

# Characteristics Associated with a Positive PEST Screening Among Patients with Psoriasis without a Diagnosis of Psoriatic Arthritis: Results from the Global Psoriasis and Beyond Study

Alexis Ogdie<sup>1</sup>, April Armstrong<sup>2</sup>, Barbra Bohannon<sup>3</sup>, Sicily Mburu<sup>4</sup>, Laura C Coates<sup>5</sup>, Elena Kornyeveva<sup>6</sup>, Susan Frade<sup>6</sup>, Silvia F Barrio<sup>7</sup>, Matthias Augustin<sup>8</sup>

<sup>1</sup>Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA; <sup>2</sup>Department of Dermatology, University of Southern California, Los Angeles, CA, USA; <sup>3</sup>Psoriasisförbundet, Stockholm, Sweden; <sup>4</sup>IFPA, Stockholm, Sweden; <sup>5</sup>Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, University of Oxford, Oxford, UK; <sup>6</sup>Novartis Pharma AG, Basel, Switzerland; <sup>7</sup>Asociación Para El Enfermo De Psoriasis, Buenos Aires, Argentina; <sup>8</sup>University Medical Center Hamburg-Eppendorf, Hamburg, Germany

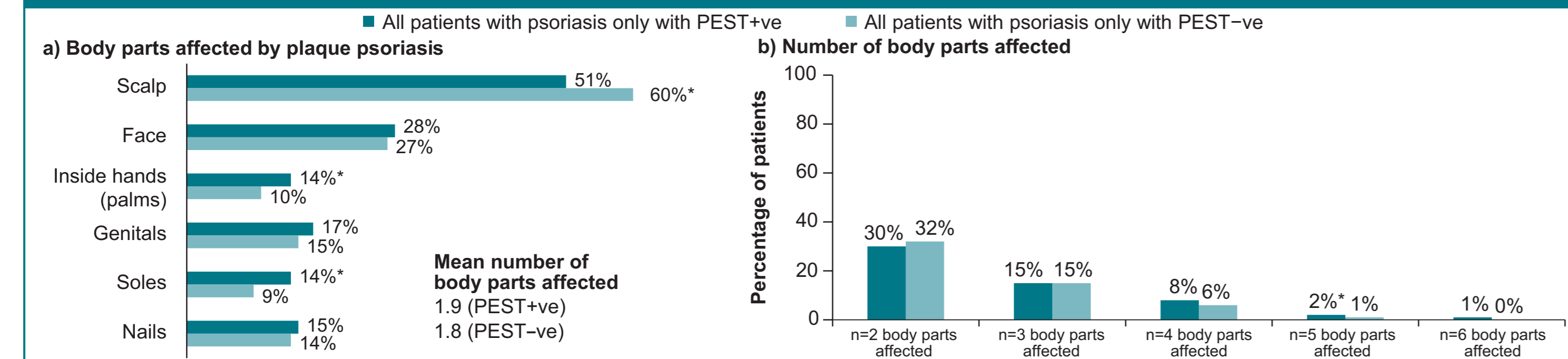
## INTRODUCTION

- The Global Psoriasis and Beyond Study, conducted in partnership with IFPA, aimed to assess patients' understanding of their psoriasis and psoriatic arthritis (PsA) as part of a systemic disease, associated comorbidities, disease burden, and their relationships with health care professionals<sup>1</sup>
- PsA is a common comorbidity in patients with psoriasis; up to one-third of patients with psoriasis will develop PsA in their lifetime.<sup>2</sup> Despite this fact, the Psoriasis and Beyond Study<sup>1</sup> recently reported that 71% of patients with psoriasis were unaware of the relationship between their skin disease and PsA
- Here, we describe the characteristics associated with a positive Psoriasis Epidemiology Screening Tool (PEST) score among patients from the Psoriasis and Beyond Study with psoriasis without a diagnosis of PsA<sup>1</sup>

## RESULTS

- A total of 4978 responses were analyzed, of which 3490 patients had a diagnosis of psoriasis only, while 1488 patients also had a diagnosis of PsA. Of the patients with psoriasis only, 38% (n=1340) screened PEST+ve
- Among patients with PsA diagnosis who screened PEST+ve, no differences regarding PsA severity between genders were reported:
  - Women began to experience PsA symptoms at an average age of 32 years (29 years in men)
- Among patients without PsA diagnosis who screened PEST+ve, psoriasis severity was categorized as moderate in 26% and severe in 13% of patients
- Of the patients with psoriasis only, a higher proportion of patients who screened PEST+ve reported dry skin that may crack and bleed (57% vs 44%), soreness around psoriatic plaques (36% vs 20%), and thick and pitted nails (16% vs 12%) compared with patients who screened PEST-negative (PEST-ve)
- Patients with psoriasis only who screened PEST+ve had higher mean sensitive body parts affected by psoriasis (1.9); the palms and soles were the significantly most affected parts for PEST+ve (14% each) (Figure 1)

Figure 1. PEST response in self-reported body parts affected by plaque psoriasis severity



\*Significance higher vs other columns tested. Statistical significance test at 95%.

## METHODS

### Study Design and Patients

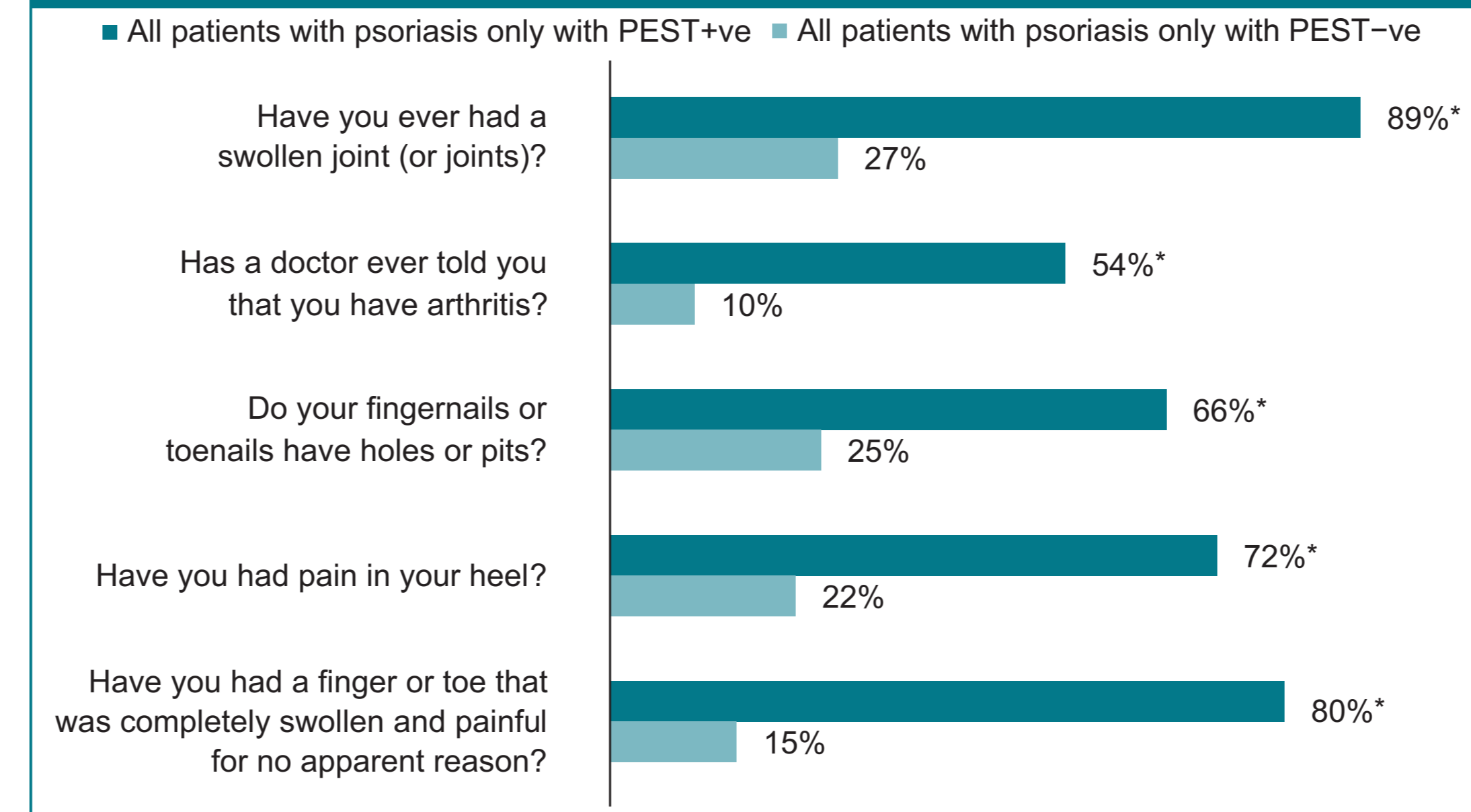
- The Psoriasis and Beyond Study was a cross-sectional, quantitative online survey conducted in adults from 20 countries across Europe, Asia-Pacific, and the Americas
- Adult patients (aged ≥18 years) with a self-reported, physician-given diagnosis of moderate to severe psoriasis (moderate: body surface area [BSA] >5% to <10% affecting sensitive and/or prominent body parts [scalp, face, palms, hands, fingers, genitals, soles, or nails]; severe: BSA ≥10% at its worst, with/without concomitant PsA regardless of treatment)
- Patients without a confirmed diagnosis of PsA were screened using the PEST; patients providing ≥3 positive responses to the 5 questions in the PEST were considered as having a higher probability of undiagnosed PsA (i.e., PEST-positive [PEST+ve] patients)

### Statistical Analysis

- The results for the primary and secondary objectives are reported descriptively

- All patients with psoriasis only, regardless of PEST score, reported at least 2 body parts affected by plaque psoriasis (30% in PEST+ve vs 32% in PEST-ve)
- Regardless of the absence of PsA diagnosis, more psoriasis-only patients who screened PEST+ve (vs PEST-ve) reported having notably swollen joints (89% vs 27%), swollen finger(s) and/or toe(s) (80% vs 15%), and heel pain (72% vs 22%)
- The knees and hand/finger joints were the predominant joints causing discomfort for psoriasis-only patients who screened PEST+ve (Figure 2)

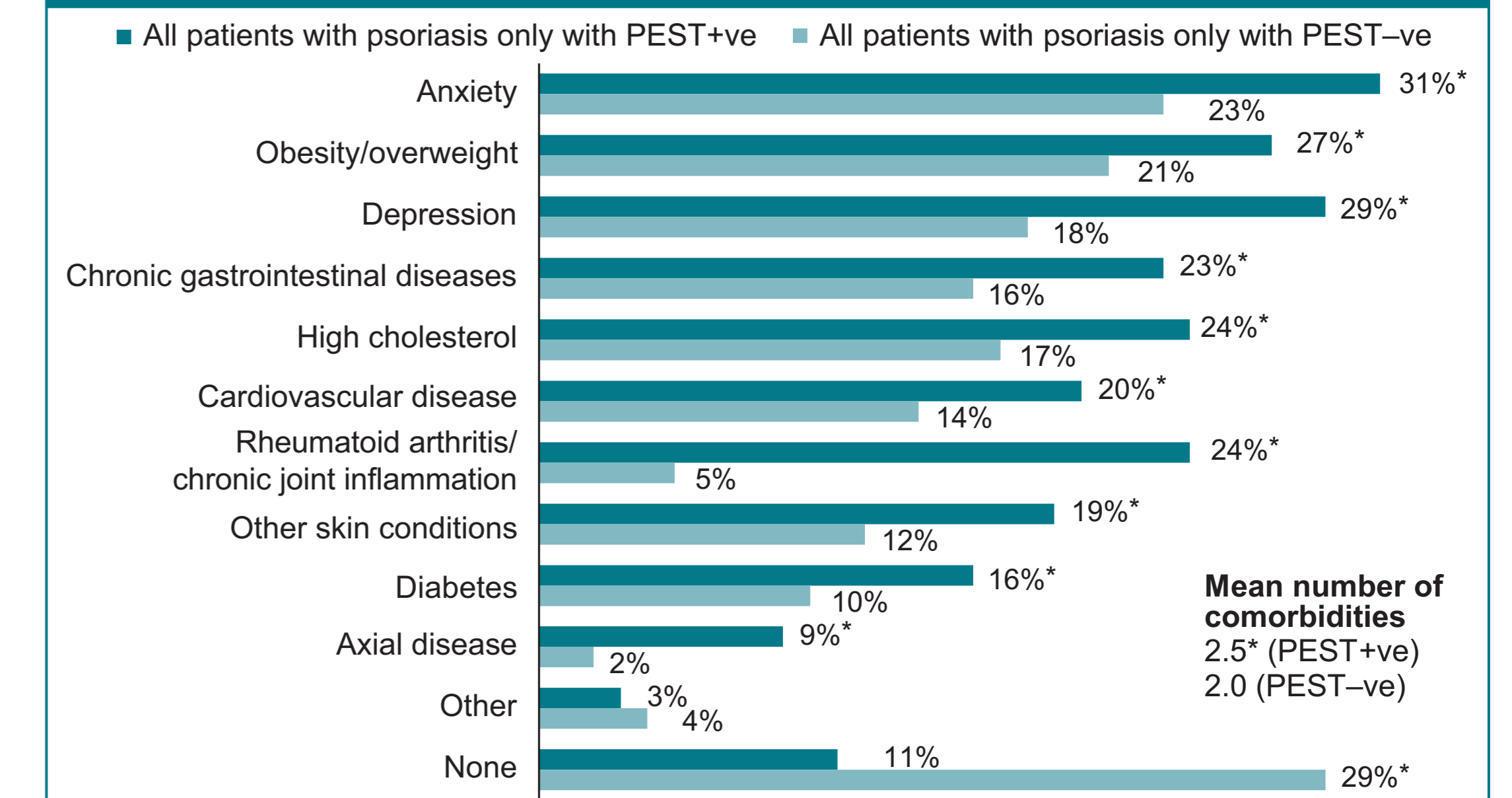
Figure 2. Musculoskeletal symptoms by PEST response



\*Significance higher vs other columns tested. Statistical significance test at 95%.

- The comorbidity burden was higher in psoriasis-only patients who screened PEST+ve, with anxiety, depression, and obesity being the most commonly reported comorbidities (Figure 3)
- The impact of psoriasis on quality of life was also higher in psoriasis-only patients who screened PEST+ve compared to psoriasis-only patients who screened PEST-ve (very large effect: 38% vs 22%; extremely large effect: 26% vs 5%)

Figure 3. Comorbidities by PEST response in patients with psoriasis only



\*Significance higher vs other columns tested. Statistical significance test at 95%.

## CONCLUSION

- A large sub-population of psoriasis-only patients screened PEST+ve, which indicated a higher probability of having undiagnosed PsA highlighting the need for active screening for PsA by psoriasis-treating physicians to minimize the development of irreversible joint damage with timely appropriate treatment
- Higher PEST+ve score in psoriasis only patients is an indication of significant comorbidities burden combined with higher psoriasis severity; these findings warrant further studies

## REFERENCES

- Armstrong A, et al. Fall Clinical Dermatology Conference, October 21–24, 2021.
- Gottlieb A, Merola JF. *J Dermatolog Treat.* 2020;31:662–79.

## Acknowledgments

The authors thank Kamalakkannan Narasimha Naidu (Novartis, India) for medical writing support. The study was sponsored by Novartis Pharma AG, Basel, Switzerland.  
Poster presented at: American College of Rheumatology (ACR) Convergence 2022, Philadelphia, Pennsylvania, November 10–14, 2022.  
To download a copy of this poster, visit the web at: <http://novartis.medicalcongressposters.com/Default.aspx?doc=94b04>  
Copies of this poster obtained through quick response (QR) code are for personal use only and may not be reproduced without written permission of the authors

