

190.19 - Collagen Crosslinks, Any Method

Description

Collagen crosslinks, part of the matrix of bone upon which bone mineral is deposited, are biochemical markers the excretion of which provides a quantitative measurement of bone resorption. Elevated levels of urinary collagen crosslinks indicate elevated bone resorption. Elevated bone resorption contributes to age-related and postmenopausal loss of bone leading to osteoporosis and increased risk of fracture. The collagen crosslinks assay can be performed by immunoassay or by high performance liquid chromatography (HPLC). Collagen crosslink immunoassays measure the pyridinoline crosslinks and associated telopeptides in urine.

Bone is constantly undergoing a metabolic process called turnover or remodeling. This includes a degradation process, bone resorption, mediated by the action of osteoclasts, and a building process, bone formation, mediated by the action of osteoblasts. Remodeling is required for the maintenance and overall health of bone and is tightly coupled; that is, resorption and formation must be in balance. In abnormal states of bone remodeling, when resorption exceeds formation, it results in a net loss of bone. The measurement of specific, bone-derived resorption products provides analytical data about the rate of bone resorption.

Osteoporosis is a condition characterized by low bone mass and structural deterioration of bone tissue, leading to bone fragility and an increased susceptibility to fractures of the hip, spine, and wrist. The term primary osteoporosis is applied where the causal factor in the disease is menopause or aging. The term secondary osteoporosis is applied where the causal factor is something other than menopause or aging, such as long-term administration of glucocorticosteroids, endocrine-related disorders (other than loss of estrogen due to menopause), and certain bone diseases such as cancer of the bone.

With respect to quantifying bone resorption, collagen crosslink tests can provide adjunct diagnostic information in concert with bone mass measurements. Bone mass measurements and biochemical markers may have complementary roles to play in assessing effectiveness of osteoporosis treatment. Proper management of osteoporosis patients, who are on long-term therapeutic regimens, may include laboratory testing of biochemical markers of bone turnover, such as collagen crosslinks, that provide a profile of bone turnover responses within weeks of therapy. Changes in collagen crosslinks are determined following commencement of antiresorptive therapy. These can be measured over a shorter time interval when compared to bone mass density. If bone resorption is not elevated, repeat testing is not medically necessary.

HCPCS Codes (Alphanumeric, CPT[©] AMA)

| Code | Description |
|-------|----------------------------------|
| 82523 | Collagen cross links, any method |



ICD-10-CM Codes Covered by Medicare Program

The ICD-10-CM codes in the table below can be viewed on CMS' website as part of Downloads: Lab Code List, at

http://www.cms.gov/Medicare/Coverage/CoverageGenInfo/LabNCDsICD10.html

| Code | Description |
|----------|--|
| C44.1321 | Sebaceous cell carcinoma of skin of right upper eyelid, including canthus |
| C44.1322 | Sebaceous cell carcinoma of skin of right lower eyelid, including canthus |
| C44.1391 | Sebaceous cell carcinoma of skin of left upper eyelid, including canthus |
| C44.1392 | Sebaceous cell carcinoma of skin of left lower eyelid, including canthus |
| E05.00 | Thyrotoxicosis with diffuse goiter without thyrotoxic crisis or storm |
| E05.01 | Thyrotoxicosis with diffuse goiter with thyrotoxic crisis or storm |
| E05.10 | Thyrotoxicosis with toxic single thyroid nodule without thyrotoxic crisis or storm |
| E05.11 | Thyrotoxicosis with toxic single thyroid nodule with thyrotoxic crisis or storm |
| E05.20 | Thyrotoxicosis with toxic multinodular goiter without thyrotoxic crisis or storm |
| E05.21 | Thyrotoxicosis with toxic multinodular goiter with thyrotoxic crisis or storm |
| E05.30 | Thyrotoxicosis from ectopic thyroid tissue without thyrotoxic crisis or storm |
| E05.31 | Thyrotoxicosis from ectopic thyroid tissue with thyrotoxic crisis or storm |
| E05.40 | Thyrotoxicosis factitia without thyrotoxic crisis or storm |
| E05.41 | Thyrotoxicosis factitia with thyrotoxic crisis or storm |
| E05.80 | Other thyrotoxicosis without thyrotoxic crisis or storm |
| E05.81 | Other thyrotoxicosis with thyrotoxic crisis or storm |
| E05.90 | Thyrotoxicosis, unspecified without thyrotoxic crisis or storm |
| E05.91 | Thyrotoxicosis, unspecified with thyrotoxic crisis or storm |
| E06.3 | Autoimmune thyroiditis |
| E07.9 | Disorder of thyroid, unspecified |
| E21.0 | Primary hyperparathyroidism |
| E21.1 | Secondary hyperparathyroidism, not elsewhere classified |
| E21.2 | Other hyperparathyroidism |
| E21.3 | Hyperparathyroidism, unspecified |
| E28.310 | Symptomatic premature menopause |
| E28.319 | Asymptomatic premature menopause |
| E28.39 | Other primary ovarian failure |
| E28.8 | Other ovarian dysfunction |
| E28.9 | Ovarian dysfunction, unspecified |

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| Code | Description |
|----------|---|
| E55.9 | Vitamin D deficiency, unspecified |
| E58 | Dietary calcium deficiency |
| E59 | Dietary selenium deficiency |
| E60 | Dietary zinc deficiency |
| E61.0 | Copper deficiency |
| E61.1 | Iron deficiency |
| E61.2 | Magnesium deficiency |
| E61.3 | Manganese deficiency |
| E61.4 | Chromium deficiency |
| E61.5 | Molybdenum deficiency |
| E61.6 | Vanadium deficiency |
| E88.02 | Plasminogen deficiency |
| E89.40 | Asymptomatic postprocedural ovarian failure |
| E89.41 | Symptomatic postprocedural ovarian failure |
| M48.50XA | Collapsed vertebra, not elsewhere classified, site unspecified, initial encounter for fracture |
| M48.51XA | Collapsed vertebra, not elsewhere classified, occipito-atlanto-axial region, initial encounter for fracture |
| M48.52XA | Collapsed vertebra, not elsewhere classified, cervical region, initial encounter for fracture |
| M48.53XA | Collapsed vertebra, not elsewhere classified, cervicothoracic region, initial encounter for fracture |
| M48.54XA | Collapsed vertebra, not elsewhere classified, thoracic region, initial encounter for fracture |
| M48.55XA | Collapsed vertebra, not elsewhere classified, thoracolumbar region, initial encounter for fracture |
| M48.56XA | Collapsed vertebra, not elsewhere classified, lumbar region, initial encounter for fracture |
| M48.57XA | Collapsed vertebra, not elsewhere classified, lumbosacral region, initial encounter for fracture |
| M48.58XA | Collapsed vertebra, not elsewhere classified, sacral and sacrococcygeal region, initial encounter for fracture |
| M80.00XA | Age-related osteoporosis with current pathological fracture, unspecified site, initial encounter for fracture |
| M80.011A | Age-related osteoporosis with current pathological fracture, right shoulder, initial encounter for fracture |
| M80.012A | Age-related osteoporosis with current pathological fracture, left shoulder, initial encounter for fracture |
| M80.019A | Age-related osteoporosis with current pathological fracture, unspecified shoulder, initial encounter for fracture |



| Description |
|---|
| Age-related osteoporosis with current pathological fracture, right humerus, initial encounter for fracture |
| Age-related osteoporosis with current pathological fracture, left humerus, initial encounter for fracture |
| Age-related osteoporosis with current pathological fracture, unspecified humerus, initial encounter for fracture |
| Age-related osteoporosis with current pathological fracture, right forearm, initial encounter for fracture |
| Age-related osteoporosis with current pathological fracture, left forearm, initial encounter for fracture |
| Age-related osteoporosis with current pathological fracture, unspecified forearm, initial encounter for fracture |
| Age-related osteoporosis with current pathological fracture, right hand, initial encounter for fracture |
| Age-related osteoporosis with current pathological fracture, left hand, initial encounter for fracture |
| Age-related osteoporosis with current pathological fracture, unspecified hand, initial encounter for fracture |
| Age-related osteoporosis with current pathological fracture, right femur, initial encounter for fracture |
| Age-related osteoporosis with current pathological fracture, left femur, initial encounter for fracture |
| Age-related osteoporosis with current pathological fracture, unspecified femur, initial encounter for fracture |
| Age-related osteoporosis with current pathological fracture, right lower leg, initial encounter for fracture |
| Age-related osteoporosis with current pathological fracture, left lower leg, initial encounter for fracture |
| Age-related osteoporosis with current pathological fracture, unspecified lower leg, initial encounter for fracture |
| Age-related osteoporosis with current pathological fracture, right ankle and foot, initial encounter for fracture |
| Age-related osteoporosis with current pathological fracture, left ankle and foot, initial encounter for fracture |
| Age-related osteoporosis with current pathological fracture, unspecified ankle and foot, initial encounter for fracture |
| Age-related osteoporosis with current pathological fracture, vertebra(e), initial encounter for fracture |
| Age-related osteoporosis with current pathological fracture, other site, initial encounter for fracture |
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| Code | Description |
|----------|---|
| M80.0AXD | Age-related osteoporosis with current pathological fracture, other site, subsequent encounter for fracture with routine healing |
| M80.0AXG | Age-related osteoporosis with current pathological fracture, other site, subsequent encounter for fracture with delayed healing |
| M80.0AXK | Age-related osteoporosis with current pathological fracture, other site, subsequent encounter for fracture with nonunion |
| M80.0AXP | Age-related osteoporosis with current pathological fracture, other site, subsequent encounter for fracture with malunion |
| M80.0AXS | Age-related osteoporosis with current pathological fracture, other site, sequela |
| M80.0B1A | Age-related osteoporosis with current pathological fracture, right pelvis, initial encounter for fracture |
| M80.0B2A | Age-related osteoporosis with current pathological fracture, left pelvis, initial encounter for fracture |
| M80.0B9A | Age-related osteoporosis with current pathological fracture, unspecified pelvis, initial encounter for fracture |
| M80.80XA | Other osteoporosis with current pathological fracture, unspecified site, initial encounter for fracture |
| M80.811A | Other osteoporosis with current pathological fracture, right shoulder, initial encounter for fracture |
| M80.812A | Other osteoporosis with current pathological fracture, left shoulder, initial encounter for fracture |
| M80.819A | Other osteoporosis with current pathological fracture, unspecified shoulder, initial encounter for fracture |
| M80.821A | Other osteoporosis with current pathological fracture, right humerus, initial encounter for fracture |
| M80.822A | Other osteoporosis with current pathological fracture, left humerus, initial encounter for fracture |
| M80.829A | Other osteoporosis with current pathological fracture, unspecified humerus, initial encounter for fracture |
| M80.831A | Other osteoporosis with current pathological fracture, right forearm, initial encounter for fracture |
| M80.832A | Other osteoporosis with current pathological fracture, left forearm, initial encounter for fracture |
| M80.839A | Other osteoporosis with current pathological fracture, unspecified forearm, initial encounter for fracture |
| M80.841A | Other osteoporosis with current pathological fracture, right hand, initial encounter for fracture |
| M80.842A | Other osteoporosis with current pathological fracture, left hand, initial encounter for fracture |
| M80.849A | Other osteoporosis with current pathological fracture, unspecified hand, initial encounter for fracture |



| Code | Description |
|----------|---|
| M80.851A | Other osteoporosis with current pathological fracture, right femur, initial encounter for fracture |
| M80.852A | Other osteoporosis with current pathological fracture, left femur, initial encounter for fracture |
| M80.859A | Other osteoporosis with current pathological fracture, unspecified femur, initial encounter for fracture |
| M80.861A | Other osteoporosis with current pathological fracture, right lower leg, initial encounter for fracture |
| M80.862A | Other osteoporosis with current pathological fracture, left lower leg, initial encounter for fracture |
| M80.869A | Other osteoporosis with current pathological fracture, unspecified lower leg, initial encounter for fracture |
| M80.871A | Other osteoporosis with current pathological fracture, right ankle and foot, initial encounter for fracture |
| M80.872A | Other osteoporosis with current pathological fracture, left ankle and foot, initial encounter for fracture |
| M80.879A | Other osteoporosis with current pathological fracture, unspecified ankle and foot, initial encounter for fracture |
| M80.88XA | Other osteoporosis with current pathological fracture, vertebra(e), initial encounter for fracture |
| M80.8AXA | Other osteoporosis with current pathological fracture, other site, initial encounter for fracture |
| M80.8AXD | Other osteoporosis with current pathological fracture, other site, subsequent encounter for fracture with routine healing |
| M80.8AXG | Other osteoporosis with current pathological fracture, other site, subsequent encounter for fracture with delayed healing |
| M80.8AXK | Other osteoporosis with current pathological fracture, other site, subsequent encounter for fracture with nonunion |
| M80.8AXP | Other osteoporosis with current pathological fracture, other site, subsequent encounter for fracture with malunion |
| M80.8AXS | Other osteoporosis with current pathological fracture, other site, sequela |
| M80.8B1A | Other osteoporosis with current pathological fracture, right pelvis, initial encounter for fracture |
| M80.8B2A | Other osteoporosis with current pathological fracture, left pelvis, initial encounter for fracture |
| M80.8B9A | Other osteoporosis with current pathological fracture, unspecified pelvis, initial encounter for fracture |
| M81.0 | Age-related osteoporosis without current pathological fracture |
| M81.6 | Localized osteoporosis [Lequesne] |
| M81.8 | Other osteoporosis without current pathological fracture |



| Code | Description |
|----------|---|
| M84.40XA | Pathological fracture, unspecified site, initial encounter for fracture |
| M84.411A | Pathological fracture, right shoulder, initial encounter for fracture |
| M84.412A | Pathological fracture, left shoulder, initial encounter for fracture |
| M84.419A | Pathological fracture, unspecified shoulder, initial encounter for fracture |
| M84.421A | Pathological fracture, right humerus, initial encounter for fracture |
| M84.422A | Pathological fracture, left humerus, initial encounter for fracture |
| M84.429A | Pathological fracture, unspecified humerus, initial encounter for fracture |
| M84.431A | Pathological fracture, right ulna, initial encounter for fracture |
| M84.432A | Pathological fracture, left ulna, initial encounter for fracture |
| M84.433A | Pathological fracture, right radius, initial encounter for fracture |
| M84.434A | Pathological fracture, left radius, initial encounter for fracture |
| M84.439A | Pathological fracture, unspecified ulna and radius, initial encounter for fracture |
| M84.441A | Pathological fracture, right hand, initial encounter for fracture |
| M84.442A | Pathological fracture, left hand, initial encounter for fracture |
| M84.443A | Pathological fracture, unspecified hand, initial encounter for fracture |
| M84.444A | Pathological fracture, right finger(s), initial encounter for fracture |
| M84.445A | Pathological fracture, left finger(s), initial encounter for fracture |
| M84.446A | Pathological fracture, unspecified finger(s), initial encounter for fracture |
| M84.451A | Pathological fracture, right femur, initial encounter for fracture |
| M84.452A | Pathological fracture, left femur, initial encounter for fracture |
| M84.453A | Pathological fracture, unspecified femur, initial encounter for fracture |
| M84.454A | Pathological fracture, pelvis, initial encounter for fracture |
| M84.459A | Pathological fracture, hip, unspecified, initial encounter for fracture |
| M84.461A | Pathological fracture, right tibia, initial encounter for fracture |
| M84.462A | Pathological fracture, left tibia, initial encounter for fracture |
| M84.463A | Pathological fracture, right fibula, initial encounter for fracture |
| M84.464A | Pathological fracture, left fibula, initial encounter for fracture |
| M84.469A | Pathological fracture, unspecified tibia and fibula, initial encounter for fracture |
| M84.471A | Pathological fracture, right ankle, initial encounter for fracture |
| M84.472A | Pathological fracture, left ankle, initial encounter for fracture |
| M84.473A | Pathological fracture, unspecified ankle, initial encounter for fracture |
| M84.474A | Pathological fracture, right foot, initial encounter for fracture |
| M84.475A | Pathological fracture, left foot, initial encounter for fracture |
| M84.476A | Pathological fracture, unspecified foot, initial encounter for fracture |



| Code | Description |
|----------|---|
| M84.477A | Pathological fracture, right toe(s), initial encounter for fracture |
| M84.478A | Pathological fracture, left toe(s), initial encounter for fracture |
| M84.479A | Pathological fracture, unspecified toe(s), initial encounter for fracture |
| M84.48XA | Pathological fracture, other site, initial encounter for fracture |
| M84.50XA | Pathological fracture in neoplastic disease, unspecified site, initial encounter for fracture |
| M84.511A | Pathological fracture in neoplastic disease, right shoulder, initial encounter for fracture |
| M84.512A | Pathological fracture in neoplastic disease, left shoulder, initial encounter for fracture |
| M84.519A | Pathological fracture in neoplastic disease, unspecified shoulder, initial encounter for fracture |
| M84.521A | Pathological fracture in neoplastic disease, right humerus, initial encounter for fracture |
| M84.522A | Pathological fracture in neoplastic disease, left humerus, initial encounter for fracture |
| M84.529A | Pathological fracture in neoplastic disease, unspecified humerus, initial encounter for fracture |
| M84.531A | Pathological fracture in neoplastic disease, right ulna, initial encounter for fracture |
| M84.532A | Pathological fracture in neoplastic disease, left ulna, initial encounter for fracture |
| M84.533A | Pathological fracture in neoplastic disease, right radius, initial encounter for fracture |
| M84.534A | Pathological fracture in neoplastic disease, left radius, initial encounter for fracture |
| M84.539A | Pathological fracture in neoplastic disease, unspecified ulna and radius, initial encounter for fracture |
| M84.541A | Pathological fracture in neoplastic disease, right hand, initial encounter for fracture |
| M84.542A | Pathological fracture in neoplastic disease, left hand, initial encounter for fracture |
| M84.549A | Pathological fracture in neoplastic disease, unspecified hand, initial encounter for fracture |
| M84.550A | Pathological fracture in neoplastic disease, pelvis, initial encounter for fracture |
| M84.551A | Pathological fracture in neoplastic disease, right femur, initial encounter for fracture |
| M84.552A | Pathological fracture in neoplastic disease, left femur, initial encounter for fracture |
| M84.553A | Pathological fracture in neoplastic disease, unspecified femur, initial encounter for fracture |
| M84.559A | Pathological fracture in neoplastic disease, hip, unspecified, initial encounter for fracture |
| M84.561A | Pathological fracture in neoplastic disease, right tibia, initial encounter for fracture |
| M84.562A | Pathological fracture in neoplastic disease, left tibia, initial encounter for fracture |
| M84.563A | Pathological fracture in neoplastic disease, right fibula, initial encounter for fracture |
| M84.564A | Pathological fracture in neoplastic disease, left fibula, initial encounter for fracture |
| M84.569A | Pathological fracture in neoplastic disease, unspecified tibia and fibula, initial encounter for fracture |
| M84.571A | Pathological fracture in neoplastic disease, right ankle, initial encounter for fracture |
| M84.572A | Pathological fracture in neoplastic disease, left ankle, initial encounter for fracture |



| Code | Description |
|----------|--|
| M84.573A | Pathological fracture in neoplastic disease, unspecified ankle, initial encounter for fracture |
| M84.574A | Pathological fracture in neoplastic disease, right foot, initial encounter for fracture |
| M84.575A | Pathological fracture in neoplastic disease, left foot, initial encounter for fracture |
| M84.576A | Pathological fracture in neoplastic disease, unspecified foot, initial encounter for fracture |
| M84.58XA | Pathological fracture in neoplastic disease, other specified site, initial encounter for fracture |
| M84.60XA | Pathological fracture in other disease, unspecified site, initial encounter for fracture |
| M84.611A | Pathological fracture in other disease, right shoulder, initial encounter for fracture |
| M84.612A | Pathological fracture in other disease, left shoulder, initial encounter for fracture |
| M84.619A | Pathological fracture in other disease, unspecified shoulder, initial encounter for fracture |
| M84.621A | Pathological fracture in other disease, right humerus, initial encounter for fracture |
| M84.622A | Pathological fracture in other disease, left humerus, initial encounter for fracture |
| M84.629A | Pathological fracture in other disease, unspecified humerus, initial encounter for fracture |
| M84.631A | Pathological fracture in other disease, right ulna, initial encounter for fracture |
| M84.632A | Pathological fracture in other disease, left ulna, initial encounter for fracture |
| M84.633A | Pathological fracture in other disease, right radius, initial encounter for fracture |
| M84.634A | Pathological fracture in other disease, left radius, initial encounter for fracture |
| M84.639A | Pathological fracture in other disease, unspecified ulna and radius, initial encounter for fracture |
| M84.641A | Pathological fracture in other disease, right hand, initial encounter for fracture |
| M84.642A | Pathological fracture in other disease, left hand, initial encounter for fracture |
| M84.649A | Pathological fracture in other disease, unspecified hand, initial encounter for fracture |
| M84.650A | Pathological fracture in other disease, pelvis, initial encounter for fracture |
| M84.651A | Pathological fracture in other disease, right femur, initial encounter for fracture |
| M84.652A | Pathological fracture in other disease, left femur, initial encounter for fracture |
| M84.653A | Pathological fracture in other disease, unspecified femur, initial encounter for fracture |
| M84.659A | Pathological fracture in other disease, hip, unspecified, initial encounter for fracture |
| M84.661A | Pathological fracture in other disease, right tibia, initial encounter for fracture |
| M84.662A | Pathological fracture in other disease, left tibia, initial encounter for fracture |
| M84.663A | Pathological fracture in other disease, right fibula, initial encounter for fracture |
| M84.664A | Pathological fracture in other disease, left fibula, initial encounter for fracture |
| M84.669A | Pathological fracture in other disease, unspecified tibia and fibula, initial encounter for fracture |
| M84.671A | Pathological fracture in other disease, right ankle, initial encounter for fracture |
| M84.672A | Pathological fracture in other disease, left ankle, initial encounter for fracture |



| Code | Description |
|----------|---|
| M84.673A | Pathological fracture in other disease, unspecified ankle, initial encounter for fracture |
| M84.674A | Pathological fracture in other disease, right foot, initial encounter for fracture |
| M84.675A | Pathological fracture in other disease, left foot, initial encounter for fracture |
| M84.676A | Pathological fracture in other disease, unspecified foot, initial encounter for fracture |
| M84.68XA | Pathological fracture in other disease, other site, initial encounter for fracture |
| M84.751A | Incomplete atypical femoral fracture, right leg, initial encounter for fracture |
| M85.80 | Other specified disorders of bone density and structure, unspecified site |
| M85.811 | Other specified disorders of bone density and structure, right shoulder |
| M85.812 | Other specified disorders of bone density and structure, left shoulder |
| M85.819 | Other specified disorders of bone density and structure, unspecified shoulder |
| M85.821 | Other specified disorders of bone density and structure, right upper arm |
| M85.822 | Other specified disorders of bone density and structure, left upper arm |
| M85.829 | Other specified disorders of bone density and structure, unspecified upper arm |
| M85.831 | Other specified disorders of bone density and structure, right forearm |
| M85.832 | Other specified disorders of bone density and structure, left forearm |
| M85.839 | Other specified disorders of bone density and structure, unspecified forearm |
| M85.841 | Other specified disorders of bone density and structure, right hand |
| M85.842 | Other specified disorders of bone density and structure, left hand |
| M85.849 | Other specified disorders of bone density and structure, unspecified hand |
| M85.851 | Other specified disorders of bone density and structure, right thigh |
| M85.852 | Other specified disorders of bone density and structure, left thigh |
| M85.859 | Other specified disorders of bone density and structure, unspecified thigh |
| M85.861 | Other specified disorders of bone density and structure, right lower leg |
| M85.862 | Other specified disorders of bone density and structure, left lower leg |
| M85.869 | Other specified disorders of bone density and structure, unspecified lower leg |
| M85.871 | Other specified disorders of bone density and structure, right ankle and foot |
| M85.872 | Other specified disorders of bone density and structure, left ankle and foot |
| M85.879 | Other specified disorders of bone density and structure, unspecified ankle and foot |
| M85.88 | Other specified disorders of bone density and structure, other site |
| M85.89 | Other specified disorders of bone density and structure, multiple sites |
| M85.9 | Disorder of bone density and structure, unspecified |
| M88.0 | Osteitis deformans of skull |
| M88.1 | Osteitis deformans of vertebrae |
| M88.811 | Osteitis deformans of right shoulder |



| Code | Description |
|----------|---|
| M88.812 | Osteitis deformans of left shoulder |
| M88.819 | Osteitis deformans of unspecified shoulder |
| M88.821 | Osteitis deformans of right upper arm |
| M88.822 | Osteitis deformans of left upper arm |
| M88.829 | Osteitis deformans of unspecified upper arm |
| M88.831 | Osteitis deformans of right forearm |
| M88.832 | Osteitis deformans of left forearm |
| M88.839 | Osteitis deformans of unspecified forearm |
| M88.841 | Osteitis deformans of right hand |
| M88.842 | Osteitis deformans of left hand |
| M88.849 | Osteitis deformans of unspecified hand |
| M88.851 | Osteitis deformans of right thigh |
| M88.852 | Osteitis deformans of left thigh |
| M88.859 | Osteitis deformans of unspecified thigh |
| M88.861 | Osteitis deformans of right lower leg |
| M88.862 | Osteitis deformans of left lower leg |
| M88.869 | Osteitis deformans of unspecified lower leg |
| M88.871 | Osteitis deformans of right ankle and foot |
| M88.872 | Osteitis deformans of left ankle and foot |
| M88.879 | Osteitis deformans of unspecified ankle and foot |
| M88.88 | Osteitis deformans of other bones |
| M88.89 | Osteitis deformans of multiple sites |
| M88.9 | Osteitis deformans of unspecified bone |
| M89.9 | Disorder of bone, unspecified |
| M94.9 | Disorder of cartilage, unspecified |
| N92.4 | Excessive bleeding in the premenopausal period |
| N95.0 | Postmenopausal bleeding |
| N95.1 | Menopausal and female climacteric states |
| N95.8 | Other specified menopausal and perimenopausal disorders |
| N95.9 | Unspecified menopausal and perimenopausal disorder |
| P78.84 | Gestational alloimmune liver disease |
| S12.9XXA | Fracture of neck, unspecified, initial encounter |
| Z79.3 | Long term (current) use of hormonal contraceptives |
| Z79.51 | Long term (current) use of inhaled steroids |



| Code | Description |
|---------|--|
| Z79.52 | Long term (current) use of systemic steroids |
| Z79.84 | Long term (current) use of oral hypoglycemic drugs |
| Z79.85 | Long-term (current) use of injectable non-insulin antidiabetic drugs |
| Z79.891 | Long term (current) use of opiate analgesic |
| Z79.899 | Other long term (current) drug therapy |

Indications

Generally speaking, collagen crosslink testing is useful mostly in "fast losers" of bone. The age when these bone markers can help direct therapy is often pre-Medicare. By the time a fast loser of bone reaches age 65, she will most likely have been stabilized by appropriate therapy or have lost so much bone mass that further testing is useless. Coverage for bone marker assays may be established, however, for younger Medicare beneficiaries and for those men and women who might become fast losers because of some other therapy such as glucocorticoids. Safeguards should be incorporated to prevent excessive use of tests in patients for whom they have no clinical relevance.

Collagen crosslinks testing is used to:

Identify individuals with elevated bone resorption, who have osteoporosis in whom response to treatment is being monitored.

Predict response (as assessed by bone mass measurements) to FDA approved antiresorptive therapy in postmenopausal women.

Assess response to treatment of patients with osteoporosis, Paget's disease of the bone, or risk for osteoporosis where treatment may include FDA approved antiresorptive agents, antiestrogens or selective estrogen receptor moderators.

Limitations

Because of significant specimen to specimen collagen crosslink physiologic variability (15-20%), current recommendations for appropriate utilization include: one or two base-line assays from specified urine collections on separate days; followed by a repeat assay about 3 months after starting anti-resorptive therapy; followed by a repeat assay in 12 months after the 3-month assay; and thereafter not more than annually, unless there is a change in therapy in which circumstance an additional test may be indicated 3 months after the initiation of new therapy.

Some collagen crosslink assays may not be appropriate for use in some disorders, according to FDA labeling restrictions.

ICD-10-CM Codes That Do Not Support Medical Necessity

Any ICD-10-CM code not listed in either of the ICD-10-CM covered or non-covered sections.

Sources of Information

Arnaud CD. Osteoporosis: Using 'bone markers' for diagnosis and monitoring. Geriatrics 1996; 51:24-30.

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*January 2025 Changes ICD-10-CM Version - Red



Chesnut CH, III, Bell NH, Clark G, et al. Hormone replacement therapy in postmenopausal women: urinary N-telopeptide of type I collagen monitors therapeutic effect and predicts response of bone mineral density. Am. J. Med. 1997;102:29-37.

Garnero P, Delmas PD. Clinical usefulness of markers of bone remodelling in osteoporosis. In: Meunier PJ. (ed).Osteoporosis: diagnosis and management. London: Martin Dunitz Ltd 1998:79-101.

Garnero P, Shih WJ, Gineyts E, et al. Comparison of new biochemical markers of bone turnover in late postmenopausal osteoporotic women in response to alendronate treatment. J. Clin. Endocrinol. Metab.1994;79:1693-700.

Harper KD, Weber TJ. Secondary osteoporosis - Diagnostic considerations.

Endocrinol. Metab.Clin. North Am. 1998;27:325-48.

Hesley RP, Shepard KA, Jenkins DK, Riggs BL. Monitoring estrogen replacement therapy and identifying rapid bone losers with an immunoassay for deoxypyridinoline. Osteoporos.Int. 1998;8:159-64.

Melton LJ, III, Khosla S, Atkinson EJ, et al. Relationship of bone turnover to bone density and fractures. J.Bone Miner.Res.1997;12:1083-91.

Millard PS. Prevention of osteoporosis: making sense of the published evidence. In: Rosen CJ (ed). Osteoporosis: diagnostic & therapeutic principles. Totowa: Humana Press. 1996:275-85.

Rosen CJ. Biochemical markers of bone turnover. In: Rosen CJ(ed). Osteoporosis: diagnostic and therapeutic principles. Totowa: Humana Press Inc. 1996:129-41.

Schneider DL, Barrett-Connor EL. Urinary N-Telopeptide levels discriminate normal, osteopenic, and osteoporotic bone mineral density. Arch. Intern. Med. 1997;157:1241-5.