

Osteoporosis Diagnosis Guide

Risk Stratification · Screening Criteria · Clinical Presentation · Diagnostic Thresholds

 **1 in 5**
Men >50 years old affected in their lifetime.

 **1 in 3**
Women >50 years old affected in their lifetime.

1/3 Of all fractures occur in older males

24% Mortality rate in the year following a hip fracture.

70% Of osteoporotic fractures occur in patients whose BMD T-score is above -2.5

SECTION 01

Risk Factors for Osteoporosis

● Non-modifiable ● Medication-related ● Modifiable

- Older age (>50 years)
- Female / postmenopausal
- Prior fragility fracture or high-trauma fracture
- History of falls
- Low body weight (BMI < 20)
- Family history of hip fracture
- Glucocorticoid use (>3 months, ≥5 mg/day)
- Hormonal risk factors (premature menopause)
- Smoking
- Nutritional deficiencies or immobility
- Chronic inflammatory or autoimmune disease
- Excessive alcohol use (≥3 drinks/day)

SECTION 02

Clinical Signs to Examine

- ▶ Height Loss
- ▶ Occiput-to-Wall Distance
- ▶ Rib-to-Pelvis Distance
- ▶ Hyperkyphosis
- ▶ Incidental Back Pain

SECTION 03

DXA Bone Mineral Density & T-Score



70% of osteoporotic fractures occur in patients with T-score above -2.5. BMD alone is insufficient – always integrate clinical risk factors.

SECTION 04

FRAX – 10-Year Fracture Risk Tool

Estimates the 10-year absolute probability of hip, spine, shoulder, and forearm fracture. Femoral neck BMD is an optional input.

≥ 20%

High risk threshold major osteoporotic fracture

≥ 3%

High risk threshold hip fracture specifically

SECTION 05

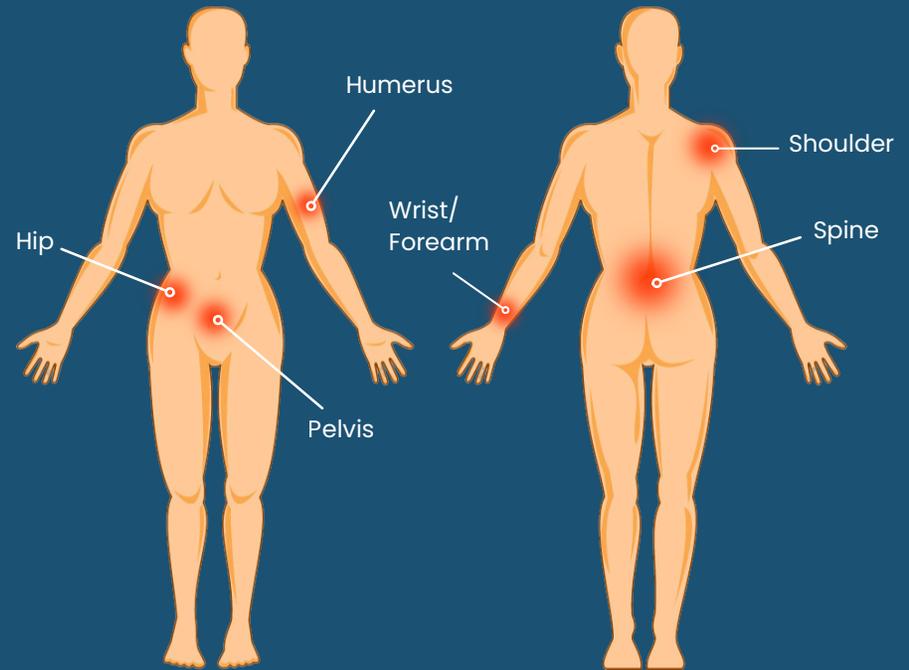
Fracture Sites & Osteoporosis Association

Trauma threshold expanded: High-trauma fractures (e.g., falling down stairs) carry the same reduced BMD association as low-trauma fractures and predict future fractures. Only extreme trauma (falling from a roof) or pathological fractures should be discounted.

Vertebral fracture clinical diagnosis: Can be made without imaging in the presence of fall-related hip, vertebral, or multiple fracture events – if primary bone cancer, metastasis, or metabolic bone disease is excluded.

NOT CONSIDERED OSTEOPOROTIC

- Hands
- Feet
- Craniofacial



SECTION 06

BMD Screening Recommendations

Population	Recommendation	Priority
Women ≥ 65 years	Universal BMD screening (USPSTF 2025)	High
Postmenopausal women <65 with risk factors	Screen if FRAX indicates increased risk	High
Women 50–64 / Men 50–69	Screen with clinical risk factors present	Moderate
Men ≥ 70 years	BMD screening recommended (BHOFF)	Moderate
Men 50–69 (general)	USPSTF: insufficient evidence to recommend universal screening	Discuss
Any age with prior hip/vertebral fracture	Clinical diagnosis; BMD for baseline monitoring	High