Memorial Sloan Kettering Cancer Center

PATIENT & CAREGIVER EDUCATION

# Osteonecrosis of the Jaw (ONJ)

This information explains osteonecrosis (os-tee-oh-neh-kroh-sis) of the jaw (ONJ) and answers some frequently asked questions.

## What is ONJ?

ONJ is when the bone cells in your jaw break down or die.

## What causes ONJ?

ONJ is a rare but very bad side effect of certain medicines that target the bone. These medicines are bisphosphonates and denosumab. You may be prescribed them if you have:

- Multiple myeloma or other cancers.
- Cancer that has spread to the bone.
- Osteoporosis (os-tee-oh-puh-ROH-sis) or osteopenia (os-tee-oh-PEE-nee-uh). This is a weakening of the bones that can lead to fractures (broken bones).

### Bisphosphonates

Bisphosphonates can be given orally (by mouth) or intravenously (through a vein). Some examples of bisphosphonates are:

- Zoledronic acid (known as Zometa® for cancer treatment and as Reclast® for osteoporosis treatment)
- Pamidronate disodium (Aredia®)
- Alendronate (Fosamax®)
- Risedronate sodium (Actonel®)

- Ibandronate sodium (Boniva®)

### Denosumab

Denosumab is given by injection (shot). Examples of denosumab include:

- Xgeva® for cancer treatment
- Prolia® for osteoporosis treatment

People with cancer get both bisphosphonates and denosumab in higher doses, and more often, than people with osteoporosis.

## What are the symptoms of ONJ?

Symptoms of ONJ can range from very mild to severe (very bad). ONJ looks like an area of exposed bone in your mouth. It can cause tooth or jaw pain and swelling in your jaw. Severe symptoms include infection in your jaw bone.

You can get ONJ after some dental surgeries, such as getting teeth extracted (removed) or implanted. If this happens, it may take a long time for you to heal after dental surgery. Or, you may not heal at all.

## What is the treatment for ONJ?

Mild cases of ONJ can be treated with a mouth wash. More severe cases can be treated with antibiotics, topical gels (gels you put right on your gums), and dental procedures.

## How many people get ONJ?

Only a small number of people who take bisphosphonates or denosumab will develop ONJ. We do not know who will get it and who will not.

For every 100 people who take these medicines for cancer related to bones, about 1 to 2 people will get ONJ.

The risk is much lower for people who take them to treat osteoporosis. Out of every 100,000 people who take these medicines for osteoporosis, only about 1

will develop ONJ.

## What raises my risk of getting ONJ?

Your risk of ONJ gets higher the longer you're treated with bisphosphonates or denosumab. People who take these medicines to treat cancer often take them longer, and at higher doses, than people with osteoporosis. That puts them at a higher risk for developing ONJ.

People with multiple myeloma also seem to have a higher risk for ONJ.

You also have a higher risk for ONJ if you have dental surgeries while you're taking these medicines.

## What can I do to lower my risk for getting ONJ?

If you start taking bisphosphonates or denosumab, it's very important to keep your teeth and gums healthy. Before you start taking them, make sure to visit your dentist.

If you need to have any major dental surgeries (such as implants or extractions), have them before starting these medicines. Your mouth must heal from any dental surgeries before you start taking these medicines. This could take months, depending on the surgery.

Once you start taking bisphosphonates or denosumab, tell your dentist so that they will be prepared to treat you. Make sure to get regular dental checkups to prevent problems.

If you need to have dental surgery, tell your oncologist (cancer doctor).

## What should I consider when deciding whether to take bisphosphonates or denosumab?

It's important to consider both the small risk of developing ONJ and how these medicines can help protect your bones. These medicines prevent broken bones from osteoporosis, osteopenia, or cancer weakening your bones.

Sometimes broken bones or the problems caused by broken bones are very bad. They can be life threatening or disabling (prevent you from doing some activities).

Your healthcare provider believes the benefits of these medicines are greater than the small risk of getting ONJ. The choice is yours to make. Talk with your healthcare provider about making a choice.

# Call Your healthcare provider if:

- You have any pain in or around your jaw

If you have questions or concerns, contact your healthcare provider. A member of your care team will answer Monday through Friday from 9 a.m. to 5 p.m. Outside those hours, you can leave a message or talk with another MSK provider. There is always a doctor or nurse on call. If you're not sure how to reach your healthcare provider, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.

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