Universal Recommendations for All Patients

1. Adequate intake of Calcium and Vitamin D
   a. Calcium – at least 1,200 mg per day, including supplements if necessary
   b. Vitamin D – 1800 IU per day in divided doses
2. Regular weight-bearing and muscle strengthening exercise
   a. Examples include walking, jogging, martial arts, stair climbing, dancing, tennis, weight training and resistive exercises
3. Fall prevention
   a. Action items includes vision and hearing screening and correction, home safety evaluation, prescription medication review for potential side effects, neuro and skeletal/muscle defects,
4. Avoidance of tobacco use and excessive alcohol intake

Diagnosis

Indications for bone mineral density (BMD) testing:
- All women age 65 and older and men age 70 and older, regardless of clinical risk factors
- All postmenopausal women and men age 50 and older should be evaluated clinically for osteoporosis risk in order to determine the need for (BMD) testing
- Adults who have a fracture after age 50
- Anyone being considered for pharmacologic therapy
- Postmenopausal women discontinuing estrogen therapy
- Patients on long-term corticosteroid therapy

1. Risk assessment for conditions, diseases and medications that cause or contribute to osteoporosis
   - Lifestyle factors
   - Genetic factors
   - Hypogonadal states
   - Endocrine disorders
   - Gastrointestinal disorders
   - Hematologic disorders
   - Rheumatic and autoimmune diseases
   - Miscellaneous conditions/diseases
   - Medications

2. Clinical Evaluation
   - Relevant blood and urine studies
     o Vitamin D level
   - Bone mineral density measurement
     o Normal – T-score at -1.0 and above
     o Osteopenia – T-score between -1.0 and -2.5
     o Osteoporosis – T-score at or below -2.5
Short Clinical Guidelines:  
Osteoporosis – Prevention and Treatment

Treatment
Postmenopausal women and men age 50 and older who present with the following should be considered for treatment:

1. A hip or vertebral fracture
2. T-score -1.5 to -2 at the lateral vertebral spine after appropriate evaluation to exclude secondary causes
3. Low bone mass 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
4. A result of osteopenia is treated depending on risk factors, dexa scan results and FRAX score
5. Follow-up bone mineral density studies every 1-2 years after initiation of treatment to evaluate efficacy of treatment and with any vertebral fracture
6. Depending on risk factors and severity of disease, treatment duration is 5-7 years followed by a 1 year “holiday” and re-assessment
7. If osteopenia or osteoporosis continues to be identified, treatment should resume and follow the above described routine

Pharmacological treatments

1. Bisphosphonates
   a. Alendronate (Fosamax®, Fosamax Plus D™)
   b. Ibandronate (Boniva®)
   c. Risedronate (Actonel®, Actonel® with Calcium)
   d. Zoledronic Acid (Reclast®)
   e. Risedronate Sodium (Atelvia®)
2. IV Bisphosphonates (used for individuals who are unable to tolerate oral bisphosphonates due to gastrointestinal toxicity, malabsorption or for those individuals who do not respond to oral medication and manifest worsening of their BMD evaluation)
   a. Boniva® – given every 3 months; injected in less than 1 minute
   b. Reclast – given annually; 5mg/100mL infusion over 25 to 30 minutes.
      i. Treatment of osteoporosis in postmenopausal women
      ii. Prevention of osteoporosis in postmenopausal women
      iii. Treatment of osteoporosis in men
      iv. Glucocorticoid induced osteoporosis
      v. Paget disease of bone
      vi. Low trauma hip fracture (pathologic fracture of the femur or fracture due to injury)
3. Prolia®
4. Calcitonin
5. Estrogen/Hormone therapy
6. Estrogen agonist/antagonist
7. Parathyroid hormone

Considerations for Specialty Referral

Adapted from Guidelines Provided by the National Osteoporosis Foundation and Reviewed by the Babak Zamiri, MD, Board Certified Rheumatologist
Short Clinical Guidelines:  
Osteoporosis – Prevention and Treatment

1. Young patients with fragile fractures
2. Patients with normal bone density and fragile fractures
3. Poor response or failure to routine oral therapy
4. Inability to tolerate therapy
5. Treatment is beyond the level of expertise of primary care practitioner
6. Prior to referral for IV Reclast® therapy, the following information should be provided by the PCP:
   a. Current complete metabolic panel
   b. Calculated creatinine clearance (should be ≥ 35mL per minute)
   c. Current serum calcium and vitamin D level which should be in normal range
   d. Confirmation that the patient is receiving enough calcium and vitamin D supplement on a regular basis