

International medical review

Scientists from the United States assessed the effectiveness of the new oral drug muvalaplin in reducing lipoprotein(a) [Lp(a)] levels in patients at high risk of cardiovascular events. According to standard analysis, muvalaplin led to a 47.6% reduction in Lp(a) concentration compared to placebo at a dose of 10 mg/day and an 81.7% reduction at 60 mg/day. At a dose of 240 mg/day, Lp(a) levels decreased by 85.8%.

The data were analyzed for 233 adult patients with Lp(a) levels above 175 nmol/L. They were randomized into groups taking one of three daily doses of muvalaplin (10, 60, or 240 mg) or placebo for 12 weeks.

According to the JAMA

Scientists from Southern California studied the duration of elevated cardiovascular risk following COVID-19 and whether this risk decreased after recovery.

The analysis revealed that during three years of follow-up, the risk of heart attack, stroke, and death was at least twice as high among adults who had COVID-19, and nearly four times higher among those hospitalized for the virus, compared to those without a history of the disease.

The study included data from 10,005 UK Biobank participants who either tested positive for COVID-19 or were hospitalized due to the infection. The authors concluded that the increased risk of heart attack, stroke, and death should be considered not only as a severe form COVID-19 but also as an additional cardiovascular risk factor.

According to the Arteriosclerosis, Thrombosis, and Vascular Biology journal

Researchers from the Heart Institute of Central America assessed the impact of sodium zirconium cyclosilicate on optimizing spironolactone use in participants with heart failure with reduced ejection fraction (HFrEF) and hyperkalemia.

The analysis showed that 71% of patients taking sodium zirconium cyclosilicate achieved normokalemia while on at least 25 mg/day of spironolactone without emergency hyperkalemia therapy, compared to 36% of patients on placebo.

The authors concluded that in patients with HFrEF and hyperkalemia, sodium zirconium cyclosilicate led to a higher rate of normokalemia at optimal spironolactone doses, reduced the risk of hyperkalemia, and minimized the need to lower the dose/discontinue spironolactone.

According to the JACC

Scientists from Novosibirsk State Technical University developed a method for diagnosing the risk of coronary heart disease (CHD) in young people.

The method evaluates CHD risk based on inflammatory, oxidative, and lipid biomarkers in 200 patients.

As part of the project, researchers proposed a convenient system for visualizing results, allowing different markers and their deviations from the "normal-pathological" threshold to be displayed. The visual representation makes it possible to determine which subsystems of the body contribute to the CHD risk.

According to the Press Service of Novosibirsk State Technical University

Scientists created the AIRE platform, based on artificial intelligence (AI), which integrates eight risk models to predict the likelihood of cardiovascular death.

Using a single electrocardiogram analysis, AIRE generates patient-specific survival curves and predicts the time to death. The platform predicts all-cause mortality with a concordance index (C-index) of 0.775, outperforming assessments based on demographic data and traditional risk factors.

In addition to mortality, the platform can predict the risk of developing atherosclerotic cardiovascular disease, ventricular arrhythmia, and heart failure in patients without such conditions in their medical history.

According to the Lance journal

Researchers reported the ability of protein "signatures" to predict the onset of 67 diseases, including multiple myeloma, non-Hodgkin lymphoma, motor neuron diseases, pulmonary fibrosis, and dilated cardiomyopathy. They evaluated the concentrations of approximately 3,000 plasma proteins to create models predicting the ten-year incidence of 218 common and rare diseases.

The analysis demonstrated that measuring the concentration of five proteins alone, without additional information, was equivalent to clinical models for predicting 163 diseases and significantly outperformed them for 30 conditions.

According to the Nature journal