

# April 2023 COVID-19 and Monkeypox News

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SARS-CoV-2 Omicron continues to proliferate and evolve leading to subvariants. The bivalent mRNA vaccines were introduced in 2022 in order to boost the defense mechanism against the emerging new variants. Scientists did not see any difference in the peak neutralizing antibody (Nab) titers against the virus following the bivalent vaccine booster. Similar results were found in both. (Monovalent vs Bivalent) except for the variant BA5 cohort which exhibited a higher Nab titers at 3 months. So boosting with the bivalent mRNA vaccines is not better than boosting with the original monovalent vaccine.

- A-** More, several studies have shown an association between cardiac diseases and COVID-19 vaccination, especially among young people. but the mortality associated with it, remains unclear. National data, linked to electronic health system in the UK, was used to assess the impact of the disease and the effects of the vaccination on patients with a positive SARS-CoV-2 to evaluate the risk of cardiac disease and the mortality rate in a cohort of young patients (12 to 29 years). The paper showed that there is no increase in cardiac mortality 12 weeks following the COVID-19 vaccination. However, the study found that there is an increase in cardiac death in women after the first dose of non-mRNA vaccine. A positive SARS-CoV-2 test is associated with an increase in cardiac and all-cause mortality.
- B-** Priority groups have received vaccines as suggested by the Committee on Vaccination and Immunization (JCVI) in England. Rare cases of adverse reactions were reported with the COVID-19 vaccine and an increase risk, in of myocarditis and myopericarditis associated with mRNA vaccines (Pfizer-Bio-Tech and Moderna) and a higher risk of thrombotic events or other cardiovascular anomalies. There are also some rare neurological complications. Brief, this has lowered their risk of hospitalization and death.
- C- Positive SARS-CoV-2 test** is associated with increased cardiac mortality in both vaccinated and unvaccinated individuals. People extremely vulnerable may be at greater risk of adverse events

following vaccination than the general population. In the study above half of the population received a non-mRNA or an unknown vaccine while it was observed that an increase in cardiac and all-cause mortality was noted after a positive SARS-CoV-2 test among both unvaccinated and vaccinated individuals. In Florida, recent data found also an increase risk of cardiac death in the first four-weeks after mRNA vaccination in people aged 18-39 years. The Florida study did not account multiple exposure and they combined death after first and second doses although the Johnson and Johnson vaccines were used with a shorter interval between the doses. This was the difference between the UK and USA analysis. Other studies in Denmark and England, have also highlighted the risk of myocarditis and cardiac events.

- D-** Death registration records were used to supports these data and the main limitation was the delay in the coroner referrals because not all death registration were registered on time. The spacing between the doses may have also play a factor in limiting the analysis on a longer period exceeding the dosing intervals.
- E-** Evidence of an increased risk of cardiac death after the first dose of a non mRNA vaccine among females was found in the study. Those vaccines are not used anymore in the UK vaccination program.
- F-** To change gear a little, the U.S. Drug Enforcement Administration (DEA) just notified physicians about a new federal requirement for prescribers, and requiring to complete 8 hours of educational training on the treatment and management of patients with opioid or other substance use disorder. There is a deadline to complete such task on line (27 June, 2023). FMA online CME will catalog soon a course.
- G-** More cases of **Monkeypox** in the USA are being discovered currently and many are concerned of the outbreak while the trend may increase in coming months. In Vue of the circulation of the disease, Risk identification and Prevention, Vaccination should be integrated in all clinic workflows for sexual health. The JYNNEOS vaccine should be available to any clinic. People who engage in sex with multiple or anonymous partners, or participate in group sex or in transactional sex are at risk. The vaccine is recommended for post exposure prophylaxis within 14 days after exposure to the Monkeypox virus. People may transmit the virus 1-4 days prior to being symptomatic. All patient eligible for HIV PrEp or who have been diagnosed with a sexually transmitted infection the last six months may benefit from the vaccination. Two doses of JYNNEOS vaccine will protect the individual. The vaccine is given subcutaneously or intradermally on the forearm, the bac of the shoulder. The JYNNEOS vaccine can be administered to persons at risk who are under the age of 18 as well with an FDA authorization.

**H-** To diagnose **Monkeypox**, specimen should be collected by vigorous swabbing of the lesions with a sterile synthetic swab., by unroofing or aspirating any lesion. Any person suspected to have Monkeypox, should be evaluated for HIV and other sexual transmitted disease.

**I-** The CDC issued updated Interim Treatment Guidance for the treatment of Severe **Monkeypox** disease. People with advanced and uncontrolled HIV are at higher risk of catching the disease. Other countermeasures from the strategic National Stockpile including vaccinia immune globulin intravenous (VIGV) or Brincidofovir can be obtained through your State Medical authorities.

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