Primary Bone Cancer: Tests to Check the Extent of the Cancer

If your healthcare provider has found that you have primary bone cancer (cancer that started in your bones), more tests will be needed. You may have had some of these tests before the biopsy was done. (A biopsy is when a small piece of the tumor is taken out to be checked for cancer cells.)

Additional tests help your healthcare provider learn more about the type of bone cancer you have and exactly where it is and how big it is. You'll likely have more than 1 of these tests. They can show the size of the tumor and help see if the cancer has grown into nearby areas or spread to other parts of your body. These test results help your providers decide the best choices for treating the cancer. If you have any questions about these or other tests, be sure to talk with your healthcare team.

The tests you may have can include:

- X-ray
- MRI
- CT scan
- Bone scan
- PET scan

X-ray

An X-ray is a simple test that uses a small amount of radiation to get a black-and-white picture of your bones. Cancer can look like a black hole in the white bone. It can also give the normally smooth bone a ragged look.

A chest X-ray may also be done to see if the cancer has spread to your lungs.

MRI

An MRI uses magnets, radio waves, and a computer to create detailed pictures of the inside of your body. This test can help show if the bone tumor has grown into nearby soft tissues, like muscle.

MRIs don't hurt. But they can take a long time, often an hour or longer. During that time, you must lie still on a table that's moved into a long, narrow tube. The tube-like scanner is a small space. If you're uncomfortable in small spaces, you may be given a sedative to help you relax. Some hospitals and clinics have open MRI scanners. These are less confining, but the images may not be as sharp. When the scanner is working, it can be very loud. You may be given earplugs or headphones to wear. A 2-way intercom will let you talk to the technician during the test.

CT scan

A CT scan uses special X-rays to make detailed pictures of the inside of your body. During a CT scan, a doughnut-shaped X-ray machine scans the part of your body where there is cancer.

A CT scan of the bone tumor can help show the extent of the tumor. CT scans can also help show if the cancer has spread to other parts of your body, such as your lungs.

A CT scan doesn't hurt. Before the scan, a contrast dye may be put into your blood through a vein. The dye helps outline parts of your body so that they show up better on the CT scan.

During the test, you lie still on an exam table. The table slides through the center of the ring-shaped CT scanner. The scanner takes pictures of your body from many angles. The technician may ask you to hold your breath 1 or more times during the scan. A computer combines these pictures to create detailed cross-sectional images of the inside of your body.

Bone scan

Bone scans show areas of cell activity in bones, which can sometimes be a sign of cancer. Bone scans can often show where the cancer has spread. They can find small metastases, or the spread of cancer, better than an X-ray. Bone scans don’t make detailed images. So other tests, like X-rays or CT scans, may be needed if any abnormal spots are seen.

For this test, a small amount of a mildly radioactive tracer is put into a vein. It travels through your blood and collects in areas of abnormal bone growth. You need to wait about 2 hours between the injection and the bone scan. It’s recommended that you drink fluids during that time to help flush out the tracer. You then lie on a table for about 30 minutes while a machine scans your body for the places the tracer has collected. These are sometimes called hot spots. The amount of radioactive material used for this test is small. The tracer will lose its radioactivity over time after this test. Your treatment team will tell you if there are any special precautions you should take.

PET scan

A PET scan looks for cancer all over your body. It can sometimes tell if a tumor is cancer or not cancer (benign). For this test, a small amount of sugar attached to a mildly radioactive tracer will be put into a vein in your arm. Cancer cells absorb more of the radioactive sugar than normal cells, so they're more likely to show up on the test.

One hour after you get the radioactive tracer, you’ll get the PET scan. You will lie still on a table that is pushed into the scanner. It will rotate around you and take pictures. Other than the injection, a PET scan is painless. Some people are sensitive to the substance and may have nausea, a headache, or vomiting. Often PET and CT scans are done at the same time, so areas that show up on the PET scan can be compared to the more detailed images of the CT scan.

Working with your healthcare provider

Your healthcare provider will talk with you about which tests you'll have. Make sure you understand and follow the directions for how to get ready for the tests. You may want to ask when and how you'll get the test results. Ask questions and talk about any concerns you have.