Breast AI Analysis package
Powered by RUBEE™

Embedded intelligence, supporting the clinical workflow
Embedded intelligence, 
supporting the clinical workflow

RUBEE for AI and the significance of the Enterprise Imaging platform

Healthcare systems across the globe are exploring the potential application and benefits of Artificial Intelligence for improving quality care, focused on outcomes. The path towards realizing the benefits opens another opportunity: addressing the interoperability and integration aspects. Already, there are hundreds of start-ups and AI developers working in the healthcare arena, each focusing on highly specific applications. Selecting which ones you need, and then integrating them into your system and workflows is far from simple!

RUBEE for AI, as part of your Enterprise Imaging platform, offers a seamless AI experience for your clinicians. Carefully curated ‘packages’ embed best-of-breed AI apps that support your real clinical workflow from start to finish.

With RUBEE for AI, you get more out of your AI investments, while enriching the value of your Enterprise Imaging. It’s a win-win-win for your hospital, your clinicians and your patients!

What is RUBEE for AI?

With RUBEE for AI, you can embed our AI specialty packages into your clinical workflows.

RUBEE visualizes the metadata generated by algorithms such as deep learning, machine learning, image analysis and natural language processing. It also uses that information to automate and optimize your workflows, all within your Enterprise Imaging ecosystem.

Future-proof and clinically relevant

‘Augmented Intelligence’ does just that: offering a set of tools that let your clinicians maximize the value of their own expertise, increase their productivity and enhance diagnosis. But to get the real benefits to your clinicians, the tools need to be embedded right into the workflows and systems they use every day.

Your Enterprise Imaging already offers a future-proof, multi-specialty platform that consolidates your hospital’s wealth of data. With RUBEE for AI, it also becomes your AI-enabled ecosystem.

Standards-based workflows are embedded with niche and specialty-focused AI apps, delivering clinical relevance. No need for an additional, complex and costly dedicated AI platform or marketplace. And, instead of worrying about which apps to select and how to integrate them, you are leaping ahead with an ecosystem of seamlessly embedded AI.
Best-of-class AI apps, specialty packages

We have taken the guesswork out of your AI journey. Our AI specialty packages have been carefully curated to enable interoperability and integration of best-of-class algorithms. You can be confident that all the algorithms come from reliable companies, and trained on evidence-based data.

Most of all, they are powered by RUBEE for AI, ensuring that they meet your specific clinical needs from start to finish. So, there’s no ‘trial and error’: just proven value.

Enrich your Enterprise Imaging workflows

With AI fully embedded in your Enterprise Imaging platform, your clinicians see benefits all along the line.

- Task assignments and case distribution are smoothly automated, based on the metadata generated from the AI apps.
- Hanging protocols get ‘smart’, with dedicated reading protocols.
- Reports are automated by auto-including AI results into the reporting workflow.

Offering advanced visualizations, workflow optimization and automation, RUBEE for AI helps your clinicians to focus their efforts on cases that require immediate attention.
Radiology plays a critical role in timely diagnosis and treatment of breast cancer. Yet the high volume of cases combined with the need to avoid unnecessary costs, such as unnecessary biopsies, is putting the radiologist under greater pressure than ever.

Machine learning and deep learning models can relieve some of that pressure, by prioritizing the cases that need to be reviewed first and reducing interobserver variability.

Agfa HealthCare’s Breast AI Analysis package, powered by Lunit INSIGHT MMG® and embedded in your Enterprise Imaging solution, is a workflow-centric, evidence-based AI package that lightens the radiologist’s workload while enhancing the early detection of breast cancer through cost-effective, quality diagnostic services.

It thus supports medical imaging to help further contribute to enhancing long-term survival rates for women with breast cancer.
**Enhanced workflow and augmented detection**

Agfa HealthCare's Breast AI Analysis package (RUBEE for AI + Lunit INSIGHT MMG®) helps improve the screening and diagnostic workflow with advanced visualizations, workflow orchestration and triage benefits, dedicated reading protocols and report notifications.

By enabling Agfa HealthCare's Breast AI Analysis package, radiologists can focus on the cases that require immediate attention, and by helping detect cancer early, the Breast AI Analysis package supports the delivery of cost-effective, quality care.

- FDA and CE-cleared AI solution that supports 2D mammo and breast density assessment
- Optimized for screening and diagnostic workflows
- Helps reduce recall rate by enhancing reader performance
- Highly performant solution for women with fatty and dense breast tissue
- RUBEE-enabled triage, prioritization, visualizations and smart hanging protocols

---

**Fast triage of normal cases**

According to the abnormality scores generated by AI, radiologists can successfully triage up to 60% of all cases without human interpretation, which can reduce their mammogram interpretation workload by more than half.

**60%** Triage up to 60% of all cases without human interpretation  
**+50%** Reduce workload by more than half (½) in mammogram interpretation.

**Rule out:**
60% of all cases with scores below a rule-out threshold could be triaged to a no-radiologist work stream and interpreted as negative.

**Rule in:**
Detect more cancer cases that were originally interpreted by double reading as normal. Cases interpreted as normal but with scores above a rule-in threshold could be considered for supplementary breast imaging tests to detect more cancer that could have been missed.
Advanced visualization

The Breast AI Analysis package provides:

- The location information of detected breast cancer in the form of heatmap and outlines.
- An abnormality score for each side of the breast, which reflects the AI’s calculation of the actual presence of the detected breast cancer.

Structured reporting

Both LUNIT INSIGHT MMG and Enterprise Imaging support DICOM Structured Reporting.

1. Detect more breast cancers
   The combination of first-reader radiologists and Lunit AI detects more breast cancers, than not only the first-reader and second-reader radiologists but also the double reading by radiologists.\(^3\)

2. Improved reading performance of general radiologists and breast specialists
   General radiologists can use the AI analysis results to improve their reading performance, at a level up to that of breast specialists.\(^3\)

3. Early diagnosis of breast cancer
   Radiologists can detect T1 and node-negative breast cancer with 91% and 87% accuracy, respectively.\(^4\)

4. Support for decision-making on BI-RADS 3 and 4 cases
   For difficult cases classified as BI-RADS 3 or 4, radiologists can compare their reading result and decide with confidence whether additional exams such as ultrasound and biopsy are needed.

5. Improved diagnostic accuracy for dense breasts
   Radiologists can improve their diagnostic accuracy for dense and fatty breasts by up to 9% and 22%, respectively.\(^5\)
The optional XERO Xtend Breast AI mammography tools enhance collaboration, with visualization of detection aid (CAD markers) and exam scores.

References:


1 If you already have XERO Xtend, the Breast AI tools will be active.