

Bone Scintigraphy

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COMMENTARY

Bone scintigraphy also known as bone scan, is a nuclear medicine imaging technique of the bone. This technique can help diagnose a number of bone conditions that may not be visible in traditional X-ray images such as cancer of the bone, location of bone inflammation, fractures and also bone infection. Bone scintigraphy is a nuclear medicine test that means this technique uses small amounts of radioactive material. The radioactive material use in this technique is called radiotracers and it is injected into the bloodstream. The radiotracer emits radioactive energy which is detected by a special camera or imaging device that produces pictures of the bones called scintigrams.

Bone scintigraphy is painless, although it may require you to lie still for up to an hour while the scanning is done. The test poses no greater risk than a standard X-ray as it involves very little radiation exposure. There is no need to restrict diet or to avoid particular activities in preparation for bone scintigraphy or bone scan. You do not have to do anything special to prepare for this procedure. But barium and bismuth can interfere with bone scan results. So tell the doctor if you have had an X-ray test using barium contrast material within the past four days, or if you have taken medicine containing bismuth. You will need to remove jewelry and other metal objects before the scan.

A bone scintigraphy procedure includes both an injection and the actual scan. Tracer material will be injected through a vein in your

arm. Immediately after the injection some images may be taken. But the main images are taken two to four hours later to allow the radiotracer to circulate and be absorbed by your bones. It is recommended by the doctor to drink several glasses of water while you wait. For the scan, you will be asked to lie still on a table while a camera takes pictures. The scanning may take up to an hour. This procedure is not painful, but lying on the table may become uncomfortable. Generally there are no side effects of a bone scintigraphy and no follow up care is needed.

Test results of bone scintigraphy are considered normal when the radiotracer is spread evenly throughout the body. This means you do not have major bone problem. But when the scan shows darker "hot spots" or lighter "cold spots" in the bones, then the results are considered abnormal. And these abnormal results can indicate that you have a bone disorder, such as cancer or arthritis or infection in the bone.

There are some limitations of bone scintigraphy. This technique cannot identify some types of cancer. To help distinguish between normal and abnormal bone an abnormal finding on a bone scan may require additional tests like Magnetic Resonance Imaging (MRI), Computed Tomography (CT), blood tests or a biopsy. Also this procedure can be time consuming. For the radiotracer to accumulate in the area of interest it can take several hours to days, and imaging may take up to several hours to perform. The image resolution of images taken in this technique may not be as high as that of CT or MRI.

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