Effect of Lumacaftor/Ivacaftor on Small Intestinal Bacterial Overgrowth

Cystic fibrosis transmembrane conductance regulator (CFTR) dysfunction contributes to gut dysbiosis, including small intestinal bacterial overgrowth (SIBO).

Results from a multicenter longitudinal study:

- Positive baseline HBT: 73.7%
- Positive HBT after lumacaftor/iva: 65.8%

Effect of CFTR-dysfunction-improving drugs lumacaftor/iva on SIBO:

- Hydrogen breath test (HBT) fasting - After glucose ingestion
- n = 38
- 21% patients converted from positive to negative HBT after lumacaftor/iva

Treatment with a combination of lumacaftor/iva does not show any benefits for SIBO in the short-term.

Please note: An indirect method was used to diagnose SIBO to avoid the invasive nature of duodenal aspiration.

Changes in glucose breath test in cystic fibrosis patients treated with one month of lumacaftor/iva. Givel et al. (2022)