



IEHP UM Subcommittee Approved Authorization Guideline			
<b>Guideline</b>	Dexa Scan	<b>Guideline #</b>	UM_DIA 05
		<b>Original Effective Date</b>	11/18/09
<b>Section</b>	Diagnostic	<b>Revision Date</b>	9/19/2018

## COVERAGE POLICY

### I. IEHP considers bone mineral density testing using DEXA medically necessary for members who meet any of the following criteria:

- A. Women aged  $\geq 65$  years
- B. Men aged  $\geq 70$  years
- C. Individuals being monitored to assess the response to osteoporosis drug therapy
- D. Vertebral compression fractures
- E. Osteopenia apparent on x-ray film
- F. Fragility fractures after age 40
- G. Family history of osteoporotic fractures in a first-degree relative
- H. Prolonged immobilization
- I. Senile fracture of the proximal femur
- J. Idiopathic fracture
- K. Or for individuals who are known or suspected to have a condition that may underlie osteoporosis, including the following:
  1. Endocrine disease or metabolic cause:
    - a. Primary hyperparathyroidism
    - b. Primary and secondary hypogonadism
    - c. Hyperadrenocorticism
    - d. Thyrotoxicosis
    - e. Hypophosphatasia
    - f. Cushing's syndrome
    - g. Hyperprolactinemia
    - h. Untreated early menopause (before age 45)
    - i. Porphyria
    - j. Hemochromatosis
  2. Nutritional conditions:
    - a. Malabsorption syndromes
    - b. Severe chronic liver disease (especially primary biliary cirrhosis)
    - c. Prolonged parenteral nutrition
  3. Drugs:
    - a. Chronic anticonvulsant therapy of 3 years or more with phenobarbital or phenytoin
    - b. Systematic glucocorticoid therapy equivalent to 5mg of prednisone or greater, per day, for greater than 3 months
    - c. Chemotherapeutic agents which affect bone density

- d. Lupron therapy in men
- 4. Disorders of collagen metabolism:
  - a. Osteogenesis imperfect
  - b. Homocystenuria due to cystathione deficiency
  - c. Ehler's-Danlos syndrome
  - d. Marfan syndrome
  - e. Menke's syndrome
- 5. Hematologic disorders:
  - a. Hemophilia
  - b. Leukemia and lymphomas
  - c. Multiple myeloma
  - d. Sickle cell disease
  - e. Systemic mastocytosis
- 6. Other:
  - a. Chronic renal failure
  - b. Organ transplantation
  - c. Hypercalciuria

**II. IEHP considers bone mineral density testing using DEXA medically necessary for postmenopausal women less than 65 yrs of age and men aged 50-69 who meet two or more of the following risk factors:**

- A. Prolonged low dietary calcium intake
- B. Excessive alcohol intake (>2 drinks per day)
- C. Current smoking
- D. Propensity to fall
- E. Weight < 57 kg
- F. Malnutrition
- G. Vitamin D deficiency
- H. Rheumatoid arthritis
- I. Ankylosing spondylitis
- J. Lupus
- K. Chronic heparin therapy
- L. HIV or AIDS
- M. COPD
- N. Renal tubular acidosis

**COVERAGE LIMITATIONS AND EXCLUSIONS**

**Frequency of repeat central bone mineral density testing by DEXA is related to medical therapy for osteoporosis:**

- A. Not on therapy related to osteoporosis:
  - 1. For those not at high risk for accelerated bone loss or without significant osteopenia, repeat testing is considered medically necessary every 3-5 years
  - 2. For those with significant osteopenia or at high risk for accelerated bone loss, repeat measurement is considered medically necessary every 2-3 years
  - 3. Repeat testing should be considered no more than every 12 to 24 months, although testing as frequently as every 6 to 12 months may be indicated for patients taking glucocorticoids or suppressive doses of thyroid hormone (MCG, 2017).
- B. On therapy related to osteoporosis:

It is considered medically necessary when performed at intervals of 2 years or greater in order to monitor response to therapy.

## **ADDITIONAL INFORMATION**

Currently, (dual energy X-ray absorptiometry) DEXA is the most widely accepted and used method of screening for osteoporosis. This bone mineral testing should be performed based on a patient's risk factors and is not indicated unless the results will impact the treatment or management of the patient. DEXA measures bone mineral density and predict the risk of fracture. Bone Mineral Density (BMD) between 1 and 2.5 standard deviations below the young adult mean (T score) is defined as osteopenia and BMD 2.5 standard deviation or more below the young adult mean is defined as osteoporosis. Both osteopenia and osteoporosis increase the risk of fracture.

Specifically, hip fracture has been noted as a source of significant (accounting for 15-20% of) morbidity and mortality and thoracic fracture closely follows with significant morbidity. More than 1 standard deviation decrease in bone mass poses a 2-fold increase risk of fracture. Since osteoporosis is a preventable disease, screening methods including use of DEXA scan and other pharmacological interventions can reduce the number of complications related to or resulting from it.

## **CLINICAL/REGULATORY RESOURCE**

### **I. Centers for Medicare and Medicaid Services**

Medicare will approve bone mineral density measurement every 2 years for the following:

- A. A woman who has been determined by the physician or qualified non-physician practitioner treating her to be estrogen-deficient and at clinical risk for osteoporosis, based on her medical history and other findings.
- B. An individual with vertebral abnormalities as demonstrated by an x-ray to be indicative of osteoporosis, osteopenia, or vertebral fracture.
- C. An individual receiving (or expecting to receive) glucocorticoid (steroid) therapy equivalent to an average of 5.0 mg of prednisone, or greater, per day, for more than 3 months.
- D. An individual with primary hyperparathyroidism.
- E. An individual being monitored to assess the response to or efficacy of an FDA-approved osteoporosis drug therapy.
- F. Note: Medicare may pay for more frequent bone mineral density measurements when medically necessary. For example, individuals on long-term glucocorticoid therapy of more than 3 months or confirming baseline bone mineral density to permit future monitoring.

### **II. Medi-Cal**

DEXA studies are not reimbursable when ordered solely for bone density screening but will be covered in the following medical conditions:

- A. Significant risk of developing osteoporosis, including:
  1. Primary osteoporosis: Postmenopausal (Type I) vertebral crush fracture syndrome, senile (Type II) fracture of the proximal femur, idiopathic (juvenile and adult)
  2. Endocrine osteoporosis: Hyperparathyroidism, Cushing's syndrome or glucocorticoid administration, hyperthyroidism, hypogonadism

3. Nutritional osteoporosis: Vitamin C deficiency; malabsorption: calcium deficiency, protein-calorie malnutrition
  4. Hematopoietic osteoporosis: Multiple myeloma, systemic mastocytosis
  5. Immobilization
  6. Genetic disorders: Osteogenesis Imperfecta, homocystinuria, Ehlers-Danlos syndrome, Marfan's syndrome, Menke's syndrome
  7. Miscellaneous: Rheumatoid arthritis, alcoholism, liver disease, diabetes mellitus, prolonged heparin therapy, chronic obstructive pulmonary disease
- B. A fracture clinically suspected to be a result of undiagnosed osteoporosis
  - C. Established osteoporosis that may require pharmacologic treatment of osteoporosis
  - D. Receiving a medication approved by the FDA for the treatment of osteoporosis
  - E. In addition, bone mineral density studies are recommended to confirm the presence of osteoporosis before beginning medical treatment and may help management of those being treated for osteoporosis.
  - F. DEXA studies are limited to 1 test per recipient per year

### **III. American College of Preventive Medicine**

- A. Screening with bone mineral density testing for osteoporosis is recommended in women aged  $\geq 65$  years and in men aged  $\geq 70$  years.
- B. Younger postmenopausal women and men aged 50-69 years should undergo screening if they have at least one major or two minor risk factors for osteoporosis.
- C. Major risk factors include:
  1. Vertebral compression fracture
  2. Fragility fracture after age 40
  3. Family history of osteoporotic fracture
  4. Systemic glucocorticoid therapy lasting  $>3$  months
  5. Malabsorption syndrome
  6. Primary hyperparathyroidism
  7. Propensity to fall
  8. Osteopenia apparent on x-ray film
  9. Hypogonadism
  10. Early menopause (before age 45).
- D. Minor risk factors include:
  1. Rheumatoid arthritis
  2. Past history of hyperthyroidism
  3. Chronic anticonvulsant therapy
  4. Low dietary calcium intake
  5. Smoking
  6. Excessive alcohol intake
  7. Excessive caffeine intake
  8. Weight  $<57$  kg
  9. Weight loss  $>10\%$  of weight at age 25
  10. Chronic heparin therapy.

#### **IV. American College of Obstetricians and Gynecologists**

- A. Bone mineral density testing should be recommended to all postmenopausal women aged 65 years or older
- B. Bone mineral density testing may be recommended to postmenopausal women younger than 65 years who have 1 or more risk factors for osteoporosis:
  - 1. History of a fragility fracture
  - 2. Parental history of hip fracture
  - 3. Body weight less than 27 lbs.
  - 4. Medical causes of bone loss (medications or diseases)
  - 5. Current smoker
  - 6. Alcoholism
  - 7. Rheumatoid arthritis
- C. In the absence of new risk factors, bone mineral density screening (DEXA) should not be performed more frequently than every 2 years.

#### **V. American Association of Clinical Endocrinologists**

##### Indications for Bone Mineral Density Testing

- A. All women  $\geq 65$  years old
- B. All postmenopausal women
  - 1. With a history of fracture(s) without major trauma
  - 2. With osteopenia identified radiographically
  - 3. Starting or taking long-term systemic glucocorticoid therapy ( $\geq 3$  mo)
- C. Other peri- or postmenopausal women with risk factors for osteoporosis if willing to consider pharmacologic interventions
- D. Low body weight (<127 lb or body mass index <20 kg/m<sup>2</sup>)
- E. Long term systemic glucocorticoid therapy ( $\geq 3$  mo)
- F. Family history of osteoporotic fracture
- G. Early menopause (<40 years old)
- H. Current smoking
- I. Excessive alcohol consumption
- J. Secondary osteoporosis

#### **VI. United States Preventive Services Task Force (2018):**

- A. The U.S. Preventive Services Task Force (USPSTF) recommends that women aged 65 and older be screened routinely for osteoporosis. The USPSTF recommends that routine screening begin at age 60 for women at increased risk for osteoporotic fractures
- B. The USPSTF recommends routine osteoporosis screening in postmenopausal women who are younger than 65 at increased risk for osteoporotic fractures, as determined by a formal clinical risk assessment tool.
- C. The USPSTF concluded evidence is inadequate to assess the benefits and harms of screening for osteoporosis to prevent osteoporotic fractures in men.

## DEFINITION OF TERMS

None

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