

Mammary gland impedance image evaluation



Mammary gland impedance image evaluation

Image

Contour

*Mammary gland
anatomy*

*Local changes
of electrical conductivity*

*Lactic sinus
zone*

Measurement

*Mean electrical
Conductivity index*

*Electrical conductivity
distribution divergence*

*Local changes
of electrical conductivity*

Mammary gland impedance image evaluation

Image

Contour



- *deformation*
- *hyperimpedance*

Mammary gland anatomy



- *anatomy changes*
- *displacement of internal structures*
- *hyperimpedance area contour around the focus*

Local changes of electrical conductivity



- *hyperimpedance area*
- *hypoimpedance area*

Lactic sinus zone

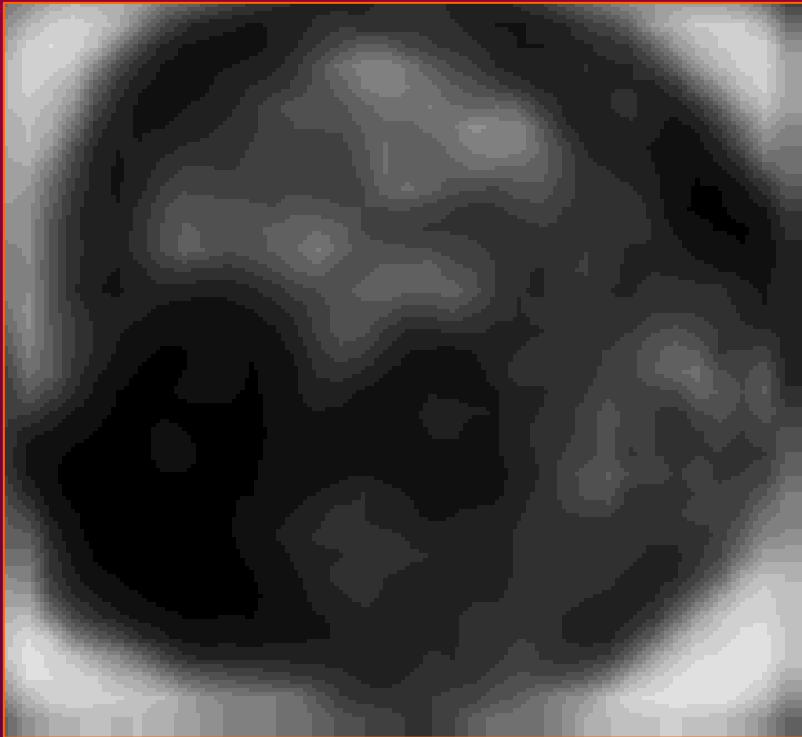


- *can be imaged*
- *can not me imaged*
- *dilated*
- *not dilated*

Mammary gland contours

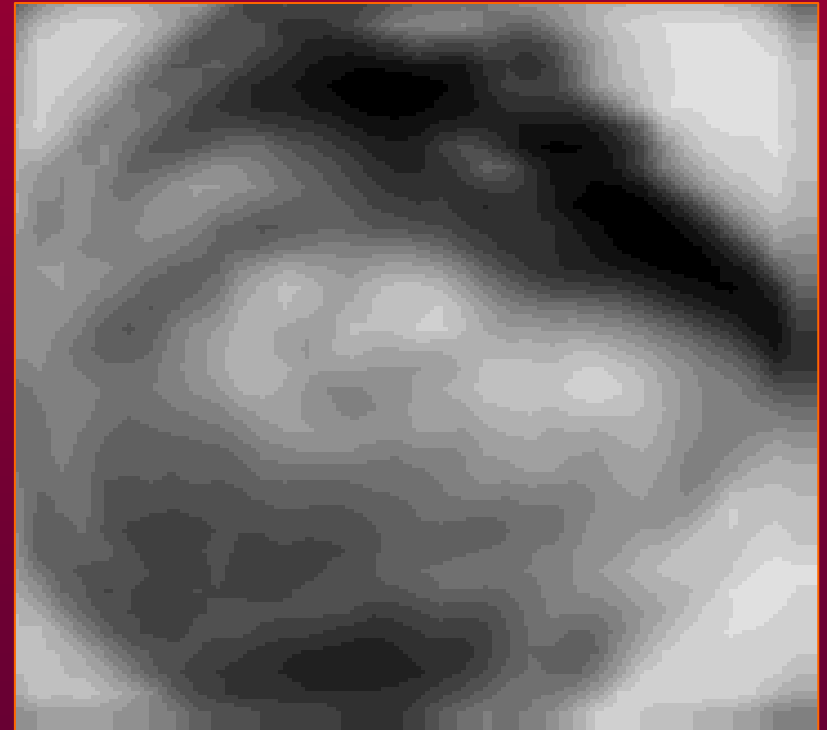
- Contour deformation

outwards (bulging)



Mastitis

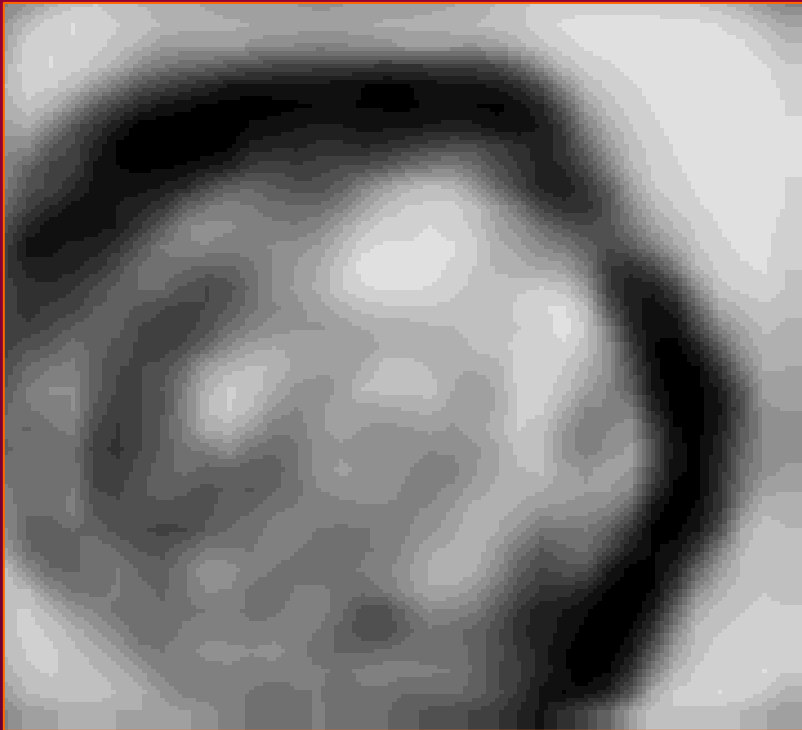
inwards (retraction)



Mammary gland cancer

Mammary gland contours

- Hyperimpedance of the contour (a 51-years-old patient)



Right mammary gland cancer

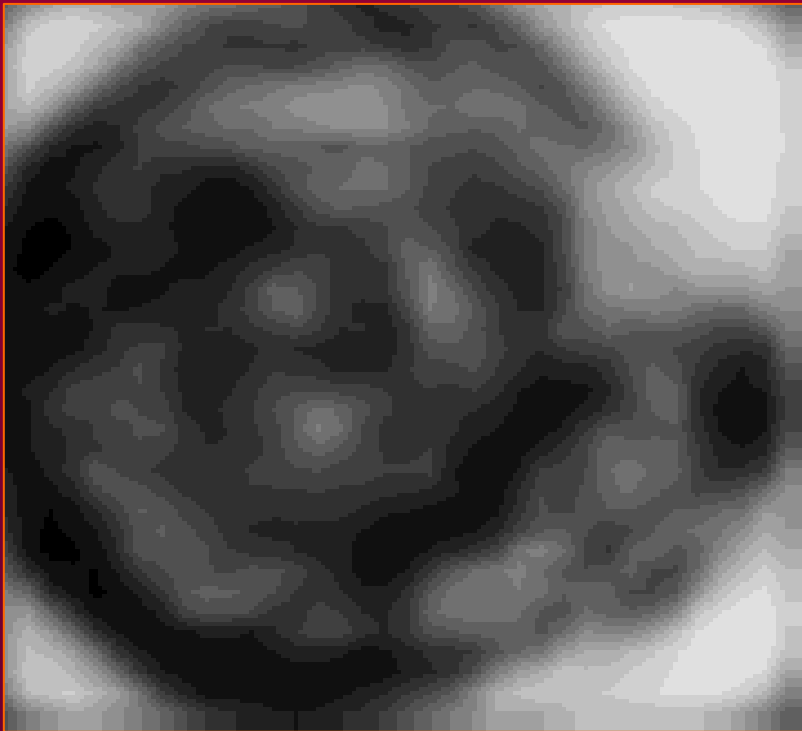


Left mammary gland

Mammary gland anatomy

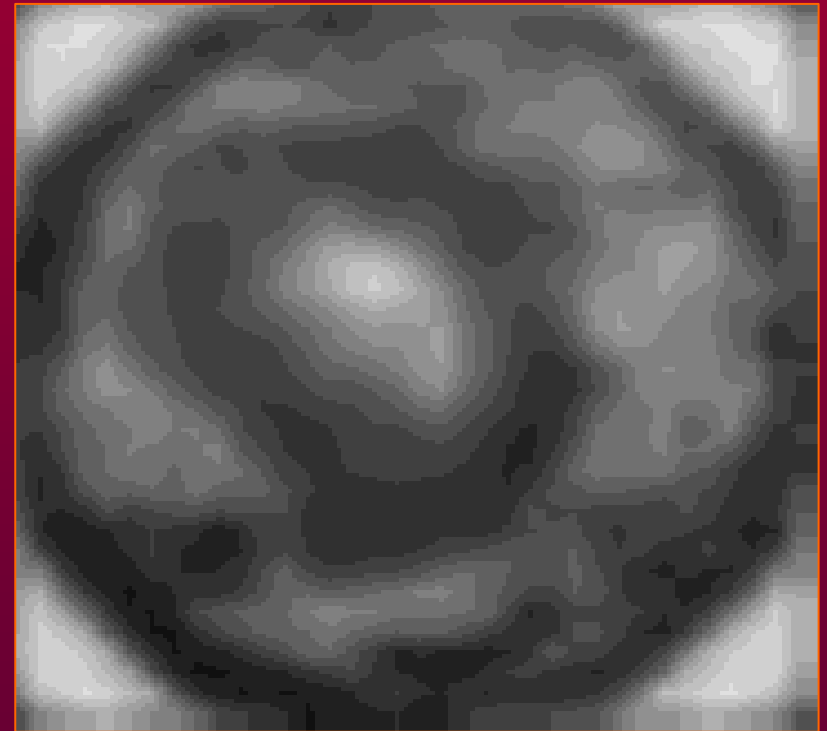
- Anatomy (a 39-years-old patient)

altered



Affected mammary gland (cancer)

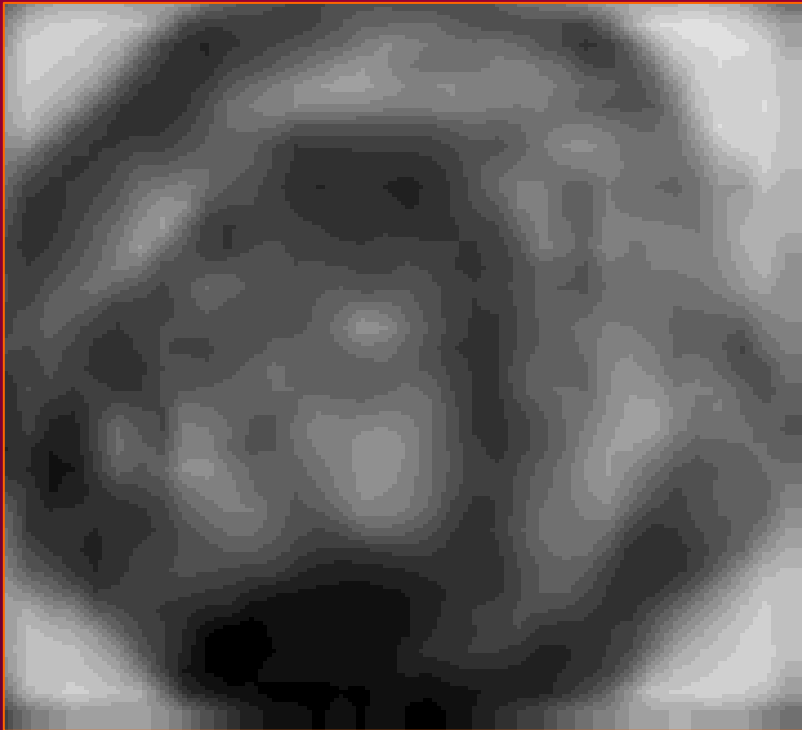
not altered



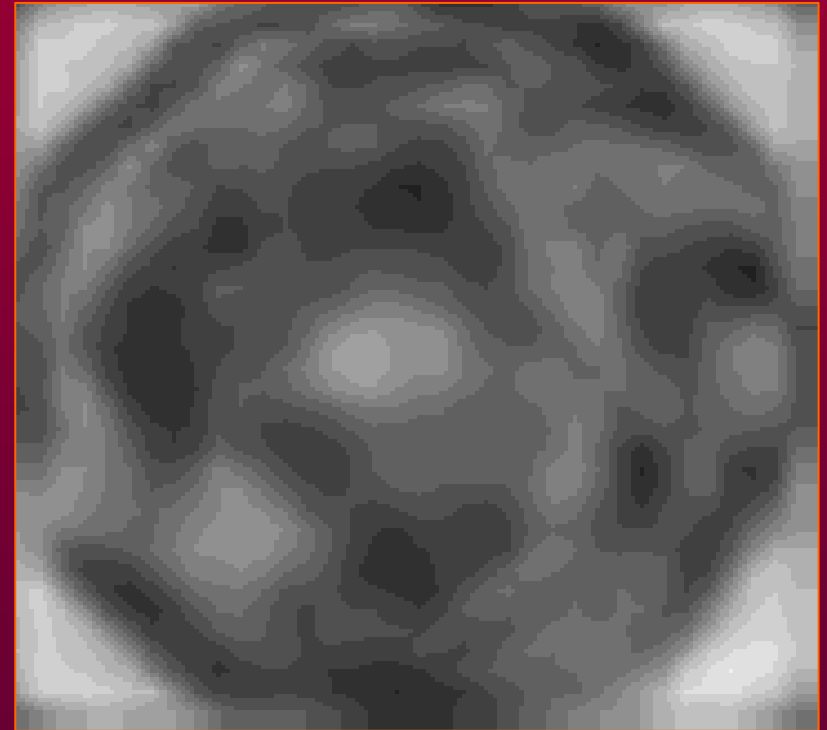
Normal mammary gland

Mammary gland anatomy

- Displacement of internal structures (a 50-years-old patient)
with displacement *no displacement*



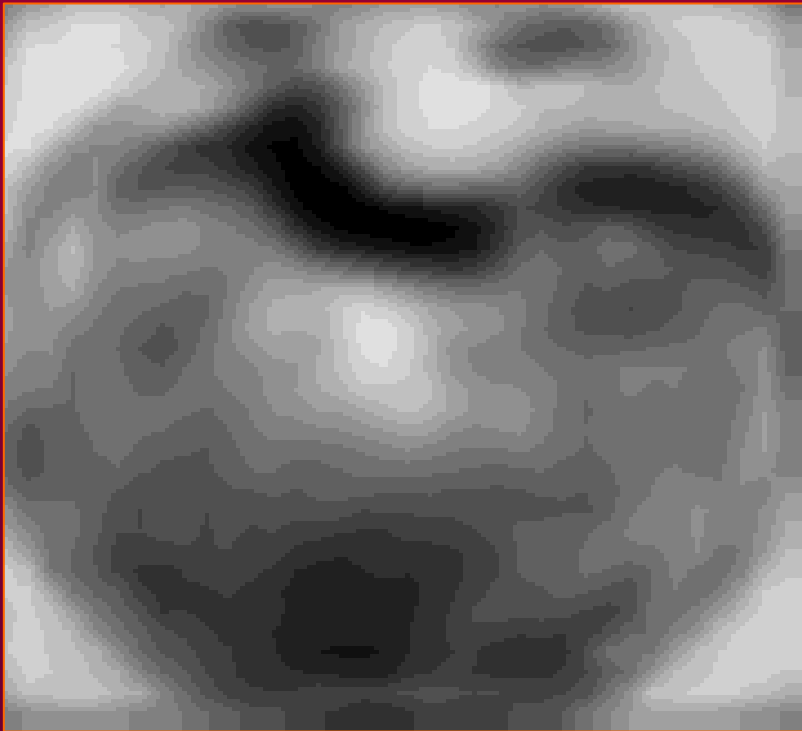
Affected mammary gland (cancer)



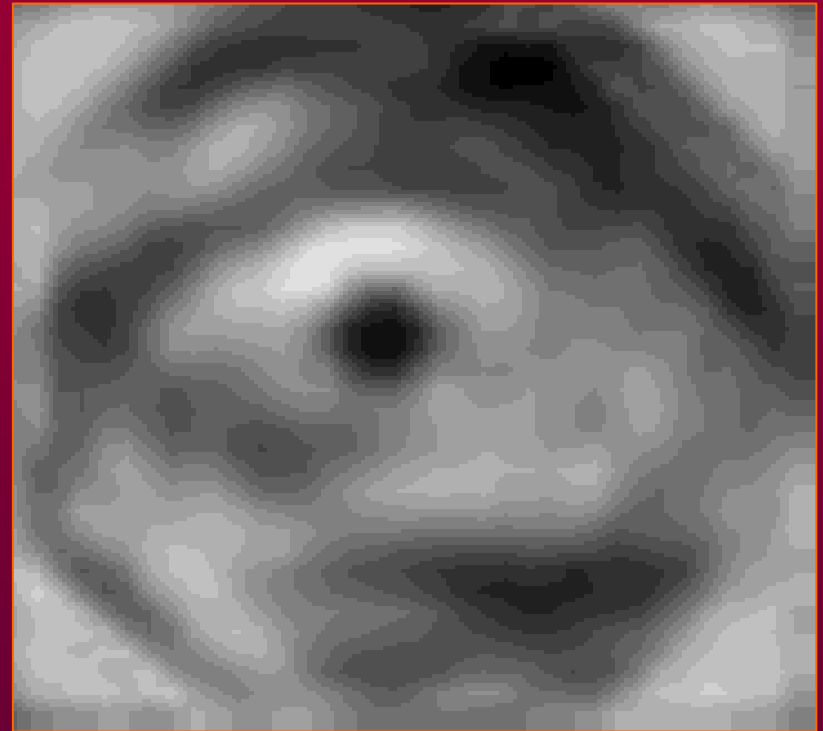
Normal mammary gland

Mammary gland anatomy

- Hyperimpedance contour around the focus
(a 67-years-old patient)



Affected mammary gland (cancer)

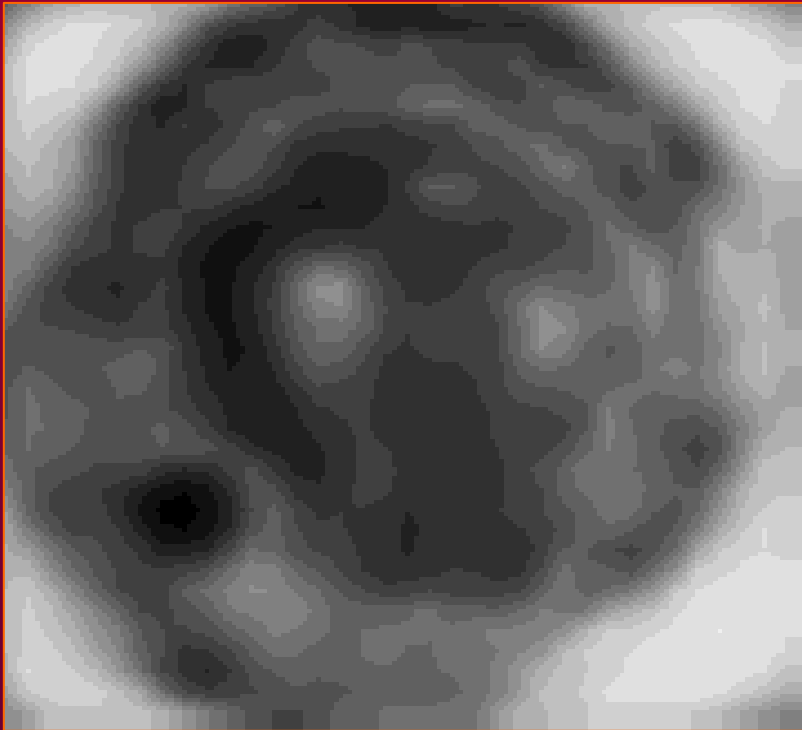


Normal mammary gland

Local changes of electrical conductivity

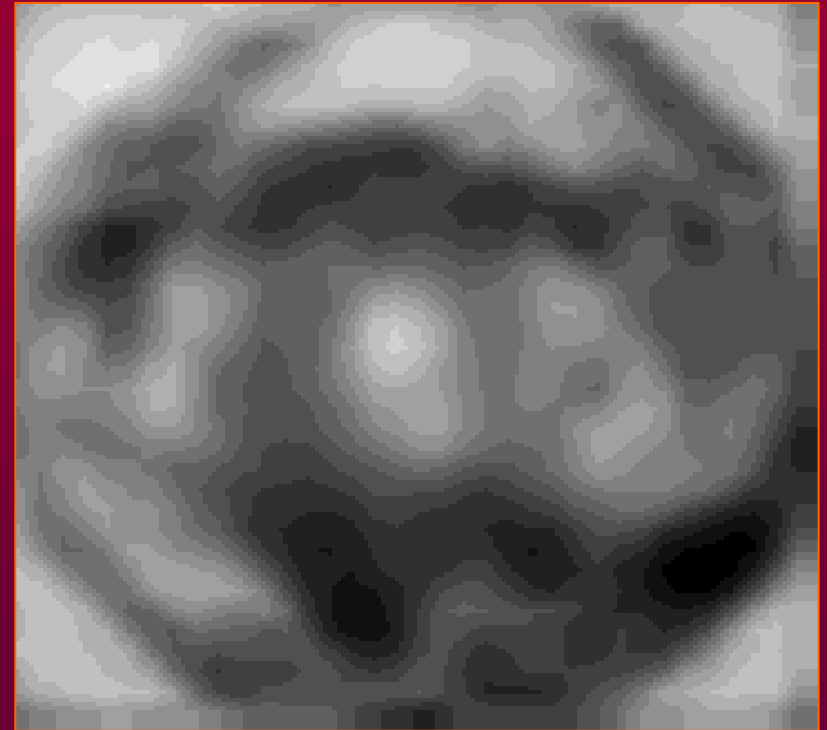
- Changes of electrical conductivity (a 50-years-old patient)

hyperimpedance area



Mastitis

hypoimpedance area

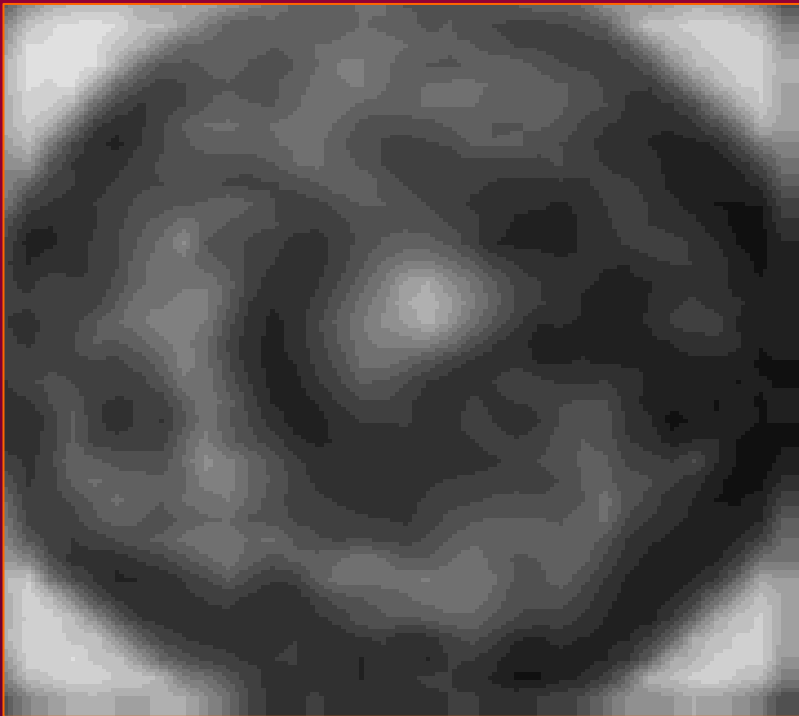


Mammary gland cancer

Lactic sinus zone

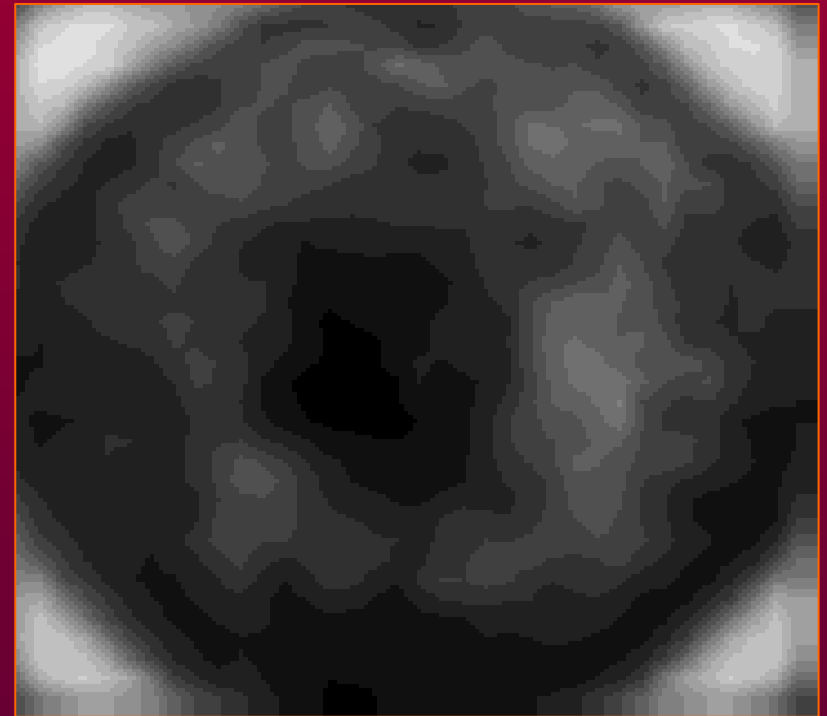
- Lactic sinus

can be imaged



A 42-years-old patient

can not be imaged

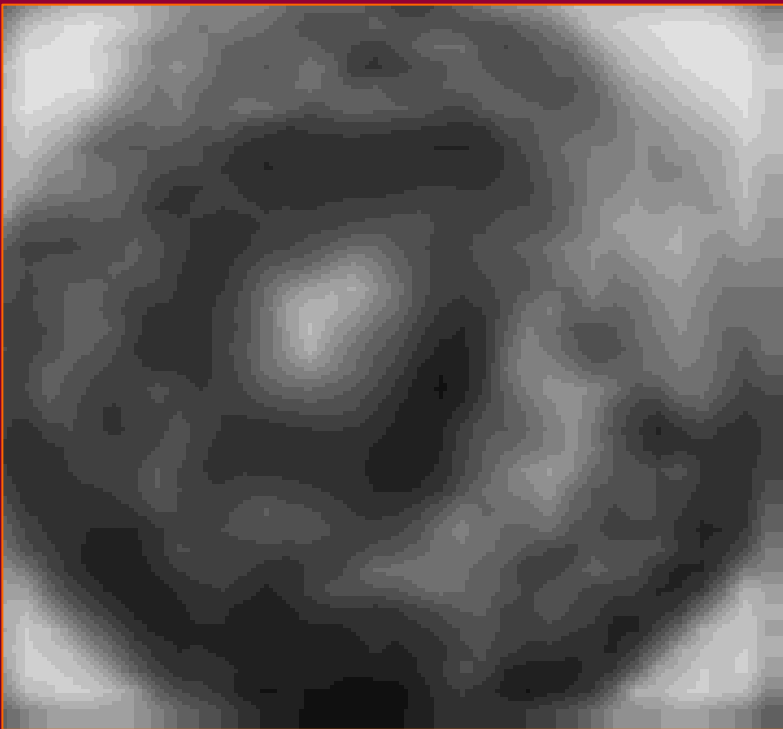


A 38-years-old patient

Lactic sinus zone

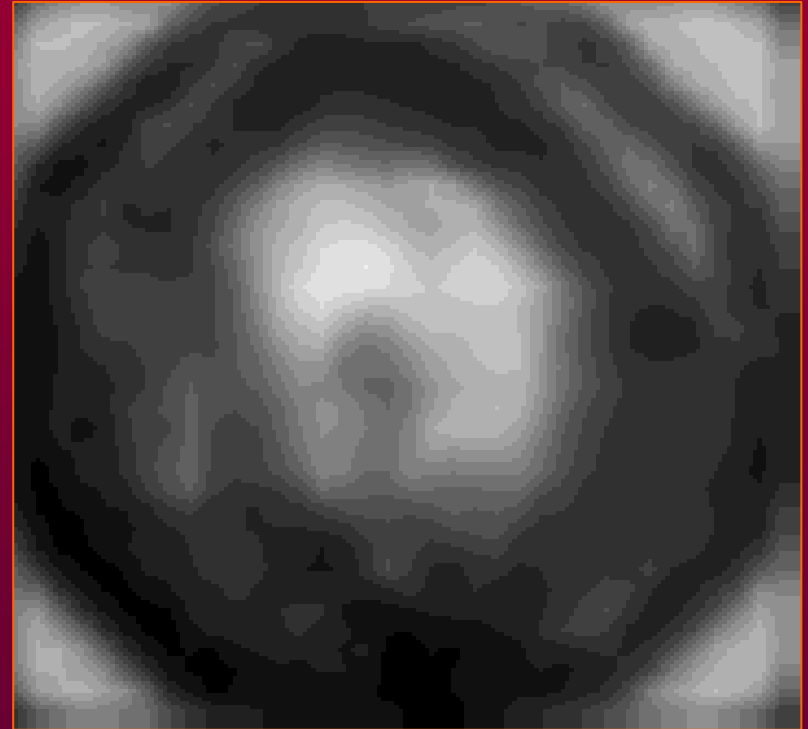
- Lactic sinus

Not dilated



A 35-years-old patient

dilated



A 27-years-old patient

Mammary gland impedance image evaluation

Measurement

*Mean electrical
conductivity index*



- *mean electrical conductivity index*
- *histogram of electrical conductivity distribution*

*Electrical conductivity
distribution divergence*



- *mean electrical conductivity index and divergence in electrical conductivity distribution between the left and right breast*
- *mean electrical conductivity index and divergence in electrical conductivity distribution between the left (right) and the normal breast*

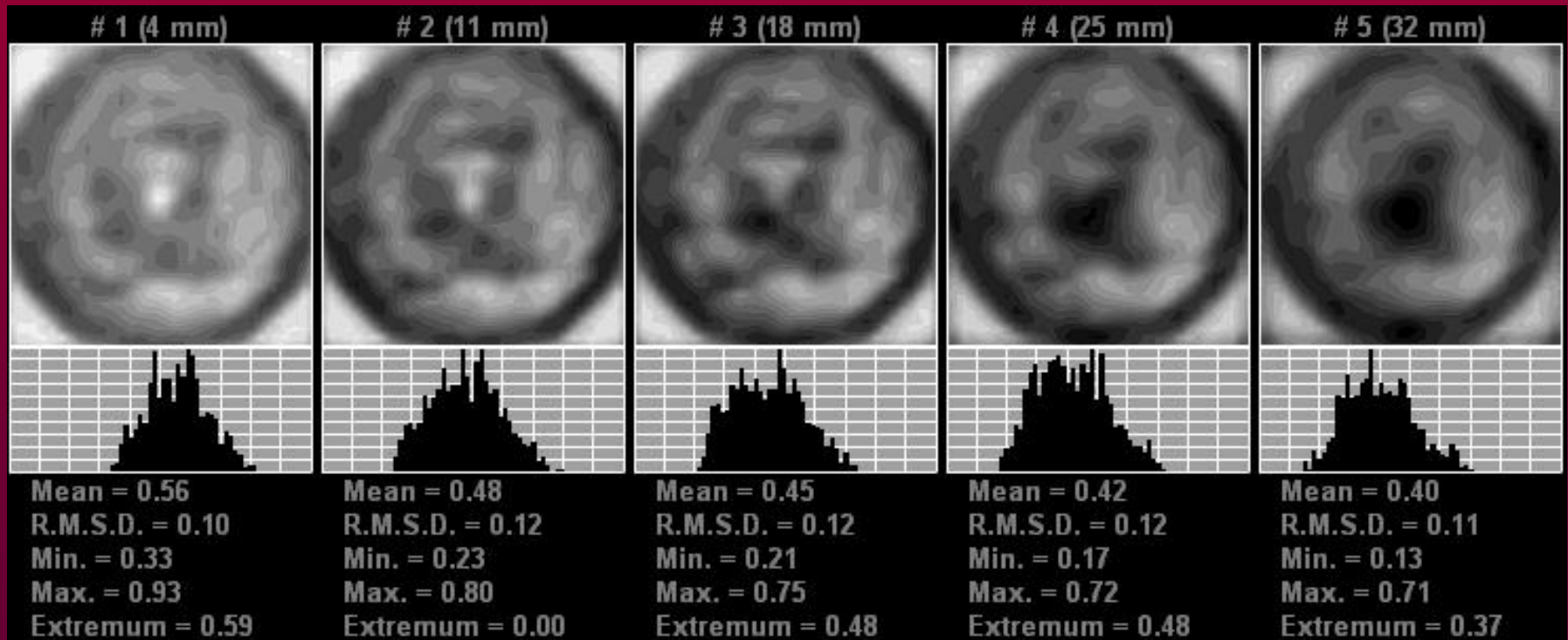
*Local changes
of electrical conductivity*



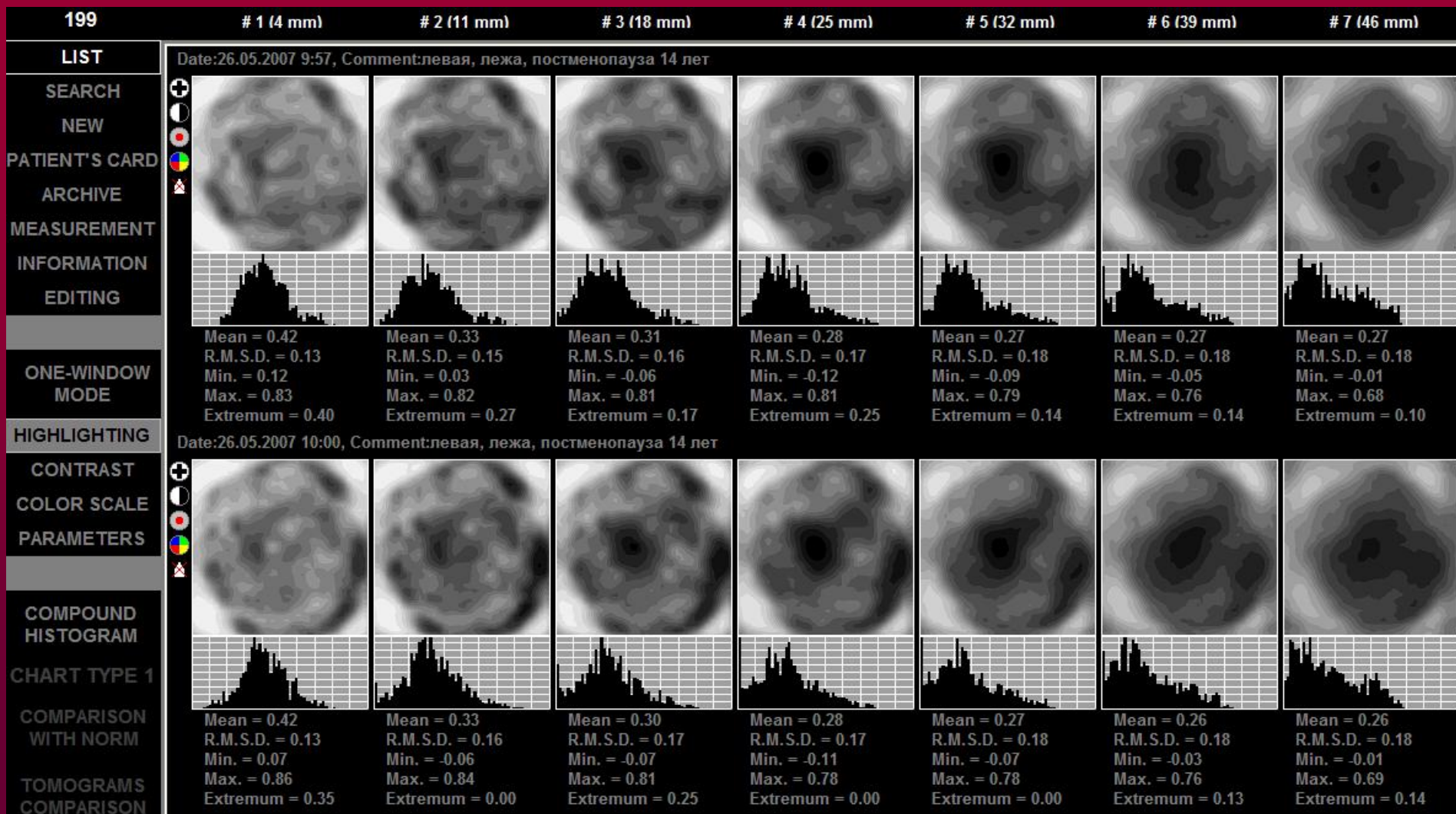
- *mean electrical conductivity index of the selected area*
- *histogram of electrical conductivity distribution*

Mean electrical conductivity index

- Mean electrical conductivity index and histogram of electrical conductivity distribution

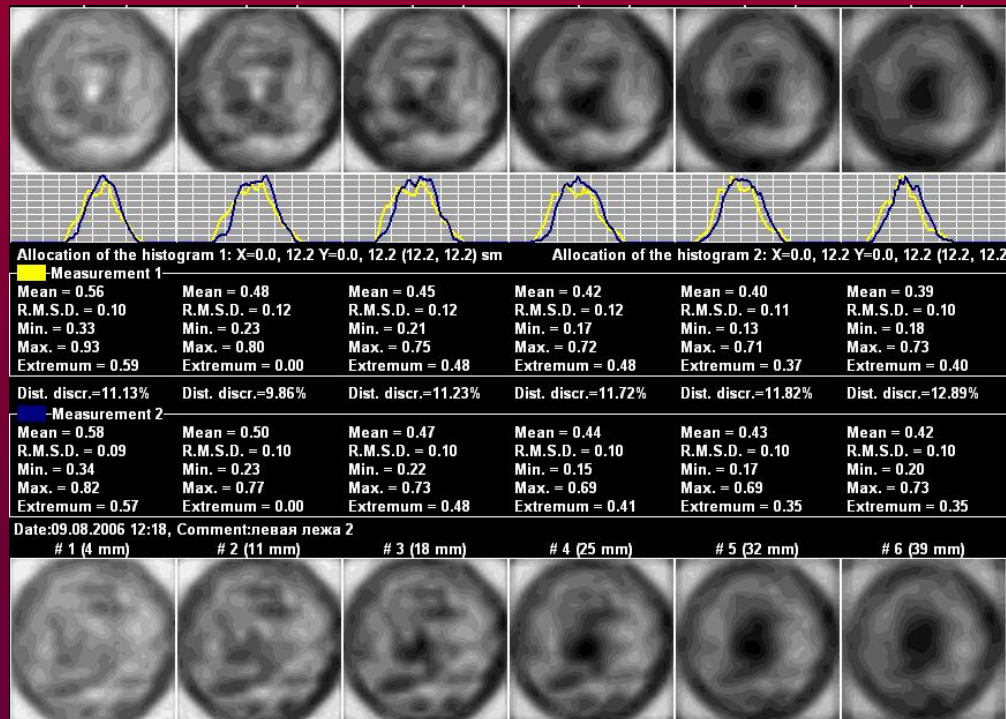


Mean electrical conductivity index and histogram of electrical conductivity distribution

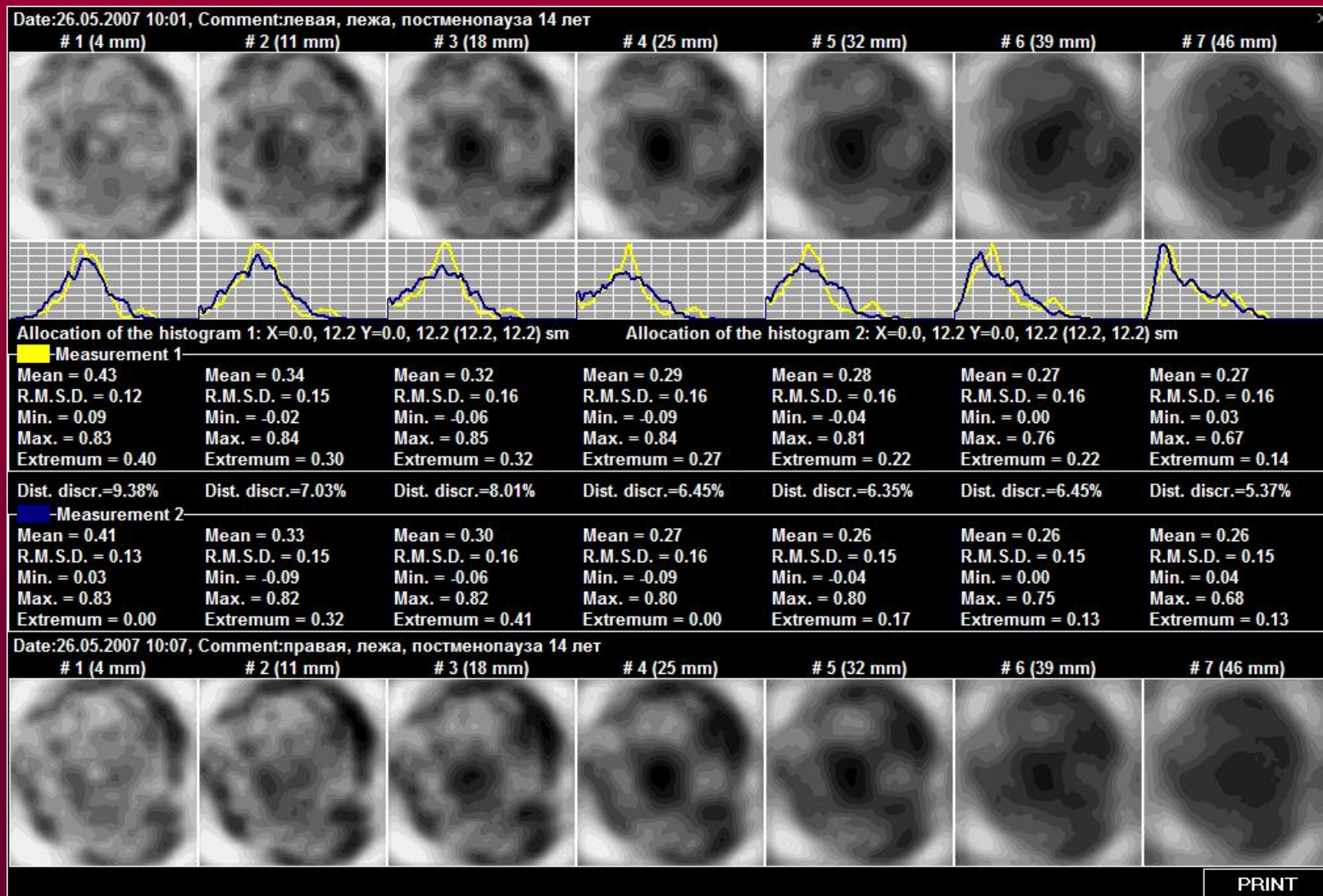


Divergence in electrical conductivity distribution

- Mean electrical conductivity index and divergence in electrical conductivity distribution between the left and right breast

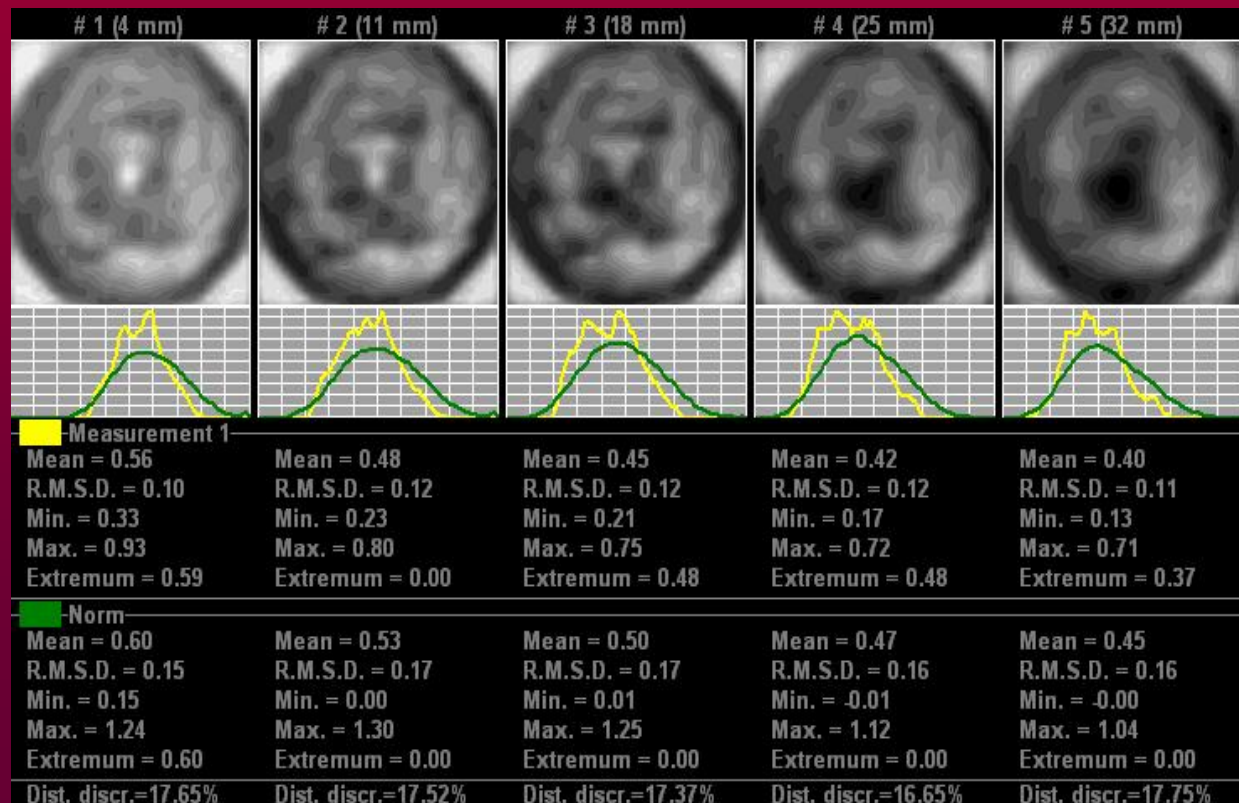


Mean electrical conductivity index and divergence in electrical conductivity distribution between the left and right breast

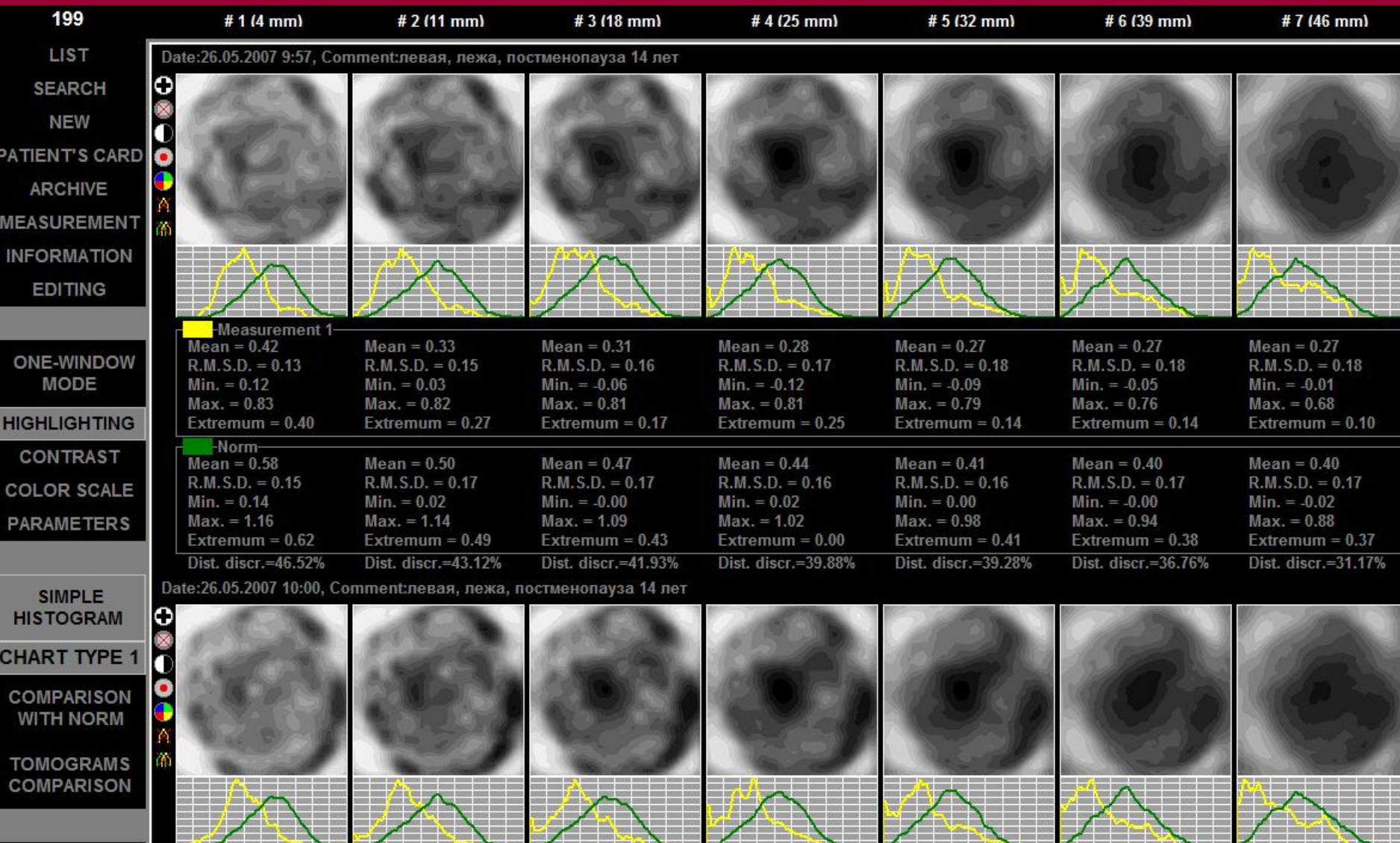


Divergence in electrical conductivity distribution

- Mean electrical conductivity index and divergence in electrical conductivity distribution between the left (right) and the normal breast



Mean electrical conductivity index and divergence in electrical conductivity distribution between the left (right) and the normal breast



Local changes of electrical conductivity

- Mean conductivity index of the selected area and histogram of electrical conductivity distribution

