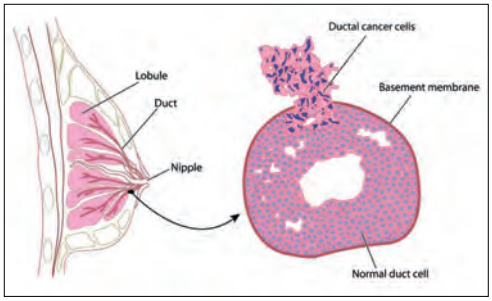
Olea MEDICAL
Improved diagnosis for life™

Did You Know?

DCIS (Ductal Carcinoma In Situ)

Take-home message

- Diagnosing DCIS involves physical examination of the breast; mammography and different types of biopsies.
- About 80% of DCIS cases are found by mammography.
- Although DCIS needs to be treated, it is not a life-threatening condition.
- It is the earliest possible form of breast cancer.



- **DCIS is the most common type of non-invasive breast cancer.** Ductal means that cancer starts inside the milk duct; carcinoma refers to any cancer that begins in epithelial tissues (structural tissue cells) or other tissues (including breast tissue) that cover or line the internal organs; and "in situ" means "in its original place".

This type of cancer is non-invasive because it does not spread beyond the milk duct.

DCIS will not spread to the lymph nodes under the arm, which is where invasive breast cancer can spread to, or to anywhere else in the body. DCIS generally has no sign or symptom.

A small number of people may have a lump in the breast or some discharge coming out of the nipple.

There is an increased risk of developing breast cancer or DCIS in families that have a history of breast cancer.

Complications

- DCIS can lead to breast cancer.
- High risk for developing a new breast cancer, the chances of recurrence are under 30%.

Possible treatment

- Lumpectomy (surgical removal of a discrete portion of breast) followed by radiation therapy or alone.
- Mastectomy (removal of the breast).
- Hormonal therapy after surgery.

In Olea Sphere®?

Breast application + Kinetics module

MRI can determinate the size of DCIS, necessary information for surgical removal **(1)**.

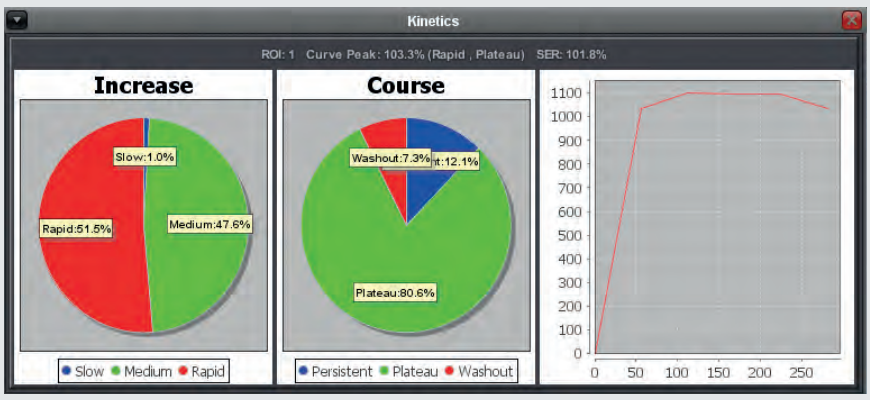
Thanks to **Breast application,** semi-automatic segmentation of the lesion volume and subtraction dynamic phases successively allow a **morphological** and **multi-parametric analysis.**

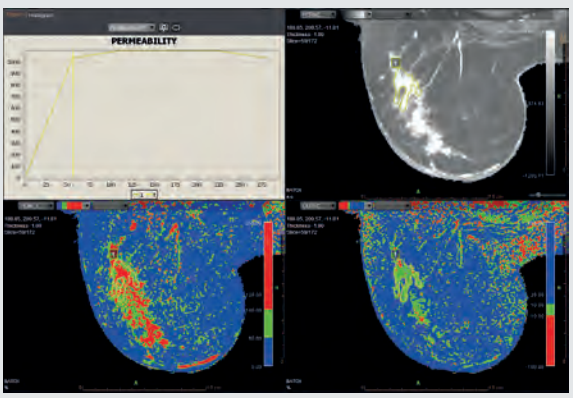
Thanks to computed maps in Kinetics, contrast enhancement may be characterized by **three types of curves *(++)**. The **dynamic analysis** of DCIS through optimal placement of a region of interest (ROI) helps to estimate the heterogeneity of the lesion.

In the case shown in **Picture 1,** the enhancement predominantly corresponds to the type 2 curve called **«with plateau»,** severity sign.

++

*The 3 types of curves :
-Type 1 : persistent peak
-Type 2 : peak with plateau
-Type 3 : wash-out peak





Picture 1

Sources: http://www.dcis.info/cause.html ■ http://www.mayoclinic.org/diseases-conditions/dcis/basics/causes/con-20031842 ■ http://www.breastcancer.org/symptoms/types/dcis ■ http://www.mayoclinic.org/diseases-conditions/dcis/basics/definition/con-20031842 ■ http://www.macmillan.org.uk/information-and-support/breast-cancer/dcis/understanding-cancer/what-is-dcis.html#4119 ■ https://wwwyoutube.com/watch?v=TribJtj3Fco ■ http://pe.sfrnet.org/Data/ModuleConsultationPoster/pdf/2008/1/961c30ec-93c4-41db-993d-66e97dedea0f.pdf ■ V.A. // B.T. // A.M. // S.F. // V.L.