

### A Patient's Guide to Osteoradionecrosis of the Mandible (ORN-M)

<p><b>What is osteoradionecrosis of the mandible?</b></p>	<p>Osteoradionecrosis of the mandible (ORN-M) is a potentially serious medical jaw condition that is caused by radiotherapy, typically when certain patient factors exist (see risk factors below).</p> <p>ORN-M is essentially bone destruction of a portion of the jaw, which can result in a fracture.</p>
<p><b>Who is at risk?</b></p>	<ul style="list-style-type: none"> <li>✓ Patients who endure high doses of radiation of 60 Grays or more to the nasopharynx, oropharynx, and oral cavity.</li> <li>✓ Patients who undergo chemotherapy increases acute toxicity, especially oral mucositis, which can lead to oral ulcers and tissue breakdown.</li> <li>✓ Patients who undergo ablative surgical procedures and then receive radiotherapy.</li> <li>✓ Patients who have large tumors near or on the mandible.</li> <li>✓ Patients who have weakened immunologic health, nutritional status, and lower BMI.</li> <li>✓ Patients who have poor dental hygiene and have had recent dental extraction post- radiotherapy.</li> <li>✓ Patients who are positive for tobacco and alcohol use during and after radiotherapy.</li> <li>✓ Patients who are treated with anti-resorptive agents for osteoporosis such as intravenous, high-potency bisphosphonates and denosumab.</li> </ul>
<p><b>What are the symptoms?</b></p>	<p>Symptoms of ORN-M may go unnoticed for an unknown period of time but then begin to appear, such as prolonged pain, gingival swelling, redness, ulcerations, trismus, drainage and foul odor, exposed bone, and bone destruction as seen on imaging studies.</p>
<p><b>How is ORN-M diagnosed?</b></p>	<p>Diagnosis may be based on the patient's response to hyperbaric oxygen treatments (HBOT) or by physical examination findings, panorex, and CT scan imaging.</p>
<p><b>How can ORN-M be prevented?</b></p>	<p>Meticulous, daily oral hygiene and topical fluoride applications to teeth and careful timing of any necessary dental extractions. Pay close attention to the above factors that can increase a patient's risk of acquiring ORN-M.</p>
<p><b>How is ORN-M treated?</b></p>	<p>Depending on the stage of ORN-M, a patient may be monitored closely, undergo minor surgical repairs, or the patient may require reconstructive surgery.</p>