

## 278. IMMUNOHISTOCHEMICAL MARKERS SPECIFIC FOR PRIMARY CARDIAC TUMORS

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**Introduction.** Immunohistochemistry provides useful information in the study of tissues and cells, using antibodies to identify antigens of the examined tissue samples. In the last decades, special attention has been given to immunohistochemical markers, due to their specificity and high sensitivity in identifying the histological origin of tumors. This is useful in performing differential diagnosis and establishing the definitive diagnosis of cardiac tumors, which facilitates the determination of treatment tactics and the prognosis of pathology.

**Aim of the study.** In this paper, we aim to analyze the literature and to make a synthesis of the immunohistochemistry particularities in the study of cardiac tumors, namely the identification of the immunohistochemical markers characteristic for each histological type of cardiac tumor.

**Materials and methods.** We reviewed the pertinent literature by a selective PubMed search on the terms “cardiac tumor”, “immunohistochemistry”, “immunohistochemical markers”. We analyzed not only various scientific articles, but also specialty books by renowned authors.

**Conclusions.** Each cardiac tumor has its immunohistochemical markers depending on the tissue from which it is formed. Knowing these markers facilitates identification of the studied tissue. Our review study revealed that unlike benign tumors, malignancies exhibit positivity for cell proliferation markers (Ki-67, PCNA). It is important to mention that the use of immunohistochemical markers of cardiac tumors allows performing differential diagnosis, the establishment of a definitive diagnosis, the right choice of treatment and the determination of the prognosis of the pathology.

**Key words:** cardiac tumor, immunohistochemical markers, immunohistochemistry

## 279. THE FUNCTIONAL PROFILE AND THERAPEUTIC APPROACHES OF THE TUMOR ASSOCIATED MACROPHAGES

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**Introduction.** Macrophages are one of the most flexible immune cell of our body. Recent studies have elucidated their involvement in the tumour pathology too. There are two types of macrophages: M1 (pro-inflammatory) and M2 (anti-inflammatory). Macrophages that populate the tumours undergo morphologic changes and are called tumour-associated macrophages (TAM). It is assumed that these cells express a phenotype M2, which are responsible of tumorigenesis and metastases. Furthermore, TAM interact with many cells, as effector T-cell, neoplastic cells, endothelial cells, etc. Through these interactions, these cells can promote angiogenesis, metastasis, cancer cell stemness, also chemotherapeutic resistance, immunosuppressive functions.

**Aim of the study.** This review will study the polarization states of macrophages, their functional profile and role in cancer, and therapeutic approaches of the tumour-associated macrophages.

**Results.** Among the innate and adaptive immune cells that are involved in the tumour microenvironment, macrophages are particularly abundant and are present in all stages of tumour progression. M1-like TAM are stimulated by LPS, IFN- $\gamma$  and/or GM-CSF that produces a variety