



# Francis O. Walker Neuromuscular Ultrasound Workshop

May 1-2, 2025 | Winston-Salem NC

## Course Overview

The **Wake Forest University School of Medicine Neuromuscular Ultrasound Workshop** focuses on applications in muscle disease, peripheral and cranial nerve imaging, and an introduction to the use of ultrasound in evaluating musculoskeletal disorders. Lectures are integrated with hands-on demonstrations of technique and case interpretation. A small group format facilitates questions and answers and tailors the educational experience to meet the specific needs of individual participants. It is in real-time use of the instrument that the practitioner recognizes the importance of this type of basic knowledge, and it is in this context that they can apply this knowledge to troubleshoot difficult imaging cases, identify artifacts, and improve resolution at the bedside.

## CME

The Wake Forest University School of Medicine designates this live activity for a maximum of 15 *AMA PRA Category 1 Credits*<sup>™</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

## Course Objectives

Participants in the Neuromuscular Ultrasound Workshop will be able to:

- Define terms of ultrasound and demonstrate application of the principles while imaging neuromuscular structures.
- Identify upper extremity, lower extremity and cranial musculature and the visible boundaries that distinguish muscle groups in these areas.
- Recognize loss of heterogeneity, fasciculations, hyperechoic changes, hypertrophy and other common pathologic changes in affected human muscles.
- Identify the median, radial and ulnar nerves in the upper extremity and areas of the sural, peroneal and tibial nerves in the lower extremity and recognize common anatomic variants and pathologic abnormalities of these nerves.
- Discuss indications for appropriate use of ultrasound imaging, factors that could complicate interpretation and clinical situations where ultrasound imaging is particularly contributory to addressing clinical problems.

## Program Fees:

Physicians: \$1064  
APPS: \$904

Register online:

[www.nwahec.org/73696](http://www.nwahec.org/73696)



## Day 1 (Thursday)

- 8:00 - 8:05 Welcome
- 8:05 - 8:45 Introduction to Ultrasound
- 8:45 - 9:30 Neuromuscular Ultrasound
- 9:30 - 9:45 Break
- 9:45 - 10:30 Upper/Lower Extremity Anatomy
- 10:30 - 12:00 Scanning Labs with Live Subjects
- 12:00 - 13:00 Lunch and Exhibits
- 13:00 - 14:00 NMUS Cases
- 14:00 - 14:45 Ultrasound of Brachial Plexus
- 14:45 - 15:00 Break
- 15:00 - 17:00 Scanning Labs with Live Subjects

## Day 2 (Friday)

- 8:00 - 8:05 Announcements
- 8:05 - 9:00 MSK Ultrasound Principles
- 9:00 - 10:00 Muscle Ultrasound
- 10:00 - 10:15 Break
- 10:15 - 12:00 Scanning Labs with Cadavers
- 12:00 - 13:00 Lunch and Exhibits
- 13:00 - 14:00 US of Traumatic Nerve Injury
- 14:00 - 14:45 Ultrasound of the Diaphragm
- 14:45 - 15:00 Ultrasound Billing and Coding
- 15:00 - 17:00 Scanning Labs with Live Subjects

The Wake Forest University School of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

## Course Faculty

**Michael Cartwright, MD, MS** is the course director and is a Professor of Neurology at Wake Forest University School of Medicine.

**James Caress, MD** is a Professor of Neurology at Wake Forest University School of Medicine.

**Adam Comer, MD** is Assistant Professor of Neurology at Indiana University School of Medicine, Indianapolis, IN.

**James Johnson, PhD** is Associate Professor of Neurobiology & Anatomy at Wake Forest University School of Medicine.

**Frederick Kremkau, PhD** is Emeritus Professor of Radiologic Sciences, Wake Forest University School of Medicine.

**Vanessa Baute Penry, MD** is Associate Professor of Neurology at Wake Forest University School of Medicine.

**J. Wells Reynolds, MD** is Associate Professor of Anesthesiology at Wake Forest University School of Medicine.

**Sarada Sakamuri, MD** is a Clinical Associate Professor of Neurology at Stanford University, Stanford, CA.

**Aarti Sarwal, MD, FCCM, FNCS, FAAN, RPNI** is a Professor of Neurology at Virginia Commonwealth University School of Medicine, Richmond, VA.

**Heath Thornton, MD** is Associate Professor of Family Medicine at Wake Forest University School of Medicine.

**Maha Torabi, MD** is Associate Professor of Radiology at Wake Forest University School of Medicine.

**Francis Walker, MD** is Emeritus Professor of Neurology at Wake Forest University School of Medicine.

