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Circulating Transforming Growth Factor-Beta1 Levels in Pediatric Bone Sarcoma Patients

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Background
Transforming growth factor-Beta (TGF-B1) has an important role in wound healing, angiogenesis, immunoregulation and cancer. TGF-beta plays a major role in cancer by suppressing tumor growth in the early phase of neoplasia, while promoting tumor progression and metastasis in later phases. We aimed to identify the clinical significance of circulating levels of TGF-beta1 as a tumor marker in bone sarcomas.

Methods
Serum TGF-B1 levels were measured by ELISA in sera of 31 patients with osteosarcoma, 14 patients with Ewing sarcoma before and after treatment and 22 healthy controls.

Results
Pretreatment mean serum TGF-beta 1 levels were 44.8 ng/ml in osteosarcoma, 46.2 ng/ml in ewing sarcoma and 45.4 ng/ml in control groups. Posttreatment mean serum TGF-beta 1 levels were 42.2 ng/ml in osteosarcoma, 41.2 ng/ml in ewing sarcoma group. Serum TGF-beta 1 level in metastatic disease was 48.1 ng/ml, in non metastatik disease 44.5 ng/ml. The differences between groups and pre and post treatment levels were not significant statistically.

Conclusion
We could not find any diagnostic and prognostic value of TGF beta 1 in pediatric bone sarcomas.

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