The Advanced Thyroid Ultrasound Course is for clinicians who already have experience with examination of thyroid disease and want to go to the next level. The nuances between a variety of thyroid pathologies examined by ultrasound will be covered as well as practical issues related to cytopathology and molecular testing of thyroid nodules. The course will include lateral neck and central neck lymph node assessment. Participants will learn thyroid cancer surveillance with ultrasound as well as treatment intervention (e.g. alcohol ablation) and innovation (e.g. elastography and HIFU laser ablation). Practical hands on skills sessions, with participation of patients who have benign and malignant thyroid pathologies, will complement the didactic learning. Leaders in thyroid ultrasound will provide interactive lectures as well as practical demonstrations and tips during the hands-on component. Space is limited so book early.

PROGRAM FOR ADVANCED THYROID ULTRASOUND COURSE

07:00 - 07:30  Registration and Continental Breakfast
07:30 - 07:40  Welcome and Introduction
               Mira Milas, MD
07:40 - 08:30  Evaluation of Diffuse Thyroid Disease and Thyroiditis
               Jill Langer, MD
               Artifacts and Diagnostic Implications
               Distinguishing true Nodules from Pseudonodules in Hashimoto's Disease
08:30 - 09:15  Evaluation of Thyroid Nodules
               Susan Mandel, MD
               Ultrasound Criteria of Benign and Malignant Nodules
09:15 - 09:45  Ultrasound Guided Thyroid Fine Needle Aspiration (FNA): Techniques
               Cord Sturgeon, MD
               Optimal Patient Positioning
               Ergonomics: Machine Placement, Physician Positioning, Assistant Role
               Bench Set-Up
               Equipment (Needle Size, Syringe Holders, Aspiration Vs Capillary Action)
               Anesthesia (Local, EMLA, Ice-Cube, None)
               Needle Placement (Parallel/Perpendicular)
               Video of the FNA Procedure
09:45 - 10:00  Practical Issues for On-site Cytopathology and Nodule Sampling
               John Abele, MD
               Nodule sampling tips (location, dwell time, number of passes)
               How a bloody aspirate affects interpretation
               Coding for Nodule Sampling by FNA and On-site Cytopathology
10:00 - 10:15  Coffee Break
10:15 - 10:45  Thyroid FNA: Specimen Preparations and Adequacy
               Guido Fadda, MD
               Dividing the product
               Expulsion of material in liquid based material (Cytolyt®)
               Expulsion of material for ancillary testing
Expulsion of material onto glass slides
Creating a smear (demonstration)
Alcohol Fixation of smears

10:45 - 11:20 **Thyroid FNA: Key Cytology and Histology for Clinicians**
Zubair Baloch, MD
Cytomorphology
The Bethesda Classification and Histologic Correlates
Modern understanding of the “indeterminate” nodule

11:20 - 12:00 **Molecular Testing in the Evaluation of Thyroid Nodules**
Bryan Haugen, MD

12:00 - 13:00 **Lunch (Boxed lunch in conjunction with following presentations)**
- Clinical Decision-Making Based on Cytology and Molecular Testing:
  Case-based faculty panel Q and A session
  Susan Mandel, MD and David Steward, MD

13:00 - 13:40 **Lymph Nodes: Pre-operative Assessment & Postoperative Surveillance in Thyroid Cancer**
Anil Ahuja, MD

13:40 - 14:00 **Ultrasound of the Central Neck and “Empty” neck**
Mira Milas, MD

14:00 - 14:30 **Interventional Ultrasound: ETOH Ablation**
Dan Duick, MD

14:30 - 15:00 **Innovations in Ultrasound: Elastography and HIFU Laser Ablation**
Roberto Valcavi, MD

15:00 - 17:00 **Lab Practicum and Hands-on Skills Session**
US Practicum with Patients
- Anil Ahuja, MD; Dan Duick, MD; Jeremy Freeman, MD; Jill Langer, MD;
- Susan Mandel, MD; Mira Milas, MD; Edmund Pribitkin, MD; Greg Randolph, MD;
- Cord Sturgeon, MD; Moshe Yehuda, MD

FNA preparation/US Innovations
- Zubair Baloch, MD; Jennifer Brainard, MD; Guido Fadda, MD;
- Roberto Valcavi, MD

**FACULTY**

*Course Chair:* Mira Milas MD

*Course Faculty for ACS Thyroid/Parathyroid Ultrasound Certification Course:* Anil Ahuja MD, Karen Devon MD, Mark Lupo MD, Lawrence Kim MD, Barbra Miller MD, Jamie Mitchell MD, Lisa Orloff MD, Sareh Parangi MD, Phillip Pelliterri MD, Maisie Shindo MD, Bob Sofferman MD, David Steward MD, David Terris MD, Ian Witterick MD

*Course Faculty for ADVANCED Thyroid Ultrasound Course:* John Abele MD, Anil Ahuja MD, Jennifer Brainard MD, Zubair Baloch MD, Dan Duick MD, Guido Fadda MD, Jeremy Freeman MD, Bryan Haugen MD, Jill Langer MD, Susan Mandel MD, Mira Milas MD, Edmund Pribitkin MD, Greg Randolph MD, David Steward MD, Cord Sturgeon MD, Roberto Valcavi MD, Moshe Yehuda MD

*Course Fees:* $1500.00 CAN per person. Space is limited for this hands-on course, to reserve a position, please send your contact information to registration@thyroidworldcongress.com. Further information will be provided in the near future.
COURSE OBJECTIVES

Ultrasound Evaluation of Diffuse Thyroid Disease, and Nodules
• Understand the spectrum of sonographic features of diffuse thyroid disease, thyroiditis, and nodules
• Demonstrate the utility of ultrasound and Doppler in the evaluation of thyroiditis
• Describe patterns of Hashimoto’s thyroiditis and identification of pseudonodules vs. true nodules
• Identify sonographic features associated with thyroid malignancy

Ultrasound Guided FNA Biopsy
• Understand the ATA and AACE guidelines for biopsy
• Recognize the various approaches to FNA and how to modify techniques

Thyroid Cytology, Pathology and Molecular Diagnostic Markers
• Understand the definition of thyroid FNA adequacy
• Understand slide preparation techniques
• Review follicular cell cytology and the Bethesda classification system
• Understand approach to potentially "Indeterminate" nodule at the time of initial FNA, including use of molecular genetic markers

Lymph Nodes: Preoperative Assessment and Postoperative Surveillance in Thyroid Cancer
• Learn to identify characteristics of benign and malignant lymph nodes
• Understand the role of cervical ultrasound in the pre-operative management of thyroid cancer
• Understand the role of ultrasound in the long-term surveillance for recurrence in thyroid cancer
• Recognize the indications of ETOH ablation of metastatic lymph nodes

Lab Practicum
• Perform sonographic imaging of cervical lymph nodes compartments
• Perform FNAB using the sector probe rather than the linear probe, using simulated model
• Demonstrate slide preparation
• Understand to basic principles of elastography and laser ablation of thyroid nodules

ACCREDITATION
The American College of Surgeons is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

AMA CREDIT DESIGNATION (Pending)
CME credit is available for the Advanced Thyroid US Course via attendance and also counts towards CME requirements for ECNU.

Who should take the Advanced Thyroid Ultrasound Course?
Clinicians of any specialty who routinely perform thyroid ultrasound and FNA are interested to learn more about challenging scenarios requiring US and FNA skills participate in the treatment of thyroid cancer patients
wish to know up-to-date applications of decision-making using cytology and molecular testing of thyroid nodules