MEDICATION COVERAGE POLICY

PHARMACY AND THERAPEUTICS ADVISORY COMMITTEE

Health Plan of San Joaquin

POLICY:	Osteoporosis	**P&T DATE:**	9/11/2018
THERAPEUTIC CLASS:	Endocrine Disorders	**REVIEW HISTORY:** (MONTH/YEAR)	12/16, 2/15, 5/13, 9/12, 5/11
LOB AFFECTED:	MCL		

This policy has been developed through review of medical literature, consideration of medical necessity, generally accepted medical practice standards, and approved by the HPSJ Pharmacy and Therapeutic Advisory Committee.

OVERVIEW

The goal of osteoporosis treatment is to prevent future complications, such as fractures, from occurring. Treatment of fractures means greater medical and personal burden for elderly patients. As the predicted cost of care for fractures is expected to rise to $25.3 billion by 2025[1], the following measures to reduce the risk of fractures would be advantageous for everyone. The National Osteoporosis Foundation (NOF) provides recommendations for the overall treatment of osteoporosis as well as preventative measures to delay progression towards osteoporosis itself. This review will examine the treatment guidelines for osteoporosis, currently available agents for osteoporosis, and their coverage criteria.

Table 1: Osteoporosis Agents *(Current as of 7/2018)*

Class	Drug	Available Strengths	Form. Status	Restriction (Blank = No restriction)	Cost Per Rx¥
Bisphosphonates	Alendronate (Fosamax, Binosto is NF) *Tablets, Solution*	Tablets: 5mg, 10mg, 35mg, 40mg, 70mg Solution: 70 mg/75 mL	F, QL	Restricted to 4 tablets per month (35mg and 70mg) or 30 tablets per month (5mg, 10mg and 40mg).	$2.76
	Ibandronate (Boniva) *Tablets, IV infusion is NF*	Tablets: 150mg IV infusion: 1 mg/mL	F, QL, ST	Step therapy to an adequate trial or intolerance to Alendronate. Restricted to 1 tablet per month.	$11.93
	Risedronate (Actonel*)*	Tablets: 5mg, 30mg, 35mg, 150mg	F, QL, PA	Reserved for intolerance or treatment failure of Alendronate and Ibandronate; restricted to 1 tablet per 30 days.	$145.10
	Risedronate DR (Atelvia)	Tablets: 35mg	NF		$150.64
	Zoledronic Acid (Reclast) *IV infusion*	5 mg/100 mL	F, PA	Reserved for patients unable to swallow tablets. 1 fill per 365 days.	$306
Estrogen agonist/antagonist (previously called SERMs)	Raloxifene (Evista) *Tablets*	60 mg	NF		$91.63
Calcitonin	Calcitonin (Miacalcin) *Intranasal*	200 units/actuation	F, ST	Reserved as last-line therapy for treatment failure/intolerance to all other formulary agents.	$67.38
Tissue-Selective Estrogen Complex	Conjugated estrogens/bazedoxifene (Duavee) *Tablets*	20 mg/0.45 mg	NF		-
			F, PA, SP	Reserved for treatment of osteoporosis as evidenced by	$3289.36

Parathyroid Hormone Analogs	Teriparatide (Forteo) *SQ injection*	600 mcg/2.4 mL		documented t-score <-2.5 in patients with treatment failure to 1 year of Prolia with calcium supplementation AND treatment failure or intolerance to Abaloparatide.	
	Abaloparatide (Tymlos) *SQ injection*	3120 mcg/1.56 ml	F, PA, SP	Reserved for treatment of osteoporosis as evidenced by documented t-score <-2.5 in patients with treatment failure to 1 year of Prolia with calcium supplementation.	$1755.30
RANKL inhibitor	Denosumab (Prolia) *SQ injection*	60 mg/mL	F, PA, SP	Reserved for diagnosis of osteoporosis and failure of 2 bisphosphonates or fracture on bisphosphonate therapy. 1 fill per 180 days	$1162.05

F = Formulary, QL = Quantity Limit, ST = Step therapy, PA = Prior Authorization required. SP = Specialty Pharmacy
RANKL = Receptor Activator of Nuclear Factor kappa-B Ligand

Clinical Justification:

World Health Organization Criteria for Classification of Osteopenia and Osteoporosis

Category	T-score
Normal	-1.0 or above
Low bone mass (osteopenia)	Between -1 and -2.5
Osteoporosis	-2.5 or below
Severe Osteoporosis	-2.5 and below with history of a fracture

The NOF recommends that pharmacologic therapy should be reserved for postmenopausal women and men aged 50 years or older who represent with the following 3 categories:

- History of hip or vertebral fracture (vertebral fractures may be clinical or asymptomatic)
- T score of -2.5 or less at the femoral neck or spine after appropriate evaluation to exclude secondary causes
- Low bone mass (T score between -1.0 and -2.5 at the femoral neck or spine) and a 10 year probability of a hip fracture of 3% or higher or a 10 year risk of a major osteoporosis-related fracture of 20% or greater based on the US adapted WHO absolute fracture risk model (Fracture Risk Algorithm: FRAX)

Bisphosphonates in combination with calcium and vitamin D supplementation are recognized by the National Osteoporosis Foundation Guidelines as first-line therapy for osteoporosis. In regards to all other treatment modalities, very little direction is provided.

Miacalcin has yet to prove its efficacy in decreasing fracture risk or incidence, however, as it is a recommended agent that has not proven to be harmful or have any significant risks, it is available as a last line agent after all other options have failed or are contraindicated.

Due to uncertainty in its benefits and a higher risk of thromboembolism, Duavee is not on formulary.

Prolia has been shown to have comparable health benefits to alendronate and similar effectiveness to Forteo. However, Prolia is only dosed every 6 months, whereas Forteo is dosed daily. Along with the possible benefit of improved patient adherence to Prolia, Prolia is also more cost-effective, making it the better alternative to treatment failure of bisphosphonate therapy.

Duration of therapy needs to be individualized. The recommendation for 5 years of therapy may be appropriate for some, but not for other patients. Drug holidays are not recommended for those on Prolia since the protection from vertebral fracture may be lost within 3-18 months after discontinuation. [7]

Triage:

- ***Appropriate diagnosis (labs/clinical documentation of osteoporosis)***
- ***Past medication history related to treating osteoporosis***
- ***History of osteoporosis medication intolerances***

EVALUATION CRITERIA FOR APPROVAL/EXCEPTION CONSIDERATION

Below are the coverage criteria and required information for each agent. These coverage criteria have been reviewed approved by the HPSJ Pharmacy & Therapeutics (P&T) Advisory Committee. For conditions not covered under this Coverage Policy, HPSJ will make the determination based on Medical Necessity as described in HPSJ Medical Review Guidelines (UM06).

Bisphosphonates

Alendronate (Fosamax), Ibandronate (Boniva), Risedronate (Actonel), Zoledronate (Reclast)

- ❒ **Coverage Criteria:**
  - Ibandronate: Boniva (Ibandronate Sodium) is step therapy to an adequate trial or intolerance to alendronate.
  - Risedronate: 3rd line therapy behind treatment failure or intolerance to [1] Alendronate (Fosamax), and [2] Ibandronate (Boniva).
  - Zoledronate: Reclast (Zoledronic Acid) is reserved for patients unable to swallow tablets.
- ❒ **Limits:**
  - Alendronate:
    - Alendronate 35mg and 70 mg is restricted to 4 tablets per month.
    - Alendronate 5mg, 10mg, and 40mg is restricted to 30 tablets per month.
  - Ibandronate: Restricted to 1 tablet per month.
  - Risedronate: Restricted to 1 tablet per month.
  - Zoledronate: Restricted to 1 fill per 365 days.
- ❒ **Required Information for Approval:**
  - Ibandronate: Fill history or documentation of intolerance to alendronate.
  - Risedronate: Fill history or documentation of intolerance to alendronate and ibandronate.
  - Zoledronate: Documentation of inability to swallow tablets.

Calcitonin

Calcitonin (Miacalcin)

- ❒ **Coverage Criteria:** Calcitonin nasal spray is reserved as last-line therapy for treatment failure/intolerance to ALL other formulary agents.
- ❒ **Limits:** None
- ❒ **Required Information for Approval:** Fill history or documentation of treatment failure/intolerance to ALL other formulary agents.

Parathyroid Hormone

Abaloparatide (Tymlos)

- ❒ **Coverage Criteria:** Forteo (Teriparatide) is reserved for treatment of osteoporosis as evidenced by documented t-score <-2.5 in patients with treatment failure to 1 year of Prolia with calcium supplementation.
- ❒ **Limits:** 1 pen (1.56 ml) per 28 days, restricted to specialty pharmacy. Limited to 24 total months of treatment.
- ❒ **Required Information for Approval:**
  - Clinical evidence of osteoporosis via a documented t-score <-2.5
  - Treatment failure to 1 year of Prolia with calcium supplementation

Teriparatide (Forteo)

- ❒ **Coverage Criteria:** Forteo (Teriparatide) is reserved for treatment of osteoporosis as evidenced by documented t-score <-2.5 in patients with treatment failure to 1 year of Prolia with calcium supplementation AND treatment failure or intolerance to Abaloparatide.
- ❒ **Limits:** 1 pen (2.4ml) per 28 days, restricted to specialty pharmacy. Limited to 24 total months of treatment.
- ❒ **Required Information for Approval:**
  - Clinical evidence of osteoporosis via a documented t-score <-2.5
  - Treatment failure to 1 year of Prolia with calcium supplementation AND documented treatment failure or intolerance to Abaloparatide.

Receptor Activator of Nuclear kappa-B Ligand Inhibitor

Denosumab (Prolia)

- ❒ **Coverage Criteria:** Prolia is for treatment of osteoporosis as evidenced by documented T-score <-2.5 in patients with treatment failure to 1 year of bisphosphonate with calcium treatment or failure/intolerance to 2 formulary bisphosphonates.
- ❒ **Limits:** Limited to 1 fill per 180 days.
- ❒ **Required Information for Approval:**
  - Clinical evidence of osteoporosis via a documented t-score <-2.5
  - Treatment failure to 1 year of bisphosphonate with calcium treatment OR failure/intolerance to 2 formulary bisphosphonates

REFERENCES

1. Office of the Surgeon General (US). *Bone Health and Osteoporosis: A Report of the Surgeon General.* Rockville (MD): Office of the Surgeon General (US); 2004.
2. National Osteoporosis Foundation. Clinician's Guide to Prevention and Treatment of Osteoporosis. Washington, DC: National Osteoporosis Foundation; 2014.
3. Tymlos [package insert]. Radius Health, Incorporated. Waltham, Massachusetts. April 2017.
4. Hattersley G, Dean T, Corbin BA, et al. Binding Selectivity of Abaloparatide for PTH-Type-1-Receptor Conformations and Effects on Downstream Signaling. *Endocrinology* 2016; 157:141-149.
5. Miller P, Hattersley, G, et al. Effects of Abaloparatide vs Placebo on New Vertebral Fractures in Postmenopausal Women with Osteoporosis A Randomized Control Trial. *JAMA*. 2016;316(7):722-733
6. US Preventive Services Task Force. Screening for osteoporosis to prevent fractures: US Preventative Services Task Force recommendation statement. *JAMA* 2018;319(24):2521-2531.
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—2016. *Endo Pract* 2016;22;(suppl 4):S1-S42.
8. World Health Organization. WHO Scientific Group on the assessment of osteoporosis at primary health care level: Summary meeting report; May5-7, 2004, Brussels, Belsium. Geneva, Switzerland: World Health Organization, 2007;1-17.

⌖ REVIEW & EDIT HISTORY

Document Changes	Reference	Date	P&T Chairman
Creation of Policy	Formulary Realignment 5-11.xlsx	05/2011	Allen Shek PharmD BCPS
Update to Policy	Formulary Realignment PT 9-18-12.xlsx	09/2012	Allen Shek PharmD BCPS
Update to Policy	Formulary Realignment PT 5-21-13.xlsx	05/2013	Jonathan Szkotak, PharmD BCACP
Update to Policy	Osteoporosis Class Review 2-17-15.xlsx	02/2015	Jonathan Szkotak, PharmD BCACP
Update to Policy	HPSJ Coverage Policy - Endocrine Disorders - Osteoporosis 2016-12.docx	12/2016	Johnathan Yeh, PharmD
Update to Policy	HPSJ Coverage Policy - Endocrine Disorders - Osteoporosis 2018-9.docx	9/2018	Johnathan Yeh, PharmD

Note: All changes are approved by the HPSJ P&T Committee before incorporation into the utilization policy