Medical Policy
Mineral Density Studies

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Policy Number: 450
BCBSA Reference Number: 6.01.01

Related Policies
- Vertebral Fracture Assessment with Densitometry, #449
- Bone Turnover Markers for Diagnosis and Management of Osteoporosis, #549

Policy
Commercial Members
Initial or repeat bone mineral density (BMD) measurement is not indicated unless the results will influence treatment decisions.

An initial measurement of BMD at the hip or spine may be MEDICALLY NECESSARY to assess fracture risk and the need for pharmacologic therapy in both women and men who are considered at risk for osteoporosis. BMD testing may be indicated under the following conditions:
- Women age 60 and older, regardless of other risk factors
- Men age 70 and older, regardless of other risk factors
- Younger postmenopausal women about whom there is a concern based on their risk factors
- Men age 50-70 about whom there is a concern based on their risk factors, and
- Adults with a condition or taking a medication associated with low bone mass or bone loss.

Repeat measurement of central (hip/spine) BMD for individuals who previously tested normal (does not require pharmacologic treatment) may be MEDICALLY NECESSARY at an interval not more frequent than every 3–5 years; the interval depends on patient risk factors.

Regular (not more frequent than every 2–3 years) serial measurements of central BMD to monitor treatment response may be MEDICALLY NECESSARY when the information will affect treatment decisions such as duration of therapy.

Medicare HMO BlueSM and Medicare PPO BlueSM Members
There is no national coverage determination for bone mass measurements (BMMs). Conditions for coverage of bone mass measurements are now contained in chapter 15, section 80.5 of Pub. 100-02, Medicare Benefit Policy Manual. Please refer to this document for coverage information.
Prior Authorization Information
Commercial Members: Managed Care (HMO and POS)
Prior authorization is NOT required.

Commercial Members: PPO, and Indemnity
Prior authorization is NOT required.

Medicare Members: HMO BlueSM
Prior authorization is NOT required.

Medicare Members: PPO BlueSM
Prior authorization is NOT required.

CPT Codes / HCPCS Codes / ICD-9 Codes
The following codes are included below for informational purposes. Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member’s contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

<table>
<thead>
<tr>
<th>CPT Codes</th>
<th>Code Description</th>
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<tbody>
<tr>
<td>77078</td>
<td>Computerized tomography, bone mineral density study, 1 or more sites; axial skeleton (e.g., hips, pelvis, spine)</td>
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<tr>
<td>77080</td>
<td>Dual-energy x-ray absorptiometry (DXA) bone density study, 1 or more sites; axial skeleton (e.g., hips, pelvis, spine)</td>
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<tr>
<td>77081</td>
<td>Dual-energy x-ray absorptiometry (DXA) bone density study, 1 or more sites; appendicular skeleton (peripheral) (e.g., radius, wrist, heel)</td>
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<tr>
<td>76977</td>
<td>Ultrasound bone density measurement and interpretation, peripheral site(s), any method</td>
</tr>
<tr>
<td>78350</td>
<td>Bone density (bone mineral content) study, 1 or more sites; single photon absorptiometry</td>
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<tr>
<td>78351</td>
<td>Bone density (bone mineral content) study, 1 or more sites; dual photon absorptiometry</td>
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<tr>
<th>HCPCS codes:</th>
<th>Code Description</th>
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<tr>
<td>G0130</td>
<td>Single energy x-ray absorptiometry (SEXA) bone density study, one or more sites; appendicular skeleton (peripheral) (e.g., radius, wrist, heel)</td>
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Description
Bone density studies can be used to identify individuals with osteoporosis and monitor response to osteoporosis treatment, with the goal of reducing the risk of fracture. Low bone mineral density (BMD) is a primary indication for pharmacologic therapy. BMD can be measured with a variety of techniques in a variety of central (i.e., hip or spine) or peripheral (i.e., wrist, finger, heel) sites. While BMD measurements are predictive of fragility fractures at all sites, central measurements of the hip and spine are the most predictive. Fractures of the hip and spine (i.e., vertebral fractures) are also considered to be the most clinically relevant. BMD is typically expressed in terms of the number of standard deviations (SD) the BMD falls below the mean for young healthy adults. This number is termed the T score.

The following technologies are most commonly used:

1. Dual X-Ray Absorptiometry (DXA)
DXA is probably the most commonly used technique to measure BMD because of its ease of use, low radiation exposure, and its ability to measure BMD at both the hip and spine. DXA can also be used to measure peripheral sites, such as the wrist and finger.

2. Quantitative Computed Tomography (QCT)
QCT depends on the differential absorption of ionizing radiation by calcified tissue and is used for central measurements only. Compared to DXA, QCT is less readily available and associated with relatively high radiation exposure.

3. Ultrasound Densitometry
Ultrasound densitometry is a technique for measuring BMD at peripheral sites, typically the heel but also the tibia and phalanges. Compared to osteoporotic bone, normal bone demonstrates higher attenuation of the ultrasound wave and is associated with a greater velocity of the wave passing through bone. Ultrasound densitometry has no radiation exposure, and machines may be purchased for use in an office setting.

Summary
There is evidence that bone mineral density measurements predict fracture risk and may be useful for individuals at increased risk of fracture who are considering pharmacologic therapy. The greatest amount of support is for central BMD measurements using DXA. There is less evidence on serial or repeat measurement of BMD. The available evidence and the consensus of clinical opinion support at least a 2-year interval in BMD measurement to monitor response to treatment. In addition, the available evidence suggests that a 3- to 5-year timeframe is reasonable for repeat measurement of BMD in individuals who initially tested normal.

Policy History

<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
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<tbody>
<tr>
<td>5/2013</td>
<td>New references from BCBSA National medical policy.</td>
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<tr>
<td>10/2011</td>
<td>Updated to reflect coverage in accordance with National Health Care Reform.</td>
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<tr>
<td>1/2011</td>
<td>BCBSA National medical policy review. No changes to policy statements.</td>
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</table>
No changes to policy statements.

No changes to policy statements.

No changes to policy statements.

Information Pertaining to All Blue Cross Blue Shield Medical Policies
Click on any of the following terms to access the relevant information:
Medical Policy Terms of Use
Managed Care Guidelines
Indemnity/PPO Guidelines
Clinical Exception Process
Medical Technology Assessment Guidelines

References
5. Blue Cross and Blue Shield Association Technology Evaluation Center (TEC). Ultrasonography of peripheral sites for diagnosing and selecting patients for pharmacologic treatment for osteoporosis. TEC Assessments 2002; Volume 17, Tab 5.