NEXTSTEPS IN DERM

Secukinumab Therapeutic Cheat Sheet

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TRADE NAME[1-2]

- Cosentyx

MECHANISM OF ACTION[1-5]

Secukinumab is a fully human monoclonal immunoglobulin (IgG1)/κ antibody that selectively binds to and neutralizes interleukin-17A (IL-17A), the primary effector cytokine of the Th17 cell lineage, preventing it from interacting with its receptor.

- IL-17A binding stimulates keratinocytes to express chemokines and cytokines, particularly TNF-α, which recruit inflammatory cells and activate the innate immune system. This interaction contributes to epidermal hyperproliferation and skin barrier dysfunction, hallmark features of psoriasis.
- By inhibiting IL-17A, secukinumab interrupts this inflammatory cascade and helps normalize skin structure and function.
- At therapeutic doses, secukinumab specifically neutralizes IL-17A without neutralizing IL-17F or affecting other Th17 functions or the Th1 pathway.

FDA-APPROVED FOR[1-3,6]

- Moderate to severe plaque psoriasis (adult and pediatric ≥ 6 years)
- Psoriatic arthritis (adult and pediatric ≥ 2 years)
- Hidradenitis suppurativa (adults)
- Ankylosing spondylitis
- Non-radiographic axial spondyloarthritis
- Enthesis-related arthritis (pediatric ≥ 2 years)

OFF-LABEL DERMATOLOGIC USES[7]

- Chronic spontaneous urticaria (limited data)
- Pityriasis Rubra Pilaris (case reports)
- Behcet's disease
- Alopecia Areata
- Allergic Contact Dermatitis
- Palmoplantar pustulosis
- Lichen planus (case reports)
- Generalized pustular psoriasis

DOSING[1-3]

- Plaque psoriasis (Adults): 300 mg SC at weeks 0, 1, 2, 3, 4, then every 4 weeks
- Plaque psoriasis (Pediatric dosing): Weight-based 75-300 mg SC at weeks 0, 1, 2, 3, 4, then every 4 weeks
- Psoriatic Arthritis: **IV or SC**

  With loading dose: 6mg/kg IV at week 0, then 1.75mg/kg every 4 weeks.

  Without loading dose: 1.75mg/kg every 4 weeks

  With loading dose: 150mg SC at weeks 0,1,2,3,4, then every 4 weeks

  Without loading dose: 150mg SC every 4 weeks
- Hidradenitis suppurativa: 300 mg SC at weeks 0, 1, 2, 3, 4 then every 4 weeks. If a patient does not adequately respond, consider increasing the dosage to 300 mg every 2 weeks.

SIDE EFFECTS[1-3]

Secukinumab is well tolerated, with most adverse events being mild to moderate.

- Common side effects: Nasopharyngitis (11%-12%), upper respiratory infections (3%), diarrhea (3% to 4%), headache (≥ 2%), injection site reactions.
- Serious side effects: Inflammatory bowel disease exacerbation (<1%), mucocutaneous candida infections (<1%), hypersensitivity reactions including urticaria and anaphylaxis (rare)

WARNINGS AND PRECAUTIONS[1-3]

- Patients should be evaluated for latent or active tuberculosis infection prior to initiating therapy.
- Secukinumab may increase the risk of infections and close monitoring for infections during treatment is recommended.
- Caution when using secukinumab in individuals with history of Crohn's disease as it may exacerbate inflammatory bowel disease.

CONTRAINDICATIONS[1-3]

- Contraindicated in patients with hypersensitivity to secukinumab or latex.
- Absolute contraindications for using secukinumab are the presence of active infections, latent or active tuberculosis, hepatitis B, C, and HIV.

DRUG INTERACTIONS[1-3]

- Live vaccines should not be administered concurrently with secukinumab.
- Although secukinumab does not exhibit significant interactions with cytochrome P450 enzymes, cytokine suppression may influence the metabolism of co-administered drugs.

PREGNANCY AND BREASTFEEDING[3,8-9]

- Limited human data regarding its use in pregnancy; however, animal studies showed no harm at doses much higher than those used in humans. One study found no safety concerns related to miscarriage or birth defects, though it had significant limitations[9]
- It is not known if secukinumab is excreted in human milk; therefore, caution should be exercised when administering the drug to breastfeeding individuals.

LAB MONITORING

- Baseline Monitoring:
  - Complete blood count and hemogram
  - Liver function test
  - Renal function test
  - Screening for hepatitis and HIV infection
  - Tuberculin skin testing or Quantiferon Gold test
  - Pregnancy test in females of childbearing age
- Ongoing monitoring
  - No routine labs required

REFERENCES

1. Novartis Pharmaceuticals Corp. Cosentyx (secukinumab) [package insert]. Revised Jan 2024.
2. Cosentyx (secukinumab) Drug Label. DailyMed. Updated 2024.
3. Cosentyx: Drug information. In: UpToDate, Connor RF (Ed), Wolters Kluwer. [Accessed June 2025].
4. Frieder J, Kivelevitch D, Menter A. Secukinumab: a review of the anti-IL-17A biologic for the treatment of psoriasis. Therapeutic Advances in Chronic Disease. 2018;9(1):5-21. PMID : 29344327
5. Papp KA, Langley RG, Sigurgeirsson B, et al. Efficacy and safety of secukinumab in the treatment of moderate-to-severe plaque psoriasis: a randomized, double-blind, placebo-controlled phase II dose-ranging study. British Journal of Dermatology. 2013;168(2):412-421. PMID 23106107
6. Langley RG, Elewski BE, Lebwohl M, et al. Secukinumab in plaque psoriasis — results of two phase 3 trials. N Engl J Med. 2014;371(4):326-338. PMID: 25007392
7. Wu KK, Dao H Jr. Off-label dermatologic uses of IL-17 inhibitors. J Dermatolog Treat. 2022 Feb;33(1):41-47. PMID: 32116066.
8. Secukinumab - StatPearls - NCBI Bookshelf.
9. Warren RB, Reich K, Langley RG, Strober B, Gladman D, Deodhar A, Bachhuber T, Bao W, Altemeyer E, Hussain S, Safi J Jr. Secukinumab in pregnancy: outcomes in psoriasis, psoriatic arthritis and ankylosing spondylitis from the global safety database. Br J Dermatol. 2018 Nov;179(5):1205-1207. PMID: 29927479.