

Denosumab (Prolia[®]) shared care guideline

Specialist Details	Patient Identifier
Name: _____	Date: _____
Location: _____	
Tel: _____	

NOTE – this guideline relates only to the use of denosumab 60mg (Prolia[®]) injection. Other preparations of denosumab are not covered by this guideline.

Introduction

Licensed indication: Denosumab (Prolia[®]) is licensed for treatment of osteoporosis in postmenopausal women at increased risk of fractures (see NICE TA204). This is the only licensed indication currently approved for use in Northern Ireland.

Adult dosage and administration

The recommended dose of denosumab is 60mg administered as a single subcutaneous injection once every 6 months into the thigh, abdomen or upper arm.

Available as: Denosumab (Prolia[®]) 60mg/1mL pre-filled syringe (should be stored between 2 - 8 °C).

Hypocalcaemia or vitamin D deficiency must be corrected by adequate intake of calcium and/or vitamin D before initiating therapy. Even normocalcaemic patients could be at risk of hypocalcaemia following administration of denosumab if they are vitamin D deficient. Severe symptomatic hypocalcaemia has been reported in patients predisposed to hypocalcaemia receiving denosumab.

Corrected calcium levels should be checked and confirmed to be within normal limits of lab:

- In the two week period **before** each dose is given
- within two weeks **after** the initial dose in patients with risk factors for hypocalcaemia (eg, eGFR <30 mL/min/1.73m²)
- if suspected symptoms of hypocalcaemia occur or if otherwise indicated based on the clinical condition of the patient.

^{a)} It is important that all patients know to report symptoms of hypocalcaemia to their doctor (eg, muscle spasms, twitches, or cramps; numbness or tingling in the fingers, toes or around the mouth).

Hospital specialist responsibilities

- Assess patients' suitability for denosumab (as per NICE TA204)
- Provide patient/carer with relevant written information on use (including Prolia[®] patient alert card), side effects and need for monitoring of medication
- Assess risk factors for hypocalcaemia. Ensure patients are aware that they should report symptoms of hypocalcaemia ^{a)}
- Ensure patients are adequately supplemented with calcium and vitamin D – this is especially important in patients with severe renal impairment
- Evaluate patients for Osteonecrosis of the Jaw (ONJ) risk factors ^{b)} prior to treatment. A dental exam with appropriate preventative dentistry is recommended in patients with concomitant risk factors
- Explain to the patient about the risk of osteonecrosis of the jaw and external auditory canal^{c)} and advise patients to: tell their doctor if they have any problems with their mouth or teeth before starting treatment; if they wear dentures they should make sure their dentures fit properly before starting treatment; maintain good oral hygiene and get routine dental check-ups during treatment; tell their doctor and dentist that they are receiving denosumab if they need dental treatment or dental surgery; tell their doctor and dentist immediately if they have any problems with their mouth or teeth during treatment (eg loose teeth, pain, swelling, non-healing sores or discharge); report any ear pain, discharge from the ear, or an ear infection during denosumab treatment
- Ensure corrected calcium and renal function is checked before each dose of denosumab is administered in secondary care
- Administer the first denosumab injection and discuss the shared care arrangement with the patient to ensure he/she understands the plans for follow-up care
- Agree shared care for continuation of denosumab therapy with the patient's GP specifying brand (Prolia[®]) to be prescribed. Communicate baseline results and clearly state who is responsible for ongoing monitoring and acting on test results
- For those patients predisposed to hypocalcaemia, arrange check of corrected calcium within two weeks after the first dose and ensure GP and patient are aware of the need for this
- Continue to review the patient every two years to monitor disease response to treatment and need to continue therapy. Review results of safety monitoring, request additional tests if required and send a written summary to the GP
- Provide any other advice or information for the GP if required
- Report adverse drug reactions to usual bodies (e.g. MHRA / CHM).

GP responsibilities

- Prescribe and administer denosumab 60mg (by brand name Prolia[®]) subcutaneously six months after the initial injection from the initiating specialist and at six month intervals thereafter
- Ensure corrected calcium levels and renal function are checked no more than two weeks before each dose of denosumab is administered. If any results are abnormal or if any concerns, withhold denosumab and contact initiating specialist for advice
- Ensure calcium and vitamin D preparations are prescribed as advised by specialist and encourage patient compliance
- GP to identify and confirm who will be responsible for administering the denosumab injection (i.e. the GP or nurse)
- Ensure no drug interactions with other medicines
- Reiterate to patient the importance of maintaining good oral hygiene - recommending regular dental check-ups. Refer to Prolia[®] patient alert card
- Report adverse drug reactions to initiating specialist and usual bodies (e.g. MHRA / CHM)
- Refer the patient back to the initiating specialist if their condition deteriorates and/or they experience any adverse reactions
- A small number of patients who are predisposed to hypocalcaemia (initiating specialist will advise) may receive all doses of denosumab in secondary care. For these patients, the initiating specialist may request GP to check corrected calcium within two weeks after the first dose of denosumab. Contact specialist if any results are abnormal or if any concerns.

Adverse effects, precautions and contraindications

Side effects listed as common include urinary tract infection, upper respiratory tract infection, sciatica, cataracts, constipation, abdominal discomfort, musculoskeletal pain, rash and pain in extremities.

Hypocalcaemia with denosumab most commonly occurs within the first 6 months of treatment, but it can occur at any time during treatment.

Skin infections: patients receiving denosumab may develop skin infections (predominantly cellulitis) leading to hospitalisation. Prompt medical attention is required if signs or symptoms of cellulitis develop.

No dose adjustment required in renal impairment or elderly.

Pregnancy: Denosumab is not recommended for use in pregnant women.

Osteonecrosis of the jaw (ONJ) has been reported in patients treated with denosumab or bisphosphonates, another class of anti-resorptive agents. For patients who develop ONJ while on denosumab therapy, dental surgery may exacerbate the condition. If ONJ occurs during treatment with denosumab, use clinical judgment and guide the management plan of each patient based on individual benefit/risk evaluation. Temporary interruption of treatment should be considered until the condition resolves and contributing risk factors are mitigated, where possible. While on treatment with denosumab, patients with risk factors for ONJ should avoid invasive dental procedures if possible.

^{b)} Risk factors for ONJ include: smoking; old age; poor oral hygiene; invasive dental procedures; comorbidity (eg, dental disease, anaemia, coagulopathy, infection) ; advanced cancer ; previous treatment with bisphosphonates; concomitant treatments (eg, chemotherapy, antiangiogenic biologics, corticosteroids, radiotherapy to head and neck)

Osteonecrosis of the external auditory canal has been reported rarely and should be considered in patients who present with ear symptoms including chronic ear infections or in those with suspected cholesteatoma. Possible risk factors^{c)} include steroid use and chemotherapy, with or without local risk factors such as infection or trauma.

Atypical femoral fractures have been reported rarely. Patients presenting with new or unusual thigh, hip or groin pain should be evaluated for an incomplete femoral fracture. Discontinuation of denosumab therapy should be considered if an atypical femur fracture is suspected, while the patient is evaluated.

Latex Allergy: the needle cover of the pre-filled syringe contains dry natural rubber (a derivative of latex), which may cause allergic reactions.

Denosumab is contraindicated in hypocalcaemia and in any patients who have hypersensitivity to active substance or to any of the excipients listed in the SPC.

Patients being treated with Prolia[®] should not be treated concomitantly with other denosumab-containing medicinal products.

Common drug interactions

No significant drug interactions have been reported.

Communication

For any queries relating to this patient's treatment with denosumab, please contact the specialist named at the top of this document.

This information is not inclusive of all prescribing information and potential adverse effects. Please refer to full prescribing data in the SPC or the BNF