21645515.2022.2059308. Epub ahead of print. PMID: 35385678.
https://pubmed.ncbi.nlm.nih.gov/35385678/

Watanabe S, Zheng S, Rashidi A. **IgA nephropathy relapse following COVID-19 vaccination treated with corticosteroid therapy: case report**. BMC Nephrol. 2022 Apr 7;23(1):135. doi: 10.1186/s12882-022-02769-9. PMID: 35392838; PMCID: PMC8988530.
https://pubmed.ncbi.nlm.nih.gov/35392838/

Mira FS, Costa Carvalho J, de Almeida PA, Pimenta AC, Alen Coutinho I, Figueiredo C, Rodrigues L, Sousa V, Ferreira E, Pinto H, Escada L, Galvão A, Alves R. **A Case of Acute Interstitial Nephritis After Two Doses of the BNT162b2 SARS-CoV-2 Vaccine**. Int J Nephrol Renovasc Dis. 2021 Dec 3;14:421-426. doi: 10.2147/IJNRD.S345898. PMID: 34887676; PMCID: PMC8650829.
https://pubmed.ncbi.nlm.nih.gov/34887676/

Feghali EJ, Zafar M, Abid S, Santoriello D, Mehta S. **De-novo Antineutrophil Cytoplasmic Antibody-Associated Vasculitis Following the mRNA-1273 (Moderna) Vaccine for COVID-19**. Cureus. 2021 Nov 16;13(11):e19616. doi: 10.7759/cureus.19616. PMID: 34956751; PMCID: PMC8675571.
https://pubmed.ncbi.nlm.nih.gov/34956751/

Schaubschlager T, Rajora N, Diep S, Kirtek T, Cai Q, Hendricks AR, Shastri S, Zhou XJ, Saxena R. **De novo or recurrent glomerulonephritis and acute tubulointerstitial nephritis after COVID-19 vaccination: A report of six cases from a single center**. Clin Nephrol. 2022 Feb 10. doi: 10.5414/CN110794. Epub ahead of print. PMID: 35142282. https://pubmed.ncbi.nlm.nih.gov/35142282/

Lim JH, Kim MS, Kim YJ, Han MH, Jung HY, Choi JY, Cho JH, Kim CD, Kim YL, Park SH. **New-Onset Kidney Diseases after COVID-19 Vaccination: A Case Series**. Vaccines (Basel). 2022 Feb 16;10(2):302. doi: 10.3390/vaccines10020302. PMID: 35214760; PMCID: PMC8880359
https://pubmed.ncbi.nlm.nih.gov/35214760/

Sugita K, Kaneko S, Hisada R, Harano M, Anno E, Hagiwara S, Imai E, Nagata M, Tsukamoto Y. **Development of IgA vasculitis with severe glomerulonephritis after COVID-19 vaccination: a case report and literature review**. CEN Case Rep. 2022 Mar 11:1–6. doi: 10.1007/s13730-022-00695-1. Epub ahead of print. PMID: 35275366; PMCID: PMC8914443. https://pubmed.ncbi.nlm.nih.gov/35275366/

Klomjit N, Alexander MP, Fervenza FC, et al. **COVID-19 vaccination and glomerulonephritis** [published online ahead of print, 2021 Oct 6]. Kidney Int Rep. 2021;10.1016/j.ekir.2021.09.008. doi:10.1016/j.ekir.2021.09.008 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8493782/pdf/main.pdf

Nicholas L. Li et. al. **COVID-19 vaccination followed by activation of glomerular diseases: does association equal causation?** Kidney International (2021) 100, 959–965; https://doi.org/10.1016/j.kint.2021.09.002 https://www.kidneyinternational-online.org/action/showPdf?pii=S0085-2538%2821%2900854-1

Mira FS, Costa Carvalho J, de Almeida PA, Pimenta AC, Alen Coutinho I, Figueiredo C, Rodrigues L, Sousa V, Ferreira E, Pinto H, Escada L, Galvão A, Alves R. **A Case of Acute Interstitial Nephritis After Two Doses of the BNT162b2 SARS-CoV-2 Vaccine**. Int J Nephrol Renovasc Dis. 2021 Dec 3;14:421-426. doi: 10.2147/IJNRD.S345898. PMID: 34887676; PMCID: PMC8650829. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8650829/pdf/ijnrd-14-421.pdf

Nakazawa E, Uchimura T, Hirai Y, Togashi H, Oyama Y, Inaba A, Shiga K, Ito S. **New-onset pediatric nephrotic syndrome following Pfizer-BioNTech SARS-CoV-2 vaccination: a case report and literature review.** CEN Case Rep. 2021 Nov 15:1–5. doi: 10.1007/s13730-021-00656-0. Epub ahead of print. PMID: 34782983; PMCID: PMC8592073. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8592073/pdf/13730_2021_Article_656.pdf

Dheir H, Sipahi S, Cakar GC, Yaylaci S, Hacibekiroglu T, Karabay O. **Acute tubulointerstitial nephritis after COVID-19 m-RNA BNT162b2 vaccine**. Eur Rev Med Pharmacol Sci. 2021 Oct;25(20):6171-6173. doi: 10.26355/eurrev_202110_26985. PMID: 34730195. https://www.europeanreview.org/wp/wp-content/uploads/6171-6173.pdf

Ferrer F, Roldão M, Figueiredo C, Lopes K. **Atypical Hemolytic Uremic Syndrome after ChAdOx1 nCoV-19 Vaccination in a Patient with Homozygous CFHR3/CFHR1 Gene Deletion**. Nephron. 2021 Nov 1:1-5. doi: 10.1159/000519461. Epub ahead of print. PMID: 34724668; PMCID: PMC8678224. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8678224/pdf/nef-0001.pdf

27. **2,315 Symptoms reported as paralysis or catatonia;** 48% within two days after injection.

Kazi SE, Hoque S. **Acute Psychosis Following Corticosteroid Administration**. Cureus. 2021 Sep 19;13(9):e18093. doi: 10.7759/cureus.18093. PMID: 34692307; PMCID: PMC8525047. https://pubmed.ncbi.nlm.nih.gov/34692307/

> Note in the case presented by Kazi, not mentioned in the abstract, the patient had been vaccinated with Moderna COVID-19 vaccine 9 days before manifestation of adverse reactions. "*Our patient presented with psychosis about 23 days after receiving the COVID-19 vaccine and 21 days after the onset of other COVID-19 symptoms*"

Flannery P, Yang I, Keyvani M, Sakoulas G. **Acute Psychosis Due to Anti-N-Methyl D-Aspartate Receptor Encephalitis Following COVID-19 Vaccination: A Case Report**. Front Neurol. 2021 Nov 4;12:764197. doi: 10.3389/fneur.2021.764197. PMID: 34803896; PMCID: PMC8599934. https://pubmed.ncbi.nlm.nih.gov/34803896/

Tamaki A, Cabrera CI, Li S, et al. **Incidence of Bell Palsy in Patients With COVID-19**. JAMA Otolaryngol Head Neck Surg. 2021;147(8):767–768. doi:10.1001/jamaoto.2021.1266 https://jamanetwork.com/journals/jamaotolaryngology/fullarticle/2781368

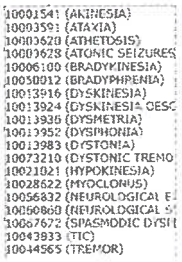
Shemer A, Pras E, Einan-Lifshitz A, Dubinsky-Pertzov B, Hecht I. **Association of COVID-19 Vaccination and Facial Nerve Palsy: A Case-Control Study**. JAMA Otolaryngol Head Neck Surg. 2021;147(8):739–743. doi:10.1001/jamaoto.2021.1259
https://jamanetwork.com/journals/jamaotolaryngology/fullarticle/2781367

Renoud L, Khouri C, Revol B, et al. **Association of Facial Paralysis With mRNA COVID-19 Vaccines: A Disproportionality Analysis Using the World Health Organization Pharmacovigilance Database**. JAMA Intern Med. 2021;181(9):1243–1245. doi:10.1001/jamainternmed.2021.2219
https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2779389

Colella G, Orlandi M, Cirillo N. **Bell's palsy following COVID-19 vaccination**. J Neurol. 2021;268(10):3589-3591. doi:10.1007/s00415-021-10462-4
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7897359/pdf/415_2021_Article_10462.pdf

Flannery P, Yang I, Keyvani M, Sakoulas G. **Acute Psychosis Due to Anti-N-Methyl D-Aspartate Receptor Encephalitis Following COVID-19 Vaccination: A Case Report**. Front Neurol. 2021 Nov 4;12:764197. doi: 10.3389/fneur.2021.764197. PMID: 34803896; PMCID: PMC8599934.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8599934/pdf/fneur-12-764197.pdf

28. **31,889 Symptoms reported as tremor, dyskinesia, dystonia, myoclonus, tics, rigidity, spasmodic dysphonia, akinesia, bradykinesia, hypokinesia, Ataxia, dysmetria, asynergia, Athetosis, Bradyphrenia or other neurological pathologies;** 69% within 2 days of injection.



Renemane L, Vrublevska J, Cera I. **First Episode Psychosis Following COVID-19 Vaccination: a Case Report**. Psychiatr Danub. 2022 Sep;34(Suppl 8):56-59. PMID: 36170703.
https://pubmed.ncbi.nlm.nih.gov/36170703/

Zhu A, Burke MJ. **Functional neurologic disorder associated with SARS-CoV-2 vaccination**. CMAJ. 2022 Aug 15;194(31):E1086-E1088. doi: 10.1503/cmaj.220039. PMID: 35970543; PMCID: PMC9377566.
https://pubmed.ncbi.nlm.nih.gov/35970543/

Sehgal V, Bansal P, Arora S, Kapila S, Bedi GS. **Myelin Oligodendrocyte Glycoprotein Antibody Disease After COVID-19 Vaccination - Causal or Incidental?** Cureus. 2022 Jul 19;14(7):e27024. doi: 10.7759/cureus.27024. PMID: 35989780; PMCID: PMC9386328.
https://pubmed.ncbi.nlm.nih.gov/35989780/

Allahyari F, Molaee H, Hosseini Nejad J. **Covid-19 vaccines and neurological complications: a systematic review**. Z Naturforsch C J Biosci. 2022 Sep 12. doi: 10.1515/znc-2022-0092. Epub ahead of print. PMID: 36087300. https://pubmed.ncbi.nlm.nih.gov/36087300/

Otero-Losada M, Petrovsky N, Alami A, Crispo JAG, Mattison D, Capani F, Goetz C, Krewski D, Perez-Lloret S. **Disproportionality analysis of adverse neurological and psychiatric reactions with the ChAdOx1 (Oxford-AstraZeneca) and BNT162b2 (Pfizer-BioNTech) COVID-19 vaccines in the United Kingdom**. Expert Opin Drug Saf. 2022 Aug 31. doi: 10.1080/14740338.2022.2120607. Epub ahead of print. PMID: 36043937. https://pubmed.ncbi.nlm.nih.gov/36043937/

Pinzon RT, Haryono FK, Darmawan NE, Salikim MAM, Veronica V. **Acute dizziness and mental alteration associated with Moderna COVID-19 vaccine: a case report**. BMC Neurol. 2022 Aug 26;22(1):322. doi: 10.1186/s12883-022-02834-8. PMID: 36028809; PMCID: PMC9412800. https://pubmed.ncbi.nlm.nih.gov/36028809/

Farinaz Safavi, Lindsey Gustafson, Brian Walitt, Tanya Lehky, Sara Dehbashi, Amanda Wiebold, Yair Mina, Susan Shin, Baohan Pan, Michael Polydefkis, Anne Louise Oaklander, **Neuropathic symptoms with SARS-CoV-2 vaccination**, medRxiv preprint BMJ doi: https://doi.org/10.1101/2022.05.16.22274439 https://www.medrxiv.org/content/10.1101/2022.05.16.22274439v1#:~:text=Results%20In%20an%20observational%20study,orthostasis%2C%20heat%20intolerance%20and%20palpitations

> Conclusion: Safavi et al "*observational study suggests that a variety of neuropathic symptoms may manifest after SARS-CoV-2 vaccinations and in some patients might be an immune-mediated process.*"

Min, Young Gi, Kim, Jee-Eun, Hwang, Ji Young, Shin, Je-Young, Sung, Jung-Joon, Hong, Yoon-Ho, **Parsonage-Turner syndrome following COVID-19 vaccination**, Journal of Neurology, Neurosurgery, J Neurol Neurosurg Psychiatry,doi 10.1136/jnnp-2021-328182., jnnp-2021-328182, 2022/04/06, http://jnnp.bmj.com/content/early/2022/04/05/jnnp-2021-328182.abstract https://jnnp.bmj.com/content/early/2022/04/05/jnnp-2021-328182.citation-tools

J S Koh, Y Goh, B Y -Q Tan, A C -F Hui, R H M Hoe, A Makmur, P L Kei, J Vijayan, K W P Ng, A M L Quek, U Thirugnanm, **Neuralgic amyotrophy following COVID-19 mRNA vaccination**, QJM: An International Journal of Medicine, Volume 114, Issue 7, July 2021, Pages 503–505, https://doi.org/10.1093/qjmed/hcab216 https://academic.oup.com/qjmed/article/114/7/503/6339673

Hirose, Satoshi MD, PhD; Hara, Makoto MD, PhD*; Koda, Kento MD; Natori, Naotoshi MD; Yokota, Yuki MD; Ninomiya, Satoko MD, PhD; Nakajima, Hideto MD, PhD. **Acute autoimmune transverse myelitis following COVID-19 vaccination: A case report**. Medicine: December 23, 2021 - Volume 100 - Issue 51 - p e28423 doi: 10.1097/MD.0000000000028423 https://journals.lww.com/md-journal/fulltext/2021/12230/acute_autoimmune_transverse_myelitis_following.167.aspx

Fitzsimmons, William and Nance, Christopher S., **Sudden Onset of Myelitis after COVID-19 Vaccination: An Under-Recognized Severe Rare Adverse Event** (May 5, 2021). Available at SSRN: https://ssrn.com/abstract=3841558 or http://dx.doi.org/10.2139/ssrn.3841558

Patrick McLean, Lori Trefts, **Transverse myelitis 48 hours after the administration of an mRNA COVID 19 vaccine**, Neuroimmunology Reports, Volume 1, 2021, 100019, ISSN 2667-257X, https://doi.org/10.1016/j.nerep.2021.100019. https://www.sciencedirect.com/science/article/pii/S2667257X21000176

Eom H, Kim SW, Kim M, Kim YE, Kim JH, Shin HY, Lee HL. **Case Reports of Acute Transverse Myelitis Associated With mRNA Vaccine for COVID-19**. J Korean Med Sci. 2022 Feb 21;37(7):e52. doi: 10.3346/jkms.2022.37.e52. PMID: 35191229; PMCID: PMC8860770. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8860770/

Khokhar F, Khan A, Hussain Z, Yu J. **Small Fiber Neuropathy Associated With the Moderna SARS-CoV-2 Vaccine**. Cureus. 2022 Jun 15;14(6):e25969. doi: 10.7759/cureus.25969. PMID: 35812635; PMCID: PMC9259076. https://pubmed.ncbi.nlm.nih.gov/35812635/

Kim JE, Park J, Song TJ. **A disproportionality analysis for the association of central nervous system demyelinating diseases with COVID-19 vaccination using the World Health Organization pharmacovigilance database**. Mult Scler. 2022 Jul 13:13524585221109397. doi: 10.1177/13524585221109397. Epub ahead of print. PMID: 35822296. https://pubmed.ncbi.nlm.nih.gov/35822296/

Thakur KT, Epstein S, Bilski A, Balbi A, Boehme AK, Brannagan TH, Wesley SF, Riley CS. **Neurologic Safety Monitoring of COVID-19 Vaccines: Lessons From the Past to Inform the Present**. Neurology. 2021 Oct 19;97(16):767-775. doi: 10.1212/WNL.0000000000012703. Epub 2021 Sep 2. PMID: 34475124; PMCID: PMC8548963. https://pubmed.ncbi.nlm.nih.gov/34475124/

Goss AL, Samudralwar RD, Das RR, Nath A. **ANA Investigates: Neurological Complications of COVID-19 Vaccines**. Ann Neurol. 2021 May;89(5):856-857. doi: 10.1002/ana.26065. Epub 2021 Mar 30. PMID: 33710649; PMCID: PMC8250888. https://pubmed.ncbi.nlm.nih.gov/33710649/

Kim DD, Kung CS, Perez DL. **Helping the Public Understand Adverse Events Associated With COVID-19 Vaccinations: Lessons Learned From Functional Neurological Disorder**. JAMA Neurol. 2021 Jul 1;78(7):789-790. doi: 10.1001/jamaneurol.2021.1042. PMID: 33835153. https://pubmed.ncbi.nlm.nih.gov/33835153/

Gill R, Rizvi M, Sadiq MS, Feldman M. **Recrudescence of severe polyneuropathy after receiving Pfizer-BioNTech COVID-19 vaccine in a patient with a history of eosinophilic granulomatosis with polyangiitis**. BMJ Case Rep. 2022 Apr 29;15(4):e245749. doi: 10.1136/bcr-2021-245749. PMID: 35487626. https://pubmed.ncbi.nlm.nih.gov/35487626/

Yıldız Tascı Y, Nalcacoglu P, Gumusyayla S, Vural G, Toklu Y, Yesılırmak N. Aquaporin-4 **protein antibody-associated optic neuritis related to neuroendocrine tumor after receiving an inactive COVID-19 vaccine**. Indian J Ophthalmol. 2022 May;70(5):1828-1831. doi: 10.4103/ijo.IJO_2494_21. PMID: 35502086. https://pubmed.ncbi.nlm.nih.gov/35502086/

Roncati L, Gravina D, Marra C, Della Rosa N, Adani R. **Cubital Tunnel Syndrome Temporally after COVID-19 Vaccination**. Trop Med Infect Dis. 2022 Apr 16;7(4):62. doi: 10.3390/tropicalmed7040062. PMID: 35448837; PMCID: PMC9028216. https://pubmed.ncbi.nlm.nih.gov/35448837/

Dinetz E. **Case Series of Three Neurological Side Effects in Younger-Aged Individuals After Pfizer's mRNA Vaccine**. Cureus. 2022 Apr 3;14(4):e23779. doi: 10.7759/cureus.23779. PMID: 35382061; PMCID: PMC8977060. https://pubmed.ncbi.nlm.nih.gov/35382061/

Gao JJ, Tseng HP, Lin CL, Shiu JS, Lee MH, Liu CH. **Acute Transverse Myelitis Following COVID-19 Vaccination**. Vaccines (Basel). 2021;9(9):1008. Published 2021 Sep 10. doi:10.3390/vaccines9091008 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8470728/pdf/vaccines-09-01008.pdf

Finsterer J, Scorza FA. **SARS-CoV-2 vaccines are not free of neurological side effects**. Acta Neurol Scand. 2021;144(1):109-110. doi:10.1111/ane.13451 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8206845/pdf/ANE-144-109.pdf

Finsterer J, Matovu D. **Consider Transverse Myelitis as a Complication of a SARS-CoV-2 Vaccination**. J Korean Med Sci. 2022 May 9;37(18):e150. doi: 10.3346/jkms.2022.37.e150. PMID: 35535377; PMCID: PMC9091424. https://pubmed.ncbi.nlm.nih.gov/35535377/

Lu L, Xiong W, Mu J, et al. **The potential neurological effect of the COVID-19 vaccines: A review**. Acta Neurol Scand. 2021;144(1):3-12. doi:10.1111/ane.13417 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8250748/pdf/ANE-144-3.pdf

Garg RK, Paliwal VK. **Spectrum of neurological complications following COVID-19 vaccination** [published online ahead of print, 2021 Oct 31]. Neurol Sci. 2021;1-38. doi:10.1007/s10072-021-05662-9 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8557950/pdf/10072_2021_Article_5662.pdf

29. **3,000 Symptoms reported as Guillain-Barré syndrome**; 38% within 10 days after injection.

Kim JE, Yoon BA, Kim YH, Kim JK, Bae JS. **Miller Fisher syndrome following COVID-19 vaccines: A scoping review**. Acta Neurol Scand. 2022 Aug 8. doi: 10.1111/ane.13687. Epub ahead of print. PMID: 35938305. https://pubmed.ncbi.nlm.nih.gov/35938305/

Oshibe N, Honda M, Koga M, Sato R, Oishi M, Kanda T. **[A Patient Developing Guillain-Barré Syndrome After Receiving the BNT162b2 COVID-19 mRNA Vaccine]**. Brain Nerve. 2022 Aug;74(8):1025-1030. Japanese. doi: 10.11477/mf.1416202173. PMID: 35941801. https://pubmed.ncbi.nlm.nih.gov/35941801/

Hilts A, Schreiber A, Singh A. **A Clinical Case of COVID-19 Vaccine-Associated Guillain-Barré Syndrome**. Am J Case Rep. 2022 Aug 10;23:e936896. doi: 10.12659/AJCR.936896. PMID: 35945825; PMCID: PMC9377719. https://pubmed.ncbi.nlm.nih.gov/35945825/

Nanatsue K, Takahashi M, Itaya S, Abe K, Inaba A. **A case of Miller Fisher syndrome with delayed onset peripheral facial nerve palsy after COVID-19 vaccination: a case report**. BMC Neurol. 2022 Aug 22;22(1):309. doi: 10.1186/s12883-022-02838-4. PMID: 35996074; PMCID: PMC9395791. https://pubmed.ncbi.nlm.nih.gov/35996074/

Kim YH, Kim JE, Yoon BA, Kim JK, Bae JS. **Bilateral Facial Weakness with Distal Paresthesia Following COVID-19 Vaccination: A Scoping Review for an Atypical Variant of Guillain-Barré Syndrome**. Brain Sci. 2022 Aug 7;12(8):1046. doi: 10.3390/brainsci12081046. PMID: 36009109; PMCID: PMC9406009. https://pubmed.ncbi.nlm.nih.gov/36009109/

Hanson KE, Goddard K, Lewis N, et al. **Incidence of Guillain-Barré Syndrome After COVID-19 Vaccination in the Vaccine Safety Datalink**. JAMA Netw Open. 2022;5(4):e228879.

doi:10.1001/jamanetworkopen.2022.8879
https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2791533

Dyer, Owen, **Covid-19: Regulators warn that rare Guillain-Barré cases may link to J&J and AstraZeneca vaccines**, 10.1136/bmj.n1786, 2021 Jul 14, BMJ
http://www.bmj.com/content/374/bmj.n1786.full

Bellucci M, Germano F, Grisanti S, Castellano C, Tazza F, Mobilia EM, Visigalli D, Novi G, Massa F, Rossi S, Durando P, Cabona C, Schenone A, Franciotta D, Benedetti L. Case Report: **Post-COVID-19 Vaccine Recurrence of Guillain-Barré Syndrome Following an Antecedent Parainfectious COVID-19-Related GBS**. Front Immunol. 2022 Jul 18;13:894872. doi: 10.3389/fimmu.2022.894872. PMID: 35924236; PMCID: PMC9339669. https://pubmed.ncbi.nlm.nih.gov/35924236/

Germano F, Bellucci M, Grisanti S, Beronio A, Grazzini M, Coco E, Tassinari T, Della Cava F, De Michelis C, Baldi O, Sivori G, Murialdo A, Cabona C, Durando P, Uccelli A, Schenone A, Franciotta D, Benedetti L. **COVID-19 vaccine-related Guillain-Barré syndrome in the Liguria region of Italy: A multicenter case series**. J Neurol Sci. 2022 Jun 25;440:120330. doi: 10.1016/j.jns.2022.120330. Epub ahead of print. PMID: 35802961; PMCID: PMC9232395. https://pubmed.ncbi.nlm.nih.gov/35802961/

García-Grimshaw M, Galnares-Olalde JA, Bello-Chavolla OY, Michel-Chávez A, Cadena-Fernández A, Briseño-Godínez ME, Antonio-Villa NE, Nuñez I, Gutiérrez-Romero A, Hernández-Vanegas L, Saniger-Alba MDM, Carrillo-Mezo R, Ceballos-Liceaga SE, Carbajal-Sandoval G, Flores-Silva FD, Díaz-Ortega JL, Cortes-Alcalá R, Pérez-Padilla JR, López-Gatell H, Chiquete E, Reyes-Terán G, Arauz A, Valdés-Ferrer SI. **Incidence of Guillain-Barré syndrome following SARS-CoV-2 immunization: Analysis of a nationwide registry of recipients of 81 million doses of seven vaccines**. Eur J Neurol. 2022 Jul 16. doi: 10.1111/ene.15504. Epub ahead of print. PMID: 35841212.
https://pubmed.ncbi.nlm.nih.gov/35841212/

Kundi M, Montgomery S, Mao S, Asghar S. **Not All That Is Droopy Post Ad26.COV2.S (JNJ) Vaccine Is Bell's Palsy: A Rare Case of Isolated Dorsal Pontine Stroke Causing Ipsilateral Complete Hemi-Facial Palsy**. Cureus. 2022 Mar 15;14(3):e23195. doi: 10.7759/cureus.23195. PMID: 35444866; PMCID: PMC9010170. https://pubmed.ncbi.nlm.nih.gov/35444866/

Yamakawa M, Nakahara K, Nakanishi T, Nomura T, Ueda M. **Miller Fisher Syndrome Following Vaccination against SARS-CoV-2**. Intern Med. 2022;61(7):1067-1069. doi: 10.2169/internalmedicine.8851-21. Epub 2022 Apr 1. PMID: 35370249.
https://pubmed.ncbi.nlm.nih.gov/35370249/

Trimboli, M., Zoleo, P., Arabia, G. et al. **Guillain-Barré syndrome following BNT162b2 COVID-19 vaccine**. Neurol Sci 42, 4401–4402 (2021). https://doi.org/10.1007/s10072-021-05523-5
https://link.springer.com/content/pdf/10.1007/s10072-021-05523-5.pdf

30. **489 Symptoms reported as myasthenia gravis**; 23% within 2 days after injection

Abicic A, Sitas B, Adamec I, Bilic E, Habek M. **New-Onset Ocular Myasthenia Gravis After Booster Dose of COVID-19 Vaccine**. Cureus. 2022 Jul 24;14(7):e27213. doi: 10.7759/cureus.27213. PMID: 36035038; PMCID: PMC9399320. https://pubmed.ncbi.nlm.nih.gov/36035038/

Slavin E, Fitzig J, Neubert C, Garcia-Lopez F, Cuevas-Trisan R. **New-onset myasthenia gravis confirmed by electrodiagnostic studies after a third dose of SARS-CoV-2 mRNA-1273 vaccine: a case report**. Am J Phys Med Rehabil. 2022 Aug 2. doi: 10.1097/PHM.0000000000002076. Epub ahead of print. PMID: 35930797. https://pubmed.ncbi.nlm.nih.gov/35930797/

Sonigra KJ, Sarna K, Vaghela VP, Guthua S. **An Interesting Case of Fatal Myasthenic Crisis Probably Induced by the COVID-19 Vaccine**. Cureus. 2022 Mar 17;14(3):e23251. doi: 10.7759/cureus.23251. PMID: 35449619; PMCID: PMC9012544. https://pubmed.ncbi.nlm.nih.gov/35449619/

Ishizuchi K, Takizawa T, Sekiguchi K, Motegi H, Oyama M, Nakahara J, Suzuki S. **Flare of myasthenia gravis induced by COVID-19 vaccines**. J Neurol Sci. 2022 May 15;436:120225. doi: 10.1016/j.jns.2022.120225. Epub 2022 Mar 9. PMID: 35290838; PMCID: PMC8906005. https://pubmed.ncbi.nlm.nih.gov/35290838/

Poli K, Poli S, Ziemann U. **Multiple Autoimmune Syndromes Including Acute Disseminated Encephalomyelitis, Myasthenia Gravis, and Thyroiditis Following Messenger Ribonucleic Acid-Based COVID-19 Vaccination: A Case Report**. Front Neurol. 2022 May 27;13:913515. doi: 10.3389/fneur.2022.913515. PMID: 35711270; PMCID: PMC9195504. https://pubmed.ncbi.nlm.nih.gov/35711270/

Lee MA, Lee C, Park JH, Lee JH. **Early-Onset Myasthenia Gravis Following COVID-19 Vaccination**. J Korean Med Sci. 2022 Mar 14;37(10):e50. doi: 10.3346/jkms.2022.37.e50. PMID: 35289135; PMCID: PMC8921216. https://pubmed.ncbi.nlm.nih.gov/35289135/

Augustine Chavez, Charlotte Pougnier, **A Case of COVID-19 Vaccine Associated New Diagnosis Myasthenia Gravis**, October 28, 2021, Journal of Primary Care & Community Health Volume 12: 1–3 https://journals.sagepub.com/doi/pdf/10.1177/21501327211051933

31. 10,555 **Symptoms reported as anaphylaxis treatment, anaphylactic reaction, anaphylactic shock or shock**; 73% within same day of injection

Žilėnaitė E, Malinauskienė L, Černiauskas K, Griguola L, Linauskienė K, Kvedarienė V, Chomičienė A. **Vaccinating with a COVID-19 Vaccine: Experience of the Tertiary Allergology Center**. Acta Med Litu. 2022;29(1):27-32. doi: 10.15388/Amed.2021.29.1.1. Epub 2022 Jul 26. PMID: 36061933; PMCID: PMC9428637. https://pubmed.ncbi.nlm.nih.gov/36061933/

Mahdiabadi S, Rezaei N. **Anaphylaxis and allergic reactions to COVID-19 vaccines: A narrative review of characteristics and potential obstacles on achieving herd immunity**. Health Sci Rep. 2022 Aug 24;5(5):e787. doi: 10.1002/hsr2.787. PMID: 36032518; PMCID: PMC9401640. https://pubmed.ncbi.nlm.nih.gov/36032518/

Bloise S, Marcellino A, Frasacco B, Gizzone P, Proietti Ciolli C, Martucci V, Sanseviero M, Del Giudice E, Ventriglia F, Lubrano R. **Cross-Sectional Survey on BNT162b2 mRNA COVID-19 Vaccine Serious Adverse Events in Children 5 to 11 Years of Age: A Monocentric Experience. Vaccines** (Basel). 2022 Jul 30;10(8):1224. doi: 10.3390/vaccines10081224. PMID: 36016112; PMCID: PMC9416594. https://pubmed.ncbi.nlm.nih.gov/36016112/

Toledo-Salinas C, Scheffler-Mendoza SC, Castano-Jaramillo LM, Ortega-Martell JA, Del Rio-Navarro BE, Santibáñez-Copado AM, Díaz-Ortega JL, Baptista-Rosas R, Sánchez-Novoa P, García-Grimshaw M, Valdés-Ferrer SI, Reyes-Terán G, Mendoza-Hernández DA. **Anaphylaxis to SARS-CoV-2 Vaccines in the Setting of a Nationwide Passive Epidemiological Surveillance Program.** J Clin Immunol. 2022 Aug 17:1–7. doi: 10.1007/s10875-022-01350-1. Epub ahead of print. PMID: 35976470; PMCID: PMC9382604. https://pubmed.ncbi.nlm.nih.gov/35976470/

Imai K, Tanaka F, Kawano S, Esaki K, Arakawa J, Nishiyama T, Seno S, Hatanaka K, Sugiura T, Kodama Y, Yamada S, Iwamoto S, Takeshima S, Abe N, Kamae C, Aono S, Ito T, Yamamoto T, Mizuguchi Y. **Incidence and Risk Factors of Immediate Hypersensitivity Reactions and Immunization Stress-related Responses With COVID-19 mRNA Vaccine.** J Allergy Clin Immunol Pract. 2022 Aug 8:S2213-2198(22)00797-8. doi: 10.1016/j.jaip.2022.07.027. Epub ahead of print. PMID: 35953016; PMCID: PMC9359595. https://pubmed.ncbi.nlm.nih.gov/35953016/

Marković I, Božan M, Perković T, Paušek K, Nedeljković V, Perković M, Kelava T, Artuković M, Stipić Marković A. **Incidence of immediate allergic reactions to mRNA COVID-19 vaccines in adults with drug allergies and other allergic disorders. Medicine (Baltimore).** 2022 Jul 29;101(30):e29571. doi: 10.1097/MD.0000000000029571. PMID: 35905225; PMCID: PMC9333079. https://pubmed.ncbi.nlm.nih.gov/35905225/

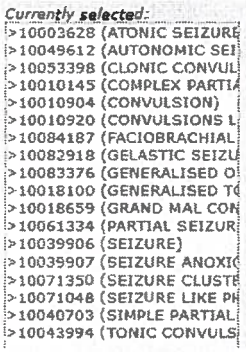
McSweeney MD, Mohan M, Commins SP, Lai SK. **Anaphylaxis to Pfizer/BioNTech mRNA COVID-19 Vaccine in a Patient With Clinically Confirmed PEG Allergy.** Front Allergy. 2021 Sep 29;2:715844. doi: 10.3389/falgy.2021.715844. PMID: 35387046; PMCID: PMC8974707. https://pubmed.ncbi.nlm.nih.gov/35387046/

Kim MA, Lee YW, Kim SR, et al. COVID-19 **Vaccine-associated Anaphylaxis and Allergic Reactions: Consensus Statements of the KAAACI Urticaria/Angioedema/Anaphylaxis Working Group**. *Allergy Asthma Immunol Res.* 2021;13(4):526-544. doi:10.4168/aair.2021.13.4.526 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8255352/pdf/aair-13-526.pdf

Matsuzaki S, Kamiya H, Inoshima I, Hirasawa Y, Tago O, Arai M. **COVID-19 mRNA Vaccine-induced Pneumonitis: A Case Report.** Intern Med. 2021 Oct 26. doi: 10.2169/internalmedicine.8310-21. Epub ahead of print. PMID: 34707048. https://www.jstage.jst.go.jp/article/internalmedicine/advpub/0/advpub_8310-21/_article

Kounis NG, Koniari I, de Gregorio C, et al. **Allergic Reactions to Current Available COVID-19 Vaccinations: Pathophysiology, Causality, and Therapeutic Considerations.** Vaccines (Basel). 2021;9(3):221. Published 2021 Mar 5. doi:10.3390/vaccines9030221 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7999280/pdf/vaccines-09-00221.pdf

32. **12,793 Symptoms reported as of convulsions or seizure;** 61% within 1 day after injection.

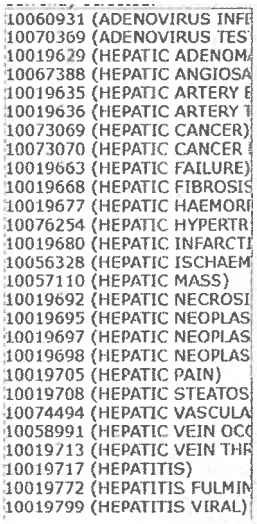


Seeley EA, Zimmer M, Berghea R. **Suspected COVID-19 Immunization-Induced Probable Catastrophic Antiphospholipid Syndrome**. Cureus. 2022 Jul 26;14(7):e27313. doi: 10.7759/cureus.27313. PMID: 36042994; PMCID: PMC9410733. https://pubmed.ncbi.nlm.nih.gov/36042994/

Núñez I, García-Grimshaw M, Castillo Valencia CY, Aguilera Callejas DE, Moya Alfaro ML, Saniger-Alba MDM, Gutiérrez-Romero A, Carrillo-Mezo R, Ceballos-Liceaga SE, Baptista-Rosas RC, López-Gatell H, Reyes-Terán G, Díaz-Ortega JL, Arauz A, Valdés-Ferrer SI, Hernández-Vanegas LE. **Seizures following COVID-19 vaccination in Mexico: A nationwide observational study**. Epilepsia. 2022 Aug 9. doi: 10.1111/epi.17390. Epub ahead of print. PMID: 35943891. https://pubmed.ncbi.nlm.nih.gov/35943891/

Ghosh R, Dubey S, Roy D, Mandal A, Naga D, Benito-León J. **Focal onset non-motor seizure following COVID-19 vaccination: A mere coincidence?**. Diabetes Metab Syndr. 2021;15(3):1023-1024. doi:10.1016/j.dsx.2021.05.003 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8105133/pdf/main.pdf

33. **1,760 Symptoms reported as hepatitis, hepatic sarcomas, hepatic vasculature embolism, thrombosis, hemorrhage or adenoviral infection**; 30% within 2 days after injection



Pérez-Gracia MT, Tarín-Pelló A, Suay-García B. **Severe Acute Hepatitis of Unknown Origin in Children: What Do We Know Today?** J Clin Transl Hepatol. 2022 Aug 28;10(4):711-717. doi: 10.14218/JCTH.2022.00244. Epub 2022 Jul 26. PMID: 36062273; PMCID: PMC9396315. https://pubmed.ncbi.nlm.nih.gov/36062273/

> *"So far, the cause of these cases is unknown and many hypotheses remain open, but hepatitis A-E viruses and COVID-19 vaccines have been ruled out."*

Lasagna A, Lenti MV, Cassaniti I, Sacchi P. **Development of hepatitis triggered by SARS-CoV-2 vaccination in patient with cancer during immunotherapy: a case report**. Immunotherapy. 2022 Jun 13. doi: 10.2217/imt-2021-0342. Epub ahead of print. PMID: 35694999.

https://pubmed.ncbi.nlm.nih.gov/35694999/

Zin Tun GS, Gleeson D, Al-Joudeh A, Dube A. **Immune-mediated hepatitis with the Moderna vaccine, no longer a coincidence but confirmed**. J Hepatol. 2022 Mar;76(3):747-749. doi: 10.1016/j.jhep.2021.09.031. Epub 2021 Oct 5. PMID: 34619252; PMCID: PMC8491984. https://pubmed.ncbi.nlm.nih.gov/34619252/

Kawasaki Y, Matsubara K, Hori M, Isome K. **Liver injury and cytopenia after BNT162b2 COVID-19 vaccination in an adolescent**. Pediatr Int. 2022 Jan;64(1):e15178. doi: 10.1111/ped.15178. PMID: 35510521. https://pubmed.ncbi.nlm.nih.gov/35510521/

Boettler T, Csernalabics B, Salié H, Luxenburger H, Wischer L, Alizei ES, Zoldan K, Krimmel L, Bronsert P, Schwabenland M, Prinz M, Mogler C, Neumann-Haefelin C, Thimme R, Hofmann M, Bengsch B. **SARS-CoV-2 vaccination can elicit a CD8 T-cell dominant hepatitis**. J Hepatol. 2022 Apr 21:S0168-8278(22)00234-3. doi: 10.1016/j.jhep.2022.03.040. Epub ahead of print. PMID: 35461912; PMCID: PMC9021033. https://pubmed.ncbi.nlm.nih.gov/35461912/

The Boettler paper was featured in the May 4-10 issue of the Epoch Times

Zhou T, Fronhoffs F, Dold L, Strassburg CP, Weismüller TJ. **New-onset autoimmune hepatitis following mRNA COVID-19 vaccination in a 36-year-old woman with primary sclerosing cholangitis - should we be more vigilant?** J Hepatol. 2022 Jan;76(1):218-220. doi: 10.1016/j.jhep.2021.08.006. Epub 2021 Aug 25. PMID: 34450237; PMCID: PMC8384483. https://pubmed.ncbi.nlm.nih.gov/34450237/

Bril F. **Autoimmune hepatitis developing after coronavirus disease 2019 (COVID-19) vaccine: One or even several swallows do not make a summer**. J Hepatol. 2021 Nov;75(5):1256-1257. doi: 10.1016/j.jhep.2021.08.001. Epub 2021 Aug 10. PMID: 34384822; PMCID: PMC8352654. https://pubmed.ncbi.nlm.nih.gov/34384822/

Shroff H, Satapathy SK, Crawford JM, Todd NJ, VanWagner LB. **Liver injury following SARS-CoV-2 vaccination: A multicenter case series**. J Hepatol. 2022 Jan;76(1):211-214. doi: 10.1016/j.jhep.2021.07.024. Epub 2021 Jul 31. PMID: 34339763; PMCID: PMC8324396. https://pubmed.ncbi.nlm.nih.gov/34339763/

Lodato F, Larocca A, D'Errico A, Cennamo V. **An unusual case of acute cholestatic hepatitis after m-RNABNT162b2 (Comirnaty) SARS-CoV-2 vaccine: Coincidence, autoimmunity or drug-related liver injury**. J Hepatol. 2021 Nov;75(5):1254-1256. doi: 10.1016/j.jhep.2021.07.005. Epub 2021 Jul 10. PMID: 34256064; PMCID: PMC8272621. https://pubmed.ncbi.nlm.nih.gov/34256064/

McShane C, Kiat C, Rigby J, Crosbie Ó. **The mRNA COVID-19 vaccine - A rare trigger of autoimmune hepatitis?** J Hepatol. 2021 Nov;75(5):1252-1254. doi: 10.1016/j.jhep.2021.06.044. Epub 2021 Jul 8. PMID: 34245804; PMCID: PMC8264276. https://pubmed.ncbi.nlm.nih.gov/34245804/

Clayton-Chubb D, Schneider D, Freeman E, Kemp W, Roberts SK. **Autoimmune hepatitis developing after the ChAdOx1 nCoV-19 (Oxford-AstraZeneca) vaccine**. J Hepatol. 2021 Nov;75(5):1249-1250. doi: 10.1016/j.jhep.2021.06.014. Epub 2021 Jun 22. PMID: 34171435; PMCID: PMC8219312. https://pubmed.ncbi.nlm.nih.gov/34171435/

Tan CK, Wong YJ, Wang LM, Ang TL, Kumar R. **Autoimmune hepatitis following COVID-19 vaccination: True causality or mere association?** J Hepatol. 2021 Nov;75(5):1250-1252. doi: 10.1016/j.jhep.2021.06.009. Epub 2021 Jun 18. PMID: 34153398; PMCID: PMC8404983. https://pubmed.ncbi.nlm.nih.gov/34153398/

Bril F, Fettig DM. Reply to: **"Comment on "Autoimmune hepatitis developing after coronavirus disease 2019 (COVID-19) vaccine: Causality or casualty?""**. J Hepatol. 2021 Oct;75(4):996-997. doi: 10.1016/j.jhep.2021.06.008. Epub 2021 Jun 17. PMID: 34146650; PMCID: PMC8272678. https://pubmed.ncbi.nlm.nih.gov/34146650/

Londoño MC, Gratacós-Ginès J, Sáez-Peñataro J. **Another case of autoimmune hepatitis after SARS-CoV-2 vaccination - still casualty?** J Hepatol. 2021 Nov;75(5):1248-1249. doi: 10.1016/j.jhep.2021.06.004. Epub 2021 Jun 12. PMID: 34129886; PMCID: PMC8197609. https://pubmed.ncbi.nlm.nih.gov/34129886/

Rocco A, Sgamato C, Compare D, Nardone G. **Autoimmune hepatitis following SARS-CoV-2 vaccine: May not be a casuality**. J Hepatol. 2021 Sep;75(3):728-729. doi: 10.1016/j.jhep.2021.05.038. Epub 2021 Jun 9. PMID: 34116081; PMCID: PMC8186938. https://pubmed.ncbi.nlm.nih.gov/34116081/

Capecchi PL, Lazzerini PE, Brillanti S. **Comment on "Autoimmune hepatitis developing after coronavirus disease 2019 (COVID-19) vaccine: Causality or casualty?".** J Hepatol. 2021 Oct;75(4):994-995. doi: 10.1016/j.jhep.2021.04.039. Epub 2021 May 5. PMID: 33964372; PMCID: PMC8098030. https://pubmed.ncbi.nlm.nih.gov/33964372/

Bril F, Al Diffalha S, Dean M, Fettig DM. **Autoimmune hepatitis developing after coronavirus disease 2019 (COVID-19) vaccine: Causality or casualty?** J Hepatol. 2021 Jul;75(1):222-224. doi: 10.1016/j.jhep.2021.04.003. Epub 2021 Apr 20. PMID: 33862041; PMCID: PMC8056822. https://pubmed.ncbi.nlm.nih.gov/33862041/

Rela M, Jothimani D, Vij M, Rajakumar A, Rammohan A. **Auto-immune hepatitis following COVID vaccination**. J Autoimmun. 2021 Sep;123:102688. doi: 10.1016/j.jaut.2021.102688. Epub 2021 Jul 3. PMID: 34225251. https://pubmed.ncbi.nlm.nih.gov/34225251/

Pinazo-Bandera JM, Hernández-Albújar A, García-Salguero AI, Arranz-Salas I, Andrade RJ, Robles-Díaz M. **Acute hepatitis with autoimmune features after COVID-19 vaccine: coincidence or vaccine-induced phenomenon?** Gastroenterol Rep (Oxf). 2022 Apr 27;10:goac014. doi: 10.1093/gastro/goac014. PMID: 35498817; PMCID: PMC9046091. https://pubmed.ncbi.nlm.nih.gov/35498817/

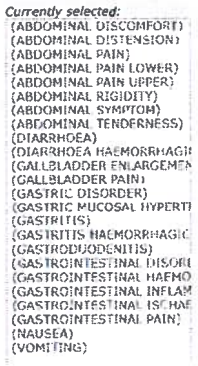
Schneider L, Schubert L, Winkler F, Munda P, Winkler S, Tobudic S. **SARS-CoV-2 vaccine response in patients with autoimmune hepatitis.** Clin Gastroenterol Hepatol. 2022 Apr 26:S1542-3565(22)00405-0. doi: 10.1016/j.cgh.2022.04.006. Epub ahead of print. PMID: 35487452; PMCID: PMC9040499. https://pubmed.ncbi.nlm.nih.gov/35487452/

Chow KW, Pham NV, Ibrahim BM, Hong K, Saab S. **Autoimmune Hepatitis-Like Syndrome Following COVID-19 Vaccination: A Systematic Review of the Literature.** Dig Dis Sci. 2022 Apr 29:1–7. doi: 10.1007/s10620-022-07504-w. Epub ahead of print. PMID: 35486203; PMCID: PMC9052185. https://pubmed.ncbi.nlm.nih.gov/35486203/

Sookaromdee P, Wiwanitkit V. **COVID-19 vaccine and autoimmune hepatitis.** Rev Esp Enferm Dig. 2022 Apr 26. doi: 10.17235/reed.2022.8837/2022. Epub ahead of print. PMID: 35469403. https://pubmed.ncbi.nlm.nih.gov/35469403/

Kang SH, Kim MY, Cho MY, Baik SK. **Autoimmune Hepatitis Following Vaccination for SARS-CoV-2 in Korea: Coincidence or Autoimmunity?** J Korean Med Sci. 2022 Apr 18;37(15):e116. doi: 10.3346/jkms.2022.37.e116. PMID: 35437965; PMCID: PMC9015903. https://pubmed.ncbi.nlm.nih.gov/35437965/

34. **188,575 Symptoms reported as diarrhea, abdominal pain, gastritis, vomiting or other digestive system pathology**; 69% within two days of injection



Nishimura T, Onogawa S, Yamamoto T, Okuda Y, Ikeda M, Matsumoto N, Kurihara K, Shimizu A, Kitamura S, Katamura Y, Hirano N, Itamoto S, Nakahara M, Yonehara S, Shimamoto F, Hanada K. **Acute necrotic disorder of the small intestine post-coronavirus disease-2019 vaccination.** DEN open. 2022 Jun 5;3(1):e137. doi: 10.1002/deo2.137. PMID: 35898845; PMCID: PMC9307720. https://pubmed.ncbi.nlm.nih.gov/35898845/

Lee JY, Lee JH. **mRNA COVID-19 Vaccine-Associated Subserosal Eosinophilic Gastroenteritis: A Case Report.** J Korean Med Sci. 2022 Aug 1;37(30):e233. doi: 10.3346/jkms.2022.37.e233. PMID: 35916045. https://pubmed.ncbi.nlm.nih.gov/35916045/

James D, Jena A, Bharath PN, Choudhury A, Singh AK, Sebastian S, Sharma V. **Safety of SARS-CoV-2 vaccination in patients with inflammatory bowel disease: A systematic review and meta-analysis.** Dig Liver Dis. 2022 Mar 22:S1590-8658(22)00210-9. doi: 10.1016/j.dld.2022.03.005. Epub ahead of print. PMID: 35382972; PMCID: PMC8938236. https://pubmed.ncbi.nlm.nih.gov/35382972/

Zacharopoulou E, Orfanoudaki E, Tzouvala M, Tribonias G, Kokkotis G, Kitsou V, Almpani F, Christidou A, Viazis N, Mantzaris GJ, Tsafaridou M, Karmiris K, Theodoropoulou A, Papathanasiou E, Zampeli E, Michopoulos S, Tigkas S, Michalopoulos G, Laoudi E, Karatzas P, Mylonas I, Kyriakos N, Liatsos C, Kafetzi T, Theocharis G, Taka S, Panagiotopoulou K, Koutroubakis IE, Bamias G. **Patients With Inflammatory Bowel Diseases Have Impaired Antibody Production After Anti-SARS-CoV-2 Vaccination: Results From a Panhellenic Registry**. Inflamm Bowel Dis. 2022 Apr 8:izac068. doi: 10.1093/ibd/izac068. Epub ahead of print. PMID: 35394529. https://pubmed.ncbi.nlm.nih.gov/35394529/

Cannatelli R, Ferretti F, Carmagnola S, et alRisk of adverse events and reported clinical relapse after COVID-19 vaccination in patients with IBDGut Published Online First: 24 November 2021. doi: 10.1136/gutjnl-2021-326237
https://gut.bmj.com/content/gutjnl/early/2021/11/23/gutjnl-2021-326237.full.pdf

35. **2,952 Symptoms reported as Cancer;** COVID-19 vaccines account for almost 72% of all reported cancers associated with all vaccinations over 30 years (4,439)

Vaccine	Events Reported	Percent (of 4,439)
Total	4,984	112.28%
COVID19 (COVID19 (PFIZER-BIONTECH)) (1200)	2,227	50.17%
COVID19 (COVID19 (MODERNA)) (1201)	831	18.72%
HPV (GARDASIL) (1098)	585	13.18%
ZOSTER (SHINGRIX) (1192)	120	2.70%
COVID19 (COVID19 (JANSSEN)) (1203)	119	2.68%
VACCINE NOT SPECIFIED (NO BRAND NAME) (999)	108	2.43%
HPV (CERVARIX) (1136)	84	1.89%
ZOSTER LIVE (ZOSTAVAX) (1097)	83	1.87%
INFLUENZA (SEASONAL) (NO BRAND NAME) (44)	79	1.78%
HPV (NO BRAND NAME) (1102)	75	1.69%
HPV (GARDASIL 9) (1170)	73	1.64%
PNEUMO (PNEUMOVAX) (30)	69	1.55%
HEP B (ENGERIX-B) (38)	39	0.88%
PNEUMO (PREVNAR13) (1141)	27	0.61%
POLIO VIRUS, ORAL (ORIMUNE) (17)	27	0.61%
HEP B (RECOMBIVAX HB) (25)	23	0.52%
COVID19 (COVID19 (UNKNOWN)) (1202)	22	0.50%
HEP A + HEP B (TWINRIX) (1009)	20	0.45%
INFLUENZA (SEASONAL) (FLUZONE) (7)	19	0.43%
MEASLES + MUMPS + RUBELLA (MMR II) (26)	19	0.43%
HEP B (NO BRAND NAME) (110)	18	0.41%
PNEUMO (NO BRAND NAME) (120)	17	0.38%
ANTHRAX (BIOTHRAX) (1008)	11	0.25%
INFLUENZA (SEASONAL) (FLUARIX) (1089)	11	0.25%
VARICELLA (VARIVAX) (269)	11	0.25%
HEP A (HAVRIX) (268)	10	0.23%
HEP A (NO BRAND NAME) (279)	10	0.23%
INFLUENZA (SEASONAL) (FLUZONE HIGH-DOSE QUADRIVALENT) (1199)	10	0.23%
PNEUMO (PREVNAR) (1001)	9	0.20%
ZOSTER (NO BRAND NAME) (1103)	9	0.20%
INFLUENZA (SEASONAL) (FLUVIRIN) (262)	8	0.18%
LYME (LYMERIX) (302)	8	0.18%
POLIO VIRUS, INACT. (NO BRAND NAME) (232)	8	0.16%
INFLUENZA (SEASONAL) (FLUSHIELD) (261)	7	0.16%
TDAP (ADACEL) (1002)	7	0.16%
TYPHOID VI POLYSACCHARIDE (TYPHIM VI) (271)	7	0.16%
HIB (ACTHIB) (256)	6	0.14%
HEP B (FOREIGN) (24)	6	0.14%
MENINGOCOCCAL (NO BRAND NAME) (113)	6	0.14%
TD ADSORBED (NO BRAND NAME) (11)	6	0.14%
TETANUS TOXOID (NO BRAND NAME) (12)	6	0.14%
ANTHRAX (NO BRAND NAME) (64)	5	0.11%
SMALLPOX (DRYVAX) (47)	5	0.11%
YELLOW FEVER (YF-VAX) (14)	5	0.11%
BCG (NO BRAND NAME) (102)	4	0.09%
HIB (NO BRAND NAME) (111)	4	0.09%
INFLUENZA (SEASONAL) (FLUOGEN) (34)	4	0.09%
INFLUENZA (SEASONAL) (FLUZONE HIGH-DOSE) (1145)	4	0.09%
MENINGOCOCCAL B (BEXSERO) (1165)	4	0.09%

Search codes

Searched on 'cancer' or 'carcinoma' or 'metastatic' and selected potential cancer candidates but not above stage 0 or 1. Cancers with recurrent status included

Zagorec N, Horvatić I, Šenjug P, Horaček M, Galešić Ljubanović D, Galešić K. **Immune-mediated diseases after coronavirus disease 2019 vaccination: rare but important complication**. Croat

Med J. 2022 Aug 31;63(4):389-393. PMID: 36046936.
https://pubmed.ncbi.nlm.nih.gov/36046936/

Sekizawa A, Hashimoto K, Kobayashi S, Kozono S, Kobayashi T, Kawamura Y, Kimata M, Fujita N, Ono Y, Obuchi Y, Tanaka Y. **Rapid progression of marginal zone B-cell lymphoma after COVID-19 vaccination (BNT162b2): A case report**. Front Med (Lausanne). 2022 Aug 1;9:963393. doi: 10.3389/fmed.2022.963393. PMID: 35979213; PMCID: PMC9377515.
https://pubmed.ncbi.nlm.nih.gov/35979213/

Veeraballi S, Patel A, Are G, Ramahi A, Chittamuri S, Shaaban H. **A Case of Chronic Myelomonocytic Leukemia Unmasked After Receiving J&J COVID-19 Vaccine**. Cureus. 2022 Jun 18;14(6):e26070. doi: 10.7759/cureus.26070. PMID: 35865440; PMCID: PMC9292133.
https://pubmed.ncbi.nlm.nih.gov/35865440/

Sousa LG, McGrail DJ, Li K, Marques-Piubelli ML, Gonzalez C, Dai H, Ferri-Borgogno S, Godoy M, Burks J, Lin SY, Bell D, Ferrarotto R. **Spontaneous tumor regression following COVID-19 vaccination**. J Immunother Cancer. 2022 Mar;10(3):e004371. doi: 10.1136/jitc-2021-004371. PMID: 35241495; PMCID: PMC8896046. https://pubmed.ncbi.nlm.nih.gov/35241495/

Yang K, Prussick L, Hartman R, Mahalingam M. **Acantholytic Dyskeratosis Post-COVID Vaccination**. Am J Dermatopathol. 2022 Jun 1;44(6):e61-e63. doi: 10.1097/DAD.0000000000002150. Epub 2022 Feb 15. PMID: 35170477.
https://pubmed.ncbi.nlm.nih.gov/35170477/

Steber CR, Ponnatapura J, Hughes RT, Farris MK. **Rapid Development of Clinically Symptomatic Radiation Recall Pneumonitis Immediately Following COVID-19 Vaccination**. Cureus. 2021 Apr 5;13(4):e14303. doi: 10.7759/cureus.14303. PMID: 33968515; PMCID: PMC8098628.
https://pubmed.ncbi.nlm.nih.gov/33968515/

So far publications are devoid in addressing even the possibility that recurrent cancers might be connected with vaccinated persons subsequently responding with immune suppression. Since there is presumably a significant delay, it may take years to determine any connection, if ever. In-vitro studies can only set the foundation for further study. [my opinion]

36. **4,396 Symptoms reported as Asthma**; 55% within one day of injection

Marta Colaneri, Maria De Filippo, Amelia Licari, Alessia Marseglia, Laura Maiocchi, Alessandra Ricciardi, Angelo Corsico, Gianluigi Marseglia, Mario Umberto Mondelli, Raffaele Bruno, **COVID vaccination and asthma exacerbation: might there be a link?**, International Journal of Infectious Diseases, Volume 112, 2021, Pages 243-246, ISSN 1201-9712,
https://doi.org/10.1016/j.ijid.2021.09.026,
https://www.sciencedirect.com/science/article/pii/S1201971221007335

37. **41,314 Symptoms reported as Lymphadenopathy or Lymphadenitis**; 66% within two days of injection

Kang ES, Kim MY. **Bilateral Cervical Lymphadenopathy after mRNA COVID-19 Vaccination on Oral Squamous Cell Carcinoma Patient: A Case Report. Diagnostics** (Basel). 2022 Jun 21;12(7):1518. doi:

10.3390/diagnostics12071518. PMID: 35885424; PMCID: PMC9320456. https://pubmed.ncbi.nlm.nih.gov/35885424/

Co M, Wong PCP, Kwong A. **COVID-19 vaccine associated axillary lymphadenopathy - A systematic review**. Cancer Treat Res Commun. 2022;31:100546. doi: 10.1016/j.ctarc.2022.100546. Epub 2022 Mar 11. PMID: 35334408; PMCID: PMC8913438. https://pubmed.ncbi.nlm.nih.gov/35334408/

Perry H. **Editorial Comment: Prolonged Resolution of COVID-19 Vaccine-Related Axillary Lymphadenopathy Necessitates a Long Imaging Follow-Up Interval.** AJR Am J Roentgenol. 2022 Jun 1. doi: 10.2214/AJR.22.28019. Epub ahead of print. PMID: 35642766. https://pubmed.ncbi.nlm.nih.gov/35642766/

Armas-Conde M, Sánchez-Álvarez ÁL, Tejera-Hernández A, Vega-Benítez V, Antela-López JC, Gutiérrez-Giner MI, Hernández-Hernández JR. **Post-vaccination SARS-CoV-2 axillary adenopathy. Differences with axillary metastases from breast cancer.** Cir Cir. 2022;90(3):410-413. English. doi: 10.24875/CIRU.21000737. PMID: 35636962. https://pubmed.ncbi.nlm.nih.gov/35636962/

Alijotas-Reig J, García-GImenez V, Velthuis PJ, Niessen FB, Decates TS. **Inflammatory immune-mediated adverse reactions induced by COVID-19 vaccines in previously injected patients with soft tissue fillers: a case-series of 20 patients**. J Cosmet Dermatol. 2022 May 27. doi: 10.1111/jocd.15117. Epub ahead of print. PMID: 35621234. https://pubmed.ncbi.nlm.nih.gov/35621234/

Daghri S, Belmoufid N, Rami A, Al Bouzidi A, Bouanani N. **Kikuchi-Fujimoto's Disease or Histiocytic Necrotizing Lymphadenitis Following mRNA COVID-19 Vaccination: A Rare Case**. Cureus. 2022 Apr 15;14(4):e24155. doi: 10.7759/cureus.24155. PMID: 35592214; PMCID: PMC9110038. https://pubmed.ncbi.nlm.nih.gov/35592214/

Heaven CL, Barber L, Abmadi O, Selvarajah K, Shetty S. **COVID-19 vaccine associated cervical lymphadenopathy: a case series**. ANZ J Surg. 2022 May 19. doi: 10.1111/ans.17808. Epub ahead of print. PMID: 35588265. https://pubmed.ncbi.nlm.nih.gov/35588265/

Kashiwada T, Saito Y, Terasaki Y, Shirakura Y, Shinbu K, Tanaka T, Tanaka Y, Seike M, Gemma A. **Kikuchi-Fujimoto disease can present as delayed lymphadenopathy after COVID-19 vaccination.** Hum Vaccin Immunother. 2022 May 18:2071080. doi: 10.1080/21645515.2022.2071080. Epub ahead of print. PMID: 35583472. https://pubmed.ncbi.nlm.nih.gov/35583472/

Lane EG, Eisen CS, Drotman MB, Dodelzon K, Mema E, Thomas C, Prince MR. **Time for Resolution of COVID-19 Vaccine-Related Lymphadenopathy and Associated Factors**. AJR Am J Roentgenol. 2022 May 18. doi: 10.2214/AJR.22.27687. Epub ahead of print. PMID: 35583425. https://pubmed.ncbi.nlm.nih.gov/35583425/

Schroeder JW, Gamba C, Toniato A; COVID-19 Study Group, Rongioletti F, Caputo V, Balossi LG, Piantanida M, Borgonovo L, Scibilia J, Gentile CR, Liuzzi M, Nicolosi S, Toscano A, Ortiz SVB, Calzari P, Bagnato CD, Arguello YA, Lasagni G, Moll JF, Botta A, Cordini C. **A definite case of Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS) induced by administration of the Pfizer/BioNTech BNT162b2 vaccine for SARS-CoV2**. Clin Dermatol. 2022 May 9:S0738-081X(22)00052-9. doi: 10.1016/j.clindermatol.2022.02.018. Epub ahead of print. PMID: 35550918; PMCID: PMC9085440. https://pubmed.ncbi.nlm.nih.gov/35550918/

Felices-Farias JM, Martínez-Martínez JF, Guzmán-Aroca F. **Unusual lymphadenopathies secondary to the BNT162b2 mRNA Covid-19 vaccine**. Med Clin (Engl Ed). 2022 Apr 8;158(7):343-344. doi: 10.1016/j.medcle.2021.06.018. Epub 2022 May 3. PMID: 35531304; PMCID: PMC9063124. https://pubmed.ncbi.nlm.nih.gov/35531304/

Romeo V, Stanzione A, D'Auria D, Fulgione L, Giusto F, Maurea S, Brunetti A. **COVID-19 vaccine-induced lymphadenopathies: incidence, course and imaging features from an ultrasound prospective study**. J Ultrasound. 2022 May 4:1–7. doi: 10.1007/s40477-022-00674-3. Epub ahead of print. PMID: 35507248; PMCID: PMC9064721. https://pubmed.ncbi.nlm.nih.gov/35507248/

Moy L, Kim E. **Follow-up of COVID-19 Vaccine-related Axillary Lymphadenopathy before 12 weeks is Unnecessary.** Radiology. 2022 Apr 26:220962. doi: 10.1148/radiol.220962. Epub ahead of print. PMID: 35471114; PMCID: PMC9096715. https://pubmed.ncbi.nlm.nih.gov/35471114/

Ha SM, Chu AJ, Lee J, Kim SY, Lee SH, Yoen H, Cho N, Moon WK, Chang JM. **US Evaluation of Axillary Lymphadenopathy Following COVID-19 Vaccination: A Prospective Longitudinal Study. Radiology**. 2022 Apr 26:220543. doi: 10.1148/radiol.220543. Epub ahead of print. PMID: 35471107; PMCID: PMC9096883. https://pubmed.ncbi.nlm.nih.gov/35471107/

Yamada M, Sada RM, Kashihara E, Okubo G, Matsushita S, Manabe A, Tagawa S, Akebo H, Miyake H, Hatta K. **TAFRO syndrome with a fatal clinical course following BNT162b2 mRNA (Pfizer-BioNTech) COVID-19 vaccination: A case report**. J Infect Chemother. 2022 Jul;28(7):1008-1011. doi: 10.1016/j.jiac.2022.04.005. Epub 2022 Apr 11. PMID: 35428576; PMCID: PMC8995253. https://pubmed.ncbi.nlm.nih.gov/35428576/

Adin ME, Wu J, Isufi E, Tsui E, Pucar D. **Ipsilateral Malignant Axillary Lymphadenopathy and Contralateral Reactive Lymph Nodes in a COVID-19 Vaccine Recipient With Breast Cancer**. J Breast Cancer. 2022 Apr;25(2):140-144. doi: 10.4048/jbc.2022.25.e12. Epub 2021 Mar 15. PMID: 35380021; PMCID: PMC9065355. https://pubmed.ncbi.nlm.nih.gov/35380021/

Azzolini E, Canziani LM, Voza A, Desai A, Pepys J, De Santis M, Ceribelli A, Pozzi C, Turato M, Badalamenti S, Germagnoli L, Mantovani A, Rescigno M, Selmi C. **Short-Term Adverse Events and Antibody Response to the BNT162b2 SARS-CoV-2 Vaccine in 4156 Health Care Professionals**. Vaccines (Basel). 2022 Mar 13;10(3):439. doi: 10.3390/vaccines10030439. PMID: 35335071; PMCID: PMC8950377. https://pubmed.ncbi.nlm.nih.gov/35335071/

Granata V, Fusco R, Vallone P, Setola SV, Picone C, Grassi F, Patrone R, Belli A, Izzo F, Petrillo A. **Not only lymphadenopathy: case of chest lymphangitis assessed with MRI after COVID 19 vaccine**. Infect Agent Cancer. 2022 Mar 17;17(1):8. doi: 10.1186/s13027-022-00419-1. PMID: 35300727; PMCID: PMC8929244. https://pubmed.ncbi.nlm.nih.gov/35300727/

Musaddaq B, Brown A, Dluzewski S, Marafioti T, Malhotra A. **Axillary lymphadenopathy in a high-risk breast screening patient following the COVID-19 vaccine: a diagnostic conundrum**. BJR Case Rep. 2022 Mar 9;7(6):20210063. doi: 10.1259/bjrcr.20210063. PMID: 35300233; PMCID: PMC8906153. https://pubmed.ncbi.nlm.nih.gov/35300233/

de Bock E, Trumpi K, Suijkerbuijk KPM, Vriens MR, Richir MC. **Diagnostic pitfalls after COVID-19 vaccination in melanoma and breast cancer patients: A case series**. Int J Surg Case Rep. 2022

Apr;93:106938. doi: 10.1016/j.ijscr.2022.106938. Epub 2022 Mar 12. PMID: 35298983; PMCID: PMC8917012. https://pubmed.ncbi.nlm.nih.gov/35298983/

Guan Y, Xia X, Lu H. **Kikuchi-Fujimoto disease following vaccination against COVID-19.** J Hematop. 2022 Mar 4;15(1):21-23. doi: 10.1007/s12308-021-00477-1. PMID: 35284024; PMCID: PMC8896846. https://pubmed.ncbi.nlm.nih.gov/35284024/

Kaur I, Zafar S, Capitle E, Khianey R. **COVID-19 Vaccination as a Potential Trigger for New-Onset Systemic Lupus Erythematosus.** Cureus. 2022 Feb 4;14(2):e21917. doi: 10.7759/cureus.21917. PMID: 35273863; PMCID: PMC8901143. https://pubmed.ncbi.nlm.nih.gov/35273863/

Koff A, Inaty H. **Axillary Adenopathy Secondary to SARS-CoV-2 Vaccination: a Case Report.** SN Compr Clin Med. 2022;4(1):61. doi: 10.1007/s42399-022-01143-y. Epub 2022 Feb 19. PMID: 35224447; PMCID: PMC8857527. https://pubmed.ncbi.nlm.nih.gov/35224447/

Hieber ML, Sprute R, Eichenauer DA, Hallek M, Jachimowicz RD. **Hemophagocytic lymphohistiocytosis after SARS-CoV-2 vaccination.** Infection. 2022 Feb 26:1–6. doi: 10.1007/s15010-022-01786-y. Epub ahead of print. PMID: 35218512; PMCID: PMC8881936. https://pubmed.ncbi.nlm.nih.gov/35218512/

Citu IM, Citu C, Gorun F, Sas I, Tomescu L, Neamtu R, Motoc A, Gorun OM, Burlea B, Bratosin F, Malita D. **Immunogenicity Following Administration of BNT162b2 and Ad26.COV2.S COVID-19 Vaccines in the Pregnant Population during the Third Trimester.** Viruses. 2022 Feb 2;14(2):307. doi: 10.3390/v14020307. PMID: 35215900; PMCID: PMC8878278. https://pubmed.ncbi.nlm.nih.gov/35215900/

Cheong KM, Tsai TY. **A Woman with Painful Neck after COVID-19 Vaccination.** Ann Emerg Med. 2022 Feb;79(2):e13-e14. doi: 10.1016/j.annemergmed.2021.08.021. Epub 2021 Aug 31. PMID: 35065751; PMCID: PMC8405597. https://pubmed.ncbi.nlm.nih.gov/35065751/

Bshesh K, Khan W, Vattoth AL, Janjua E, Nauman A, Almasri M, Mohamed Ali A, Ramadorai V, Mushannen B, AlSubaie M, Mohammed I, Hammoud M, Paul P, Alkaabi H, Haji A, Laws S, Zakaria D. **Lymphadenopathy post-COVID-19 vaccination with increased FDG uptake may be falsely attributed to oncological disorders: A systematic review.** J Med Virol. 2022 May;94(5):1833-1845. doi: 10.1002/jmv.27599. Epub 2022 Feb 7. PMID: 35060149; PMCID: PMC9015520. https://pubmed.ncbi.nlm.nih.gov/35060149/

Gullotti DM, Lipson EJ, Fishman EK, Rowe SP. **Acute axillary lymphadenopathy detected shortly after COVID-19 vaccination found to be due to newly diagnosed metastatic melanoma.** Radiol Case Rep. 2022 Mar;17(3):878-880. doi: 10.1016/j.radcr.2021.12.002. Epub 2022 Jan 10. PMID: 35035652; PMCID: PMC8747434. https://pubmed.ncbi.nlm.nih.gov/35035652/

Hao M, Edmonds CE, Nachiappan AC, Conant EF, Zuckerman SP. **Management Strategies for Patients Presenting With Symptomatic Lymphadenopathy and Breast Edema After Recent COVID-19 Vaccination.** AJR Am J Roentgenol. 2022 Jun;218(6):970-976. doi: 10.2214/AJR.21.27118. Epub 2021 Dec 29. PMID: 34964358. https://pubmed.ncbi.nlm.nih.gov/34964358/

Tsumura Y, Asakura K, Takahashi I, Akaihata M, Takahashi Y, Ishida Y. **New mimic of relapse or regional lymph node metastasis in a cancer survivor: a case of mRNA COVID-19 vaccine-induced lymphadenitis**

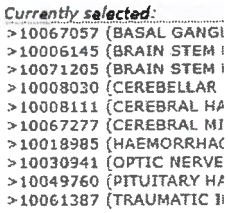
with high FDG uptake. Immunol Med. 2022 Mar;45(1):45-47. doi: 10.1080/25785826.2021.1999786. Epub 2021 Dec 16. PMID: 34915816. https://pubmed.ncbi.nlm.nih.gov/34915816/

Larkin K, Sharma A, Drachtman R, Salaru G. **Supraclavicular lymphadenopathy after COVID-19 vaccination**. Pediatr Blood Cancer. 2022 May;69(5):e29516. doi: 10.1002/pbc.29516. Epub 2021 Dec 16. PMID: 34913588. https://pubmed.ncbi.nlm.nih.gov/34913588/

38. **12,301 Symptoms reported as Cognitive disorder, confusional state or dementia**; 58% within two days of injection

Procaccini L, Mincuzzi E, Bernardini A, Franchi P, Voicu IP, Caulo M. **"Reversible cytotoxic lesion of the corpus callosum following SARS-CoV-2 mRNA vaccine administration: a finding to be aware of"**. Neuroradiol J. 2022 Apr 29:19714009221096825. doi: 10.1177/19714009221096825. Epub ahead of print. PMID: 35488375; PMCID: PMC9066226. https://pubmed.ncbi.nlm.nih.gov/35488375/

39. **2,292 Symptoms reported as intracranial hemorrhage or brain bleed;** 32% within two days of injection



Roncati L, Manenti A. **Pituitary apoplexy following adenoviral vector-based COVID-19 vaccination. Brain Hemorrhages**. 2022 Apr 19. doi: 10.1016/j.hest.2022.04.002. Epub ahead of print. PMID: 35464129; PMCID: PMC9017089. https://pubmed.ncbi.nlm.nih.gov/35464129/

Kim BH, Yoo MC. **Intracranial Hemorrhage Due to Potential Rupture of an Arteriovenous Malformation after BNT162b2 COVID-19 mRNA Vaccination in a Young Korean Woman: Case Report**. Vaccines (Basel). 2022 Feb 25;10(3):362. doi: 10.3390/vaccines10030362. PMID: 35334996; PMCID: PMC8953327. https://pubmed.ncbi.nlm.nih.gov/35334996/

Purkayastha P, Mckechnie C, Kalkur P, et al **Rare case of COVID-19 vaccine-associated intracranial hemorrhage with venous sinus thrombosis** BMJ Case Reports CP 2021;14:e245092. https://casereports.bmj.com/content/bmjcr/14/9/e245092.full.pdf

40. **3,537 Symptoms reported as alopecia;** 30% within two days of injection

Aryanian Z, Balighi K, Hatami P, Afshar ZM, Mohandesi NA. **The role of SARS-CoV-2 infection and its vaccines in various types of hair loss**. Dermatol Ther. 2022 Mar 9:e15433. doi: 10.1111/dth.15433. Epub ahead of print. PMID: 35266262; PMCID: PMC9111640. https://pubmed.ncbi.nlm.nih.gov/35266262/

Gallo G, Mastorino L, Tonella L, Ribero S, Quaglino P. **Alopecia areata after COVID-19 vaccination**. Clin Exp Vaccine Res. 2022 Jan;11(1):129-132. doi: 10.7774/cevr.2022.11.1.129. Epub 2022 Jan 31. PMID: 35223675; PMCID: PMC8844677. https://pubmed.ncbi.nlm.nih.gov/35223675/

Here, we report the case of a patient with a ***rapid onset of alopecia areata immediately after receiving the second dose of the COVID-19 vaccine***

May Lee M, Bertolani M, Pierobon E, Lotti T, Feliciani C, Satolli F. **Alopecia areata following COVID-19 vaccination: vaccine-induced autoimmunity?** Int J Dermatol. 2022 May;61(5):634-635. doi: 10.1111/ijd.16113. Epub 2022 Feb 2. PMID: 35107173. https://pubmed.ncbi.nlm.nih.gov/35107173/

Rossi A, Magri F, Michelini S, Caro G, Di Fraia M, Fortuna MC, Pellacani G, Carlesimo M. **Recurrence of alopecia areata after covid-19 vaccination: A report of three cases in Italy**. J Cosmet Dermatol. 2021 Dec;20(12):3753-3757. doi: 10.1111/jocd.14581. Epub 2021 Nov 6. PMID: 34741583. https://pubmed.ncbi.nlm.nih.gov/34741583/

41. **3,688 Symptoms reported as aphasia**; 50% within two days of injection

Saleh M, Zimmermann J, Lehnen NC, Pötzsch B, Weller JM. **Late-Onset Vaccine-Induced Immune Thombotic Thrombocytopenia (VITT) with Cerebral Venous Sinus Thrombosis**. J Stroke Cerebrovasc Dis. 2022 Apr;31(4):106311. doi: 10.1016/j.jstrokecerebrovasdis.2022.106311. Epub 2022 Jan 29. PMID: 35093626; PMCID: PMC8799476. https://pubmed.ncbi.nlm.nih.gov/35093626/

Aphasia can be caused by the COVID vaccine Steve Kirsch, March 30, 2022

42. **13,741 Symptoms reported as pulmonary embolism, pulmonary thromboembolism or pulmonary thrombus;** 42% within 10 days of injection

Currently selected:
10078201 (PULMONARY ARTE
10037340 (PULMONARY ARTE
10037377 (PULMONARY EMBC
10037437 (PULMONARY THRC
10037459 (PULMONARY VENO

Kan Y, Asada M, Uesawa Y. **Trends in reporting embolic and thrombotic events after COVID-19 vaccination: A retrospective, pharmacovigilance study**. PLoS One. 2022 Aug 1;17(8):e0269268. doi: 10.1371/journal.pone.0269268. PMID: 35913955; PMCID: PMC9342794. https://pubmed.ncbi.nlm.nih.gov/35913955/

Borisoff B D, Bohn K D, Sager J, et al. (August 05, 2022) **Unprovoked Submassive Saddle Pulmonary Embolism in an Adult Male After Pfizer COVID-19 Vaccination**. Cureus 14(8): e27717. doi:10.7759/cureus.27717 https://www.cureus.com/articles/107450-unprovoked-submassive-saddle-pulmonary-embolism-in-an-adult-male-after-pfizer-covid-19-vaccination#references

Malik B, Kalantary A, Rikabi K, Kunadi A. **Pulmonary embolism, transient ischaemic attack and thrombocytopenia after the Johnson & Johnson COVID-19 vaccine**. BMJ Case Rep. 2021 Jul 14;14(7):e243975. doi: 10.1136/bcr-2021-243975. PMID: 34261635; PMCID: PMC8280905. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8280905/pdf/bcr-2021-243975.pdf

43. **8,212 Symptoms reported as pneumonia or pulmonary edema**; 39% within 10 days of injection

Yoshikawa T, Tomomatsu K, Okazaki E, Takeuchi T, Horio Y, Kondo Y, Oguma T, Asano K. **COVID-19 vaccine-associated organizing pneumonia**. Respirol Case Rep. 2022 Mar 29;10(5):e0944. doi: 10.1002/rcr2.944. PMID: 35386579; PMCID: PMC8965045.
https://pubmed.ncbi.nlm.nih.gov/35386579/

Dr Alex Stoyanov MBBS (Hons) MSc , Dr Graeme Thompson MBBS (Hons) , Dr Monique Lee MBBS (Hons) , Professor Connie Katelaris MBBS PhD , **Delayed hypersensitivity to the Comirnaty COVID-19 vaccine presenting with pneumonitis and rash**, Annals of Allergy, Asthma Immunology (2021), doi: https://doi.org/10.1016/j.anai.2021.11.014
https://www.annallergy.org/action/showPdf?pii=S1081-1206%2821%2901274-6

44. **652 Symptoms reported as interstitial lung disease**; 34% within 10 days of injection

Park JY, Kim JH, Park S, Hwang YI, Kim HI, Jang SH, Jung KS, Kim YK, Kim HA, Lee IJ. **Clinical characteristics of patients with COVID-19 vaccine-related pneumonitis: a case series and literature review**. Korean J Intern Med. 2022 Sep;37(5):989-1001. doi: 10.3904/kjim.2022.072. Epub 2022 Aug 22. PMID: 35989064.
https://pubmed.ncbi.nlm.nih.gov/35989064/

So C, Izumi S, Ishida A, Hirakawa R, Kusaba Y, Hashimoto M, Ishii S, Miyazaki H, Iikura M, Hojo M. **COVID-19 mRNA vaccine-related interstitial lung disease: Two case reports and literature review**. Respirol Case Rep. 2022 Mar 23;10(4):e0938. doi: 10.1002/rcr2.938. PMID: 35355663; PMCID: PMC8942814.
https://pubmed.ncbi.nlm.nih.gov/35355663/

DeDent AM, Farrand E **Vaccine-induced interstitial lung disease: a rare reaction to COVID-19 vaccination** Thorax Published Online First: 11 September 2021. doi: 10.1136/thoraxjnl-2021-217985
https://thorax.bmj.com/content/thoraxjnl/early/2021/09/11/thoraxjnl-2021-217985.full.pdf

Miqdadi A, Herrag M (October 21, 2021) **Acute Eosinophilic Pneumonia Associated With the Anti-COVID-19 Vaccine AZD1222**. Cureus 13(10): e18959. doi:10.7759/cureus.18959
https://www.cureus.com/articles/71391-acute-eosinophilic-pneumonia-associated-with-the-anti-covid-19-vaccine-azd1222

Ayumi Yoshifuji, Kota Ishioka, Yuya Masuzawa, Shuntaro Suda, Saori Murata, Yoshifumi Uwamino, Motoko Fujino, Hiromi Miyahara, Naoki Hasegawa, Munekazu Ryuzaki, Haruhiko Hoshino, Kazuhiko Sekine, **COVID-19 vaccine induced interstitial lung disease**, Journal of Infection and Chemotherapy, Volume 28, Issue 1, 2022, Pages 95-98, ISSN 1341-321X, https://doi.org/10.1016/j.jiac.2021.09.010
https://www.sciencedirect.com/science/article/pii/S1341321X21002592

Shinichi Matsuzaki, Hiroyuki Kamiya, Ichiro Inoshima, Yasutaka Hirasawa, Osamu Tago, Masashi Arai, **COVID-19 mRNA Vaccine-induced Pneumonitis: A Case Report**, Internal Medicine, Article ID 8310-21, [Advance publication] Released October 26, 2021, Online ISSN 1349-7235, Print ISSN 0918-2918,
https://www.jstage.jst.go.jp/article/internalmedicine/advpub/0/advpub_8310-21/_pdf/-char/en

45. **9,514 Symptoms reported as Deep vein thrombosis (DVT), phlebitis or thrombophlebitis;** 45% within 10 days of injection

Ikechi D, Hashimoto H, Nakano H, Nakamura K. **A Case of Suspected COVID-19 Vaccine-related Thrombophlebitis**. Intern Med. 2022 May 15;61(10):1631. doi: 10.2169/internalmedicine.8767-21. Epub 2022 Mar 19. PMID: 35314544; PMCID: PMC9177380. https://pubmed.ncbi.nlm.nih.gov/35314544/

Lorente E. **Idiopathic Ipsilateral External Jugular Vein Thrombophlebitis After Coronavirus Disease (COVID-19) Vaccination**. AJR Am J Roentgenol. 2021 Sep;217(3):767. doi: 10.2214/AJR.21.25708. Epub 2021 Jul 22. PMID: 33624509. https://pubmed.ncbi.nlm.nih.gov/33624509/

Roncati L, Manenti A, Corsi L. **A Three-Case Series of Thrombotic Deaths in Patients over 50 with Comorbidities Temporally after modRNA COVID-19 Vaccination**. Pathogens. 2022 Apr 3;11(4):435. doi: 10.3390/pathogens11040435. PMID: 35456110; PMCID: PMC9032304. https://pubmed.ncbi.nlm.nih.gov/35456110/

Vallone MG, Falcón AL, Castro HM, Ferraris A, Cantarella RF, Staneloni MI, Aliperti VI, Ferloni A, Mezzarobba D, Vázquez FJ, Ratti MFG. **Thrombotic events following Covid-19 vaccines compared to Influenza vaccines**. Eur J Intern Med. 2022 May;99:82-88. doi: 10.1016/j.ejim.2022.03.002. Epub 2022 Mar 9. PMID: 35288031; PMCID: PMC8904150. https://pubmed.ncbi.nlm.nih.gov/35288031/

The Vallone study found twice the number of thrombotic events for covid-19 vaccines over flu vaccines; statistically significant, and cited the following conclusion:

> *This study shows a significant increase in thrombotic events in subjects vaccinated with Covid-19 vaccines in comparison to a control group. The clinical implication of these findings should be interpreted with caution, in light of the high effectiveness of vaccination and the inherent risk of thrombosis from Covid-19 infection itself.*[36]

Bhan C, Bheesham N, Shakuntulla F, Sharma M, Sun C, Weinstein M. **An unusual presentation of acute deep vein thrombosis after the Moderna COVID-19 vaccine-a case report**. Ann Transl Med. 2021 Oct;9(20):1605. doi: 10.21037/atm-21-2772. PMID: 34790811; PMCID: PMC8576696. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8576696/pdf/atm-09-20-1605.pdf

46. **583 Symptoms reported as coma or brain death;** 34% within 2 days of injection

Gogu AE, Motoc AG, Docu Axelerad A, Stroe AZ, Gogu AA, Jianu DC. **Tolosa-Hunt Syndrome and Hemorrhagic Encephalitis Presenting in a Patient after COVID-19 Vaccination Followed by COVID-19 Infection.** Brain Sci. 2022 Jul 10;12(7):902. doi: 10.3390/brainsci12070902. PMID: 35884709; PMCID: PMC9313130. https://pubmed.ncbi.nlm.nih.gov/35884709/

Shimizu M, Ogaki K, Nakamura R, Kado E, Nakajima S, Kurita N, Watanabe M, Yamashiro K, Hattori N, Urabe T. **An 88-year-old woman with acute disseminated encephalomyelitis following messenger**

[36] This last sentence candy coats the conclusion, and the paper further offers no substantial statistics to firmly support the statement. In court a defense attorney for the case would call *hearsay*.

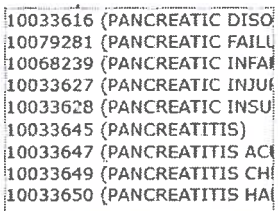
ribonucleic acid-based COVID-19 vaccination. eNeurologicalSci. 2021 Dec;25:100381. doi: 10.1016/j.ensci.2021.100381. Epub 2021 Nov 20. PMID: 34841097; PMCID: PMC8605821. https://pubmed.ncbi.nlm.nih.gov/34841097/

Barsha SY, Akiful Haque MM, Rashid MU, Rahman ML, Hossain MA, Zaman S, Bhuiyan E, Sultana R, Hossian M, Nabi MH, Hawlader MDH. **A case of acute encephalopathy and non-ST segment elevation myocardial infarction following mRNA-1273 vaccination: possible adverse effect**? Clin Exp Vaccine Res. 2021 Sep;10(3):293-297. doi: 10.7774/cevr.2021.10.3.293. Epub 2021 Sep 30. PMID: 34703815; PMCID: PMC8511584. https://pubmed.ncbi.nlm.nih.gov/34703815/

Uzun G, Bohnert BN, Althaus K, Nann D, Nadalin S, Heyne N, Fend F, Haap M, Bakchoul T. **Organ Donation From a Brain Dead Donor With Vaccine-induced Immune Thrombotic Thrombocytopenia After Ad26.COV2.S: The Risk of Organ Microthrombi**. Transplantation. 2022 Mar 1;106(3):e178-e180. doi: 10.1097/TP.0000000000004039. PMID: 34974451; PMCID: PMC8862669. https://pubmed.ncbi.nlm.nih.gov/34974451/

Guditi S, Setty G, Verma M, Reddy R, Devraj R, Raju SB, Gokhale GK. **Vaccine-Induced Thrombotic Thrombocytopenia Due to Coronavirus Disease 2019 Vaccine From a Deceased Donor: A Case Report**. Transplant Proc. 2021 Nov 12:S0041-1345(21)00794-6. doi: 10.1016/j.transproceed.2021.11.002. Epub ahead of print. PMID: 34916063; PMCID: PMC8585593. https://pubmed.ncbi.nlm.nih.gov/34916063/

47. **1,276 Symptoms reported as Pancreatitis;** 32% within 2 days of injection



Parkash O, Sharko A, Farooqi A, Ying GW, Sura P. **Acute Pancreatitis: A Possible Side Effect of COVID-19 Vaccine**. Cureus. 2021;13(4):e14741. Published 2021 Apr 28. doi:10.7759/cureus.14741 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8163516/pdf/cureus-0013-00000014741.pdf

48. **23,197 Symptoms reported as tinnitus, hearing impairment, auditory disorder, auditory nerve disorder;** 51% within 2 days of injection

Colizza A, Ralli M, Turchetta R, Minni A, Greco A, de Vincentiis M. **Otolaryngology adverse events following COVID-19 vaccines**. Eur Rev Med Pharmacol Sci. 2022 Jun;26(11):4113-4116. doi: 10.26355/eurrev_202206_28981. PMID: 35731083. https://pubmed.ncbi.nlm.nih.gov/35731083/

Skarzynska MB, Matusiak M, Skarzynski PH. **Adverse Audio-Vestibular Effects of Drugs and Vaccines Used in the Treatment and Prevention of COVID-19: A Review**. Audiol Res. 2022 Apr 29;12(3):224-248. doi: 10.3390/audiolres12030025. PMID: 35645195; PMCID: PMC9149960. https://pubmed.ncbi.nlm.nih.gov/35645195/

Pisani D, Gioacchini FM, Viola P, Scarpa A, Astorina A, Re M, Marcianò G, Manti F, Anzivino R, Chiarella G. **Audiovestibular Disorders after COVID-19 Vaccine: Is There an Association**? Audiol Res. 2022 Apr

21;12(3):212-223. doi: 10.3390/audiolres12030024. PMID: 35645194; PMCID: PMC9149883. https://pubmed.ncbi.nlm.nih.gov/35645194/

Chen JJ, Zeng BY, Lui CC, Chen TY, Chen YW, Tseng PT. **Pfizer-BioNTech COVID-19 vaccine associated tinnitus and treatment with transcranial magnetic stimulation**. QJM. 2022 May 18:hcac124. doi: 10.1093/qjmed/hcac124. Epub ahead of print. PMID: 35583323; PMCID: PMC9129164. https://pubmed.ncbi.nlm.nih.gov/35583323/

Li W, Micco A, Fang D, Liu H. **Intratympanic steroid treatments rescued recurrent hearing loss following COVID-19 vaccination and detection of an intralabyrinthine schwannoma**. BMJ Case Rep. 2022 Jul 6;15(7):e249316. doi: 10.1136/bcr-2022-249316. PMID: 35793841; PMCID: PMC9260791. https://pubmed.ncbi.nlm.nih.gov/35793841/

Saunders GH, Beukes E, Uus K, Armitage CJ, Kelly J, Munro KJ. **Shedding Light on SARS-CoV-2, COVID-19, COVID-19 Vaccination, and Auditory Symptoms: Causality or Spurious Conjunction?** Front Public Health. 2022 Feb 22;10:837513. doi: 10.3389/fpubh.2022.837513. PMID: 35296050; PMCID: PMC8919951. https://pubmed.ncbi.nlm.nih.gov/35296050/

Shirai T, Suzuki J, Kuniyoshi S, Tanno Y, Fujii H. **Granulomatosis with Polyangiitis Following Pfizer-BioNTech COVID-19 Vaccination**. Mod Rheumatol Case Rep. 2022 Mar 4:rxac016. doi: 10.1093/mrcr/rxac016. Epub ahead of print. PMID: 35246689; PMCID: PMC8903471. https://pubmed.ncbi.nlm.nih.gov/35246689/

Ulrich AK, Sundaram ME, Osterholm MT. Rare Sudden Sensorineural Hearing Loss Potentially Associated With COVID-19 Vaccination Does Not Outweigh the Benefit of COVID-19 Vaccines. JAMA Otolaryngol Head Neck Surg. 2022 Feb 24. doi: 10.1001/jamaoto.2021.4279. Epub ahead of print. PMID: 35201285. https://pubmed.ncbi.nlm.nih.gov/35201285/

Formeister EJ, Chien W, Agrawal Y, Carey JP, Stewart CM, Sun DQ. **Preliminary Analysis of Association Between COVID-19 Vaccination and Sudden Hearing Loss Using US Centers for Disease Control and Prevention Vaccine Adverse Events Reporting System Data**. JAMA Otolaryngol Head Neck Surg. 2021;147(7):674–676. doi:10.1001/jamaoto.2021.0869 https://jamanetwork.com/journals/jamaotolaryngology/fullarticle/2780288

Briggs SE, Brenner MJ, Chandrasekhar SS. **Sudden Sensorineural Hearing Loss and COVID-19 Vaccination**. JAMA Otolaryngol Head Neck Surg. Published online November 24, 2021. doi:10.1001/jamaoto.2021.3384 https://jamanetwork.com/journals/jamaotolaryngology/article-abstract/2786751

49. **668 Symptoms reported as Rhabdomyolysis**; 39% within 2 days of injection

Sutcu M, Gul D, Atik F, Kara M. **Rhabdomyolysis after BNT162b2 mRNA Covid-19 vaccine in an adolescent male**. Malawi Med J. 2022 Jun;34(2):154-156. doi: 10.4314/mmj.v34i2.13. PMID: 35991822; PMCID: PMC9356520. https://pubmed.ncbi.nlm.nih.gov/35991822/

Banamah TA, Bogari AA, Neyazi A, Kotbi E, Almaghraby H, Atwah F. **Severe Rhabdomyolysis Complicated With Acute Kidney Injury Required Renal Replacement Therapy After Pfizer COVID-19 Vaccine** . Cureus. 2022 May 22;14(5):e25199. doi: 10.7759/cureus.25199. PMID: 35747054; PMCID: PMC9210739. https://pubmed.ncbi.nlm.nih.gov/35747054/

Kimura M, Niwa JI, Doyu M. **Recurring Weakness in Rhabdomyolysis Following Pfizer-BioNTech Coronavirus Disease 2019 mRNA Vaccination**. Vaccines (Basel). 2022 Jun 11;10(6):935. doi: 10.3390/vaccines10060935. PMID: 35746543; PMCID: PMC9230860. https://pubmed.ncbi.nlm.nih.gov/35746543/

Kalekar TM, Jaipuria RK, Navani RS. **MRI Findings in Case of Post-COVID-19 Vaccination Rhabdomyolysis: A Rare Postvaccination Adverse Effect**. Indian J Radiol Imaging. 2022 Jul 13;32(2):256-259. doi: 10.1055/s-0042-1748534. PMID: 35924123; PMCID: PMC9340183. https://pubmed.ncbi.nlm.nih.gov/35924123/

Unger K, Ponte CD, Anderson D. **A Possible Case of COVID-19 Booster Vaccine-Associated Rhabdomyolysis and Acute Kidney Injury**. J Pharm Technol. 2022 Aug; 38(4):247-250. doi: 10.1177/87551225221093944. Epub 2022 May 3. PMID: 35832563; PMCID: PMC9272487. https://pubmed.ncbi.nlm.nih.gov/35832563/

Kamura Y, Terao T, Akao S, Kono Y, Honma K, Matsue K. **Fatal thrombotic microangiopathy with rhabdomyolysis as an initial symptom after the first dose of mRNA-1273 vaccine: A case report**. Int J Infect Dis. 2022 Apr;117:322-325. doi: 10.1016/j.ijid.2022.02.031. Epub 2022 Feb 18. PMID: 35189339; PMCID: PMC8853962. https://pubmed.ncbi.nlm.nih.gov/35189339/

Nassar M, Chung H, Dhayaparan Y, et al. **COVID-19 vaccine induced rhabdomyolysis: Case report with literature review**. Diabetes Metab Syndr. 2021;15(4):102170. doi:10.1016/j.dsx.2021.06.007 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8205294/pdf/main.pdf

Faissner, S., Richter, D., Ceylan, U. et al. **COVID-19 mRNA vaccine induced rhabdomyolysis and fasciitis**. J Neurol (2021). https://link.springer.com/content/pdf/10.1007/s00415-021-10768-3.pdf

Ajmera KM. **Fatal Case of Rhabdomyolysis Post-COVID-19 Vaccine**. Infect Drug Resist. 2021;14:3929-3935. Published 2021 Sep 24. doi:10.2147/IDR.S331362 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8478340/pdf/idr-14-3929.pdf

Gelbenegger G, Cacioppo F, Firbas C, Jilma B. **Rhabdomyolysis Following Ad26.COV2.S COVID-19 Vaccination**. Vaccines. 2021; 9(9):956. https://doi.org/10.3390/vaccines9090956 https://www.mdpi.com/2076-393X/9/9/956

Hakroush S, Tampe B. **Case Report: ANCA-Associated Vasculitis Presenting With Rhabdomyolysis and Pauci-Immune Crescentic Glomerulonephritis After Pfizer-BioNTech COVID-19 mRNA Vaccination**. Front Immunol. 2021 Sep 30;12:762006. doi: 10.3389/fimmu.2021.762006. PMID: 34659268; PMCID: PMC8514980. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8514980/pdf/fimmu-12-762006.pdf

50. **16,433 Symptoms reported as Hypertension**; 54% within 1 days of injection.

Soegiarto G, Wulandari L, Purnomosari D, Dhia Fahmita K, Ikhwan Gautama H, Tri Hadmoko S, Edwin Prasetyo M, Aulia Mahdi B, Arafah N, Prasetyaningtyas D, Prawiro Negoro P, Rosita Sigit Prakoeswa C, Endaryanto A, Gede Agung Suprabawati D, Tinduh D, Basuki Rachmad E, Astha Triyono E, Wahyuhadi J, Budi Keswardiono C, Elyana Wardani F, Mayorita F, Kristiani N, Baskoro A, Fetarayani D, Kartika Nurani W, Oceandy D. **Hypertension is associated with antibody response and breakthrough infection in health care workers following vaccination with inactivated SARS-CoV-2**. Vaccine. 2022 May 27:S0264-410X(22)00676-4. doi: 10.1016/j.vaccine.2022.05.059. Epub ahead of print. PMID: 35660034; PMCID: PMC9135674. https://pubmed.ncbi.nlm.nih.gov/35660034/

For COVID-19 vaccines, Pfizer accounts for over 70% of the cases of hypertension, but this may only be due to Pfizer being the the major vaccine distributed.

Messages:

- **VAERS data in CDC WONDER are updated every Friday. Hence, results for the same query can change from week to week.**
- **These results are for 16,433 total events.**

Vaccine	Events Reported	Percent (of 16,433)
Total	**17,035**	**103.66%**
COVID19 (COVID19 (PFIZER-BIONTECH)) (1200)	11,678	71.06%
COVID19 (COVID19 (MODERNA)) (1201)	4,317	26.27%
COVID19 (COVID19 (JANSSEN)) (1203)	946	5.76%
COVID19 (COVID19 (UNKNOWN)) (1202)	74	0.45%
COVID19 (COVID19 (MODERNA BIVALENT)) (1212)	10	0.06%
COVID19 (COVID19 (PFIZER-BIONTECH BIVALENT)) (1211)	9	0.05%
COVID19 (COVID19 (NOVAVAX)) (1210)	1	0.01%

If we compare to all vaccines over all time, the COVID-19 vaccines account for almost 90% of reported cases of hypertension. This fact together with the fact that increased blood pressure occurs within 1 day of injection may be a predisposing factor to many of the other injuries listed in this report.

Vaccine	Events Reported	Percent (of 19,209)
Total	20,804	108.30%
COVID19 (COVID19 (PFIZER-BIONTECH)) (1200)	11,678	60.79%
COVID19 (COVID19 (MODERNA)) (1201)	4,317	22.47%
COVID19 (COVID19 (JANSSEN)) (1203)	946	4.92%
HEP B (ENGERIX-B) (38)	280	1.46%
VACCINE NOT SPECIFIED (NO BRAND NAME) (999)	242	1.26%
INFLUENZA (SEASONAL) (NO BRAND NAME) (44)	225	1.17%
INFLUENZA (SEASONAL) (FLUZONE) (7)	224	1.17%
HEP B (RECOMBIVAX HB) (25)	182	0.95%
PNEUMO (PNEUMOVAX) (30)	179	0.93%
MEASLES + MUMPS + RUBELLA (MMR II) (26)	146	0.76%
ZOSTER (SHINGRIX) (1192)	118	0.61%
TD ADSORBED (NO BRAND NAME) (11)	117	0.61%
ANTHRAX (BIOTHRAX) (1008)	102	0.53%
HPV (GARDASIL) (1098)	92	0.48%
INFLUENZA (SEASONAL) (FLUVIRIN) (262)	79	0.41%
ZOSTER LIVE (ZOSTAVAX) (1097)	77	0.40%
COVID19 (COVID19 (UNKNOWN)) (1202)	74	0.39%
INFLUENZA (SEASONAL) (FLUSHIELD) (261)	72	0.37%
PNEUMO (PREVNAR13) (1141)	65	0.34%
HEP A (HAVRIX) (268)	63	0.33%
INFLUENZA (SEASONAL) (FLUZONE HIGH-DOSE) (1145)	52	0.27%
TDAP (ADACEL) (1092)	49	0.26%
VARICELLA (VARIVAX) (269)	48	0.25%
HEP A + HEP B (TWINRIX) (1009)	43	0.22%
SMALLPOX (DRYVAX) (47)	41	0.21%
POLIO VIRUS, ORAL (ORIMUNE) (17)	39	0.20%
HEP B (NO BRAND NAME) (110)	38	0.20%
TDAP (BOOSTRIX) (1091)	35	0.18%
INFLUENZA (SEASONAL) (FLUARIX QUADRIVALENT) (1161)	33	0.17%
TYPHOID VI POLYSACCHARIDE (TYPHIM VI) (271)	33	0.17%
ANTHRAX (NO BRAND NAME) (64)	32	0.17%
INFLUENZA (SEASONAL) (FLUARIX) (1089)	31	0.16%
INFLUENZA (SEASONAL) (FLUZONE QUADRIVALENT) (1162)	29	0.15%
LYME (LYMERIX) (302)	29	0.15%
PNEUMO (NO BRAND NAME) (120)	28	0.15%
INFLUENZA (SEASONAL) (AFLURIA) (1121)	24	0.12%
INFLUENZA (SEASONAL) (FLUOGEN) (34)	24	0.12%
TYPHOID VI POLYSACCHARIDE (NO BRAND NAME) (52)	24	0.12%
PNEUMO (PREVNAR) (1001)	23	0.12%
DTP (NO BRAND NAME) (2)	22	0.11%
HPV (GARDASIL 9) (1170)	22	0.11%
INFLUENZA (H1N1) (H1N1 (MONOVALENT) (SANOFI)) (1132)	22	0.11%
TETANUS TOXOID (NO BRAND NAME) (12)	22	0.11%
YELLOW FEVER (YF-VAX) (14)	21	0.11%
HEP A (VAQTA) (280)	20	0.10%
INFLUENZA (SEASONAL) (AFLURIA QUADRIVALENT) (1177)	20	0.10%
INFLUENZA (SEASONAL) (FLUAD) (1173)	20	0.10%
PNEUMO (PNU-IMUNE) (16)	20	0.10%
INFLUENZA (SEASONAL) (FLUAD QUADRIVALENT) (1198)	19	0.10%

51. **340 Symptoms reported as Multisystem Inflammatory Syndrome**; 20% within 2 days of injection.

Although MIS, and in particular MIS-C has been in the news and published literature as a concern, VAERS currently shows relatively few reported cases. Nevertheless cases reported in VAERS show the largest number of cases occurring in the youngest age groups that were given the Pfizer-BioNtech vaccine.

Messages:

- VAERS data in CDC WONDER are updated every Friday. Hence, results for the same query can change from week to week.
- These results are for 340 total events.
- Rows with zero Events Reported are hidden. Use Quick Options above to show zero rows.

Vaccine	Age	Events Reported	Percent (of 340)
Total		376	110.59%
COVID19 (COVID19 (PFIZER-BIONTECH)) (1200)	Total	329	96.76%
COVID19 (COVID19 (PFIZER-BIONTECH)) (1200)	6-17 years	162	47.65%
COVID19 (COVID19 (PFIZER-BIONTECH)) (1200)	Unknown	121	35.59%
COVID19 (COVID19 (MODERNA)) (1201)	Total	35	10.29%
COVID19 (COVID19 (PFIZER-BIONTECH)) (1200)	3-5 years	15	4.41%
COVID19 (COVID19 (PFIZER-BIONTECH)) (1200)	18-29 years	12	3.53%
COVID19 (COVID19 (MODERNA)) (1201)	65-79 years	8	2.35%
COVID19 (COVID19 (JANSSEN)) (1203)	Total	7	2.06%
COVID19 (COVID19 (MODERNA)) (1201)	18-29 years	7	2.06%
COVID19 (COVID19 (MODERNA)) (1201)	6-17 years	5	1.47%
COVID19 (COVID19 (MODERNA)) (1201)	Unknown	5	1.47%
COVID19 (COVID19 (PFIZER-BIONTECH)) (1200)	65-79 years	5	1.47%
COVID19 (COVID19 (UNKNOWN)) (1202)	Total	5	1.47%
COVID19 (COVID19 (JANSSEN)) (1203)	Unknown	4	1.18%
COVID19 (COVID19 (MODERNA)) (1201)	30-39 years	4	1.18%
COVID19 (COVID19 (PFIZER-BIONTECH)) (1200)	50-59 years	4	1.18%
COVID19 (COVID19 (UNKNOWN)) (1202)	Unknown	4	1.18%
COVID19 (COVID19 (MODERNA)) (1201)	50-59 years	3	0.88%
COVID19 (COVID19 (PFIZER-BIONTECH)) (1200)	40-49 years	3	0.88%
COVID19 (COVID19 (MODERNA)) (1201)	40-49 years	2	0.59%
COVID19 (COVID19 (PFIZER-BIONTECH)) (1200)	30-39 years	2	0.59%
COVID19 (COVID19 (PFIZER-BIONTECH)) (1200)	60-64 years	2	0.59%
COVID19 (COVID19 (PFIZER-BIONTECH)) (1200)	80+ years	2	0.59%
COVID19 (COVID19 (JANSSEN)) (1203)	18-29 years	1	0.29%
COVID19 (COVID19 (JANSSEN)) (1203)	30-39 years	1	0.29%
COVID19 (COVID19 (JANSSEN)) (1203)	65-79 years	1	0.29%
COVID19 (COVID19 (MODERNA)) (1201)	60-64 years	1	0.29%
COVID19 (COVID19 (PFIZER-BIONTECH)) (1200)	1-2 years	1	0.29%
COVID19 (COVID19 (UNKNOWN)) (1202)	6-17 years	1	0.29%

Zhen Qin, Aurélie Bouteau, Christopher Herbst, Botond Z. Igyártó, **Pre-exposure to mRNA-LNP inhibits adaptive immune responses and alters innate immune fitness in an inheritable fashion**, bioRxiv 2022.03.16.484616; doi: https://doi.org/10.1101/2022.03.16.484616 https://www.biorxiv.org/content/10.1101/2022.03.16.484616v2.full

Wangu Z, Swartz H, Doherty M. **Multisystem inflammatory syndrome in children (MIS-C) possibly secondary to COVID-19 mRNA vaccination**. BMJ Case Rep. 2022 Mar 30;15(3):e247176. doi: 10.1136/bcr-2021-247176. PMID: 35354564. https://pubmed.ncbi.nlm.nih.gov/35354564/

Ouldali N, Bagheri H, Salvo F, Antona D, Pariente A, Leblanc C, Tebacher M, Micallef J, Levy C, Cohen R, Javouhey E, Bader-Meunier B, Ovaert C, Renolleau S, Hentgen V, Kone-Paut I, Deschamps N, De Pontual L, Iriart X, Guen CG, Angoulvant F, Belot A; "French Covid-19 Paediatric Inflammation Consortium"£ and the "French Pharmacovigilance network"*. **Hyper inflammatory syndrome following COVID-19 mRNA vaccine in children: A national post-authorization pharmacovigilance study**. Lancet Reg Health Eur. 2022 Apr 29:100393. doi: 10.1016/j.lanepe.2022.100393. Epub ahead of print. PMID: 35505833; PMCID: PMC9051933. https://pubmed.ncbi.nlm.nih.gov/35505833/

Bartsch YC, St Denis KJ, Kaplonek P, Kang J, Lam EC, Burns MD, Farkas EJ, Davis JP, Boribong BP, Edlow AG, Fasano A, Shreffler W, Zavadska D, Johnson M, Goldblatt D, Balazs AB, Yonker LM, Alter G. **Comprehensive antibody profiling of mRNA vaccination in children**. bioRxiv [Preprint]. 2022 Jan 4:2021.10.07.463592. doi: 10.1101/2021.10.07.463592. PMID: 35018376; PMCID: PMC8750651. https://pubmed.ncbi.nlm.nih.gov/35018376/

Lieu A, Mah J, Church D. **A case of multisystem inflammatory syndrome in adults following natural infection and subsequent immunization**. Int J Infect Dis. 2022 Mar;116:34-37. doi: 10.1016/j.ijid.2021.12.339. Epub 2021 Dec 24. PMID: 34954311; PMCID: PMC8702592. https://pubmed.ncbi.nlm.nih.gov/34954311/

Patel T, Kelleman M, West Z, Peter A, Dove M, Butto A, Oster ME. **Comparison of Multisystem Inflammatory Syndrome in Children-Related Myocarditis, Classic Viral Myocarditis, and COVID-19 Vaccine-Related Myocarditis in Children**. J Am Heart Assoc. 2022 May 3;11(9):e024393. doi: 10.1161/JAHA.121.024393. Epub 2022 Apr 27. PMID: 35475362. https://pubmed.ncbi.nlm.nih.gov/35475362/

Kildegaard H, Lund LC, Højlund M, Stensballe LG, Pottegård A. **Risk of adverse events after covid-19 in Danish children and adolescents and effectiveness of BNT162b2 in adolescents: cohort study**. BMJ. 2022 Apr 11;377:e068898. doi: 10.1136/bmj-2021-068898. PMID: 35410884; PMCID: PMC8995669. https://pubmed.ncbi.nlm.nih.gov/35410884/

Merckx J, Cooke S, El Tal T, Bitnun A, Morris SK, Yeh EA, Yea C, Gill P, Papenburg J, Lefebvre MA, Scuccimarri R, Ulloa-Gutierrez R, Brenes-Chacon H, Yock-Corrales A, Ivankovich-Escoto G, Soriano-Fallas A, Mezerville MH, Dewan T, Restivo L, Nateghian A, Aski BH, Manafi A, Dwilow R, Bullard J, Lopez A, Sadarangani M, Roberts A, Barton M, Petel D, Le Saux N, Bowes J, Purewal R, Lautermilch J, Tehseen S, Bayliss A, Wong JK, Leifso K, Foo C, Robinson J; Pediatric Investigators Collaborative Network on Infections in Canada (PICNIC). **Predictors of severe illness in children with multisystem inflammatory syndrome after SARS-CoV-2 infection: a multicentre cohort study**. CMAJ. 2022 Apr 11;194(14):E513-E523. doi: 10.1503/cmaj.210873. PMID: 35410860; PMCID: PMC9001008. https://pubmed.ncbi.nlm.nih.gov/35410860/

Kumar D, Rostad CA, Jaggi P, Villacis Nunez DS, Prince C, Lu A, Hussaini L, Nguyen TH, Malik S, Ponder LA, Shenoy SPV, Anderson EJ, Briones M, Sanz I, Prahalad S, Chandrakasan S. **Distinguishing immune activation and inflammatory signatures of multisystem inflammatory syndrome in children (MIS-C) versus hemophagocytic lymphohistiocytosis (HLH)**. J Allergy Clin Immunol. 2022 May;149(5):1592-1606.e16. doi: 10.1016/j.jaci.2022.02.028. Epub 2022 Mar 15. PMID: 35304157; PMCID: PMC8923010. https://pubmed.ncbi.nlm.nih.gov/35304157/

Jain E, Donowitz JR, Aarons E, Marshall BC, Miller MP. **Multisystem Inflammatory Syndrome in Children after SARS-CoV-2 Vaccination**. Emerg Infect Dis. 2022 May;28(5):990-993. doi: 10.3201/eid2805.212418. Epub 2022 Mar 11. PMID: 35275051; PMCID: PMC9045439. https://pubmed.ncbi.nlm.nih.gov/35275051/

Schelde AB, Nielsen KF, Nygaard U, von Linstow ML, Espenhain L, Koch A. **[COVID-19 among children and adolescents]**. Ugeskr Laeger. 2022 Feb 28;184(9):V11210858. Danish. PMID: 35244020. https://pubmed.ncbi.nlm.nih.gov/35244020/

Yousaf AR, Cortese MM, Taylor AW, Broder KR, Oster ME, Wong JM, Guh AY, McCormick DW, Kamidani S, Schlaudecker EP, Edwards KM, Creech CB, Staat MA, Belay ED, Marquez P, Su JR, Salzman MB, Thompson D, Campbell AP; **MIS-C Investigation Authorship Group. Reported cases of multisystem inflammatory syndrome in children aged 12-20 years in the USA who received a COVID-19 vaccine,** December, 2020, through August, 2021: a surveillance investigation. Lancet Child Adolesc Health. 2022

May;6(5):303-312. doi: 10.1016/S2352-4642(22)00028-1. Epub 2022 Feb 23. PMID: 35216660; PMCID: PMC8864018. https://pubmed.ncbi.nlm.nih.gov/35216660/

Poussaint TY, LaRovere KL, Newburger JW, Chou J, Nigrovic LE, Novak T, Randolph AG. **Multisystem Inflammatory-like Syndrome in a Child Following COVID-19 mRNA Vaccination**. Vaccines (Basel). 2021 Dec 30;10(1):43. doi: 10.3390/vaccines10010043. PMID: 35062704; PMCID: PMC8781649. https://pubmed.ncbi.nlm.nih.gov/35062704/

Yalçinkaya R, Öz FN, Polat M, Uçan B, Teke TA, Kaman A, Özdem S, Savaş Şen Z, Cinni RG, Tanir G. **A Case of Multisystem Inflammatory Syndrome in a 12-Year-old Male After COVID-19 mRNA Vaccine**. Pediatr Infect Dis J. 2022 Mar 1;41(3):e87-e89. doi: 10.1097/INF.0000000000003432. PMID: 34978781; PMCID: PMC8828314. https://pubmed.ncbi.nlm.nih.gov/34978781/

DeJong J, Sainato R, Forouhar M, Robinson D, Kunz A. **Multisystem Inflammatory Syndrome in a Previously Vaccinated Adolescent Female With Sickle Cell Disease**. Pediatr Infect Dis J. 2022 Mar 1;41(3):e104-e105. doi: 10.1097/INF.0000000000003444. PMID: 34955521; PMCID: PMC8828312. https://pubmed.ncbi.nlm.nih.gov/34955521/

Abdelgalil AA, Saeedi FA. **Multisystem Inflammatory Syndrome in a 12-Year-old Boy After mRNA-SARS-CoV-2 Vaccination**. Pediatr Infect Dis J. 2022 Mar 1;41(3):e93-e94. doi: 10.1097/INF.0000000000003442. PMID: 34955518; PMCID: PMC8828311. https://pubmed.ncbi.nlm.nih.gov/34955518/

Campagnani G, Bardanzellu F, Pintus MC, Fanos V, Marcialis MA. **COVID-19 vaccination in children: an open question**. Curr Pediatr Rev. 2021 Dec 19. doi: 10.2174/1573396318666211220093111. Epub ahead of print. PMID: 34931965. https://pubmed.ncbi.nlm.nih.gov/34931965/

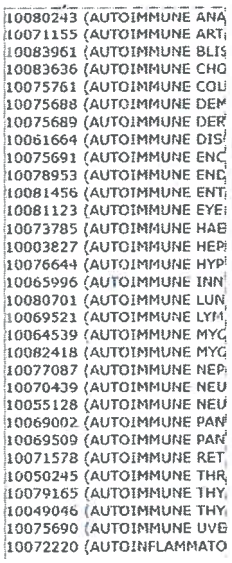
Belay ED, Godfred Cato S, Rao AK, Abrams J, Wilson WW, Lim S, Newton-Cheh C, Melgar M, DeCuir J, Webb B, Marquez P, Su JR, Meng L, Grome HN, Schlaudecker E, Talaat K, Edwards K, Barnett E, Campbell AP, Broder KR, Bamrah Morris S. **Multisystem Inflammatory Syndrome in Adults after SARS-CoV-2 infection and COVID-19 vaccination.** Clin Infect Dis. 2021 Nov 28:ciab936. doi: 10.1093/cid/ciab936. Epub ahead of print. PMID: 34849680; PMCID: PMC8690151. https://pubmed.ncbi.nlm.nih.gov/34849680/

Buchhorn R, Meyer C, Schulze-Forster K, Junker J, Heidecke H. **Autoantibody Release in Children after Corona Virus mRNA Vaccination: A Risk Factor of Multisystem Inflammatory Syndrome**? Vaccines (Basel). 2021 Nov 18;9(11):1353. doi: 10.3390/vaccines9111353. PMID: 34835284; PMCID: PMC8618727. https://pubmed.ncbi.nlm.nih.gov/34835284/

Nune A, Iyengar KP, Goddard C, Ahmed AE. **Multisystem inflammatory syndrome in an adult following the SARS-CoV-2 vaccine (MIS-V)**. BMJ Case Rep. 2021 Jul 29;14(7):e243888. doi: 10.1136/bcr-2021-243888. PMID: 34326117; PMCID: PMC8323360. https://pubmed.ncbi.nlm.nih.gov/34326117/

There was great concern for MIS-C from SARS-Cov-2, but after vaccines were 'approved' for children it was found that the vaccine itself could cause MIS-C. The number of papers, studies just provided here suggest that the number of vaccine associated MIS cases are under-reported in VAERS.

52. **2,649 Symptoms reported as either auto-immune or auto-inflammatory response**; 31% within 2 days of injection.



Vences MA, Canales D, Albujar MF, Barja E, Araujo-Chumacero MM, Cardenas E, Alvarez A, Urrunaga-Pastor D. **Post-Vaccinal Encephalitis with Early Relapse after BNT162b2 (COMIRNATY) COVID-19 Vaccine: A Case Report.** Vaccines (Basel). 2022 Jul 1;10(7):1065. doi: 10.3390/vaccines10071065. PMID: 35891229; PMCID: PMC9318781. https://pubmed.ncbi.nlm.nih.gov/35891229/

Huang YF, Ho TC, Chang CC, Shen DH, Chan HP, Chuang KP, Tyan YC, Yang MH. **A Rare Adverse Effect of the COVID-19 Vaccine on Autoimmune Encephalitis**. Vaccines (Basel). 2022 Jul 13;10(7):1114. doi: 10.3390/vaccines10071114. PMID: 35891278; PMCID: PMC9319671. https://pubmed.ncbi.nlm.nih.gov/35891278/

Bellinvia A, Aprea MG, Portaccio E, Pastò L, Razzolini L, Fonderico M, Addazio I, Betti M, Amato MP. **Hypogammaglobulinemia is associated with reduced antibody response after anti-SARS-CoV-2 vaccination in MS patients treated with antiCD20 therapies**. Neurol Sci. 2022 Aug 3:1–12. doi: 10.1007/s10072-022-06287-2. Epub ahead of print. PMID: 35918574; PMCID: PMC9345744. https://pubmed.ncbi.nlm.nih.gov/35918574/

Vanaskova E, Kelbich P, Novotny T. **Reactive synovitis of the knee joint after COVID-19 vaccination: The first ultrastructural analysis of synovial fluid**. Int J Rheum Dis. 2022 Aug 5. doi: 10.1111/1756-185X.14411. Epub ahead of print. PMID: 35929362. https://pubmed.ncbi.nlm.nih.gov/35929362/

Martinez-Reviejo R, Tejada S, Adebanjo GAR, Chello C, Machado MC, Parisella FR, Campins M, Tammaro A, Rello J. **Varicella-Zoster virus reactivation following severe acute respiratory syndrome coronavirus 2 vaccination or infection: New insights**. Eur J Intern Med. 2022 Aug 1:S0953-6205(22)00270-9. doi: 10.1016/j.ejim.2022.07.022. Epub ahead of print. PMID: 35931613. https://pubmed.ncbi.nlm.nih.gov/35931613/

Lensen R, Netea MG, Rosendaal FR. **Hepatitis C Virus Reactivation Following COVID-19 Vaccination - A Case Report**. Int Med Case Rep J. 2021 Aug 29;14:573-576. doi: 10.2147/IMCRJ.S328482. Erratum in: Int Med Case Rep J. 2021 Oct 27;14:741-742. PMID: 34512037; PMCID: PMC8412816. https://pubmed.ncbi.nlm.nih.gov/34512037/

Jara LJ, Vera-Lastra O, Mahroum N, Pineda C, Shoenfeld Y. **Autoimmune post-COVID vaccine**

syndromes: does the spectrum of autoimmune/inflammatory syndrome expand? Clin Rheumatol. 2022 Apr 5:1–7. doi: 10.1007/s10067-022-06149-4. Epub ahead of print. PMID: 35378658; PMCID: PMC8979721.
https://pubmed.ncbi.nlm.nih.gov/35378658/

Chris von Csefalvay, **A case-control study of autoimmune AEFIs following COVID-19 vaccination reported to VAERS**, PREPRINT medRxiv 2021.07.06.21260074; doi:
https://doi.org/10.1101/2021.07.06.21260074
https://www.medrxiv.org/content/10.1101/2021.07.06.21260074v1.full.pdf

Isabel Garrido, Susana Lopes, Manuel Sobrinho Simões, Rodrigo Liberal, Joanne Lopes, Fátima Carneiro, Guilherme Macedo, **Autoimmune hepatitis after COVID-19 vaccine – more than a coincidence, Journal of Autoimmunity**, Volume 125, 2021,102741,ISSN 0896-8411
https://www.sciencedirect.com/science/article/pii/S0896841121001499

Summary – Adverse Events

Unlike mathematics, where propositions can be *proven* with certainty, scientific hypotheses in the strict sense can never be proven. Hypotheses can only be *supported* by presenting evidence that sufficiently *infers* their truth or else *falsified* by as little as one instance of a counter example. Mathematical proof, except for practicing skills, never requires *repetition*. But good science should continually be repeated, even when a hypothesis has been falsified; something could have been improperly assumed or a detail missed. Mathematics is exact, science is not. There is no 'proof' in science. This fact places considerable burden on scientists, much more so than the mathematician. It also raises the question: what is considered *sufficient* to warrant a hypothesis as highly probable? Scientists rely on confidence intervals (CI) but proper use requires the associated (and assumed) statistical models (distributions) represent the reality of the data set. Too often they do not. For vaccines, adverse events occur in the 'noise' over the entirety of data and exist on *fat tailed*[37] distributions. These distributions are NOT normal (Gaussian). For fat tailed distributions, what matters is not so much frequency of occurrence, but rather the *consequences* of these events. Too much attention on low frequency of occurrence over consequence. The consequences for the vaccines, which Bayesian adherents may label 'outliers' to the statistics include the suffering and loss of human lives. Too many fooled by randomness and statistics.

Searching Pubmed (https://pubmed.ncbi.nlm.nih.gov/) today with the search string:

((covid-19 vaccine) OR (covid 19 vaccine) OR (covid-19 vaccines) OR (covid 19 vaccines)) AND ((adverse reaction) OR injury OR death OR VAERS)

Brings up 3,446 results, of course all having been published after December of 2020. This number is overwhelming in such a short time period and we cannot expect the medical community to digest it all, let alone know that such a body of work exists to address the outcome. PubMed unfortunately does not track publications by day or month, only year. But by publishing this compendium report on a monthly basis there is a sense that the growth of publications are

[37] Taleb NN, Bar-Yam Y, Cirillo P. **On single point forecasts for fat-tailed variables.** Int J Forecast. 2020;10.1016/j.ijforecast.2020.08.008. doi:10.1016/j.ijforecast.2020.08.008
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7572356/

exponential. The intent of this report is to make public health officials and other readers aware that despite the public narrative, the vaccines are doing significant harm and causing death. It is hoped that this report will help wake them from the spell this narrative has captured them and that they confirm – or else deny – what is in this report is real. Unless they do that, they are complicit in the narrative and the death and destruction the vaccines have caused.

A high percentage of many of the adverse events noted above having occurred within 2 days of injection of a COVID-19 vaccine substantiates strong temporal correlation[38], but as many will point out, correlation may not necessarily imply causation. Correlation is however a *necessary* condition for causation. Causation is not easy to determine, but scientists typically use the *Bradford Hill* criteria to test for causation. One publication by MacIntyre applies this criteria to thrombocytopenia to successfully argue indeed these events are being caused by the vaccines:

> MacIntyre, C.R., 2021. **Using the Bradford-Hill criteria to assess causality in the association between CHADOX1 NCOV-19 vaccine and thrombotic immune thrombocytopenia**. Global Biosecurity, 3(1), p.None. DOI: http://doi.org/10.31646/gbio.109

Thrombocytopenia is one of the several adverse events in VAERS that that's even been now accepted by the vaccine manufacturers as a strong signal, and now written as a risk in their FACT sheet for informed consent. Thrombocytopenia has been attributed to many of the deaths reported. MacIntyre concludes his study that indeed the vaccines are causing thrombocytopenia:

> *"**In summary, all criteria for causation are met**, with consistency, specificity, temporality and biological plausibility being very clearly met. Strength of association is met, but more data required to establish the precise estimate of the association, as case ascertainment may be variable between countries, resulting in varied estimates of incidence rates from 25 to 0.5 per 100,000 (2, 4). The application of the modified Bradford-Hill criteria to VITT following **CHADOX1 NCOV- vaccine strongly supports a causal relationship**."*

Myocarditis is now also listed in the vaccine FACT sheets as a risk; particularly the number of cases in young male adults. A great number of published and peer reviewed papers, many cited above substantiate causation and should give pause to immediately stop vaccination, at least for these higher risk age groups and revisit the benefit risk analysis. It appears the vaccine manufacturers are NOT taking that action, and the FDA is not enforcing it. But lives appear to be at risk. With such poor response, more doctors, scientists and public health officials must break from the political paralysis that's binding truth for the welfare of a generation. Publications should not hold back in spreading this truth.

An Israeli study by Mevorach et. al. also establishes a causal relationship, increased risk of myocarditis in young male persons receiving the Pfizer BioNtech mRNA vaccines:

Liu R, Pan J, Zhang C, Sun X. **Cardiovascular Complications of COVID-19 Vaccines**. Front Cardiovasc Med.

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[38] Imran Sulemankhil, Mohammad Abdelrahman, Smita I. Negi, **Temporal association between the COVID-19 Ad26.COV2.S vaccine and acute myocarditis: A case report and literature review**, Cardiovascular Revascularization Medicine, 2021,: https://www.sciencedirect.com/science/article/pii/S1553838921005789

2022 Mar 18;9:840929. doi: 10.3389/fcvm.2022.840929. PMID: 35369340; PMCID: PMC8971371. https://pubmed.ncbi.nlm.nih.gov/35369340/

Mevorach D, Anis E, Cedar N, et al. **Myocarditis after BNT162b2 mRNA Vaccine against Covid-19 in Israel**. N Engl J Med. 2021;385(23):2140-2149. doi:10.1056/NEJMoa2109730 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8531987/pdf/NEJMoa2109730.pdf

They write:

> *"The incidence of myocarditis, although low, increased after the receipt of the BNT162b2 vaccine, particularly after the second dose among young male recipients. The clinical presentation of myocarditis after vaccination was usually mild."*

But as I've mentioned above using 'mild' to describe myocarditis is misdirection. Myocarditis leads to necrosis of cardiac tissue. The dead tissue is replaced with collagen fibers (scar tissue). Scar tissue, unlike healthy myocytes, cannot function to contract the heart. This causes permanent diminished cardiac output however small that might be. The changes might not result in death or injury of the person but the changes could be a deciding factor in athletic ability especially in peak performers. Describing myocarditis as 'mild' is medical malfeasance, and the authors are clearly softening the tone for publication so that the paper is not rejected in peer review. This must stop NOW. The present academic dogma is choking scientific expression and harming individuals as much as are the contagion, the vaccines and policy.

> *"The evil that men do lives after them; the good is oft interred with their bones." – Julius Caesar*

Many researchers will do anything to get published; including omission of proper conclusions and bending the truth to satisfy editors. These evil deeds indeed will live after them, frozen in ink. Their published legacy will only reveal them as cowards that participated in the sacrifice of lives. History will regard them as self-indulging enemies of mankind during this tumultuous time.

Considering a preponderance of evidence that COVID-19 vaccines are causing harm, the prudent response by officials should at least be NOT demanding that everyone be vaccinated or arranging expensive and intrusive measures to track vaccinated individuals (vaccine passports). These are the same officials that chant "Trust the Science" But the evidence is showing that the vaccines are causing harm. Acting with force and coercion on the order of a 'higher authority' are the actions of mindless zealots, not leaders. We need only to look at history to realize very bad decisions have been made by public health officials in crusades to 'save lives' or 'make lives better'. Some have been by unwitting, negligent people. But others are more surreptitious in their actions driven by power and lucrative profits. Recall the Thalidomide tragedy in the 50's and how long that took to come to an end? From a Nov 2021 report on CNN:

> *"This year, the Covid vaccine has brought in revenue of $24.3 billion. And Pfizer said it expects a total of $36 billion from the vaccine for all of 2021 -- nearly $12 billion more in revenue the final quarter of the year. And it said based on contracts it now has signed it expects revenue $29 billion from the Covid vaccine in 2022. And that's not necessarily all it will bring in."*

This figure now exceeds $40 billion. When this much money is involved, it's difficult to NOT have corruption and influence that's counterproductive to health. As the [illicit] drug cartels have shown, money buys loyalty, obedience and protection.

This website https://www.topmastersinpublichealth.com/10-biggest-medical-scandals-in-history/ chronicles the 10 biggest medical scandals in history last updated in 2017. But given the numbers seen in VAERS alone the COVID-19 vaccine assault on humanity will be the largest ever.

53. VAERS currently reports **65,165 vaccine site complications or complaints** for all vaccines over all time with the COVID-19 vaccines alone reporting **59,019** complications (more than 90% of vaccination site complications for all vaccines). The Janssen COVID-19 accounts for less than 1%. This is an astounding observation that also warrants full investigation.

    One of the issues that has come up over COVID-19 vaccinations are reports that nurses or doctors are not aspirating with the syringe prior to injection of the vaccine. This process, recommended by the manufacturers, is intended to test whether the selected injection site is indeed restricted to an intramuscular compartment and not into a vein where the vaccine contents could distribute systemically rather than remain locally at the injection site.

    Some speculate, regardless of reason, which the lack of aspirating the syringe might be leading to many of the adverse events being reported. The process is not difficult. It simply requires the nurse to draw the syringe outward after the needle is inserted. If no blood is seen, then the needle is inside muscle tissue.

Rzymski P, Fal A. **To aspirate or not to aspirate? Considerations for the COVID-19 vaccines**. Pharmacol Rep. 2022 Mar 23:1–5. doi: 10.1007/s43440-022-00361-4. Epub ahead of print. PMID: 35320581; PMCID: PMC8941363. https://pubmed.ncbi.nlm.nih.gov/35320581/

Vaccine	Events Reported	Percent (of 65,165)
Total	68,858	105.67%
COVID19 (COVID19 (PFIZER-BIONTECH)) (1200)	35,523	54.51%
COVID19 (COVID19 (MODERNA)) (1201)	23,104	35.45%
PNEUMO (PREVNAR13) (1141)	1,020	1.57%
PNEUMO (PNEUMOVAX) (30)	808	1.24%
VACCINE NOT SPECIFIED (NO BRAND NAME) (999)	682	1.05%
COVID19 (COVID19 (JANSSEN)) (1203)	480	0.74%
ZOSTER (SHINGRIX) (1192)	388	0.60%
HIB (ACTHIB) (256)	320	0.49%
VARICELLA (VARIVAX) (269)	303	0.46%
INFLUENZA (SEASONAL) (NO BRAND NAME) (44)	292	0.45%
ZOSTER LIVE (ZOSTAVAX) (1097)	267	0.41%
MENINGOCOCCAL B (BEXSERO) (1165)	259	0.40%
TDAP (ADACEL) (1092)	216	0.33%
HPV (GARDASIL) (1098)	182	0.28%
TDAP (BOOSTRIX) (1091)	175	0.27%
INFLUENZA (SEASONAL) (FLUZONE HIGH-DOSE) (1145)	172	0.26%
MEASLES + MUMPS + RUBELLA (MMR II) (26)	160	0.25%
INFLUENZA (SEASONAL) (FLUZONE) (7)	159	0.24%
INFLUENZA (SEASONAL) (FLUZONE QUADRIVALENT) (1162)	156	0.24%
DTAP (INFANRIX) (286)	137	0.21%
HPV (GARDASIL 9) (1170)	137	0.21%
DTP (NO BRAND NAME) (2)	132	0.20%
MENINGOCOCCAL CONJUGATE (MENVEO) (1140)	128	0.20%
DTAP + IPV (UNKNOWN) (1164)	119	0.18%
MEASLES + MUMPS + RUBELLA + VARICELLA (PROQUAD) (1094)	119	0.18%
MEASLES + MUMPS + RUBELLA (NO BRAND NAME) (114)	111	0.17%
MENINGOCOCCAL CONJUGATE (MENACTRA) (1090)	110	0.17%
HEP A (HAVRIX) (268)	106	0.16%
DTAP (DAPTACEL) (1064)	99	0.15%
DTAP + IPV (KINRIX) (1126)	98	0.15%
DTAP+IPV+HEPB+HIB (INFANRIX HEXA) (1139)	96	0.15%
INFLUENZA (SEASONAL) (FLUARIX QUADRIVALENT) (1161)	93	0.14%
PNEUMO (NO BRAND NAME) (120)	90	0.14%
INFLUENZA (SEASONAL) (FLUCELVAX QUADRIVALENT) (1175)	88	0.14%
INFLUENZA (SEASONAL) (FLUVIRIN) (262)	88	0.14%
COVID19 (COVID19 (UNKNOWN)) (1202)	82	0.13%
SMALLPOX (ACAM2000) (1122)	75	0.12%

Currently selected:
- (N COMPLICATION)
- (N SITE ABSCESS)
- (N SITE ANAESTHESIA)
- (N SITE ATROPHY)
- (N SITE BRUISING)
- (N SITE CALCIFICATION)
- (N SITE CELLULITIS)
- (N SITE COLDNESS)
- (N SITE CYST)
- (N SITE DERMATITIS)
- (N SITE DISCHARGE)
- (N SITE DISCOLOURATION)
- (N SITE DISCOMFORT)
- (N SITE DRYNESS)
- (N SITE DYSAESTHESIA)
- (N SITE ECZEMA)
- (N SITE EROSION)
- (N SITE ERYTHEMA)
- (N SITE ESCHAR)
- (N SITE EXFOLIATION)
- (N SITE EXTRAVASATION)
- (N SITE FIBROSIS)
- (N SITE GRANULOMA)
- (N SITE HAEMATOMA)
- (N SITE HAEMORRHAGE)
- (N SITE HYPERAESTHESIA)
- (N SITE HYPERSENSITIVITY)
- (N SITE HYPERTRICHOSIS)
- (N SITE HYPERTROPHY)
- (N SITE HYPOAESTHESIA)
- (N SITE INDURATION)
- (N SITE INFECTION)
- (N SITE INFLAMMATION)
- (N SITE INJURY)
- (N SITE IRRITATION)
- (N SITE ISCHAEMIA)
- (N SITE JOINT DISCOMFORT)
- (N SITE JOINT EFFUSION)
- (N SITE JOINT ERYTHEMA)
- (N SITE JOINT INFECTION)
- (N SITE JOINT INFLAMMATION)
- (N SITE JOINT MOVEMENT IMP
- (N SITE JOINT PAIN)
- (N SITE JOINT SWELLING)
- (N SITE JOINT WARMTH)
- (N SITE LACERATION)
- (N SITE LYMPHADENOPATHY)
- (N SITE MACULE)
- (N SITE MASS)
- (N SITE MOVEMENT IMPAIRME
- (N SITE NECROSIS)
- (N SITE NERVE DAMAGE)
- (N SITE NODULE)
- (N SITE OEDEMA)
- (N SITE PAIN)
- (N SITE PALLOR)
- (N SITE PAPULE)
- (N SITE PARAESTHESIA)
- (N SITE PHLEBITIS)
- (N SITE PHOTOSENSITIVITY RE
- (N SITE PLAQUE)
- (N SITE PRURITUS)
- (N SITE PUSTULE)
- (N SITE RASH)
- (N SITE REACTION)
- (N SITE SCAB)
- (N SITE SCAR)
- (N SITE STREAKING)
- (N SITE SWELLING)
- (N SITE THROMBOSIS)
- (N SITE ULCER)
- (N SITE URTICARIA)
- (N SITE VASCULITIS)
- (N SITE VESICLES)
- (N SITE WARMTH)

54. VAERS currently reports:

    31 cases of **Vaccine Associated Enhanced Disease**

    4 case of **Vaccine Virus Shedding (**note last month VAERS reported 48 cases**)** and surprisingly only

    6,110 Vaccine Breakthrough Infections, considering that Omicron BA.4 and BA.5 variants were reporting high breakthrough cases in the news

It's well published now that the COVID-19 vaccines offer little to no protection from delta or omicron variants of the virus. But this figure aligns with reports that the vaccinated, if expressing flu-like symptoms, are NOT being routinely tested for COVID-19[39].

Bigay J, Le Grand R, Martinon F, Maisonnasse P. **Vaccine-associated enhanced disease in humans and animal models: Lessons and challenges for vaccine development**. Front Microbiol. 2022 Aug

[39] Carolyn Crist CDC: Fully Vaccinated Can Skip Routine COVID Testing WebMD June 4, 2021

10;13:932408. doi: 10.3389/fmicb.2022.932408. PMID: 36033843; PMCID: PMC9399815. https://pubmed.ncbi.nlm.nih.gov/36033843/

Ning W, Xu W, Cong X, Fan H, Gilkeson G, Wu X, Hughes H, Jiang W. **COVID-19 mRNA vaccine BNT162b2 induces autoantibodies against type I interferons in a healthy woman**. J Autoimmun. 2022 Aug 18;132:102896. doi: 10.1016/j.jaut.2022.102896. Epub ahead of print. PMID: 36029717; PMCID: PMC9385769. https://pubmed.ncbi.nlm.nih.gov/36029717/

Ebenig A, Muraleedharan S, Kazmierski J, Todt D, Auste A, Anzaghe M, Gömer A, Postmus D, Gogesch P, Niles M, Plesker R, Miskey C, Gellhorn Serra M, Breithaupt A, Hörner C, Kruip C, Ehmann R, Ivics Z, Waibler Z, Pfaender S, Wyler E, Landthaler M, Kupke A, Nouailles G, Goffinet C, Brown RJP, Mühlebach MD. **Vaccine-associated enhanced respiratory pathology in COVID-19 hamsters after TH2-biased immunization**. Cell Rep. 2022 Aug 16;40(7):111214. doi: 10.1016/j.celrep.2022.111214. Epub 2022 Aug 3. PMID: 35952673; PMCID: PMC9346010. https://pubmed.ncbi.nlm.nih.gov/35952673/

Taquet M, Dercon Q, Harrison PJ. **Six-month sequelae of post-vaccination SARS-CoV-2 infection: A retrospective cohort study of 10,024[40] breakthrough infections**. Brain Behav Immun. 2022 Apr 18;103:154-162. doi: 10.1016/j.bbi.2022.04.013. Epub ahead of print. PMID: 35447302; PMCID: PMC9013695. https://pubmed.ncbi.nlm.nih.gov/35447302/

Gazit S, Shlezinger R, Perez G, Lotan R, Peretz A, Ben-Tov A, Herzel E, Alapi H, Cohen D, Muhsen K, Chodick G, Patalon T. **SARS-CoV-2 Naturally Acquired Immunity vs. Vaccine-induced Immunity, Reinfections versus Breakthrough Infections: a Retrospective Cohort Study**. Clin Infect Dis. 2022 Apr 5:ciac262. doi: 10.1093/cid/ciac262. Epub ahead of print. PMID: 35380632. https://pubmed.ncbi.nlm.nih.gov/35380632/

Kim AHJ, Nakamura MC. COVID-19 **Breakthrough Infection Among Immunocompromised Persons**. JAMA Intern Med. 2021 Dec 28. doi: 10.1001/jamainternmed.2021.7033. Epub ahead of print. PMID: 34962552. https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2787647

Sun J, Zheng Q, Madhira V, Olex AL, Anzalone AJ, Vinson A, Singh JA, French E, Abraham AG, Mathew J, Safdar N, Agarwal G, Fitzgerald KC, Singh N, Topaloglu U, Chute CG, Mannon RB, Kirk GD, Patel RC; National COVID Cohort Collaborative (N3C) Consortium. **Association Between Immune Dysfunction and COVID-19 Breakthrough Infection After SARS-CoV-2 Vaccination in the US**. JAMA Intern Med. 2021 Dec 28. doi: 10.1001/jamainternmed.2021.7024. Epub ahead of print. PMID: 34962505. https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2787643

Joan Chung, MD, **A Case of Breakthrough COVID-19 Requiring Hospitalization**, Proceedings of UCLA Health -VOLUME 25 (2021)- https://proceedings.med.ucla.edu/wp-content/uploads/2021/10/Chung-A210614JC-BLM-formatted.pdf

Yamamoto S, Maeda K, Matsuda K, Tanaka A, Horii K, Okudera K, Takeuchi JS, Mizoue T, Konishi M, Ozeki M, Sugiyama H, Aoyanagi N, Mitsuya H, Sugiura W, Ohmagari N. **COVID-19 breakthrough infection and post-vaccination neutralizing antibody among healthcare workers in a referral hospital**

[40] Note the discrepancy of breakthrough infections this report offers vs what was reported in VAERS above (4076 at the date of this report, 5/7/2022).

in Tokyo: a case-control matching study. Clin Infect Dis. 2021 Dec 24:ciab1048. doi: 10.1093/cid/ciab1048. Epub ahead of print. PMID: 34950947.
https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciab1048/6482345

Hsu L, Grüne B, Buess M, Joisten C, Klobucnik J, Nießen J, Patten D, Wolff A, Wiesmüller GA, Kossow A, Hurraß J. COVID-19 **Breakthrough Infections and Transmission Risk: Real-World Data Analyses from Germany's Largest Public Health Department (Cologne)**. Vaccines (Basel). 2021 Nov 2;9(11):1267. doi: 10.3390/vaccines9111267. PMID: 34835198; PMCID: PMC8624814.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8624814/

Wendelyn Bosch, Jennifer B Cowart, Shivang Bhakta, Rickey E Carter, Hani M Wadei, Sadia Z Shah, Devang K Sanghavi, Benjamin D Pollock, Matthew R Neville, Sven P Oman, Leigh Speicher, Ameya D Scindia, Mark W Matson, Pablo Moreno Franco, Coronavirus Disease 2019 **Vaccine-Breakthrough Infections Requiring Hospitalization in Mayo Clinic Florida Through August 2021**, Clinical Infectious Diseases, 2021;, ciab932, https://doi.org/10.1093/cid/ciab932
PDF

Tenforde MW, Self WH, Adams K, et al. **Association Between mRNA Vaccination and COVID-19 Hospitalization and Disease Severity**. JAMA. 2021;326(20):2043–2054. doi:10.1001/jama.2021.19499
https://jamanetwork.com/journals/jama/article-abstract/2786039

Barbara A. Cohn, Piera M. Cirillo, Caitlin C. Murphy, Nickilou Y. Krigbaum, Arthur W. Wallace, **Breakthrough SARS-CoV-2 infections in 620,000 U.S. Veterans, February 1, 2021 to August 13, 2021**, medRxiv 2021.10.13.21264966; doi: https://doi.org/10.1101/2021.10.13.21264966
https://www.medrxiv.org/content/10.1101/2021.10.13.21264966v1.full.pdf

Aditya Sharma, Gina Oda, Mark Holodniy, **COVID-19 Vaccine Breakthrough Infections in Veterans Health Administration**, medRxiv 2021.09.23.21263864; doi:
https://doi.org/10.1101/2021.09.23.21263864
https://www.medrxiv.org/content/10.1101/2021.09.23.21263864v1.full.pdf

COVID-19 Vaccine Injury: Other Citations

These references relate to vaccine injury and other related topics, but are not necessarily related to the cited adverse events queried from VAERS listed above)

Mouliou DS, Dardiotis E. **Current Evidence in SARS-CoV-2 mRNA Vaccines and Post-Vaccination Adverse Reports: Knowns and Unknowns. Diagnostics** (Basel). 2022 Jun 26;12(7):1555. doi: 10.3390/diagnostics12071555. PMID: 35885461; PMCID: PMC9316835. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9316835/

> Mouliou concludes: *".. current literature already reveals that **several cases should not have received an mRNA vaccine against COVID-19** and should seek medical advice before potential next doses, thus highlighting a more personalized approach in the overall modern mRNA technology."*

Oueijan RI, Hill OR, Ahiawodzi PD, Fasinu PS, Thompson DK. **Rare Heterogeneous Adverse Events Associated with mRNA-Based COVID-19 Vaccines: A Systematic Review**. Medicines (Basel). 2022 Aug 11;9(8):43. doi: 10.3390/medicines9080043. PMID: 36005648; PMCID: PMC9416135. https://pubmed.ncbi.nlm.nih.gov/36005648/

Theoharides TC, Conti P. **Be aware of SARS-CoV-2 spike protein: There is more than meets the eye**. J Biol Regul Homeost Agents. 2021 May-Jun;35(3):833-838. doi: 10.23812/THEO_EDIT_3_21. PMID: 34100279. https://pubmed.ncbi.nlm.nih.gov/34100279/

Dar-Odeh N, Abu-Hammad O, Qasem F, Jambi S, Alhodhodi A, Othman A, Abu-Hammad A, Al-Shorman H, Ryalat S, Abu-Hammad S. **Long-term adverse events of three COVID-19 vaccines as reported by vaccinated physicians and dentists, a study from Jordan and Saudi Arabia**. Hum Vaccin Immunother. 2022 Dec 31;18(1):2039017. doi: 10.1080/21645515.2022.2039017. Epub 2022 Mar 3. PMID: 35240939; PMCID: PMC9009903.

Luo C, Du J, Cuker A, Lautenbach E, Asch DA, Poland GA, Tao C, Chen Y. **Comparability of clinical trials and spontaneous reporting data regarding COVID-19 vaccine safety**. Sci Rep. 2022 Jun 29;12(1):10946. doi: 10.1038/s41598-022-13809-7. PMID: 35768434; PMCID: PMC9243073. https://pubmed.ncbi.nlm.nih.gov/35768434/

Sandbrink JB, Koblentz GD. **Biosecurity risks associated with vaccine platform technologies**. Vaccine. 2022 Apr 14;40(17):2514-2523. doi: 10.1016/j.vaccine.2021.02.023. Epub 2021 Feb 25. PMID: 33640142; PMCID: PMC7904460. https://pubmed.ncbi.nlm.nih.gov/33640142/

Capponi M, Pulvirenti F, Cinicola BL, Brindisi G, Conti MG, Colaiocco G, de Castro G, Guido CA, Duse M, Midulla F, Zicari AM, Spalice A. **Short-Term Side Effects and SARS-CoV-2 Infection after COVID-19 Pfizer-BioNTech Vaccine in Children Aged 5-11 Years: An Italian Real-World Study. Vaccines (Basel).** 2022 Jun 30;10(7):1056. doi: 10.3390/vaccines10071056. PMID: 35891219; PMCID: PMC9317287. https://pubmed.ncbi.nlm.nih.gov/35891219/

Kim J, Cho JR, Kang MK. **Spontaneus (dumbbell-shaped) coronary artery pseudoaneurysm after COVID-19 vaccination**. Coron Artery Dis. 2022 Aug 1;33(5):429-430. doi: 10.1097/MCA.0000000000001133. Epub 2022 Mar 8. PMID: 35880562; PMCID: PMC9239353. https://pubmed.ncbi.nlm.nih.gov/35880562/

Dobson GP. **Wired to Doubt: Why People Fear Vaccines and Climate Change and Mistrust Science**. Front Med (Lausanne). 2022 Jan 28;8:809395. doi: 10.3389/fmed.2021.809395. PMID: 35186977; PMCID: PMC8849212. https://pubmed.ncbi.nlm.nih.gov/35186977/

Dobson speaks about Science as though it were absolute and incorruptible. That the 'recipients of science' and their reluctance to obey authority are the problem. That every scientist is pure at heart and not influenced by economic, political or egotistic influence to publish. Absolutely no benefit of the doubt that Junk Science (Dan Agin) exists and that the peer review process has been hijacked by political narrative, corporate and government forces.

Jonathan Campion, Afzal Javed, Crick Lund, Norman Sartorius, Shekhar Saxena, Michael Marmot, John Allan, Pichet Udomratn, **Public mental health: required actions to address implementation failure in the context of COVID-19**, The Lancet Psychiatry, Volume 9, Issue 2,2022, Pages 169-182, ISSN 2215-0366, https://doi.org/10.1016/S2215-0366(21)00199-1
https://www.sciencedirect.com/science/article/pii/S2215036621001991

Bonzano L, Djuric O, Mancuso P, Fares L, Brancaccio R, Ottone M, Bisaccia E, Vicentini M, Cocconcelli A, Motolese A, Boyko R, Giorgi Rossi P, Motolese A. **Incidence and Characteristics of Adverse Events after COVID-19 Vaccination in a Population-Based Programme**. Vaccines (Basel). 2022 Jul 12;10(7):1111. doi: 10.3390/vaccines10071111. PMID: 35891275; PMCID: PMC9324067.
https://pubmed.ncbi.nlm.nih.gov/35891275/

Yong SJ, Halim A, Halim M, Al Mutair A, Alhumaid S, Al-Sihati J, Albayat H, Alsaeed M, Garout M, Al Azmi R, Aldakheel N, Alshukairi AN, Al Ali HA, Almoumen AA, Rabaan AA. **Rare Adverse Events Associated with BNT162b2 mRNA Vaccine (Pfizer-BioNTech): A Review of Large-Scale, Controlled Surveillance Studies**. Vaccines (Basel). 2022 Jul 2;10(7):1067. doi: 10.3390/vaccines10071067. PMID: 35891231; PMCID: PMC9319660. https://pubmed.ncbi.nlm.nih.gov/35891231/

Sebastian J, Mathew M, Sharsty V, Ramesh M. **Leukocytoclastic Vasculitis Following COVID-19 Vaccination: A Case Report**. Hosp Pharm. 2022 Aug;57(4):564-567. doi: 10.1177/00185787211067379. Epub 2021 Dec 29. PMID: 35898243; PMCID: PMC9310316.
https://pubmed.ncbi.nlm.nih.gov/35898243/

Flora J, Khan W, Jin J, Jin D, Hussain A, Dajani K, Khan B. **Usefulness of Vaccine Adverse Event Reporting System for Machine-Learning Based Vaccine Research: A Case Study for COVID-19 Vaccines**. Int J Mol Sci. 2022 Jul 26;23(15):8235. doi: 10.3390/ijms23158235. PMID: 35897804.
https://pubmed.ncbi.nlm.nih.gov/35897804/

Riad A, Põld A, Kateeb E, Attia S. **Oral Adverse Events Following COVID-19 Vaccination: Analysis of VAERS Reports**. Front Public Health. 2022 Jul 11;10:952781. doi: 10.3389/fpubh.2022.952781. PMID: 35899169; PMCID: PMC9309565. https://pubmed.ncbi.nlm.nih.gov/35899169/

Al-Qazaz HK, Al-Obaidy LM, Attash HM. **COVID-19 vaccination, do women suffer from more side effects than men? A retrospective cross-sectional study**. Pharm Pract (Granada). 2022 Apr-Jun;20(2):2678. doi:

10.18549/PharmPract.2022.2.2678. Epub 2022 Jun 10. PMID: 35919795; PMCID: PMC9296083. https://pubmed.ncbi.nlm.nih.gov/35919795/

In Al-Qaza, et al. - **Outrageous claim**!! – they conclude the reason women are more susceptible are psychological factors. How did this get past peer review?

Montejano-Hervás P, Gómez-Pavón J, Tornero-Torres O, Valverde-Moyar MV, Martín Cruz B, Vela Carbonera M, Fuentes-Irigoyen R, Tejada González P, González-Becerra M, Higueras Sánchez E, Ramos Cordero P. **Safety, Effectiveness, and Immunogenicity 6 Months After BNT162B2 mRNA Vaccine in Frail Nursing Home Residents.** Drugs Aging. 2022 Jul;39(7):587-595. doi: 10.1007/s40266-022-00959-6. Epub 2022 Jul 7. PMID: 35794430; PMCID: PMC9261238. https://pubmed.ncbi.nlm.nih.gov/35794430/

Garrido-Suárez BB, Garrido-Valdes M, Garrido G. **Reactogenic sleepiness after COVID-19 vaccination. A hypothesis involving orexinergic system linked to inflammatory signals**. Sleep Med. 2022 Jun 20;98:79-86. doi: 10.1016/j.sleep.2022.06.011. Epub ahead of print. PMID: 35792321; PMCID: PMC9212783. https://pubmed.ncbi.nlm.nih.gov/35792321/

Al-Ahmari AK, AlAsmari A, AlKorbi A, Ahmed NJ, Almalki ZS, Alshehri AM, Albassam AA, Alem GM. **Comparison of the post-marketing safety profile between influenza and COVID-19 vaccines: An analysis of the vaccine adverse event reporting system**. Saudi Pharm J. 2022 Jun 21. doi: 10.1016/j.jsps.2022.06.009. Epub ahead of print. PMID: 35783675; PMCID: PMC9232269. https://pubmed.ncbi.nlm.nih.gov/35783675/

Manzo C, Castagna A, Isetta M. **Polymyalgia rheumatica and polymyalgia-like syndromes as adverse events following COVID-19 vaccines**: working notes from a narrative review of published literature. Reumatologia. 2022;60(2):142-147. doi: 10.5114/reum.2022.115665. Epub 2022 May 18. PMID: 35782034; PMCID: PMC9238316. https://pubmed.ncbi.nlm.nih.gov/35782034/

Qi X, Wang J, Zhang Q, Ai J, Liu C, Li Q, Gu Y, Lv J, Huang Y, Liu Y, Xu D, Chen S, Liu D, Li J, Xiang H, Liang J, Bian L, Zhang Z, Liu L, Zhang X, Qin W, Wang X, Hou Z, Zhang N, Zhang A, Zu H, Wang Y, Yan Z, Xiufang D, Hou A, Ji J, Yang J, Huang J, Zhao Z, Zou S, Ji H, Ge G, Zeng QL, Zhang W. **Safety and Immunogenicity of COVID-19 Vaccination in Patients with Hepatocellular Carcinoma (CHESS-NMCID 2101): A Multicenter Prospective Study**. J Med Virol. 2022 Jul 10. doi: 10.1002/jmv.27992. Epub ahead of print. PMID: 35811309. https://pubmed.ncbi.nlm.nih.gov/35811309/

From Qi et al: *"Given that the potential benefits may outweigh the risks and the continuing emergences of novel severe acute respiratory syndrome coronavirus 2 variants, we suggest HCC patients to be vaccinated against COVID-19"*. Stressing the word 'may'. This just shows how stupid some of these people are.

Caironi V, Pitoia F, Trimboli P. **Thyroid Inconveniences With Vaccination Against SARS-CoV-2: The Size of the Matter. A Systematic Review**. Front Endocrinol (Lausanne). 2022 Jun 23;13:900964. doi: 10.3389/fendo.2022.900964. PMID: 35813627; PMCID: PMC9259875. https://pubmed.ncbi.nlm.nih.gov/35813627/

Seki Y, Yoshihara Y, Nojima K, Momose H, Fukushi S, Moriyama S, Wagatsuma A, Numata N, Sasaki K, Kuzuoka T, Yato Y, Takahashi Y, Maeda K, Suzuki T, Mizukami T, Hamaguchi I. **Safety and immunogenicity of the Pfizer/BioNTech SARS-CoV-2 mRNA third booster vaccine dose against the**

BA.1 and BA.2 Omicron variants. Med (N Y). 2022 Jun 10;3(6):406-421.e4. doi: 10.1016/j.medj.2022.04.013. Epub 2022 Apr 26. PMID: 35815933; PMCID: PMC9040508. https://pubmed.ncbi.nlm.nih.gov/35815933/

Guo W, Deguise J, Tian Y, Huang PC, Goru R, Yang Q, Peng S, Zhang L, Zhao L, Xie J, He Y. **Profiling COVID-19 Vaccine Adverse Events by Statistical and Ontological Analysis of VAERS Case Reports**. Front Pharmacol. 2022 Jun 24;13:870599. doi: 10.3389/fphar.2022.870599. PMID: 35814246; PMCID: PMC9263450. https://pubmed.ncbi.nlm.nih.gov/35814246/

Kant, A., Jansen, J., van Balveren, L. et al. **Description of Frequencies of Reported Adverse Events Following Immunization Among Four Different COVID-19 Vaccine Brands**. Drug Saf 45, 319–331 (2022). https://doi.org/10.1007/s40264-022-01151-w https://link.springer.com/article/10.1007/s40264-022-01151-w

Kundawar A, Guralwar CO, Sontakke S. **Study of Adverse Events following COVID-19 Vaccination: A cross-sectional Survey in India**. J Assoc Physicians India. 2022 Jul;70(7):11-12. PMID: 35833411. https://pubmed.ncbi.nlm.nih.gov/35833411/

Muhsen K, Maimon N, Mizrahi AY, Varticovschi B, Bodenheimer O, Cohen D, Dagan R. **Association of BNT162b2 Vaccine Third Dose Receipt With Incidence of SARS-CoV-2 Infection, COVID-19-Related Hospitalization, and Death Among Residents of Long-term Care Facilities**, August to October 2021. JAMA Netw Open. 2022 Jul 1;5(7):e2219940. doi: 10.1001/jamanetworkopen.2022.19940. PMID: 35796153; PMCID: PMC9250055. https://pubmed.ncbi.nlm.nih.gov/35796153/

Fraiman, Joseph and Erviti, Juan and Jones, Mark and Greenland, Sander and Whelan, Patrick and Kaplan, Robert M. and Doshi, Peter, **Serious adverse events of special interest following mRNA COVID-19 vaccination in randomized trials in adults**. Elsevier Vaccine, https://doi.org/10.1016/j.vaccine.2022.08.036 August 31, 2022 https://www.sciencedirect.com/science/article/pii/S0264410X22010283

Dotan A, Kanduc D, Muller S, Makatsariya A, Shoenfeld Y. **Molecular mimicry between SARS-CoV-2 and the female reproductive system**. Am J Reprod Immunol. 2021 Dec;86(6):e13494. doi: 10.1111/aji.13494. Epub 2021 Sep 17. PMID: 34407240; PMCID: PMC8420155. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8420155/

Yamamoto K. **Adverse effects of COVID-19 vaccines and measures to prevent them**. Virol J. 2022 Jun 5;19(1):100. doi: 10.1186/s12985-022-01831-0. PMID: 35659687; PMCID: PMC9167431. https://pubmed.ncbi.nlm.nih.gov/35659687/

King WC, Rubinstein M, Reinhart A, Mejia R. **Time trends, factors associated with, and reasons for COVID-19 vaccine hesitancy: A massive online survey of US adults from January-May 2021**. PLoS One. 2021;16(12):e0260731. Published 2021 Dec 21. doi:10.1371/journal.pone.0260731 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8691631/

Alphandéry E. **Nano dimensions/adjuvants in COVID-19 vaccines**. J Mater Chem B. 2022 Mar 9;10(10):1520-1552. doi: 10.1039/d1tb02408f. PMID: 35166754. https://pubmed.ncbi.nlm.nih.gov/35166754/

Mitchell B. Liester, MD, **A review of the benefits, risks, and controversies associated with the Pfizer and Moderna COVID-19 vaccines**, July 13, 2021, DOI:10.13140/RG.2.2.23982.43843 https://www.researchgate.net/publication/353234557_A_review_of_the_benefits_risks_and_controversies_associated_with_the_Pfizer_and_Moderna_COVID-19_vaccines_preprint

Liester, Mitchell B. 2022. **"The Suppression of Dissent During the COVID-19 Pandemic."**Social Epistemology Review and Reply Collective 11 (4): 53-76. https://wp.me/p1Bfg0-6Jw

Mitchell B. Liester, **The Suppression of Dissent During the COVID-19 Pandemic**, University of Colorado School of Medicine https://www.researchgate.net/publication/360089716_The_Suppression_of_Dissent_During_the_COVID-19_Pandemic

Mitchell B. Liester (2021) **A review of the use of persuasion and coercion to overcome COVID-19 vaccine hesitancy**, Journal ofPeerScientist 4(2): e1000037 https://www.researchgate.net/publication/357366363_A_review_of_the_use_of_persuasion_and_coercion_to_overcome_COVID-19_vaccine_hesitancy

Yuen WLP, Loh SYJ, Wang DB. SIRVA **(Shoulder Injury Related to Vaccine Administration) following mRNA COVID-19 Vaccination: Case discussion and literature review**. Vaccine. 2022 Apr 20;40(18):2546-2550. doi: 10.1016/j.vaccine.2022.03.037. Epub 2022 Mar 21. PMID: 35339304; PMCID: PMC8934720. https://pubmed.ncbi.nlm.nih.gov/35339304/

van der Kraats AM, Munk S, Hollman F, Staal HM, Lambers Heerspink FOO. **Ernstige schouderproblematiek na covid-19-vaccinatie [Serious shoulder injury after COVID-19 vaccination]**. Ned Tijdschr Geneeskd. 2022 May 2;166:D6665. Dutch. PMID: 35499697. https://pubmed.ncbi.nlm.nih.gov/35499697/

Ritter A, Helmchen B, Gaspert A, Bleisch J, Fritschi B, Buchkremer F, Damm S, Schmid N, Schachtner T, Seeger H. **Clinical spectrum of gross haematuria following SARS-CoV-2 vaccination with mRNA vaccines**. Clin Kidney J. 2021 Dec 21;15(5):961-973. doi: 10.1093/ckj/sfab284. PMID: 35498904; PMCID: PMC9050541. https://pubmed.ncbi.nlm.nih.gov/35498904/

Maliwankul K, Boonsri P, Klabklay P, Chuaychoosakoon C. **Shoulder Injury Related to COVID-19 Vaccine Administration: A Case Series**. Vaccines (Basel). 2022 Apr 12;10(4):588. doi: 10.3390/vaccines10040588. PMID: 35455337; PMCID: PMC9027408. https://pubmed.ncbi.nlm.nih.gov/35455337/

Hamza N, Kulkarni U. **A narrative review of the challenges, ethical frameworks, and guidelines in the setting of COVID-19 healthcare and research**. Perspect Clin Res. 2022 Apr-Jun;13(2):70-76. doi: 10.4103/picr.picr_206_21. Epub 2022 Apr 6. PMID: 35573457; PMCID: PMC9106127. https://pubmed.ncbi.nlm.nih.gov/35573457/

Dunford S, Brooke J. **Effects of social isolation and restrictions on older people during the COVID-19 pandemic**. Nurs Older People. 2022 May 18. doi: 10.7748/nop.2022.e1400. Epub ahead of print. PMID: 35582820. https://pubmed.ncbi.nlm.nih.gov/35582820/

Koszalinski RS, Olmos B. **Communication challenges in social isolation, subjective cognitive decline, and mental health status in older adults: A scoping review (2019-2021)**. Perspect Psychiatr Care. 2022 May 17. doi: 10.1111/ppc.13115. Epub ahead of print. PMID: 35582750. https://pubmed.ncbi.nlm.nih.gov/35582750/

Antolí A, Rocamora-Blanch G, Framil M, Mas-Bosch V, Navarro S, Bermudez C, Martinez-Yelamos S, Dopico E, Calatayud L, Garcia-Muñoz N, Hernández-Benítez LH, Riera-Mestre A, Bas J, Masuet-Aumatell C, Rigo-Bonnin R, Morandeira F, Solanich X. **Evaluation of Humoral and Cellular Immune Responses to the SARS-CoV-2 Vaccine in Patients With Common Variable Immunodeficiency Phenotype and Patient Receiving B-Cell Depletion Therapy**. Front Immunol. 2022 Apr 29;13:895209. doi: 10.3389/fimmu.2022.895209. PMID: 35572562; PMCID: PMC9098934. https://pubmed.ncbi.nlm.nih.gov/35572562/

Brito-Dellan N, Tsoukalas N, Font C. **Thrombosis, cancer, and COVID-19**. Support Care Cancer. 2022 May 14:1–10. doi: 10.1007/s00520-022-07098-z. Epub ahead of print. PMID: 35567609; PMCID: PMC9106567. https://pubmed.ncbi.nlm.nih.gov/35567609/

Elisha E, Guetzkow J, Shir-Raz Y, Ronel N. **Suppressing Scientific Discourse on Vaccines? Self-perceptions of researchers and practitioners**. HEC Forum. 2022 May 19:1–19. doi: 10.1007/s10730-022-09479-7. Epub ahead of print. PMID: 35587319; PMCID: PMC9117988. https://pubmed.ncbi.nlm.nih.gov/35587319/

The Elisha paper says: Subjective perceptions of physicians, nurses, and researchers involved with vaccines through practice and/or research and who take a critical view on vaccines reported being subjected to a variety of censorship and suppression tactics, including

- retraction of papers pointing to vaccine safety problems
- negative publicity
- difficulty in obtaining research funding
- calls for dismissal
- summonses to official hearings
- suspension of medical licenses, and
- self-censorship

Scientific discourse is a hallmark of science and its suppression endangers proper interpretation of the facts by propping up a false impression of scientific consensus.

Funk PR, Yogurtcu ON, Forshee RA, Anderson SA, Marks PW, Yang H. **Benefit-risk assessment of COVID-19 vaccine, mRNA (Comirnaty) for age 16-29 years**. Vaccine. 2022 Apr 26;40(19):2781-2789. doi: 10.1016/j.vaccine.2022.03.030. Epub 2022 Mar 28. PMID: 35370016; PMCID: PMC8958165. https://pubmed.ncbi.nlm.nih.gov/35370016/

Prasad S, Kalafat E, Blakeway H, Townsend R, O'Brien P, Morris E, Draycott T, Thangaratinam S, Le Doare K, Ladhani S, von Dadelszen P, Magee LA, Heath P, Khalil **A. Systematic review and meta-analysis of the effectiveness and perinatal outcomes of COVID-19 vaccination in pregnancy**. Nat Commun. 2022 May 10;13(1):2414. doi: 10.1038/s41467-022-30052-w. PMID: 35538060; PMCID: PMC9090726. https://pubmed.ncbi.nlm.nih.gov/35538060/

Lewis G, Bonsall M. **Risk-benefit analysis of emergency vaccine use**. Sci Rep. 2022 May 6;12(1):7444. doi: 10.1038/s41598-022-11374-7. PMID: 35523979; PMCID: PMC9076899. https://pubmed.ncbi.nlm.nih.gov/35523979/

Olejarczyk JP, Young M. **Patient Rights And Ethics**. 2022 May 5. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 Jan–. PMID: 30855863. https://pubmed.ncbi.nlm.nih.gov/30855863/

Gesser-Edelsburg A, Hijazi R, Cohen R. **It Takes Two to Tango: How the COVID-19 Vaccination Campaign in Israel Was Framed by the Health Ministry vs. the Television News**. Front Public Health. 2022 Apr 12;10:887579. doi: 10.3389/fpubh.2022.887579. PMID: 35493372; PMCID: PMC9039239. https://pubmed.ncbi.nlm.nih.gov/35493372/

Tan ST, Park HJ, Rodríguez-Barraquer I, Rutherford GW, Bibbins-Domingo K, Schechter R, Lo NC. **COVID-19 Vaccination and Estimated Public Health Impact in California**. JAMA Netw Open. 2022 Apr 1;5(4):e228526. doi: 10.1001/jamanetworkopen.2022.8526. PMID: 35452106; PMCID: PMC9034409. https://pubmed.ncbi.nlm.nih.gov/35452106/

Stoto MA, Schlageter S, Kraemer JD. **COVID-19 mortality in the United States: It's been two Americas from the start**. PLoS One. 2022 Apr 28;17(4):e0265053. doi: 10.1371/journal.pone.0265053. PMID: 35482643; PMCID: PMC9049562. https://pubmed.ncbi.nlm.nih.gov/35482643/

Walach H, Klement RJ, Aukema W. The risk-benefit ratio of Covid-19 vaccines: Publication policy by retraction does nothing to improve it. Clin Transl Discov. 2022;2(1):e35. doi:10.1002/ctd2.35 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9087123/

> *Among them, two deaths in the placebo-group were attributed to COVID-19, and one in the vaccination group was attributed to COVID-19 pneumonia. This leads to an ARR = 4.56 × 10–5, and conversely to an* ***NNV = 1/ARR = 21 916 to prevent one death by COVID-19****. This shows that our original estimate was not so far off the mark.*

Akhlaghi H, Dinou V, Jones H, Vorias B, Moloney J, Tse J, Parnis S, Karro J, Walby A, Morrissey B. **Epidemiology, clinical presentations, and outcome of patients presenting to the Emergency Department after a COVID-19 vaccination: An observational study**. Emerg Med Australas. 2022 May 8. doi: 10.1111/1742-6723.14016. Epub ahead of print. PMID: 35527398. https://pubmed.ncbi.nlm.nih.gov/35527398/

Ssentongo P, Ssentongo AE, Voleti N, Groff D, Sun A, Ba DM, Nunez J, Parent LJ, Chinchilli VM, Paules CI. **SARS-CoV-2 vaccine effectiveness against infection, symptomatic and severe COVID-19: a**

systematic review and meta-analysis. BMC Infect Dis. 2022 May 7;22(1):439. doi: 10.1186/s12879-022-07418-y. PMID: 35525973; PMCID: PMC9077344. https://pubmed.ncbi.nlm.nih.gov/35525973/

Hirschbühl, K., Schaller, T., Märkl, B. et al. **High viral loads: what drives fatal cases of COVID-19 in vaccinees? – an autopsy study**. Mod Pathol (2022). https://doi.org/10.1038/s41379-022-01069-9 https://www.nature.com/articles/s41379-022-01069-9

Ioannis P. Trougakos , Evangelos Terpos, Harry Alexopoulos, Marianna Politou, Dimitrios Paraskevis, Andreas Scorilas, Efstathios Kastritis, Evangelos Andreakos, and Meletios A. Dimopoulos, **Adverse effects of COVID-19 mRNA vaccines: the spike hypothesis, Trends in Molecular Medicine**, April 20, 2022, Vol. xx, No. xx https://doi.org/10.1016/j.molmed.2022.04.007 https://www.cell.com/action/showPdf?pii=S1471-4914%2822%2900103-4

Schneider J, Sottmann L, Greinacher A, Hagen M, Kasper HU, Kuhnen C, Schlepper S, Schmidt S, Schulz R, Thiele T, Thomas C, Schmeling A. **Postmortem investigation of fatalities following vaccination with COVID-19 vaccines**. Int J Legal Med. 2021 Nov;135(6):2335-2345. doi: 10.1007/s00414-021-02706-9. Epub 2021 Sep 30. PMID: 34591186; PMCID: PMC8482743. https://pubmed.ncbi.nlm.nih.gov/34591186/

Stassi C, Mondello C, Baldino G, Cardia L, Asmundo A, Ventura Spagnolo E. **An Insight into the Role of Postmortem Immunohistochemistry in the Comprehension of the Inflammatory Pathophysiology of COVID-19 Disease and Vaccine-Related Thrombotic Adverse Events: A Narrative Review**. Int J Mol Sci. 2021 Nov 6;22(21):12024. doi: 10.3390/ijms222112024. PMID: 34769454; PMCID: PMC8584583. https://pubmed.ncbi.nlm.nih.gov/34769454/

Yeo A, Kuek B, Lau M, Tan SR, Chan S. **Post COVID-19 vaccine deaths - Singapore's early experience**. Forensic Sci Int. 2022 Jan 19;332:111199. doi: 10.1016/j.forsciint.2022.111199. Epub ahead of print. PMID: 35078041; PMCID: PMC8767909. https://pubmed.ncbi.nlm.nih.gov/35078041/

Chaparro Mérida NA, Moreno Samper D, Lacato AOF. **Seguridad de las vacunas contra la COVID-19 [COVID-19 vaccine safety]**. Rev Peru Med Exp Salud Publica. 2021 Oct-Dec;38(4):634-642. Spanish. doi: 10.17843/rpmesp.2021.384.9308. Epub 2022 Apr 1. PMID: 35385018. https://pubmed.ncbi.nlm.nih.gov/35385018/

Mills K, Tri A, Nilsen K. **The COVID-19 Vaccines: A Description of Adverse Events of Reactions Reported in Kansas**. Kans J Med. 2022 Feb 9;15:39-47. doi: 10.17161/kjm.vol15.15825. PMID: 35371387; PMCID: PMC8942589. https://pubmed.ncbi.nlm.nih.gov/35371387/

Cohen DA, Greenberg P, Formanowski B, Parikh PD. **Are COVID-19 mRNA vaccine side effects severe enough to cause missed work? Cross-sectional study of health care-associated workers**. Medicine (Baltimore). 2022 Feb 18;101(7):e28839. doi: 10.1097/MD.0000000000028839. PMID: 35363178. https://pubmed.ncbi.nlm.nih.gov/35363178/

Castaldo M, Waliszewska-Prosół M, Koutsokera M, Robotti M, Straburzyński M, Apostolakopoulou L, Capizzi M, Çibuku O, Ambat FDF, Frattale I, Gadzhieva Z, Gallo E, Gryglas-Dworak A, Halili G, Jusupova A, Koperskaya Y, Leheste AR, Manzo ML, Marcinnò A, Marino A, Mikulenka P, Ong BE, Polat B, Popovic Z,

Rivera-Mancilla E, Roceanu AM, Rollo E, Romozzi M, Ruscitto C, Scotto di Clemente F, Strauss S, Taranta V, Terhart M, Tychenko I, Vigneri S, Misiak B, Martelletti P, Raggi A; European Headache Federation School of Advanced Studies (EHF-SAS). **Headache onset after vaccination against SARS-CoV-2: a systematic literature review and meta-analysis**. J Headache Pain. 2022 Mar 31;23(1):41. doi: 10.1186/s10194-022-01400-4. PMID: 35361131; PMCID: PMC8969402.
https://pubmed.ncbi.nlm.nih.gov/35361131/

Fusco F, Scognamiglio G, Merola A, Roma AS, Nicastro C, Spatarella M, D'Abbraccio M, Di Mauro G, Atripaldi U, Atripaldi L, Correra A, Palma M, Barracano R, Borrelli N, Capuano A, Sarubbi B. **COVID-19 vaccination in adults with congenital heart disease: Real-world data from an Italian tertiary centre**. Int J Cardiol Congenit Heart Dis. 2021 Dec;6:100266. doi: 10.1016/j.ijcchd.2021.100266. Epub 2021 Oct 28. PMID: 35360668; PMCID: PMC8552781.
https://pubmed.ncbi.nlm.nih.gov/35360668/

Yamaguchi T, Iwagami M, Ishiguro C, et al. **Safety monitoring of COVID-19 vaccines in Japan**. Lancet Reg Health West Pac. 2022;23:100442. Published 2022 Mar 29. doi:10.1016/j.lanwpc.2022.100442
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8960038/

Ma BM, Tam AR, Chan KW, Ma MKM, Hung IFN, Yap DYH, Chan TM. **Immunogenicity and Safety of COVID-19 Vaccines in Patients Receiving Renal Replacement Therapy: A Systematic Review and Meta-Analysis**. Front Med (Lausanne). 2022 Mar 9;9:827859. doi: 10.3389/fmed.2022.827859. PMID: 35355604; PMCID: PMC8959490.
https://pubmed.ncbi.nlm.nih.gov/35355604/

Menni C, May A, Polidori L, Louca P, Wolf J, Capdevila J, Hu C, Ourselin S, Steves CJ, Valdes AM, Spector TD. **COVID-19 vaccine waning and effectiveness and side-effects of boosters: a prospective community study from the ZOE COVID Study**. Lancet Infect Dis. 2022 Apr 8:S1473-3099(22)00146-3. doi: 10.1016/S1473-3099(22)00146-3. Epub ahead of print. PMID: 35405090; PMCID: PMC8993156.
https://pubmed.ncbi.nlm.nih.gov/35405090/

Ashmawy R, Hamdy NA, Elhadi YAM, Alqutub ST, Esmail OF, Abdou MSM, Reyad OA, El-Ganainy SO, Gad BK, Nour El-Deen AE, Kamal A, ElSaieh H, Elrewiny E, Shaaban R, Ghazy RM. **A Meta-Analysis on the Safety and Immunogenicity of Covid-19 Vaccines**. J Prim Care Community Health. 2022 Jan-Dec;13:21501319221089255. doi: 10.1177/21501319221089255. PMID: 35400233; PMCID: PMC8998390.
https://pubmed.ncbi.nlm.nih.gov/35400233/

Shanshal M. **Eruptive Angiomatosis Triggered by COVID-19 Vaccination**. Cureus. 2022 Mar 7;14(3):e22907. doi: 10.7759/cureus.22907. PMID: 35399409; PMCID: PMC8984657.
https://pubmed.ncbi.nlm.nih.gov/35399409/

Jalani N, Tadj D. **COVID-19 vaccination-associated ipsilateral supraclavicular lymphadenopathy**. Aust J Gen Pract. 2021 Dec 10;50. doi: 10.31128/AJGP-COVID-54. PMID: 35398876.
https://pubmed.ncbi.nlm.nih.gov/35398876/

Luchetti Gentiloni MM, Paci V, Marconi V, Gigli M, Benfaremo D, Sordillo R, Macchini C, Massaccesi L, Perna GP, Offidani AM, Moroncini G. **SARS-COV-2 Infection, Vaccination, and Immune-Mediated Diseases: Results of a Single-Center Retrospective Study**. Front Immunol. 2022 Mar 21;13:859550. doi:

10.3389/fimmu.2022.859550. PMID: 35386714; PMCID: PMC8977466.
https://pubmed.ncbi.nlm.nih.gov/35386714/

Couzin-Frankel J, Vogel G. **Vaccines may cause rare, Long Covid-like symptoms**. Science. 2022 Jan 28;375(6579):364-366. doi: 10.1126/science.ada0536. Epub 2022 Jan 27. PMID: 35084966.
https://pubmed.ncbi.nlm.nih.gov/35084966/

Stephanie Seneff, Greg Nigh, Anthony M. Kyriakopoulos, Peter A. McCullough, **Innate immune suppression by SARS-CoV-2 mRNA vaccinations: The role of G-quadruplexes, exosomes, and MicroRNAs**, Food and Chemical Toxicology, Volume 164, 2022, 113008, ISSN 0278-6915, https://doi.org/10.1016/j.fct.2022.113008.

Vitiello A, Ferrara F, Zovi A, Trama U, Boccellino M. **Pregnancy and COVID-19, focus on vaccine and pharmacological treatment**. J Reprod Immunol. 2022 Apr 21;151:103630. doi: 10.1016/j.jri.2022.103630. Epub ahead of print. PMID: 35483212; PMCID: PMC9023094.
https://pubmed.ncbi.nlm.nih.gov/35483212/

Ross M. Kedl, Elena Hsieh, Thomas E. Morrison, Gabriela Samayoa-Reyes, Siobhan Flaherty, Conner L. Jackson, Rosemary Rochford, **Evidence for Aerosol Transfer of SARS-CoV2-specific Humoral Immunity**, medRxiv 2022.04.28.22274443; doi: https://doi.org/10.1101/2022.04.28.22274443

Bardenheier BH, White EM, Blackman C, Gravenstein S, Gutman R, Sarkar IN, Feifer RA, McConeghy K, Nanda A, Duprey M, Mor V. **Adverse Events Following Third Dose of mRNA COVID-19 Vaccination among Nursing Home Residents Who Received the Primary Series**. J Am Geriatr Soc. 2022 Apr 23. doi: 10.1111/jgs.17812. Epub ahead of print. PMID: 35460263. https://pubmed.ncbi.nlm.nih.gov/35460263/

Soraci L, Lattanzio F, Soraci G, Gambuzza ME, Pulvirenti C, Cozza A, Corsonello A, Luciani F, Rezza G. **COVID-19 Vaccines: Current and Future Perspectives**. Vaccines (Basel). 2022 Apr 13;10(4):608. doi: 10.3390/vaccines10040608. PMID: 35455357; PMCID: PMC9025326.
https://pubmed.ncbi.nlm.nih.gov/35455357/

Chen L, Cai X, Zhao T, Han B, Xie M, Cui J, Zhang J, Wang C, Liu B, Lu Q, Cui F. **Safety of Global SARS-CoV-2 Vaccines, a Meta-Analysis. Vaccines (Basel)**. 2022 Apr 12;10(4):596. doi: 10.3390/vaccines10040596. PMID: 35455344; PMCID: PMC9030038. https://pubmed.ncbi.nlm.nih.gov/35455344/

Machado BAS, Hodel KVS, Fonseca LMDS, Pires VC, Mascarenhas LAB, da Silva Andrade LPC, Moret MA, Badaró R. **The Importance of Vaccination in the Context of the COVID-19 Pandemic: A Brief Update Regarding the Use of Vaccines. Vaccines (Basel).** 2022 Apr 12;10(4):591. doi: 10.3390/vaccines10040591. PMID: 35455340; PMCID: PMC9027942.
https://pubmed.ncbi.nlm.nih.gov/35455340/

Lin TY, Yeh YH, Chen LW, Cheng CN, Chang C, Roan JN, Shen CF. **Hemophagocytic Lymphohistiocytosis Following BNT162b2 mRNA COVID-19 Vaccination. Vaccines (Basel).** 2022 Apr 8;10(4):573. doi: 10.3390/vaccines10040573. PMID: 35455321; PMCID: PMC9025976.
https://pubmed.ncbi.nlm.nih.gov/35455321/

Loosen SH, Bohlken J, Weber K, Konrad M, Luedde T, Roderburg C, Kostev K. **Factors Associated with Non-Severe Adverse Reactions after Vaccination against SARS-CoV-2: A Cohort Study of 908,869**

Outpatient Vaccinations in Germany. Vaccines (Basel). 2022 Apr 6;10(4):566. doi: 10.3390/vaccines10040566. PMID: 35455315; PMCID: PMC9032707. https://pubmed.ncbi.nlm.nih.gov/35455315/

Palacka P, Pol'anová M, Svobodová A, Žigmond J, Zanchetta K, Gombárová V, Vulganová M, Slopovský J, Obertová J, Drgoňa Ľ, Mego M, Pechan J. **Effectiveness, Adverse Events, and Immune Response Following Double Vaccination with BNT162b2 in Staff at the National Comprehensive Cancer Center (NCCC). Vaccines (Basel).** 2022 Apr 4;10(4):558. doi: 10.3390/vaccines10040558. PMID: 35455308; PMCID: PMC9026370. https://pubmed.ncbi.nlm.nih.gov/35455308/

Tan AY, Chang CT, Yu YK, Low YX, Razali NFM, Tey SY, Lee SWH. **Adverse Events Following BNT162b2 mRNA COVID-19 Vaccine Immunization among Healthcare Workers in a Tertiary Hospital in Johor, Malaysia**. Vaccines (Basel). 2022 Mar 25;10(4):509. doi: 10.3390/vaccines10040509. PMID: 35455258; PMCID: PMC9031399. https://pubmed.ncbi.nlm.nih.gov/35455258/

Tang KT, Hsu BC, Chen DY. **Immunogenicity, Effectiveness, and Safety of COVID-19 Vaccines in Rheumatic Patients: An Updated Systematic Review and Meta-Analysis**. Biomedicines. 2022 Apr 1;10(4):834. doi: 10.3390/biomedicines10040834. PMID: 35453585; PMCID: PMC9030402. https://pubmed.ncbi.nlm.nih.gov/35453585/

Mayfield HJ, Lau CL, Sinclair JE, Brown SJ, Baird A, Litt J, Vuorinen A, Short KR, Waller M, Mengersen K. **Designing an evidence-based Bayesian network for estimating the risk versus benefits of AstraZeneca COVID-19 vaccine**. Vaccine. 2022 Apr 8:S0264-410X(22)00418-2. doi: 10.1016/j.vaccine.2022.04.004. Epub ahead of print. PMID: 35450781; PMCID: PMC8989774. https://pubmed.ncbi.nlm.nih.gov/35450781/

Zou C, Xue X, Qian J. **Characteristics and Comparison of Adverse Events of Coronavirus Disease 2019 Vaccines Reported to the United States Vaccine Adverse Event Reporting System Between 14 December 2020 and 8 October 2021**. Front Med (Lausanne). 2022 Apr 5;9:826327. doi: 10.3389/fmed.2022.826327. PMID: 35449806; PMCID: PMC9016134. https://pubmed.ncbi.nlm.nih.gov/35449806/

Gao J, Lun P, Ding YY, George PP. **COVID-19 Vaccination for Frail Older Adults in Singapore - Rapid Evidence Summary and Delphi Consensus Statements**. J Frailty Aging. 2022;11(2):236-241. doi: 10.14283/jfa.2022.12. PMID: 35441203; PMCID: PMC8853208. https://pubmed.ncbi.nlm.nih.gov/35441203/

Benn, Christine Stabell and Schaltz-Buchholzer, Frederik and Nielsen, Sebastian and Netea, Mihai G. and Netea, Mihai G. and Aaby, Peter, **Randomised Clinical Trials of COVID-19 Vaccines: Do Adenovirus-Vector Vaccines Have Beneficial Non-Specific Effects?**. Available at SSRN: https://ssrn.com/abstract=4072489 or http://dx.doi.org/10.2139/ssrn.4072489

Stephanie Seneff, Greg Nigh, Anthony M. Kyriakopoulos, Peter A. McCullough, **Innate immune suppression by SARS-CoV-2 mRNA vaccinations: The role of G-quadruplexes, exosomes, and MicroRNAs**, Food and Chemical Toxicology, Volume 164, 2022, 113008, ISSN 0278-6915, https://doi.org/10.1016/j.fct.2022.113008

Wik JA, Skålhegg BS. **T Cell Metabolism in Infection**. Front Immunol. 2022;13:840610. Published 2022 Mar 14. doi:10.3389/fimmu.2022.840610 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8964062/

Shen, XR., Geng, R., Li, Q. et al. **ACE2-independent infection of T lymphocytes by SARS-CoV-2**. Sig Transduct Target Ther 7, 83 (2022). https://doi.org/10.1038/s41392-022-00919-x

Gu, W., Gan, H., Ma, Y. et al. **The molecular mechanism of SARS-CoV-2 evading host antiviral innate immunity**. Virol J 19, 49 (2022). https://doi.org/10.1186/s12985-022-01783-5 https://virologyj.biomedcentral.com/articles/10.1186/s12985-022-01783-5

Anika Singanayagam, PhD, Seran Hakki, PhD, Jake Dunning, PhD, Kieran J Madon, MSc Michael A Crone, MBBCh Aleksandra Koycheva, BSc et al. **Community transmission and viral load kinetics of the SARS-CoV-2 delta (B.1.617.2) variant in vaccinated and unvaccinated individuals in the UK: a prospective, longitudinal, cohort study** October 29, 2021 DOI: https://doi.org/10.1016/S1473-3099(21)00648-4

Jiang H, Mei YF. **SARS-CoV-2 Spike Impairs DNA Damage Repair and Inhibits V(D)J Recombination In Vitro**. Viruses. 2021;13(10):2056. Published 2021 Oct 13. doi:10.3390/v13102056 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8538446/

Katharina Röltgen, et. al., **Immune imprinting, breadth of variant recognition, and germinal center response in human SARS-CoV-2 infection and vaccination**, Cell, January 24, 2022 https://doi.org/10.1016/j.cell.2022.01.018

Regarding the Röltgen paper, on Feb 8, 2022 Dr. Schooley, an Infectious Disease Specialist at UCSD was featured at the County Board of Supervisors meeting on agenda item 16, the monthly COVID-19 status report from Wilma Wooten at HHS . Schooley addressed immunology as it relates to SARS-Cov-2 infections, the variants and vaccination. In his presentation he explained how the mRNA introduced by the vaccine degrades in 12 hours and that the spike protein, an agent produced by the body's own cells after being reprogrammed by vaccine induced mRNA, disappears over 48 hours. He also mentioned that the mRNA coding, although originally coded to address the initial Wuham strain, still provides protection from the delta and omicron variants. But only a week after Schooley's lesson, Röltgen's work was published indicating otherwise. The residence time of mRNA introduced by the vaccine and spike protein antigen is significantly longer than 12 days. The study detected presence of both factors for up to 60 days in some subjects; that's when the study ended. So it's very possible residence times could be even longer.

Main results from the Röltgen paper:

- Viral variant infection elicits variant-specific antibodies, but prior mRNA vaccination imprints serological responses toward Wuhan-Hu-1 rather than variant antigens. (that's the initial Wuham strain)

- In contrast to disrupted germinal centers (GCs) in lymph nodes during infection, mRNA vaccination stimulates robust GCs containing vaccine mRNA and spike antigen up to 8 weeks post vaccination in some cases.

- Another fact, not pointed out by the researchers, however obvious from the context of the paper is they actually found the mRNA from the vaccine in

lymph nodes. This is evidence the vaccine does not stay in the injection site. It indeed travels throughout the body – which was not intended by the vaccine designers! (another reason for the FDA to step in)

Sessa F, Salerno M, Esposito M, Di Nunno N, Zamboni P, Pomara C. **Autopsy Findings and Causality Relationship between Death and COVID-19 Vaccination: A Systematic Review**. J Clin Med. 2021; 10(24):5876. 2021 Dec 15. https://www.ncbi.nlm.nih.gov/labs/pmc/articles/PMC8709364/pdf/jcm-10-05876.pdf

James R. Gill, Randy Tashjian, Emily Duncanson; **Autopsy Histopathologic Cardiac Findings in Two Adolescents Following the Second COVID-19 Vaccine Dose**. Arch Pathol Lab Med 2022; doi: https://doi.org/10.5858/arpa.2021-0435-SA

Haas JW, Bender FL, Ballou S, Kelley JM, Wilhelm M, Miller FG, Rief W, Kaptchuk TJ. **Frequency of Adverse Events in the Placebo Arms of COVID-19 Vaccine Trials: A Systematic Review and Meta-analysis**. JAMA Netw Open. 2022 Jan 4;5(1):e2143955. doi: 10.1001/jamanetworkopen.2021.43955. Erratum in: JAMA Netw Open. 2022 Feb 1;5(2):e221277. PMID: 35040967; PMCID: PMC8767431. https://pubmed.ncbi.nlm.nih.gov/35040967/

Ahmad W, Shabbiri K. **Two years of SARS-CoV-2 infection (2019-2021): structural biology, vaccination, and current global situation**. Egypt J Intern Med. 2022;34(1):5. doi: 10.1186/s43162-021-00092-7. Epub 2022 Jan 14. PMID: 35043040; PMCID: PMC8759062. https://pubmed.ncbi.nlm.nih.gov/35043040/

Alshammari F, Abuzied Y, Korairi A, Alajlan M, Alzomia M, AlSheef M. **Bullous pemphigoid after second dose of mRNA- (Pfizer-BioNTech) Covid-19 vaccine: A case report**. Ann Med Surg (Lond). 2022 Mar;75:103420. doi: 10.1016/j.amsu.2022.103420. Epub 2022 Mar 1. PMID: 35251600; PMCID: PMC8885466. https://pubmed.ncbi.nlm.nih.gov/35251600/

Hisham Mushtaq, Anwar KhedrAnwar, KhedrThoyaja, KoritalaThoyaja, et. al. **A review of adverse effects of COVID-19 vaccines**, March 2022 Le Infezioni in Medicina: Rivista Periodica di Eziologia, Epidemiologia, Diagnostica, Clinica e Terapia Delle Patologie Infettive 30(1):1-10 https://www.researchgate.net/publication/359155382_A_review_of_adverse_effects_of_COVID-19_vaccines

Jill M. Ferdinands, PhD et. al, **Waning 2-Dose and 3-Dose Effectiveness of mRNA Vaccines Against COVID-19–Associated Emergency Department and Urgent Care Encounters and Hospitalizations Among Adults During Periods of Delta and Omicron Variant Predominance — VISION Network, 10 States, August 2021–January 2022, Weekly / February 18, 2022** / 71(7);255–263, On February 11, 2022, this report was posted online as an MMWR Early Release. CDC Morbidity and Mortality Weekly Report (MMWR) https://www.cdc.gov/mmwr/volumes/71/wr/mm7107e2.htm

Sonya Stokes, MD, MPH; Karen Shek, MHA; Michelle Hung, **Breakthroughs, Boosters, and Beyond: A Practical Primer on Current Challenges with COVID-19**, Emergency Medicine Practice, October 3, 2021, https://www.ebmedicine.net/topics.php?paction=dLoadTopic&topic_id=687

Daniel R Feikin, MD, Melissa M Higdon, MPH, Laith J Abu-Raddad, PhD, Nick Andrews, PhD', Rafael Araos, MD, Yair Goldberg, PhD, et al., **Duration of effectiveness of vaccines against SARS-CoV-2 infection and COVID-19 disease: results of a systematic review and meta-regression**, The Lancet,

VOLUME 399, ISSUE 10328, P924-944, MARCH 05, 2022, DOI: https://doi.org/10.1016/S0140-6736(22)00152-0

Gostin LO, Salmon DA, Larson HJ. **Mandating COVID-19 Vaccines**. JAMA. 2021;325(6):532–533. doi:10.1001/jama.2020.26553 https://jamanetwork.com/journals/jama/fullarticle/2774712

Wu, Q., Dudley, M.Z., Chen, X. et al. **Evaluation of the safety profile of COVID-19 vaccines: a rapid review**. BMC Med 19, 173 (2021). https://doi.org/10.1186/s12916-021-02059-5

Lauring A S, Tenforde M W, Chappell J D, Gaglani M, Ginde A A, McNeal T et al. **Clinical severity of, and effectiveness of mRNA vaccines against, covid-19 from omicron, delta, and alpha SARS-CoV-2 variants in the United States: prospective observational study** BMJ 2022; 376 :e069761 doi:10.1136/bmj-2021-069761 https://www.bmj.com/content/376/bmj-2021-069761

Xinyue Chang, Gilles Sousa Augusto, Xuelan Liu, Thomas M Kündig, Monique Vogel, Mona O. Mohsen, Martin F. Bachmann **BNT162b2 mRNA COVID-19 vaccine induces antibodies of broader cross-reactivity than natural infection but recognition of mutant viruses is up to 10-fold reduced** https://www.biorxiv.org/content/10.1101/2021.03.13.435222v1.full.pdf

Dash, S., Sirka, C.S., Mishra, S. and Viswan, P. (2021), **COVID-19 vaccine-induced Stevens–Johnson syndrome**. Clin Exp Dermatol, 46: 1615-1617. https://doi.org/10.1111/ced.14784 https://onlinelibrary.wiley.com/doi/full/10.1111/ced.14784

Annabi E, Dupin N, Sohier P, et al. **Rare cutaneous adverse effects of COVID-19 vaccines: a case series and review of the literature**. J Eur Acad Dermatol Venereol. 2021;35(12):e847-e850. doi:10.1111/jdv.17578 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8447383/pdf/JDV-9999-0.pdf

Paraskevi C. Fragkou, Dimitra Dimopoulou, **Serious complications of COVID-19 vaccines: A mini-review**, Metabolism Open, Volume 12, 2021, 100145, ISSN 2589-9368 https://www.sciencedirect.com/science/article/pii/S2589936821000694

Daniel Magliulo, Soumya Narayan, Frances Ue, Afroditi Boulougoura, Fadi Badlissi **Adult-onset Still's disease after mRNA COVID-19 vaccine** The Lancet Rheumatology, Vol 3 October 2021 https://www.thelancet.com/action/showPdf?pii=S2665-9913%2821%2900219-8

Su, S., Du, L. & Jiang, S. **Learning from the past: development of safe and effective COVID-19 vaccines**. Nat Rev Microbiol 19, 211–219 (2021). https://doi.org/10.1038/s41579-020-00462-y https://www.nature.com/articles/s41579-020-00462-y.pdf

Hause AM, Gee J, Baggs J, et al. **COVID-19 Vaccine Safety in Adolescents Aged 12-17 Years - United States, December 14, 2020-July 16, 2021**. MMWR Morb Mortal Wkly Rep. 2021;70(31):1053-1058. Published 2021 Aug 6. doi:10.15585/mmwr.mm7031e1 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8367318/pdf/mm7031e1.pdf

Amninder Singh, Ratesh Khillan, Yogendra Mishra, Sumit Khurana, **The safety profile of COVID-19 vaccinations in the United States, American Journal of Infection Control**, 2021, ISSN 0196-6553, https://doi.org/10.1016/j.ajic.2021.10.015

Scott McLachlan, Magda Osman, Kudakwashe Dube, Patience Chiketero, Yvonne Choi, Norman Fenton **Analysis of COVID-19 vaccine death reports from the Vaccine Adverse Events Reporting System (VAERS) Database** self-published - Research gate https://austingwalters.com/wp-content/uploads/2021/07/VAERSInterimResults2.0ReleaseDraft1.pdf

Robert P. Schumaker, Michael A. Veronin, Trevor Rohm, Rohit R. Dixit, Shadi Aljawarneh,and Juan A. Lara **An Analysis of Covid-19 Vaccine Allergic Reactions** September 17, 2021 Self published https://www.robschumaker.com/publications/IIMA%20-%20An%20Analysis%20of%20COVID-19%20Allergic%20Reactions.pdf

Jessica Rose, PhD, MSc, BSc, The Institute for Pure and Applied Knowledge, **Critical Appraisal of VAERS Pharmacovigilance: Is the U.S. Vaccine Adverse Events Reporting System (VAERS) a Functioning Pharmacovigilance System?**, Science, Public Health Policy and the Law, Volume 3:100–129,October, 2021, Clinical and Translational Research https://resistance-mondiale.com/wp-content/uploads/2021/11/adf864_0490c898f7514df4b6fbc5935da07322.pdf

Wong, J.; Patel, J.; White, C.; Ang, J.; Munoz, J.; Gee, S, Deaths post COVID-19 Vaccination: **An analysis per VAERS JACCP Journal of the American College of Clinical Pharmacy** ; 4(9):1223-1224, 2021. Artigo em Inglês | EMBASE | ID: covidwho-1445837 https://pesquisa.bvsalud.org/global-literature-on-novel-coronavirus-2019-ncov/resource/pt/covidwho-1445837?lang=en

Zimmermann P, Pittet LF, Finn A, et al **Should children be vaccinated against COVID-19?** Archives of Disease in Childhood Published Online First: 03 November 2021. doi: 10.1136/archdischild-2021-323040 https://adc.bmj.com/content/archdischild/early/2021/11/01/archdischild-2021-323040.full.pdf

Kostoff RN, Calina D, Kanduc D, et al. **Why are we vaccinating children against COVID-19?** [published correction appears in Toxicol Rep. 2021;8:1981]. Toxicol Rep. 2021;8:1665-1684. doi:10.1016/j.toxrep.2021.08.010 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8437699/pdf/main.pdf

Wei N, Kresch M, Elbogen E, Lebwohl M. **New onset and exacerbation of psoriasis after COVID-19 vaccination**. JAAD Case Rep. 2022;19:74-77. doi:10.1016/j.jdcr.2021.11.016 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8628636/pdf/main.pdf

Belay ED, Godfred Cato S, Rao AK, Abrams J, Wilson WW, Lim S, Newton-Cheh C, Melgar M, DeCuir J, Webb B, Marquez P, Su JR, Meng L, Grome HN, Schlaudecker E, Talaat K, Edwards K, Barnett E, Campbell AP, Broder KR, Bamrah Morris S. **Multisystem Inflammatory Syndrome in Adults after SARS-CoV-2 infection and COVID-19 vaccination**. Clin Infect Dis. 2021 Nov 28:ciab936. doi: 10.1093/cid/ciab936. Epub ahead of print. PMID: 34849680.

Osmanodja B, Schreiber A, Schrezenmeier E, Seelow E. **First diagnosis of thrombotic thrombocytopenic purpura after SARS-CoV-2 vaccine - case report**. BMC Nephrol. 2021 Dec 11;22(1):411. doi: 10.1186/s12882-021-02616-3. PMID: 34895163; PMCID: PMC8665311. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8665311/pdf/12882_2021_Article_2616.pdf

Song YK, Mantri S, Lawson JM, Berger EJ, Koenig HG. **Morally Injurious Experiences and Emotions of Health Care Professionals During the COVID-19 Pandemic Before Vaccine Availability**. JAMA Netw Open. 2021 Nov 1;4(11):e2136150. doi: 10.1001/jamanetworkopen.2021.36150. PMID: 34817579; PMCID: PMC8613593.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8613593/

Kahn B, Apostolidis SA, Bhatt V, Greenplate AR, Kallish S, LaCava A, Lucas A, Meyer NJ, Negoianu D, Ogdie AR, Shashaty MGS, Takach PA, Zuroff L, Wherry EJ, Anesi GL. **Multisystem Inflammation and Organ Dysfunction After BNT162b2 Messenger RNA Coronavirus Disease 2019 Vaccination**. Crit Care Explor. 2021 Nov 5;3(11):e0578. doi: 10.1097/CCE.0000000000000578. PMID: 34765984; PMCID: PMC8575416.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8575416/pdf/cc9-3-e0578.pdf

LiverTox: Clinical and Research Information on Drug-Induced Liver Injury [Internet]. Bethesda (MD): National Institute of Diabetes and Digestive and Kidney Diseases; 2012–. Covid-19 Vaccines. 2021 Oct 28. PMID: 34014629.
https://pubmed.ncbi.nlm.nih.gov/34014629/

Liu J, Wang J, Xu J, Xia H, Wang Y, Zhang C, Chen W, Zhang H, Liu Q, Zhu R, Shi Y, Shen Z, Xing Z, Gao W, Zhou L, Shao J, Shi J, Yang X, Deng Y, Wu L, Lin Q, Zheng C, Zhu W, Wang C, Sun YE, Liu Z. **Comprehensive investigations revealed consistent pathophysiological alterations after vaccination with COVID-19 vaccines**. Cell Discov. 2021 Oct 26;7(1):99. doi: 10.1038/s41421-021-00329-3. PMID: 34697287; PMCID: PMC8546144.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8546144/pdf/41421_2021_Article_329.pdf

> *Large-scale COVID-19 vaccinations are currently underway in many countries in response to the COVID-19 pandemic. Here, we report, besides generation of neutralizing antibodies, consistent alterations in hemoglobin A1c, serum sodium and potassium levels, coagulation profiles, and renal functions in healthy volunteers after vaccination with an inactivated SARS-CoV-2 vaccine. Similar changes had also been reported in COVID-19 patients, suggesting that vaccination mimicked an infection. Single-cell mRNA sequencing (scRNA-seq) of peripheral blood mononuclear cells (PBMCs) before and 28 days after the first inoculation also* ***revealed consistent alterations in gene expression of many different immune cell types. Reduction of CD8+ T cells and increase in classic monocyte contents were exemplary. Moreover, scRNA-seq revealed increased NF-κB signaling and reduced type I interferon responses****, which were confirmed by biological assays and also had been reported to occur after SARS-CoV-2 infection with aggravating symptoms. Altogether, our study recommends additional caution when vaccinating people with pre-existing clinical conditions, including diabetes, electrolyte imbalances, renal dysfunction, and coagulation disorders.*

Hsiao YT, Tsai MJ, Chen YH, Hsu CF. ***Acute Transverse Myelitis after COVID-19 Vaccination****. Medicina (Kaunas). 2021 Sep 25;57(10):1010. doi: 10.3390/medicina57101010. PMID: 34684047; PMCID:*

PMC8540274.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8540274/pdf/medicina-57-01010.pdf

Campagnani G, Bardanzellu F, Pintus MC, Fanos V, Marcialis MA. **COVID-19 vaccination in children: an open question**. Curr Pediatr Rev. 2021 Dec 19. doi: 10.2174/1573396318666211220093111. Epub ahead of print. PMID: 34931965.
https://pubmed.ncbi.nlm.nih.gov/34931965/

Atiyat R, Elias S, Kiwan C, Shaaban HS, Slim J. **Varicella-Zoster Virus Reactivation in AIDS Patient After Pfizer-BioNTech COVID-19 Vaccine**. Cureus. 2021 Dec 3;13(12):e20145. doi: 10.7759/cureus.20145. PMID: 35003978; PMCID: PMC8723776.
https://pubmed.ncbi.nlm.nih.gov/35003978/

Sieiro Santos C, Calleja Antolin S, Moriano Morales C, Garcia Herrero J, Diez Alvarez E, Ramos Ortega F, Ruiz de Morales JG. **Immune responses to mRNA vaccines against SARS-CoV-2 in patients with immune-mediated inflammatory rheumatic diseases**. RMD Open. 2022 Jan;8(1):e001898. doi: 10.1136/rmdopen-2021-001898. PMID: 34987093.
https://pubmed.ncbi.nlm.nih.gov/34987093/

Angeli F, Reboldi G, Trapasso M, Verdecchia P. **Ipertensione dopo vaccinazione anti-COVID-19 [Hypertension after COVID-19 vaccination]**. G Ital Cardiol (Rome). 2022 Jan;23(1):10-14. Italian. doi: 10.1714/3715.37055. PMID: 34985455.
https://pubmed.ncbi.nlm.nih.gov/34985455/

Park SY, Lee KH. **Adult-onset Still's Disease after BNT162b2 mRNA COVID-19 Vaccine**. J Korean Med Sci. 2021 Dec 27;36(50):e344. doi: 10.3346/jkms.2021.36.e344. PMID: 34962116.
https://pubmed.ncbi.nlm.nih.gov/34962116/

Ajmeriya S, Kumar A, Karmakar S, Rana S, Singh H. **Neutralizing Antibodies and Antibody-Dependent Enhancement in COVID-19: A Perspective** [published online ahead of print, 2022 Feb 4]. J Indian Inst Sci. 2022;1-17. doi:10.1007/s41745-021-00268-8
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8814804/pdf/41745_2021_Article_268.pdf

Albalawi OM, Alomran MI, Alsagri GM, Althunian TA, Alshammari TM. **Analyzing the U.S. Post-marketing safety surveillance of COVID-19 vaccines**. Saudi Pharm J. 2022 Feb;30(2):180-184. doi: 10.1016/j.jsps.2021.12.008. Epub 2021 Dec 31. PMID: 35002372; PMCID: PMC8719360.
https://pubmed.ncbi.nlm.nih.gov/35002372/

Tan NJH, Tay KXJ, Wong SBJ, Nga ME. **COVID-19 post-vaccination lymphadenopathy: Report of cytological findings from fine needle aspiration biopsy**. Diagn Cytopathol. 2021;49(12):E467-E470. doi:10.1002/dc.24863
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8652983/

Papers Addressing Excess All Cause Mortality

The problem with determining the difference between causality and correlation is there may be many inputs to the system that can also lead to adverse effects and which may not be observable or even known. The benefit of excess all cause mortality (aka excess deaths) analysis is it doesn't care about inputs. It assumes ALL inputs and depends on a historical trend to determine if more recent outcomes

are falling out of line with the trend. So at least several researchers in public health have turned to this tool.

An extraordinary number of people died in the first quarter of 2022, April 25, 2022 https://hagstofa.is/utgafur/frettasafn/mannfjoldi/mannfjoldinn-a-1-arsfjordungi-2022/

Christopher J. Ruhm, **Excess deaths in the United States during the first year of COVID-19**, Preventive Medicine, Volume 162, 2022, 107174, ISSN 0091-7435, https://doi.org/10.1016/j.ypmed.2022.107174 https://www.sciencedirect.com/science/article/pii/S0091743522002237

Calvin A. Ackley, Dielle J. Lundberg, Lei Ma, Irma T. Elo, Samuel H. Preston, Andrew C. Stokes, **County-level estimates of excess mortality associated with COVID-19 in the United States**, SSM - Population Health, Volume 17, 2022, 101021, ISSN 2352-8273, https://doi.org/10.1016/j.ssmph.2021.101021 https://www.sciencedirect.com/science/article/pii/S2352827321002962

Paglino E, Lundberg DJ, Cho A, Wasserman JA, Raquib R, Luck AN, Hempstead K, Bor J, Elo IT, Preston SH, Stokes AC. **Excess all-cause mortality across counties in the United States, March 2020 to December 2021**. medRxiv [Preprint]. 2022 May 17:2022.04.23.22274192. doi: 10.1101/2022.04.23.22274192. PMID: 35547848; PMCID: PMC9094106. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9094106/

Karlinsky A, Kobak D. **The World Mortality Dataset: Tracking excess mortality across countries during the COVID-19 pandemic**. medRxiv [Preprint]. 2021 Jun 4:2021.01.27.21250604. doi: 10.1101/2021.01.27.21250604. Update in: Elife. 2021 Jun 30;10: PMID: 33532789; PMCID: PMC7852240. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7852240/

Denis G Rancourt, Marine Baudin, Jérémie Mercier, **COVID-Period Mass Vaccination Campaign and Public Health Disaster in the USA From age/state-resolved all-cause mortality by time, age-resolved vaccine delivery by time, and socio-geo-economic data**, August 2022, DOI: 10.13140/RG.2.2.12688.28164, Project: Science reviews relevant to COVID-19, Lab: Jérémie Mercier's Lab

Zhou F, Hu TJ, Zhang XY, Lai K, Chen JH, Zhou XH. **The association of intensity and duration of non-pharmacological interventions and implementation of vaccination with COVID-19 infection, death, and excess mortality: Natural experiment in 22 European countries**. J Infect Public Health. 2022 May;15(5):499-507. doi: 10.1016/j.jiph.2022.03.011. Epub 2022 Mar 24. PMID: 35429788; PMCID: PMC8944114. https://pubmed.ncbi.nlm.nih.gov/35429788/

Kirpich A, Shishkin A, Weppelmann TA, Tchernov AP, Skums P, Gankin Y. **Excess mortality in Belarus during the COVID-19 pandemic as the case study of a country with limited non-pharmaceutical interventions and limited reporting**. Sci Rep. 2022 Mar 31;12(1):5475. doi: 10.1038/s41598-022-09345-z. PMID: 35361826. https://pubmed.ncbi.nlm.nih.gov/35361826/

Peretz C, Rotem N, Keinan-Boker L, Furshpan A, Green M, Bitan M, Steinberg DM. **Excess mortality in Israel associated with COVID-19 in 2020-2021 by age group and with estimates based on daily mortality patterns in 2000-2019**. Int J Epidemiol. 2022 Mar 31:dyac047. doi: 10.1093/ije/dyac047. Epub ahead of print. PMID: 35356971. https://pubmed.ncbi.nlm.nih.gov/35356971/

Asta F, Michelozzi P, De Sario M, Santelli E, Bauleo L, Cozzi I, Vairo F, Davoli M, Porta D. **Impatto dell'epidemia di COVID-19 sulla mortalità totale e per causa a Roma nel 2020 [Impact of the COVID-19 epidemic on total and cause-specific mortality in Rome (Italy) in 2020].** Epidemiol Prev. 2022 Jan-Apr;46(1-2):59-67. Italian. doi: 10.19191/EP22.1-2.A003.003. PMID: 35354268. https://pubmed.ncbi.nlm.nih.gov/35354268/

Karlinsky A. **Estimating national excess mortality from subnational data: application to Argentina.** Rev Panam Salud Publica. 2022 Mar 23;46:e19. doi: 10.26633/RPSP.2022.19. PMID: 35350453; PMCID: PMC8948443. https://pubmed.ncbi.nlm.nih.gov/35350453/

Kiang MV, Acosta RJ, Chen YH, Matthay EC, Tsai AC, Basu S, Glymour MM, Bibbins-Domingo K, Humphreys K, Arthur KN. **Sociodemographic and geographic disparities in excess fatal drug overdoses during the COVID-19 pandemic in California: A population-based study.** Lancet Reg Health Am. 2022 Jul;11:100237. doi: 10.1016/j.lana.2022.100237. Epub 2022 Mar 19. PMID: 35342895; PMCID: PMC8934030. https://pubmed.ncbi.nlm.nih.gov/35342895/

Glei DA. **The US Midlife Mortality Crisis Continues: Excess Cause-Specific Mortality During 2020.** Am J Epidemiol. 2022 Mar 24:kwac055. doi: 10.1093/aje/kwac055. Epub ahead of print. PMID: 35333293. https://pubmed.ncbi.nlm.nih.gov/35333293/

Walkowiak MP, Walkowiak D. **Underestimation in Reporting Excess COVID-19 Death Data in Poland during the First Three Pandemic Waves.** Int J Environ Res Public Health. 2022 Mar 20;19(6):3692. doi: 10.3390/ijerph19063692. PMID: 35329378; PMCID: PMC8954142. https://pubmed.ncbi.nlm.nih.gov/35329378/

Ramírez-Soto MC, Ortega-Cáceres G. **Analysis of Excess All-Cause Mortality and COVID-19 Mortality in Peru: Observational Study.** Trop Med Infect Dis. 2022 Mar 5;7(3):44. doi: 10.3390/tropicalmed7030044. PMID: 35324591; PMCID: PMC8950420. https://pubmed.ncbi.nlm.nih.gov/35324591/

'Spikopathy' – Death by spike protein

By this time most of the world is somewhat familiar with the basic morphology of the SARS-Cov-2 corona virus and particularly the 'spike protein', the small flower-like structures that cover the surface of the virus. These structures are known to be the means by which the virus attaches itself to the host cell, and through a process called endocytosis, injects viral mRNA into the cell to hijack the cell's protein factory to produce replicas of the virus. The mechanism of the mRNA vaccines also hijacks the cell's protein factory, but rather than producing the full virus, only the spike protein is expressed to stimulate immune response.

Peter McCullough recently claimed[41] that the COVID-19 vaccine-produced Spike protein (aka S protein) is at least as pathogenic, if not more as the Spike protein that exists on the SARS-CoV-2 virus. The presence of spike protein in the body, long after covid infection might explain 'long covid' manifesting in many organ systems of the body. So you really have to ask, if the spike protein is pathogenic, why on earth would scientists and vaccine developers dare to use it to stimulate immune response?

[41] https://www.americaoutloud.com/accumulating-spike-protein-threatens-the-health-of-billions/

A casual search on the internet asking the question: "Is the covid-19 spike protein cytotoxic?" results in a barrage of 'fact checker' websites that largely reject any position that spike protein might have toxic effects on cells. A Wikipedia page[42] titled "Coronavirus spike protein" includes a paragraph labeled "Misinformation" where it's claimed the spike protein from vaccine is NOT cytotoxic:

> *"During the COVID-19 pandemic, anti-vaccination misinformation about COVID-19 circulated on social media platforms related to the spike protein's role in COVID-19 vaccines. Spike proteins were said to be dangerously "cytotoxic" and mRNA vaccines containing them therefore in themselves dangerous. Spike proteins are not cytotoxic or dangerous. Spike proteins were also said to be "shed" by vaccinated people, in an erroneous allusion to the phenomenon of vaccine-induced viral shedding, which is a rare effect of live-virus vaccines unlike those used for COVID-19. "Shedding" of spike proteins is not possible"* [6 September 2022]

But Wikipedia's only two references cited to support this assertion are NOT scientific publications, rather more 'waving arm' fact checker type articles without substantiated references. It seems authors, and the fact checkers are casually dismissing this possibility and neglected other resources that indeed refer to the spike protein as toxic or pathogenic such as this paper published in Microorganisms[43]:

> *"... other properties of spike protein, such as toxicity, can intensify the pathogenicity of SARS-CoV-2. For example, the spike protein of SARS-CoV-2 can induce coagulation of the platelets in the blood stream of severely infected patients"*
>
> and
>
> *"Apart from the toxicity of the S protein, the S1 domain is highly mutable and may not be a suitable candidate [*Delta & Lambda*] for drug targeting"*
>
> and
>
> *"Toxicity of the S protein to stimulate thrombosis is the notable concern in current mRNA and adenovirus vaccines which express the S protein. Toxicity of the S protein can result in stimulation of platelet activity and the release of coagulation factors, which may cause thrombosis in infected individuals. Due to high mutation in the S protein, which may cause immune escape in new variants and a toxicity property, the investigation of alternative proteins or treatment other than spike-based vaccines to stimulate an immune response is suggested"*

In March of 2021, Lei et al[44] published the results of an *in-vivo* study (mice) revealing the impact of S protein on mitochondrial function:

> *"Confocal images of ECs treated with S1 protein revealed increased mitochondrial fragmentation, indicating altered mitochondrial dynamic"*

More specifically, they measured and found reduced basal mitochondrial respiration, ATP production, and maximal respiration as a result of introducing the S protein. They concluded for the SARS-Cov-2 virion that:

> *" ... S protein alone can damage endothelium, manifested by impaired mitochondrial function".*

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[42] https://en.wikipedia.org/wiki/Coronavirus_spike_protein

[43] Moghaddar M, et al. **Severity, Pathogenicity and Transmissibility of Delta and Lambda Variants of SARS-CoV-2, Toxicity of Spike Protein and Possibilities for Future Prevention of COVID-19**. Microorganisms. 2021; 9(10):2167. https://doi.org/10.3390/microorganisms9102167

[44] https://www.ahajournals.org/doi/10.1161/CIRCRESAHA.121.318902

So the spike glycoprotein molecule alone from the SARS-Cov-2 virus can damage endothelial cells, cells that exist in the tissues of many critical organ systems throughout the body including heart muscle, kidneys and liver.

To better appreciate the consequences of this outcome, one needs to understand the essential role of mitochondria; subcellular structures that exist within every cell of the body. Mitochondria are the power plants of cellular respiration. They are dynamic *organelles* capable of changing their organization and shape based on intracellular and extracellular signals to optimize respiration. By balancing cycles of fusion and fission, mitochondria can regulate their morphology. ***Mitochondrial fragmentation*** is the result of decreased fusion and increased fission in mitochondria. It is characterized by a large number of smaller mitochondria—as opposed to a network of highly interconnected and elongated mitochondria, which is the product of increased fusion.

Mitochondrial fragmentation is a necessary function for mitophagy (the elimination of mitochondria in removal of naturally dying cells), since smaller mitochondria are more easily engulfed by auto-phagosomes than larger ones and require less energy to be auto-phagocytosed. The fragmented state predominates during periods of high stress as well as before and after the release of apoptogenic factors which signal for cell death (apoptosis). Another study suggests mounting evidence that mitochondrial dysfunction (fragmentation) is also an early and causal event in neurodegeneration[45]. Many of the adverse events resulting from COVID-19 vaccination and accounted for in this report involve neurogenic disease.

On August 18 a self-published paper, *Vascular and organ damage induced by mRNA vaccines: irrefutable proof of causality*[46] was issued through social media channels. The authors, Michael Palmer, MD and Sucharit Bhakdi, MD, are well respected doctors with many years of experience and knowledge however they are unable to publish after being black-balled by institutional publication venues. Bhakdi and Palmer make a clear argument the spike protein is the central factor of pathology from the vaccines, and indeed they appear to have made a convincing connection between the spike protein and vasculature damage. "*Vaccine-induced expression of the spike protein induces autoimmune-like inflammation*" and that can lead to organ damage and death. The website hosting the paper offers a good point to point summary of the paper:

1. Most of the evidence presented here is from the work of pathologist Prof. Arne Burkhardt, MD
2. Pfizer's own animal experiments show that the vaccine quickly distributes throughout the body
3. Expression of viral proteins can be detected with immunohistochemistry
4. Expression of spike protein in shoulder muscle after vaccine injection
5. Coronavirus particles contain two prominent proteins: spike (S) and nucleocapsid (N)
6. Infected persons express the nucleocapsid protein (and also the spike protein)
7. Injected persons express only the spike protein, which implicates the vaccine
8. Expression of spike protein within the walls of small blood vessels
9. Endothelial stripping and destruction of a small blood vessel after vaccination
10. A crack in the wall of the aorta, lined by clusters of lymphocytes, leading to aortic rupture
11. Healthy heart muscle tissue, and lymphocytic myocarditis
12. Lymphocytic infiltration and proliferative inflammation in lung tissue
13. Vaccine-induced expression of spike protein in a bronchial biopsy nine months after vaccination
14. The Pfizer vaccine mRNA gets copied ("reverse-transcribed") into DNA and inserted into the cellular genome

In their summary the investigators claim their evidence demonstrates the complete chain of causation:

- Injection
- rapid distribution of the vaccine through the bloodstream,
- widespread spike protein expression, prominently in blood vessels, and
- autoimmune-like inflammation and organ damage.

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[45] Knott, A., Perkins, G., Schwarzenbacher, R. et al. Mitochondrial fragmentation in neurodegeneration. Nat Rev Neurosci 9, 505–518 (2008). https://doi.org/10.1038/nrn2417

[46] https://doctors4covidethics.org/vascular-and-organ-damage-induced-by-mrna-vaccines-irrefutable-proof-of-causality/

Lastly, a late breaking study published by Italian doctors comparing blood samples between vaccinated and unvaccinated patients (Cepelli et al) show 94% of the vaccinated sample (over 1000 subjects) showed aggregation of erythrocytes and the presence of particles of various shapes and sizes of unclear origin one month after the mRNA inoculation. The doctors claim to have replicated the work of a Korean group (Lei et al referenced above) having observed similar findings however improved by the use of dark-field microscopy. There were 948 vaccinated abnormal cases where they observed "*tubular/fibrous formations and frequently also crystalline and lamellar formations with extremely complex but consistently similar morphologies*". The paper [7] is another indictment of many on the safety of Pfizer and Moderna mRNA COVID-19 vaccines. This result SHOULD cause great alarm. The authors speculate that the spike protein, among other vaccine components may be the cause of the coagulation observed in their blood samples. They conclude

> *"..., such abrupt changes as we have documented in the peripheral blood profile of 948 patients have never been observed after inoculation by any vaccines in the past according to our clinical experience. The sudden transition, usually at the time of a second mRNA from a state of perfect normalcy to a pathological one, with accompanying hemolysis, visible packing and stacking of red blood cells in conjunction with the formation of gigantic conglomerate foreign structures, some of them appearing as graphene family super structures, is unprecedented. Such phenomena have never been seen before"*

The 'stacking' of red blood cells is normally observed however in capillary samples where red blood cells self-assemble to properly allow flow through the tight space of capillary vasculature. This is known as the Rouleaux effect. Rouleux stacking should never occur in in the larger vessles. Results indicate the presence of something foreign in the blood or a change in physiology signaling the stacking. Spikopathy?

References

[1] Theoharides TC. **Could SARS-CoV-2 Spike Protein Be Responsible for Long-COVID Syndrome**? Mol Neurobiol. 2022 Mar;59(3):1850-1861. doi: 10.1007/s12035-021-02696-0. Epub 2022 Jan 13. PMID: 35028901; PMCID: PMC8757925.

[2] De Michele M, et al. **Evidence of SARS-CoV-2 spike protein on retrieved thrombi from COVID-19 patients.** J Hematol Oncol. 2022 Aug 16;15(1):108. doi: 10.1186/s13045-022-01329-w. PMID: 35974404; PMCID: PMC9380658.

[3] Imig JD. **SARS-CoV-2 spike protein causes cardiovascular disease independent of viral infection**. Clin Sci (Lond). 2022 Mar 31;136(6):431-434. doi: 10.1042/CS20220028. PMID: 35348182; PMCID: PMC8965847.

[4] Avolio E, et al. **The SARS-CoV-2 Spike protein disrupts human cardiac pericytes function through CD147 receptor-mediated signalling: a potential non-infective mechanism of COVID-19 microvascular disease**. Clin Sci (Lond). 2021 Dec 22;135(24):2667-2689. doi: 10.1042/CS20210735. PMID: 34807265; PMCID: PMC8674568.

[5] Zoe Swank, et al., **Persistent circulating SARS-CoV-2 spike is associated with post-acute COVID-19 sequelae,** medRxiv 2022.06.14.22276401; doi: https://doi.org/10.1101/2022.06.14.22276401 [preprint]

[6] Sofie Nyström and Per Hammarström, **Amyloidogenesis of SARS-CoV-2 Spike Protein**, Journal of the American Chemical Society 2022 144 (20), 8945-8950, DOI: 10.1021/jacs.2c03925

[7] Benzi Cipelli, R., Giovannini, F., & Pisano, G. (2022). **Dark -Field Microscopic Analysis on the Blood of 1,006 Symptomatic Persons After Anti-COVID mRNA Injections from Pfizer/BioNtech or Moderna**. International Journal of Vaccine Theory, Practice, and Research, 2(2), 385–444. https://doi.org/10.56098/ijvtpr.v2i2.47

[8] Trougakos, I. P. et al, (2022). **Adverse effects of COVID 19 mRNA vaccines: The spike hypothesis**. Trends in Molecular Medicine , 28 (7), 542 554. https://doi.org/10.1016/j.molmed.2022.04.007

Revisiting Efficacy of the COVID-19 Vaccines

The fact that the COVID-19 vaccines are causing significant injury and death, and accepting the flawed policy that it's ok to injure some to protect others is an egregious act by public health officials. But wait, there's more. We can still ask the basic question: are the vaccines really providing protection? This question more pertinent than ever considering the vaccines were designed to vector the initial Wuham strain of SARS-Cov2, which no longer exists.

Even the phase 3 Pfizer and Moderna vaccine trials, accepted by the FDA is flawed since the studies used deceptive relative risk reduction (RRR) metrics. In a paper by Brown[47] Brown demonstrated in simple language and mathematics that the number needed to vaccinate to prevent one COVID-19 infection was roughly between 80 to 120 persons. That was for the initial Wuham strain. Just how effective now are the vaccines at preventing infection or else the severity of infection? More recently the EPOCH Times[48] addressed this very question by listing summaries of 44 published papers that collectively show evidence the vaccines are NOT effective. The article summaries and links to the original papers are offered here as evidence the vaccines were never effective:

1) Gazit et al. out of Israel showed that "SARS-CoV-2-naïve vaccinees had a **13-fold (95% CI, 8-21) increased risk for breakthrough infection with the Delta variant** compared to those previously infected." When adjusting for the time of disease/vaccine, there was a 27-fold increased risk (95% CI, 13-57).

2) Ignoring the risk of infection, given that someone was infected, Acharya et al. found "**no significant difference in cycle threshold values between vaccinated and unvaccinated**, asymptomatic and symptomatic groups infected with SARS-CoV-2 Delta."

3) Riemersma et al. found "**no difference in viral loads when comparing unvaccinated individuals** to those who have vaccine "breakthrough" infections. Furthermore, individuals with vaccine breakthrough infections frequently test positive with viral loads consistent with the ability to shed infectious viruses." Results indicate that "if vaccinated individuals become infected with the delta variant, they may be sources of SARS-CoV-2 transmission to others." They reported "low Ct values

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[47] Brown RB. **Outcome Reporting Bias in COVID-19 mRNA Vaccine Clinical Trials**. Medicina (Kaunas). 2021 Feb 26;57(3):199. doi: 10.3390/medicina57030199. PMID: 33652582; PMCID: PMC7996517.

[48] Paul Alexander of the Brownstone Institute, **44 Studies on Vaccine Efficacy That Raise Doubts on Vaccine Mandates,** March 19.2022 https://www.theepochtimes.com/44-studies-on-vaccine-efficacy-that-raise-doubts-on-vaccine-mandates_4348494.html?est=gYnejqpgBhlRYe8DWNMS6DtsftRxBdG34hlgoSzz5Zdb5BcGfM82X8DjTvXf1y0nLRk3cW4%3D

(<25) in 212 of 310 fully vaccinated (68%) and 246 of 389 (63%) unvaccinated individuals. Testing a subset of these low-Ct samples revealed infectious SARS-CoV-2 in 15 of 17 specimens (88%) from unvaccinated individuals and 37 of 39 (95%) from vaccinated people."

4) In a study from Qatar, Chemaitelly et al. reported vaccine efficacy (Pfizer) against severe and fatal disease, with efficacy in the 85-95% range at least until 24 weeks after the second dose. As a contrast, **the efficacy against infection waned down to around 30% at 15-19 weeks after the second dose**.

5) From Wisconsin, Riemersma et al. reported that **vaccinated individuals who get infected with the Delta variant can transmit SARS-CoV-2 to others**. They found an elevated viral load in the unvaccinated and vaccinated symptomatic persons (68% and 69% respectively, 158/232 and 156/225). Moreover, in the asymptomatic persons, they uncovered elevated viral loads (29% and 82% respectively) in the unvaccinated and the vaccinated respectively. This suggests that the vaccinated can be infected, harbor, cultivate, and transmit the virus readily and unknowingly.

6) Subramanian reported that "at the country-level, there appears to be no discernable relationship between percentage of population fully vaccinated and new COVID-19 cases." When comparing 2947 counties in the United States, there were slightly less cases in more vaccinated locations. In other words, there is no clear discernable relationship.

7) Chau et al. looked at transmission of SARS-CoV-2 Delta variant among vaccinated healthcare workers in Vietnam. Of 69 healthcare workers that tested positive for SARS-CoV-2, 62 participated in the clinical study, all of whom recovered. For 23 of them, complete-genome sequences were obtained, and all belonged to the Delta variant. "Viral loads of breakthrough Delta variant infection cases were 251 times higher than those of cases infected with old strains detected between March-April 2020".

8) In Barnstable, Massachusetts, Brown et al found that among **469 cases of COVID-19, 74% were fully vaccinated**, and that "**the vaccinated had on average more virus in their nose than the unvaccinated who were infected.**"

9) Reporting on a nosocomial hospital outbreak in Finland, Hetemäli et al. observed that "both symptomatic and asymptomatic infections were found among vaccinated health care workers, and secondary transmission occurred from those with symptomatic infections despite use of personal protective equipment."

10) In a hospital outbreak investigation in Israel, Shitrit et al. observed "high transmissibility of the SARS-CoV-2 Delta variant among twice vaccinated and masked individuals." They added that "**this suggests some waning of immunity**, albeit still providing protection for individuals without comorbidities."

11) In the UK COVID-19 vaccine Surveillance Report for week #42, it was noted that there is "waning of the N antibody response over time" and "that N antibody levels appear to be lower in individuals who acquire infection following 2 doses of vaccination." The same report (Table 2, page 13), shows the in the older age groups above 30, the double vaccinated persons have greater infection risk than the unvaccinated, presumably because **the latter group include more people with stronger natural immunity from prior Covid disease**. As a contrast, the vaccinated people had a lower risk of death than the unvaccinated, across all age groups, indicating that vaccines provide more protection against death than against infection. See also UK PHE reports 43, 44, 45, 46 for similar data.

12) In Israel, Levin et al. "conducted a 6-month longitudinal prospective study involving vaccinated health care workers who were tested monthly for the presence of anti-spike IgG and neutralizing antibodies". They found that "six months after receipt of the second dose of the BNT162b2 vaccine, humoral response was substantially decreased, especially among men, among persons 65 years of age or older, and among persons with immunosuppression."

13) In a study from New York State, Rosenberg et al. reported that "During May 3–July 25, 2021, the overall age-adjusted vaccine effectiveness against hospitalization in New York was relatively stable 89.5%–95.1%). The overall age-adjusted vaccine effectiveness against infection for all New York adults declined from 91.8% to 75.0%."

14) Suthar et al. noted that "Our data demonstrate a **substantial waning of antibody responses** and T cell immunity to SARS-CoV-2 and its variants, at 6 months following the second immunization with the BNT162b2 vaccine."

15) In a study from Umeå University in Sweden, Nordström et al. observed that "vaccine effectiveness of BNT162b2 against infection waned progressively from 92% (95% CI, 92-93, P<0·001) at day 15-30 to 47% (95% CI, 39-55, P<0·001) at day 121-180, and from day 211 and onwards **no effectiveness could be detected** (23%; 95% CI, -2-41, P=0·07)."

16) Yahi et al. have reported that "in the case of the Delta variant, neutralizing antibodies have a decreased affinity for the spike protein, whereas facilitating antibodies display a strikingly increased affinity. Thus, antibody dependent enhancement may be a concern for people receiving vaccines based on the original Wuhan strain spike sequence."

17) Goldberg et al. (BNT162b2 Vaccine in Israel) reported that "immunity against the delta variant of SARS-CoV-2 waned in all age groups a few months after receipt of the second dose of vaccine."

18) Singanayagam et al. examined the transmission and viral load kinetics in vaccinated and unvaccinated individuals with mild delta variant infection in the community. They found that (in 602 community contacts (identified via the UK contract-tracing system) of 471 UK COVID-19 index cases

were recruited to the Assessment of Transmission and Contagiousness of COVID-19 in Contacts cohort study and contributed 8145 upper respiratory tract samples from daily sampling for up to 20 days) "vaccination reduces the risk of delta variant infection and accelerates viral clearance. Nonetheless, fully vaccinated individuals with breakthrough infections have peak viral load similar to unvaccinated cases and can efficiently transmit infection in household settings, including to fully vaccinated contacts."

19) Keehner et al. in NEJM, has recently reported on the resurgence of SARS-CoV-2 infection in a highly vaccinated health system workforce. Vaccination with mRNA vaccines began in mid-December 2020; by March, 76% of the workforce had been fully vaccinated, and by July, the percentage had risen to 87%. Infections had decreased dramatically by early February 2021..."coincident with the end of California's mask mandate on June 15 and the rapid dominance of the B.1.617.2 (delta) variant that first emerged in mid-April and accounted for over 95% of UCSDH isolates by the end of July, infections increased rapidly, including cases among fully vaccinated persons...researchers reported that the "dramatic change in vaccine effectiveness from June to July is likely to be due to both the emergence of the delta variant and waning immunity over time."

20) Juthani et al. sought to describe the impact of vaccination on admission to hospital in patients with confirmed SARS-CoV-2 infection using real-world data collected by the Yale New Haven Health System. "Patients were considered fully vaccinated if the final dose (either second dose of BNT162b2 or mRNA-1273, or first dose of Ad.26.COV2.S) was administered at least 14 days before symptom onset or a positive PCR test for SARS-CoV-2. In total, we identified 969 patients who were admitted to a Yale New Haven Health System hospital with a confirmed positive PCR test for SARS-CoV-2"...Researchers reported "a higher number of patients with severe or critical illness in those who received the BNT162b2 vaccine than in those who received mRNA-1273 or Ad.26.COV2.S..."

21) A very recent study published by the CDC reported that a majority (53%) of patients who were hospitalized with Covid-19-like illnesses were already fully vaccinated with two-dose RNA shots. Table 1 reveals that among the 20,101 immunocompromised adults hospitalized with Covid-19, 10,564 (53%) were fully-vaccinated with the Pfizer or Moderna vaccine (Vaccination was defined as having received exactly 2 doses of an mRNA-based COVID-19 vaccine ≥14 days before the hospitalization index date, which was the date of respiratory specimen collection associated with the most recent positive or negative SARS-CoV-2 test result before the hospitalization or the hospitalization date if testing only occurred after the admission). This highlights the ongoing challenges faced with Delta breakthrough when vaccinated.

22) Eyre, 2021 looked at The impact of SARS-CoV-2 vaccination on Alpha & Delta variant transmission. They reported that "while vaccination still lowers the risk of infection, similar viral loads in vaccinated and unvaccinated individuals infected with Delta question how much vaccination prevents onward transmission... transmission reductions declined over time since second vaccination, for Delta reaching similar levels to unvaccinated individuals by 12 weeks for ChAdOx1 and attenuating substantially for BNT162b2. Protection from vaccination in contacts also declined in the 3 months after second vaccination...vaccination reduces transmission of Delta, but by less than the Initial Wuham strain."

23) Levine-Tiefenbrun, 2021 looked at Viral loads of Delta-variant SARS-CoV-2 breakthrough infections after vaccination and booster with BNT162b2, and reported the viral load reduction effectiveness declines with time after vaccination, "significantly decreasing at 3 months after vaccination and effectively vanishing after about 6 months."

24) Puranik, 2021 looked at a Comparison of two highly-effective mRNA vaccines for COVID-19 during periods of Alpha and Delta variant prevalence, reporting "In July, vaccine effectiveness against hospitalization has remained high (mRNA-1273: 81%, 95% CI: 33–96.3%; BNT162b2: 75%, 95% CI: 24–93.9%), but effectiveness against infection was lower for both vaccines (mRNA-1273: 76%, 95% CI: 58–87%; BNT162b2: 42%, 95% CI: 13–62%), with a more pronounced reduction for BNT162b2."

25) Saade, 2021 looked at Live virus neutralization testing in convalescent patients and subjects vaccinated against 19A, 20B, 20I/501Y.V1 and 20H/501Y.V2 isolates of SARS-CoV-2, and reported as "Assessed the neutralizing capacity of antibodies to prevent cell infection, using a live virus neutralization test with different strains [19A (initial one), 20B (B.1.1.241 lineage), 20I/501Y.V1 (B.1.1.7 lineage), and 20H/501Y.V2 (B.1.351 lineage)] in serum samples collected from different populations: two-dose vaccinated COVID-19-naive healthcare workers (HCWs; Pfizer-BioNTech BNT161b2), 6-months post mild COVID-19 HCWs, and critical COVID-19 patients... finding of the present study is the reduced neutralizing response observed towards the 20H/501Y.V2 variant in fully immunized subjects with the BNT162b2 vaccine by comparison to the wild type and 20I/501Y.V1 variant."

26) Canaday, 2021 looked at Significant reduction in humoral immunity among healthcare workers and nursing home residents 6 months after COVID-19 BNT162b2 mRNA vaccination, reporting "Anti-spike, anti-RBD and neutralization levels dropped more than 84% over 6 months' time in all groups irrespective of prior SARS-CoV-2 infection. At 6 months post-vaccine, 70% of the infection-naive NH residents had neutralization titers at or below the lower limit of detection compared to 16% at 2 weeks after full vaccination. These data demonstrate a significant reduction in levels of antibody in all

groups. In particular, those infection-naive NH residents had lower initial post-vaccination humoral immunity immediately and exhibited the greatest declines 6 months later."

27) Israel, 2021 looked at Large-scale study of antibody titer decay following BNT162b2 mRNA vaccine or SARS-CoV-2 infection, and reported as "To determine the kinetics of SARS-CoV-2 IgG antibodies following administration of two doses of BNT162b2 vaccine, or SARS-CoV-2 infection in unvaccinated individuals...In vaccinated subjects, antibody titers decreased by up to 40% each subsequent month while in convalescents they decreased by less than 5% per month. Six months after BNT162b2 vaccination 16.1% subjects had antibody levels below the sero-positivity threshold of <50 AU/mL, while only 10.8% of convalescent patients were below <50 AU/mL threshold after 9 months from SARS-CoV-2 infection."

28) Eyran, 2020 examined The longitudinal kinetics of antibodies in COVID-19 recovered patients over 14 months, and found "a significantly faster decay in naïve vaccinees compared to recovered patients suggesting that the serological memory following natural infection is more robust compared to vaccination. Our data highlights the differences between serological memory induced by natural infection vs. vaccination."

29) Salvatore et al. examined the transmission potential of vaccinated and unvaccinated persons infected with the SARS-CoV-2 Delta variant in a federal prison, July-August 2021. They found a total of 978 specimens were provided by 95 participants, "of whom 78 (82%) were fully vaccinated and 17 (18%) were not fully vaccinated....clinicians and public health practitioners should consider vaccinated persons who become infected with SARS-CoV-2 to be no less infectious than unvaccinated persons."

30) Andeweg et al. analyzed 28,578 sequenced SARS-CoV-2 samples from individuals with known immune status obtained through national community testing in the Netherlands from March to August 2021. They found evidence for an "increased risk of infection by the Beta (B.1.351), Gamma (P.1), or Delta (B.1.617.2) variants compared to the Alpha (B.1.1.7) variant after vaccination. No clear differences were found between vaccines. However, the effect was larger in the first 14-59 days after complete vaccination compared to 60 days and longer. In contrast to vaccine-induced immunity, no increased risk for reinfection with Beta, Gamma or Delta variants relative to Initial Wuham strain was found in individuals with infection-induced immunity."

31) Di Fusco et al. conducted an evaluation of COVID-19 vaccine breakthrough infections among immunocompromised patients fully vaccinated with BNT162b2. "COVID-19 vaccine breakthrough infections were examined in fully vaccinated (≥14 days after 2nd dose) IC individuals (IC cohort), 12 mutually exclusive IC condition groups, and a non-IC cohort." They found that"of 1,277,747 individuals ≥16 years of age who received 2 BNT162b2 doses, 225,796 (17.7%) were identified as IC

(median age: 58 years; 56.3% female). The most prevalent IC conditions were solid malignancy (32.0%), kidney disease (19.5%), and rheumatologic/inflammatory conditions (16.7%). Among the fully vaccinated IC and non-IC cohorts, a total of 978 breakthrough infections were observed during the study period; 124 (12.7%) resulted in hospitalization and 2 (0.2%) were inpatient deaths. IC individuals accounted for 38.2% (*N* = 374) of all breakthrough infections, 59.7% (*N* = 74) of all hospitalizations, and 100% (*N* = 2) of inpatient deaths. The proportion with breakthrough infections was 3 times higher in the IC cohort compared to the non-IC cohort (*N* = 374 [0.18%] vs. *N* = 604 [0.06%]; unadjusted incidence rates were 0.89 and 0.34 per 100 person-years, respectively."

32) Mallapaty (NATURE) reported that the protective effect of being vaccinated if you already had infection is "relatively small, and dwindles alarmingly at three months after the receipt of the second shot." Mallapaty further adds what we have been warning the public health community which is that persons infected with Delta have about the same levels of viral genetic materials in their noses "regardless of whether they'd previously been vaccinated, suggesting that vaccinated and unvaccinated people might be equally infectious." Mallapaty reported on testing data from 139,164 close contacts of 95,716 people infected with SARS-CoV-2 between January and August 2021 in the United Kingdom, and at a time when the Alpha and Delta variants were competing for dominance. The finding was that "although the vaccines did offer some protection against infection and onward transmission, Delta dampened that effect. A person who was fully vaccinated and then had a 'breakthrough' Delta infection was almost twice as likely to pass on the virus as someone who was infected with Alpha. And that was on top of the higher risk of having a breakthrough infection caused by Delta than one caused by Alpha."

33) Chia et al. reported that PCR cycle threshold (Ct) values were "similar between both vaccinated and unvaccinated groups at diagnosis, but viral loads decreased faster in vaccinated individuals. Early, robust boosting of anti-spike protein antibodies was observed in vaccinated patients, however, these titers were significantly lower against B.1.617.2 as compared with the wildtype vaccine strain."

34) Wilhelm et al. reported on reduced neutralization of SARS-CoV-2 omicron variant by vaccine sera and monoclonal antibodies. "*in vitro* findings using authentic SARS-CoV-2 variants indicate that in contrast to the currently circulating Delta variant, the neutralization efficacy of vaccine-elicited sera against Omicron was severely reduced highlighting T-cell mediated immunity as essential barrier to prevent severe COVID-19."

35) CDC reported on the details for 43 cases of COVID-19 attributed to the Omicron variant. They found that "34 (79%) occurred in persons who completed the primary series of an FDA-authorized or

approved COVID-19 vaccine ≥14 days before symptom onset or receipt of a positive SARS-CoV-2 test result."

36) Dejnirattisai et al. presented live neutralisation titres against SARS-CoV-2 Omicron variant, and examined it relative to neutralisation against the Victoria, Beta and Delta variants. They reported a significant drop in "neutralisation titres in recipients of both AZD1222 and BNT16b2 primary courses, with evidence of some recipients failing to neutralise at all."

37) Cele et al. assessed whether Omicron variant escapes antibody neutralization "elicited by the Pfizer BNT162b2 mRNA vaccine in people who were vaccinated only or vaccinated and previously infected." They reported that Omicron variant "still required the ACE2 receptor to infect but had extensive escape of Pfizer elicited neutralization."

38) Holm Hansen et al.'s Denmark study looked at vaccine effectiveness against SARS-CoV-2 infection with the Omicron or Delta variants following a two-dose or booster BNT162b2 or mRNA-1273 vaccination series. A key finding was reported as "VE against Omicron was 55.2% initially following primary BNT162b2 vaccination, but waned quickly thereafter. Although estimated with less precision, VE against Omicron after primary mRNA-1273 vaccination similarly indicated a rapid decline in protection. By comparison, both vaccines showed higher, longer-lasting protection against Delta." In other words, the vaccine that has failed against Delta is even far worse for Omicron. The table and figure below paint a devastating picture. See where the green dot is (Omicron variant) in the vertical lines (blue is Delta) and the 2 edges of the bars (upper and lower lips) 91 days out for Omicron (3 months). Both Pfizer and Moderna show negative efficacy for Omicron at 31 days (both are below the 'line of no effect' or '0'). The comparative table is even more devastating for it shows how much less vaccine effectiveness there is for Omicron. For example, at 1-30 days, Pfizer showed 55.2% effectiveness for Omicron versus 86.7% for Delta, and for the same period, Moderna showed 36.7% effectiveness for Omicron versus 88.2% for Delta.

39) UK reporting showed that boosters protect against symptomatic COVID-19 caused by Omicron for about 10 weeks; the UK Health Security Agency reported protection against symptomatic COVID-19 caused by the variant dropped from 70% to 45% following a Pfizer booster for those initially vaccinated with the shot developed by Pfizer with BioNTech. Specifically reporting by the UK Health Security Agency showed "Among those who received an AstraZeneca primary course, vaccine effectiveness was around 60% 2 to 4 weeks after either a Pfizer or Moderna booster, then dropped to 35% with a Pfizer booster and 45% with a Moderna booster by 10 weeks after the booster. Among those who received a Pfizer primary course, vaccine effectiveness was around 70% after a Pfizer

booster, dropping to 45% after 10-plus weeks and stayed around 70 to 75% after a Moderna booster up to 9 weeks after booster."

40) Buchan et al. used a test-negative design to assess vaccine effectiveness against OMICRON or DELTA variants (regardless of symptoms or severity) during November 22 and December 19, 2021. They included persons who had received at least 2 COVID-19 vaccine doses (with at least 1 mRNA vaccine dose for the primary series) and applied multivariable logistic regression modelling analysis to "estimate the effectiveness of two or three doses by time since the latest dose." They included 3,442 Omicron-positive cases, 9,201 Delta-positive cases, and 471,545 test-negative controls. Following 2 doses, "vaccine effectiveness against Delta infection declined steadily over time but recovered to 93% (95%CI, 92-94%) ≥7 days after receiving an mRNA vaccine for the third dose. In contrast, **receipt of 2 doses of COVID-19 vaccines was not protective against Omicron**. Vaccine effectiveness against Omicron was 37% (95%CI, 19-50%) ≥7 days after receiving an mRNA vaccine for the third dose."

41) Public Health Scotland COVID-19 & Winter Statistical Report (Publication date: 19 January 2022) provided startling data on page 38 (case rates), page 44 (hospitalization), and page 50 (deaths), showing that the vaccination has failed Delta but critically, is failing omicron. The 2nd inoculation data is of particular concern. Table 14 age-standardized case data is very troubling for it shows across the multiple weeks of study that across each dose (1 vs 2 vs 3 booster inoculations) that the vaccinated are greatly more infected than the unvaccinated, with the 2nd dose being alarmingly elevated (see grey rows). Age-standardized rates of acute hospital admissions are stunningly elevated after 2nd inoculation (over the unvaccinated) during January 2022. Looking at table 16 that reports on the number of confirmed COVID-19 related deaths by vaccination status, we again observe massive elevation in death at the 2ndinoculation. **This data indicates to us that the vaccine is associated with infection and is not optimally working against omicron and that the protection is limited, waning rapidly**.

42) The UK's COVID-19 vaccine surveillance report Week 3, 20 January 2022, raises very serious concern as to the failure of the vaccines on Delta (which is basically now being replaced by omicron for dominance) and omicron. When we look at table 9, page 34 (COVID-19 cases by vaccination status between week 51 2021 and week 2 2022), we see greater case numbers for the 2nd and 3rd inoculations. The important table on page 38, Figure 12 (unadjusted rates of COVID-19 infection, hospitalization and death in vaccinated and unvaccinated populations) shows us a continual pattern in the UK data over the last 2 to 3 to 4 months, with **the present reporting showing that persons in receipt of the 3rd inoculation (booster) at far greater risk of infection/cases than the unvaccinated** (30 years of age and above age strata).

43) In the recent UK Public Health surveillance reports Week 9, Week 8, as well as week 7 (UK COVID-19 vaccine surveillance report Week 7 17 February 2022), week 6 (COVID-19 vaccine surveillance report Week 6 10 February 2022) and week 5 for 2022 (COVID-19 vaccine surveillance report Week 5 3 February 2022) as well as the reports accumulated for 2021 since vaccine roll-out, **we see that the vaccinated are at higher risk of infection and especially for age groups above 18 years old, as well as hospitalization and even death**. This is particularly marked for those in receipt of double vaccinations. There is increased risk of death for those who are triple vaccinated and especially as age increases. The same pattern emerges in the Scottish data.

44.) Regev-Yochay et al. in Israel looked at (publication date March 16th 2022) the immunogenicity and safety of a fourth dose (4th) of either BNT162b2 (Pfizer–BioNTech) or mRNA-1273 (Moderna) administered 4 months after the third dose in a series of three BNT162b2 doses). This was an open-label, nonrandomized clinical study assessing the 4th dose in terms of need beyond the 3rd dose. Among the '1050 eligible health care workers enrolled in the Sheba HCW COVID-19 Cohort, 154 received the fourth dose of BNT162b2 and, 1 week later, 120 received mRNA-1273. For each participant, two age-matched controls were selected from the remaining eligible participants'. Overall, 25.0% of the participants in the control group were infected with the omicron variant, as compared with 18.3% of the participants in the BNT162b2 group and 20.7% of those in the mRNA-1273 group. **Vaccine efficacy against any SARS-CoV-2 infection was 30%** (95% confidence interval [CI], −9 to 55) for BNT162b2 and 11% (95% CI, −43 to 44) for mRNA-1273

The article concludes:

> *What these studies show, are that vaccines are important to reduce severe disease and death, but unable to prevent the disease from spreading and eventually infect[ing] most of us. That is, while the vaccines [may] provide individual benefits to the vaccinee, and especially to older high-risk people, the public benefit of universal vaccination is in grave doubt. As such, Covid vaccines should not be expected to contribute to eliminating the communal spread of the virus or the reaching of herd immunity. This unravels the rationale for vaccine mandates and passports.*

And here are other papers that address the concern on effectiveness of the COVID-19 vaccines:

Pilar T V Florentino, Tristan Millington, Thiago Cerqueira-Silva, Chris Robertson, Vinicius de Araújo Oliveira, Juracy B S Júnior, Flávia J O Alves, Gerson O Penna, Srinivasa Vital Katikireddi, Viviane S Boaventura, Guilherme L Werneck, Neil Pearce, Colin McCowan, Christopher Sullivan, Utkarsh Agrawal, Zoe Grange, Lewis D Ritchie, Colin R Simpson, Aziz Sheikh, Mauricio L Barreto, Igor Rudan, Manoel Barral-Netto, Enny S Paixão, **Vaccine effectiveness of two-dose BNT162b2 against symptomatic and**

severe COVID-19 among adolescents in Brazil and Scotland over time: a test-negative case-control , study, The Lancet, Infectious disease, August 8, 2022, https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(22)00451-0/fulltext

Pavan M, Bassani D, Sturlese M, Moro S. **From the Wuhan-Hu-1 strain to the XD and XE variants: is targeting the SARS-CoV-2 spike protein still a pharmaceutically relevant option against COVID-19?** J Enzyme Inhib Med Chem. 2022 Dec;37(1):1704-1714. doi: 10.1080/14756366.2022.2081847. PMID: 35695095. https://pubmed.ncbi.nlm.nih.gov/35695095/

Le Gars M, Hendriks J, Sadoff J, Ryser M, Struyf F, Douoguih M, Schuitemaker H. **Immunogenicity and efficacy of Ad26.COV2.S: An adenoviral vector-based COVID-19 vaccine**. Immunol Rev. 2022 Jun 11. doi: 10.1111/imr.13088. PMID: 35689434. https://pubmed.ncbi.nlm.nih.gov/35689434/ [49]

Ssemaganda A, Nguyen HM, Nuhu F, Jahan N, Card CM, Kiazyk S, Severini G, Keynan Y, Su RC, Ji H, Abrenica B, McLaren PJ, Ball TB, Bullard J, Van Caeseele P, Stein D, McKinnon LR. **Expansion of cytotoxic tissue-resident CD8+ T cells and CCR6+CD161+ CD4+ T cells in the nasal mucosa following mRNA COVID-19 vaccination**. Nat Commun. 2022 Jun 10;13(1):3357. doi: 10.1038/s41467-022-30913-4. PMID: 35688805. https://pubmed.ncbi.nlm.nih.gov/35688805/ [50]

Kouhpayeh H, Ansari H. **Adverse events following COVID-19 vaccination: A systematic review and meta-analysis**. Int Immunopharmacol. 2022 May 30;109:108906. doi: 10.1016/j.intimp.2022.108906. Epub ahead of print. PMID: 35671640; PMCID: PMC9148928. https://pubmed.ncbi.nlm.nih.gov/35671640/

Singh H, Dahiya N, Yadav M, Sehrawat N. **Emergence of SARS-CoV-2 New Variants and Their Clinical Significance**. Can J Infect Dis Med Microbiol. 2022 May 28;2022:7336309. doi: 10.1155/2022/7336309. PMID: 35669528; PMCID: PMC9167142. https://pubmed.ncbi.nlm.nih.gov/35669528/

> Singh et al: *These new strains occur due to unique mutations in the spike protein, which modify SARS-CoV-2 transmission and infection capabilities, limiting the efficacy of the COVID-19 vaccination. Hence, there is a need to find a potential vaccine against it.*

Buisson Y. **Covid-19, an unfinished story**. Presse Med. 2022 Jun 3:104131. doi: 10.1016/j.lpm.2022.104131. Epub ahead of print. PMID: 35667598. https://pubmed.ncbi.nlm.nih.gov/35667598/

Salari N, Vepa A, Daneshkhah A, Darvishi N, Ghasemi H, Khunti K, Mohammadi M. **Efficacy of COVID-19 vaccines by race and ethnicity**. Public Health. 2022 May 5;208:14-17. doi: 10.1016/j.puhe.2022.04.009. Epub ahead of print. PMID: 35660280; PMCID: PMC9069229. https://pubmed.ncbi.nlm.nih.gov/35660280/

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[49] Note this paper was supported by grants from Janssen Vaccines & Prevention B.V., NH/NIH HHS/United States, the National Institute of Allergy and Infectious Diseases and the Biomedical Advanced Research and Development Authority

[50] This study was supported by the Bill and Melinda Gates Foundation

Wang K, Wang L, Li M, Xie B, He L, Wang M, Zhang R, Hou N, Zhang Y, Jia F. **Real-Word Effectiveness of Global COVID-19 Vaccines Against SARS-CoV-2 Variants: A Systematic Review and Meta-Analysis**. Front Med (Lausanne). 2022 May 19;9:820544. doi: 10.3389/fmed.2022.820544. PMID: 35665358; PMCID: PMC9160927. https://pubmed.ncbi.nlm.nih.gov/35665358/

Leong C, Jin L, Kim D, Kim J, Teo YY, Ho TH. **Assessing the impact of novelty and conformity on hesitancy towards COVID-19 vaccines using mRNA technology**. Commun Med (Lond). 2022 May 31;2:61. doi: 10.1038/s43856-022-00123-6. PMID: 35664455; PMCID: PMC9156695. https://pubmed.ncbi.nlm.nih.gov/35664455/ [51]

Olliaro P, Torreele E, Vaillant M. **COVID-19 vaccine efficacy and effectiveness-the elephant (not) in the room**. Lancet Microbe. 2021 Jul;2(7):e279-e280. doi: 10.1016/S2666-5247(21)00069-0. Epub 2021 Apr 20. Erratum in: Lancet Microbe. 2021 Jul;2(7):e288. PMID: 33899038; PMCID: PMC8057721. https://pubmed.ncbi.nlm.nih.gov/33899038/

Dean Follmann, Holly E. Janes, Olive D. Buhule, Honghong Zhou, Bethany Girard, Kristen Marks, Karen Kotloff, Michaël Desjardins, Lawrence Corey, Kathleen M. Neuzil, Jacqueline M. Miller, Hana M. El Sahly, Lindsey R. Baden, **Anti-nucleocapsid antibodies following SARS-CoV-2 infection in the blinded phase of the mRNA-1273 Covid-19 vaccine efficacy clinical trial**, , medRxiv 2022.04.18.22271936; doi: https://doi.org/10.1101/2022.04.18.22271936

The Follmann study, et. al. looked at two sides of the Moderna Phase 3 vaccine trial: the vaccinated group and the control group. They looked at unvaccinated people having Covid, versus vaccinated people having so called "break-through Covid infections". The question that they asked, was: do the vaccinated acquire the same full-spectrum immunity as the unvaccinated? The answer was no. Vaccinated people were much LESS likely to develop broad natural immunity, compared to unvaccinated people. Discussed here: https://igorchudov.substack.com/p/moderna-knew-vaccinated-people-will?r=47l49&s=r&utm_campaign=post&utm_medium=email

Singanayagam A, Hakki S, Dunning J, Madon KJ, Crone MA, Koycheva A, Derqui-Fernandez N, Barnett JL, Whitfield MG, Varro R, Charlett A, Kundu R, Fenn J, Cutajar J, Quinn V, Conibear E, Barclay W, Freemont PS, Taylor GP, Ahmad S, Zambon M, Ferguson NM, Lalvani A; ATACCC Study Investigators. **Community transmission and viral load kinetics of the SARS-CoV-2 delta (B.1.617.2) variant in vaccinated and unvaccinated individuals in the UK: a prospective, longitudinal, cohort study**. Lancet Infect Dis. 2022 Feb;22(2):183-195. doi: 10.1016/S1473-3099(21)00648-4. Epub 2021 Oct 29. Erratum in: Lancet Infect Dis. 2021 Dec;21(12):e363. PMID: 34756186; PMCID: PMC8554486. https://pubmed.ncbi.nlm.nih.gov/34756186/

And on September 1, the CDC ACIP released a slide deck from a recent briefing on "COVID-19 Vaccine Effectiveness during Omicron". In their summary, little could be said regarding effectiveness of COVID-19 vaccines on preventing Omicron infection[52]. They make the unsubstantiated statement:

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[51] It's interesting to consider the word 'novel' is nowhere found in product labeling of the vaccines however present in disclosure of investment risks for the company's FY 2021 SEC 10-K filings. Investors can sue; vaccine recipients

[52] https://www.documentcloud.org/documents/22273715-cdc-slides-sept-1

"effectiveness against severe disease" NOT noting that Omicron infection does not cause severe disease as compared to influenza. Candy coated conclusions.

Please contact maborrello@roadrunner.com to request this file for easy access to hyperlinks to all cited references.

About the Author: Mike Borrello is an Engineer & Scientist that specializes in feedback control systems and dynamic simulations. For decades he has provided control designs for the defense, aerospace and medical device industries and until recently was employed by Philips Respironics but terminated by corporate policy that required him to disclose his "vaccine status" which he refused to do. Despite what the mainstream or others wish to label him, Mike Borrello is NOT an 'Anti-Vaxxer'. Up until covid he annually received influenza vaccines and during covid the shingles vaccine. In fact he volunteered on-line for the Pfizer Phase 3 trials for the covid vaccine with pure altruism in mind but Pfizer never contacted him, and as he awaited authorization to vaccinate by age group in winter of 2021, by curiosity he ran queries on VAERS to confirm what he had seen in social media. The numbers of deaths and other adverse events he saw reported with the vaccines caused him concern to the point he decided to wait and see what the CDC or FDA might publicly offer to dispel any concerns over what was happening on the CDC's own website. That explanation never happened and continues to be a void. Only media narratives that VAERS was 'unreliable'. Eventually Borrello decided he would avoid vaccination at all costs and that in his good health he could better manage infection by the virus with therapeutics than risking some of the potential harms he's seen reported in VAERS – however little the risk might be.

Borrello's experience prompted him to become more involved in researching the data and publications that continue to examine the covid-19 vaccine injuries. Since June of 2021 he has publicly engaged Wilma Wooten and the San Diego HHS each month with others by presenting the materials contained in this report. He is asking that officials stop all vaccinations, especially for younger people who potentially have so much to lose, and little or nothing to gain by being vaccinated. He is asking that the officials investigate these harms, the deception used by pharma to show vaccine efficacy is high, and to remove the emergency orders to prevent the collateral damage caused by this destructive policy.

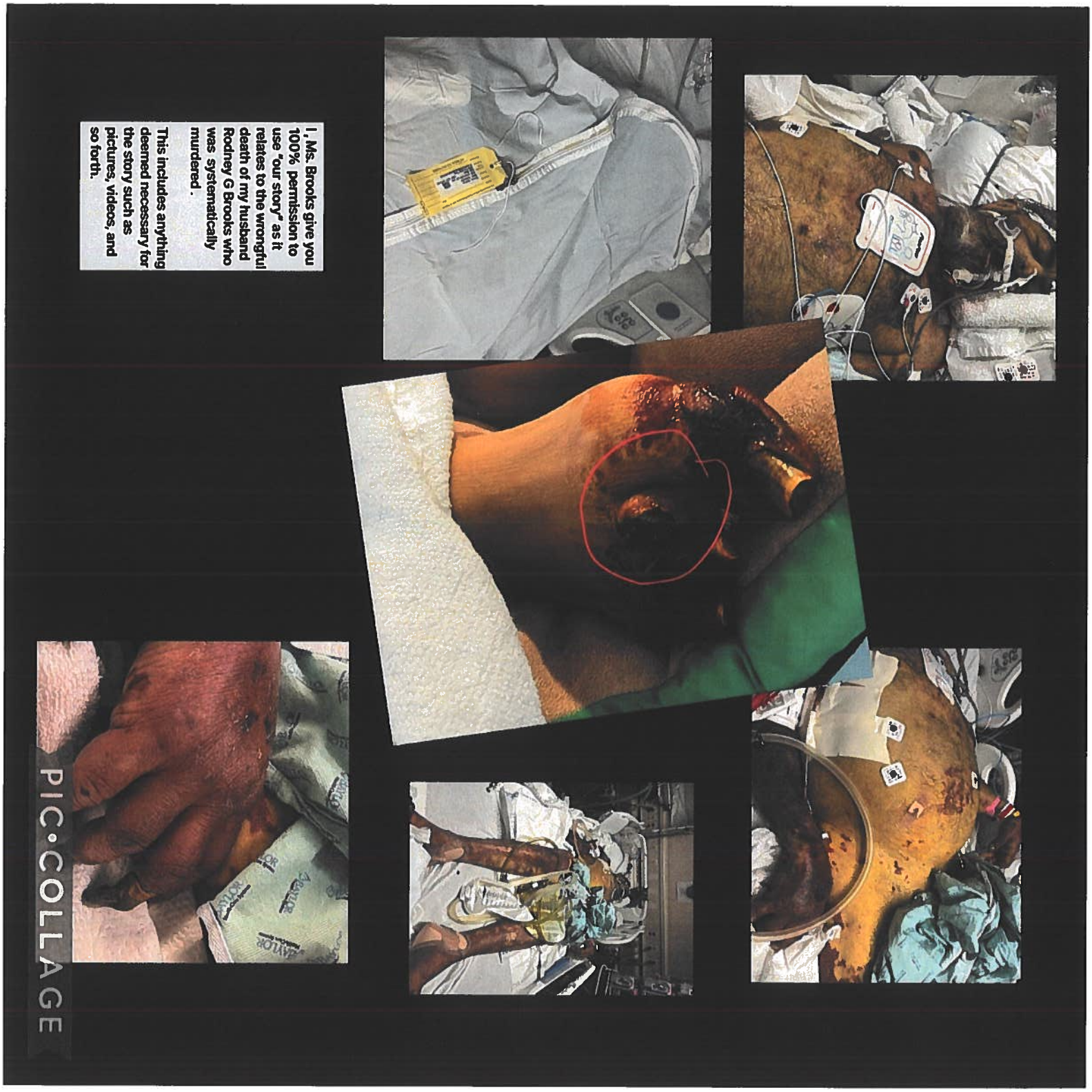
OFFICIAL RECORD
Clerk of the Board of Supervisors
County of San Diego

Exhibit No. B

Meeting Date: 10/11/2022 **Agenda No.** 13

Presented by: Sarah

HOSPITAL PROTOCOLS (Ramdesevir + Ventilators) = DEATH!!



What is Misinformation DR Wooten??