Paget disease of the breast (also known as Paget disease of the nipple) is a rare form of breast cancer involving the skin of the nipple. It is characterized by infiltration of the nipple-areolar complex by adenocarcinoma cells. The disease affects mostly women but very rarely it can also affect men.

More than 90% of Paget disease cases are associated with an additional underlying breast malignancy. It is almost always associated with an in situ or invasive ductal breast carcinoma (see "Did You Know? N° 7") and represents the retrograde extension of the underlying carcinoma into the epidermis.

In approximately 50% of cases, a breast mass is palpable. Mammographic findings may be negative in up to 50% of cases. MR imaging can be useful for evaluation of the nipple-areolar complex and identification of an additional underlying malignancy in the breast.

Symptoms
- Itching and/or redness of the nipple
- Thickened skin around the nipple
- Red or dark areole around the nipple
- Discharge from the nipple
- A deformed nipple

Possible treatment
- Removal of the nipple and areola, followed by whole-breast radiation
- Mastectomy (removing of entire breast)
- If needed lymph node surgery and/or irradiation

In Olea Sphere®?
The fast and automatic computation of SER, Ktrans, Peak and Vp maps within Olea Sphere® allows to detect the under-nipple extension and reveal the pathological nature of the latter. The Ktrans map shows the contrast agent leakage from the vascular bed to the extracellular space, which reflects the pathological nature of the two lesions.

The automatic motion correction ensures optimal quality of computed maps. The MPR visualization and measurement tools provide the surgeon with essential information on the topography of the lesions that will drive the surgical decision (mastectomy, removal of nipple-areola complex NAP).

Sources:
4. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3263015/
6. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5660109/