

Summary

Diagnostic Value of Urinary N-Telopeptide of Type I Collagen in Prostate Cancer: Comparison with Bone Scintigraphy

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The usefulness of a new biochemical marker of bone resorption, N-telopeptide of type I collagen (NTx), in the diagnosis of bone metastasis was assessed in 69 prostate cancer patients. Based on the bone scintigraphy findings, the patients were divided into a bone metastasis (+) group (n = 36) and a bone metastasis (-) group (n = 33). The urinary NTx level was significantly higher in the bone metastasis (+) group than in the bone metastasis (-) group (95.5 ± 18.5 nM BCE/mM Cr vs. 63.3 ± 7.9 nM BCE/mM Cr). There was a tendency for greater variability in urinary NTx levels during a 2 month-period in the bone metastasis (+) group than in the bone metastasis (-) group. The urinary NTx level of the 6 patients who

were clinically staged as (4 +) according to the extent of disease (EOD) grading system was 211.4 ± 96.9 nM BCE/mM Cr, and was significantly higher ($p < 0.05$) than in the (-) group. However, there was not a significant difference in urinary NTx levels between the (1 +) to (3 +) groups and the (-) group.

In conclusion, measuring urinary NTx levels is useful in diagnosing bone metastasis in view of the fact that it is a simple and noninvasive procedure. While it is not as sensitive as bone scintigraphy, it may be used to supplement bone scintigraphy.

Key words: Bone scintigraphy, Bone metastasis, NTx, Prostate cancer, EOD grade.