

Implementation of Artificial Intelligence in mammography centre - Preliminary

This case study explores the implementation of an artificial intelligence system into mammography screening in the Czech Republic. The technology is designed to support radiologists in detecting breast cancer earlier and with higher accuracy, while also reducing workload in high-volume screening settings. The study examines the practical integration of AI into existing clinical workflow. Outcomes show that AI can improve (will be added after completion of research...).

Description of Technology or System

Transpara Breast Care is an AI system for mammography and tomosynthesis, that uses deep learning to analyse breast images and assign a risk score indicating the likelihood of malignancy. Based on this score, it categorises images into three risk categories. The software highlights suspicious regions and can function either as a triage tool or as support for radiologists. It's aim is to improve cancer detection rates and optimise radiologists' workflow in breast cancer screening.

Implementation Process

- The entire implementation process took approximately 12 months.
- Stakeholders include management of the mammography centre, AI system vendor, radiologists and radiologic technologists.
- Steps: initial presentation of the system, testing of a demo version, decision to purchase and configuration of full version, staff training

Impact and Results

- Data collection is in progress. To be completed.

Country	Czech Republic
Institution/Organisation	Czech Technical University in Prague
Type of setting	Clinic
National Context	In the Czech Republic, breast cancer screening has been organised on a nationwide scale for more than two decades. Thousands of women are examined each year, which places a considerable workload on radiologists and highlights the need for innovations that can support timely and accurate diagnosis. Recent interest has therefore focused on integrating artificial intelligence into clinical practice as a tool to enhance both efficiency and diagnostic performance.

Success Factors

- Strong leadership and clear vision
- Gradual and staff-centred introduction
- Transparent communication with patients
- Sustainable financial model
- Reliable technical support and smooth integration

Challenges and Barriers

- Scepticism among radiologists, who were unsure about the reliability and added value of AI in routine practice.
- Centre needed to determine how to finance use of the system, which was resolved through patient co-payments

Key Lessons Learned

- Gradual, staff-centred approach greatly supports acceptance of AI, allowing radiologists to build confidence in the system
- Clear vision and consistent guidance help steer the team through the adoption process
- Transparent communication with patients maintains trust and supports the ethical use of new technologies

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