Medical Policy: 
Bone Mineral Density Studies in Adult Populations (Commercial)

POLICY NUMBER | LAST REVIEW DATE | APPROVED BY
--- | --- | ---
MG.MM.RA10c | 05/08/2020 | MPC (Medical Policy Committee)

IMPORTANT NOTE ABOUT THIS MEDICAL POLICY:

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Definitions

<table>
<thead>
<tr>
<th>Bone mineral density (BMD) studies (aka bone mass measurement)</th>
<th>Radiologic, radioisotopic or other procedures that quantify BMD, detect bone loss or determine bone quality. BMD measurements are used to predict the risk of fractures. Studies are typically performed using a bone densitometer or a bone sonometer system and include a physician's interpretation of the results.</th>
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</table>
| BMD measurement sites | Central (axial)— hip and spine  
Peripheral (appendicular) — e.g., forearm, finger, heel |
| BMD technologies | Connecticare recognizes the following modalities for central or peripheral sites as clinically effective: |
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<table>
<thead>
<tr>
<th>BMD utility</th>
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<tbody>
<tr>
<td>a. Assessment — fracture risk</td>
<td></td>
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<tr>
<td>b. Diagnosis — osteoporosis, <strong>vertebral fracture</strong></td>
<td></td>
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<tr>
<td>c. <strong>Therapeutic guidance/follow-up/Serial measurements</strong></td>
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<tr>
<td>i. To determine whether bone loss treatment should be initiated</td>
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<td>ii. Baseline for future monitoring</td>
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<tr>
<td>iii. Monitoring of drug therapies known to adversely affect bone density</td>
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<tr>
<td>iv. Osteoporosis drug therapy: 1. Response (e.g., increase or stability of bone density) 2. Non-response (e.g., findings of bone density loss suggesting the need for reevaluation of treatment and evaluation for secondary causes)</td>
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</table>

**Guideline**

Members are eligible for coverage of BMD Studies using FDA approved technologies when any of the following criteria sets (#s 1–4) is applicable (# 5 for **frequency guidance**):

1. **Peripheral studies** (forearm site only); any of the following:
   - a. Hip/spine cannot be measured or interpreted.
   - b. Asymptomatic primary hyperparathyroidism (PHPT) to facilitate surgical decision-making
   - c. Obesity precludes DXA measurement accuracy (e.g., member’s weight/size exceeds scanning bed capacity)

2. **Central studies**; any of the following:
   - a. Women ≥ 65
   - b. Females in menopausal transition (late 40s)
   - c. Postmenopausal females > 50 years
   - d. Women during the menopausal transition with clinical risk factors for fracture (e.g., low body weight, prior fracture, or high-risk medication use) *
   - e. Men ≥ 70
   - f. Men < 70 with clinical risk factors for fracture
   - g. Transgender and gender non-conforming members
   - h. Presence of a fragility fracture
i. Presence of a disease or condition associated with low bone mass or bone loss
j. Current drug therapy associated with low bone mass or bone loss
k. Monitoring of treatment effect
l. Any member not receiving therapy in whom evidence of bone loss would lead to treatment

*Women discontinuing estrogen should be considered for bone density testing*

3. **Simultaneous axial (central) and appendicular (peripheral) Studies; only in the following limited circumstances:**
   a. Axial is medically necessary to obtain a baseline for monitoring if osteoporosis is identified with appendicular scan
   b. Appendicular is medically necessary when artifacts obscure measurement at the axial site
   c. Member is diagnosed with uncorrected PHPT

4. **Vertebral Fracture Assessment (VFA) with densitometric spine imaging to detect vertebral fractures**
   The Plan will consider DXA VFA only when the results may influence clinical management
   a. Postmenopausal women with low bone mass by BMD criteria plus any:
      1. ≥ 70 years
      2. Historical height loss > 4 cm (1.6 in)
      3. Prospective height loss > 2 cm (0.8 in)
      4. Self-reported vertebral fracture (not previously documented)
   b. ≥ 2 of the following:
      1. 60–69 years
      2. Self-reported prior non-vertebral fracture
      3. Historical height loss of 2–4 cm
      4. Chronic systemic diseases associated with increased risk of vertebral fractures (e.g., moderate to severe COPD or COAD, seropositive rheumatoid arthritis, Crohn’s disease)
   b. Men with low bone mass by BMD criteria plus any:
      1. ≥80 years
      2. Historical height loss > 6 cm (2.4 in)
      3. Prospective height loss > 3 cm (1.2 in)
      4. Self-reported vertebral fracture (not previously documented)
   v. ≥ 2 of the following:
      1. 70–79 years
      2. Self-reported prior non-vertebral fracture
      3. Historical height loss of 3–6 cm
      4. On pharmacologic androgen deprivation therapy or following orchiectomy
5. Chronic systemic diseases associated with increased risk of vertebral fractures (e.g., moderate to severe COPD or COAD, seropositive rheumatoid arthritis, Crohn’s disease)
   c. Women or men on chronic glucocorticoid therapy (equivalent to ≥ 5 mg of prednisone daily x ≥ 3 months)
   d. Postmenopausal women or men with osteoporosis by BMD criteria, if documentation of one or more vertebral fractures will alter clinical management

5. Serial Measurement Frequency

<table>
<thead>
<tr>
<th>Time-Frame Intervals</th>
<th>Indications</th>
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<tr>
<td>1x within 24-months (Prerequisite: 23-month lapse since prior study)</td>
<td>BMD studies one year after initiation (or change of therapy) is appropriate with longer intervals once therapeutic effect is established</td>
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</tbody>
</table>
| 2x within 24 months (Prerequisite: 11-month lapse since prior study) | Any: 1. Baseline bone mass measurement — for future monitoring (when the initial test utilized differs from the proposed testing modality).  
2. Monitoring — long-term glucocorticoid (steroid) therapy or anticonvulsant therapy > 3 months duration.  
| > 2x within 24-months | Conditions associated with rapid bone loss  
1. Glucocorticoid therapy (≥ 5 mg of prednisone daily x ≥ 3 months) Follow up to assess FDA-approved osteoporosis drug therapy until a response to such therapy has been documented over time. |

Limitations/Exclusions

1. Tests not ordered by the physician/qualified non-physician practitioner, who is treating the beneficiary, are not reasonable and necessary. It is not medically necessary to perform > 1 type of test in any individual unless a different confirmatory test is performed as a baseline for future monitoring.

2. It is not medically necessary to have both peripheral and axial tests performed on the same day. Peripheral BMD studies are not considered medically necessary for PHPT if performed on any body part other than the cortical bone (e.g. fingers, ultrasound of the heel, etc.).

3. DXA screening as a BMD-adjunct for vertebral fractures is not considered medically necessary (except in the limited circumstances described in # 4 above), as the precision is low precision reference database inadequate.
4. Single and dual photon absorptiometry (CPT codes 78350, 78351) are not considered medically necessary, as they have become obsolete within the medical community.

5. Bone density measurement using pulse-echo ultrasound (e.g., Bindex® point-of-care hand-held device) is considered investigational, as its effectiveness has not been established. (CPT 0508T).

Applicable Coding
To access the codes, please download the policy to your computer, and click on the paperclip icon within the policy.

| Applicable CPT and Diagnosis Codes |

References


Specialty-matched clinical peer review.

Revision history

<table>
<thead>
<tr>
<th>DATE</th>
<th>REVISION</th>
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<tbody>
<tr>
<td>09/13/2019</td>
<td>• Connecticare has adopted the clinical criteria of its parent corporation, EmblemHealth</td>
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<td></td>
<td>• Reformatted and reorganized policy, transferred content to new template</td>
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<td></td>
<td>• Added coverage for transgender and gender non-conforming members Added Bindex® point-of-care hand-held device to Limitations/Exclusions</td>
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</table>
Endnote

Factors modifying bone mineral density (BMD) — Extremes of body weight or significant change (more than 10%) in body weight can have on unpredictable effects on BMD and affect serial measurements.

<table>
<thead>
<tr>
<th>Region</th>
<th>Increased BMD</th>
<th>Decreased BMD</th>
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<tbody>
<tr>
<td>Hip</td>
<td>Excessive or inadequate internal hip rotation</td>
<td>Artifacts overlying soft tissue</td>
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<tr>
<td></td>
<td>Osteoarthritis</td>
<td>Lytic lesions</td>
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<td></td>
<td>Metal artifact</td>
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<tr>
<td></td>
<td>Focal skeletal sclerosis</td>
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<tr>
<td>Spine</td>
<td>Osteophytes</td>
<td>Artifacts overlying soft tissues</td>
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<tr>
<td></td>
<td>Focal skeletal pathology (i.e., sclerosis, metastasis, or Paget's disease)</td>
<td>Rotoscoliosis</td>
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<td></td>
<td>Vertebral compression fracture</td>
<td>Laminectomy</td>
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<td></td>
<td>Vascular calcification</td>
<td>Lytic lesions</td>
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<tr>
<td></td>
<td>Metal, radiology contrast, stones, calcium tablets or other artifact overlying spine</td>
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</tbody>
</table>