Special Issue

Modulating the Acidic Tumor Microenvironment to Enhance the Efficacy and Reduce the Toxicity of Cancer Treatment

Message from the Guest Editors

Cancer progression is closely associated with the acidic tumor microenvironment (TME), a hallmark of disturbed metabolic and thermodynamic order. The Warburg effect—characterized by aerobic glycolysis and lactate accumulation—leads to extracellular acidification, redox imbalance, and immune suppression. Alkalization therapy aims to restore this disrupted homeostasis by normalizing intra- and extracellular pH gradients, reactivating mitochondrial respiration, and reestablishing dissipative energy flow. Recent evidence indicates that modulation of TME acidity enhances the efficacy of immune checkpoint inhibitors, improves metabolic coordination, and suppresses tumor invasion and metastasis. This Special Issue, "Alkalization Therapy and Tumor Microenvironment in Cancer," seeks to integrate molecular, metabolic, and clinical perspectives to elucidate how pH restoration can reconstruct biological order and provide a foundation for science-based, personalized cancer therapy.

Guest Editors

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Message from the Editor-in-Chief

Cancers (ISSN 2072-6694) is an international, online journal addressing both clinical and basic science issues related to cancer research. The journal will continue its open access format, which will certainly evolve to ensure that the journal takes full advantage of the rapidly changing world of information and knowledge dissemination. It publishes high-quality clinical, translational, and basic science research on cancer prevention, initiation, progression, and treatment, as well as other related topics, particularly to capture the most seminal studies in the rapidly growing area of immunology, immunotherapy, and tumor microenvironment.

Editor-in-Chief

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