This guideline has been developed to assist clinicians and staff in providing evidence-based treatment for patients presenting with suspected pathologic fracture due to osteoporosis. This guideline is not meant to substitute for clinical judgment and may not meet the needs of each individual patient.

The Guidelines...

The recommendations in this care process model are derived from:

   http://nof.org/hcp/clinicians-guide

2. 2010 American Association of Clinical Endocrinologists Medical Guidelines for Clinical Practice for the Diagnosis and Treatment of Postmenopausal Osteoporosis.
   Endocr Pract. 2010 Nov-Dec;16 Suppl 3:1–37
Pathologic fracture is defined as fracture in a person ≥ 50 years old from a fall of standing height or less, or without signs of obvious trauma.
- Hip fracture and vertebral compression fracture are osteoporosis-defining fractures
- Consider path fx also in patients presenting with pelvis and distal radius fx.

Admit via Geriatric Fracture Program
- Admit patient to hospitalist service via the GFP protocol.
- Document “Pathologic Fracture Due to Suspected Osteoporosis” in history and physical & discharge summary.

Labs
- CBC, CMET, phosphorus, 25-0H Vitamin D, TSH (class I, A).
- Consider PTH in patients with abnormal calcium level (class IIb, A).

Caveats regarding therapies
- Pharmacotherapy with bisphosphonates should NOT be initiated in the immediate post-operative period.
- Consider starting such agents 6-8 weeks after surgical repair of fracture (class IIa, C).
- Other agents, such as denosumab or recombinant PTH, may be considered to be started after discharge, provided there are no contraindications.
- In patients who have been prescribed a bisphosphonate and present with a new fracture, evaluate patient compliance, search for secondary causes, and consider changing to a different therapy after discharge from hospital.

Suspect Dx of Pathologic Fx due to Osteopenia or Osteoporosis

Management

Patient Education Regarding Osteoporosis via appropriate handouts

Vitamin D (class I, A)
- If 25-OH Vit D <30, consider 50,000 units ERGOcalciferol (Vitamin D2) weekly. (IIa,A)
- Maintenance if 25-OH Vit D is 30 or greater, give 1,000 units CHOLEcalciferol (Vitamin D3) daily (IIa, A).

Calcium Intake
- Consult to Dietician
- Men >70 yo and women >50 yo with CrCl>60ml/min need 600 mg BID (combined dietary sources & supplementation); 500 mg BID for men <70 yo (IIa, A).
- No calcium supplementation is recommended in patients with CrCl<60 without consult to nephrology.

Consult Physical Therapy for Fall Risk Assessment

Environment
- Lack of assistive devices in bathroom
- Obstacles in walking path
- Slippery conditions
- Low level lighting

Medical
- Age
- Diminished cognitive skills
- Medications that cause sedation
- Orthostatic hypotension
- History of falls
- Dehydration
- Urge incontinence
- Malabsorption / malnutrition
- Vitamin D deficiency

Neuro / Musculoskeletal
- Kyphosis
- Poor balance
- Decreased proprioception
- Weak muscles / sarcopenia
- Deconditioning
- Impaired transfer / mobility
- Impaired vision

Identify underlying risk factors and evaluate for possible secondary causes
Treat reversible causes. Refer to the “NOF Clinician’s Guide” for a comprehensive list of secondary causes.

Lifestyle / Medical
- Smoking (+/-COPD)
- ETOH abuse
- Frequent falls
- Depression
- ESRD

Medications
- Chronic systemic steroids

Genetic Factors
- Parental history of hip fracture
- Cystic fibrosis
- Osteogenesis imperfecta

Endocrine Factors
- Diabetes (Type I and II)
- Thyrotoxicosis
- Panhypopituitarism

GI Factors
- Prior gastric bypass
- Malabsorption
- Celiac disease
- Pancreatic disease

Hematologic / Rheumatologic
- Multiple myeloma
- Leukemia/lymphoma
- Cancer with bony metastasis
- Rheumatoid arthritis
- Systemic lupus

Neurological Factors
- Parkinson’s disease
- Epilepsy
- Spinal cord injury
- Multiple sclerosis
- Muscular dystrophy