High Body Mass Index (BMI) Psoriasis is Associated With Higher Prevalence of Cardiometabolic Disease, Psoriatic Arthritis, and Systemic Inflammation

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OBJECTIVE

- To evaluate whether higher baseline BMI was associated with higher prevalence of baseline comorbidities in patients with moderate-to-severe psoriasis

CONCLUSIONS

- This integrated analysis of a population with moderate-to-severe psoriasis enrolled in ixekizumab clinical trials showed that overweight or obesity were highly prevalent at baseline
- Compared with normal BMI, obesity and overweight were associated with higher proportions of people with cardiometabolic disease (hypertension, hyperlipidemia, cardiovascular disease), asthma, metabolic dysfunction-associated liver disease, and PsA
- Obesity and overweight were also associated with higher levels of CRP at baseline, suggestive of higher baseline levels of systemic inflammation
- Greater number of comorbidities with obesity and overweight suggests a higher health burden and underscores broader health implications in this population
- Obesity was associated with higher psoriasis severity, but the magnitude of difference may have been blunted by clinical trial inclusion requirements for all participants to have moderate-to-severe skin disease
  - Greater magnitudes of psoriasis disease burden across BMI categories have been previously reported in the literature[1-4]
- With new options to manage both moderate-to-severe psoriasis and overweight or obesity, there may be an opportunity for dermatologists to intervene to modify overall disease and health among people with both conditions

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BACKGROUND

- Psoriasis and obesity share inflammatory pathways with overlapping comorbid complications[5,6]
- Both conditions are chronic inflammatory processes that can have significant negative impacts on health, including increased risk of cardiovascular disease and components of metabolic syndrome[6]
- Although guidelines recommend addressing obesity and its associated comorbidities in the management of psoriasis, it remains under-managed in clinical practice. Further research is needed to clarify the impact of elevated BMI on comorbidities in people with psoriasis[7]
- Ixekizumab has been studied extensively in patients with moderate-to-severe psoriasis across 18 randomized clinical trials[8,a]
  - Comprehensive baseline data from these psoriasis trials offer the opportunity to study the relationship between baseline BMI and comorbidities among patients with moderate-to-severe disease

[a]18 trials comprised of 17 studies from Lebwohl et al. 2025 and another in patients with moderate to severe plaque or active PsA in India (NCT05855967).

KEY RESULT

- In a clinical trial population with moderate-to-severe psoriasis[a]:

~75% of patients had obesity or overweight

Prevalence of comorbidities was **higher** in people with obesity and overweight vs. normal BMI group

×11

The **proportion of people with ≥3 comorbidities** was **11 times higher** in obesity (72.2%) vs. normal BMI (6.5%) group

- Since all clinical trial participants had baseline moderate-to-severe psoriasis, the magnitudes of difference in comorbidity prevalence across BMI groups reported here may be smaller than what has been previously reported for a general psoriasis population (i.e. across mild to severe disease presentations)

[a]Defined as people with ≥10% of their body-surface area affected by psoriasis, an sPGA score of ≥3 or higher (on a scale of 0 to 5, with higher scores indicating more severe disease), and a PASI of ≥12 or higher (on a scale from 0 to 72, with higher scores indicating more severe disease) at both the screening and baseline visits.

METHODS

Patient Population and Assessments

- This integrated data set (N=7029) included 18 randomized clinical trials of ixekizumab in psoriasis[8,a]
- Participants were adults with moderate-to-severe psoriasis[8,9,b]
- Patient population agnostic of treatment arm was stratified by the following BMI groups[10]
  - Normal BMI ≥18.5 to <25 kg/m^2 (n=1710)
  - Overweight ≥25 to <30 kg/m^2 (n=2291)
  - Obesity ≥30 kg/m^2 (n=3028)
- The following baseline measures were compared across BMI subgroups
  - Disease severity: severity (Static Physician's Global Assessment [sPGA] score and Psoriasis Area and Severity Index [PASI])
  - Prevalence of psoriasis and obesity comorbidities[c]: psoriatic arthritis (PsA), hypertension, hyperlipidemia, diabetes, cardiovascular disease, asthma, metabolic dysfunction-associated liver disease
  - Inflammatory marker: CRP levels
- The non-parametric Mann-Whitney U test was used to statistically compare differences between the Obesity or Overweight groups vs. the Normal BMI group (p-value ≤0.05 indicated statistical significance)

[a]18 trials comprised of 17 studies from Lebwohl et al. 2025 and another in patients with moderate to severe plaque or active PsA in India (NCT05855967); [b]Defined as people with ≥10% of their body-surface area affected by psoriasis, an sPGA score of ≥3 or higher (on a scale of 0 to 5, with higher scores indicating more severe disease), and a PASI of ≥12 or higher (on a scale from 0 to 72, with higher scores indicating more severe disease) at both the screening and baseline visits; [c]Baseline comorbidities were determined from unsolicited. medical history.

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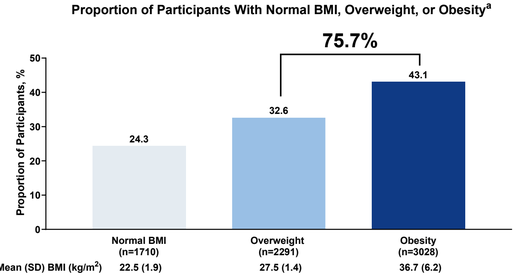
Abbreviations: *BMI=body mass index; CI=confidence interval; CRP=C-reactive protein; N=number of patients in each BMI category; n=participants in each BMI category with non-missing baseline CRP; PASI=Psoriasis Area and Severity Index; PsA=psoriatic arthritis; SD=standard deviation; sPGA=Static Physician's Global Assessment*

RESULTS

Over 75% of Participants Had Obesity or Overweight



Disease Severity at Baseline

- Obesity was significantly associated with greater psoriasis severity at baseline vs. Normal BMI subgroup[b]

Endpoint, mean (SD)	Normal BMI n=796	Overweight n=1241	Obesity n=1711
PASI	19.8 (7.9)	20.0 (7.7)	20.6 (7.8)
sPGA score	3.5 (0.6)	3.5 (0.6)	3.6 (0.6)

- Obesity was significantly associated with greater psoriasis severity at baseline vs. Normal BMI subgroup[b]

[a]BMI categories defined as: Normal BMI ≥18.5 to <25 kg/m^2; Overweight ≥25 to <30 kg/m^2; Obesity ≥30 kg/m^2; [b]p<0.001 vs. Normal subgroup based on the Mann-Whitney U test;

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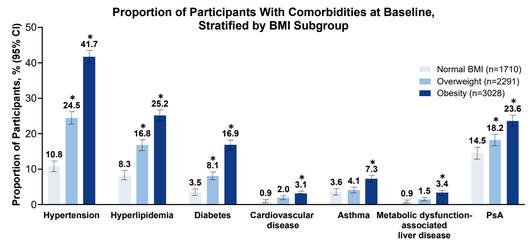
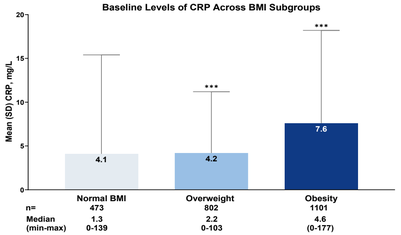
Obesity and Overweight Were Associated With Higher Prevalence of Comorbidities at Baseline



*p≤0.05 vs. Normal subgroup based on non-overlapping 95% CI.;

Obesity and Overweight Were Associated With Greater Levels of the Inflammatory Marker CRP at Baseline



***p<0.001 vs. Normal subgroup based on the Mann-Whitney U test.

Higher Baseline BMI Was Associated With a Greater Number of Comorbidities at Baseline