Whom to Screen and Treat

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I have nothing to disclose.

Outline
- Screening for osteoporosis
  - Guidelines
- Overview of treatment
  - Nonpharmacologic and pharmacologic strategies
  - Whom to treat

Risk Factors for Osteoporosis

Non Modifiable
- Increasing age
- Female gender
- White or Asian race
- Family history
- Previous osteoporotic fracture

Modifiable
- Low BMI
- Current smoking
- Alcohol (≥3/day)
- Glucocorticoids
- Sex hormone deficiency
- Immobilization
- Falls
Screening for Osteoporosis

National Osteoporosis Foundation:
- Women age ≥ 65 and men age ≥ 70
- Younger postmenopausal women, and men age 50-69, with clinical risk factors
- Adults with a condition or taking a medication associated with bone loss
- Adults who fracture at/after age 50

National Osteoporosis Foundation, 2013 Clinician’s Guide
(Cosman et al, Clinician’s Guide to Prevention and Treatment of Osteoporosis, Osteoporos Int 2014)

Screening for Osteoporosis

US Preventive Services Task Force:
- Women age ≥ 65
- Current evidence insufficient to assess benefits vs. harms in men
- Younger women whose risk is equal to that of a 65 y.o. white woman who has no additional risk factors
  - 9.3% ten-year risk for any osteoporotic fracture, by the US FRAX algorithm

United States Preventive Services Task Force, Screening for osteoporosis, Ann Intern Med 2011

FRAX can be used without BMD

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www.sheffield.ac.uk/FRAX/
Approach to Osteoporosis Treatment

1) Address secondary causes of osteoporosis as appropriate
2) Institute nonpharmacologic strategies
3) Select pharmacologic therapy

Nonpharmacologic Strategies

- Calcium
- Vitamin D
- Other nutritional strategies
- Weight-bearing & resistance exercise
- Smoking cessation
- Alcohol moderation
- Fall prevention measures
  - Home safety evaluation
  - Medication review

Pharmacologic Therapy

- Antiresorptive agents
  - Bisphosphonates (oral or IV)
  - Denosumab
  - Calcitonin
  - Estrogen therapy
  - Raloxifene
- Anabolic agents
  - Parathyroid hormone (PTH)

Whom to treat with pharmacologic therapy? NOF Guidelines

- Postmenopausal women and men ≥50 y.o. if . . .
  - T-score between -1.0 and -2.5
  - Hip or vertebral fragility fracture
  - T-score ≤-2.5 (Spine, femoral neck, or total hip)
  - 10-year probability of hip fracture ≥3%, or probability of any major fracture ≥20%

FRAX score!

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Pharmacologic Therapy

NOF recommends osteoporosis medication for postmenopausal women and men ≥ 50 with
- An osteoporotic hip or vertebral fracture
- T-score at the femoral neck or spine ≤ -2.5 after secondary causes excluded
- Low bone mass (T-score < -1.0 but > -2.5) and FRAX 10-year risk of
  - major osteoporotic fracture ≥ 20%, or
  - hip fracture ≥ 3%

Tosteson, Osteoporos Int, 2008