

Metabolic Pathways in Cancer Cells: A New Frontier in Oncology

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Abstract. The study delves into the altered metabolic pathways of cancer cells, shedding light on the metabolic reprogramming that supports rapid proliferation and survival in hostile environments. By mapping these pathways, the research identifies potential biomarkers and therapeutic targets that could disrupt cancer growth. This article provides a comprehensive analysis of the metabolic shifts in various cancer types, highlighting the role of enzymes and metabolic intermediates in tumor biology. The findings offer promising directions for developing metabolic-based therapies to combat cancer more effectively and sustainably.

Keywords: cancer, metabolism, oncology, biomarkers, therapeutics

Introduction: Cancer cells undergo profound metabolic reprogramming to sustain their growth and proliferation, adapting to the nutrient-poor and stressed environments within tumors. Understanding these metabolic transformations is crucial for developing innovative therapeutic strategies in oncology. Recent studies have uncovered diverse metabolic pathways that cancer cells exploit, often leading to unique vulnerabilities that can be targeted pharmacologically. This research focuses on characterizing these pathways and their implications for cancer treatment. By identifying critical enzymes and metabolites involved in cancer cell metabolism, we aim to provide new insights into potential therapeutic targets.

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References

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