

SENIOR EMERGENCY ULTRASOUND ROTATION

YEAR OF TRAINING: PGY 3

DURATION: 2 WEEKS

LOCATION: UHB and KCH ED

FACULTY LIASONS:

Dr. Kelly Maurelus

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Dr. Randi Ozaki

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OBJECTIVES:

1. To understand basic physics and instrumentation of medical ultrasound equipment
2. To learn how to use the ultrasound systems available in KCH and UHB Emergency Departments
3. To review normal sonographic anatomy and pathophysiology of the thorax, abdomen and pelvis
4. To understand indications and limitations of bedside emergency ultrasound
5. To become proficient in core emergency ultrasound applications, as outlined by ACEP ultrasound guidelines
 - a. Extended Focused Assessment with Sonography in Trauma (E-FAST)
 - b. Focused Gynecologic and Obstetric Ultrasound
 - c. Abdominal Aortic Aneurysm (AAA)
 - d. Emergent Echocardiography and Hemodynamic Assessment
 - e. Focused Biliary Ultrasound
 - f. Focused Renal Ultrasound
 - g. Soft-tissue and Musculoskeletal Ultrasound Applications
 - h. Thoracic Ultrasound
 - i. Ocular Ultrasound
 - j. Bowel Ultrasound
 - k. Vascular Ultrasound
 - l. Ultrasound-guided Procedures

SCHEDULE:

Supervised scanning times may vary depending on the availability of ultrasound faculty, but residents are expected to scan in the department from 9 am – 4 pm daily, with the exception of Wednesday conference. On Thursday the residents will meet with a member of the ultrasound faculty for QA and tape review. Residents will have the weekend off.

Residents on rotation must e-mail Dr. Maurelus or Dr. Ozaki for further information on the schedule and rotation expectations. **Any requests for changes in the schedule must be discussed with and approved by Dr. Bon (PRIOR) to the start of your rotation (catharine.bon@gmail.com). Attendance at Wednesday Conference is mandatory.**

ROTATION REQUIREMENTS:

Residents should report to the clinical area during their scanning shifts and perform any clinically indicated scans that may be needed in the ED. Findings should be discussed with the attending physician in charge. In addition to any clinically indicated scans, **residents should individually perform at minimum 6 FRAGEL examinations** (FAST, Renal, Aorta, Gallbladder, Echo and Lung) **during each scanning shift. If scanning as a group, then the group is expected to perform a minimum of 10 FRAGEL exams per scanning shift.** If a member of the ultrasound faculty is not present during any clinically indicated scans, studies should be reviewed with the attending staffing the case.

In addition to the requirement of FRAGELs, residents should perform a **minimum of 5 DVT, ocular and soft tissue/MSK scans** during the course of the rotation. This is to ensure that each resident meets the minimum graduation requirement (see below).

Required Scans: Residents will be required to fulfill approximately 200 scans during their rotation with a minimum of the following breakdown by examination type:

Echo – 25
FAST – 20
Gallbladder – 15
Renal – 15
Lung – 15
DVT – 10
Aorta – 10
Ocular – 5

During their rotation, residents will be expected to take online quizzes and submit their results for evaluation. The quiz is available at the following website:

- https://www.emergencyultrasoundteaching.com/tests/post_test.html

Upon completion of the rotation, the resident will be evaluated based on his/her attendance, motivation, didactic knowledge, procedural skills, and test results. Residents who have not met the minimum requirements of the rotation, as decided by ultrasound faculty, will be required to participate in remediation. Residents will also be asked to evaluate the rotation and provide suggestions on areas of improvement.

Additionally, **PGY 3 residents will be expected to give a mini-presentation** during one of the tape review sessions. Options for the presentation include the following:

- **Case follow-up:** Follow-up on one of the patients that you performed an ultrasound on to see how your ultrasound may have impacted the course of care for the patient and also to see if your findings correlate with what was ultimately found for the patient
- **Journal Club:** Present an article on a topic of interest related to ultrasound
- **Mini-lecture:** Give a 15-20 minute presentation on a topic of choice

Please be sure to discuss your plans for your presentation with the faculty in charge of tape review during your rotation.

Residents may be asked to participate in teaching sessions with medical students in lieu of scanning shifts.

EDUCATIONAL MATERIALS:

It is suggested that you review the following lectures at http://emergencyultrasoundteaching.com/narrated_lectures.html:

- Appendicitis/small bowel
- DVT
- Ocular
- Skin and Soft Tissue/MSK

All suggested reading materials are available online at <http://www.sunykchsono.com/resource>. All textbooks are available at the Downstate Medical Library and in on-line format. Certain textbooks are available in the ultrasound office and are available for use by the residents.