



# Carotid Ultrasound MasterClass

The Carotid Ultrasound Masterclass teaches you all you need to know to perform a comprehensive scan of the carotid and vertebral arteries. Get 12 hours of high-quality video content with lectures, demos, documentaries, and expert statements of top authorities in the field. We put carotid ultrasound into a clinical context to help you understand the impact and the consequences of your findings.

10.5  
CME credits

7  
Chapters

31  
Lectures

6  
Quizzes

## Chapter 1 | CME

### Free lectures

#### Lectures & Quizzes:

- Free lecture 1
- Free lecture 2
- Free lecture 3

## Chapter 2 | 1.5 CME

### Introduction to Carotid Ultrasound

In this introductory chapter, we set the stage for carotid ultrasound. First, Prof. Thomas Binder, a cardiologist, and Janet Hoyler, a registered ultrasound- and vascular technologist, talk about the importance and clinical applications of carotid ultrasound. In which setting is it used and why is it such an important imaging modality? You will then learn about stroke, revisit the anatomy of the neck, and see what the anatomical structures look like on your ultrasound screen.

#### Lectures & Quizzes:

- Welcome to Carotid Ultrasound
- Stroke
- Anatomy
- US Anatomy
- CUMC - Introduction to Carotid Ultrasound

## Chapter 3 | 1.5 CME

# Imaging Fundamentals

In this chapter, we dive deeper into the topic of imaging vessels with ultrasound. You will learn which transducer to use (and why this one), how to deal with artifacts. Do you know what the terms "angle of insonation" and "aliasing" mean? If not, find out here. The fundamentals you learn here will help you to fully grasp the concept, limitations but also fascination with ultrasound. Our experts also show you what to be mindful of when using different forms of Doppler ultrasound, and what Doppler imaging actually is, physically.

## Lectures & Quizzes:

- Principles of Carotid US
- Hardware
- Optimizing B-Mode
- Doppler Imaging
- CUMC - Imaging fundamentals

## Chapter 4 | 3 CME

# How to Image Cervical Vessels

Are you ready to start imaging? After laying out the basement for your successful career as a carotid sonographer, it is time to move to the scanner. In this chapter, you will learn how to position your patient, how to get standard views of the carotid and vertebral arteries, how to use Doppler ultrasound on them, and how to get the best out of your machine. In the last lecture, we discuss CT and MRI imaging as an alternative and complementary modality.

## Lectures & Quizzes:

- Imaging Overview
- Transverse and Longitudinal Views
- Imaging the Bifurcation
- Using Color Doppler
- Spectral Doppler
- Telling ICA from ECA
- Imaging Vertebral Arteries
- Role of Radiology
- CUMC - How to Image Cervical Vessels

## Chapter 5 | 3 CME

# Pathologies in Carotid Ultrasound

After learning how to get the image, this chapter is all about what you might find while scanning. We teach you the fundamentals of atherosclerosis, how to measure the intima-media-thickness, why plaque morphology is important, and how you can assess the hemodynamics of stenotic vessels. After watching this chapter, there is no finding in carotid ultrasound you're clueless about.

## Lectures & Quizzes:

- Atherosclerosis
- Plaque / IMT
- Stenosis: Morphology
- Stenosis: Hemodynamics
- Stenosis: Doppler criteria + cases
- Pathologies - Case Studies
- Pathologies of the Vertebral Arteries
- CUMC - Pathologies in Carotid Ultrasound

## Therapy

This chapter provides you with all you need to know to manage your patients. Here we answer important questions such as: When should an intervention or surgical procedure be performed? Which medical treatments do we have, who should receive them, and how effective are they? How do you follow up on patients? And how should you assess patients after endarterectomy and stenting?

### Lectures & Quizzes:

- Surgery and Stenting
- Medical Therapy
- Ultrasound Follow-Up after Stents / Endarterectomy
- Neck pathologies
- CUMC - Therapy

## Your standard Carotid Ultrasound Examination

After learning so much in this course and getting so many different inputs, we thought it would be nice to provide you with a sort of standard operating procedure on how to conduct an ultrasound examination from start to finish. We will guide you step by step from imaging to documentation and discuss what an ideal workflow might look like.

### Lectures & Quizzes:

- Standard Exam and Reporting
- CUMC - Standard Carotid US exam