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Bone Scan [1]

This section has been reviewed and approved by the [Cancer.Net Editorial Board](#) [2], 01/2014

Key Messages:

- A bone scan is an imaging test that uses a very small amount of a radioactive substance (tracer) to find or monitor cancer that started in the bones or that has spread to the bones from another part of the body.
- A trained medical professional injects the tracer into a vein in the arm, and a special camera takes pictures of the bones once the tracer has been absorbed.
- No special preparations are needed before a bone scan, and you can go back to your usual activities as soon as it is finished.

A bone scan is used to examine the bones for damage caused by cancer or another disease. It is a nuclear medicine test, which means that a very small amount of a radioactive substance is used during the procedure. The scan helps find cancer that started in the bones, as well as cancer that metastasized (spread) to the bone from other parts of the body. Bone scans are also used to monitor how cancer in the bone is responding to treatment.

Usually the entire body is scanned during this procedure. If the results show bone damage that may be caused by cancer, more tests may be necessary. These tests may include a [computed tomography \(CT\) scan](#) [3], [magnetic resonance imaging \(MRI\)](#) [4], or a [biopsy](#) [5].

The medical team

A bone scan can be done at the radiology or nuclear medicine department of a hospital or at an outpatient imaging center. The test is performed by a nuclear medicine technologist who has been specially trained and certified. The technologist is supervised by a radiologist (a medical doctor who specializes in using imaging tests to diagnose disease) or a nuclear medicine physician. The scan results are interpreted by the radiologist or nuclear medicine physician.

Preparing for the test

You usually do not need to do anything special before having a bone scan. This means you can eat and drink normally before your appointment. However, you should tell your doctor about all of the medications you are taking, as well as any drug allergies or other medical conditions you may

have. Medicines that contain barium or bismuth, in particular, can affect the test results, so your doctor may recommend not taking them before your scan. Women should also tell their doctors if they are breastfeeding or if there is any chance they are pregnant.

Before your appointment, you may want to check with your insurance provider to find out whether the cost of the test will be covered and if there are any additional costs you may need to pay yourself. Once you arrive for your scan, you will be asked to sign a consent form that states you understand the benefits and risks of the bone scan and agree to have the test done. Talk with your doctor about any concerns you may have about the bone scan.

During the test

When you arrive for your bone scan, a radioactive material called a tracer will be injected into your body through a vein in your arm. The injection may sting a little bit, but you will not feel the tracer move through your body. The tracer takes one to four hours to be absorbed by your bones. While you wait, you will need to drink several glasses of water. By urinating frequently, you will remove radioactive material that has not collected in your bones. During this time, you are not dangerous to others because the amount of radioactivity in your body is less than what is used during a normal x-ray.

Right before the scan takes place, you will be asked to remove jewelry and any other metal objects. You may also need to change into a hospital gown. Then the technologist performing the scan will help you lie on your back on a padded exam table in the scan room and will position a large scanning camera above your body. During the scan, the camera will move slowly around your body, taking pictures of the tracer in your bones. (Areas where too much or too little tracer has been absorbed may indicate cancer.) You will need to lie very still because movement may blur the pictures. The technologist may ask you to change positions during the scan to get pictures from different angles.

A scan of the entire body takes about one hour to complete. Bone scans are not painful, but you may become uncomfortable lying still for the entire test.

After the test

You can go back to your usual activities right after your bone scan, including driving. You should not feel any side effects from the tracer or the test itself. However, your doctor may ask you to drink lots of water the next 24 to 48 hours to flush out any tracer that may be left in your body. Typically, all of the radioactive material is gone after two days. If you notice pain, redness, or swelling around the injection site in your arm, call your doctor immediately.

Questions to ask your doctor

Before having a bone scan, consider asking the following questions:

- Who will perform the bone scan?
- What will happen during the bone scan?
- How long will the procedure take?
- What are the risks and benefits of having a bone scan?

- How accurate is a bone scan at finding cancer?
- Should the facility I go to be accredited by the American College of Radiology [6] to perform bone scans?
- When will I learn the results? How will they be communicated to me?
- Who will explain the results to me?
- What other tests will I need if the bone scan finds evidence of cancer?

More Information

Guide to Bone Cancer [7]

ASCO Answers Fact Sheet: When Cancer Spreads to the Bone (PDF)[8]

Additional Resources

RadiologyInfo: General Nuclear Medicine [9]

MedlinePlus: Bone Scan [10]

Links:

[1] <http://www.cancer.net/navigating-cancer-care/diagnosing-cancer/tests-and-procedures/bone-scan>

[2] <http://www.cancer.net/about-us>

[3] <http://www.cancer.net/node/24486>

[4] <http://www.cancer.net/node/24578>

[5] <http://www.cancer.net/node/24406>

[6] <http://www.acr.org/>

[7] <http://www.cancer.net/node/18534>

[8] http://www.cancer.net/sites/cancer.net/files/asco_answers_bone_metastasis.pdf

[9] <http://www.radiologyinfo.org/en/info.cfm?pg=gennuclear>

[10] <http://www.nlm.nih.gov/medlineplus/ency/article/003833.htm>