# Did you know?
## Mucinous Carcinoma of the Breast

## Abstract

Mucinous carcinoma represents from 2 to 3% of invasive cancers (Ref. 1). It particularly affects older women (> 60 years old). Lymph node metastases are rare (2% - 4%). The diagnosis is confirmed by micro biopsy. The 5-year survival rate is 90 to 100% for pure forms and 60% for mixed forms (Ref 2).

Mucinous carcinoma is a type of invasive ductal carcinoma (Figure 1), quite rare, accounting for only 1 to 7% of breast cancers (Ref. 3). Also called colloid carcinoma, it develops more often in women aged 60 to 70 years. Histologically, it is an invasive epithelial tumor. Two different forms are described: mixed mucinous carcinoma, and pure mucous carcinoma, the latter being less aggressive.

The diagnosis of mucinous carcinoma is usually made during mammography and ultrasound exams, often completed with MRI. Only micro-biopsy is able to eliminate a differential diagnosis such as mucocele-like lesions of the breast or myxoid fibroadenoma.

This cancer has a rather favorable prognosis, correlated with a low incidence of metastatic lymph node proliferation. Indeed, the ten-year survival rate goes from 91% in the pure form to 46% in the mixed form. Late locoregional and distant relapses can occur, hence the need for long-term follow-up.

## Complications

- Lumps
- Breast and nipple pain
- Nipple retracted
- Skin redness
- Unusual change in breast appearance

## Possible treatments

- Mastectomy (removal of an entire breast)
- Tumorectomy (conservative breast surgery)
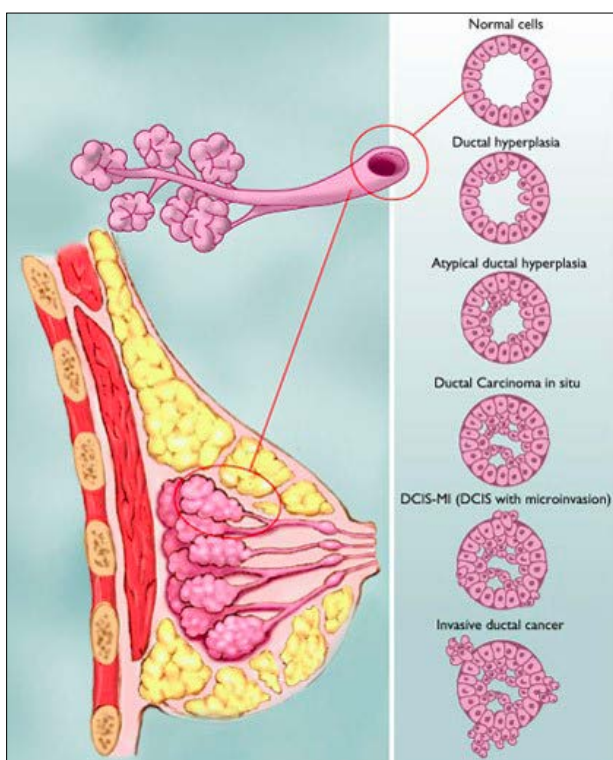- Adjuvant therapy (chemo, radio and hormone therapy)



**Figure 1**

## In Olea Sphere®

The breastscape suite brings together within a single, multimodal interface all the tools needed for diagnosis, follow-up and biopsy of a high-risk breast lesion. Indeed, breastsApp offers a rapid morphological review, giving the radiologist all advanced visualization tools such as dynamic 3D MIP, MPR and subtraction (Figure 2). Automatic computation and analysis of semi-quantitative T1-weighted perfusion maps such as Peak Enhancement and Curve Washout allow, using a predefined threshold, to identify and segment the lesion (Figure 3).

In order to optimize the diagnosis workflow, a BI-RADS® report is included in the application, with a possible export to PACS.
BreastLoc is an additional option, assisting users in planning MR guided breast interventional procedure. The radiologist within the same interface can review the previous exams, prepare the biopsy, and edit the report (Figure 4).
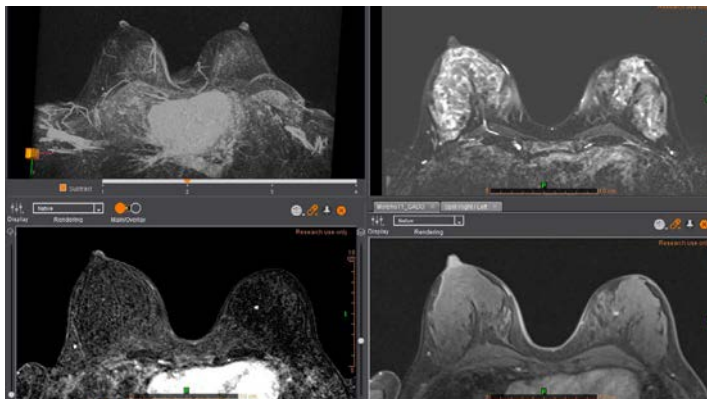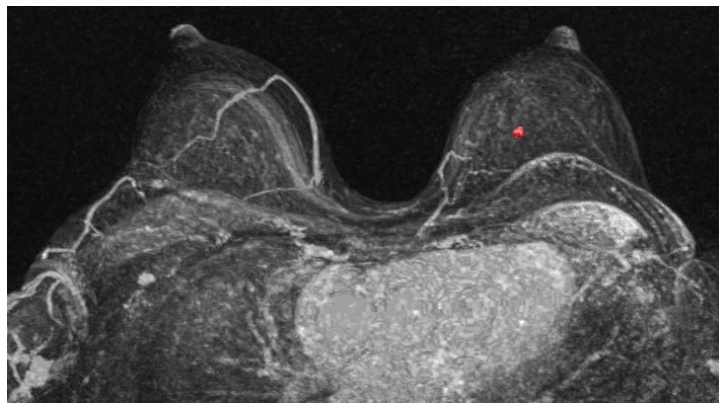
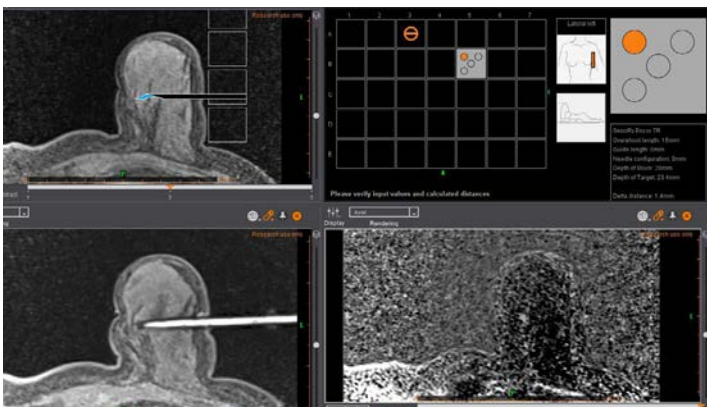## Addition

BI-RADS®* : the "Breast Imaging-Reporting and Data System" is an atlas proposed by the American College of Radiology (ACR). It helps in diagnosis standardization, and in the lesion classification. The MRI atlas is based on morphological and kinetic criteria (T1-w perfusion enhancement analysis).



**Figure 2**



**Figure 3**



**Figure 4**

## References

1. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3684304/
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3. http://pe.sfrnet.org/Data/ModuleConsultationPoster/pdf/2013/1/397583db-7ba0-4f9c-8674-f34b54feadf7.pdf
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