

### **Personalized and Dynamic Therapy for Breast Cancer: A Preclinical Perspective**

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#### **Abstract**

Breast cancer is one of the leading causes of mortality worldwide. Genomic studies have provided key insights into how breast cancer develop, evolve, metastasize, recurrence and respond to treatment. The advance of next-generation sequencing (NGS) and bioinformatics has led to an unprecedented view of the breast cancer genome and its evolution, and made the dynamic monitoring of recurrence and selective evolution of breast cancer during therapy a reality. Here we illustrate a proposed preclinical strategy of personalized and dynamic therapy for breast cancer based on the technologies of NGS and patient-derived tumor xenograft (PDX) model. The goal of this strategy is to provide a preclinical model of personalized and dynamic therapy for breast cancer to improve patients' outcomes.

**Key words:** breast cancer, next-generation sequencing, personalized cancer therapy, dynamic therapy