

Lusvertikimab is efficacious in severe ulcerative colitis (UC) patients with high fecal calprotectin (FCP): results from the CoTikiS study

Reinisch, W.¹, Kierkus, J.², Peyrin Biroulet, L.³, Sands, B.⁴, Danese, S.⁵, Vermeire, S.⁶, Laharie, D.⁷, Corallo, F.⁸ Bourreille, A.⁹ on behalf of the CoTikiS study group

¹Vienna, Austria; ²Warsaw, Poland; ³Nancy, France; ⁴New York, USA; ⁵Milan, Italy; ⁶Leuven, Belgium; ⁷Bordeaux, France; ⁸Ose-Immunotherapeutics, Paris, France; ⁹Nantes, France.

Background

Fecal calprotectin (FCP) is an objective marker of inflammation in ulcerative colitis (UC) patients and may predict sustained clinical and endoscopic response. In the CoTikiS study (NCT04882007), 2 doses (450 mg or 850 mg) of OSE-127 Lusvertikimab (L), a 1st in class pure IL-7R antagonist, were administered at week (w)0, w2 and w6 in 134 patients with moderately or severely active UC (Modified Mayo score (MMS): 4-9). Additional analyses compared the effects of these 2 doses versus placebo on FCP and their efficacy in patients with high FCP at baseline

Methods

Stool samples were collected at w0, 2, 6 and 10 in all patients, frozen at -20°C and shipped to a central laboratory where FCP was measured using a validated analytical method. FCP values were analysed by treatment groups and by visit and the changes versus baseline were compared between treatment groups and placebo. The efficacy of L850 and L450 was compared to that of placebo in patients with FCP > 250 µg/g at baseline, considered the threshold of active inflammatory disease.

Results

Total Population

Mean FCP at baseline,

L850: 1192 µg/g, L450: 1088 µg/g, L850/450: 1148 µg/g, placebo: 1459 µg/g

FCP mean changes at week 10

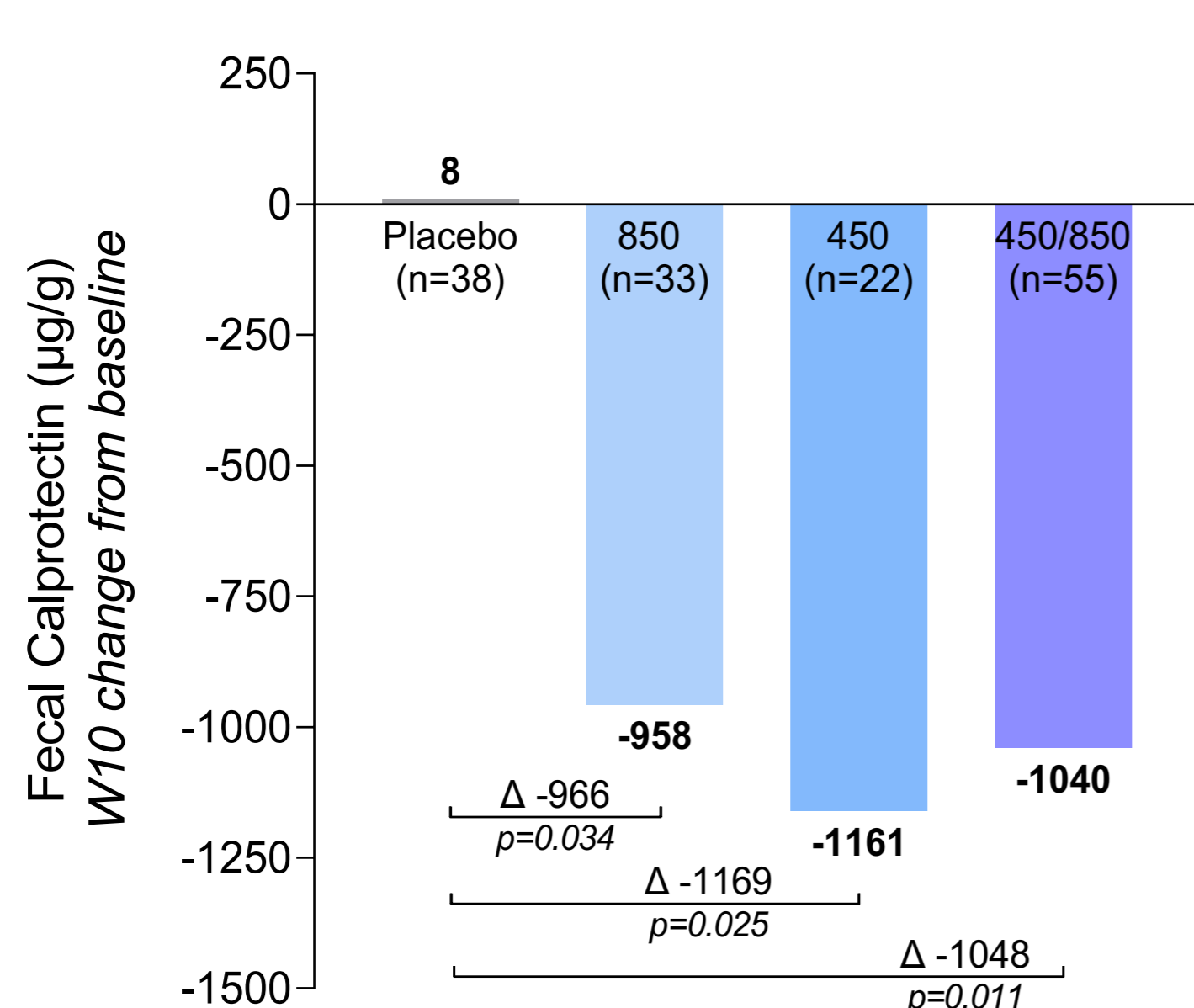
| Calprotectin (ug/g) Change at Week 10 | L850 mg (N=50) | L450 mg (N=35) | L850/450 (N=85) | Placebo (N=49) |
|--|-------------------------|---------------------------|--------------------------|-----------------------|
| n | 45 | 32 | 77 | 40 |
| Mean (SD) | -482.8 (1780.3) | -512.3 (1716.7) | -495.1 (1742.7) | -48.8 (2630.6) |
| LSM [95% CI] | -635.3 [-1096.6;-173.9] | -830.0 [-1433.8;-226.3] | -716.2 [-1094.0 ;-338.4] | 188.8 [-311.6; 689.2] |
| LSM Difference | -824.0 [-1501.0;-147.0] | -1018.8 [-1781.4 ;-256.2] | -905.0 [-1518.5 ;-291.5] | |
| Two-Sided P-Value | 0.018 | 0.009 | 0.004 | |

Patients with FCP >250 µg/g at baseline

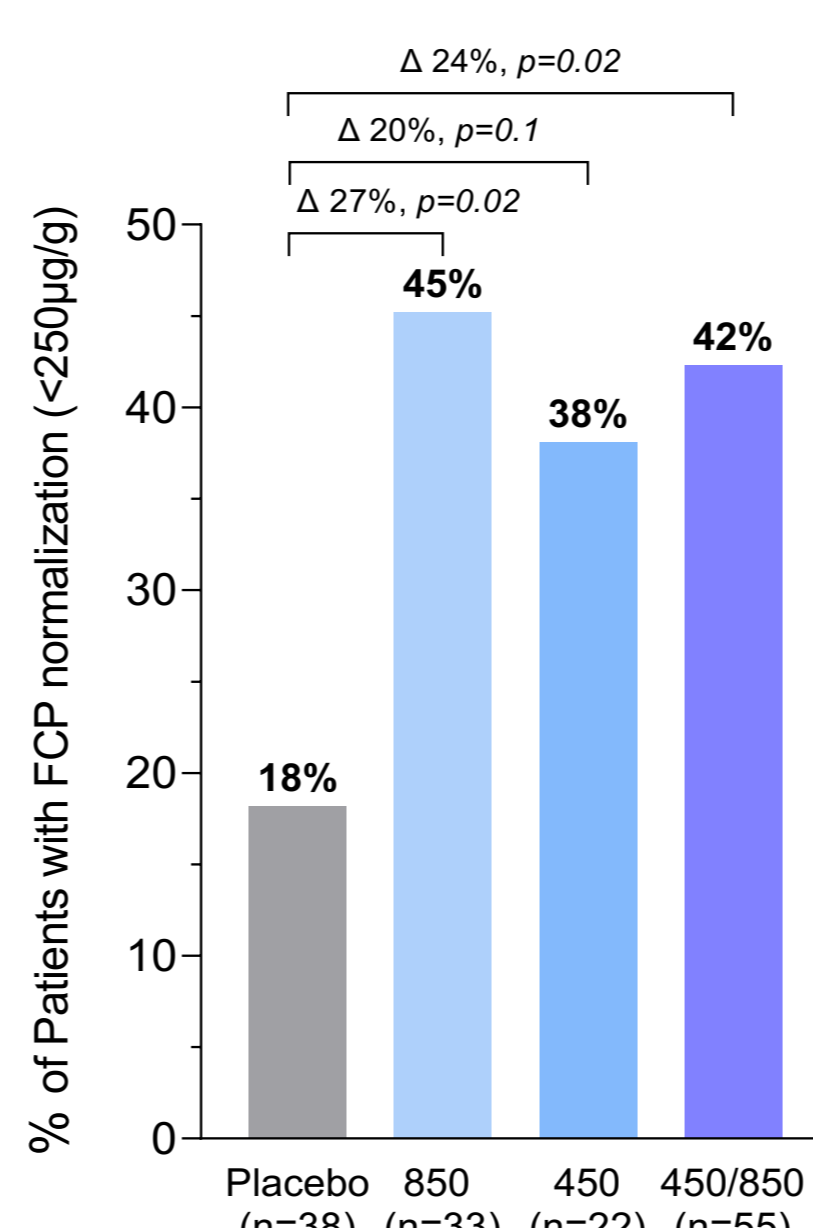
The number (%) of patients with FCP > 250 µg/g was 93 (69.4%) :

L850: n=33 (66%), L450: n=22 (62.8%), L850/450: n=55 (64.8%), placebo: n=38 (77.6%)

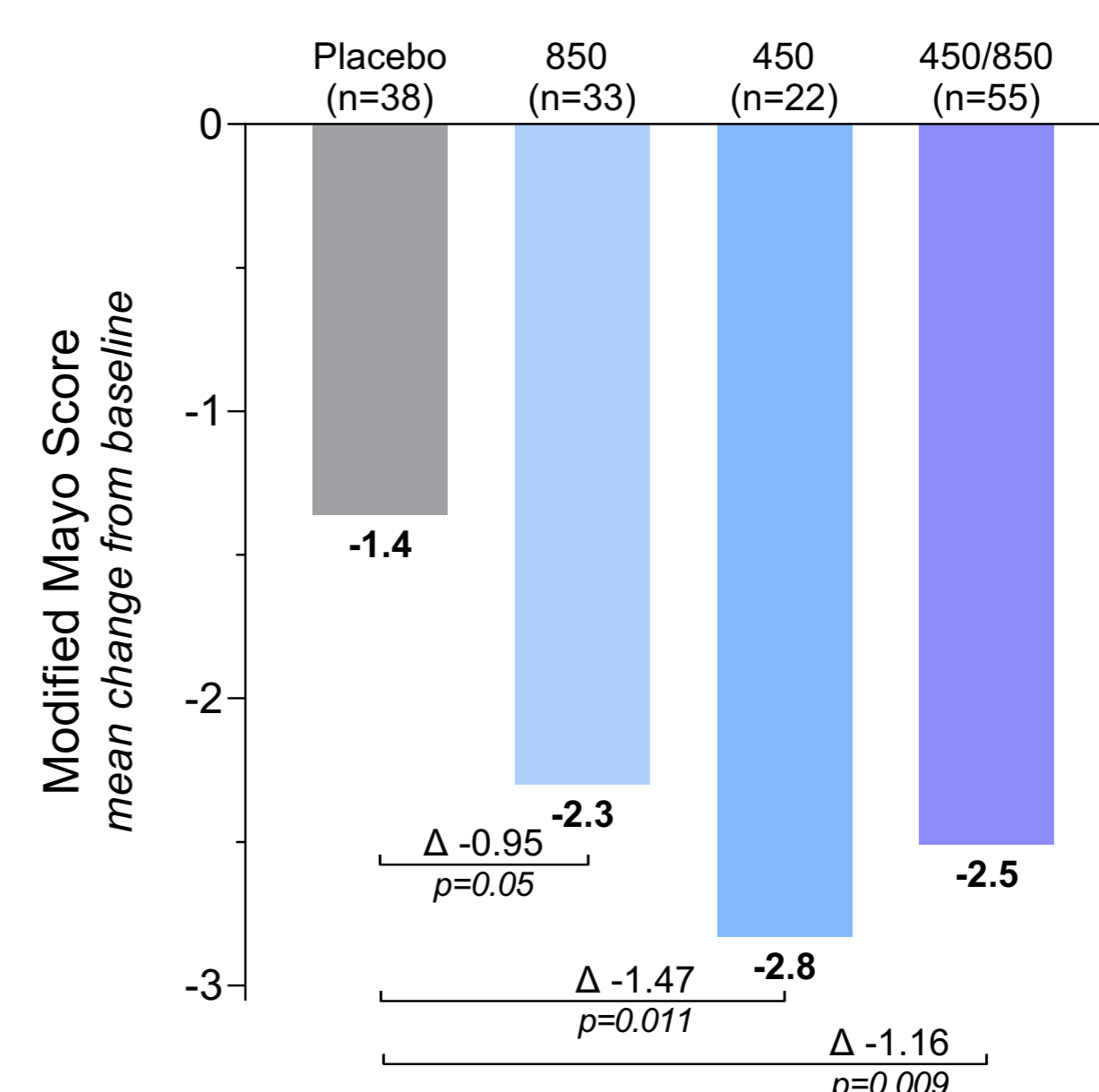
FCP mean changes



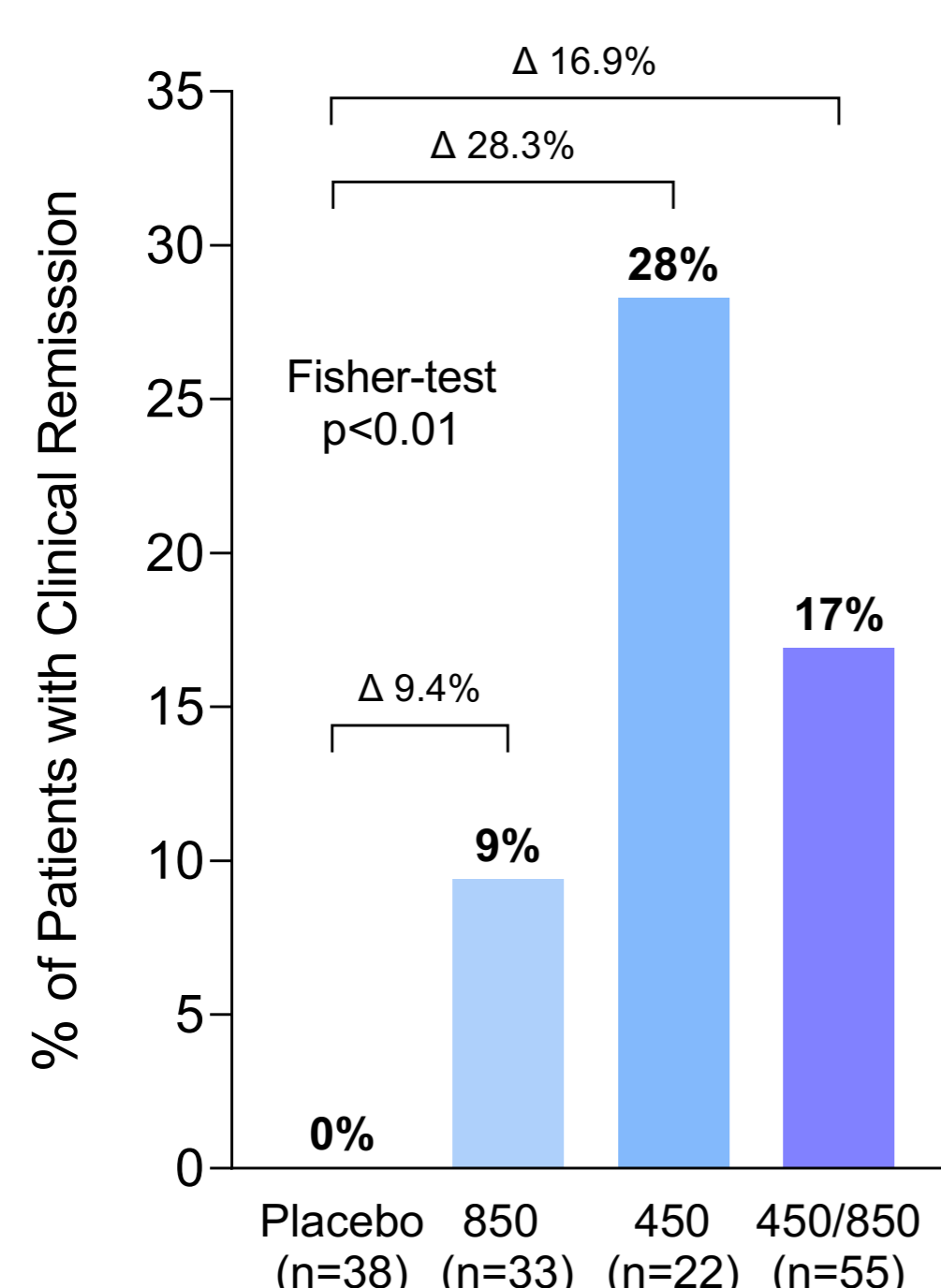
FCP normalisation



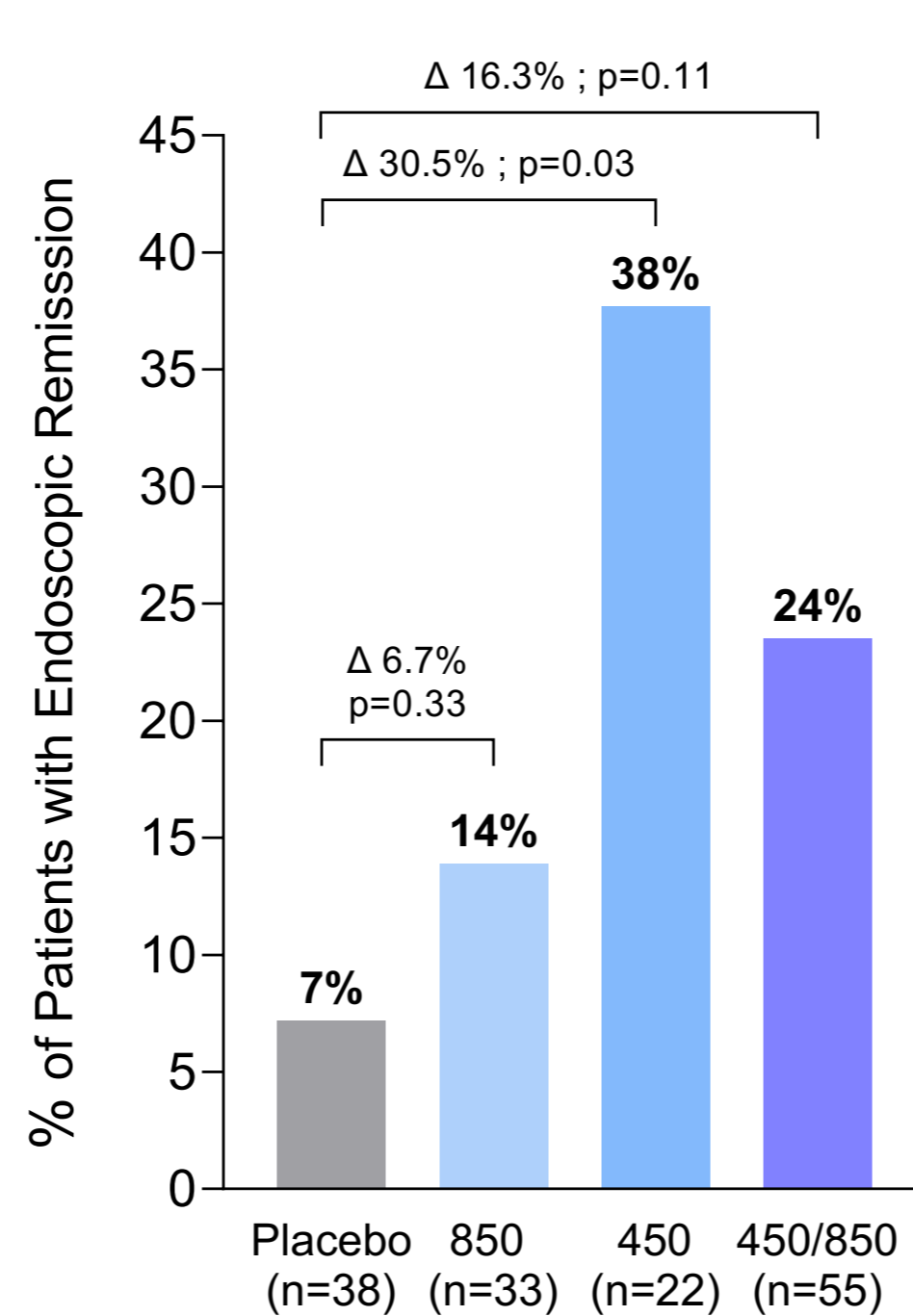
MMS mean changes



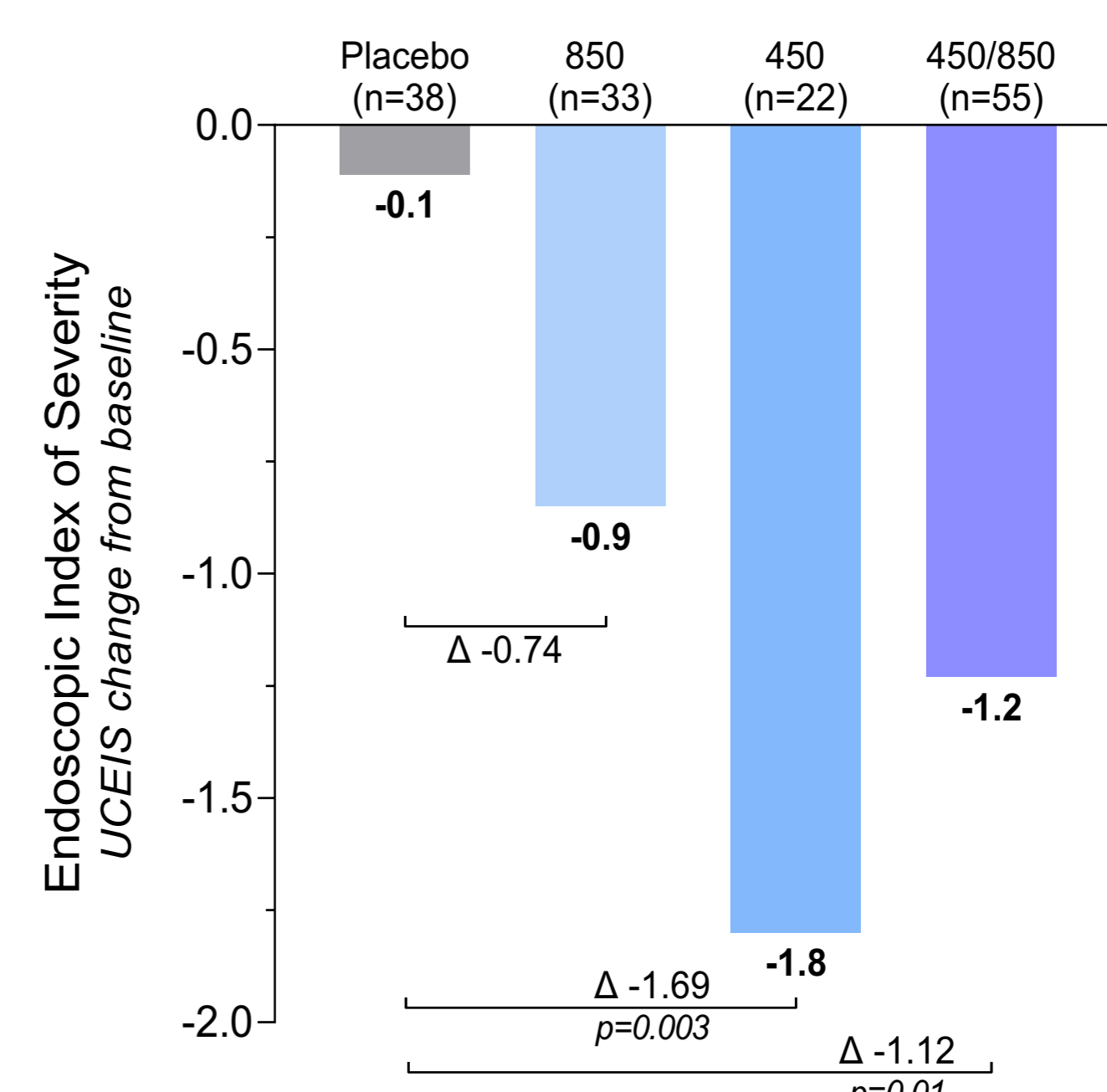
Clinical remission rate



Endoscopic remission rate



UCEIS* score Improvement



*Ulcerative Colitis Endoscopic Improvement Score

Conclusion

Lusvertikimab, a pure IL-7 receptor antagonist, significantly decreased FCP after 10 weeks of treatment in both dose groups and achieved improvements in clinical and endoscopic outcomes in UC patients with active inflammation, defined as FCP >250 µg/g at baseline. These data strengthen the overall results of the primary and key secondary endpoints from the CoTikiS study.