



Challenging Cases of Psoriasis

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Disclosures:

Research investigator and/or scientific advisor to AbbVie, Ammirall, Arcutis, ASLAN, BI, BMS, EPI, Incyte, Leo, UCB, Janssen, Lilly, Nimbus, Novartis, Ortho Dermatologics, Sun, Dermavant, Dermira, Sanofi, Regeneron, Pfizer, and Modmed.

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Case 1

44-year-old man presents with
extensive plaque psoriasis and nail
psoriasis.

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Case 1

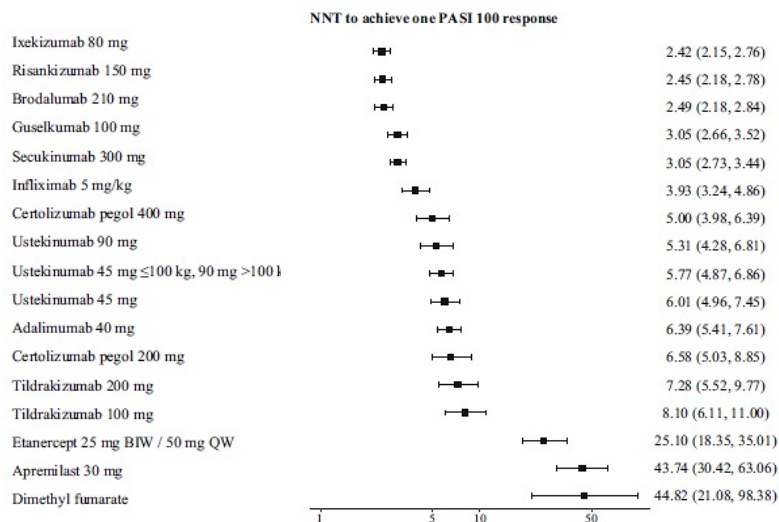
- 44-year-old man presents with extensive plaque psoriasis and nail psoriasis.
- BSA 60%, PASI 31, PGA 4
- Patient had previously been treated with:
 - adalimumab for two years without significant improvement
 - ixekizumab for one year without significant improvement
- Reports negative TB history and had been evaluated for TB annually.

PASI = Psoriasis Area and Severity Index; PGA = Physician's Global Assessment; CXR = chest X-ray; TB = tuberculosis.

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Short-term: Estimated numbers needed to treat (NNTs) relative to placebo to achieve PASI 100 response



Armstrong AW, Soliman AM, Betts KA, Wang Y, Gao Y, Puig L, Augustin M Dermatol Ther (Heidelb). 2021 Jun;11(3):885-905.

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Table 2. Estimated response rates, SUCRA, and mean rank from the NMA of long-term PASI response

Treatment	Posterior Median, % (95% CrI)			SUCRA	Mean rank (95% CrI)
	PASI 75	PASI 90	PASI 100		
Risankizumab 150 mg at weeks 0, and 4, then Q12W	93.6 (91.2, 95.4)	85.3 (81.4, 88.7)	65.4 (59.3, 71.1)	0.998	1.0 (1.0, 1.0)
Brodalumab 210 mg at weeks 0, 1, and 2, then Q2W	89.7 (86.6, 92.3)	78.8 (74.0, 83.0)	55.7 (49.4, 61.8)	0.786	2.5 (2.0, 4.0)
Guselkumab 100 mg at weeks 0, and 4, then Q8W	89.3 (85.6, 92.3)	78.1 (72.5, 83.0)	54.8 (47.6, 61.9)	0.760	2.7 (2.0, 4.0)
Ixekizumab 160 mg at week 0, 80 mg Q2W until week 12, then 80 mg Q4W	85.4 (78.5, 90.6)	72.1 (62.7, 80.1)	47.2 (37.0, 57.6)	0.577	4.0 (2.0, 5.0)
Secukinumab 300 mg at weeks 0, 1, 2, 3, and 4, then Q4W	81.8 (78.5, 84.7)	67.0 (62.8, 71.0)	41.5 (37.0, 46.1)	0.450	4.9 (4.0, 5.0)
Ustekinumab 45 mg ≤ 100 kg, 90 mg > 100 kg at weeks 0, and 4, then Q12W	72.4 (70.2, 74.4)	55.0 (52.7, 57.3)	29.8 (27.6, 32.1)	0.252	6.2 (6.0, 7.0)
Adalimumab 80 mg at week 0, then 40 mg Q2W	69.4 (60.2, 77.5)	51.6 (41.8, 61.3)	26.9 (19.3, 35.7)	0.176	6.8 (6.0, 7.0)
Etanercept 50 mg BIW until week 12, then QW	56.3 (48.1, 64.2)	37.9 (30.4, 45.8)	16.7 (12.1, 22.4)	0.001	8.0 (8.0, 8.0)

BIW: twice weekly; CrI: credible interval; kg: kilogram; mg: milligram; NMA: network meta-analysis; PASI: Psoriasis Area and Severity Index; PASI 75, 90, 100: a 75%, 90% or 100% decrease from baseline PASI; QW: once weekly; Q2W: once every 2 weeks; Q4W: once every 4 weeks; Q8W: once every 8 weeks; Q12W: once every 12 weeks; SUCRA: surface under the cumulative ranking curves. Notes: SUCRA measures the relative ranking of each treatment, ranging from 0 to 1. A treatment with a higher SUCRA value has higher likelihood of being in the top ranks, and a treatment with a lower SUCRA value has higher likelihood of being in the bottom ranks.

Armstrong et al. AAD VMX, April 2021

Comparative Efficacy of Treatments for Moderate-to-Severe Plaque Psoriasis: An Updated Network Meta-Analysis

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Prior to initiation of a biologic for psoriasis which one of the following is **not** a universally recommended baseline lab to check based on the 2019 AAD-NPF guidelines?

- A. CBC
- B. CMP
- C. Hepatitis B and C serology
- D. HIV
- E. Interferon gamma release assays (IGRAs)

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- B. CMP
- C. Hepatitis B and C serology
- D. **HIV**
- E. Interferon gamma release assays (IGRAs)

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Case 1

- Prior to starting a biologic for psoriasis, baseline lab workup revealed **positive QuantiFERON Gold test**
- Patient is asymptomatic and subsequent CXR was negative for active TB
- How to approach this patient?
 - Choice of biologic
 - Management of TB

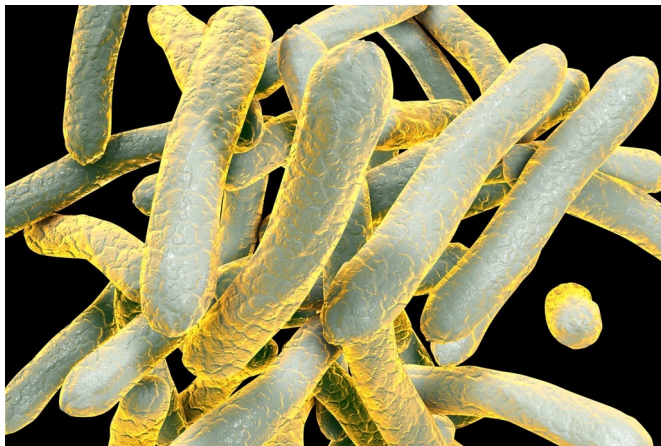
PASI = Psoriasis Area and Severity Index; PGA = Physician's Global Assessment; CXR = chest X-ray; TB = tuberculosis.

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Tuberculosis

- **Risk factors** for reactivation of latent TB: HIV/AIDS, transplantation, TNF- α blockers, close contacts, kidney dialysis
- Risk of reactivation of latent TB is much lower with IL-17 inhibitors and IL-23 inhibitors compared to TNF inhibitors



HIV/AIDS = human immunodeficiency virus/acquired immunodeficiency syndrome.

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Drug(s)	Duration	Dose	Frequency	Total Doses
Isoniazid (INH)	6 months	Adults: 5 mg/kg Children: 10–20 mg/kg Maximum dose: 300 mg	Daily	180
		Adults: 15 mg/kg Children: 20–40 mg/kg Maximum dose: 900 mg	Twice weekly	52
	9 months	Adults: 5 mg/kg Children: 10–20 mg/kg Maximum dose: 300 mg	Daily	270
		Adults: 15 mg/kg Children: 20–40 mg/kg Maximum dose: 900 mg	Twice weekly	76

**Latent TB
Treatment:
6- to 9-Month
Regimen with
Isoniazid
Monotherapy**

CDC. Accessed August 9, 2021. <https://www.cdc.gov/tb/topic/treatment/ltbi.htm>.

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Drug(s)	Duration	Dose	Frequency	Total Doses
Isoniazid (INH) and Rifampine (RPT)	3 months	<u>Adults and Children aged 12 years and older:</u> INH: 15 mg/kg rounded up to the nearest 50 or 100 mg; 900 mg maximum RPT: 10–14.0 kg 300 mg 14.1–25.0 kg 450 mg 25.1–32.0 kg 600 mg 32.1–49.9 kg 750 mg ≥50.0 kg 900 mg maximum <u>Children aged 2–11 years:</u> INH 25 mg/kg; 900 mg maximum RPT as above	Once weekly	12
Rifampin (RIF)	4 months	<u>Adults:</u> 10 mg/kg <u>Children:</u> 15–20 mg/kg <u>Maximum dose:</u> 600 mg	Daily	120
Isoniazid (INH) and Rifampin)	3 months	<u>Adults:</u> INH 5 mg/kg; 300 mg maximum RIF 10 mg/kg; 600 mg maximum <u>Children:</u> INH 10–20 mg/kg; 300 mg maximum RIF 15–20 mg/kg; 600 mg maximum	Daily	90

Latent TB Treatment: 3- to 4-Month Regimen

CDC. Accessed August 9, 2021. <https://www.cdc.gov/tb/topic/treatment/ltbi.htm>.

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Risk of TB reactivation with different classes of biologics

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Case 1: Back to Our Psoriasis Patient with a Positive IGRA Test

- Patient was started on rifampin 10 mg/kg daily
- Patient was started on risankizumab concurrently at 150 mg at week 0, 4, and every 12 weeks thereafter
- Patient's psoriasis at month 4 is BSA 7%, PASI 8, PGA 2
- Patient will be screened for TB symptoms yearly thereafter.

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How should patients with a history of latent TB be followed after adequate anti-TB treatment?

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Case 2

- Psoriasis patient with previous failure to multiple biologics

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**Psoriasis patients who have failed
prior biologics**

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P.L.

36 year-old
man who
developed
psoriasis since
age 15

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P.L.

Treatment history:
-topical steroids
-phototherapy x 1
year
-Adalimumab x 3
years; ustekinumab
x 2 years;
secukinumab x 1
year; ixekizumab x8
months;
Guselkumab x 1
year.

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P.L.

BSA: 18%
PASI: 22
PGA: 4
DLQI: 16

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Switching



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Primary versus secondary failure to a biologic

- Primary failure: A patient who has never responded optimally to a biologic
- Secondary failure: A patient who responded initially to a biologic but lost response over time

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Primary Failure: Switching Biologics



- Wait at least 6 months to switch, unless you do not see any improvement
- If the patient never responded to the initial drug (primary failure), consider switching to another class.

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Secondary Failure: Dose Escalation or Switching Biologics



- If the patient had responded to the biologic for a long time and then lost response (secondary failure), then
 - dose escalation
 - within class switch: if it helps to address comorbidities such as PsA
 - across-class switching

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P.L.

- Switched to Risankizumab; 8 months after initiation:
 - BSA: 2.5%
 - PASI: 4
 - PGA: 2
 - DLQI: 4
- 14 months after initiation:
 - BSA: 1%
 - PASI: 2
 - PGA: 1
 - DLQI: 3

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P.L.

- However, patient began having tenderness in the DIP and PIP joints of the hands
- Morning stiffness lasting around 30 minutes
- Evaluated by rheumatology



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Now what?

Treatment History

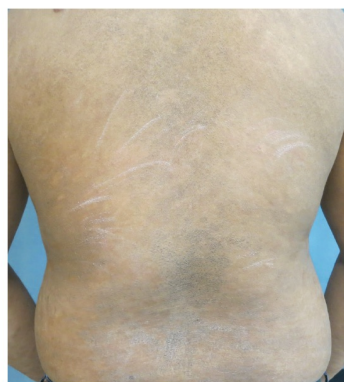
- Topical steroids
- Phototherapy x 1 year
- Adalimumab x 3 years;
- Ustekinumab x 2 years
- Secukinumab x 1 year; ixekizumab x8 months;
- Guselkumab x 1 year.
- Risankizumab x 10 months

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Brodalumab in Patients who failed other IL-17 inhibitors

Figure. Skin clearance of patients who received brodalumab.

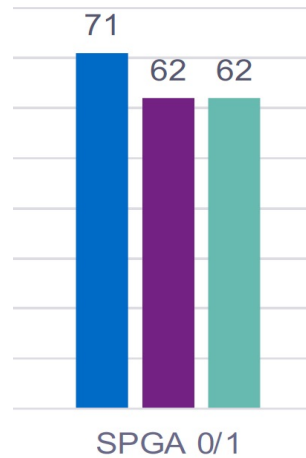


Baseline

Week 16

Approximately 40 patients failed treatment with secukinumab or ixekizumab

% patients achieving clear or almost clear



SPGA 0/1

■ AO ■ LOCF ■ NRI

Kimmel et al. Presented at: 77th Meeting of the American Academy of Dermatology; March 1-

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P.L.

- Switched to brodalumab at 210mg at weeks 0, 1, and 2, and then every 2 weeks
- Maintenance of skin improvement and improvements in the joints.

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Thank you!

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