Lunit INSIGHT MMG

Scaling Quality Care with AI:

Delivering Efficiency Without Compromising Accuracy

BreastScreen New South Wales (BSNSW) struggled to maintain operational efficiency and uphold the high detection accuracy required to meet national accreditation standards. Traditional “double-blind” reading protocols, while essential for improving detection rates and preventing poor screening outcomes, proved to be both labour-intensive and time-consuming. These inefficiencies strained resources and threatened the quality of care, creating an urgent need for a solution that could enhance accuracy, streamline workflows, and ensure compliance with stringent regulatory requirements.

What sets this project apart

AI deployment sets a benchmark with multi-agency governance and national accreditation

Branding AI as a “machine reader”, in line with community consultation that AI be monitored and treated like any other reader

650K

Largest global study of mammograms, proving **AI matches or outperforms traditional methods**

Women aged **50-59**

Phased rollout to ensure **optimal AI performance** before full-scale expansion

Why Lunit INSIGHT MMG was the clear choice

After a tender process, BSNSW selected Lunit INSIGHT MMG for its unmatched clinical performance demonstrated during a test set evaluation using local NSW mammograms. The solution stood out for its proven scalability and seamless compatibility with state health IT systems, ensuring efficient integration into existing infrastructure. Additionally, Lunit INSIGHT MMG met BSNSW’s stringent security and validation requirements, facilitated by a robust technical support framework that aligned with the organisation’s rigorous operational standards.

> “By combining the strength of technology with the world-class expertise of our specialist radiologists, machine reading will help support the thousands of women accessing our state’s breast screening services, now and into the future.”
>
> **Professor Tracey O’Brien AM**
> Chief Cancer Officer and Chief Executive of Cancer Institute NSW

A pioneering project with high-value impact

BSNSW valued several key aspects of Lunit INSIGHT MMG, with its potential to address critical radiologist shortages standing out as the most transformative. The solution provided a scalable, AI-powered alternative that maintained high-quality breast cancer screening services without overburdening the limited radiology workforce. Screening up to 350,000 women annually, BSNSW's adoption of AI improves detection accuracy and timeliness, significantly enhancing public health outcomes by enabling earlier intervention and potentially saving more lives.

A streamlined and comprehensive implementation

The implementation process, though extensive, followed a structured, multi-phase approach to ensure accuracy, reliability, and minimal disruption. Spanning nearly five years since the initial tender process in 2019, it included:

Retrospective validation: A groundbreaking analysis of 650,000 mammograms, marking the largest study of its kind.

Prospective validation: Integration into existing workflows validated over a two-year period, ensuring operational efficiency and reliability.

Clinical use: A measured rollout targeting women aged 50–59, enabling focused monitoring and comprehensive performance assessment before broader deployment.

This methodical approach ensured a smooth transition to clinical use, solidifying Lunit INSIGHT MMG as an essential tool for BSNSW's mission to enhance mammography screening outcomes.

Tangible benefits and measurable outcomes

Following a successful go-live phase, BSNSW has realised significant benefits by integrating Lunit INSIGHT MMG into its screening workflows. The introduction of AI reading has reduced reliance on radiologist resources, helping to mitigate the impact of looming workforce shortages. Despite these efficiencies, diagnostic accuracy has been maintained or improved, with AI sensitivity aligned to the performance of human readers.

The solution has also supported the planned expansion of the screening programs while ensuring quality through strict validation and threshold selection. A retrospective analysis of 650,000 mammograms confirmed the clinical equivalence or superiority of AI-assisted methods compared to traditional protocols, marking a milestone in advancing mammography screening practices.

While the full results of the validation phase, including interval cancer data, are pending publication, the early outcomes highlight the transformative potential of Lunit INSIGHT MMG in addressing critical challenges in breast cancer screening.

> "NSW is proud to lead the way in the introduction of cutting-edge technology to ensure the sustainability of the life-saving BreastScreen NSW program."
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> **Ryan Park**, Minister for Health, NSW Government