TAMS42 (Probability and Statistics) Vinjett 3
—statistics in medicine

Background: Regarding the treatment of COVID-19, several therapies have received regulatory approval on the basis of promising results, and these include: the antiviral remdesivir; remdesivir in combination with baricitinib (a Janus kinase inhibitor); dexamethasone (a corticosteroid), and so on (see the paper https://err.ersjournals.com/content/30/159/200384). Statistics plays an important role in identifying which therapy gives better treatment, given necessary conditions.

Discussions: (a) For the fair use of statistics to determine whether or not a specific therapy (such as the antiviral remdesivir mentioned above) works better, what factors are important?

(b) Recently, Merck stated (see link below) that: at the interim analysis, 7.3 percent of patients who received Molnupiravir were hospitalized through day 29, compared with 14.1 percent of Placebo-treated patients who were hospitalized or died.

https://www.merck.com/news/merck-and-ridgebacks-investigational-oral-antiviral-molnupiravir-reduced-the-risk-of-hospitalization-or-death-by-approximately-50-percent-compared-to-placebo-for-patients-with-mild-or-moderat/

With such data, what can we say about the effectiveness of the therapy with Molnupiravir? (definitely effective? moderately effective? slightly effective? not effective?)