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# The usage of artificial intelligence in the early breast cancer detection

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**Objective:** This literature review aimed to evaluate the effectiveness of using artificial intelligence in breast cancer screening and its impact on diagnostic approaches for early-stage detection among women. **Methodology:** This is a systematic literature review that analyzed data from three databases: PubMed, SciELO, and MEDLINE. The search terms used were “breast cancer,” “artificial intelligence” (AI), and “diagnostic” to select articles and studies published between 2019 and 2023. The results were analyzed to draw a conclusion about the proposal of this systematic review. **Results:** The literature review provides strong evidence for the use of AI in the early detection of breast cancer. Computer-assisted detection systems, specifically the modern “CAD 2.0” based on optimized learning algorithms, have increased the percentage of malignancy detection and reduced false positives. Additionally, breast tomosynthesis and radiometric techniques have shown promising results in the early tracking and prognosis of breast cancer. These advances demonstrate the potential of AI to improve the precision and effectiveness of breast cancer tracking, contributing positively to clinical practice and enabling early and more accurate interventions for breast cancer patients. **Conclusion:** Through thorough examination and analysis of pertinent studies, it is discerned that the integration of AI in breast cancer screening has been a practice spanning several decades, yielding considerable advantages ranging from image generation to outcome prediction. Nonetheless, lingering inquiries persist regarding this technology, encompassing bioethical considerations and the refinement, progression, and management of AI systems. Thus, it is anticipated that, in forthcoming years, AI will progressively increase its role in facilitating the screening process and promoting early detection of breast cancer.

**Keywords:** artificial intelligence; breast neoplasms; women’s health.