EVALUATING OSTEOPOROSIS TREATMENT OPTIONS

Intermountain Osteoporosis Algorithm
For Evaluating Treatment Options
And Monitoring Treatment Effect
Using Central DeXA Scanning
11/15/2000

Osteoporosis screening is indicated for those individuals who are at high risk for osteoporotic fractures or who may have a secondary cause of osteoporosis. Flow charts are included for the following scenarios:

- Evaluating the treatment options for Post-menopausal Women
- Evaluating the treatment options for Men and Pre-menopausal Women
- Monitoring the effect of pharmacotherapy treatment of previously diagnosed osteoporosis


The method of bone densitometry for screening and monitoring therapy which has been determined to be most effective is Central DeXA scanning. SelectHealth will not consider reimbursement for any other method of bone densitometry.
Osteoporosis: Evaluating Treatment Options in Men & Premenopausal Women

- Known fragility fracture or $\geq 1.5$ inches in height loss with back pain, or Secondary cause of Osteoporosis

  - No
  - Central DeXA

No densitometry - Modify risk factors

Evaluate with central DeXA:
1. baseline prior to initiation or change of treatment which is expected to change bone mineral density (BMD)
2. follow-up no more often than every 2-3 years thereafter to evaluate change in treatment
Osteoporosis: Evaluating Treatment Options in Post-Menopausal Women

Known fragility fracture or ≥1.5 in. height loss with back pain

Willing to consider treatment?

Yes

Willing to consider treatment?

No

Treat

Densitometry not needed for treatment decision (see Monitoring chart)

No densitometry - Modify risk factors

Age ≥70 yrs.?

Yes

Age ≥65 yrs.?

No

Treat

Densitometry not needed for treatment decision (see Monitoring chart)

Central DeXA

Central DeXA

No Densitometry- Modify risk factors

Risk factors present?

One or more Key risk factors or Secondary cause (excluding menopause)

Yes

No

Key Risk Factors (per NOF):
1) personal history of fragility fracture
2) first-degree relative with fragility fracture
3) current cigarette smoker
4) >10% unintentional weight loss since age 50
5) body weight <127 lbs.

Secondary Causes of Osteoporosis:
Adrenal atrophy and Addison’s disease
Amyloidosis
Congenital porphyria
Cushing’s syndrome
Endometriosis, if previously treated with lupron
Epidermolysis bullosa
Gastroctomy
Gonadal insufficiency (primary and secondary)
Hemochromatosis
Hemophilia
Hyperparathyroidism
Hypophosphatasia
Idiopathic scoliosis
Malabsorption syndromes
Mastocytosis
Multiple myeloma
Nutritional disorders i.e. Vit. D or calcium deficiency, anorexia nerv.
Osteogenesis imperfecta
Pernicious anemia
Rheumatoid arthritis, present at least 5 yrs.
Sarcoidosis
Severe liver disease, especially primary biliary cirrhosis
Thalassemia
Thyrotoxicosis
Tumor secretion of parathyroid hormone-related peptide

Evaluation Guideline:
- <65 y.o. without Key risk factors = no densitometry, modify other risk factors
- <65 y.o. with Key risk factors or Secondary Cause = evaluate with DeXA
  - > 65 y.o. without Key risk factors or 65-69 y.o. with Key risk factors = evaluate with DeXA
  - > 70 y.o. with risk factors = treat without evaluation (use baseline DeXA for monitoring treatment)

Caveats:
- DeXA indicated only if its use is expected to change patient management decisions
  - If HRT is taken principally for other reasons (eg, cardioprotective effect) then DeXA is not indicated
  - A work-up may not be indicated if the patient has a terminal or end-stage condition
  - A strict QA/QC program is adhered to by facilities providing BMD testing.

Secondary Causes -- Drugs (chronic use / exposure):
Anticoagulants
Cytotoxic drugs
Alcoholism
Excessive thyroxine
Glucocorticosteroids and adrenocorticotropic
Gonadotropin-releasing hormone agonists
Heparin
Lithium
Tamoxifen (premenopausal use)
Osteoporosis: Monitoring Treatment Effect

Does patient have a baseline DeXA that is useful in monitoring current treatment?

- No
  - Obtain baseline DeXA

- Yes
  - Is patient currently taking or expecting to take medication that is intended to change BMD?
    - Yes
      - Obtain follow-up DeXA 
        ≥2 yrs. after initiation or change of treatment
    - No
      - No densitometry

Monitor treatment:
1. baseline central DeXA
2. initial follow-up DeXA at 2-3 yrs.
3. additional DeXA scans at least 2 years after treatment change (when BMD is expected to change)

Basic treatment plan:
- BMD "T" score < -2.0 sd + no risk factors --> treat
- BMD "T" score < -1.5 sd + risk factors --> treat
- Women >70 yrs. + risk factors --> treat

"Risk factors" = at least one Key or Secondary risk factor (excluding menopause); see Evaluation chart.