

**Pharmacy Prior Authorization
Clinical Guidelines - Injectable Osteoporosis Medications**

Forteo® (teriparatide) Prolia® (denosumab) Tymlos® (abaloparatide) zoledronic acid
Evenity® (romosozumab-aqcg) teriparatide

Zoledronic acid, Prolia, Forteo, teriparatide: Treatment of Osteoporosis in Postmenopausal Women and Men

Tymlos, Evenity: Treatment of Osteoporosis in Postmenopausal Women only

Preferred Agent: Prolia and Tymlos are the preferred agents (where indicated)

Requests for Forteo require trial and failure of Tymlos and Prolia (as appropriate per indication) in addition to clinical criteria

Requests for Evenity require trial and failure of Tymlos and Prolia in addition to clinical criteria

Authorization Guidelines:

- Member will be supplemented with adequate calcium and vitamin D, (exception: Forteo, teriparatide).
- Member does not have contraindication to requested drug.
 - Prolia: Member is not pregnant and does not have hypocalcemia
 - Zoledronic acid: Member does not have hypocalcemia, creatinine clearance less than 35mL/min, or acute renal impairment
 - Evenity: Member does not have hypocalcemia, or myocardial infarction or stroke within preceding year

Treatment of Osteoporosis in Postmenopausal Women: Forteo, teriparatide, Prolia, zoledronic acid, Evenity, Tymlos

- Diagnosis of osteoporosis with T-score less than -2.5, or fragility fracture at hip, spine, wrist, arm, rib, or pelvis; OR
- T-score between -1.0 and -2.5 and high risk for osteoporosis fracture
 - Fracture Risk Assessment Tool (FRAX) risk of greater than or equal to 3.0% for hip fracture, or greater than or equal to 20% for any major osteoporosis related fracture, or multiple risk factors for fracture
 - *See Additional information for detail
- Member has one of the following:
 - Therapeutic failure of preferred oral or intravenous bisphosphonate despite compliance
 - Including new fracture or reduction in bone mineral density per recent dual energy X-ray absorptiometry (DEXA) scan, after 2 years of oral bisphosphonate
 - Contraindication or severe intolerance to oral bisphosphonate
 - For example, current upper gastrointestinal symptoms, inability to swallow, or inability to remain in upright position after oral bisphosphonate administration for required length of time

Treatment to Increase Bone Mass in Men with Osteoporosis: - Forteo, teriparatide, Prolia, zoledronic acid

**Pharmacy Prior Authorization
Clinical Guidelines - Injectable Osteoporosis Medications**

- Diagnosis of osteoporosis with T-score less than -2.5, or fragility fracture at hip, spine, wrist, arm, rib, or pelvis; OR
- T-score between -1.0 and -2.5 and high risk for osteoporosis fracture
 - Fracture Risk Assessment Tool (FRAX) risk of greater than or equal to 3.0% for hip fracture, or greater than or equal to 20% for any major osteoporosis related fracture, or multiple risk factors for fracture
 - *See Additional information for detail
- Testosterone level is normal for lab reference range
- If member is hypogonadal, testosterone replacement therapy should be prescribed before starting treatment with injectable osteoporosis agent, unless member has history of prostate cancer
- Member has one of the following:
 - Therapeutic failure of preferred oral or intravenous bisphosphonate despite compliance
 - Including new fracture or reduction in bone mineral density per recent dual energy X-ray absorptiometry (DEXA) scan, after 2 years of oral bisphosphonate
 - Contraindication or severe intolerance to oral bisphosphonate
 - For example, current upper gastrointestinal symptoms, inability to swallow, or inability to remain in upright position after oral bisphosphonate administration for required length of time

Prevention of Osteoporosis in Postmenopausal Women - Zoledronic acid:

- Diagnosis of osteoporosis with T-score less than -2.5, or fragility fracture at hip, spine, wrist, arm, rib, or pelvis; OR
- T-score between -1.0 and -2.5 and high risk for osteoporosis fracture
 - Fracture Risk Assessment Tool (FRAX) risk greater than or equal to 3.0% for hip fracture, or greater than or equal to 20% for any major osteoporosis related fracture, or multiple risk factors for fracture
 - *See Additional information for details
- Member has one of the following:
 - Therapeutic failure of preferred oral or intravenous bisphosphonate despite compliance
 - Including new fracture, or reduction in bone mineral density per recent dual energy X-ray absorptiometry (DEXA) scan, after 2 years of oral bisphosphonate
 - Contraindication or severe intolerance to oral bisphosphonate
 - For example, current upper gastrointestinal symptoms, inability to swallow, or inability to remain in upright position after oral bisphosphonate administration for required length of time

Glucocorticoid-Induced Osteoporosis - Zoledronic acid, Forteo, teriparatide, Prolia:

- Member meets one of the following:
 - Postmenopausal woman or man over 50 years of age
 - Received, or is expected to receive, prednisone over 7.5mg/day (or equivalent) for longer than 3 months
 - Premenopausal woman or man less than 50 years of age
 - History of fragility fracture and received, or is expected to receive, prednisone over 7.5mg/day (or equivalent) for greater than 3 months

**Pharmacy Prior Authorization
Clinical Guidelines - Injectable Osteoporosis Medications**

- Member has one of the following:
 - Therapeutic failure of preferred oral or intravenous bisphosphonate despite compliance
 - Including new fracture, or reduction in bone mineral density per recent dual energy X-ray absorptiometry (DEXA) scan, after 2 years of oral bisphosphonate
 - Contraindication, or severe intolerance to oral bisphosphonate
 - For example, current upper gastrointestinal symptoms, inability to swallow, or inability to remain in upright position, after oral bisphosphonate administration for required length of time

Bone Metastases of Cancer and Multiple Myeloma - zoledronic acid, Prolia:

- Member has one of the following diagnoses:
 - Castration-resistant prostate cancer with bone metastases
 - Multiple myeloma

Increase of Bone Mass in Men on Androgen Deprivation Therapy for Prostate Cancer Without Bone Metastases - Prolia, zoledronic acid:

- Member is at high risk for osteoporosis fracture
 - Fracture Risk Assessment Tool (FRAX) risk of greater than or equal to 3.0% for hip fracture, or greater than or equal to 20% for any major osteoporosis related fracture, or multiple risk factors for fracture
 - *See Additional information for details
- Member has one of the following:
 - Therapeutic failure of preferred oral or intravenous bisphosphonate despite compliance
 - Including new fracture, or reduction in bone mineral density per recent dual energy X-ray absorptiometry (DEXA) scan, after 2 years of oral bisphosphonate
 - Contraindication, or severe intolerance to oral bisphosphonate
 - For example, current upper gastrointestinal symptoms, inability to swallow, or inability to remain in upright position after oral bisphosphonate administration, for required length of time

Increase of Bone Mass in Women on Aromatase Inhibitory therapy for Breast Cancer - Prolia, zoledronic acid:

- Member is postmenopausal, or premenopausal with T-score between -1.0 and -2.5 and high risk for osteoporosis fracture
- Member has one of the following:
 - Therapeutic failure of preferred oral or intravenous bisphosphonate despite compliance
 - Including new fracture or reduction in bone mineral density per recent dual energy X-ray absorptiometry (DEXA) scan, after 2 years of oral bisphosphonate
 - Contraindication, or severe intolerance to oral bisphosphonate
 - For example, current upper gastrointestinal symptoms, inability to swallow, or inability to remain in upright position, after oral bisphosphonate administration for required length of time

Hypercalcemia of Malignancy - zoledronic acid, Prolia:

**Pharmacy Prior Authorization
Clinical Guidelines - Injectable Osteoporosis Medications**

- Member has moderate, or severe hypercalcemia associated with malignancy *Refer to additional information for details
- Member is receiving vigorous saline hydration with goal of increasing urine output to about 2 L/day
- Prolia may be used if member has trial and failure of or contraindication to zoledronic acid, such as severe renal impairment

Paget's Disease of Bone - zoledronic acid:

- Member has bone specific alkaline phosphatase greater than 2 times the upper limit of normal or has symptoms related to active Paget's (for example, pain at site of pagetic lesion)
- Member has normal serum calcium, phosphorus, and 25-hydroxyvitamin D (based on the reference range for lab)
- Abnormalities should be treated before starting intravenous bisphosphonates
- Member has one of the following:
 - Therapeutic failure of preferred oral or intravenous bisphosphonate despite compliance
 - Including new fracture, or reduction in bone mineral density per recent dual energy X-ray absorptiometry (DEXA) scan, after two years of oral bisphosphonate
 - Contraindication, or severe intolerance to oral bisphosphonate
 - For example, current upper gastrointestinal symptoms, inability to swallow, or inability to remain in upright position after oral bisphosphonate administration, for the required length of time

INITIAL APPROVAL:

- Paget's Disease: one treatment
- Hypercalcemia from Malignancy: one treatment
- Osteoporosis: 2 years
- Evenity: 1 year
- All other indications: 2 years

Note:

- Cumulative use of abaloparatide (Tymlos) and teriparatide (Forteo) for more than 2 years during a member's lifetime is not recommended.
 - Forteo use for more than 2 years may be considered in members who remain at or return to having high risk of fracture
- Cumulative use of Evenity (romosozumab-aqqg) is limited to 12 monthly doses.

RENEWAL APPROVAL:

- Documentation to support member is benefiting from therapy
 - For example, improved or stabilized bone mineral density, no new fractures
- Paget's Disease: One treatment
 - If bone specific alkaline phosphatase rises after initial treatment or if member has symptoms
 - Bisphosphonates usually induce remission; therefore, long-term approval is usually not appropriate
- Hypercalcemia from Malignancy:
 - Retreatment is not recommended unless new occurrence
- Osteoporosis:

**Pharmacy Prior Authorization
Clinical Guidelines - Injectable Osteoporosis Medications**

- Members with stable bone mineral density without fractures on treatment may be appropriate for drug holiday after 4-5 years of treatment.
- Continue treatment if bone mineral density has worsened, or if member had fractures on treatment
- All other indications:
 - 2 years if member meets criteria for initial approval

QUANTITY LIMITS:

- Forteo, teriparatide: one pen per 28 days
- Prolia: one vial/syringe per 168 days (six months)
- Tymlos: one pen per 30 days
- Zoledronic Acid:
 - For Treatment of Osteoporosis and Glucocorticoid-Induced Osteoporosis: one, 5mg vial per year
 - For Prevention of Osteoporosis: one, 5mg vial every 2 years
 - For Multiple Myeloma or Bone Metastases: one, 4mg vial per 21 days
- Evenity: two 105 mg/1.17 mL pens per 30 days

ADDITIONAL INFORMATION:

- It is recommended by American Association of Clinical Endocrinologists (AACE) and the Endocrine Society that the member's serum 25-hydroxyvitamin D level be ≥ 30 ng/mL and patients should receive calcium and vitamin D from diet and/or supplements to improve effectiveness of the medications and to prevent hypocalcemia.
- Fracture Risk Assessment Tool (FRAX) Calculator:
<http://www.shef.ac.uk/FRAX/tool.jsp?locationValue=9>
- Severe Hypercalcemia = albumin-corrected calcium (cCa) greater than 12 mg/dL [3.0 mmol/L]
 - Formula: albumin-corrected calcium (cCa) in mg/dL = Ca in mg/dL + 0.8 (4.0 g/dL - member albumin [g/dL]).

Major Risk factors for Osteoporotic Fractures:

- a. low body mass index
- b. previous fragility fracture
- c. parental history of hip fracture
- d. glucocorticoid treatment (refer to specific criteria above for this indication)
- e. current smoking
- f. alcohol intake of 3 or more units per day
- g. rheumatoid arthritis
- h. secondary causes of osteoporosis

References:

1. Forteo® (teriparatide). Prescribing information. Eli Lilly and Company, Indianapolis, IN; Revised April 2021.
<https://pi.lilly.com/us/forteo-pi.pdf>. Accessed August 26, 2021.
2. Reclast® (zoledronic acid). Prescribing information. Novartis Pharmaceuticals Corporation, East Hanover, NJ; Revised April 2020.

**Pharmacy Prior Authorization
Clinical Guidelines - Injectable Osteoporosis Medications**

- https://www.novartis.us/sites/www.novartis.us/files/reclast.pdf?usertrack_filter_applied=true&Novald=4029461978804220598. Accessed August 26, 2021.
3. Prolia® (denosumab). Prescribing information. Amgen Manufacturing Limited, Thousand Oaks, CA; Revised May 2021. https://www.pi.amgen.com/~media/amgen/repositorysites/pi-amgen-com/prolia/prolia_pi.pdf. Accessed August 26, 2021.
 4. Tymlos®(abaloparatide). Prescribing information. Radius Health, Inc, Boston, MA; Revised November 2021. <https://radiuspharm.com/wp-content/uploads/tymlos/tymlos-prescribing-information.pdf>. Accessed August 26, 2021.
 5. Evenity® (romosozumab-aqqg). Prescribing information. Amgen Inc (per FDA), Thousand Oaks, CA, April 2020. https://www.pi.amgen.com/~media/amgen/repositorysites/pi-amgen-com/evenity/evenity_pi_hcp_english.ashx. Accessed August 26, 2021.
 6. Qaseem A, Forciea MA, McLean RM, Denberg TD. Treatment of Low Bone Density or Osteoporosis to Prevent Fractures in Men and Women: A Clinical Practice Guideline Update from the American College of Physicians. *Ann Intern Med*. 2017 Jun 6;166(11):818-839. doi: 10.7326/M15-1361. https://www.acpjournals.org/doi/full/10.7326/M15-1361?rfr_dat=cr_pub++0pubmed&url_ver=Z39.88-2003&rfr_id=ori%3Arid%3Acrossref.org. Accessed August 26, 2021.
 7. Camacho PM, Petak, SM, Binkley, N, et al. American Association of Clinical Endocrinologists and American College of Endocrinology Clinical Practice Guidelines for the Diagnosis and Treatment of Postmenopausal Osteoporosis—2020 Update. *Endocr Pract*. 2020 May;26(Suppl 1):1-46. doi: 10.4158/GL-2020-0524SUPPL. [https://www.endocrinepractice.org/article/S1530-891X\(20\)42827-7/fulltext](https://www.endocrinepractice.org/article/S1530-891X(20)42827-7/fulltext). Accessed August 26, 2021.
 8. Watts NB, Adler RA, Bilezikian JP, et al. Endocrine Society. Osteoporosis in men: An Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab*. 2012 Jun;97(6):1802-22. doi: 10.1210/jc.2011-3045. <https://academic.oup.com/jcem/article/97/6/1802/2536476>. Accessed August 26, 2021.
 9. Buckley L, Guyatt G, Fink HA, et al. 2017 American College of Rheumatology Guideline for the Prevention and Treatment of Glucocorticoid-Induced Osteoporosis. *Arthritis Rheumatol*. 2017 Aug;69(8):1521-1537. doi: 10.1002/art.40137. <https://onlinelibrary.wiley.com/doi/10.1002/art.40137>. Accessed August 26, 2021.
 10. NCCN: National Comprehensive Cancer Network. NCCN Clinical Practice Guideline in Oncology: Prostate Cancer. https://www.nccn.org/professionals/physician_gls/pdf/prostate.pdf. Version 2.2021. Accessed August 26, 2021.
 11. NCCN: National Comprehensive Cancer Network. NCCN Clinical Practice Guideline in Oncology: Breast Cancer. https://www.nccn.org/professionals/physician_gls/pdf/breast.pdf. Version 7.2021. Accessed August 26, 2021.
 12. NCCN: National Comprehensive Cancer Network. NCCN Clinical Practice Guideline in Oncology: Multiple Myeloma. https://www.nccn.org/professionals/physician_gls/pdf/myeloma.pdf. Version 1.2022. Accessed August 26, 2021.
 13. Singer FR, Bone HG 3rd, Hosking DJ, et al. Paget's disease of bone: An endocrine society clinical practice guideline. *J Clin Endocrinol Metab*. 2014 Dec;99(12):4408-22. doi:10.1210/jc.2014-2910. <https://academic.oup.com/jcem/article/99/12/4408/2833929>. Accessed August 26, 2021.