

# Bone Resorption Assessment



Innovative Testing for Optimal Health

63 Zillico Street  
Asheville, NC 28801  
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Patient: **SAMPLE  
PATIENT**

Age: 50

Sex: F

MRN:

Order Number:

Completed:

Received:

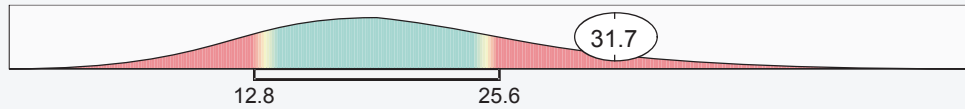
Collected:

## SAMPLE REPORT

### Chemistry Parameters

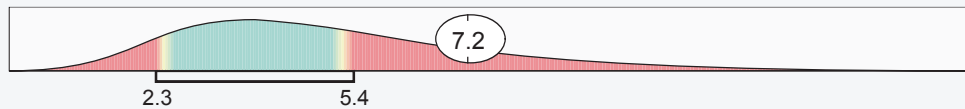
#### Pyridinium Crosslinks/Creatinine

Ref Range  
nmol/mmol



#### Deoxypyridinoline/Creatinine

Ref Range  
nmol/mmol



### Commentary

Pyridinium crosslinks consist of both pyridinoline and deoxypyridinoline. Deoxypyridinoline is found predominantly in bone tissue, whereas pyridinoline is found in both bone and cartilage. Pyridinium crosslinks are released when bone is broken down (or resorbed). While not diagnostic of osteoporosis, these markers may be used to monitor bone resorption status and therefore are a useful gauge of treatment efficacy.

The level of pyridinium crosslinks is elevated. Abnormally high pyridinium crosslinks in urine suggest increased cartilage, connective tissue, and/or bone resorption. For example, pyridinoline might be elevated secondary to rheumatoid arthritis, lupus and other connective tissue disorders, osteoarthritis, or chronic alcohol ingestion. Similarly, periods of rapid growth or repair of connective tissue (adolescence post-trauma) lead to high levels.

The level of deoxypyridinoline (DPD) is elevated, indicating an increased rate of bone loss. In individuals with no underlying bone disease, this is an important marker in the development of osteoporosis. Elevations of DPD may also suggest a recent fracture, or a rapid state of bone development as is found in adolescence. A healthy diet high in calcium and other trace elements, adequate vitamin D and K, and regular exercise have been proven to decrease the rate of bone resorption and contribute to building of bone.