FEBRUARY PROTOCOL REVIEW

PART 2 – ALL ABDOMINAL EXAMS

A review of frequently missed protocol images and recent changes

ABD EXAMS – RUQ and Complete

- **Separate Caudate Lobe images in sag and transverse should be taken & labeled "Caudate Liver Sag/Trv." This should be done ANY time looking at the liver – RUQ, Complete Abd, Doppler, Liver TX**
- **2D and Color image of MPV on all Abdomen cases to show direction and patency**
- **Look at and measure the Spleen only in HCC screening cases, Complete Abd, and Liver TX cases, not needed in a RUQ.**
- **Include an image of Liver and Kidney for echogenicity comparison**

ABD DOPPLER EXAMS –

Abd Doppler and Liver TX will be reviewed in more depth during the month of March, so this list is purposely short for now 😊.

- **Dedicated 2D and color images of MPV, RPV and LPV are needed in addition to the pulsed wave image of each.**
- **For Portal Hypertension – In addition to the color and pulsed wave of MPV, RPV and LPV, don't forget a color image of splenic vein (at splenic hilum) and document any collaterals in LUQ.**
- **When looking at the hepatic veins, only the waveform is needed. A velocity is not needed unless you see aliasing, or if the patient has a stent. Be sure to angle correct for accurate velocities. Please do no measure the velocity of the hepatic veins unless indicated so that our exams and protocol can be consistent.**
- **Anytime you do a velocity it should be angle corrected! A portion of the length of the hepatic artery should be shown so that the angle can be corrected accordingly.**
- **Splenic vein – Dr Dighe is researching this and will get back to us on what we will have in our protocol. For now the protocol only says color at the hilum of the spleen, however she would also like us to include color at the pancreas and spectral at the hilum. We will clarify this when we do the review.**

RENAL EXAMS–

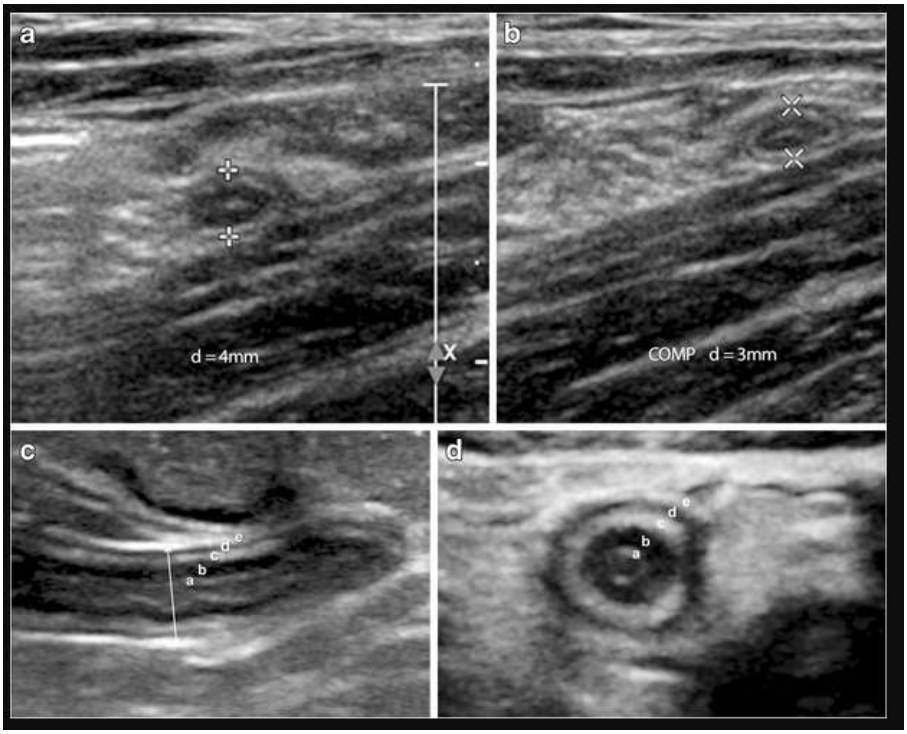
- **Serial Renal Images with appropriate labels are needed on all exams–**
    - **Sagittal –Lateral, Mid, and Medial**
    - **Transverse – Superior, Mid, and Inferior**
    - **Color image showing the perfusion is needed**
    - **Length is the only measurement needed unless a volume is specifically requested. Transverse measurements not required.**
    - If a patient only has one kidney, please still look at the renal fossa but the charge will be a renal **LIMITED**, not a renal complete.

AAA EXAMS –

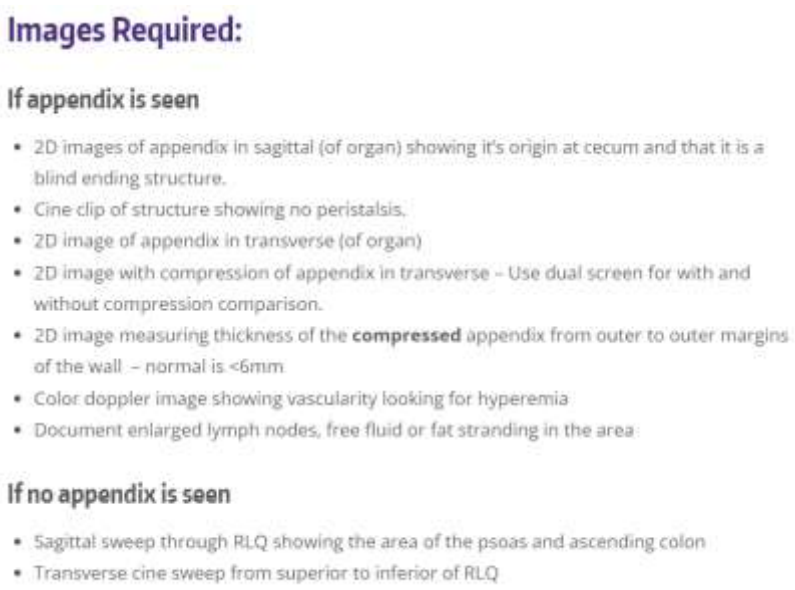
- **AAA Exams – Images of IVC also needed in Trv and Sag**

APPENDIX EXAMS –

- **Always check for compressibility**
- **Appendix should be measured from the outer hypoechoic to outer hypoechoic layers (in the image below it would include layers a-d on both sides, not including the outer serosa/echogenic layer "e").**
- **Normal is less than 6mm AFTER compression.**



- **Our Appendix protocol was more of a description on how to perform the exam and was lacking a list of the images that are specifically needed. This section was added to the protocol to clarify what to document**



Images Required:

If appendix is seen

- 2D images of appendix in sagittal (of organ) showing it's origin at cecum and that it is a blind ending structure.
- Cine clip of structure showing no peristalsis.
- 2D image of appendix in transverse (of organ)
- 2D image with compression of appendix in transverse – Use dual screen for with and without compression comparison.
- 2D image measuring thickness of the **compressed** appendix from outer to outer margins of the wall – normal is <6mm
- Color doppler image showing vascularity looking for hyperemia
- Document enlarged lymph nodes, free fluid or fat stranding in the area

If no appendix is seen

- Sagittal sweep through RLQ showing the area of the psoas and ascending colon
- Transverse cine sweep from superior to inferior of RLQ

HERNIA EXAMS –

- **Compression is not needed. Instead, we are looking for reducibility. To check for reducibility, have the patient Valsalva and observe whether the contents of the hernia return into the abdomen when the patient relaxes. If it does, it is reducible. If a portion of the hernia contents returns, but not all of it, it is partially reducible. If it all stays herniated with no change in size, it is not reducible.**
- **Standing images are needed for all exams to access whether the hernia and contents of the hernia change while upright. Does it get larger? Is it still reducible?**
- **When measuring the size of a hernia - we are looking at the size of the NECK of the hernia, or in other words, the size of the defect/break in the inguinal ring. You do not need to measure the contents of the hernia.**
- **Cine clips are more important than still images for hernias, so please include both. The cine clip is to be taken with the patient performing a Valsalva and keeping the transducer on the area of interest, it is not a sweep of the area.**
- **The wording on where to acquire the images and has been updated and can be viewed in the protocol. PLEASE REVIEW THIS.**