

RESIDENT GUIDE TO THE FIRST-YEAR ULTRASOUND ROTATION

First Day:

- Arrive before 8AM for morning conference (don't be late!) The ultrasound reading area is directly across from the Abrams conference room.
- Meet with Dr. Benson or Dr. Frates for a brief orientation and overview as well as useful handouts and online links.
- On the wall in the main reading area there will be a list of room assignments where you can find out which sonographer you are paired with each day. For the first four weeks or so, you will be working closely with a sonographer. After that, if you are ready, you will be running your own room, though you will still be paired with a sonographer much of the time to assist with workflow.
- For one day the first week, you will shadow one of the two sonologist assistants. You will spend one day in High Risk OB and 2 days in the vascular lab during your last week. Otherwise, you will be on L1.
- There is a break room with a refrigerator as well as free coffee/tea/hot chocolate.
- There is a coat rack and shelf that residents can use to store their personal items as you walk in. These are not secured, however.
- The day typically ends between 4:30 and 5:00 PM. Check with the coordinator (typically Linda) to make sure there are no cases pending and you are clear to go.

Reading:

You are strongly encouraged to follow the syllabus provided. After the required reading is complete, additional resources include:

- OB/GYN Ultrasound Case Review Series (stick with the GYN portion as a first year)
- General/Vascular Ultrasound Case Review Series
- RadPrimer (Basic and Intermediate, "Obstetric" and "Ultrasound"), over 800 questions in total, great resource given new board format.
- Core Radiology, Jake Mandell
- Primer of Diagnostic Imaging, Weissleder

OSCE: On a CD that you pick up from the administrative office toward the end of rotation and typically review with Dr. Benson during the last week. Study hard and take it seriously (not that you wouldn't, of course).

Everything else will be taught as you go along during the first four weeks with sonographers, but here are some helpful pointers. These will make more sense after you start working with the sonographers.

Sample Workflow:

- 1) When assigned room is clean (and sonographer you are working with is ready, if applicable) grab accession form at front desk (next patient to be seen is the sheet on far left of row) and take patient around to your room. Call patient by first name only (HIPAA).
 - a. Grab manila folder if OB. OB folder may not be pulled, so check the bookshelf up front (organized by two numbers, which correspond to the second- and third-to-last numbers in the patient's MRN).
- 2) Once in the exam room, confirm the name, DOB, Reason for Exam with patient; LMP if pelvic case; ask about hormones if postmenopausal; type of cycle (3-or-5 day), embryo transfer date, and number of embryos transferred if IVF visit. Remember to ask the patient for the two identifiers; do not provide them.
- 3) Start machine: Select correct operator (some machines will allow you to enter your initials; otherwise you are "RES" when running a room), probe, model, etc.
- 4) Review history in Epic, print relevant old reports ("Open External Results Report") if not already printed; calculate estimated gestational age based on LMP, IVF date, prior U/S in OBUS if OB patient, etc.
- 5) Perform exam (Limit: 15 minutes). If TA+TV exam, have attending check TA images before beginning TV portion. At least one female must be present in the room for TVUS. Occasionally the requisition form up front will state "Female Only" which is self-explanatory.
- 6) Get in line (put room # on list of waiting cases), present to attending. Note: for obstetrical ultrasound studies, you are

expected to have put in a preliminary report with measurements and calculations before presenting to the attending.

- 7) Once checked by attending, End Exam on machine, excuse patient to waiting room if patient needs copy of report or other unresolved issues, otherwise can generally let them go at that point.
- 8) Complete study in Percipio/Epic for billing purposes (strangely, can't be logged in as yourself to complete a study in Percipio, have to use an open Percipio window or ask a sonographer). Make sure to pick "ALL" when adding staff to find your name.
- 9) File Report in UltraSTAR / OBUS and give a copy to patient if Inpatient, seeing another Dr. same day, OB case, or patient requests.
 - If inpatient, will need to put in a transport request through Epic and bring patient back to inpatient waiting area. Also fill out an Ultrasound Escort Slip and give to the staff at the inpatient waiting area when you drop the patient off.
 - If OB patient, attendings want you to give the OBUS version of the report, not the UltraSTAR version, to the patient, along with a picture. Don't give any pictures with caliper measurements.
 - There are other rules you will learn as you go along. You may need to call in a finding, such as a newly discovered echogenic intracardiac focus on a fetal survey, in which case you will need to document that it was called in using ANCR. Typically you will contact the ordering provider on the requisition form. For OB findings in patients at certain health centers, you will contact the Midwife On Call (beeper 11935). If any confusion, ask for clarification.
- 10) Put red "exam performed with trainee" sheet and paper clip packet including requisition form, old reports if applicable, and a copy of current report (if OB case), into inbox at attending workstation. The "exam performed with trainee" sheet should be on top. It is important so the attending will remember to add an attestation before signing.
- 11) Clean room, prepare for next study.

Protocols: Current protocols are all available on line at:

<http://tinyurl.com/US-Protocols-Policies>

Additionally, there is a binder in the main ultrasound reading area on L1 with detailed descriptions of individual protocols.

Current as of 6/26/2016

Computer Programs

Epic: Use as you would in other sections to look up patient information and prior imaging reports. *UltraStar:* This is the program you will use to enter the accession number of studies you perform and generate a report. For non-OB cases, you will construct the text of the report through UltraStar (a number of helpful templates are available). For OB cases, use OBUS for report construction. Instructions on obtaining Login/PW information will be provided at orientation.

**Always remember to check that your name is added to the report generated through UltraStar, and that the correct attending is selected. If you are being checked by a sonologist assistant, you will add both the “late” attending and the sonologist assistant’s name to the report.*

OBUS: For construction of OB reports. Note that you will still initially enter the accession number into UltraStar for report generation; however, you will construct and edit the report through OBUS. This program is best learned through trial and error while shadowing, but one helpful thing to know going in is that there are several built-in functions to quickly determine gestational age. Before performing an OB study, you should open OBUS and calculate the expected gestational age using the following functions:

<USDT>: First and best choice, if available. Use the **earliest** ultrasound done at BWH for dating. Enter the date of ultrasound / GA at that time.

<IVF>: Use for IVF patients, first visit. Need to know cycle length (e.g. 3 or 5 day) and embryo transfer or retrieval date.

<LMP>: Based on patient’s last menstrual period. This is the least accurate way to date a pregnancy and should be the last option chosen.

Note on OB cases: There are several rules to remember. As just a few examples: typically only two fetal full surveys are performed;; specific information must be added to a report for growth evaluation such as estimated weight based on the “analyze” function in OBUS; and so forth. These details are beyond the scope of this guide but should be kept in mind in the first month, so you are aware of what to do when you are on your own. Pay particularly close attention to how the sonographers construct reports in OBUS during your first four weeks.

Note on Abdominal Ultrasounds

*You might perform a **limited** abdominal ultrasound occasionally, depending on when the patient last had imaging (CT, U/S). Don't forget to check the imaging history beforehand to determine whether a full or limited abdomen is the appropriate study to perform.*

Note on Renal Ultrasounds

Keep difference between measurements of kidneys in mind, as anything >1cm is considered abnormal by Renal and will typically warrant further investigation. Remeasure to ensure that there is actually discrepant size.

PACS Tip

To edit images in PACS (e.g., if you mislabel an image): click Tools, place your cursor in front of the text/label you wish to delete, and then hold Ctrl+Alt+B. There is also a measuring tool to measure from images in PACS if necessary.

Billing Codes: If uncertain how to complete the case, ask the coordinator which code to use.

Helpful Numbers

Transport – x27117; Midwife On Call – beeper 11935