



DEXA Protocol

Patients recommended to have regular DXA scans include:

- Asymptomatic patients 65 years and older who were assigned female at birth (AFAB)
- Asymptomatic patients 70 years and older who were assigned male at birth (AMAB)
- All postmenopausal women younger than 65 years and men younger than 70 years who have risk factors for osteoporosis including:
 - A history of fracture of the wrist, hip, spine, or proximal humerus with minimal or no trauma, excluding pathologic fractures
 - Family history of osteoporotic fracture
 - Low body mass (less than 127 lbs or 57.6 kg)
 - Current use of cigarettes
 - Excessive use of alcohol
 - Loss of height, thoracic kyphosis
- Individuals of any age with findings suggestive of demineralization or fragility fractures on imaging studies such as radiographs, computed tomography (CT), or magnetic resonance imaging (MRI)
- Individuals receiving (or expected to receive) glucocorticoid therapy for more than 3 months
- Individuals beginning or receiving long-term therapy with medications known to adversely affect BMD (eg, anticonvulsant drugs, androgen deprivation therapy, aromatase inhibitor therapy, or chronic heparin)
- Individuals with an endocrine disorder known to adversely affect BMD (eg, hyperparathyroidism, hyperthyroidism, or Cushing's syndrome)
- Postpubertal hypogonadal males with surgically or chemo-therapeutically induced castration
- Individuals being monitored to:
 - Assess the effectiveness of osteoporosis drug therapy [25]
 - Follow-up medical conditions associated with abnormal BMD
- Individuals with medical conditions associated with abnormal BMD, such as:
 - Chronic renal failure
 - Rheumatoid arthritis and other inflammatory arthritides
 - Eating disorders, including anorexia nervosa and bulimia
 - Gastrointestinal malabsorption or sprue
 - Osteomalacia
 - Acromegaly, chronic alcoholism, or established cirrhosis
 - Multiple myeloma
 - Gastric bypass for obesity. The accuracy of DXA in these patients might be affected by obesity
 - Organ Transplantation
 - Prolonged immobilization
 - Prolonged poor nutrition

Routine or Screening DXA are not recommended for the following patients:

- Although proton pump inhibitors (PPIs) may be associated with an increased risk of fragility fractures, routine or screening BMD is not recommended in patients receiving PPIs in the absence of other risk factors

Protocol:

- Obtain a patient history, including any risk factors and prior surgery that could affect the accuracy of measurements.
- **For ROUTINE exams**, perform bilateral hips and lumbar spine (L1-L4)
- Include non-dominant forearm (dominant if history of fracture to non-dominant)- if patient has a history of HYPERPARATHYROID. This is only for HYPERPARATHYROID, not for hypo or thyroid issues.
- If spine and hips are excluded from imaging, scan bilateral forearms.

Note: 2 adequate points of reference are necessary. If 2 or more vertebrae or 1 or more hips must be excluded, the following options may be used:.

- 1-2 hips + 2 lumbar vertebrae (Vertebrae do **not** need to be contiguous)
- 1-2 hips + non-dominant forearm*
- 2 lumbar vertebrae + non-dominant forearm*
- Bilateral forearms (For patients exceeding the table weight limit or if spine and hips must be excluded)

*Dominant forearm should be scanned if there is history of fracture to non-dominant forearm.

Contraindications:

There are no absolute contraindications to performing DXA [30]. However, a DXA examination may be of limited value or require modification of the technique or rescheduling of the examination in some situations, including:

- Recently administered oral contrast or radionuclides
- Pregnancy
- Severe degenerative changes or fracture deformity in the measurement area
- Implants, hardware, devices, or other foreign material in the measurement area
- The patient's inability to attain correct position and/or remain motionless for the measurement
- Extremes of high or low body mass index that may adversely affect the ability to obtain accurate measurements. QCT may be a desirable alternative in these individuals [31-33].