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  
* Richard Guttler, 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
  David Steward, MD moderator

13:00 - 13:40  Lymph Nodes: Pre-operative Assessment & Postoperative Surveillance in Thyroid Cancer
Susan Mandel, 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  Interventional Ultrasound: Laser, Radiofrequency and HIFU Laser Ablation
Roberto Valcavi, MD

15:00 - 17:00  Lab Practicum and Hands-on Skills Session
US Practicum with Patients
Dan Duick, MD
Jeremy Freeman, MD
R. Mack Harrell, 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
Richard Guttler MD
Roberto Valcavi, MD

FACULTY
Course Chair: Mira Milas MD
Course Chairs for ACS Course: Robert Sofferman MD and Lisa Orloff MD
Course Faculty for ACS Thyroid/Parathyroid Ultrasound Certification Course: Karen Devon MD, Lawrence Kim MD, Teresa Kroeker 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: Jennifer Brainard MD, Zubair Baloch MD, Dan Duick MD, Richard Guttler MD, Guido Fadda MD, Jeremy Freeman MD, R. Mack Harrell 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 Hashimotos 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
CME credit is available for the Advanced Thyroid US Course and 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