



Pharmacologic Agents for Treatment of Osteoporosis

SCAN Formulary Drugs

Medication	2018 Formulary Status		2019 Formulary Status		Dosing & Administration	Adverse Drug Reactions
	Tier	UM	Tier	UM		
Biphosphonates						
<i>alendronate tabs</i>	1		1		<ul style="list-style-type: none"> GIO* prevention for men: 5mg PO QD GIO prevention: 5mg PO QD for women receiving estrogen and 10mg PO QD in women not receiving estrogen 	Abdominal pain, esophagitis, bone pain, muscle pain, nausea
<i>alendronate oral soln</i>	2		2		<ul style="list-style-type: none"> Osteoporosis treatment in men: 10mg PO QD or 70mg PO QW (every week) PMO* prevention: 35 mg PO QW or 5mg PO QD PMO treatment: 70mg PO QW or 10mg PO QD 	Not recommended if CrCl is less than 35 ml/min
<i>risedronate</i>	3	[ST]	3	[ST]	<ul style="list-style-type: none"> GIO (men and women): 5mg PO QD Osteoporosis treatment in men: 35mg PO QW PMO prevention & treatment: 5mg PO QD or 35mg PO QW or 75mg/day PO for 2 days of each month or 150mg PO monthly. 	Abdominal pain, arthralgia, diarrhea, nausea, rash
<i>ibandronate inj</i>	2	[PA] [BvsD]	[NF]		Inj: 3mg IV Q 3 months	Nausea, fever, vomiting, dyspnea (not recommended if CrCl is less than 35 ml/min)
<i>ibandronate oral</i>	2		2		Oral: PMO prevention & treatment: 150mg PO monthly or 2.5mg PO QD	Nausea, fever, vomiting, dyspnea (not recommended if CrCl is less than 35 ml/min)
<i>zoledronic acid inj 5mg/100ml</i>	2	[PA]	[NF]		<ul style="list-style-type: none"> GIO prevention & treatment and treatment of PMO and Osteoporosis in men: 5mg IV every 12 months. PMO prevention: 5mg IV every 24 months. 	Pyrexia, myalgia, headache, arthralgia, extremity pain



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Selective Estrogen Receptor Modifying Agents						
<i>raloxifene</i>	3	[QL]	3	[QL]	PMO prevention & treatment: 60mg PO QD	Hot flashes, arthralgia, sinusitis, flu like syndrome, headache
Estrogens (Indicated for Osteoporosis prevention)**						
<i>estradiol oral**</i> , <i>estropipate**</i>	2	[PA]	2	[PA]	0.5mg PO daily	Peripheral edema, nausea/vomiting, breast tenderness
<i>estradiol patches**</i>	3	[PA]	3	[PA]	Transdermal system: start at 0.025mg per week	Peripheral edema, nausea/vomiting, breast tenderness
<i>estradiol/norethindrone**</i> , <i>mimvey**</i> , <i>mimvey lo**</i>	3	[PA]	3	[PA]	Start at 0.5mg /0.1mg PO QD	Peripheral edema, nausea/vomiting, breast tenderness
<i>jinteli**</i> (norethindrone acetate/ ethinyl estradiol)	3	[PA]	3	[PA]	1mg/5mcg PO QD	Peripheral edema, nausea/vomiting, breast tenderness
PREMARIN ORAL** (conjugated estrogens)	4	[PA]	4	[PA]	0.3 – 0.625 mg PO QD	Peripheral edema, nausea/vomiting, breast tenderness
PREMPRO**, PREMPHASE** (medroxy-progesterone/ conjugated estrogens)	4	[PA]	4	[PA]	Start at 0.3mg/1.5mg PO QD	Peripheral edema, nausea/vomiting, breast tenderness



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	Tier	UM	Tier	UM		
Calcitonin						
<i>calcitonin-salmon nasal</i>	2		2		1 spray (200 IU) / day, alternating nostrils	Nasal symptoms (e.g., nasal crusts, dryness, redness, nasal sores, irritation, itching, soreness, infection)
MIACALCIN INJ (calcitonin)	4	[PA] [BvsD]	[NF]		100 IU SQ/IM QOD - QD	Injection site reaction, nausea, vomiting
Parathyroid Hormone						
FORTEO (teriparatide)	5	[PA]	5	[PA]	GIO (men and women), PMO treatment: 20mcg SC daily	Hypertension, arthralgia, rhinitis, nausea, dizziness, pain, asthenia, headache
TYMLOS (abaloparatide)	5	[PA]	5	[PA]	80mcg SC daily	Hypercalciuria, dizziness, nausea, headache, and palpitations
RANK Ligand (RANKL) Inhibitor						
PROLIA (<i>denosumab</i>)	4	[PA]	4	[PA]	Treatment of PMO and Osteoporosis in men: 60mg SC every 6 months	Back pain, arthralgia, extremity pain

*GIO: glucocorticoid-induced osteoporosis

PMO: postmenopausal osteoporosis

** Estrogens with or without progesterone (oral and topical patch products only) are considered High Risk Medications or medications that generally should be avoided in the elderly due to the evidence of carcinogenic potential (breast and endometrium) and lack of cardio-protective effect and cognitive protection in older women.

Brand-name drugs are capitalized and generic drugs are listed in lower-case italics

[PA] = Prior Authorization

[BvsD] = B versus D determination

[QL] = Quantity Limit

[ST] = Step Therapy



Osteoporosis Guidelines References

Osteoporosis Guidelines adapted from:

1. U.S. Preventive Services Task Force. Screening for osteoporosis: U.S. preventive services task force recommendation statement. *Ann Intern Med* 2011 Mar 1;154(5):356-64.
2. Kanis, JA, Borgstrom, F, De Laet. C, et al. Assessment of fracture risk. *Osteoporosis International* 2005; 16:581.
3. Raisz, LG. Clinical practice. Screening for osteoporosis. *N Engl J Med* 2005; 353:164.
4. Cosman, F., de Beur, S.J., LeBoff, M.S. et al. Clinician's Guide to Prevention and Treatment of Osteoporosis. *Osteoporos Int* (2014) 25: 2359. doi:10.1007/s00198-014-2794-2
5. Drug Facts & Comparisons. (2018, Sept). Retrieved from www.online.factsandcomparisons.com. Wolters Kluwer Health: Deventer, The Netherlands.
6. Epocrates Online. (2018, Sept). Retrieved from: <http://online.epocrates.com>. Epocrates, Inc.: San Mateo, California.
7. American Geriatrics Society 2015 Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults. *J Am Geriatr Soc* 2015 Nov; 63(11):2227-46.
8. "Quality Indicators for Care of Osteoporosis in Vulnerable Elders" *JAGS*, 55:S392-S402 2007.
9. Algorithm of clinical and BMD information to model the 10-year fracture probability in men and women <http://www.shef.ac.uk/FRAX>.