

Clinical Policy: Triamcinolone ER Injection (Zilretta)

Reference Number: ERX.SPA.308

Effective Date: 03.01.19

Last Review Date: 02.21

Line of Business: Commercial, Medicaid

[Revision Log](#)

See **Important Reminder** at the end of this policy for important regulatory and legal information.

Description

Triamcinolone acetonide extended-release injectable suspension (Zilretta[®]) is an extended-release synthetic corticosteroid.

FDA Approved Indication(s)

Zilretta is indicated as an intra-articular injection for the management of osteoarthritis pain of the knee.

Limitation(s) of use: The efficacy and safety of repeat administration of Zilretta have not been demonstrated.

Policy/Criteria

Provider must submit documentation (such as office chart notes, lab results or other clinical information) supporting that member has met all approval criteria.

Health plan approved formularies should be reviewed for all coverage determinations. Requirements to use preferred alternative agents apply only when such requirements align with the health plan approved formulary.

It is the policy of health plans affiliated with Envolve Pharmacy Solutions[™] that Zilretta is **medically necessary** when the following criteria are met:

I. Initial Approval Criteria

A. Osteoarthritis of the Knee (must meet all):

1. Diagnosis of osteoarthritis of the knee;
2. Prescribed by or in consultation with a rheumatologist or an orthopedist;
3. Age \geq 18 years;
4. Failure of a \geq 4-week trial of one of the following (a or b), unless contraindicated or clinically significant adverse effects are experienced:
 - a. Oral nonsteroidal anti-inflammatory drug (NSAID) at continuous therapeutic dosing (prescription strength);
 - b. Topical NSAID if member is \geq 75 years old or unable to take oral NSAIDs;
**Prior authorization may be required for topical NSAIDs*
5. Trial of at least one other intra-articular glucocorticoid injection for the knee with a documented positive, but inadequate response (e.g., inadequate pain relief, frequent need of rescue medications such as NSAIDs or opioids, need to decrease or inability to increase activity levels, adequate pain relief but with steroid-induced hyperglycemia);
**Prior authorization may be required for intra-articular glucocorticoids*
6. Dose does not exceed 32 mg as a single intraarticular injection into the knee.

Approval duration: 3 months (one dose per knee)

B. Other diagnoses/indications

1. Refer to ERX.PA.01 if diagnosis is NOT specifically listed under section III (Diagnoses/Indications for which coverage is NOT authorized).

II. Continued Therapy

A. Osteoarthritis of the Knee

1. Re-authorization is not permitted. Zilretta is not indicated for repeat administration in the same knee. For an untreated knee, members must meet the initial approval criteria.

Approval duration: Not applicable

III. Diagnoses/Indications for which coverage is NOT authorized:

- A. Non-FDA approved indications, which are not addressed in this policy, unless there is sufficient documentation of efficacy and safety according to the off-label use policy – ERX.PA.01 or evidence of coverage documents.

IV. Appendices/General Information

Appendix A: Abbreviation/Acronym Key

FDA: Food and Drug Administration

NSAID: non-steroidal anti-inflammatory drug

TA: triamcinolone acetonide

Appendix B: Therapeutic Alternatives

This table provides a listing of preferred alternative therapy recommended in the approval criteria.

The drugs listed here may not be a formulary agent and may require prior authorization.

Drug Name	Dosing Regimen	Dose Limit/ Maximum Dose
Oral NSAIDs		
diclofenac (Voltaren®)	50 mg PO BID to TID	150 mg/day
etodolac (Lodine®)	400-500 mg PO BID	1,200 mg/day
fenoprofen (Nalfon®)	400-600 mg PO TID to QID	3,200 mg/day
ibuprofen (Motrin®)	400-800 mg PO TID to QID	3,200 mg/day
indomethacin (Indocin®)	25-50 mg PO BID to TID	200 mg/day
indomethacin SR	75 mg PO QD to BID	150 mg/day
ketoprofen	25-75 mg PO TID to QID	300 mg/day
meloxicam (Mobic®)	7.5-15 mg PO QD	15 mg/day
naproxen (Naprosyn®)	250-500 mg PO BID	1,500 mg/day
naproxen sodium (Anaprox®, Anaprox DS®)	275-550 mg PO BID	1,650 mg/day
oxaprozin (Daypro®)	600-1200 mg PO QD	1,800 mg/day
piroxicam (Feldene®)	10-20 mg PO QD	20 mg/day
salsalate (Disalcid®)	1500 mg PO BID or 1000 mg PO TID	3,000 mg/day
sulindac	150 mg-200 mg PO BID	400 mg/day
Topical NSAIDs		
diclofenac 1.5% (Pennsaid®)	40 drops QID on each painful knee	160 drops/knee/day
Voltaren® Gel 1% (diclofenac)	2-4 g applied to affected area QID	32 g/day
Intra-articular Glucocorticoids		
triamcinolone acetonide (Kenalog®)	40 mg (1 mL) for large joints	80 mg/treatment
methylprednisolone acetate (Depo-Medrol®)	20-80 mg for large joints	80 mg/treatment

Therapeutic alternatives are listed as Brand name® (generic) when the drug is available by brand name only and generic (Brand name®) when the drug is available by both brand and generic.

Appendix C: Contraindications/Boxed Warnings

- Contraindication(s): patients with hypersensitivity to triamcinolone acetonide or any component of the product
- Boxed warning(s): none reported

Appendix D: General Information

- Zilretta (extended-release triamcinolone acetonide [TA-ER]) is designed to deliver TA over 12 weeks using extended-release microsphere technology. In contrast, Bodick, et al., 2015, reports that, historically, immediate-release intraarticular glucocorticoids, while demonstrating a large initial analgesic effect, wane over one to four weeks.
- In an evaluation of TA-ER vs immediate-release triamcinolone acetonide (TA-IR) synovial and systemic pharmacokinetics, Krause, et al, 2017, reports that TA-ER demonstrated prolonged residency in the joint (through week 12) relative to TA-IR (through week 6), and consequently showed diminished peak plasma steroid levels relative to TA-IR through week 6. Russell, et al, 2017, reports that in patients with knee osteoarthritis and type-2 diabetes mellitus, TA-ER was associated with a significant and clinically relevant reduction in blood glucose elevation relative to TA-IR 72 hours post-injection.
- In the Zilretta pivotal trial, Conaghan, et al, 2018, reported superiority of TA-ER versus placebo to 12 weeks in average daily pain (ADP) scores (primary endpoint) and continuing TA-ER activity out to 24 weeks. While TA-ER did not show superior outcomes relative to TA-IR over 12 weeks in ADP scores (secondary endpoint), it was superior to TA-IR at week 12 when evaluated using the exploratory endpoints Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC)-A/B/C and Knee injury and Osteoarthritis Outcome Score Quality of Life (KOOS QoL) subscales.
- Conaghan also reports that patients treated with TA-ER used significantly less rescue medication than those treated with TA-IR.
- A phase 3b, open-label, single-arm study by Spitzer et al., 2019, evaluated the safety and efficacy of repeat administration of Zilretta in 208 patients, of whom 179 received a second injection of Zilretta after a median of 16.6 weeks. Additional injections after the second dose were not allowed.
 - The proportion of patients who experienced arthralgia in any joint was nearly doubled during the second injection period (19.0%) compared to the first injection period (10.6%); there were also slightly higher rates of index-knee treatment-emergent AEs during the second injection period (17.3%) compared to the first (14.0%).
 - The FDA highlights this concern in the Zilretta Prescribing Information, Section 6.1 Adverse Reactions – Clinical Studies, stating “The data from this study are insufficient to fully characterize the safety of repeat administration of Zilretta.” As a result, the label continues to retain a limitation of use concerning the unknown benefit of repeat administration.

V. Dosage and Administration

Indication	Dosing Regimen	Maximum Dose
Osteoarthritis of the knee	32 mg (5 mL) as a single intra-articular extended-release injection	32 mg (5 mL)

VI. Product Availability

Injectable suspension of microspheres (single-dose vial for reconstitution): 32 mg/5 mL

VII. References

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2. Clinical Pharmacology [database online]. Tampa, FL: Gold Standard, Inc.; 2019. Available at: <http://www.clinicalpharmacology-ip.com/>.
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6. Bodick N, Lufkin J, Willwerth C, et al. An intra-articular, extended-release formulation of triamcinolone acetonide prolongs and amplifies analgesic effect in patients with osteoarthritis of the knee: A randomized clinical trial. *J Bone Joint Surg Am*. 2015; 97: 877-88.
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11. Krause VB, Conaghan PG, Aazami HA, et al. Synovial and systemic pharmacokinetics (PK) of triamcinolone acetonide (TA) following intra-articular (IA) injection of an extended release microsphere-based formulation (FX006) or standard crystalline suspension in patients with knee osteoarthritis (OA). *Osteoarthritis and Cartilage*. 2018; 26: 34-42.
12. Spitzer AI, Richmond JC, Kraus VB, et al. Safety and efficacy of repeat administration of triamcinolone acetonide extended-release in osteoarthritis of the knee: A phase 3b, open-label study. *Rheumatol Ther*. Published online February 11, 2019. <https://doi.org/10.1007/s40744-019-0140-z>.

Reviews, Revisions, and Approvals	Date	P&T Approval Date
Policy created	12.11.18	02.19
1Q 2020 annual review: modified NSAID trial duration to 4 weeks to align with existing requirements for hyaluronates; references reviewed and updated.	11.26.19	02.20
1Q 2021 annual review: no significant changes; references reviewed and updated.	10.22.20	02.21
Added information regarding repeat administration to Appendix D.	03.26.21	

Important Reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information.

This Clinical Policy is not intended to dictate to providers how to practice medicine, nor does it constitute a contract or guarantee regarding payment or results. Providers are expected to exercise professional medical judgment in providing the most appropriate care, and are solely responsible for the medical advice and treatment of members.

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