



CPEN
ENDOCRINOLOGIA I NUTRICIÓ



ADVANCED WORKSHOP ON ULTRASOUND ADIPOSE TISSUE AND MUSCLE

ECO-OBESITY

NUTRITIONAL ULTRASOUND

Speakers:

Dr Guillem Cuatrecasas (CP Endocrinologia SLP, Director)

Marta Calbo / Laia Dachs (Dietitian-Nutritionist, Body Composition)

Date: Friday, September 19th, 2025

Location: Auditorium, CP Endocrinologia SLP, c/Mallorca 297, 08037 Barcelona

Objective:

To present the potential of abdominal adipose tissue ultrasound as a clinical tool for assessing abdominal obesity.

We know the importance of waist circumference as a clinical marker of cardiovascular risk associated with obesity. However, only visceral fat correlates with obesity-related comorbidities. Until now, visceral fat could only be accurately measured with DEXA or CT scans, techniques that are costly, involve significant radiation exposure, and are not widely accessible to all specialists.

Ultrasound allows precise measurement of visceral fat (hepatic steatosis), as well as the five layers of intra-abdominal fat: subcutaneous (superficial and deep), preperitoneal, omental, and perirenal (retroperitoneal).

Our team has recently published several studies highlighting the importance of preperitoneal, omental, and perirenal fat layers as independent markers of cardiovascular risk.

To complement the workshop and address sarcopenic obesity, we will measure muscle variables in the rectus femoris muscle.

We will also teach how to measure epicardial fat thickness to enhance cardiovascular risk analysis in patients with obesity.

Finally, a FibroScan device will be available to explore NAFLD and various assessments of hepatic steatosis/fibrosis.

Target audience:

Medical doctors, nurses and dietitian-nutritionists working in the fields of nutrition, endocrinology, and cardiovascular risk, with at least basic experience in ultrasound.

Methodology:

All sessions are theoretical and practical, with ultrasound devices always used directly with the participants. We provide 1 ultrasound machine and 1 volunteer model per 6 students. Maximum number of participants: 12.

Program:

4:00 p.m. – Anatomy of adipose tissue. Physiological differences between superficial and visceral adipose tissue.

Muscle anatomy. Sarcopenia markers on ultrasound of the rectus femoris.

5:00 p.m. – Coffee break / Group allocation

5:30 p.m. – Workshop: Identification of different sections through practical sessions on live pathological models:

- Superficial and deep subcutaneous fat. Concept of panniculopathy
- Preperitoneal fat
- Visceral fat. Periaortic or omental fat
- Retroperitoneal (renal) fat
- Epicardial fat
- Ultrasound of the femoral quadriceps
- Hepatic steatosis. Elastography. FibroScan. Fibrosis (F score) and CAP score

7:30 p.m. – Conclusions / Reflections / Clinical relevance
