



Efficacy of spesolimab for the treatment of GPP flares across prespecified patient subgroups in the Effisayil 1 study

A. David Burden¹, Yukari Okubo², Min Zheng³, Diamant Thaçi⁴, Peter van de Kerkhof⁵, Na Hu⁶, Mogana Sivalingam⁷, Christian Thoma⁸, Siew Eng Choon⁹

¹Institute of Infection, Immunity and Inflammation, University of Glasgow, Glasgow, UK; ²Department of Dermatology, Tokyo Medical University, Tokyo, Japan; ³Department of Dermatology, Second Affiliated Hospital, Zhejiang University, School of Medicine, Hangzhou, Zhejiang, China; ⁴Universitat Zu Luebeck, Lubeck, Germany; ⁵Department of Dermatology, Radboud University, Nijmegen, the Netherlands; ⁶Boehringer Ingelheim (China) Investment Co., Ltd, Shanghai, China; ⁷Boehringer Ingelheim International GmbH, Ingelheim, Germany; ⁸Boehringer Ingelheim International GmbH, Biberach, Germany; ⁹Department of Dermatology, Hospital Sultanah Aminah, Clinical School Johor Bahru, Monash University Malaysia, Subang Jaya, Malaysia



Subgroup analyses from the Effisayil 1 study showed that the efficacy of spesolimab (pustular and skin lesion clearance) was consistent across all prespecified patient populations, including those with or without *IL36RN* mutations



PURPOSE

To investigate the consistency of the spesolimab treatment effect by conducting a subgroup analysis of the primary and key secondary endpoints from the Effisayil 1 study, according to patient demographics and clinical characteristics at baseline.

INTRODUCTION

- GPP is a rare and potentially life-threatening autoinflammatory disease characterized by recurrent flares of widespread sterile pustules, with or without systemic inflammation^{1,2}
- Effisayil 1 (NCT03782792) was a multicenter, randomized, double-blind, placebo-controlled study of spesolimab, an anti-IL-36 receptor antibody, in patients presenting with a GPP flare. Within 1 week of a single dose of spesolimab, rapid pustular and skin clearance was observed compared with placebo³
 - Primary endpoint (GPPGA pustulation subscore of 0; no visible pustules): 54% vs 6% (one-sided p<0.001)
 - Key secondary endpoint (GPPGA total score of 0 or 1; clear or almost clear skin): 43% vs 11% (one-sided p=0.0118)

CONCLUSIONS

- Estimates of spesolimab treatment effect in each patient subgroup were generally similar to those of the overall population for both the primary and key secondary endpoints
- The efficacy of spesolimab (pustular and skin clearance) compared with placebo was consistent across all prespecified subgroups
- However, it should be noted that several subgroups had very few patients
- These data provide further evidence supporting the use of spesolimab to treat all patients presenting with a GPP flare

METHODS

- The efficacy of spesolimab was evaluated in prespecified patient subgroups from Effisayil 1, if at least 2 categories of the subgroup included ≥5 patients: sex, age, race, BMI, GPPGA pustulation subscore at baseline, GPPGA total score at baseline, JDA GPP severity score at baseline, presence of plaque psoriasis at baseline, and *IL36RN* mutation status

- Scan the QR code at the bottom of this poster to see full details of the Effisayil 1 study design^{3,4}

RESULTS

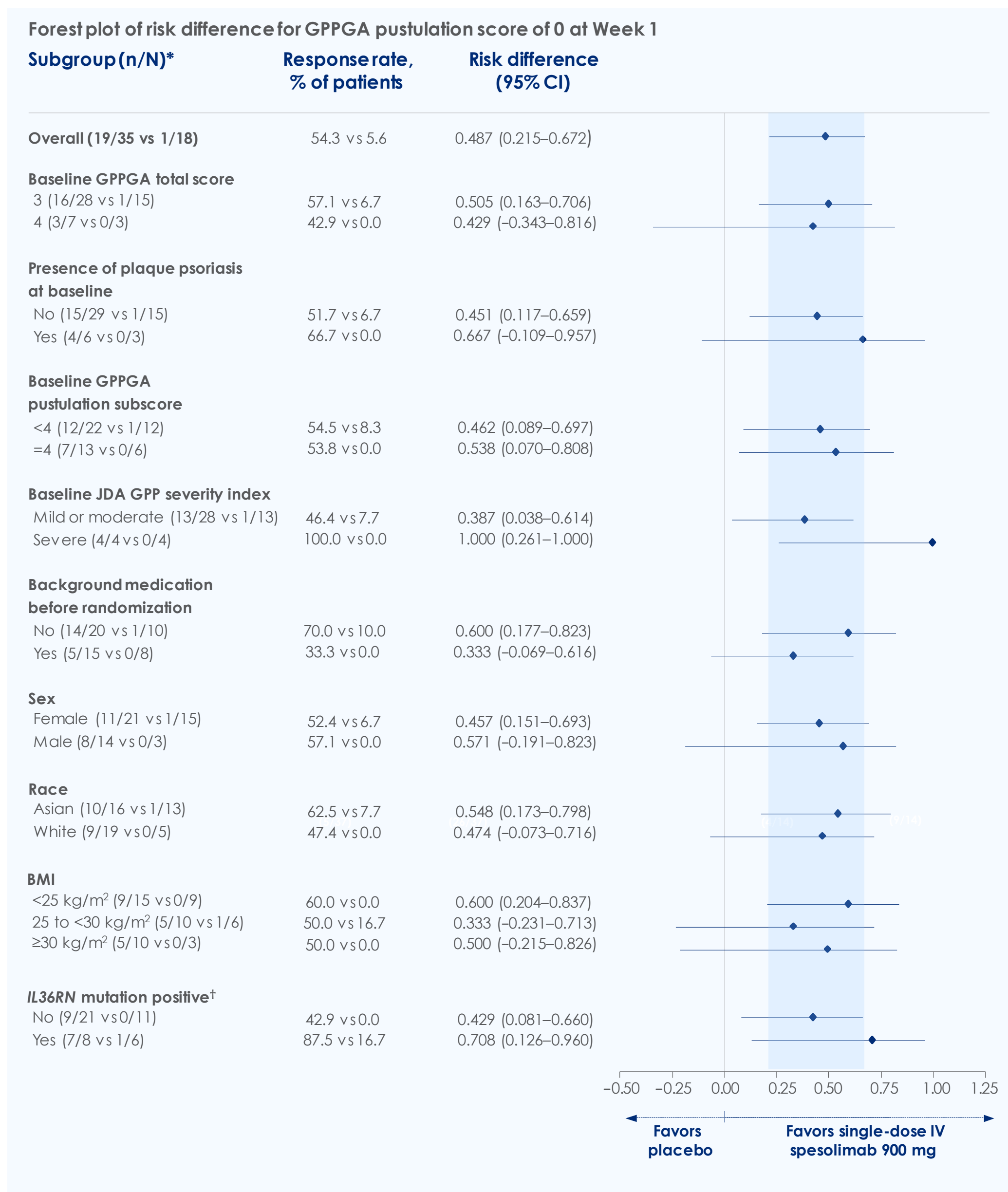
Baseline demographics and clinical characteristics

Characteristic	Spesolimab (n=35)	Placebo (n=18)
Age, years, mean (SD)	43.2 (12.1)	42.6 (8.4)
Female, n (%)	21 (60.0)	15 (83.3)
Race, n (%)		
Asian	16 (45.7)	13 (72.2)
White	19 (54.3)	5 (27.8)
BMI, kg/m ² , mean (SD)	27 (8)	26 (10)
<i>IL36RN</i> mutation positive*, n (%)	8 (22.9)	6 (33.3)
GPPGA total score, n (%)		
3 (moderate)	28 (80.0)	15 (83.3)
4 (severe)	7 (20.0)	3 (16.7)
GPPGA pustulation subscore, n (%)		
2 (mild)	6 (17.1)	5 (27.8)
3 (moderate)	16 (45.7)	7 (38.9)
4 (severe)	13 (37.1)	6 (33.3)
Pain VAS, median (IQR)	79.8 (70.5–87.8)	70.0 (50.0–89.4)
JDA GPP severity index, n (%)		
Mild	9 (25.7)	5 (27.8)
Moderate	19 (54.3)	8 (44.4)
Severe	4 (11.4)	4 (22.2)
Missing	3 (8.6)	1 (5.6)
Mean (SD)	7.9 (3.0)	8.4 (2.8)
Median (min, max)	8.0 (2, 14)	8.0 (4, 14)
Medication for GPP prior to randomization, n (%)†	18 (51.4)	9 (50.0)
Clobetasol propionate	5 (14.3)	1 (5.6)
Acitretin	4 (11.4)	1 (5.6)
Cyclosporin	2 (5.7)	3 (16.7)
Betamethasone valerate	2 (5.7)	2 (11.1)
Methotrexate	1 (2.9)	3 (16.7)
Betamethasone dipropionate	1 (2.9)	2 (11.1)
Betamethasone; calcipotriol	2 (5.7)	1 (5.6)
Emulsifying wax; paraffin, liquid, white soft paraffin	1 (2.9)	2 (11.1)

Genotyping data were available for 46 patients; DNA sequencing was not performed in 7 patients. *Patients who were homozygous or heterozygous for an *IL36RN* mutation were considered positive; †Background medication for GPP in at least 3 patients of the overall population.

The placebo arm included a higher proportion of female and Asian patients than the spesolimab arm; clinical characteristics were generally balanced between study arms

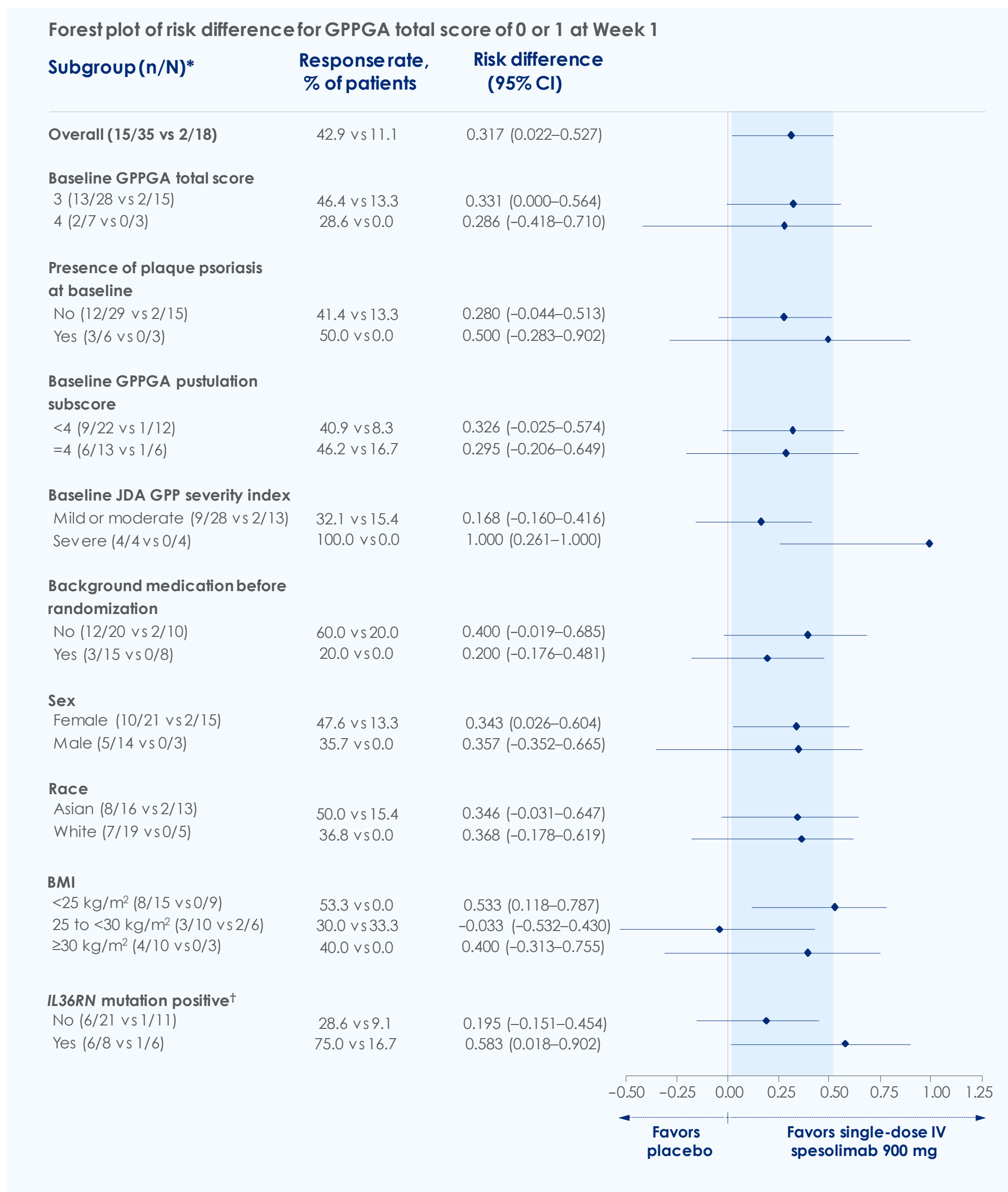
Subgroup analysis of GPPGA pustulation subscore of 0 at Week 1



Missing values or any use of other medication for GPP within the first week of the trial were regarded as non-response for the analysis of these endpoints. *Single-dose IV spesolimab 900 mg vs placebo; subgroup analysis by age was not performed, as only 2 patients were aged ≥65 years; †Patients who were homozygous or heterozygous for an *IL36RN* mutation were considered positive.

The efficacy of spesolimab (GPPGA pustulation subscore of 0) was consistent across patient subgroups

Subgroup analysis of GPPGA total score of 0 or 1 at Week 1



Missing values or any use of other medication for GPP within the first week of the trial were regarded as non-response for the analysis of these endpoints. *Single-dose IV spesolimab 900 mg vs placebo; subgroup analysis by age was not performed, as only 2 patients were aged ≥65 years; †Patients who were homozygous or heterozygous for an *IL36RN* mutation were considered positive.

The efficacy of spesolimab (GPPGA total score of 0 or 1) was consistent across patient subgroups

Abbreviations: BMI, body mass index; CI, confidence interval; FDA, US Food and Drug Administration; GPP, generalized pustular psoriasis; GPPGA, Generalized Pustular Psoriasis Physician Global Assessment; IL-36, interleukin-36; IQR, interquartile range; IV, intravenous; JDA, Japanese Dermatological Association; SD, standard deviation; VAS, visual analog scale. References: 1. Haverkamp A, et al. J Eur Acad Dermatol Venereol 2017;31:1792-1799; 2. Fujita H, et al. J Dermatol 2018;45:1235-1270; 3. Bachelez H, et al. N Engl J Med 2021;385:2431-2440; 4. Choon SE, et al. BMJ Open 2021;15:e043666.

Disclosures & Acknowledgements: Spesolimab is an investigational drug and is currently undergoing Priority Review by the FDA for the treatment of GPP flares. The study was supported and funded by Boehringer Ingelheim. ADB declares paid consulting activities for AbbVie, Amiral, Boehringer Ingelheim, Celgene, Eli Lilly, Janssen, LEO Pharma, Novartis, and UCB. YO declares grants or contracts from Eisai, Maruho Pharmaceutical, and Shiseido Toli; and consulting fees from AbbVie, Amgen, Boehringer Ingelheim, Bristol Myers Squibb, Celgene, Eisai, Eli Lilly, Janssen, JIMRO, Kyowa Kirin, LEO Pharma, Maruho Pharmaceutical, Novartis, Pfizer, Sanofi, Sun Pharmaceutical Industries, Taiho Pharmaceutical, and UCB. MZ declares receiving grants, consulting fees, and/or speaker's fees from AbbVie, Boehringer Ingelheim, Janssen-Cilag, LEO Pharma, Novartis, Pfizer, and Xian-Janssen. DT declares having attended advisory boards and/or received consultancy fees and/or receiving grants as an investigator from AbbVie, Amiral, Amgen, Beiersdorf, Bristol Myers Squibb, Boehringer Ingelheim, DS-Pharma, Eli Lilly, Galapagos, GlaxoSmithKline, Janssen-Cilag, LEO Pharma, Maruho, Medac, MorphoSys, Novartis, Pfizer, Regeneron Pharmaceuticals, Inc., Samsung, Sanofi, Sanofi, Sun Pharmaceutical Industries, and UCB. PvdK received fees for consultancy services or lectureships from Amiral, AbbVie, Boehringer Ingelheim, Bristol Myers Squibb, Dermavant Sciences, Eli Lilly, Janssen, LEO Pharma, Novartis, and UCB. NH, MS, and CT are employees of Boehringer Ingelheim. SEC declares paid activities as an advisor, speaker, or consultant for AbbVie, Boehringer Ingelheim, Eli Lilly, Janssen, LEO Pharma, MSD, Novartis, Pfizer, Sanofi, and UCB. The authors met criteria for authorship as recommended by the International Committee of Medical Journal Editors (ICMJE). The authors did not receive payment related to the development of the poster. Boehringer Ingelheim was given the opportunity to review the poster for medical and scientific accuracy, as well as intellectual property considerations. Geetha Vilventharaja of OPEN Health Communications (London, UK) provided writing, editorial, and formatting support, which was contracted and funded by Boehringer Ingelheim.



Scan QR code for an interactive, electronic, device-friendly copy of the poster <https://bit.ly/3KTNClu>

Click the icon to access an interactive microsite for this Smart poster

