

Table SI. Inclusion and exclusion criteria for the patients with psoriasis and the healthy controls, respectively

Inclusion criteria

Patients with psoriasis

- Caucasian
- Age ≥ 18 years
- Moderate-to-severe plaque psoriasis, defined as: Psoriasis Area Severity Index (PASI) ≥ 10 and/or Dermatology Life Quality Index (DLQI) ≥ 10 .
- Moderate-to-severe plaque psoriasis where other systemic treatments were ineffective or considered inappropriate.
- No previous tumour necrosis factor alpha (TNF- α) inhibitor exposure.

Healthy controls

- Age ≥ 18 years.
- No history of psoriasis.
- No other inflammatory disorder of the skin, joints and/or bowel.
- Sex, age, and season matched to the patients with psoriasis.

Exclusion criteria, for both patients and controls

- Pregnancy/lactation or plans for pregnancy.
- Ongoing other severe chronic or systemic disease, e.g. liver, kidney, cancer, or infectious disease.
- Treatment with oral steroids or other immunosuppressive/anti-inflammatory drugs and antibiotic treatment.
- Ongoing sunbed use or sunbed use during the past 4 weeks.
- Sun holiday during the past 4 weeks (sun holiday was defined as journey to a location where the ultraviolet (UV) index was ≥ 3 during the period of the journey).
- Use of vitamin D interactive medicine (e.g. anticonvulsants).
- Vitamin D substitution and/or the use of topical vitamin D analogues were not allowed during the study.