



# A Patient's Guide to QCT Bone Density Testing



Osteoporosis is treatable and preventable but often progresses without obvious symptoms. Early diagnosis and intervention greatly improves the outlook for patients.

Screening for osteoporosis is important enough that Medicare considers any postmenopausal woman to be eligible for Bone Mineral Density (BMD) testing at 24 month intervals. BMD testing is one of twelve preventive services offered by the Centers for Medicare and Medicaid.

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- » **Why Test for Bone Mineral Density?**  
Osteoporosis is characterized by the deterioration of bone strength (bone density and bone quality) and increased susceptibility to fractures of the hip, spine, and wrist in particular. Bone density is more easily measured than bone quality and an examination scan is recognized as the best way to diagnose the presence of osteoporosis.
- » **The QCT Exam for BMD**  
A QCT exam takes around 5 minutes and is very similar to an ordinary CT scan. During the exam, both the spine and hip are scanned for low bone mass (osteopenia) or osteoporosis. A low-dose CT scan is used and so the amount of radiation required is comparable to a mammogram.
- » **The QCT Report**  
The average bone density is calculated and then compared to age and sex matched control data. If a patient's previous examination is available in the database, a direct comparison to the results of the new examination may be made to assess specific changes in BMD.

## What is QCT?

Quantitative Computed Tomography (QCT) is a fast, non-invasive exam that is widely used and one of three methods cited by the National Osteoporosis Foundation as safe and effective for the evaluation of Bone Mineral Density.

## Is QCT the Same as DXA?

At the hip, QCT produces measurements that are the same as DXA. However, QCT is likely to detect low bone mass in the spine earlier because QCT measures the interior bone (which is affected earlier and to a greater degree) separately from the denser walls of the bone – including for patients with scoliosis. In addition, QCT can avoid the artificially high BMD measurements that can affect DXA due to obesity, disc space narrowing, spinal degenerative diseases, aortic calcification and osteophytes (in patients with arthritis).