Drug Monograph

Drug/Drug Class: **Cosentyx™ (secukinumab) injection/ DMARDs**

Prepared for: MO HealthNet

Prepared by: Xerox Heritage, LLC

☒ **New Criteria** ☐ **Revision of Existing Criteria**

Executive Summary

Purpose:	The purpose of this monograph is to provide a review of new therapy to determine whether the reviewed drug should be made available on an open access basis to prescribers, require a clinical edit or require prior authorization for use.
Dosage Forms & Manufacturer:	Cosentyx™ is available in a Sensoready pen for injection containing 150 mg of secukinumab per ml. It is also available in a single-use prefilled syringe containing 150 mg of secukinumab per ml. Novartis Pharmaceuticals Corporation East Hanover, NJ 07936
Summary of Findings:	Cosentyx™ is a subcutaneous IL-17A antagonist indicated for the treatment of adults with moderate to severe plaque psoriasis who are candidates for phototherapy or systemic therapy. The safety and efficacy of 12 weeks of Cosentyx was demonstrated in 4 randomized, double-blind, placebo-controlled trials. Two studies (ERASURE and FIXTURE) that used the lyophilized powder found that 67% to 81.6% of patients treated with Cosentyx showed an improvement of 75% or greater from baseline in the PASI-75 compared with 4.5% to 4.9% receiving placebo. Additionally, IGA scores of clear or almost clear were achieved in 51.1% to 65.3% with Cosentyx compared with 2.4% to 2.8% with placebo. Similar results were found in the FEATURE study that used the prefilled syringe and the JUNCTURE study that used the prefilled automated injection. Most patients in the FIXTURE and ERASURE studies had continued efficacy at 52 weeks. In addition to improving efficacy over placebo, the FIXTURE study demonstrated that Cosentyx was superior to etanercept. Cosentyx is associated with an increased risk of infections, and all patients must be evaluated for tuberculosis prior to initiating therapy.
Status Recommendation:	☐ Prior Authorization (PA) Required ☐ Open Access ☐ Clinical Edit ☒ PDL
Type of PA Criteria:	☐ Increased Risk of ADE ☒ Non-Preferred Agent ☐ Appropriate Indications ☐ Under Solicitation

Purpose

The purpose of this monograph is to provide a review of new therapy to determine whether the reviewed drug should be considered a prior authorization drug, a clinical edit drug or an open access drug. While prescription expenditures are increasing at double-digit rates, payors are evaluating ways to control these costs by influencing prescriber behavior and guide appropriate medication usage. This review will assist in the achievement of qualitative and economic goals related to health care resource utilization. Restricting the use of certain medications can reduce costs by requiring documentation of appropriate indications for use, and where appropriate, encourage the use of less expensive agents within a drug class.

Introduction[5]

Plaque psoriasis is the most common form of the disease and appears as raised, red patches covered with a silvery white buildup of dead skin cells or scale. These patches or plaques most often appear on the scalp, knees, elbows and lower back. They are often itchy and painful, and they can crack and bleed. It is very common with more than 3 million cases per year in the US.

Dosage Form(s) [1]

Cosentyx™ is available in a Sensoready pen for injection containing 150 mg of secukinumab per ml. It is also available in a single-use prefilled syringe containing 150 mg of secukinumab per ml.

Manufacturer [1]

Novartis Pharmaceuticals Corporation, East Hanover, NJ 07936

Indication(s) [1]

Cosentyx™ is indicated for the treatment of adult patients with moderate to severe plaque psoriasis who are candidates for systemic therapy or phototherapy.

Clinical Efficacy [1,2,3,4] (mechanism of action/pharmacology, comparative efficacy)

Cosentyx™ is a recombinant human monoclonal antibody that inhibits the release of proinflammatory cytokines and chemokines by selectively binding to the interleukin-17A (IL-17A) cytokine and inhibiting its interaction with the IL-17 receptor. IL-17A is naturally produced in normal inflammatory and immune responses, but is found in elevated levels in psoriatic plaques.

Pharmacokinetics

	Cosentyx
Volume of distribution	7.1 to 8.6 L
Metabolism	Degradation to amino acids via catabolic pathways
Half-life	22 to 31 days

Cosentyx™ was more effective than placebo and etanercept in the treatment of moderate to severe plaque psoriasis in two randomized clinical trials (ERASURE and FIXTURE).

STUDY DESIGN	Two randomized, double-blind, multicenter, 52-week, placebo-controlled, phase 3 clinical trials (ERASURE, n=737; FIXTURE, n=1305).
INCLUSION	Adult patients with poorly controlled, moderate to severe plaque psoriasis,

CRITERIA	diagnosed at least 6 months previously.
EXCLUSION CRITERIA	Patients receiving concomitant medications for plaque psoriasis (ERASURE and FIXTURE) or patients with any previous use of etanercept (FIXTURE study only).
TREATMENT REGIMEN	Patients were randomized to receive Cosentyx 150 mg (n=245), Cosentyx 300 mg (n=245), or placebo (n=248) in the ERASURE trial. In the FIXTURE trial patients received either Cosentyx 150 mg (n=327), Cosentyx 300 mg (n=327), etanercept at 50 mg subQ twice weekly until week 12 then once weekly through week 51 (n=326), or placebo (n=326). Patients receiving Cosentyx were administered weekly injections ofthe lyophilized powder form at baseline, at weeks 1, 2, 3, and 4, then every 4 weeks until week 48.
RESULTS	In the ERASURE and FIXTURE studies, 71.6% and 67% of patients treated with Cosentyx 150 mg, respectively, and 81.6% and 77.1% of patients treated with Cosentyx 300 mg, respectively, showed an improvement of 75% or greater from baseline in the PASI-75 compared with 4.5% and 4.9% receiving placebo, respectively, or 44% with etanercept after 12 weeks. Additionally, IGA scores of clear or almost clear were achieved in 51.2% and 51.1% with Cosentyx 150 mg and 65.3% and 62.5% with Cosentyx 300 mg compared with 2.4% and 2.8% with placebo or 27.2% with etanercept. PASI-75 scores were maintained from week 12 to week 52 in 72.4% and 82.2% with 150 mg and in 80.5% and 84.3% with 300 mg compared with 72.5% with etanercept. The IGA scores of clear or almost clear were maintained from week 12 to week 52 in 59.2% and 67.7% with Cosentyx 150 mg and 74.4% and 79.7% with Cosentyx 300 mg compared with 56.8% with etanercept. Statistical significance in favor of Cosentyx was shown for all endpoints when compared with placebo, and for the Cosentyx 300-mg dose when compared with the 150-mg dose of Cosentyx. Noninferiority and superiority were found for all endpoints when Cosentyx was compared with etanercept.
SAFETY	Over the initial 12-week induction phase, infections occurred in 26.7% to 30.9% of Cosentyx patients versus 16.2% to 19.3% of placebo patients and 24.5% of etanercept patients. Other common adverse events in both trials included nasopharyngitis, headache, and upper respiratory tract infection. Injection site reactions occurred in 0.7% of the Cosentyx groups versus 11.1% of the etanercept group.

Contraindications [1]

- Serious hypersensitivity to secukinumab or any component of the product

Warnings and Precautions [1]

- Exacerbation of Crohn disease, sometimes serious, has been reported; exercise caution in and closely monitor patients with active Crohn disease.
- Infections have been reported, with an increased risk with increasing dose; monitoring recommended and discontinuation may be required if serious infection develops.
- Use caution in patients with chronic infection or a history of recurrent infection.
- Tuberculosis; do not administer to patients with active infection, treat latent tuberculosis prior to initiating secukinumab, and monitor for infection during treatment.
- Anaphylaxis and urticaria have been reported; discontinue if anaphylaxis or serious allergic reaction occur.
- Latex allergy; cap contains natural rubber latex.
- Completion of all age-appropriate vaccinations prior to treatment initiation is recommended.
- Avoid live vaccine administration during treatment; non-live vaccines may not be effective if administered during treatment.

Adverse Effects [1]

Most common, ≥ 1%	Cosentyx™ (n=691)	Placebo (n=694)
Nasopharyngitis	11.4%	8.6%
Diarrhea	4.1%	1.4%
Upper respiratory tract infection	2.5%	0.7%
Rhinitis	1.4%	0.7%
Oral herpes	1.3%	0.3%
Pharyngitis	1.2%	0%
Urticaria	0.6%	0.1%
Rhinorrhea	1.2%	0.1%

Drug Interactions [1]

- CYP450 substrates with narrow therapeutic indices: warfarin

- Vaccines, live and non-live

Dosage and Administration [1]

The recommended initial dose is 300 mg subQ weekly at weeks 0, 1, 2, 3, and 4, followed by a maintenance dose of 300 mg subQ once every 4 weeks. A dose of 150 mg is adequate in some patients.

Cost [1]

GENERIC NAME	BRAND NAME	MANUFACTURER	STRENGTH	DOSE	COST*/ MONTH
Secukinumab	Cosentyx	Novartis	150 mg single-use pen	300 mg every 4 weeks	$3290.73
			150 mg prefilled single-use syringe	300 mg every 4 weeks	$3290.73
Etanercept	Enbrel	Amgen	50 mg prefilled syringe	50 mg once a week	$3081.58
			50 mg autoinjector	50 mg once a week	$3081.58

*WholesaleAcquisitionCost

Conclusion

Cosentyx™ is a subcutaneous IL-17A antagonist indicated for the treatment of adults with moderate to severe plaque psoriasis who are candidates for phototherapy or systemic therapy. The safety and efficacy of 12 weeks of Cosentyx was demonstrated in 4 randomized, double-blind, placebo-controlled trials. Two studies (ERASURE and FIXTURE) that used the lyophilized powder found that 67% to 81.6% of patients treated with Cosentyx showed an improvement of 75% or greater from baseline in the PASI-75 compared with 4.5% to 4.9% receiving placebo. Additionally, IGA scores of clear or almost clear were achieved in 51.1% to 65.3% with Cosentyx compared with 2.4% to 2.8% with placebo. Similar results were found in the FEATURE study that used the prefilled syringe and the JUNCTURE study that used the prefilled automated injection. Most patients in the FIXTURE and ERASURE studies had continued efficacy at 52 weeks. In addition to improving efficacy over placebo, the FIXTURE study demonstrated that Cosentyx was superior to etanercept. Cosentyx is associated with an increased risk of infections, and all patients must be evaluated for tuberculosis prior to initiating therapy. The most common adverse events include nasopharyngitis, diarrhea, and upper respiratory tract infections.

Recommendation

The MO HealthNet Division recommends this drug for inclusion to the state specific Preferred Drug List.

References

1. Product Information: Cosentyx™, secukinumab injection. Novartis Pharmaceuticals Corporation, East Hanover, NJ, 01/2015
2. 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.
3. Blauvelt A, Prinz JC, Gottlieb AB et al: Secukinumab administration by pre-filled syringe: efficacy, safety and usability results from a randomized controlled trial in psoriasis (FEATURE). Br J Dermatol 2015; 172(2):484-493.
4. Paul C, Lacour JP, Tedremets L et al: Efficacy, safety and usability of secukinumab administration by autoinjector/pen in psoriasis: a randomized, controlled trial (JUNCTURE). J Eur Acad Dermatol Venereol 2014 Sep 22; Epub ahead of print.
5. Plaque Psoriasis. Retrieved June 2, 2015 from https://www.psoriasis.org/about-psoriasis/types/plaque

Prepared by: Luke Boehmer, PharmD

Date: June 2, 2015

