Osteoradionecrosis

What is osteoradionecrosis?

Osteoradionecrosis (ORN) is bone death. Patients with head and neck cancers can be treated with radiation to the mouth area. ORN for this group of patients affects their jaw bones. Radiation harms the healthy gums that cover your jaw bone. The bone becomes exposed. Because the bone isn’t covered it is more likely to become infected or not able to heal.

ORN can also cause:

- Pain.
- Taste changes.
- Food getting caught in the space.
- Changes in feeling.
- Changes in speech.
- Trouble opening the mouth.

The higher the dose of radiation you get, the more likely it is that you will get ORN. You should get the lowest possible dose to treat your cancer and prevent serious side effects.

How does it happen?

Radiation treatment can cause hypovascularization. This means that radiation can harm and sometimes destroy small blood vessels. These vessels supply the jaw bone and nearby tissues with oxygen and nutrients to stay alive and to heal after injury. Poor eating habits and poor dental practices can worsen ORN.

What can you do?

Before you have radiation to the mouth area, a dentist will do an in-depth exam of your mouth and teeth. Your provider will suggest a dentist that you should go to. This dentist should know how to take care of patients with head and neck cancers. Any teeth that could become a problem in the future should be removed. Before you start radiation you should be doing frequent mouth care. Fluoride treatments should be used. This should also be done after treatment to stop infection.

Your risk of ORN will never go away. You should first speak with your radiation oncologist about any dental work. Having a tooth removed could cause trauma to the jaw bone which can worsen ORN and cause infection.

Treatment of ORN

Treatment of ORN depends on how bad your case of ORN is. Choices include:

- Antibiotics. At the first sign of infection, most providers will order you an antibiotic. This will control and treat the infection.
- Surgery. Surgery can be used to remove the dead bone. How bad your case of ORN is will help decide what type of surgery you need. You may need to have bone and tissue taken from another part of your body to rebuild what was removed. In some cases, hyperbaric oxygen therapy is given before or after the surgery is done.
- **Hyperbaric Oxygen Therapy** (HBO). HBO is the use of pure oxygen to help healing of blood vessels and tissues. You breathe the oxygen in and it then helps heal hurt tissues.

ORN is a serious side effect that can happen after radiation for head and neck cancers. You and your care team will decide the
best steps to prevent and treat ORN.

OncoLink is designed for educational purposes only and is not engaged in rendering medical advice or professional services. The information provided through OncoLink should not be used for diagnosing or treating a health problem or a disease. It is not a substitute for professional care. If you have or suspect you may have a health problem or have questions or concerns about the medication that you have been prescribed, you should consult your health care provider.