Overview of Osteoporosis Diagnosis and Treatment for Adults

1. **Counsel all individuals on the risk factors for osteoporosis.**
   Osteoporosis is a “silent” risk factor for fracture; nearly 1 in 2 women and 1 in 4 men will experience an osteoporosis-related fracture at age 50 or older.

2. **Perform Bone Mineral Density (BMD) testing for the following at-risk populations:**
   - Women aged 65 and older
   - Postmenopausal women under age 65 with risk factors (family history of osteoporosis, small and thin, smoking)
   - Men age 70 and older
   - Adults who fracture a bone after age 50 or have height loss of more than 1 ½ inches
   - Adults over age 50 with a disease or condition associated with low bone mass or bone loss
   - Adults over age 50 taking medications associated with low bone mass or bone loss
   - Pre-menopausal women or men under age 50, with suspicion of osteoporosis
   Central measurement at the hip and spine by Dual x-ray absorptiometry (DXA) is considered the gold standard for diagnosis and treatment monitoring.

3. **Counsel all patients on strategies to promote bone health including the following:**
   - Advise all patients to eat a varied, nutrient rich diet including generous amounts of fruits and vegetables.
   - Counsel all patients to obtain the recommended dietary allowance (RDA) for calcium (1000 to 1200 mg a day), preferably from food sources, and to include calcium supplements only if necessary.
   - Recommend vitamin D intakes of 600 to 800 IU per day for healthy adults; this usually requires supplementation. Patients with osteoporosis typically require more vitamin D.
   - Advise patients to avoid smoking and to limit alcohol intake.
   - Educate patients about safety precautions to reduce the risk of falls and related fractures.
   - Recommend regular physical activity including weight bearing, muscle strengthening, postural, and balance exercises. Consider a physical therapy consultation for patients with osteoporosis, history of falls, and/or fracture.
   - When appropriate, prescribe FDA-approved medications for osteoporosis.

**FDA Approved Osteoporosis Medications**

- Bisphosphonates:
  - Alendronate (Fosamax)
  - Ibandronate (Boniva)
  - Risedronate (Actonel, Atelvia)
  - Zoledronic acid (Reclast)
- Calcitonin (Fortical or Miacalcin)
- Denosumab (Prolia)
- Estrogen/Hormone Therapy
- Teriparatide (Forteo)
- Raloxifene (Evista)

4. **Select the following candidates for treatment with FDA-approved osteoporosis medications:**
   - All postmenopausal women and men who present with vertebral or hip fracture
   - Persons with a T-score ≤ -2.5 at the femoral neck or spine after evaluation to exclude secondary causes
   - Low bone mass (T-score between -1.0 and -2.5 at the femoral neck or spine) and a 10-year probability of a hip fracture ≥ 3% or a 10-year probability of a major osteoporosis-related fracture ≥ 20% based on the US-adapted WHO algorithm in patients over 50 and not currently on osteoporosis medication (FRAX: [www.sheffield.ac.uk/FRAX](http://www.sheffield.ac.uk/FRAX))
   - Clinician’s judgment and/or patient preferences may indicate treatment for people with 10-year fracture probabilities above or below these levels

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