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Research Updates from Around the World

THE FIRST KNOWN DEATH FROM ALASKAPOX

The first known human death from Alaskapox of an elderly patient undergoing cancer therapy, has been reported from Alaska. The disease is caused by the Alaskapox virus, which is an orthopox virus similar to small pox, cowpox and monkeypox. It was first identified in 2015 in Alaska. Since then, 6 more cases have been reported. It is a zoonotic disease as the virus is transmitted from small mammals and symptoms include rash, arthralgia, myalgia and enlarged lymph nodes... (Source: *The Guardian*. Feb. 14, 2024).

EBOLA VACCINE SHOWS ENCOURAGING RESULTS

Administration of rVSVΔG-ZEBOV-GP Ebola vaccine led to nearly 50% reduction in mortality following confirmed Ebola virus infection besides decreasing the odds of acquiring the infection. It is a single dose intramuscular vaccine. The mortality rate was 56% in the unvaccinated patients, whereas among the vaccinated group, the mortality was 25%. The study involved over 2,000 patients in the Democratic Republic of Congo, reported to be the second-largest outbreak of Ebola... (Source: *Lancet Infectious Diseases*, Feb. 7, 2024).

A NOVEL CELL THERAPY FOR METASTATIC OR UNRESECTABLE MELANOMA

Lifileucel, a tumor-derived autologous T-cell immunotherapy, has been approved for the treatment of adult patients with unresectable or metastatic melanoma that has been earlier treated with other therapies such

as a PD-1 blocking antibody, and a BRAF inhibitor with/without a MEK inhibitor if *BRAF* V600 mutation positive. It is the first cell therapy for solid tumors... (Source: *FDA*. Feb. 16, 2024).

FREQUENT CONSULTATIONS MAY BE A RED FLAG FOR SUICIDE RISK

Patients, aged ≥ 15 years, who consulted frequently (more than once in a month) for pain, depression, medication review, among other reasons, are at 5-times higher risk of suicide with odds ratio (OR) of 5.88 regardless of the presence/absence of a known psychiatric disorder. Girls and women were at highest risk (OR 9.50), patients aged 15 to 45 years (OR 8.08), patients who were socioeconomically better off (OR 6.56) and those with psychiatric conditions (OR 4.57)... (Source: *Br J Gen Pract*. Feb. 8, 2024).

OMALIZUMAB NOW ALSO APPROVED TO REDUCE RISK OF FOOD ALLERGY REACTION

Omalizumab, a monoclonal antibody, is now available for treating adults and children aged ≥ 1 year with immunoglobulin E-mediated food allergy. Available as an injectable formulation, the drug is intended to reduce the risk of type 1 hypersensitivity reactions after accidental exposure to foods and not for emergency treatment of allergic reactions, including anaphylaxis. It has been previously approved for treatment of moderate to severe persistent allergic asthma and chronic spontaneous urticaria and chronic rhinosinusitis with nasal polyps... (Source: *FDA*. Feb. 16, 2024).

STUDY LINKS ACHALASIA TO COVID-19

A new study has found that severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection can lead to the development of achalasia, a motility disorder of the esophagus. Compared with pre-COVID-19 (coronavirus disease 2019) long-term achalasia and non-COVID-19 long-term achalasia, patients with post-COVID-19 achalasia had significantly higher levels of SARS-CoV-2 nucleocapsid (N) protein mRNA, which correlates with a significant increase in the inflammatory markers NLRP3 and tumor necrosis factor... (Source: *Am J Gastroenterol. Jan. 24, 2024*).

TESTING FOR DEMENTIA IN THE LAB

Persons with higher levels of glial fibrillary acidic protein (GFAP) are 2.32 times more likely to develop dementia; they were also 2.91 times more at risk of developing Alzheimer's disease and 2.45 times greater risk of vascular dementia. Risk of dementia was also associated with increased levels of other proteins such as neurofilament light chain (NfL) (hazard ratio [HR] 2.32) and growth/differentiation factor 15 (HR 1.70)... (Source: *Nature Aging. Feb. 12, 2024*).

FDA CAUTIONS AGAINST USE OF NONINVASIVE SMARTWATCHES TO MONITOR BLOOD GLUCOSE

The US Food and Drug Administration (FDA) has cautioned about the use of noninvasive smartwatches or smart rings that claim to measure blood glucose levels without finger pricks or skin piercing. It's always best to rely on FDA-authorized devices that pierce the skin, like continuous glucose monitoring devices (CGMs) for accurate and safe blood glucose monitoring... (Source: *US FDA. Feb. 21, 2024*).

POINT-OF-CARE PROCALCITONIN TEST TO DIAGNOSE PNEUMONIA IN CHILDREN WITH INFLUENZA-LIKE ILLNESS

Point-of-care testing for procalcitonin can help diagnose suspected pneumonia in children with influenza-like illness and fever (>4 days) and thus preclude the need for unnecessary chest X-ray. A cut-off point >0.5 ng/mL was used as an indication for performing a chest X-ray... (Source: *Indian Pediatr. Jan. 15, 2024*).

FDA NOW MANDATES BOXED WARNINGS FOR CAR-T CELL THERAPIES

All chimeric antigen receptor T-cell, or CAR-T cell therapies will now carry a boxed warning about the risk of secondary T-cell malignancies in blood cancer

patients who have been treated with this form of immunotherapy... (Source: *JAMA. Feb. 21, 2024*).

CLOSING THE GENDER GAP: BENEFITS OF EXERCISE

Women experience greater benefits of regular exercise compared to men even with equivalent amounts of exercise. The all-cause mortality reduced by 24% in women (vs. 15% in men) and the cardiovascular mortality reduced by 36% (vs. 14% in men)... (Source: *J Am Coll Cardiol. Feb. 27, 2024*).

STUDY SHOWS HIGH EFFICACY OF NOVEL HEPATITIS E VACCINE

Ten-year results from a phase 3 trial of a novel hepatitis E vaccine demonstrate durable protection against hepatitis E. Vaccine-induced antibodies were still detectable for 8.5 years in over 85% persons after intramuscular administration of three doses of the vaccine... (Source: *Lancet. Feb. 19, 2024*).

A SIMPLE BLOOD TEST TO DIAGNOSE SARCOIDOSIS: NIH

A NIH study has successfully evaluated a blood test to quickly diagnose sarcoidosis. In the study, the researchers were able to differentiate between sarcoidosis and other respiratory disorders such as tuberculosis, lung cancer with the help of a novel peptide-based sarcoidosis immunoassay... (Source: *NIH. Feb. 22, 2024*).

THE FIRST FDA-APPROVED INTERCHANGEABLE, HIGH-CONCENTRATION HUMIRA BIOSIMILAR

Adalimumab-ryvk has been approved as the first interchangeable, high-concentration, citrate-free adalimumab biosimilar by the US FDA. It is the 10th adalimumab biosimilar to be approved by FDA. It has been approved for the treatment of rheumatoid arthritis, psoriatic arthritis, Crohn's disease, ulcerative colitis, juvenile idiopathic arthritis, ankylosing spondylitis, plaque psoriasis, hidradenitis suppurativa and uveitis... (Source: *Medscape. Feb. 26, 2024*).

USTEKINUMAB AND APREMILAST APPROVED FOR PSORIASIS IN EUROPE

The Committee for Medicinal Products for Human Use of the European Medicines Agency (EMA) has approved the use of ustekinumab for the treatment of plaque psoriasis, including pediatric plaque psoriasis, psoriatic arthritis, ulcerative colitis and Crohn's disease. Apremilast has also been approved for psoriasis, psoriatic arthritis and Behçet disease... (Source: *Medscape. Feb. 23, 2024*).