

Serum β -HCG and CA-125 as tumor markers in a patient with osteosarcoma: case report

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ABSTRACT

Background. Elevated β -HCG serum levels are usually an indication of pregnancy or pregnancy-related disorders, but β -HCG can also be elevated in testis and germ cell tumors. HCG expression by osteosarcoma is a rare phenomenon, with a few documented cases. CA-125 is commonly used to monitor disease progression and treatment response in ovarian cancer. CA-125 expression in patients with osteosarcoma has not previously been documented.

Case report. Elevated β -HCG and CA-125 serum levels were observed in a female patient of 57 years of age with metastatic osteosarcoma during screening investigations prior to participation in a phase I clinical trial. Pregnancy was excluded. Immunohistochemical studies revealed the tumor to be the source of the elevated β -HCG serum levels. We found no CA-125 expression in tumor tissue. The patient was treated with E7080, a novel oral multi-targeted tyrosine kinase inhibitor. We measured serum β -HCG and CA-125 to monitor treatment response. She had a significant clinical and radiological response after two cycles of treatment, but developed progressive disease after the third cycle. The β -HCG serum levels seemed to better reflect her disease status than those of the other tumor marker, CA-125.

Conclusions. When elevated, β -HCG serum levels in patients with osteosarcoma might be used to monitor treatment. Treatment of advanced osteosarcoma with tyrosine kinase inhibitors, including E7080, warrants further investigation. Free full text available at www.tumorionline.it

Key words: tumor marker, osteosarcoma, angiogenesis inhibitor, case report.

Consent: Written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

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Authors' contributions: DB collected the data and drafted the manuscript, with help from HG, JB, TE and JS. DJ carried out the immunohistochemical studies. JW participated in the design and coordination of the E7080 phase I trial. All authors read and approved the final manuscript.

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