



Medica Central Coverage Policy

Policy Name: Collagen Cross Links Tests as Markers of Bone Turnover MP9677

Effective Date: 09/01/2025

Important Information – Please Read Before Using This Policy

These services may or may not be covered by all Medica Central plans. Coverage is subject to requirements in applicable federal or state laws. Please refer to the member’s plan document for other specific coverage information. If there is a difference between this general information and the member’s plan document, the member’s plan document will be used to determine coverage. With respect to Medicare, Medicaid, and other government programs, this policy will apply unless these programs require different coverage.

Members may contact Medica Customer Service at the phone number listed on their member identification card to discuss their benefits more specifically. Providers with questions may call the Provider Service Center. Please use the Quick Reference Guide on the Provider Communications page for the appropriate phone number. <https://mo-central.medica.com/Providers/SSM-employee-health-plan-for-IL-MO-OK-providers>

Medica Central coverage policies are not medical advice. Members should consult with appropriate health care providers to obtain needed medical advice, care, and treatment.

Coverage Policy

Collagen cross links tests as markers of bone turnover are investigative and unproven, and therefore **NOT COVERED**. There is insufficient reliable evidence in the form of high quality peer-reviewed medical literature to establish the effects on health care outcomes.

Description

Adult bones are continuously being reabsorbed and rebuilt. Bone metabolism is a process that involves multiple components, including osteoclasts and osteoblasts (that is, cells associated with bone resorption and bone formation), parathyroid hormones, growth hormones, steroids, calcitonins, vitamin D, blood calcium levels, and numerous cytokines. As a result, specific metabolites are released into blood and urine and can be analyzed in the laboratory. Individuals who have elevated rates of bone resorption and reduced rates of new bone formation may be at risk for osteoporosis.

Collagen cross links are one type of biochemical marker of bone turnover. Analysis of these products are purported to provide information regarding bone metabolism that cannot be provided solely by standard bone density measurements.

Collagen cross link markers of bone formation include:	Collagen cross link makers of bone resorption include:
<ul style="list-style-type: none"> Serum bone specific alkaline phosphatase (BSAP) 	<ul style="list-style-type: none"> Urinary hydroxyproline (Hyp)
<ul style="list-style-type: none"> Serum procollagen I carboxyterminal propeptide (PICP) 	<ul style="list-style-type: none"> Urinary collagen type I cross-linked N-telopeptide (NTx, also called Osteomark)
<ul style="list-style-type: none"> Serum procollagen type 1 N-terminal propeptide (PINP) 	<ul style="list-style-type: none"> Urinary collagen type I cross-linked C-telopeptide (CTx, also called CrossLaps®)



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Collagen cross link markers of bone formation include:	Collagen cross link makers of bone resorption include:
	<ul style="list-style-type: none"> Urinary free pyridinoline (f-Pyr, also called Pryiliks-D®)
	<ul style="list-style-type: none"> Urinary total pyridinoline (Pyr)
	<ul style="list-style-type: none"> Urinary total deoxypyridinoline (dPyr)
	<ul style="list-style-type: none"> Serum carboxyterminal telopeptide of type I collagen (ITCP)

Results are obtained following laboratory assays of serum or urine specimens. It has been suggested that the information obtained could be used in: (1) measuring the rate of bone loss, (2) determining osteoporosis management, (3) monitoring post-therapy changes in bone metabolism and density, and (4) managing ongoing osteoporosis therapy.

FDA Approval

The FDA regulates laboratory tests and test systems that are commercially marketed under the 510(k) approval process. Laboratories that employ their own tests but do not market the test systems to other facilities are subject to the standards of the Clinical Laboratory Improvement Act (CLIA) of 1988, but are not subject to FDA marketing approval.

Examples of tests that are commercially marketed and approved by the FDA include, but are not limited to,

1. MicroVue™ DPD (Quidel Corporation). This test measures deoxypryridinoline (Dpd), which is excreted unaltered in the urine.
2. Osteomark® NTx assays (Inverness Medical Innovations, Inc.). These assays measure cross-linked N-telopeptides of bone collagen (NTx) in either a blood or urine specimen.
3. Pyrilinks test (Metra Biosystems, Santa Clara, CA). This test measures collagen type 1 crosslink, pyridium.
4. Serum CrossLaps® (Immunodiagnostic Systems Holdings plc [IDS]). This assay employs monoclonal antibodies that recognize and bind to C-telopeptide fragments of collagen type 1, alpha-1 chains (CTX).

Non-commercially marketed tests are available for many of the other collagen cross link markers for bone formation or bone resorption.

Prior Authorization

Prior authorization is not applicable. Claims for this service are subject to retrospective review and denial of coverage, as investigative services are not eligible for reimbursement.

Coding Considerations

Use the current applicable CPT/HCPCS code(s). The following codes are included below for informational purposes only, and are subject to change without notice. Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement.

CPT Codes:

82523 - collagen cross links, any method



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Document		
Created:	Medical Policy Committee/Health Services Division	December 20, 2023
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