



Clinical Medical Policy Bone Mineral Density Testing

Benefit Coverage:

Description:

Bone Mineral Density (BMD) measurement with DXA has been identified to be the single best imaging predictor of fracture risk as well as best monitor of patient response to treatment. Current practice is to describe an individual's bone mineral density as compared to a reference normal population. The T score is the number of standard deviations above or below the mean for a gender and ethnicity matched young adult healthy population. Normal, low bone density (osteopenia) and osteoporosis are defined by the lowest of lumbar spine (at least two vertebrae required), femoral neck, and total femur T score according to the World Health Organization (WHO).

- Normal: T score greater or equal to -1
- Osteopenia= T score between -1 and -2.5
- Osteoporosis: T score less than or equal to -2.5

The femoral neck T score is best used in combination with the clinical risk factors to predict a given patient's fracture risk in the WHO Fracture Risk Assessment Tool (FRAX model). The absolute risk of fracture is not only related to bone density but also by bone quality and other non bone density risk fractures including clinical risk. Clinical risk factors include:

- Prior fragility fracture
- Parental history of hip fracture
- Current tobacco smoking
- Long term use of oral glucocorticoids
- Rheumatoid arthritis
- Other secondary causes of osteoporosis (untreated hypogonadism in men and women, inflammatory bowel disease, prolonged immobility, organ transplant, type I diabetes, and thyroid disorders).

The FRAX calculation allows prediction of ten year absolute fracture risk for hip fracture and all osteoporotic fractures based on femoral neck bone density. For US population, treatment is recommended for adults with prior hip or vertebral fracture and adults with BMD T scores at spine, hip or radius or less than or equal to -2.5. Treatment is suggested for patients who are osteopenic.

Coverage Determination:

In accordance with the National Osteoporosis Foundation's recommendation for BMD testing, coverage is allowed without prior auth for women aged 65 and older and men age 70 and older regardless of clinical risk factors.

Prior authorization is required for women under age 65 and for men under age 70. The following criteria are used to determine medical necessity.

Frequency of Retesting:



Clinical Medical Policy Bone Mineral Density Testing

Patients found to have low risk of future fracture by BMD testing should not automatically be assumed to remain at low risk of future fracture over their remaining lifetime years. They should be periodically reassessed by reviewing risk factors and measuring BMD.

1. Postmenopausal status, initiation or continuation of steroid therapy, organ transplantation or other causes, it may be appropriate to remeasure bone density as soon as 6-12 months after initial measurement. *Prior authorization required.*
2. In those patients not expected to have high turnover or rapid loss, it is appropriate to remeasure BMD at an appropriate interval such as 2-5 years after the initial measurement. *No prior authorization if last BMD was > 2 years prior.*
3. All women aged 65 years and older, or younger women who have had a bone fracture should be tested for bone mineral density no more than every two years unless a new risk factor appears. *No prior authorization if last BMD was > 2 years prior.*

Criteria:

One of the following clinical risk factors must be met for coverage of bone mineral density testing for younger post menopausal women and men ages 50-70:

- Women in perimenopause with low body weight, prior low trauma fracture, or high risk medication
- Men with low body weight, body mass index <20-25 kg/meter squared, weight loss of > 10%, physical inactivity
- Adults who have fracture after age 50
- Adults with conditions or taking medications associated with low bone mass or bone loss (includes glucocorticoids greater than or equal to 5 mgm/day for 3 months or longer)
- Anyone being considered for pharmacologic therapy for osteoporosis
- Anyone not receiving therapy in whom evidence of bone loss would lead to treatment
- Post menopausal women discontinuing estrogen

Exclusions:

CMP Number: CMP-036.00

CMP Cross Reference:

References:

National Guideline Clearinghouse <http://www.guideline.gov/>

Created: 5/7/09

Annual Review Month:

Review Dates:

Revision Dates:

Approval Dates: