

17th & 18th
APRIL, 2025

MASTERS OF BRAIN
ULTRASOUND IN
NEUROSURGERY



HOSPITAL UNIVERSITARI SANT PAU
BARCELONA

Directed by Dr. Cristian De Quintana

Aventik

 Societat Catalana de
Neurocirurgia

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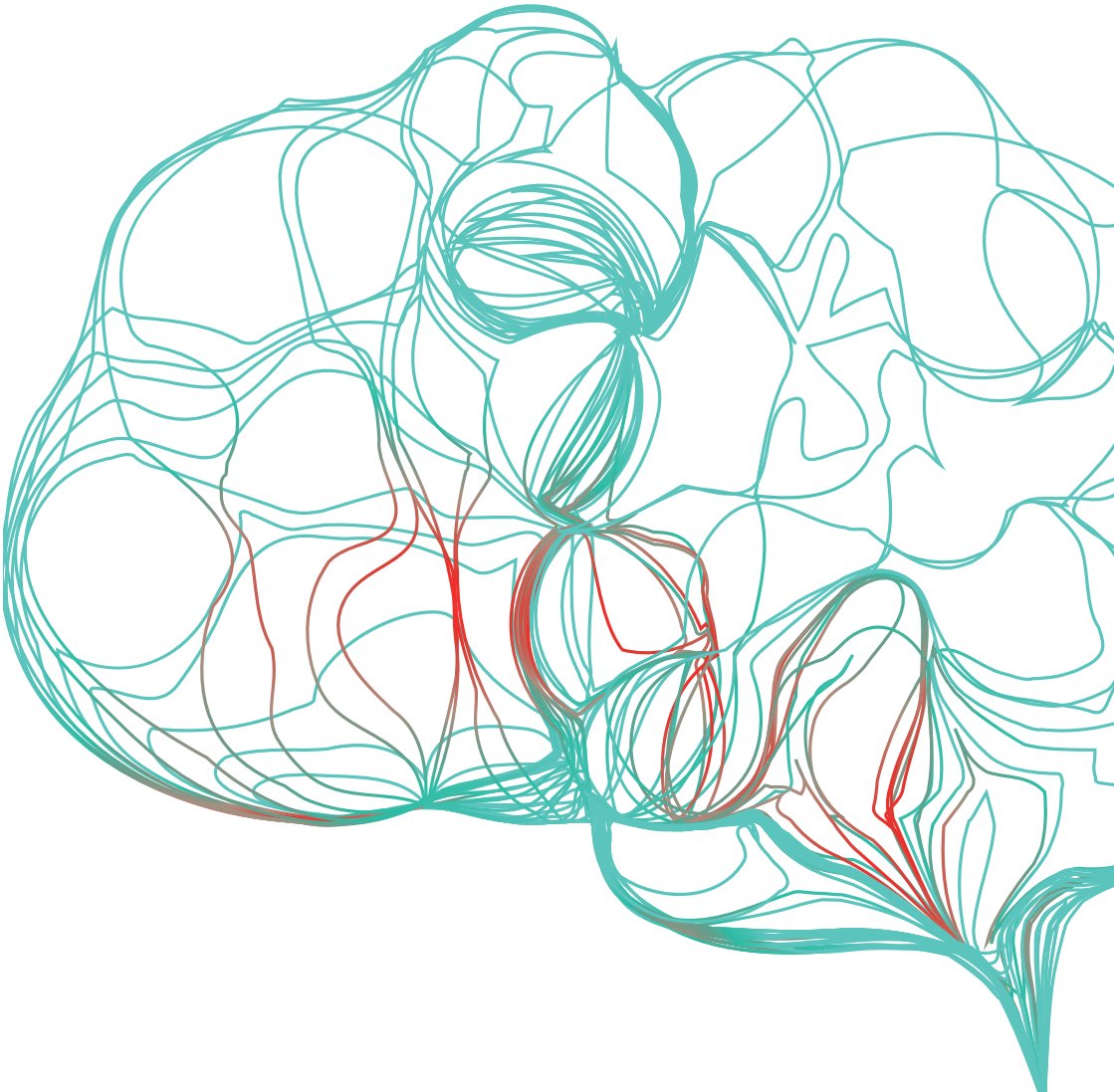
DIRECTOR

Dr. Cristian De Quintana

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COURSE

“The course has been granted 7.5 European CME credits by the European Accreditation Council for Continuing Medical Education (EACCME)”

There is a growing interest in intraoperative images in the neurosurgery field. In Neuro-Oncology this interest becomes a necessity to evaluate the grade of resection and the possibility of residual tumor.

In this aspect, neuronavigated ultrasound is an excellent tool because having a very high-quality image, quick acquisition (you do not need to stop the surgery to use it), cost-effectiveness, portability, and reproducibility (as many times as you need). However, sometimes neurosurgeons do not use ultrasound because there is a learning curve to the spatial orientation and interpretation of images. The reason for this course, eminently practical, is teaching the necessary skills to use intraoperative ultrasound in Neuro-Oncology.

The main difference between this course and other ones related to ultrasound is that not only it provides the participants with the theoretical knowledge, but specially highlights the practical side of it.

This is achieved thanks to the expert faculty invited for a maximum number of 20 participants. Moreover, the attendants will have at their disposal a few ultrasound equipments and practical phantoms which will allow them to train image orientation and interpretation.

OBJECTIVES

- Enhance the understanding of the basic principles of ultrasound.
- Apply these principles to the reduction of common artifacts and the improvement of high-quality diagnostic ultrasound images.
- Orientation in neuronavigated ultrasound.
- Differentiation between the most common subtypes of brain tumors.
- Coregistration of images (MRI-US...), tractography and segmentation in neuronavigated ultrasound.
- Evaluation of residual tumor in the operating room.
- Application of ultrasound contrast and elastography in brain tumors.
- Guided puncture with neuronavigated ultrasound (biopsies, ventricular punctures (shunt ventricles),...).

PROGRAM

Thursday, 17th April

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|----------------------|--|
| 16:00 - 16:15 | Introduction of the course
Dr. De Quintana |
| 16:15 - 16:30 | Introduction to basics of ultrasound (online)
Dr. Padayachy |
| 16:30 - 17:00 | Simulation training in IOUS (Part 1)
Dr. Perin |
| 17:00 - 17:30 | Mastering IOUS - Skill required - practical guidelines
Dr. Moiyadi |
| 17:30 - 18:00 | 2D ultrasound in resection of brain tumors (image interpretations and anatomical landmarks)
Dr. DiMeco |
| 18:00 - 18:15 | Coffee break |
| 18:15 - 18:45 | Neuronavigated ultrasound in Neuro-Oncology
Dr. De Quintana |
| 18:45 - 19:15 | Experiences from everyday use of navigated 3D ultrasound in brain tumor surgeries (tricks and tips, use in LGG)
Dr. Unsgård |
| 19:15 - 19:45 | Contrast-enhanced ultrasound, elastography
Dr. Prada |

- 19:45 - 20:15** Ultrasound guidance in hydrocephalus, endoscopy and Chiari I decompression (online)
[Dr. Padayachy](#)
- 20:15 - 20:45** Advantages for intraoperative ultrasound vs other imaging, other technology? (online)
[Dr. Nahed](#)
- 21:15** Dinner (included)

Friday, 18th April

- 10:00 - 10:15** Presentation of the case (live surgery)
[Dr. Aibar / Dr. Freixer](#)
- 10:15 - 10:45** Prediction of histologic tumor in the operating room using iUS and Gliolan (5-ALA)
[Dr. Aibar](#)
- 10:45 - 11:15** Simulation training in IOUS (Part 2)
[Dr. Perin](#)
- 11:15 - 11:30** Resection of the tumor (live surgery)
[Dr. Aibar / Dr. De Quintana](#)
- 11:45 - 12:15** Coffee break
- 12:15 - 14:15** Hands on
a) Module 1: Setup ultrasound machine
b) Module 2: Special ultrasound skills

COURSE VENUE

Sala Polivalente
Hospital Universitari
Santa Creu i Sant Pau
Barcelona
C/ de Sant Quintí, 89,
Horta-Guinardó,
08025 Barcelona

REGISTRATION

Registration fee: ---*

*EANS Members 10% discount on the registration fee

ENDORSED BY



Societat Catalana de
Neurocirurgia

MORE INFO

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*Please note that it is necessary to register in advance on the online simulation platform NeuroStream Academy in order to participate and fully enjoy the simulation session on IOUS in the link

<https://neurostream.academy/auth/register>

It is also necessary to bring your own laptop and smartphone in order to simulate IOUS during the course.