



HEAD & NECK CANCER
AUSTRALIA
ENGAGE • EDUCATE • EMPOWER

OSTEORADIONECCROSIS OF THE JAW (ORN)



OSTEORADIONECROSIS (ORN) OF THE JAW

WHAT IS ORN?

ORN is an uncommon side effect after radiotherapy. A diagnosis of ORN is confirmed when there is a change in the appearance of the bone on x-ray / an area of exposed jawbone / bone that can be probed via the gum / in a region that has been exposed to radiation treatment.¹

WHAT CAUSES ORN?

The risk factors for ORN include high radiation dose to the jawbone, dental or gum infection resulting in tooth removal, jaw surgery, poor oral hygiene, gum disease, tobacco use and dry mouth.

WHAT SHOULD YOU LOOK FOR?

- Any site of exposed bone
- ulceration of the mucosa (skin in the mouth)
- sharp, protruding bone, that might cause ulcers on the tongue or cheek
- pain in the jaws
- difficulty with opening mouth wide or a change to the way your teeth meet
- swelling in the jaws or lumps around the gums
- bad taste or discharge
- any site of discharge under the jaw

If you have any concerns about these signs or symptoms you should discuss with your doctor.

TREATMENT OF ORN

The treatment of ORN will depend on the diagnosis, gradingⁱⁱ or extent of the ORN. Treatment will also be dictated by symptoms.

Treatment might range from observation in conjunction with conservative measures, for example, gentle brushing of the site with an antibacterial gel, and smoothing any sharp or protruding bone, to major surgery. It is often necessary to involve many teams in the management of ORN to optimise outcomes.

PREVENTION OF ORN

ORN risk can be reduced by seeing a dental practitioner as soon as possible before your head and neck cancer treatment. Teeth that are deemed to have a poor prognosis should be extracted allowing a minimum of two weeks healing before starting the radiation treatment.

- 1 Good oral health: Maintaining excellent oral health by brushing the teeth regularly with a high-fluoridate toothpaste, cleaning between the teeth with floss or interdental brushes.

2. Seeing your dentist regularly for oral health examinations is important for thorough examination of the teeth and gums and to look for early signs of ORN. Make sure your dentist knows you have had radiation treatment to the head and neck region.
3. If you wear a denture making sure it fits well and it is not rubbing on the gums.
4. Drink plenty of water (try to avoid anything sweetened) and use dry mouth products if you have a dry mouth.
5. Reduce tobacco and alcohol consumption.

There are other medical conditions that might increase your risk of ORN. You should discuss this with your medical team.

About Head and Neck Cancer Australia

Head and Neck Cancer Australia (formerly Beyond Five) is Australia's only charity dedicated to providing information and support to people living with head and neck cancer, caregivers, family and healthcare professionals.

Head and Neck Cancer Australia's mission is to improve the quality of life of everyone affected by head and neck cancer through education and access to support and to raise awareness of head and neck cancer nationally.

Head and Neck Cancer Australia supports people through their cancer journey, from diagnosis to treatment and life after cancer by providing comprehensive, easy to understand and easy to access information. We have the only Directory of Head and Neck Cancer services and support groups available in Australia and New Zealand helping people to find the right services and support when they need it most.

Phone: 1300 424 848

Email: contact@headandneckcancer.org.au

Web: www.headandneckcancer.org.au

Head and Neck Cancer Australia Disclaimer: *You acknowledge and accept that the information in this factsheet is for general information purposes only. It is not intended, nor should it be relied on, as medical or legal advice, or as a substitute for consultation with a physician or other licensed healthcare provider. You agree that if you have individual healthcare-related questions you should contact your doctor promptly and should not disregard professional medical advice, or delay seeking it, because of information contained here. You also agree that Head and Neck Cancer Australia is not liable for any injury or damage to persons or property (howsoever caused, including by negligence) arising out of or related to any use of Head and Neck Cancer Australia's patient education materials, or for any errors or omissions.*

First Published: 2025

ⁱ Watson, E. E., Hueniken, K., Lee, J., Huang, S. H., El Maghrabi, A., Xu, W., ... & Hosni, A. A. (2024). Development and standardization of an osteoradionecrosis classification system in head and neck cancer: implementation of a risk-based model. *Journal of Clinical Oncology*, 42(16), 1922-1933

ⁱⁱ Watson, E. E., Hueniken, K., Lee, J., Huang, S. H., El Maghrabi, A., Xu, W., ... & Hosni, A. A. (2024). Development and standardization of an osteoradionecrosis classification system in head and neck cancer: implementation of a risk-based model. *Journal of Clinical Oncology*, 42(16), 1922-1933.