

REVIEW

Bone and soft tissue sarcomas during pregnancy: A narrative review of the literature  CrossMark

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GRAPHICAL ABSTRACT



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ABSTRACT

Bone or soft tissue sarcomas are rarely diagnosed during pregnancy. Until today 137 well documented cases have been reported in the English literature between 1963 and 2014. Thirty-eight pregnant mothers were diagnosed with osteosarcoma, Ewing's sarcoma or chondrosarcoma,

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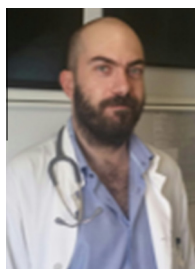
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whereas 95 other cases of soft tissue sarcomas of various types have been documented. We present the clinical picture and therapeutic management of this coexistence.

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Introduction

Cancer and pregnancy

Cancer diagnosis during pregnancy is a rare coexistence in a ratio of one case per 1000 deliveries. However, there is an increasing trend due to delaying pregnancy in western societies into the later reproductive years [1].

The most common gestational cancers are those appearing during the reproductive period of a woman. Breast cancer and cervical cancers are the most frequently diagnosed malignancies followed by hematological tumors and melanoma [1].

Diagnostic and staging workup should be very carefully performed due to maternal and fetal radiation exposure. Recommendation of imaging studies should always follow the established guidelines [2].

Systemic chemotherapy should be avoided during the first trimester of pregnancy due to lethal, teratogenic or developmental malformation effects. However, during the second and third trimesters certain chemotherapeutic drugs can be administered. Hormonal and/or targeted treatments should not be advised. In addition, radiotherapy cannot be applied to the mother's trunk due to the lethal effects on the fetus [3,4].

Metastatic transmission to the products of conception happens rarely and the most frequent malignancies that invade placenta and fetus are melanoma (30%), cancer of unknown primary site (22.5%), hematological malignancies (15%), breast cancer (14%) and lung cancer (13%) [5].

Bone and soft tissue sarcomas [6]

Malignant bone tumors are rare, accounting for only 0.2% of all malignancies. Among them the most frequent are osteosarcoma, Ewing's sarcoma and chondrosarcoma. Less frequent sarcomas are the malignant fibrous histiocytoma, chordoma, and very rarely liposarcoma, angiosarcoma, and hemangiopericytoma.

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