

Managing ONJ

Identification of ONJ by an oral healthcare professional at an early stage means that the majority of patients can be managed conservatively using the following treatments:^{7,10,16}

- maintenance of optimal oral hygiene
- elimination of active dental and periodontal disease
- topical antibacterial mouth rinses
- systemic antibiotic therapy.

This approach will resolve the majority of early-stage cases or provide long-term symptomatic relief.^{10,25,26} For non-responsive ONJ lesions, consultation by an oral health specialist is required in order to assess if surgery (debridement and/or resection) may be effective.^{10,27,28}

There is a lack of data supporting discontinuation of bone-protective therapy (a 'drug holiday').¹⁶ If ONJ develops, the patient's oncologist may consider discontinuing the therapy until soft tissue closure is achieved; in such cases, the risk of skeletal-related events if therapy is stopped should also be assessed.^{16,29} A multidisciplinary management plan should be set up in close collaboration with the patient's oral healthcare team.^{3,4,7}

Key considerations

- ✓ Assess your patients' oral health before they start bone-protective therapy: refer patients to their own oral healthcare provider or to a hospital dental service (if available).
- ✓ Advise your patients to have regular dental check-ups during bone-protective treatment.
- ✓ Assess your patients for additional risk factors.
- ✓ Provide patients with an alert card to take with them on their next visit to their oral healthcare provider.

Take-home messages

- ONJ can occur as a complication of high-dose bone-protective therapy used for patients with advanced malignancies involving bone.
 - Patients receiving low-dose bone-protective therapy have a much lower risk of ONJ.
- The risk of ONJ can be reduced by implementing preventive dental measures before starting treatment, maintaining good oral hygiene, ensuring periodic follow-up by oral healthcare professionals and avoiding elective invasive procedures during treatment.
- Early diagnosis enables most cases of ONJ to be managed effectively and conservatively by an experienced and trained oral healthcare specialist.

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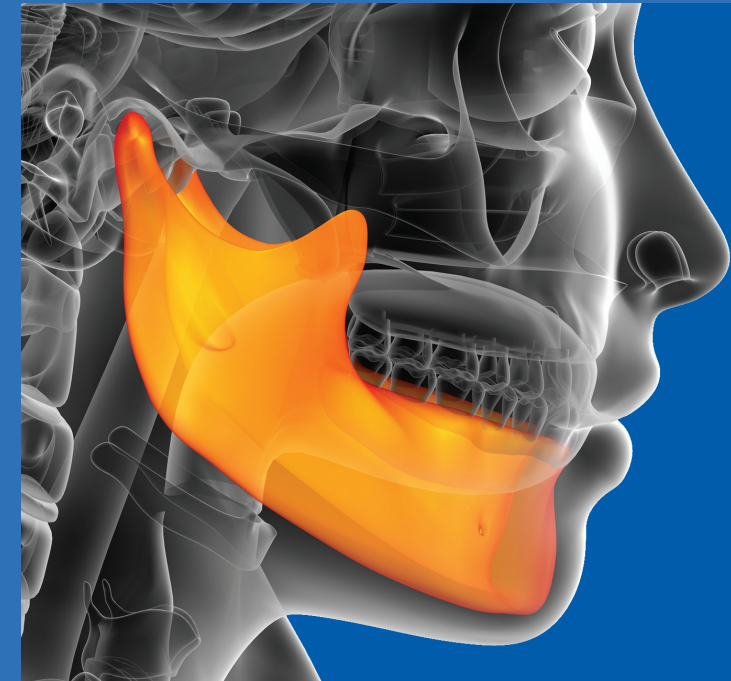
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Osteonecrosis of the jaw



A multidisciplinary approach, including a strong partnership with oral healthcare professionals, is key in the prevention of osteonecrosis of the jaw (ONJ) in patients receiving antiresorptive agents.

It is also essential that clinicians are aware of the signs and symptoms so that, when ONJ occurs, diagnoses can be made promptly and patients can be treated effectively and conservatively.

What is ONJ?

Signs and symptoms include exposed bone, paraesthesia in the region of the jaw/gum, loosening of teeth, fistulae, swelling, exudation, pain, soft tissue infection and halitosis.^{1,2}

Over 90% of cases of ONJ are in patients receiving antiresorptive or 'bone-protective' therapy (bisphosphonates or denosumab) for the prevention of skeletal-related events in patients with advanced malignancies involving bone, or for the treatment of giant cell tumour of the bone, osteoporosis and bone loss associated with adjuvant cancer treatment or long-term systemic glucocorticoid therapy.³⁻¹⁰

However, this complication occurs infrequently, even in the oncology setting, with phase 3 studies of denosumab and the bisphosphonate zoledronic acid suggesting an incidence of up to 2.3% when patients with solid tumours are treated for up to 2 years.¹¹⁻¹³ The incidence

increases with duration of therapy; in an open-label extension of two phase 3 studies, patients with breast or prostate cancer received denosumab for up to 5 years, and the incidence of ONJ was 6.9%.^{14,a}

Although ONJ can lead to considerable morbidity, there are many steps that can be taken to prevent the condition, in addition to effective management strategies.¹⁵⁻¹⁸

Accurate diagnosis is crucial because patients receiving bone-protective agents may present with other common clinical conditions, which should not be mistaken for ONJ. Such conditions include: alveolar osteitis, caries, chronic sclerosing osteomyelitis, fibro-osseous lesions, gingivitis/periodontitis, sinusitis, periapical pathology and temporomandibular joint disorders.¹⁶

ONJ needs to be managed by a specialist experienced in managing ONJ.

ONJ^b is characterised by three main features¹⁹



An area of exposed jawbone



No healing for more than 8 weeks



No previous craniofacial irradiation

^aIncidence not adjusted for exposure. Comparable long-term data for zoledronic acid are not available. ^bONJ related to bone-protective therapy is sometimes referred to as 'medication-related ONJ' or 'MRONJ'.²⁰

Who is at risk of ONJ?

Patients receiving high-dose bone-protective therapy for the prevention of skeletal-related events in advanced malignancies involving bone are at increased risk. Patients receiving low-dose bone-protective therapy, which is used to treat osteoporosis and bone loss associated with adjuvant cancer treatment or long-term systemic glucocorticoid therapy, have a much lower risk of ONJ.^{5,6,10,16}

Various other factors are associated with an increased risk of ONJ in patients receiving bone-protective therapy.^{1-8,10,21,22,24}

The main risk factors include:



dental disease or poor dental hygiene



invasive dental treatments (e.g. tooth extraction [mainly due to pre-existing gum disease], insertion of dental implants or prostheses, or surgery in the region of the mouth)



cancer therapy (e.g. radiotherapy in the region of the head and neck, chemotherapy, corticosteroid therapy, or previous treatment with bisphosphonates or inhibitors of angiogenesis)



concomitant diseases (e.g. pre-existing dental diseases, cancer, anaemia, infections, diabetes mellitus, immunosuppression or renal failure)



smoking



old age (over 60 years old).

How can ONJ be prevented?

Before initiating high-dose bone-protective therapy or low-dose therapy with the presence of additional risk factors, clinicians may need to refer patients to their oral healthcare provider for the following preventive measures:^{4,16,23}

- removing non-restorable teeth and completing required dental surgery (bone-protective therapy should not be initiated until the extraction site wound has healed)
- treating infections in the mouth region
- checking prostheses to ensure good positioning and treating any pressure points that have arisen.

If possible, restorative dental procedures should be completed before the start of treatment. If invasive dental treatment is required while receiving high-dose bone-protective treatment, or if the patient develops dental or periodontal disease that doesn't respond to treatment within a few weeks, they should be referred to a specialist experienced in managing ONJ.

To reduce the risk of ONJ further during treatment with bone-protective therapy, all patients should be encouraged to maintain good oral hygiene, to have dental check-ups (at least every 6 months) and dental treatments as needed, and to immediately tell their healthcare team, including their oral healthcare provider, about any problems with their mouth or teeth.^{3,4,7,23}



ONJ stages^{7,16}

