

Metabolic Reprogramming in Cancer: Implications for Immunosuppressive Microenvironment

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Abstract

Cancer is a complex and heterogeneous disease characterized by uncontrolled cell growth and proliferation. One hallmark of cancer cells is their ability to undergo metabolic reprogramming, which allows them to sustain their rapid growth and survival. This metabolic reprogramming creates an immunosuppressive microenvironment that facilitates tumour progression and evasion of the immune system. In this paper, we review the mechanisms underlying metabolic reprogramming in cancer cells and discuss how these metabolic alterations contribute to the establishment of an immunosuppressive microenvironment. We also explore potential therapeutic strategies targeting metabolic vulnerabilities in cancer cells to enhance immune-mediated anti-tumour responses.

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