

## Corporate Medical Policy

### Screening for Vertebral Fracture with Dual X-ray Absorptiometry (DXA)

**File Name:** screening\_for\_vertebral\_fracture\_with\_dual\_x\_ray\_absorptiometry\_(dxa)  
**Origination:** 10/2004  
**Last CAP Review:** 5/201809  
**Next CAP Review:** 5/2020  
**Last Review:** 5/2019

#### Description of Procedure or Service

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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-energy x-ray absorptiometry (DXA). The addition of vertebral fractures to BMD may provide additional useful information on a subject's risk of fracture.

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. 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 bone mineral density study using dual x-ray absorptiometry (DXA). However, several densitometers with specialized software are able to perform vertebral fracture assessment (VFA) in conjunction with DXA. The lateral spine scan is performed 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 radiological 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, radiographic vertebral assessment, dual energy vertebral assessment or lateral vertebral assessment.

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 representing a 20%-24% reduction in vertebral height and ranging up to grade III, which is 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 radiological 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

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that have received FDA clearance include Lunar Dual Energy Vertebral Assessment (DVA™) (General Electric Medical Systems) and Hologic Instant Vertebral Assessment™ (IVA™) software.

## Related Policies

Bone Turnover Markers for Diagnosis and Management of Osteoporosis and Diseases Associated with High Bone Turnover  
Bone Mineral Density Studies

**\*\*\*Note: This Medical Policy is complex and technical. For questions concerning the technical language and/or specific clinical indications for its use, please consult your physician.**

## Policy

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**Screening for vertebral fractures using dual energy x-ray absorptiometry (DXA) is considered investigational for all applications. BCBSNC does not provide coverage for investigational services or procedures.**

## Benefits Application

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This medical policy relates only to the services or supplies described herein. Please refer to the Member's Benefit Booklet for availability of benefits. Member's benefits may vary according to benefit design; therefore member benefit language should be reviewed before applying the terms of this medical policy.

## When Screening for Vertebral Fracture with Dual X-ray Absorptiometry (DXA) is covered

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Not applicable

## When Screening for Vertebral Fracture with Dual X-ray Absorptiometry (DXA) is not covered

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Screening for vertebral fractures using dual energy x-ray absorptiometry (DXA) is considered **investigational**. BCBSNC does not provide coverage for investigational services or procedures.

## Policy Guidelines

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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.

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## **Billing/Coding/Physician Documentation Information**

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This policy may apply to the following codes. Inclusion of a code in this section does not guarantee that it will be reimbursed. For further information on reimbursement guidelines, please see Administrative Policies on the Blue Cross Blue Shield of North Carolina web site at [www.bcsnc.com](http://www.bcsnc.com). They are listed in the Category Search on the Medical Policy search page.

*Applicable service codes: 77085, 77086*

BCBSNC may request medical records for determination of medical necessity. When medical records are requested, letters of support and/or explanation are often useful, but are not sufficient documentation unless all specific information needed to make a medical necessity determination is included.

## **Scientific Background and Reference Sources**

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- BCBSA Medical Policy Reference Manual [Electronic Version]. 6.01.44
- BCBSA Medical Policy Reference Manual [Electronic Version]. 6.01.44, 12/14/05
- BCBSA TEC Assessment. Screening for Vertebral Fracture with Dual X-ray Absorptiometry (February 2006)
- Centers for Medicare & Medicaid Services. Local Coverage Determination for Bone (Mineral) Density Studies (L957). Retrieved September 11, 2006, from [http://www.cms.hhs.gov/mcd/viewlcd.asp?lcd\\_id=957](http://www.cms.hhs.gov/mcd/viewlcd.asp?lcd_id=957)
- BCBSA Medical Policy Reference Manual [Electronic Version]. 6.01.44, 4/17/07
- BCBSA Medical Policy Reference Manual [Electronic Version]. 6.01.44, 1/13/11
- BCBSA Medical Policy Reference Manual [Electronic Version]. 6.01.44, 1/12/12
- Specialty Matched Consultant Advisory Panel, 6/2012
- BCBSA Medical Policy Reference Manual [Electronic Version]. 6.01.44, 1/10/13
- Specialty Matched Consultant Advisory Panel, 7/2013
- BCBSA Medical Policy Reference Manual [Electronic Version]. 6.01.44, 1/9/14
- National Osteoporosis Foundation. The Clinician's Guide to Prevention and Treatment of Osteoporosis 2014. Available online at: <http://nof.org/files/nof/public/content/file/2791/upload/919.pdf>. Last accessed June 2014.
- Specialty Matched Consultant Advisory Panel, 7/2014
- BCBSA Medical Policy Reference Manual [Electronic Version]. 6.01.44, 5/22/14
- BCBSA Medical Policy Reference Manual [Electronic Version]. 6.01.44, 5/21/15
- Specialty Matched Consultant Advisory Panel review- 6/2015
- BCBSA Medical Policy Reference Manual [Electronic Version]. 6.01.44, 9/8/2016
- BCBSA Medical Policy Reference Manual [Electronic Version]. 6.01.44, 9/14/2017
- BCBSA Medical Policy Reference Manual [Electronic Version]. 6.01.44, 9/13/2018

## **Policy Implementation/Update Information**

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## Screening for Vertebral Fracture with Dual X-ray Absorptiometry (DXA)

- 12/9/14 Converted from Evidence Based Guideline to Corporate Medical Policy. Screening for vertebral fractures using dual energy x-ray absorptiometry (DEXA or DXA) is considered **investigational**. Changed DEXA to DXA in the title of the policy. Deleted CPT code 77082 and added CPT codes 77085 and 77086 to the Billing/Coding section for effective date 1/1/2015. Policy noticed 12/9/14 for effective date 2/10/15. (lpr)
- 7/28/15 Specialty Matched Consultant Advisory Panel review 6/24/2015. Reference added. No change to policy statement. (lpr)
- 7/26/16 References updated. Specialty Matched Consultant Advisory Panel review 6/29/2016. No change to policy statement. (an)
- 6/30/17 Policy Guidelines updated. Added reference. Specialty Matched Consultant Advisory Panel review 5/26/2017. No change to policy statement. (an)
- 6/29/18 Reference updated. Specialty Matched Consultant Advisory Panel review 5/23/2018. No change to policy statement. (an)
- 6/11/19 Reference added. Specialty Matched Consultant Advisory Panel review 5/15/2019. No change to policy statement. (an)

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Medical policy is not an authorization, certification, explanation of benefits or a contract. Benefits and eligibility are determined before medical guidelines and payment guidelines are applied. Benefits are determined by the group contract and subscriber certificate that is in effect at the time services are rendered. This document is solely provided for informational purposes only and is based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease. Medical practices and knowledge are constantly changing and BCBSNC reserves the right to review and revise its medical policies periodically.