

Evidence Based Guideline

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

File Name: screening_for_vertebral_fracture_with_dual_x_ray_absorptiometry_(dexa)
Origination: 10/2004
Last CAP Review: 6/2011
Next CAP Review: 6/2012
Last Review: 6/2011

Description of Procedure or Service

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. However, several densitometers with specialized software are able to perform vertebral fractures assessment (VFA) in conjunction with DEXA. 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.

Vertebral fracture assessment (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. VFA may be referred to as dual x-ray absorptiometry (DEXA or DXA) or morphometric x-ray absorptiometry (MXA).-Manufacturers have also referred to this procedure as "Instant Vertebral Assessment," (IVA) or Radiographic Vertebral Assessment (RVA™) (Hologic), or Dual energy Vertebral Assessment (DVA™) previously known as "Lateral Vertebral Assessment" (LVA) (GE Lunar Medical Systems).

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% 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.

Related Policy: Bone Mineral Density Studies

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

Evidence Based Guideline for screening for vertebral fracture with dual x-ray absorptiometry (DEXA)

Not applicable.

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

Medical Evidence regarding screening for vertebral fracture with dual x-ray absorptiometry (DEXA) indicates it is not recommended in the following situations

Dual x-ray absorptiometry (DEXA) is not recommended for screening for vertebral fracture. There is a lack of direct evidence from screening trials comparing densitometry with and without vertebral fracture assessment that VFA improves health outcomes. Some evidence exists regarding the diagnostic performance of vertebral assessment. Using the vertebra as the unit of analysis, sensitivity ranged from 54% to 72% and specificities ranged from 94% to 99%. Regarding clinical utility, studies have found that vertebral fracture assessment can identify individuals with low bone density who may be appropriate candidates for treatment. 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. Moreover, data are only available on post-menopausal women. Therefore, the use of this technology cannot be recommended at this time.

Benefits Application

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.

Billing/Coding/Physician Documentation Information

This guideline 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.bcbsnc.com. They are listed in the Category Search on the Medical Policy search page.

Applicable codes:77082

Scientific Background and Reference Sources

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

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

Policy Implementation/Update Information

- | | |
|----------|--|
| 10/28/04 | New policy issued. Screening for vertebral fractures with dual x-ray absorptiometry is considered investigational. Reference added. Notification 10/28/2004. Effective 01/06/2005. |
| 01/06/05 | Code 76077 added. Is considered investigational. |
| 1/20/05 | Format changes. |

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

- 11/27/06 References updated. Specialty Matched Consultant Advisory Panel review 10/23/06. No changes to policy coverage criteria. (adn)
- 2/12/07 Billing/Coding section updated to reflect 2007 CPT code changes. (adn)
- 6/16/08 Description section revised for clarity. Specialty Matched Consultant Advisory Panel review 5/15/08. No change to policy statement.
Medical Policy changed to Evidence Based Guideline.
- 6/22/10 Policy Guideline Number(s) removed (amw)
- 9/28/10 Specialty Matched Consultant Advisory Panel review. No changes to guideline. (adn)
- 7/19/11 Updated Description section and Policy Guidelines. No change to Guidelines or recommendation. Specialty Matched Consultant Advisory Panel review 6/29/11. Accepted as written. (adn)

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.