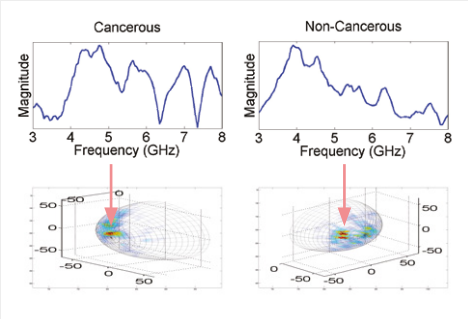
Tissue differentiation powered by AI

MARIA® is currently used as an adjunct to other imaging modalities to reduce the chance of missing a cancer. We already know from work carried out at Micrima that different types of lesion give a different response across the frequency spectrum.[2]



Frequency response from a patient

Micrima's growing database of anonymized patient information, has images from different modalities as well as defined patient histology. We are now reprocessing this data with Artificial Intelligence technology to improve cancer detection and begin the process of characterising our cancer findings for newly acquired images. As we continue to add data to the database with the assistance of our clinical partners, we expect to be able to further stratify lesions and possibly even different types of cancer. Our aim is to empower radiologists with this new technology.

Scan the QR code to see the full animation of MARIA® and how it works

[2] Radio-wave imaging – Frequency response as an aid to lesion characterization. Early concept work. T Doshi et al- Symposium mammographicum 2018

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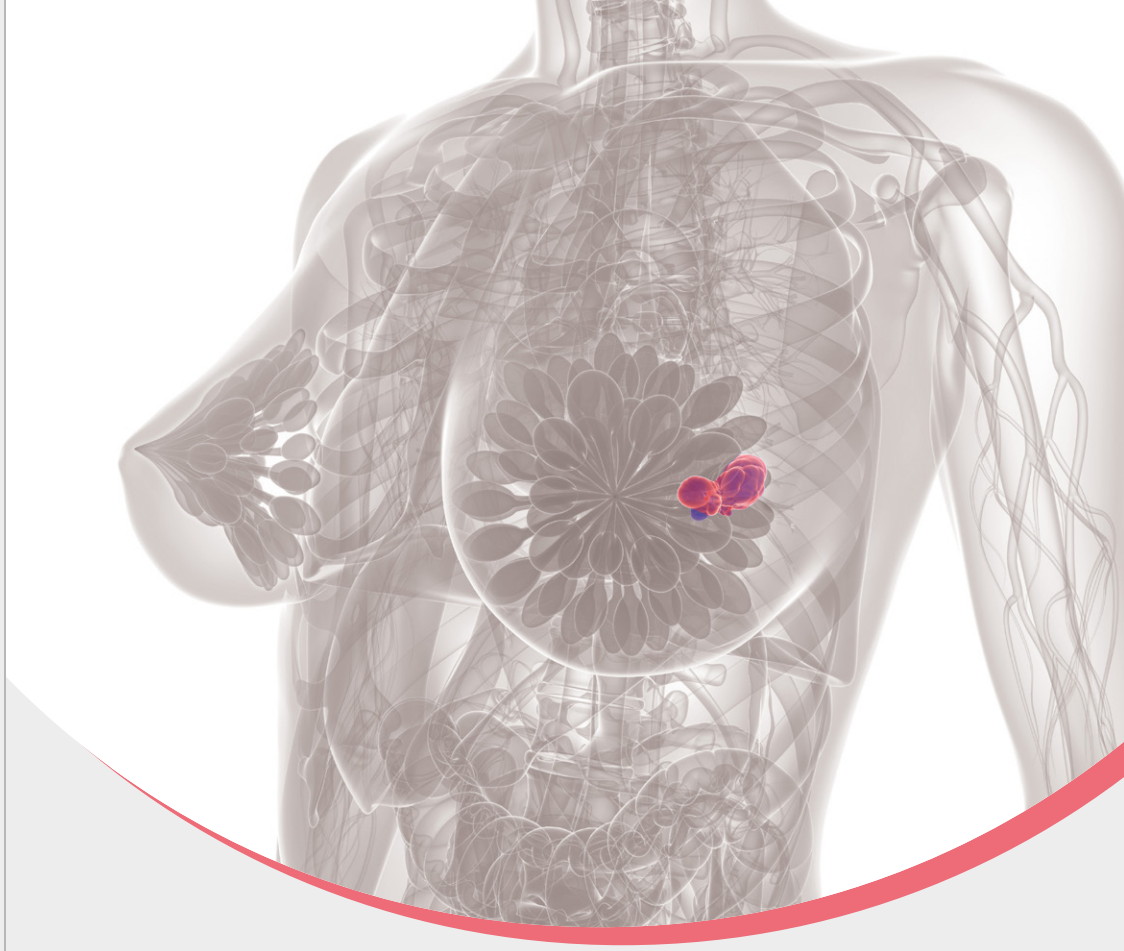
PM-001 Rev3

Micrima®

Evolving Medical Imaging



MARIA®

New radio-wave breast imaging for dense tissue

Tissue differentiation powered by AI

Micrima®

Evolving Medical Imaging

How does MARIA® work

The patient lies prone on the bed with the breast to be imaged pendulous through a circular aperture in the bed. The array then comes up to gently cup the breast (with different sized inserts for different sizes breasts).

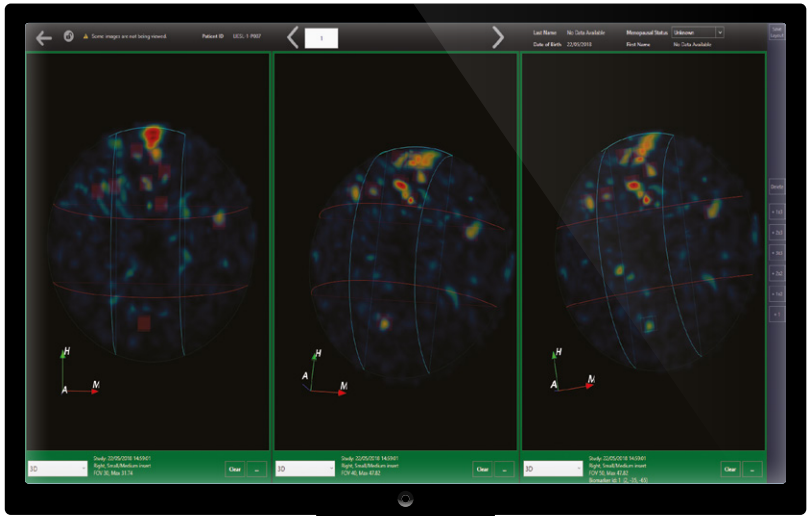
Patient position on the bed

The array contains 60 antennae, that each transmit and receive in turn. This takes 22 seconds before the array rotates. The process is repeated twice more in order to build up a 3D map of the tissues throughout the breast.

Array with representation of the radio-waves

What MARIA® measures

Scan data is collected from 1770 interrogation pathways, and across 101 different frequencies, from 3GHz to 8GHz. MARIA® measures the signal reflected at the interface between tissues of different electromagnetic material properties, showing reflections from the edges of lesions. These are reconstructed and shown as areas of high intensity in the MARIA® image. 3 images are generated and displayed to ensure all of the breast is covered.



Patient data shown in MARIA® user interface

MARIA® has been used to scan over 500 women now in various clinical trials and has demonstrated the ability to detect breast cancer, particulalry in dense tissue.[1] New clinical trials are taking place at various centres in Europe. To find out the latest presentations and publications go to the clinical section of the Micrima® website or contact us.

Today MARIA® can be used as an adjunct to mammography to assist in reducing the chance of missing cancers, particularly in dense tissue.

[1] Detection of breast cancer in the symptomatic clinic using radio-wave technology-a Multi-centre study. I Lyburn et al Symposium mammographicum 2018