

**University of Tennessee Radiology Residency  
Ultrasound Rotation  
Resident Scanning Program  
2012-13**

**Goals:**

In order to develop greater depth of understanding of ultrasound technique and diagnosis, a program has been developed to allow for direct scanning of patients by residents during their rotation at Methodist University Hospital.

**Overview:**

Residents will perform ultrasound scans with image documentation for a set number of examinations per month, determined by their past experience with ultrasound scanning. Residents are encouraged to prepare for scanning of patients by observing the scan technique of sonographers, studying the examination protocols, and reviewing the RSNA physics modules for practical ultrasound physics.

Ultrasound examinations performed by residents will not be included in the patient's medical record; rather, the examination will be performed by the resident after the official examination is performed by sonographers and will be saved in PACS under a different classification than the patient's medical record. To that end, residents, with the assistance of sonographers, will ask patients if they would be willing to have additional, time-limited scanning performed by the resident for training purposes. It is recognized that not all patients will agree to participate, but it is anticipated that there will be enough agreeable patients to allow for this scanning to be performed. (On months in which there are more than one resident, it is acceptable for the initial 2 examinations to be performed on a fellow resident).

The ultrasound section director will review the completed ultrasound examinations by the residents at the end of the rotation and confirm that the requisite examinations were performed, satisfying a *requirement for successful completion of the rotation*. The performance of additional examinations beyond the specified requirements will be considered evidence of increased effort and interest. The section director will critique the examinations for the resident, either in person or via email communication.

**Requirements:**

1. First rotation in ultrasound (6 examinations):
  - a. Leg venous ultrasound examinations: 2 examinations, either 2 separate unilateral legs or 1 bilateral leg examination.
  - b. Right upper quadrant abdominal ultrasound: 1 or 2 examinations

- c. Renal ultrasound: 1 or 2 examinations
  - d. Scrotal, thyroid, or pelvic ultrasound: 1 examination
- 2. Second rotation in ultrasound (if had experience with scanning during 1<sup>st</sup> rotation; otherwise follow guidelines for 1<sup>st</sup> rotation) 7 examinations:
  - a. Leg venous ultrasound: 2 examinations, either 2 separate unilateral legs or 1 bilateral leg examination
  - b. Complete abdominal ultrasound: 1 examination
  - c. Renal ultrasound: 1 examination
  - d. Right upper quadrant abdominal ultrasound: 1 examination
  - e. Scrotal or thyroid ultrasound: 1 examination
  - f. Pelvic or transvaginal ultrasound, Gyn or Ob: 1 examination
- 3. Third rotation in ultrasound (if had experience scanning during 1<sup>st</sup> two rotations; otherwise follow guidelines for 1<sup>st</sup> or 2<sup>nd</sup> rotation) 7 examinations
  - a. Carotid ultrasound: 1 examination
  - b. Abdominal ultrasound: 2 examinations
  - c. Pelvic or transvaginal ultrasound (Gyn or Ob): 1 examination
  - d. Leg venous ultrasound: 2 examinations
  - e. Transplant kidney ultrasound (including Doppler): 1 examination

**Procedure:**

1. Ask patient if he/she would be willing to undergo additional scanning by resident for training purposes.
2. Coordinate with sonographer the transfer of patient to a scan room not assigned to a sonographer (typically the fluid drainage room)
3. Enter the patient's Medical Record Number (MRN) into the field for the Accession Number
4. Enter the resident's ultrasound scanning number (see list in Appendix A) in the Patient Name field, i.e., Resident2.
5. Perform examination and capture images on PACS per protocol with any needed additional images for clarification of identified pathology.
6. Review examination on PACS and list major findings on the report page. If there are any limitations in the examination, please list them as well with a brief explanation.
7. Each of your examinations will initially be stored in the "unspecified exam" folder for MUH in Centricity PACS. You will need to call Brad Yount, MUH PACS coordinator after completion of each examination and ask that the study be moved to your scan folder in Centricity. (Individual scan folders for residents will have been created in Centricity by the IT Department).
8. Communicate (directly or via email) with the ultrasound section director (Donald Emerson, [ds.emerson@gmail.com](mailto:ds.emerson@gmail.com)) if there are any problems with meeting the base scanning requirements of this program.
9. Scanning by residents should not take undue advantage of the good will of patients. Examinations should therefore be completed within approximately

- ½ hour. Residents should also express gratitude to the patient at the end of the scan session for their willingness to cooperate in physician training.
10. When a transvaginal ultrasound is performed, there should be a chaperone in the room. (There is often a radiology tech student on rotation in ultrasound who would be willing to perform this function).
  11. Sonographers are an excellent teaching resource in the department but they have significant clinical obligations and cannot be expected to help perform the resident scans. Furthermore, direct scan assistance by sonographers would be considered a dilution of the resident's scan experience. On the other hand, if they are available, sonographers may be asked specific questions to help the resident overcome a specific technical or scanning problems encountered.
  12. It is the resident's responsibility to keep up with performing the requisite number and type of examination.
  13. Be aware that there is always a variation in the type and number of examinations performed in the ultrasound section. Therefore, it is *incumbent that the resident does not wait till the end of the rotation to complete these examinations*. It is not possible to perform all the required examinations during the last 2 weeks of the rotation. The first 1 or 2 scans should be performed during the first week of the rotation. Plan ahead!
  14. The resident should coordinate the performance of his/her scanning with the sonographers in the ultrasound section. Failure to do so may be disruptive to the functioning of the department.
  15. The resident should inform the ultrasound section director when examinations are completed so that they can be reviewed and feedback on technical and protocol performance can be provided. This is best accomplished after each examination is completed but can be done for multiple examinations if necessitated by scheduling conflicts.
  16. It is considered exemplary if the resident wishes to perform more examinations than specified in the base requirement. Nevertheless, this must not conflict with the orderly functioning of the ultrasound division.

**Appendix A**  
**Resident Scan Number**

7. Natera, Alejandra
8. Chatterjee, Rano
9. Ali, Cina
10. Newman, Justin
11. Windord, Kristi
12. Roberts, Matt
13. Blankeship, Patrick
14. Awwad, Reem
15. Benkhe, Schorr
16. Rozas, Alexandra
17. Chary, Aaron
18. Hansen, Dale
19. Robinson, Kyle
20. Patel, Neil
21. Little, Seth
22. Angel, Wes
23. Laxton, Will
24. Young Natalie
25. Bohl, Casey
26. Oh, Christopher
27. Caldwell, Jason
28. Termiyakarn, Float
29. Walker, Nichole

30. Osborne, Scott
31. Miller, Adrian
32. Hart, Sharron
33. Mayhall, George
34. Mays, Margaret
35. Radtke, Ina
36. Rothrock, Becky
37. Terry, Adrian
38. Walton, James