Denosumab (Prolia®)

DENOSUMAB is a fully human, highly specific, monoclonal antibody to receptor activator of nuclear factor kappa-B ligand (RANKL). The antibody is produced in genetically engineered mammalian (Chinese hamster ovary) cells. Denosumab binds to RANKL, a transmembrane or soluble protein essential for the formation, function, and survival of osteoclasts; the cells responsible for bone resorption. Denosumab prevents RANKL from activating on its receptor, RANK, present on the surface of osteoclasts and their precursors. Prevention of the RANKL/RANK interaction inhibits osteoclast formation, function, and survival, thereby decreasing bone resorption and increasing bone mass and strength in both cortical and trabecular bone. Ultimately, denosumab blocks osteoclast activation, thereby resulting in decreased bone resorption (less bone breakdown).

Resources from Manufacturer

Patient Medication Guide
Full Prescribing Information
Bone Matters
Financial Assistance
REMS Program

Denosumab-bbdz (Jubbonti) Resources from Manufacturer

Patient Medication Guide and Full Prescribing Information

FDA-Approved Indications and Dosing in Rheumatology

Denosumab is indicated for:

- Treatment of postmenopausal women with osteoporosis at high risk for fracture
- Treatment to increase bone mass in men with osteoporosis at high risk for fracture
- Treatment of glucocorticoid-induced osteoporosis in men and women at high risk for fracture
- Treatment to increase bone mass in men at high risk for fracture receiving androgen deprivation therapy for nonmetastatic prostate cancer
- Treatment to increase bone mass in women at high risk for fracture receiving adjuvant aromatase inhibitor therapy for breast cancer

Subcutaneous Dosing

- Denosumab should be administered by a healthcare professional.
- For all indications: administer 60mg every 6 months as a subcutaneous injection in the upper arm, upper thigh, or abdomen.
- All patients should receive calcium 1000mg and at least 400 IU vitamin D daily.

Contraindications

- Hypocalcemia
- Pregnancy
- Known hypersensitivity to denosumab

ACR/ARP Medication Guide

American College of Rheumatology
Empowering Rheumatology Professionals

Association of Rheumatology Professionals
The Interprofessional Division of the American College of Rheumatology

Warnings and Precautions

1. Same Active Ingredient: Patients receiving Prolia® should not receive XGEVA® or other denosumab products concomitantly.
2. Hypersensitivity including anaphylactic reactions may occur. Discontinue permanently if a clinically significant reaction occurs.
3. Hypocalcemia: Must be corrected before initiating denosumab. Hypocalcemia may worsen, especially in patients with renal impairment. Adequately supplement patients with calcium and vitamin D.
4. Serious infections including skin infections may occur, including severe infections requiring hospitalization. Advise patients to seek prompt medical attention, if they develop signs or symptoms of infection, including cellulitis.
5. Dermatitis, eczema and rashes may occur.
6. Pregnancy
7. Osteonecrosis of the jaw (ONJ) has been reported with denosumab – monitor for symptoms.
8. Atypical femoral fractures have been reported. Evaluate patients with thigh or groin pain for femoral fracture.
9. Severe bone, joint, muscle pain may occur. Discontinue use if severe symptoms develop.
10. Suppression of bone turnover: Significant suppression has been demonstrated. Monitor for consequences of bone over suppression.

Adverse Reactions

- Postmenopausal osteoporosis: Most common adverse reactions (>5%) were: back pain, pain in extremity, hypercholesterolemia, musculoskeletal pain and cystitis. Pancreatitis has been reported in clinical trials.
- Male osteoporosis: Most common adverse reactions (>5%) were: back pain, arthralgia and nasopharyngitis.
- Bone loss due to hormone ablation for cancer: Most common adverse reactions (>10%) were: arthralgia and back pain. Pain in extremity and musculoskeletal pain have also been reported in clinical trials.

Medication Strength and Preparations

- Available single use prefilled syringe of 60mg/mL

Medication Administration and Storage

- Injection should be stored under refrigeration between temp of 2 to 8° C

Subcutaneous Administration

1. Prior to administration, denosumab may be allowed to reach room temperature in the original carton. This generally takes 15 to 30 minutes. Do not warm by any other method. Once removed from the refrigerator, denosumab must be maintained at room temperature (up to 77°F [25°C]) in the original carton and must be used within 14 days for Prolia or 30 days for Jubbonti.
2. Visually inspect denosumab for particulate matter and discoloration prior to administration whenever solution and container permit. Denosumab is a clear, colorless to pale yellow solution that may contain trace amounts of translucent to white protein particles. Do not use if the solution is discolored or cloudy or if the solution contains many particles or foreign particulate matter.

Medication Administration and Storage *continued*

3. Latex Allergy for Prolia: People sensitive to latex should not handle the grey needle cap on the single-use prefilled syringe, which contains dry natural rubber (a derivative of latex). Jubbonti pre-filled syringe if not made with natural rubber latex.
4. In order to minimize accidental needle sticks, the denosumab single-use prefilled syringe has a safety guard that may be activated after the injection is administered.
5. Remove gray needle cap and inject subcutaneously into abdomen (avoiding 2-inch area around navel), upper arm or thigh
6. Insert needle and inject all liquid subcutaneously, hold prefilled syringe by clear finger grip with one hand, with other hand gently grasp and slide green safety guard toward the needle until you hear a click
7. Do not slide the safety guard forward over the needle before administering the injection– it will lock in place and prevent injection.
8. Immediately dispose of needle into sharps container

Pre-Administration Checklist and Screening

1. Calcium levels should be assessed prior to administration of denosumab. Hypocalcemia must be corrected prior to initiating therapy with denosumab.
2. Patient cannot have any signs and symptoms of infection. Ensure patient is not on an antibiotic.
3. May want repeat calcium level after injection in high risk populations.

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