



Dr KK Aggarwal
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HCFI DR KK AGGARWAL RESEARCH FUND

Coronavirus Updates

COVID-19-RELATED DEATHS RISE AGAIN, SAYS WHO

The number of weekly new COVID cases continues to show a decline, but the weekly deaths have again risen by 4% following 5 weeks of decreasing trend, says the World Health Organization (WHO) in its latest COVID-19 Weekly Epidemiological Update. The new weekly deaths in the Regions of Americas were up by 21% and in the Western Pacific region by 17%, while the new weekly deaths decrease in the other four regions... (Source: WHO, June 15, 2022)

COVID-19 VACCINES FOR CHILDREN BELOW 5 YEARS IN THE US MAY START SOON

An FDA panel has unanimously recommended the Pfizer-BioNTech and Moderna COVID-19 vaccines for use in children younger than 5 years beginning from 6 months of age stating that their benefits outweigh the risks in this age group... (Source: Medscape, June 15, 2022)

A NEGATIVE COVID-19 TEST NO LONGER MANDATORY TO ENTER THE US

The Centers for Disease Control and Prevention (CDC) has revoked the mandatory requirement of a negative COVID-19 test just prior to traveling or a documentation stating recovery from COVID for international travelers. This will come into effect from June 12, 2022. However, the CDC still recommends travelers to test themselves for COVID nearer to their traveling date and desist from traveling if positive ... (Source: CDC, June 10, 2022)

DR FAUCI BECOMES COVID-19-POSITIVE

Dr Anthony Fauci, MD, Director of the National Institute of Allergy and Infectious Diseases (NIAID) and also the Chief Medical Advisor to the President of the United States, has tested positive for COVID-19 on a rapid antigen test. However, according to the National Institutes of Health (NIH), Dr Fauci has mild symptoms. He is fully vaccinated and has taken two booster doses as well... (Source: NIH, June 15, 2022).

PROTECTIVE EFFICACY OF COVAXIN AGAINST DELTA AND OMICRON VARIANTS OF CONCERN

Results of preclinical study conducted on Syrian hamster model show that Covaxin booster dose enhanced the protective efficacy of the vaccine against Delta variant and was also protective against the BA.1.1 and BA.2 subvariants of the Omicron. The viral load in the lungs diminished subsequent to the booster vaccination... (Source: bioRxiv, June 14, 2022)

COVID-19 VACCINES PREVENTED 20 MILLION COVID-19 DEATHS FROM 2020 TO 2021

A mathematical modeling study from the Imperial College London published in the *Lancet Infectious Diseases* has described the impact of the COVID-19 vaccines in curbing the onslaught of the pandemic. During the first year of their availability, between December 8, 2020 and December 8, 2021, vaccines prevented 14.4 million deaths from COVID-19 in 185 countries. Addition of excess deaths increased this estimate to nearly

20 million. During the first year, an estimated 60% of people globally had received at least one dose of the vaccine.... (Source: *Medscape*, June 23, 2022)

SURGE IN BA.4 AND BA.5 CASES IN EUROPE

There has been an upsurge of new COVID-19 infections in Europe driven by the BA.4 and BA.5 Omicron subvariants. On 22nd June, France recorded more than 95,000 daily new cases. Cases are also rising in other European countries such as Portugal. These new subvariants, which are more infectious but less virulent, are likely to become the dominant strains in Europe, says the European Centre for Disease Prevention and Control ... (Source: *Reuters*, June 23, 2022)

MODERNA SAYS ITS COMBINATION COVID-19 BOOSTER VACCINE IS EFFECTIVENESS AGAINST OMICRON

Moderna says that its combination COVID-19 booster vaccine candidate mRNA-1273.214-induced eightfold increase in the neutralizing antibody titers among seronegative study subjects against the Omicron variant than the original mRNA-1273 vaccine after 1 month of administration. It was also well-tolerated with a side effect profile similar to the mRNA-1273 vaccine. The vaccine candidate contains the original mRNA-1273 vaccine along with a vaccine candidate targeting the Omicron variant... (Source: *Moderna*, June 8, 2022).

WOMEN ARE MORE LIKELY TO DEVELOP LONG COVID THAN MEN

Women are more likely to develop long COVID than men with odds ratio (OR) of 1.22, according to a recently published review in *Current Medical Research and Opinion*. The likelihood of ENT (OR 2.28), gastrointestinal (OR 1.60), mood/psychiatric (OR 1.58), neurological (OR 1.30), dermatological (OR 1.29) sequelae were higher among women, while men were more likely have renal (OR 0.74) and endocrine (OR 0.75) disorders... (Source: *Current Medical Research and Opinion*, June 20, 2022)

SECOND PFIZER BOOSTER DOSE 72% PROTECTIVE AGAINST COVID-RELATED DEATHS DURING OMICRON WAVE

In a study from Israel involving more than 24,000 residents of long-term care facilities, a fourth vaccine dose of the Pfizer-BioNTech vaccine was highly protective against COVID-19 hospitalizations and deaths. It provided 34% protection against infection, 64% to 67% against hospitalizations and 72% against deaths during the Omicron wave. The study was

conducted between January 10 through to March 2022... (Source: *JAMA Internal Medicine*, June 23, 2022)

PREVALENCE OF BA.4 AND BA.5 OMICRON SUBVARIANTS RISING IN THE US

The prevalence of BA.4 and BA.5 sublineages of the Omicron severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) variant is increasing in the United States. Together the two strains now constitute 13% of new infections compared to 7.5% in the previous week, as per latest CDC data; 7.6% are BA.5 and 5.4% are BA.4 cases. BA.2.12.1 is the predominant circulating strain at 62.2%, while BA.2 accounts for 24.8% of cases... (Source: *Medscape*, June 9, 2022).

HIGHER IMMUNE EVADING PROPERTIES OF BA.4 AND BA.5

The BA.4 and BA.5 Omicron subvariants show 4.2 times higher immune escape potential in persons who are fully vaccinated and also boosted vis-à-vis BA.2, thereby increasing the chances of breakthrough infections. The immune escape potential was less with BA.2.12.1 (1.8-fold). Bebtelovimab was the only monoclonal antibody with robust activity against BA.4 and BA.5 and also BA.2.12.1... (Source: *bioRxiv*, May 26, 2022)

INTRAUTERINE EXPOSURE TO SARS-COV-2 INCREASE RISK OF NEURODEVELOPMENTAL DEFICITS IN INFANTS

Babies born to COVID-positive mothers are at risk of neurodevelopmental deficits, according to preliminary results of a small study presented at the virtual meeting of the European Psychiatric Association (EPA) 2022 Congress. At 6 weeks of age, the infants showed significantly low scores on the social interactive dimension of the Brazelton Neonatal Behavioral Assessment Scale (NBAS) if the mother became infected before 20 weeks of gestation... (Source: *Medscape*, June 8, 2022).

COVID-19 VACCINE PROTECT AGAINST SEVERE OUTCOMES IN HEART FAILURE PATIENTS

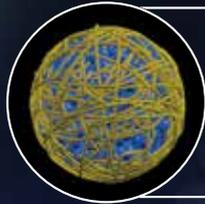
Heart failure patients who are fully vaccinated and boosted as well are at lower risk of all-cause mortality with hazard ratio (HR) of 0.33 compared to those who were fully vaccinated but had not taken the booster dose (HR 0.36) and those who were unvaccinated. They also had a lower probability of hospitalization (incidence rate ratio [IRR] 0.68) including ICU admission (IRR 0.63) than those who are partially vaccinated or unvaccinated ... (Source: *Journal of Cardiac Failure*, June 9, 2022).

With inputs from Dr Monica Vasudev

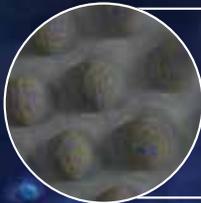
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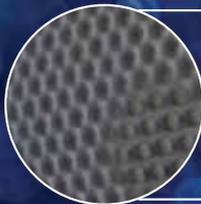


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