Osteoporosis and Bone Mineral Density

Osteoporosis (https://www.radiologyinfo.org/en/info/osteoporosis) is reduced bone density that can lead to bone fragility and increased bone fracture risk. Osteoporosis is identified by imaging tests measuring bone mineral density (BMD). For individuals suspected to have low BMD, dual energy x-ray test (DXA) (https://www.radiologyinfo.org/en/info/dexa) for lumbar spine/hip(s) is usually appropriate as the initial imaging test. DXA distal forearm and quantitative CT scan (QCT) (https://www.radiologyinfo.org/en/info/spinect) lumbar spine/hip(s) may be appropriate.

For follow-up imaging of individuals at risk for fracture or with low BMD, DXA lumbar spine/hip is usually appropriate. DXA distal forearm, TBS lumbar spine, and QCT lumbar spine/hip may be appropriate.

For follow-up imaging of individuals with T risk scores of less than −1, women 70 years and older, men 80 years and older, or those with height loss, self-reported back bone fracture, or prolonged glucocorticoid use, DXA lumbar spine/hip and DXA vertebral fracture assessment are usually appropriate. DXA distal forearm, X-ray axial skeleton, and QCT lumbar spine/hip may be appropriate.

For premenopausal women or men less than 50 years of age with risk of low BMD, initial imaging with DXA lumbar spine/hips is usually appropriate. DXA distal forearm may be appropriate.

For follow-up imaging of premenopausal women or men less than 50 years of age with risk of low BMD, DXA lumbar spine/hips is usually appropriate. DXA distal forearm and QCT lumbar spine/hip may be appropriate.

For initial imaging of individuals 50 years or older with suspected osteoporosis and advanced spine degenerative changes, DXA distal forearm, DXA lumbar spine/hips, and QCT lumbar spine/hip are usually appropriate.

— By Rebecca Koweek and Samantha L. Heller, PhD, MD. This information originally appeared in the *Journal of the American College of Radiology*.

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