

## BONE PROTECTION FOR PEOPLE WITH **METASTATIC BREAST CANCER IN THE BONE**

### **What are the signs and symptoms of bone metastases?**

Signs and symptoms of bone metastases include:

- Bone pain,
- Fractures,
- Urinary and bowel issues,
- Weakness in the legs or arms; and
- High levels of calcium in the blood (hypercalcemia) which can cause nausea, vomiting, constipation and confusion.

Blood and imaging tests may be done to explain bone pain and confirm bone metastases.

### **Related educational resources:**

- [Metastatic Breast Cancer](#)
- [Clinical Trials](#)
- [Questions to Ask Your Doctor](#)
- [Managing Side Effects and Supportive Care](#)

Metastatic breast cancer (MBC) in the bone occurs when breast cancer cells spread beyond the breast to the bone (bone metastases). Even though cancer is in the bone, these are breast cancer cells. They are different from cancer cells that start in the bone.

Bone is the most common site for breast cancer metastases. The most common sites for bone metastases include the spine, skull, ribs, pelvis, long bones in the arms and legs.

### **How do bones work in our body?**

Bones provide support for our bodies to walk or stand. They are made up of tissues, calcium and bone cells.

Bone is always forming and breaking down in our bodies to keep bones strong and release calcium into the blood stream.



### **How do breast cancer cells affect bones?**

When breast cancer cells spread to the bones, lesions can occur.

Osteolytic or lytic lesions break down bone without replacing it. These lesions are holes in the bone which weaken bones and cause them to break easily. It's like holes in swiss cheese.

Osteoblastic or blastic lesions make bone that is thick and rigid. These areas of the bone are abnormal and break more easily than normal bone.

A person with bone metastases may have both osteolytic and osteoblastic lesions.

These lesions can lead to bone complications. These complications are called skeletal related events, or SREs. SREs include bone fractures and spinal cord compression.

For more information, visit [komen.org](http://komen.org) or call Susan G. Komen's breast care helpline at 1-877 GO KOMEN (1-877-465-6636) Monday through Friday, 9 AM to 10 PM ET.

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## Resource

**Susan G. Komen®**

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komen.org

## Questions to ask your doctor

- Should I be concerned about my bone health?
- Do any of the drugs I take (prescription and over-the-counter) affect my bone strength?
- How can I protect my bones from fractures or other problems?
- What drug options are best for me?
- Are there exercises I could do to help strengthen my bones? What exercises should I avoid?
- Are there any dietary guidelines I need to follow while on this treatment?

## What are the risks associated with bone metastases?

As treatment for MBC improves, so does survival. As a result, the risk of SREs increases.

**SREs can lead to:**

- Emergency room visits/hospitalization.
- Surgery to prevent or repair broken bones.
- Radiation to help control bone pain.
- Pressure on the spinal cord which can cause pain and interfere with bladder and bowel control.
- Chronic pain and loss of mobility (movement).

## How to prevent and manage SREs?

Research shows up to 70 percent of women with bone metastases will have a SRE within 2 years of diagnosis without a bone-strengthening therapy. If you have bone metastases, bone-strengthening therapy may be added to your treatment plan to protect your bones and reduce SREs. Talk with your doctor to discuss these therapies and which might be right for you.

	Bisphosphonates		RANK ligand (RANKL) inhibitor
<b>Drug names (brand names)</b>	Pamidronate (Aredia)	Zoledronic acid (Zometa)	Denosumab (Xgeva)
<b>How is it given?</b>	Given through an IV	Given through an IV	Given by injection
<b>How often is it given?</b>	Every 3-4 weeks	Every 3-4 weeks or every 12 weeks	Every 4 weeks

**Use of these drugs can:**

- Lower the risk of bone fractures related to bone metastases.
- Help reduce pain caused by bone metastases.
- Reduce the need for radiation therapy and surgery related to bone fractures and bone pain.

## What are side effects of bone-strengthening therapy?

These drugs can cause bone, joint or muscle pain or fatigue. When your bones are mending, you may have more pain. Talk with your doctor about other possible side effects and how they may be managed.

If you develop muscle twitching or increased anxiety, let your doctor know. Your doctor may want you to take vitamin D and calcium supplements.

In rare cases, a disorder called osteonecrosis of the jaw may occur. To reduce this risk, visit the dentist and take care of any dental procedures before you start either drug.

Talk with your doctor about other ways to prevent SREs and manage complications.

The list of resources is only a suggested resource and is not a complete listing of breast health and breast cancer materials or information. The information contained herein is not meant to be used for self-diagnosis or to replace the services of a medical professional. Komen does not endorse, recommend or make any warranties or representations regarding the accuracy, completeness, timeliness, quality or non-infringement of any of the materials, products or information provided by the organizations referenced herein.