



Autofluorescence Spectral Analysis : Probea[®] medical device

F CHATELLIER (NODEA MEDICAL)

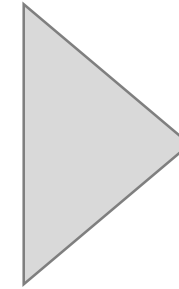
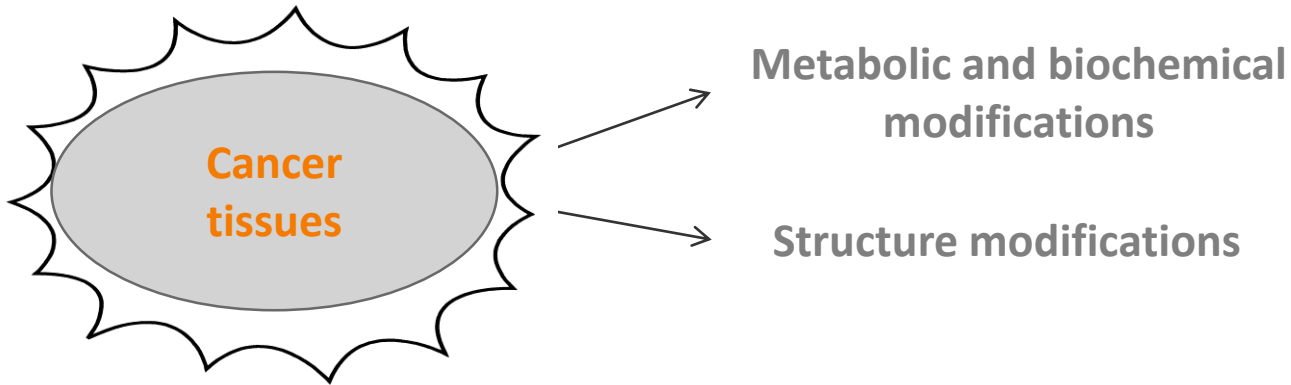
FEBRUARY 2016

AUTOFLUORESCENCE SPECTRAL ANALYSIS (ASA)

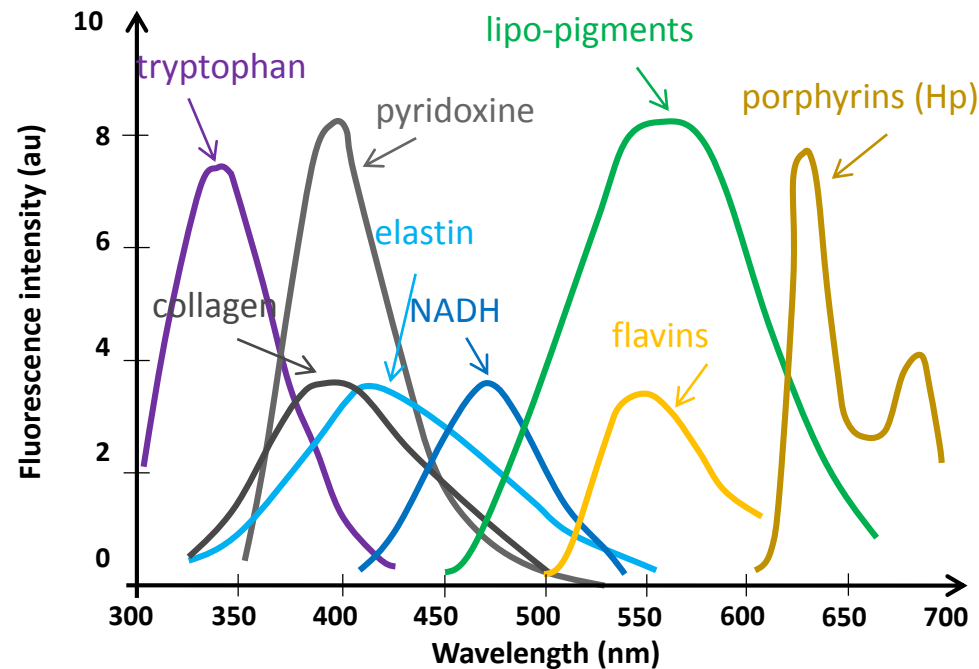
Principle



AUTOFLUORESCENCE & CANCER

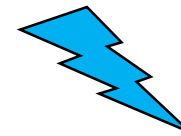


Changes in concentration and presence of some molecules in the tissue

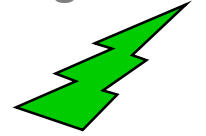


Wagnières et al., 1998

Excitation light

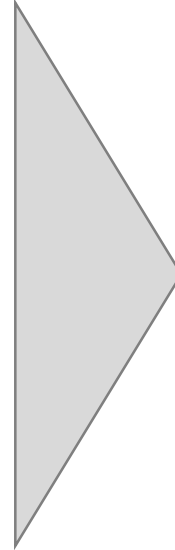
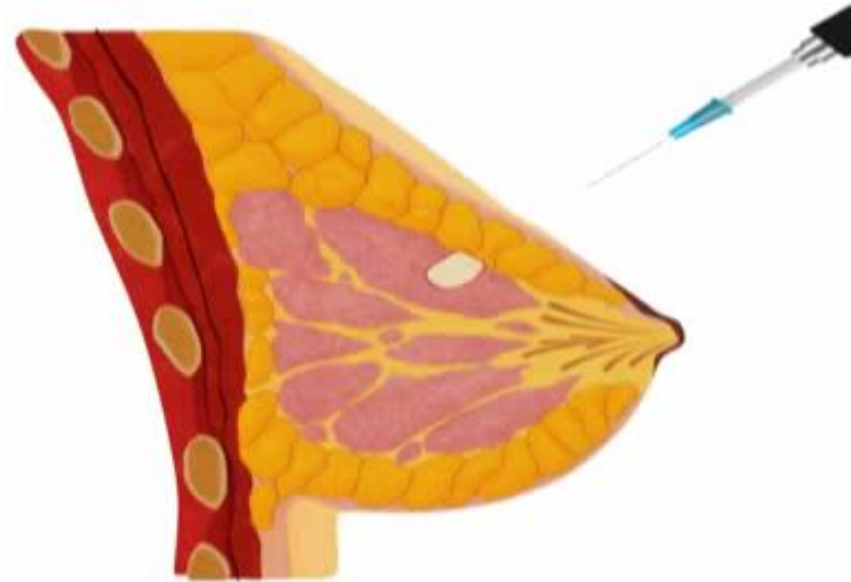


Autofluorescence signature

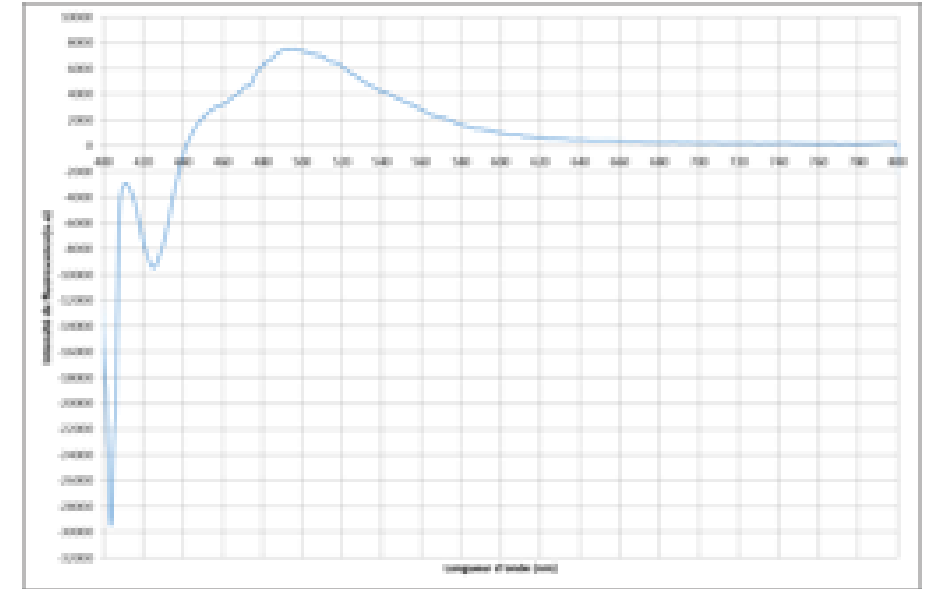


405nm excitation light : harmless

AUTOFLUORESCENCE SPECTRAL ANALYSIS : HOW DOES IT WORK ?

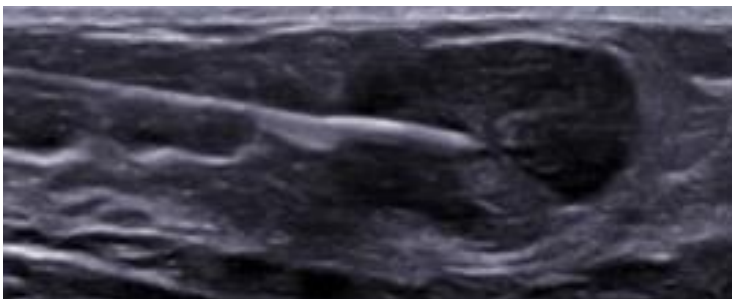


Fluorescence signature : The Spectrum



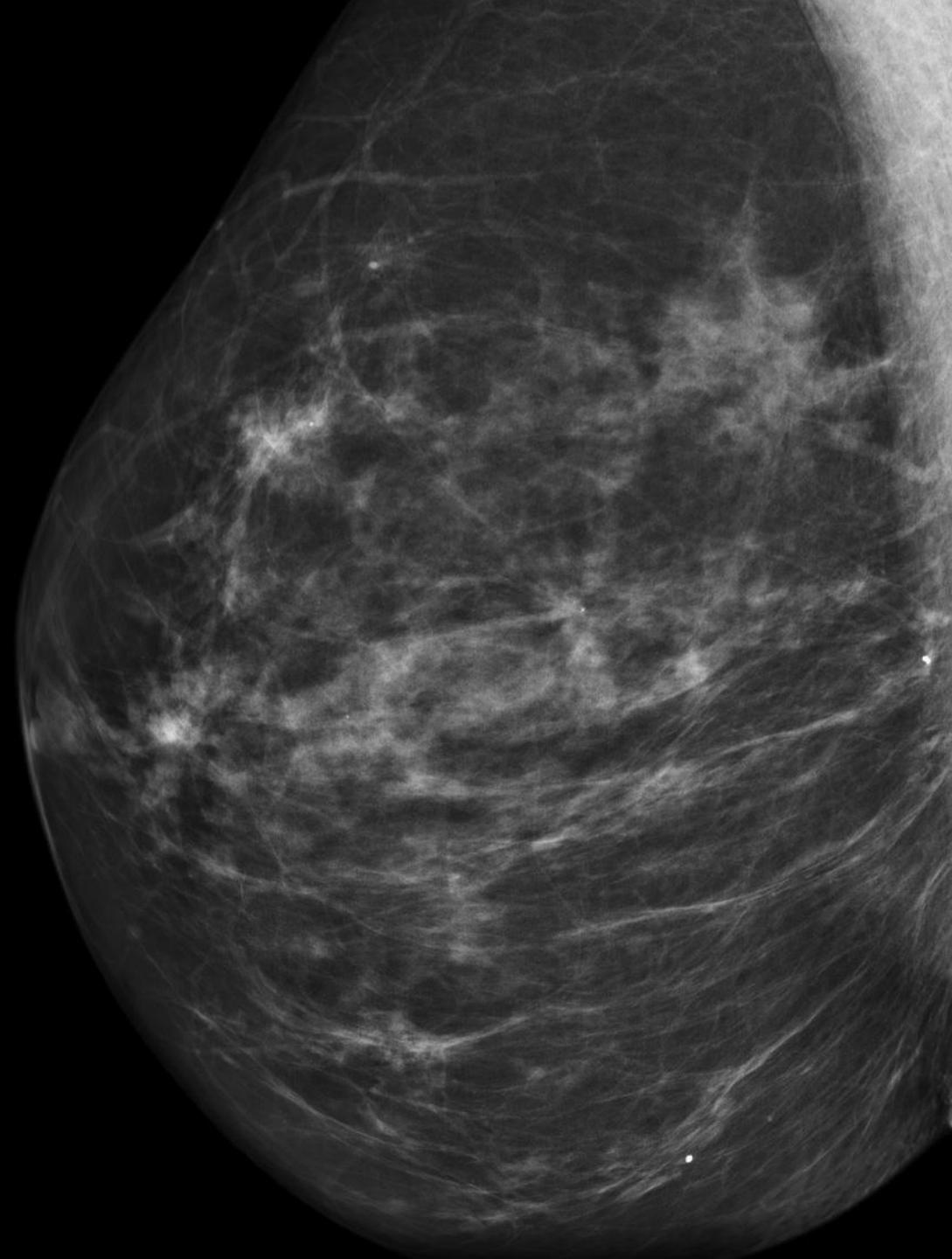
60 spectrums / seconde
analysed in real time

Optical fiber probe guided by imaging
technics



Breast Cancer
Clinical Study
58 patients
(244 ongoing)

BREAST CANCER

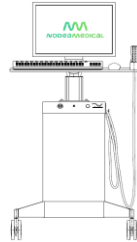


BREAST CANCER DIAGNOSTIC ISSUES AND AND PROBEA® GOAL

BIRADS 3

(2% rate of malignancy)

✓ Avoid monitoring

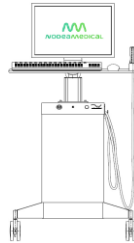


Instantaneously refine the diagnosis

BIRADS 4

(30% rate of malignancy)

✓ Avoid biopsy & monitoring



Instantaneously refine the diagnosis
Allow some benign lesions to be downgraded

Diagnostic
help
+++

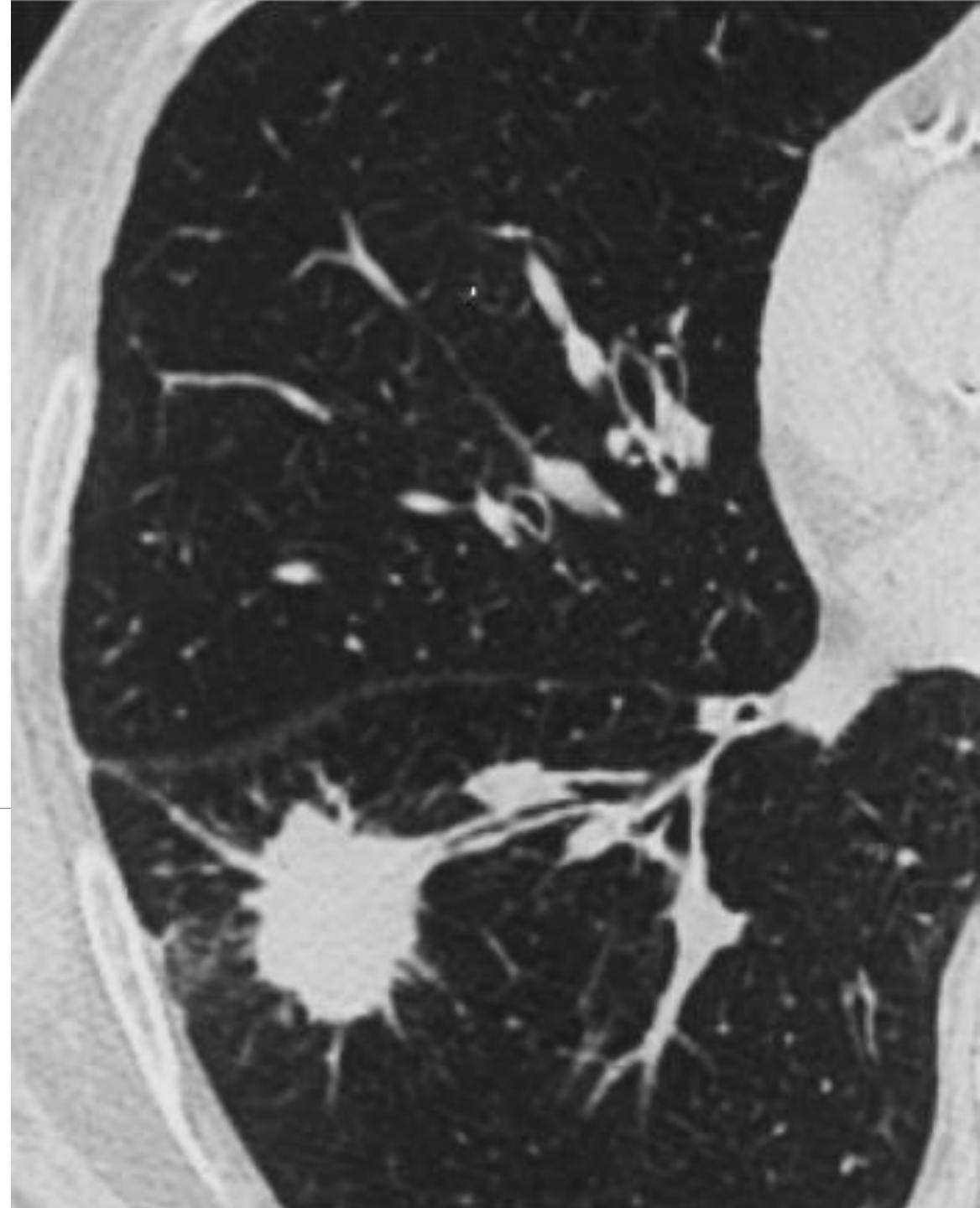


LUNG CANCER



Assistance Publique
Hôpitaux de Marseille

Hôpital Nord de Marseille
Hôpital de la Timone



A reference publication:



RESEARCH ARTICLE

Pulmonary Endogenous Fluorescence Allows the Distinction of Primary Lung Cancer from the Perilesional Lung Parenchyma

Lucile Gust¹*, Alexis Toullec², Charlotte Benoit², René Farcy³, Stéphane Garcia⁴, Veronique Secq⁴, Jean-Yves Gaubert⁵, Delphine Trousse¹, Bastien Orsini¹, Christophe Doddoli¹, Helene Moniz-Koum², Pascal Alexandre Thomas¹, Xavier Benoit D'journo¹*

1 Department of Thoracic Surgery and Diseases of the Oesophagus, North Hospital, Aix-Marseille University, Marseille, France, **2** Nodea Medical, Villejuif, France, **3** LAC, Paris-Sud XI University, Laboratoire Aimé Cotton, Bat.505, Orsay, France, **4** Department of Pathology, North Hospital, Aix-Marseille University, Marseille, France, **5** Department of Radiology, Timone Hospital, Aix-Marseille University, Marseille, France

* These authors contributed equally to this work.

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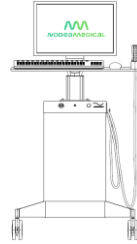
A certificate of excellence from the CE:



LUNG CANCER DIAGNOSTIC ISSUES AND PROBEA[®] GOAL

Benign nodules

✓ Avoid surgery



Instantaneously refine the diagnosis

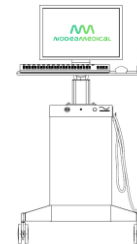
Diagnostic help

+++



Biopsy sampling

✓ Guide the biopsy targetting



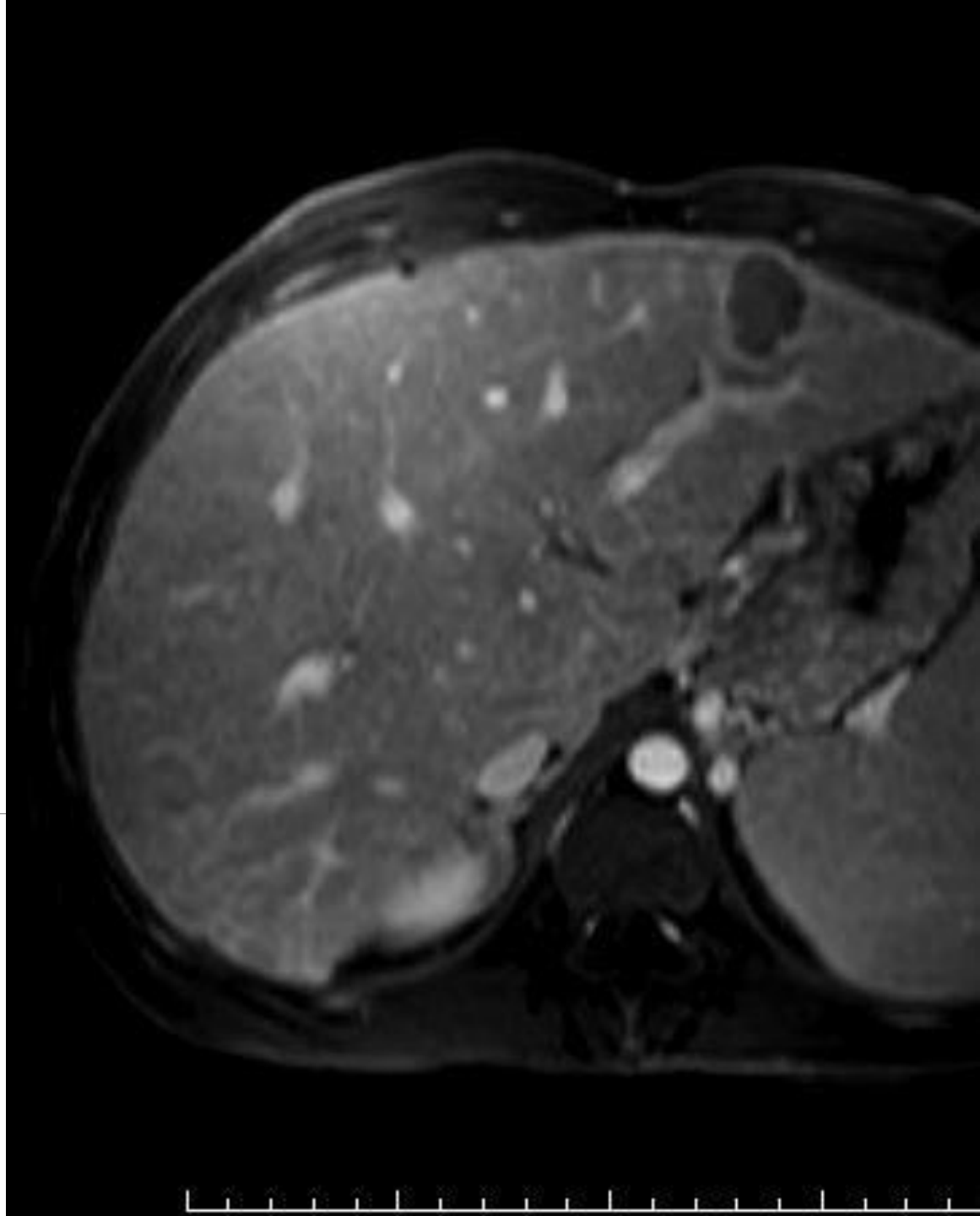
Improve the specificity of the biopsy by improving the biopsy sample

Biopsy targetting

+++

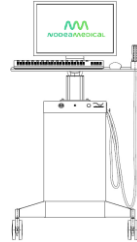


LIVER CANCER



Early-stage detection HCC

- ✓ Discriminate the nodules < 20mm



Instantaneously refine the diagnosis

Diagnostic help
+++



Biopsy sampling

- ✓ Guide the biopsy targetting



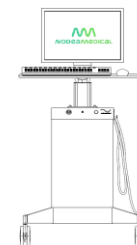
Improve the specificity of the biopsy

Biopsy targetting
+++



Risk of bleeding & tumoral cells seeding

- ✓ Avoid repetitive biopsy



Avoid repetitive biopsy by improving the biopsy sample

Biopsy targetting
+++

