Efficacy of bamlanivimab for COVID-19 may vary with antibody status

December 23 2021

Credit: Pixabay/CC0 Public Domain

(HealthDay)—Among patients hospitalized with COVID-19, the efficacy and safety of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) neutralizing monoclonal antibody bamlanivimab varies

according to whether endogenous neutralizing antibodies (nAbs) are present, according to a study published online Dec. 21 in the *Annals of Internal Medicine*.

Jens D. Lundgren, M.D., from the University of Copenhagen in Denmark, and colleagues recruited 314 hospitalized patients with COVID-19 without end-organ failure and randomly assigned them to receive either bamlanivimab or placebo (163 and 151, respectively). At entry, 50 percent had evidence of production of anti-spike nAbs; 50 percent had SARS-CoV-2 nucleocapsid plasma antigen levels ≥1,000 ng/L. This trial was stopped prematurely because of futility, and the results of an a priori-defined subgroup analysis are reported here.

The researchers found that the median time to sustained recovery was 19 days and was similar in the bamlanivimab and placebo groups (subhazard ratio [sHR], 0.99; 95 percent confidence interval [CI], 0.79 to 1.22; sHR >1 favors bamlanivimab). Among those without nAbs at entry, the sHR was 1.24 (95 percent CI, 0.90 to 1.70), while among those with nAbs, the sHR was 0.74 (95 percent CI, 0.54 to 1.00; nominal P for interaction, 0.018). Those with plasma antigen or nasal viral RNA levels above median at entry had an sHR greater than 1; sHR was greatest among those without antibodies and with elevated levels of antigen (sHR, 1.48 [95 percent CI, 0.99 to 2.23]) or viral RNA (sHR, 1.89 [95 percent CI, 1.23 to 2.91]). For the composite safety outcome, hazard ratios (