

Exam Date: 09/15/2020

9/15/2020
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8/21/19
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L1 to L4

cc: TIRA CHAICH

BONE DENSITOMETRY, HIP AND SPINE: 9/15/2020

CLINICAL HISTORY: Postmenopausal. Use of thyroid medication and calcium. History of breast cancer. History of osteoporosis.

COMPARISON: 08/21/2019

INTERPRETATION:

2019 T 1 -2.6	2 -1.2	L-Spine (L1 to L4): 0.823 g/cm ² Bone Mineral Density (BMD), -2.0 T-Score, -0.6 Z-Score
2019 T 2 -2.3	2 -1.1	L1: 0.709 g/cm ² Bone Mineral Density (BMD), -2.0 T-Score, -0.7 Z-Score
2019 T 3 -2.7	2 -1.3	L2: 0.839 g/cm ² Bone Mineral Density (BMD), -1.7 T-Score, -0.3 Z-Score
2019 T 4 -2.8	2 -1.3	L3: 0.812 g/cm ² Bone Mineral Density (BMD), -2.5 T-Score, -1.0 Z-Score
2019 T -2.7	2 -1.5	L4: 0.916 g/cm ² Bone Mineral Density (BMD), -1.8 T-Score, -0.3 Z-Score
2019 TOTAL HIP -1.9 T	2 -1.0 Z	Left Femoral Neck: 0.560 g/cm ² Bone Mineral Density (BMD), -2.6 T-Score, -1.3 Z-Score
		Left Total Hip: 0.751 g/cm ² Bone Mineral Density (BMD), -1.6 T-Score, -0.6 Z-Score

FRAX Scores: Major Osteoporotic 11%, Hip 2.5%

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.

BDHISP - BONE DENSITOMETRY, HIP AND SPINE

Cherie

IMPRESSION:

1. The bone density in the total lumbar spine is in the osteopenia range. There is a 7.7% increase since 08/21/2019.
2. The bone density in the total left hip remains in the osteopenia range, with a 5.5% increase since 08/21/2019.
3. The bone density in the left femoral neck remains in the osteoporosis range. The 2.4% increase since 08/21/2019 does not reach the 95% confidence level for significant change.
4. The 10 year probability of major osteoporotic fracture is 11%. The 10 year probability of hip fracture is 2.2%.

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.

IMAGE_REF - BONE
DENSITOMETRY, HIP AND SPINE