Vertebral Fracture Assessment with Densitometry

Policy Number: 6.01.44  
Origination: 4/2005  
Last Review: 6/2017  
Next Review: 12/2017

Policy
Blue Cross and Blue Shield of Kansas City (Blue KC) will not provide coverage for vertebral fracture assessment with densitometry. This is considered investigational.

When Policy Topic is covered
Not Applicable

When Policy Topic is not covered
Screening for vertebral fractures using dual x-ray absorptiometry (DEXA or DXA) is considered investigational.

Considerations
If a vertebral fracture assessment is performed with a DXA of the axial skeleton, the vertebral fracture assessment is considered a redundant procedure and not separately payable.

Description of Procedure or Service

<table>
<thead>
<tr>
<th>Populations</th>
<th>Interventions</th>
<th>Comparators</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individuals:</td>
<td>Interventions of interest are:</td>
<td>Comparators of interest are:</td>
<td>Relevant outcomes include:</td>
</tr>
<tr>
<td>Who are at risk of having</td>
<td>Vertebral fracture assessment with</td>
<td>Bone mineral density assessment by dual-energy</td>
<td></td>
</tr>
<tr>
<td>vertebral fractures but</td>
<td>densitometry by dual-energy x-ray absorpti</td>
<td>x-ray absorptiometry alone</td>
<td>Test accuracy</td>
</tr>
<tr>
<td>are not known to have them</td>
<td>ometry</td>
<td></td>
<td>Test validity</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Morbid events</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Resource utilization</td>
</tr>
</tbody>
</table>

Vertebral fracture assessment (VFA) with densitometry is a technique in which vertebral fractures are assessed at the same time as bone mineral density (BMD), by use of dual x-ray absorptiometry (DEXA). The addition of vertebral fractures to BMD may provide additional useful information on an individual’s risk of fracture.
For individuals who are at risk of having vertebral fractures but are not known to have them who receive VFA with densitometry by DXA, the evidence includes diagnostic accuracy studies and subanalyses of treatment studies. Relevant outcomes are test accuracy and validity, morbid events, and resource utilization. There is a lack of direct evidence from screening trials that use of densitometry with and without VFA improves health outcomes. Because direct evidence was not available, a causal chain of indirect evidence was sought. Evidence was examined on the diagnostic accuracy of VFA in nonosteoporotic patients (ie, those not already eligible for treatment), the ability of VFA to identify patients for treatment who would not otherwise be identified, and the effectiveness of treatment in this population. Diagnostic accuracy studies have variable findings; recent studies have suggested higher diagnostic accuracy of VFA overall compared with standard radiographs than older studies. Studies have found that VFA can identify patients without osteoporosis who may be appropriate candidates for treatment according to recommendations from the National Osteoporosis Foundation. However, there is limited evidence on the effectiveness of treatment in this population. No treatment data have been published in patients whose vertebral fracture had been identified using VFA software with densitometry. The evidence is insufficient to determine the effects of the technology on health outcomes.

**Background**

Vertebral fractures are highly prevalent in the elderly population, and epidemiologic studies have found that these fractures are associated with an increased risk of future spine or hip fractures independent of bone mineral density (BMD). Only 20–30% of vertebral fractures are recognized clinically; the rest are discovered incidentally on lateral spine radiographs. Lateral spine x-rays have not been recommended as a component of risk assessment for osteoporosis because of the cost, radiation exposure, and the fact that the x-ray would require a separate procedure in addition to the BMD study using dual x-ray absorptiometry (DEXA). However, several densitometers with specialized software are able to perform vertebral fractures assessment (VFA) in conjunction with DEXA. The lateral spine scan is performed by using a rotating arm; depending on the densitometer used, the patient can either stay in the supine position after the bone density study or is required to move onto the left decubitus position.

VFA differs from radiologic detection of fractures, as VFA uses a lower radiation exposure and can detect only fractures, while traditional x-ray images can detect other bone and soft tissue abnormalities in addition to spinal fractures. Manufacturers have also referred to this procedure as instant vertebral assessment (IVA), radiographic vertebral assessment (RVA), dual energy vertebral assessment (DVA), or lateral vertebral assessment (LVA).

For both lateral spine x-rays and images with densitometry, vertebral fractures are assessed visually. While a number of grading systems have been proposed, the semiquantitative system of Genant is commonly used. This system grades the deformities from I to III, with grade I (mild) representing a 20–24% reduction in vertebral height, grade II (moderate) representing a 25-39% reduction in height, and grade III (severe) representing a 40% or greater reduction in height. The
location of the deformity within the vertebrae may also be noted. For example, if only the mid-height of the vertebrae is affected, the deformity is defined as an endplate deformity; if both the anterior and mid-heights are deformed, it is a wedge deformity; and if the entire vertebrae is deformed, it is classed as a crush deformity. A vertebral deformity of at least 20% loss in height is typically considered a fracture. Accurate interpretation of both lateral spine x-rays and VFA imaging is dependent on radiologic training. Thus, device location and availability of appropriately trained personnel may influence diagnostic accuracy.

### Regulatory Status
To perform vertebral fracture assessment with a densitometer, additional software is needed, and it must have 510(k) marketing clearance from the U.S. Food and Drug Administration (FDA). Products that have received FDA clearance include Lunar Dual Energy Vertebral Assessment (General Electric Medical Systems) and Hologic Instant Vertebral Assessment software.

### Rationale
The evidence review was created in July 2004 and has been updated regularly with searches of the MEDLINE database. Most recently, the literature was reviewed through July 21, 2016. Following is a summary of the key literature published to date.

This review addresses whether screening for vertebral fracture assessment (VFA) using dual-energy x-ray absorptiometry (DXA) improves the net health outcome. The ideal study to evaluate improvement in the net health outcome would be a randomized controlled trial (RCT) comparing health outcomes in individuals screened with VFA plus bone densitometry using DXA to those screened with bone densitometry using DXA alone. Because no RCTs of this type have been published, an alternative strategy is to examine a chain of indirect evidence. This chain of evidence involves searching for: (1) evidence that VFA is accurate, (2) evidence that VFA identifies appropriate candidates for treatment who would not otherwise be identified, and (3) evidence that treatment in this population is actually beneficial.

The National Osteoporosis Foundation’s (NOF) 2014 Clinician's Guide to Prevention and Treatment of Osteoporosis\(^1\) recommends considering U.S. Food and Drug Administration (FDA)-approved medical treatment for the following groups of patients:

- “In those with hip or vertebral (clinical or asymptomatic) fractures
- In those with T-scores ≤-2.5 at the femoral neck, total hip or lumbar spine by DXA
- In postmenopausal women and men age 50 and older with low bone mass (T-score between -1.0 and -2.5, osteopenia) at the femoral neck, total hip, or lumbar spine by DXA and a 10-year hip fracture probability ≥ 3% or a 10-year major osteoporosis-related fracture probability of ≥ 20% based on the USA-
adapted WHO [World Health Organization] absolute fracture risk model (Fracture Risk Algorithm [FRAX])."

(For the WHO algorithm, see http://www.shef.ac.uk/FRAX; see also Appendix A.)

Because patients with osteoporosis (T score, ≤ -2.5) diagnosed by DXA and patients with low bone mass and other risk factors for fracture would be treated regardless of vertebral fractures, any incremental benefit using a VFA-inclusive strategy would accrue in the population without osteoporosis. Thus, the literature review will focus on patients who do not have osteoporosis.

**Clinical Validity**

**Systematic Reviews**

Several recent studies have compared the diagnostic accuracy of VFA and standard radiography. A systematic review of studies was published by Lee et al (2016). They included studies with postmenopausal women and/or men 50 years and older that compared the diagnostic accuracy of VFA with DXA to spinal radiography. Seventeen studies met selection criteria; 5 were excluded because of inadequate description of methods or results. Of the remaining 12 studies, 4 examined postmenopausal women, 5 included osteoporotic patients (men and women), and 2 included both populations. Studies were heterogeneous and thus the reviewers did not pool study findings. Among the 8 studies that reported findings on a per-vertebral level, sensitivity of VFA with DXA ranged from 70% to 93% and specificity ranged from 95% to 100%. Nine studies reported findings on a per-patient level. Sensitivity ranged from 65% to 100% and specificity from 74% to 100%. The systematic review did not report separate analyses for the diagnostic accuracy of VFA with DXA in osteoporotic versus nonosteoporotic patients.

**Nonrandomized Trials**

One study included in the systematic review that was judged to have a low risk of bias was published in 2013 by Domiciano et al. The authors reported on 429 adults at least 65 years old who had VFA with densitometry and spine radiography on the same day. On VFA, vertebral fractures were identified in 77 (29.7%) of 259 women and in 48 (28.2%) of 170 men. Comparable numbers on spine radiographs were 74 (28.6%) of 259 women and 52 (30.6%) of 170 men. Compared with spine radiography, the sensitivity of VFA was 81.7% (95% confidence interval [CI], 73.9% to 88.1%) and the specificity was 92.7% (95% CI, 9.2% to 95.4%).

The diagnostic performance of VFA with DXA tended to be lower in older studies. For example, in 2008 Ferrar et al evaluated the performance of vertebral assessment using a visual algorithm–based approach. Subjects in the low-risk group were women ages 55 to 79 years who were randomly selected from their general practitioners’ offices. Most of them had normal bone mineral density (BMD) or were osteopenic. Subjects in the high-risk group were recruited after a low-trauma fracture to the hip, forearm, or humerus. Most high-risk patients had osteopenia or osteoporosis. In per-patient analysis and including all poor or
unreadable images, the sensitivity of VFA was 60% in the low-risk group and 81% in the high-risk group; specificity was 97% in both groups. In addition, a 2005 study by Binkley et al compared VFA (GE Lunar densitometer) with radiography in 27 osteoporotic, 38 osteopenic, and 15 normal women. Blinded analysis found correct identification for 17 of 18 radiographically evident grade 2 to 3 fractures (a false-negative rate, 6%). The study did not describe whether the grade 2 or 3 fractures were found in women with osteoporosis, osteopenia, or normal BMD. Also, only 11 (50%) of 22 grade 1 fractures were identified. Thirty vertebrae were classified as fractured when no fractures were present (38% false positive), 29 of these were grade 1 fractures by VFA with normal radiography. In addition, VFA identified 40 grade 1 fractures but only 11 (28%) were true positive results. Also problematic is that results were compared only in vertebrae evaluable by VFA; 1 patient could not be evaluated due to poor image quality, and 66% of T4 to T6 vertebrae in other subjects could not be adequately visualized.

**Section Summary: Clinical Validity**

Several studies have compared VFA with radiography and these were evaluated in a 2016 systematic review. The sensitivity of VFA compared with standard radiography reported in these studies was variable. More recent studies have also reported higher diagnostic accuracy than older studies, ie, sensitivities in the 80% to 99% range and specificities over 90%.

**Clinical Utility**

An indirect chain of evidence of the clinical utility of VFA screening is based on evidence that VFA identifies appropriate candidates for treatment who would not otherwise be identified and there is evidence that treatment in this population is beneficial.

**VFA to Identify Candidates Who Would Not Otherwise Be Identified**

As previously stated, the 2014 NOF guidelines recommend treating patients with osteoporosis, osteopenia, and other risk factors as well as those with hip or vertebral fractures (clinical or asymptomatic).

VFA has been used to identify candidates for treatment when patients with vertebral fractures do not fall into one of the other established categories. No studies were identified that specifically dealt with whether VFA could identify candidates for medication treatment who would not otherwise have been identified, but several studies are somewhat informative. Representative studies with larger sample sizes are described next.

A 2014 study by Kanterewiez et al in Spain collected data on a population-based cohort of 2968 postmenopausal women between the ages of 59 and 70 years. A total of 127 (4.3%) women had a vertebral fracture according to VFA. Among these, 48.0% had osteoporosis and 42.5% had osteopenia. Moreover, 42.5% had previous fragility fractures and 34.6% had a first-degree family history of fractures. Thus, VFA could potentially identify women who would be eligible for fracture prevention therapy according to NOF guidelines (ie, women who did not have osteoporosis, osteopenia plus a 10-year fracture risk, or other risk factors).
The authors did not attempt to define this subgroup (eg, they did not report data on women with normal BMD and other risk factors).

In 2013, Mrgan et al in Denmark published a retrospective study evaluating VFA with BMD in 3275 patients presenting for osteoporosis screening or evaluation of antosteoporotic medication; 85% were female. Vertebral fractures were found on VFA in 260 (7.9%) patients. Of these, 156 patients (4.8% of the total sample) had osteoporosis (ie, BMD at least -2.5) and 104 (3.2% of the total sample) did not, according to BMD. The data suggested that up to 40% (104/250) patients with vertebral fractures identified would be eligible for treatment by NOF guidelines and might not have been identified were DXA alone used. Some patients, however, may have had osteopenia and other risk factors that would have led to their eligibility for treatment.

In 2011, Jager et al reported on 2424 consecutive patients (65% female) referred for BMD for a variety of reasons at a single center in the Netherlands. Participants underwent VFA with BMD during the same session. Vertebral fractures (reduction in height of at least 20%) were detected in 541 (22%) patients. The prevalence of vertebral fractures was 14% (97/678) in patients with normal BMD and 21% (229/1100) in patients with osteopenia. Thus, 60.5% (326/541) of the patients with vertebral fracture did not have osteoporosis and would have been eligible for treatment based on the 2013 NOF guidelines if they did not fall into another eligibility category (eg, osteopenia with other risk factors). Most of the fractures had not been identified in the past. The vertebral fractures were previously unknown in 74% of patients with normal BMD and 71% of patients with osteopenia.

**Pharmacologic Treatment for Vertebral Fracture and Low Bone Mass**

Bisphosphonates decrease bone resorption and are the major class of drugs now used to treat osteoporosis.

**Randomized Controlled Trials**

Several subgroup analyses of large RCTs evaluating the efficacy of bisphosphonates in patients with low bone mass and/or baseline vertebral fractures have been published. The trials were not designed a priori to assess efficacy according to baseline vertebral fracture status or BMD categories. The Fracture Intervention Trial (FIT) study group was the first large multicenter study comparing the effects of treatment between osteoporotic women and women with low bone mass without existing vertebral fractures using the revised National Health and Nutrition Examination Survey cutoffs. This trial randomly assigned 4432 women to alendronate or placebo and analyzed the treatment group in 3 BMD categories (< -2.5 SD, -2.0 to -2.5 SD; -1.6 to -2.0 SD below the mean). Women with a BMD less than -2.5 SD had a statistically significant reduction in clinical and vertebral fractures over 4 years. The relative risk (RR) for all clinical fractures among patients with a BMD less than -2.5 SD was 0.6 (95% CI, 0.5 to 0.8). There was no significant reduction in all clinical fractures for women with higher BMD values (RR=1.1; 95% CI, 0.9 to 1.4), suggesting no benefit among patients with low bone mass or normal BMD.
Quandt et al reanalyzed FIT study data for the outcome of clinical vertebral fractures (symptomatic and diagnosed by physician) and radiographically detected (assessed at surveillance intervals) vertebral fractures. A total of 3737 women at least 2 years postmenopausal with low bone mass (T-score between -1.6 and -2.5) were included in the analysis. Among the women with low bone mass and existing radiographically detected vertebral fractures (n=940), the rate of subsequent clinical vertebral fractures were 6 (a rate of 43/10,000 person-years of risk) in the alendronate group and 16 (124/10,000 person-years of risk) in the placebo group. Alendronate treatment compared with placebo was accompanied by a relative risk of 0.3 (95% CI, 0.1 to 0.8) for clinical vertebral fractures and a relative risk of 0.5 (95% CI, 0.3 to 0.8) for radiographically detected fractures. Similar relative risk estimates were found for women having low bone mass without vertebral fractures, but absolute risks were lower (12 vs 81 fractures per 10,000 person-years for those without and with baseline fractures, respectively).

Kanis et al reanalyzed data on 1802 women at least 5 years postmenopausal from the Vertebral Efficacy with Risedronate Therapy (VERT) trials who were identified on the basis of a prior radiographically detected vertebral fracture regardless of BMD and had radiographs available at baseline and 3 years. Overall, there was a significantly lower rate of a new vertebral fracture in women with prior vertebral fracture randomly assigned to treatment with risedronate (14.5%) compared with placebo (22.3%; p<0.001). In the group with a T score greater than -2.5, the rate of new femoral neck fractures was 50 (11%) of 519 in the risedronate group and 71 (15.5%) of 537 in the placebo group (p=0.049). In the osteoporotic group, for those with a T score of -2.5 or lower, the rate of new femoral neck fracture was 53 (18.7%) of 355 in the risedronate group and 92 (33.4%) of 318 in the placebo group (p<0.001). Findings were similar when the T score at the most severe skeletal site (femoral neck or lumbar spine) was used for stratification.

No RCTs were identified that evaluated the efficacy of bisphosphonate treatment in men with vertebral fractures and low bone density. Several trials have evaluated whether bisphosphonate treatment increases BMD in men at risk for bone loss (eg, on androgen deprivation therapy). However, vertebral fractures were not assessed and, therefore, conclusions cannot be drawn about the potential added benefit of VFA in addition to densitometry in at-risk men.

Section Summary: Clinical Utility
Routine use of VFA with DXA will identify substantial numbers of patients with previously unrecognized vertebral fractures. Many of these vertebral fractures are found in patients without osteoporosis. Data are not available on how many of the vertebral fractures in nonosteoporotic patients were in patients who would not otherwise be eligible for treatment (ie, those with osteopenia and other risk factors for fracture).

Evidence from the FIT and VERT studies has suggested that treatment of patients with low bone mass (but not osteoporosis) reduces further fractures. However, the FIT and VERT studies were post hoc subgroup analyses, which are generally
considered to be exploratory. In addition, vertebral fracture screening was done using radiography rather than VFA software. Advantages of the studies are that the 2 subanalyses had large sample sizes and used data from well-conducted randomized trials.

Currently, this indirect chain of evidence is insufficient to determine whether treatment of patients with low bone density and vertebral fractures improves outcomes.

**Ongoing and Unpublished Clinical Trials**
A search of ClinicalTrials.gov in Aug 2016 did not identify any ongoing or unpublished trials that would likely influence this review.

**Summary of Evidence**
For individuals who are at risk of having vertebral fractures but are not known to have them who receive vertebral fracture assessment (VFA) with densitometry by dual-energy x-ray absorptiometry (DXA), the evidence includes diagnostic accuracy studies and subanalyses of treatment studies. Relevant outcomes are test accuracy and validity, morbid events, and resource utilization. There is a lack of direct evidence from screening trials that use of densitometry with and without VFA improves health outcomes. Because direct evidence was not available, a causal chain of indirect evidence was sought. Evidence was examined on the diagnostic accuracy of VFA in nonosteoporotic patients (ie, those not already eligible for treatment), the ability of VFA to identify patients for treatment who would not otherwise be identified, and the effectiveness of treatment in this population. Diagnostic accuracy studies have variable findings; recent studies have suggested higher diagnostic accuracy of VFA overall compared with standard radiographs than older studies. Studies have found that VFA can identify patients without osteoporosis who may be appropriate candidates for treatment according to recommendations from the National Osteoporosis Foundation (NOF). However, there is limited evidence on the effectiveness of treatment in this population. No treatment data have been published in patients whose vertebral fracture had been identified using VFA software with densitometry. The evidence is insufficient to determine the effects of the technology on health outcomes.

**Clinical Input Received From Physician Specialty Societies and Academic Medical Centers**
While the various physician specialty societies and academic medical centers may collaborate with and make recommendations during this process, through the provision of appropriate reviewers, input received does not represent an endorsement or position statement by the physician specialty societies or academic medical centers, unless otherwise noted.

In response to requests, input was received through 5 physician specialty societies and 6 academic medical centers when this policy was under review in 2014. One of the 5 specialty societies only submitted a practice statement and did not respond to questions. Input was mixed on whether VFA using DXA is considered investigational. Input was also mixed on whether the diagnostic accuracy of VFA...
using DXA is sufficiently high to justify its use as an alternative to plain radiographs. There was near-consensus agreement with NOF recommendations regarding imaging to evaluate for vertebral fractures. Responders did not cite published literature to support the NOF recommendations. In addition, there was near-consensus that patients with vertebral fracture alone (ie, no low bone mineral density and no other signs of osteoporosis) should be treated with medications to reduce fracture risk.

**Practice Guidelines and Position Statements**

**National Osteoporosis Foundation**
The National Osteoporosis Foundation’s 2014 Clinician's Guide to Prevention and Treatment of Osteoporosis stated:

“A vertebral fracture is consistent with a diagnosis of osteoporosis, even in the absence of a bone density diagnosis, and is an indication for pharmacologic treatment with osteoporosis medication to reduce fracture risk. Most vertebral fractures are asymptomatic when they first occur and often are undiagnosed for many years. Proactive vertebral imaging is the only way to diagnose these fractures. The finding of a previously unrecognized vertebral fracture may change the diagnostic classification, alters future fracture risk and subsequent treatment decisions.”

The guide recommends that vertebral imaging tests be considered in the following patients:

- “All women age 70 and older and all men age 80 and older....
- Women age 65 to 69 and men age 75 to 79 when BMD [bone mineral density] T-score is -1.5 or below.
- Postmenopausal women age 50 to 64 and men age 50 to 69 ... with specific risk factors:
  - Low-trauma fracture...
  - Historical height loss of 1.5 in. or more (4 cm)
  - Prospective height loss of 0.8 in. or more (2 cm)
  - Recent or ongoing long-term glucocorticoid treatment”

**International Society for Clinical Densitometry**
In 2013, the International Society for Clinical Densitometry issued updated recommendations for selecting patients for VFA. The new recommendations were simpler compared with the 2007 recommendations and were intended to be easier to use in clinical practice. Lateral spine imaging with either standard radiography or densitometric VFA is indicated for patients with a T score of less than -1.0 when at least 1 of the following factors are present:

- “Women age ≥70 yr or men ≥80 yr
- Historical height loss >4 cm (>1.5 inches)
- Self-reported but undocumented prior vertebral fracture
- Glucocorticoid therapy equivalent to ≥5 mg of prednisone per day for ≥3 mo”
Endocrine Society
A 2012 task force of the Endocrine Society recommended pharmacologic therapy for men at high risk for fracture.¹⁶ Risk includes but is not limited to the following criteria:

- “Men who have had a hip or vertebral fracture without major trauma.
- Men who have not experienced a spine or hip fracture but whose BMD of the spine, femoral neck, and/or total hip is 2.5 SD or more below the mean of normal young white males.
- In the United States, men who have a T-score between -1.0 and -2.5 in the spine, femoral neck, or total hip plus a 10-yr risk of experiencing any fracture ≥20% or 10-yr risk of hip fracture ≥3% using FRAX [Fracture Risk Algorithm]; further studies will be needed to determine appropriate intervention levels using other fracture risk assessment algorithms....
- Men who are receiving long-term glucocorticoid therapy in pharmacologic doses (e.g. prednisone or equivalent >7.5 mg/d), according to the 2010 guidelines of the American Society of Rheumatology.”

North American Menopause Society
The North American Menopause Society’s 2010 position statement on management of osteoporosis did not include a recommendation for or against VFA as part of the screening process.¹⁷ The statement indicated that vertebral fracture must be confirmed by lateral spine radiographs or VFA visualization of fracture at the time of BMD testing.

U.S. Preventive Services Task Force Recommendations
The U.S. Preventive Services Task Force published updated recommendations on osteoporosis screening in January 2011. The recommendations are as follows: “Current diagnostic and treatment criteria rely on dual-energy x-ray absorptiometry of the hip and lumbar spine.” VFA was not specifically mentioned.¹⁸ A recommendation statement on screening for osteoporosis fractures was in development as of August 2016.

Medicare National Coverage
There is no national coverage determination (NCD). In the absence of an NCD, coverage decisions are left to the discretion of local Medicare carriers.

References
women at low and high risk of fracture. J Bone Miner Res. Jan 2008;23(1):103-111. PMID 17892377


**Billing Coding/Physician Documentation Information**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>77085</td>
<td>Dual-energy X-ray absorptiometry (DXA), bone density study, 1 or more sites; axial skeleton (eg, hips, pelvis, spine), including vertebral fracture assessment</td>
</tr>
<tr>
<td>77086</td>
<td>Vertebral fracture assessment via dual-energy X-ray absorptiometry (DXA)</td>
</tr>
</tbody>
</table>

**ICD-10 Codes**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M80.08</td>
<td>Age-related osteoporosis with current pathological fracture, vertebra(e)</td>
</tr>
<tr>
<td>M80.88</td>
<td>Other osteoporosis with current pathological fracture, vertebra(e)</td>
</tr>
</tbody>
</table>
M81.0 Age-related osteoporosis without current pathological fracture
M81.6 Localized osteoporosis
M81.8 Other osteoporosis without current pathological fracture
Z13.820 Encounter for screening for osteoporosis
Z13.828 Encounter for screening for other musculoskeletal disorder

CPT 77082 deleted 1/1/2015.

Additional Policy Key Words
N/A

Policy Implementation/Update Information
4/1/05 New policy added to the Radiology section. Considered investigational.
10/1/05 No policy statement changes.
4/1/06 Policy statement revised replacing morphometric absorptiometry (MXA) with dual x-ray absorptiometry (DEXA or DXA). This procedure remains investigational.
10/1/06 No policy statement changes.
4/1/07 No policy statement changes. Coding Updates.
10/1/07 No policy statement changes.
4/1/08 No policy statement changes.
10/1/08 No policy statement changes.
4/1/09 No policy statement changes.
10/1/09 No policy statement changes.
4/1/10 No policy statement changes.
10/1/10 No policy statement changes.
4/1/11 No policy statement changes.
10/1/11 No policy statement changes.
4/1/12 Added Appendix A
10/1/12 No policy statement changes.
4/1/13 No policy statement changes.
10/1/13 No policy statement changes.
4/1/14 No policy statement changes.
10/1/14 No policy statement changes.
4/1/15 No policy statement changes.
6/1/15 No policy statement changes.
12/1/15 No policy statement changes.
6/1/16 No policy statement changes.
12/1/16 No policy statement changes.
6/1/17 No policy statement changes.

State and Federal mandates and health plan contract language, including specific provisions/exclusions, take precedence over Medical Policy and must be considered first in determining eligibility for coverage. The medical policies contained herein are for informational purposes. The medical policies do not constitute medical advice or medical care. Treating health care providers are independent contractors and are neither employees nor agents Blue KC and are solely responsible for diagnosis, treatment and medical advice. No part of this publication may be
Appendix A
The risk factors assessed by the FRAX tool include (4):
- Age
- Gender
- Rheumatoid arthritis
- Secondary osteoporosis
- Prior osteoporotic fracture (including morphometric vertebral fracture)
- Parental history of hip fracture
- Femoral neck BMD
- Current smoking
- Low body mass index (kg/m2)
- Alcohol intake (3 or more drinks/d)
- Oral glucocorticoids ≥5 mg/d of prednisone for ≥3 mo (ever)

Charts of the FRAX® tool are available on-line at http://www.shef.ac.uk/FRAX/charts.jsp#USc’. These charts give fracture probabilities according to the number of clinical risk factors (CRF) that are found in an individual. Charts are available for:
- Women and men aged 50 years or more.
- Country-specific charts (USA, China, France, Italy, Japan, Spain, Sweden, Turkey and the UK)
- Ten-year probability of hip fracture or of a major osteoporotic fracture (clinical spine, hip, forearm and humerus fracture)