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Matrix metalloproteinases in urinary system tumours. Part I - Matrix metalloproteinases in renal cell carcinoma

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ABSTRACT

Extracellular matrix metalloproteinases - MMPs, also referred to as matrixines, provide a group of proteolytic enzymes. They belong to the family of endopeptidases that break down elements of extracellular matrix, resulting in its continuous remodelling. Their activity is regulated at multiple levels, while tissue inhibitors of metalloproteinases play a major role in this process. Metalloproteinases play a significant part in neoplastic processes due to their contribution to local tumour invasion and formation of distant metastases, as well as to angiogenesis.

Urinary tract tumours pose a significant diagnostic and therapeutic challenge and their incidence tends to grow every year. The aim of this part of review is to describe extracellular matrix and matrix metalloproteinases and to highlight the contribution of matrix metalloproteinases in the development of renal clear cell carcinoma.

Keywords: Extracellular matrix, matrix metalloproteinases, urinary tract tumours, renal clear cell carcinoma

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