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An in Depth Review on Breast Cancer Detection System

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Abstract: *Systems for detecting breast cancer include a wide range of techniques and tools for identifying, treating, and tracking the disease. The most recent developments in the field are reviewed in detail, including liquid biopsy, thermography, clinical decision support systems (CDSS), genetic testing, mammography, ultrasound, magnetic resonance imaging (MRI), biopsy techniques, artificial intelligence (AI) and machine learning, and patient risk assessment tools. Every strategy has its own benefits and drawbacks, adding to the complex field of breast cancer diagnosis. It is possible to improve early detection rates, prognosis, and treatment outcomes by using a multidisciplinary strategy that integrates several modalities and technology. In order to improve the accuracy, usability, and financial viability of breast cancer detection systems in clinical settings, more research and development work is necessary.*

Keywords: Breast Cancer Detection System, Mammography, Deep learning, Machine learning, Early detection, Feature selection, Clinical data integration, Accuracy.

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