The Role of the Microenvironment in Prostate Cancer-Associated Bone Disease.

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Abstract

The bone is a common site for metastasis in patients with advanced prostate carcinoma, and provides a 'fertile' milieu which stimulates tumour growth and associated bone disease. For years, the concept of treatment strategies has remained targeting the tumour itself; however, the occurrence of chemoresistance remains a challenge now more than ever. The attraction of targeting the bone microenvironment in order to disrupt tumour localisation and proliferation stems from the idea that stromal cells are superiorly stable at a genetic level, thus decreasing the risk of resistance manifestation. In this review, we will discuss recent findings with regards to the pathogenesis of prostate cancer-induced bone disease and recent therapeutic strategies in an aim to evaluate the ever increasing role of the microenvironment in disease progression.

KEYWORDS: Bone metastasis; Bone microenvironment; Prostate cancer; Therapeutic strategies

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