

## Ultrasound Rotation

Hours/Locations - Clinical Shifts are 10A-10P in KCH main Quads 1-4, Mon, Tue, Thur, Fri, weekends are free, Wed is normal ER conference. There is 9-10 image review in the ultrasound room prior to the KCH conference room on Thursday in the AM, you can leave at 9 PM that day. Normally plan to stay 1 hour past 10, I found personally.

Responsibilities - You pick up in Pod A Quads 1-2 and Quads 3-4 (1) all vaginal bleed pt's (2) all pregnant pts with belly pain. You are responsible for (1) Carrying (HPI, orders, etc), (2) Lab draw, UA, (3) Pelvic US +/- Transvaginal US. However, if you are just 1 person and you are overwhelmed (aka 10 come in), you will be helped. Just ask :)

You are also responsible for getting 25 well done ultrasounds of (1) Renal, (2) Aorta, (3) FAST, (4) IUP. These will be done easily if you are efficient and you do all 4 on each pregnant patient. If you are not, you may have to do extra scanning shifts, which you can do if you want practice anyways, so no stress, you have time.

You also have to complete ACEP Quizzes for US ([http://www.emsono.com/acep/ACEP\\_EUS\\_Exam.html](http://www.emsono.com/acep/ACEP_EUS_Exam.html)) This is an extra website that I found to have very good teaching for these <http://www.emergencyultrasoundteaching.com/> (Go to the Ultrasound Images and scroll through each one, you'll teach yourself)

### Tips/Helpful Stuff

(1) Pull up the Q1-4 "To Be Seen" Whiteboard. Put the vaginal bleeders into your quadramed, assign yourselves to them once they get a nurse. Check the POC Urine Preg on all 20-50 yo F with abdo pain, if positive, it's your pt.

(2) Bring the Sono machine into the room with you when you see a patient, take the history while ultrasounding them and for each patient, perform all four scans while taking the history. Then on the Ultrasound machine, click "Text" and then write a brief history and the results of the scan on four lines or so. "42F, 7 wk by LMP, p/w abdo pain, vag bleed" / "FAST Neg, No AAA, No Hydro" / "IUP, No FF, Pos FHR, Pos Mvmt" "C And C" (Note: C and C means, you found the machine clean and put it back clean, remember to spray it down, it's gross)

To Work Machine → Plug it in, click power button → Click "Patient" → Type in your last name & attending's last name → Type in pt's MRN → Click "Done" → When ready for an image click "Freeze" then "Save" → To save video click "Clip"

What you want for each exam.

FAST - RUQ - Liver tip & kidney / LUQ - Spleen & Kidney / Pericardial - Clip it / Bladder - Behind bladder  
Renal - Pan through kidney in both views, look for hydro (black in middle) & cysts / Bladder - ureteral jets for obs  
Aorta (4 views) - 1 - Seagull sign (celiac trunk) / 2 - Snowman sign (SMA) / 3 - Aorta (<3 cm) / 4 - Iliac (<1.5 cm)  
Preg - Gest sac + Yolk sac (lil cheerio in sac) = IUP / Free Fluid under uterus? / FHR (MMode heart) / Baby mvmt  
Note: Technically, attending is present during your transabdominal & transvaginal. Most are content reviewing your saved images, so I tended to do my Aorta/Renal/FAST then check for IUP transab, and say "I have them if you'd like to see or we can do it together" and then see how each attending liked it done.

(3) INCREDIBLY Basic approach to vaginal bleeding (there are many, many exceptions...)

Labs on all pt's → Urine: UA/UCx/UhCG + Blood: (CBC, T&S, CMP, Quant hCG, PT/PTT) is "ED Order Set"

Neg hCG: Not anemic → d/c to GYN f/u in 2 days / Anemic (Hct <7 + sx) → GYN consult for transfusion

Pos hCG: IUP → d/c to GYN f/u in 2 days / No IUP → GYN consult for r/o ectopic

Note: Feel free to reread whatever OB notes or book for abdo pain & vag bleed in preg, that's a basic ED one.

When to actually order the lab stuff (since this is important for costs, pt care, etc).

- All labs, it's a rainbow + a pink (aka lavender, blue, yellow, 2 pinks) & *SIGN the T&S on the slip.*
  - Every pt gets a UA (cheap, r/o infxn), UhCG (often at triage, need to know).
  - UCx in older pt's or complicated UTI's w/o easy Nitro rx (bactrim is class B in preg, lots of resist in KCH).
  - CBC in anemia sx (pale conjunctiva, poor cap refill, SOB, lightheaded, many pads, many days)
  - PT/PTT if on blood thinner, or hx of clot (this test is \$600)
  - T&S on pt's with vaginal bleeding without a T&S in QuadraMed (RhoGam for RH- mom's with Rh+ baby)
  - CMP for pt's with belly pain who you might want to know ALP/AST/ALT
  - Quant for belly pain pt's with early pregnancy and no IUP (<1500 = f/u OB, >1500 = OB consult r/o ectopic)
- Note: Rhogam is arguable in <12 wk pts. Studies show not able to make Ab in this time (baby can't bleed enough)  
Note: They are going to get all these labs in their first visit to an OB. (My feeling is, if I'm sticking them, I'm getting them because we are saving them a stick) Each attending has different preferences, you will be hearing opinions.