Special Issue

Artificial Intelligence for Network-Based Oncomarker Discovery and Cancer Prediction

Message from the Guest Editor

The discovery of reliable biomarkers, or oncomarkers, remains one of the central challenges in oncology, with profound implications for early detection, prognosis, and personalised treatment strategies. While traditional biomarker studies have provided important insights, they often focus on individual molecules rather than the complex biological networks driving cancer initiation and progression.

By integrating genomics, transcriptomics, proteomics, epigenomics, and metabolomics, AI methods can uncover novel molecular interactions, dysregulated pathways, and predictive signatures that may remain hidden in conventional analyses. In particular, graph neural networks (GNNs), network embeddings, and systems biology-inspired approaches hold promise for identifying prognostic and predictive oncomarkers, and informing clinical decision support in oncology.

The aim of this Special Issue is to bring together cutting-edge research and comprehensive reviews on the applications of AI for network-based biomarker discovery and cancer prediction. We welcome contributions that explore computational innovations and translational insights with clinical relevance.

Guest Editor

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Cancers

About the Journal

Message from the Editor-in-Chief

Cancers is an international online journal addressing both clinical and basic science issues related to cancer research. The journal is publishing in 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.

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