

Use of Contrast-Enhanced-Mammography with the Sirius Pintuition Marker: a single case report (2)

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Conclusions

The Sirius Pintuition Marker was correctly positioned in the lesion, it was easily found during surgery and allowed the removal of the lesion with adequate intraoperative margins. The Sirius Pintuition Marker did not cause any artefact on CEM images.

Case Description

At screening mammography a 20 mm lesion in the upper quadrant retroareolar region of the left breast was identified in a 50 year old patient

Diagnosis

Upon the physical examination an indurated ill-defined nodule was noticed in the retroareolar region of the left breast that was causing nipple retraction. Breast imaging techniques were performed (ultrasound, MRI, mammography and contrast mammography) revealing an architectural distortion in the retroareolar region of the left breast that showed intense heterogeneous non-mass enhancement after contrast administration. The lesion was categorised as BIRADS 4C.

The results of the core biopsy showed an infiltrating ductal carcinoma with the following characteristics:

- Histologic grade: I, well differentiated
- Lymphovascular invasion: absence.
- Intraductal carcinoma: absence
- Pattern: solid-cribriform
- Necrosis: No
- Microcalcifications: No
- Molecular profile
 - Hormone receptors: positive (estrogen 90%, progesterone 100%)
 - Cell proliferation index: Ki67 19%
 - Her2: negative

Breast Cancer cT2N0 Ductal infiltrating G1 Luminal A (phenotype)

Treatment and outcomes:

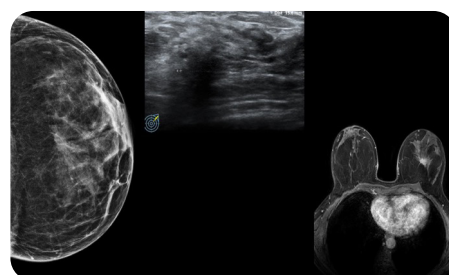
A Sirius Pintuition Marker was placed in the centre of the lesion by US guidance and its position was confirmed by CEM. The Pintuition Marker did not cause any artefact and did not prevent the correct reading of the contrast mammography

CEM acquisition imaging protocol:

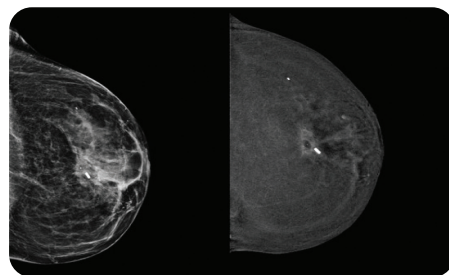
Contrast agent concentration of 350 mg I/mL or 300 mg I/mL, with a dose of 1.5 ml/kg and a 3 ml/s flow with the breast compressed. The acquisition protocol starts 2 minutes after the contrast injection with a window of 8 minutes to acquire the breast images. Sequences: 1° cranio-caudal (CC) of the affected breast, 2° CC and oblique medio-lateral (OML) of the health breast and 3° OML and lateral of the affected breast. A dual image is obtained: a low energy image to evaluate the density of the breast and the characteristics of the lesions and a high energy one to evaluate both the background and the lesion.

Surgery: lumpectomy + Sentinel Lymph Node Biopsy

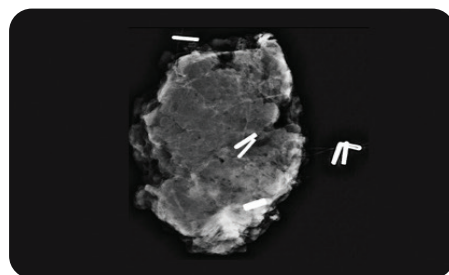
The lesion was precisely localized with Sirius Pintuition and successfully removed with adequate intraoperative margins. The SLNB was negative.



Pre-op images



CEM image post-deployment of the Pintuition Marker



Post-op images

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