BONE DENSITOMETRY, HIP AND SPINE: 4/30/2021

CLINICAL HISTORY: Postmenopausal. Calcium supplement. Osteoporosis.

COMPARISON: 12/06/2019

INTERPRETATION:

L-Spine (L1 to L4): 0.781 g/cm2 Bone Mineral Density (BMD), -2.4 T-Score, -1.0 Z-Score

L1: 0.675 g/cm2 Bone Mineral Density (BMD), -2.3 T-Score, -1.0 Z-Score
L2: 0.794 g/cm2 Bone Mineral Density (BMD), -2.1 T-Score, -0.7 Z-Score
L3: 0.818 g/cm2 Bone Mineral Density (BMD), -2.4 T-Score, -0.9 Z-Score
L4: 0.806 g/cm2 Bone Mineral Density (BMD), -2.8 T-Score, -1.3 Z-Score

Left Total Hip: 0.696 g/cm2 Bone Mineral Density (BMD), -2.0 T-Score, -1.0 Z-Score

Left Femoral Neck: 0.592 g/cm2 Bone Mineral Density (BMD), -2.4 T-Score, -1.1 Z-Score

FRAX Scores: Major Osteoporotic 5.4%, Hip 0.8%

Classifications are based on data from the World Health Organization.

Normal = -1.0 or above.

Low Bone Mass (Osteopenia) = Between -1.0 and -2.5.

Osteoporosis = -2.5 or below.

Z-Score = The standard deviation from the mean when compared to other patients of the same age.

IMPRESSION:
1. Bone mineral density in the total lumbar spine is in the osteopenia range. The 2.7% increase in bone mineral density since 12/06/2019 does not reach the 95% confidence level for significant change.
2. Bone mineral density in the total hip remains in the osteopenia range. The 1.7% increase in bone mineral density since 12/06/2019 does not reach the 95% confidence level for significant change.
3. Bone mineral density in the femoral neck is in the osteopenia range. The 4.7% increase in bone mineral density since 12/06/2019 does not reach the 95% confidence level for significant change.
4. The 10 year probability of major osteoporotic fracture is 5.4%. The 10 year probability of hip fracture is 0.8%.

The FRAX algorithms give the 10-year probability of fracture. The output is a 10-year probability of hip fracture and the 10-year probability of a major osteoporotic fracture (clinical spine, forearm, hip or shoulder fracture).

FRAX should be used in the following patients:
Postmenopausal women or men age 50 and older with BOTH of the following characteristics:
a. Low bone density (Osteopenia) but not Osteoporosis.
b. Not taking an osteoporosis medicine; this score is NOT validated in patients on therapy.

Note that FRAX is not intended for use in patients who are currently on medications used to treat or prevent Osteoporosis.

RECOMMENDATIONS:
*All recommendations are suggestions and physicians should determine individual treatments based on the need of each patient.
*BMD T-scores below -2 for all patients without other risk factors for osteoporosis present, and below -1.5 for women with other risk factors present indicates the need for the initiation of therapy.
*An evaluation for secondary causes of decreased bone mineral density might be considered if the Z-score is less than -1.5 in a premenopausal female patient or in a male patient.
*Adequate intake of dietary calcium and vitamin D.
**Calcium: At least 1200 mg/d with supplementation as necessary.
**Vitamin D: Supplementation (400 to 800 IU daily)
*Regular weight bearing and muscle strengthening exercise.
*Avoidance of tobacco use and alcohol abuse.
*Pharmacological options for osteoporosis include hormone therapy replacement, Alendronate, Raloxifene, Ibandronate, Calcitonin and Zoledronic Acid Infusion.
*Suggest repeat bone densitometry in 1 to 3 years, depending on patient's risk factors.

This exam was performed on a Hologic Bone Densitometry unit.
A copy of this report will be mailed to the patient.

Ronald Hoelscher, MD
Electronically Signed: 4/30/2021 10:29 AM