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Breast Cancer: Molecular Mechanisms, Diagnosis Techniques and Therapeutic Targets

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Message from the Guest Editor

Breast cancer remains one of the most common cancers affecting women. Its molecular mechanism involves the growth, migration and invasion of cancerous cells due to dysfunctional proteins and pathways at a genetic level. The main subtypes include Luminal A, Luminal B, HER2enriched and triple-negative breast cancers. Each has different biomarkers and therapeutic responses. Diagnosis techniques include self-examination, mammography, ultrasound, biopsy and genetic testing. These methods help to identify the stage, type and spread of the cancer. The advancements in molecular biology have led to the formation of therapeutic targets such as hormone receptors (estrogen and progesterone receptors), HER2 proteins and BRCA1 and BRCA2 genes. Targeted therapies based on these receptors and genes have shown better results in treatment. Hormone therapy, radiation therapy, chemotherapy, immunotherapy and surgery are some standard treatment options.

This Special Issue aims to present a collection of original research articles and reviews that address the use of modern molecular diagnosis techniques and targeted therapies in breast cancer.









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Editor-in-Chief

Message from the Editor-in-Chief

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