

## INDEX ULTRASOUND Report Templates

**NOTE: Reports in italics are planned but not yet created in this document**

### Basic Structure

- A. Abdomen
- B. Renal
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- D. Ob
- E. Pelvis - Male
- F. Extremities
- G. Neck
- H. Head
- I. Thorax

### Expanded Structure

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    - ii. Post-hysterectomy
  - b. Transvaginal
    - i. Normal
    - ii. Post-hysterectomy
  - c. *Pelvis and Transvaginal*
  - d. *Transvaginal (after initial pelvis with no pelvis charge)*

- e. *Limited pelvis – postvoid bladder*
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    - ii. Limited Ob (sac)
    - iii. Limited Ob (sac/yolk sac)
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  - b. 1<sup>st</sup> Trimester - Transvaginal Ob
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    - iii. Transvaginal – (sac/yolk sac)
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    - ii. Limited Ob & Transvaginal Ob – sac
    - iii. Limited Ob & Transvaginal Ob – sac/yolk sac
    - iv. Limited Ob & Transvaginal Ob - embryo
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  - e. *Limited Ob – 22w – 32w*
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*H. Thorax*

- a. *Pleural effusion evaluation*
- b. *Thoracentesis*

## ABDOMEN

- a. Complete Abdomen US
- b. RUQ (Liver Gallbladder) US
- c. Complete Abdomen with Hepatic Vascular
- d. Complete Abdomen (Liver Transplant) with Hepatic Vascular
- e. Hepatic Vascular
- f. Limited Abd for Ascites
- g. *Limited Abd for Abdominal Hernia*
- h. *Aorta (for AAA)*
- i. Aorta, Iliac A's, IVC, Iliac V's (pre-transplant)
- j. *Mesenteric Vascular*
- k. Paracentesis

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## **COMPLETE ABDOMEN ULTRASOUND**

**CLINICAL INFORMATION:** Right upper quadrant abdominal pain.

**EXAMINATION:** ABDOMINAL ULTRASOUND, 02/01/2010

**FINDINGS:** Real-time ultrasound of the abdomen demonstrates normal-appearing liver without evidence of intrahepatic biliary dilatation. The gallbladder is normal in appearance without evidence of stones or wall thickening. The common bile duct is not abnormally distended, measuring 4 mm in diameter. The head, body, and proximal tail of the pancreas are normal but the distal tail is obscured by overlying bowel gas. Spleen is not enlarged, measuring 6.8 cm in length. There is a small accessory splenule measuring 1.3 cm in diameter. The kidneys are normal in size and echogenicity bilaterally. Right kidney measures 11.9 cm in length and the left kidney measures 10.3 cm in length. No sign of collecting system dilatation. No free fluid within the abdomen. The abdominal aorta and IVC are normal in caliber.

**IMPRESSION:** Negative.

## **Limited Abdomen Ultrasound: Liver, Gallbladder**

**CLINICAL INFORMATION:** Cholelithiasis, abdominal pain.

**EXAMINATION:** LIVER AND GALLBLADDER ULTRASOUND, 02/01/2010

**FINDINGS:** Real-time ultrasound of the right upper quadrant of the abdomen demonstrates normal-appearing liver without evidence of intrahepatic biliary dilatation. There are multiple stones seen within the gallbladder. There is no sign of gallbladder wall thickening or pericholecystic fluid. Gallbladder is not overly distended. The common bile duct is not abnormally distended, measuring 3 mm in caliber. The pancreatic head, body and proximal tail are normal, but the distal tail is obscured by overlying bowel gas. The right kidney is normal in appearance, measuring 12.3 cm in length with normal echogenicity and no sign of collecting system dilatation. The abdominal aorta is normal in caliber. IVC is not overly distended.

**IMPRESSION:** Cholelithiasis.

## Abdominal Ultrasound AND Hepatic Vascular Ultrasound

**CLINICAL INFORMATION:** Chronic hepatitis C. Cirrhosis.

**EXAMINATION:** ABDOMINAL ULTRASOUND, 02/01/2010

**EXAMINATION:** HEPATIC VASCULAR ULTRASOUND, 02/10/2010

**FINDINGS:** Real-time ultrasound of the abdomen demonstrates abnormal liver with coarse echotexture and irregular margins consistent with the presence of cirrhosis. No sign of intrahepatic biliary dilatation. There is sludge within the gallbladder. However, no stones are seen. No sign of gallbladder wall thickening. The common bile duct is not abnormally distended, measuring 3 mm in caliber. There is a 1-cm cyst in the midbody of the pancreas and a possible additional 4-mm cyst in the proximal body of the pancreas. The pancreas is otherwise unremarkable in appearance. The spleen is enlarged, measuring 14 cm in length. The kidneys are normal in size and echogenicity bilaterally. The right kidney measures 10.8 cm in length and the left kidney measures 11.2 cm in length. There is a 9-mm stone in the lower pole of the left kidney without associated calyceal dilatation. The abdominal aorta and IVC are normal in caliber. No free fluid within the abdomen.

Color and spectral Doppler interrogation utilized for evaluation of the hepatic vascular flow patterns:

Splenic vein within splenic hilum: Hepatopetal flow.

Splenic vein: Hepatopetal flow.

Main portal vein: 11 mm caliber, hepatopetal flow, maximal velocity 28 cm/s.

Right and left portal vein branches: Hepatopetal flow.

Main hepatic artery: Normal arterial waveform, peak velocity 49 cm/s, RI 0.81.

Right and left hepatic artery branches: Normal arterial waveforms, RI 0.72 and 0.70, respectively.

Right, middle, and left hepatic veins: Appropriate hepatofugal flow.

IVC: Appropriate flow pattern.

### IMPRESSION

1. Cirrhosis.
2. Mild to moderate splenomegaly.
3. Normal hepatic vascular flow patterns demonstrated with color and spectral Doppler ultrasound.
4. 1-cm midbody pancreatic cyst and additional likely 4 mm proximal body pancreatic cyst. There has been no significant change in approximately 2 years since the previous CT scan of November 2007.
5. Nonobstructing left renal calculus.

## Liver Transplant: Abdominal Ultrasound & Hepatic Vascular Ultrasound

**CLINICAL INFORMATION:** Liver Transplant. Abnormal liver enzymes

**EXAMINATION:** ABDOMINAL ULTRASOUND, 02/01/2010

**EXAMINATION:** HEPATIC VASCULAR ULTRASOUND, 02/01/2010

**FINDINGS:** Real-time ultrasound of the abdomen demonstrates a normal appearing transplant liver with no sign of intrahepatic biliary dilatation. Small fluid collection is seen a posterior margin of the right lobe measuring 8 x 2 x 12cm, consistent with a perihepatic hematoma. Gallbladder is surgically absent. The common bile duct is not abnormally distended, measuring -- mm in caliber. The pancreas is unremarkable in appearance. The spleen is enlarged, measuring -- cm in length. The kidneys are normal in size and echogenicity bilaterally. The right kidney measures -- cm in length and the left kidney measures -- cm in length. The abdominal aorta and IVC are normal in caliber. No free fluid within the abdomen.

Color and spectral Doppler interrogation utilized for evaluation of hepatic vascular flow patterns.

Splenic vein within splenic hilum: Hepatopetal flow.

Midline splenic vein: Hepatopetal flow.

Main portal vein: -- mm caliber, hepatopetal flow, maximal velocity -- cm/s.

Main portal vein anastomosis: -- cm/s.

Right and left portal vein branches: Hepatopetal flow.

Main hepatic artery: Normal arterial waveform, peak velocity --cm/s, RI 0.--.

Right and left hepatic artery branches: Normal arterial waveforms, RI 0.-- and 0.-, respectively.

Right, middle, and left hepatic veins: Appropriate hepatofugal flow.

IVC: Appropriate flow pattern.

### **IMPRESSION**

1. Normal appearing transplant liver.
2. Persistent moderate splenomegaly.
3. Normal hepatic vascular flow patterns demonstrated with color and spectral Doppler ultrasound.



## **ABDOMINAL DOPPLER (Hepatic flow)**

**CLINICAL INFORMATION:** Cirrhosis. Ascites

**EXAMINATION:** HEPATIC VASCULAR ULTRASOUND, 02/01/2010

**FINDINGS:** [Abdominal ultrasound performed one day earlier.] Color and spectral Doppler interrogation utilized for evaluation of hepatic vascular flow patterns.

Splenic vein within splenic hilum: Hepatopetal flow.

Midline splenic vein: Hepatopetal flow.

Main portal vein: -- mm caliber, hepatopetal flow, maximal velocity -- cm/s.

[Main portal vein anastomosis: -- cm/s] *\*\*add this line when liver transplant*

Right and left portal vein branches: Hepatopetal flow.

Main hepatic artery: Normal arterial waveform, peak velocity --cm/s, RI 0.--.

Right and left hepatic artery branches: Normal arterial waveforms, RI 0.-- and 0.-  
-, respectively.

Right, middle, and left hepatic veins: Appropriate hepatofugal flow.

IVC: Appropriate flow pattern.

## **IMPRESSION**

1. Normal hepatic vascular flow patterns demonstrated with color and spectral Doppler ultrasound.

**LIMITED ABDOMEN for ascites evaluation**

**CLINICAL INFORMATION:** Abdominal Distention.

**EXAMINATION:** LIMITED ABDOMINAL ULTRASOUND, 02/01/2010

**FINDINGS:** Real time ultrasound of the abdomen demonstrates a moderate amount of ascites. The largest pocket is seen in the right upper quadrant, around the liver.

**IMPRESSION:** Moderate amount of ascites.

## **AORTA, ILIAC ARTERIES, IVC, ILIAC VEINS (PRE-KIDNEY TRANSPLANT)**

**CLINICAL INFORMATION:** Prekidney transplant evaluation.

**EXAMINATION:** VASCULAR ULTRASOUND AORTA, ILIAC ARTERIES, IVC, ILIAC VEINS, 10/04/2011

**FINDINGS:** Real-time ultrasound demonstrates normal-caliber aorta and iliac arteries. The common iliac arteries bilaterally are normal in appearance and size. The right iliac artery measures 1.0 x 1.0 cm and the left iliac artery measures 1.1 x 1.1 cm. Color and spectral Doppler interrogation reveal normal triphasic waveforms within the aorta and iliac arteries. The IVC and iliac veins are normal in caliber and manifest normal flow patterns on color and spectral Doppler.

**IMPRESSION:** Negative.

## **Paracentesis under ultrasound guidance**

**CLINICAL INFORMATION:** Cirrhosis, ascites.

**EXAMINATION:** ULTRASOUND GUIDED PARACENTESIS, 02/01/2010

**FINDINGS:** Real time ultrasound demonstrated a large amount of ascites. After informed consent was obtained, ultrasound guidance was used to identify a window of access into the right lower quadrant of the abdomen. The overlying skin was marked, then prepped and draped in the usual sterile fashion. Lidocaine mixed with bicarbonate was used for local anesthesia. Next, a 5-French Skater catheter was introduced into the abdomen and yellow, clear ascitic fluid returned. 30 mL of fluid was obtained and sent to the lab for analysis. Paracentesis was continued and approximately -- L of fluid was aspirated. The patient tolerated the procedure well and there were no immediate complications. The estimated blood loss was less than 1 mL. The patient left the ultrasound department in stable condition.

**IMPRESSION:** Successful ultrasound-guided paracentesis with --.- L of yellow, clear ascitic fluid aspirated.

## **RENAL**

- a. Renal
- b. Renal with Renal Vascular (RAS)
- c. Renal Transplant with Doppler
- d. Renal Transplant without Doppler
- e. Renal Transplant with Doppler AND Post Void Bladder

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## **RENAL ULTRASOUND**

**CLINICAL INFORMATION:** Chronic renal failure. Diabetes. Hypertension.

**EXAMINATION:** RENAL ULTRASOUND, 02/02/2010

**FINDINGS:** Real-time ultrasound demonstrates normal size kidneys bilaterally, right measuring 11.8 cm in length and the left measuring 11.5 cm in length. Renal echogenicity is normal. No sign of collecting system dilatation. Urinary bladder is unremarkable in appearance with a moderate amount of urine within it.\* No focal wall abnormalities are identified.

**IMPRESSION:** Negative.

### ALTERNATIVES:

The bladder is decompressed around the foley catheter and cannot be further evaluated.

The bladder is empty at the time of the examination and cannot be visualized.

There is a minimal amount of urine within the bladder which limits the ability to adequately visualize it.

## **Renal Ultrasound with Renal Vascular Doppler Ultrasound**

**CLINICAL INFORMATION:** Elevated BUN and creatinine. Malignant hypertension.

**EXAMINATION:** RENAL ULTRASOUND, 02/02/2010

**EXAMINATION:** RENAL ARTERY DOPPLER ULTRASOUND, 02/02/2010

**FINDINGS:** Real-time ultrasound demonstrates normal size kidneys bilaterally, right measuring 10.6 cm in length and the left kidney measuring 10.5 cm in length. There is no sign of collecting system dilatation. Renal echogenicity is normal. There is only a small amount of urine within the urinary bladder. No focal bladder wall abnormalities are identified. (The abdominal aorta and IVC are normal in caliber.)

Color and spectral Doppler interrogation of the renal arteries was performed utilizing both, the indirect method, evaluating the waveforms in the distal renal arteries just proximal to the renal hila bilaterally, and the direct method, evaluating main renal artery velocities at the origins off the aorta. Distal renal artery systolic acceleration is normal bilaterally, greater than 3 m/s/s. The resistive index of the renal arteries bilaterally is moderately elevated, measuring between 0.82 and 0.84 bilaterally. Peak velocities within the origins of the renal arteries are in the normal range, measuring 95cm/s on the right and 102cm/s on the left. Peak velocity within the abdominal aorta measures approximately 90cm/s. Normal main renal venous flow was seen bilaterally

### **IMPRESSION**

1. Normal appearing kidneys bilaterally
4. No focal bladder abnormalities.
5. No evidence of renal artery stenosis utilizing both indirect and direct methods of renal artery Doppler interrogation.
6. Increased resistive index of the renal arteries bilaterally. This is a nonspecific finding, consistent with renal dysfunction.

## **Renal Transplant w Doppler**

**CLINICAL INFORMATION:** Renal transplant since 1988. Elevated BUN and creatinine. Abdominal pain.

**EXAMINATION:** TRANSPLANT KIDNEY ULTRASOUND WITH DOPPLER ON 09/16/2011

**FINDINGS:** Real-time ultrasound demonstrates normal size right pelvic transplant kidney measuring 10.8 cm in length. No sign of collecting system dilatation or perinephric collections. The urinary bladder is normal in appearance. Color and spectral Doppler interrogation was utilized for evaluation of renal vascular flow. Interlobar artery waveforms are normal with resistive indices ranging from 0.57 to 0.72. Normal main renal venous flow is seen. Main renal artery peak velocity within the renal hilum measures 56 cm/s. At the anastomosis, peak velocities measure up to 51 cm/s.

**IMPRESSION:**

1. Normal appearing renal transplant.
2. Unremarkable vascular study.



## **Renal Transplant without Doppler**

**CLINICAL INFORMATION:** Renal transplant since 2007. Pain over region of transplant

**EXAMINATION:** LIMITED RETROPERITONEAL ULTRASOUND (RENAL TRANSPLANT 08/16/2011

**FINDINGS:** Real-time ultrasound demonstrates normal size left pelvic transplant kidney measuring 13 cm in length. No sign of collecting system dilatation or perinephric collections. The urinary bladder is normal in appearance. \*

**IMPRESSION:** Normal appearing renal transplant.

**\*Alternative:** The urinary bladder is empty and cannot be visualized.

## **Renal Transplant w Doppler AND Postvoid Residual**

**CLINICAL INFORMATION:** Renal transplant 5/2011. Elevated BUN and creatinine.

### **EXAMINATION:**

TRANSPLANT KIDNEY ULTRASOUND WITH DOPPLER ON 09/20/2011  
LIMITED PELVIC ULTRASOUND (POST VOID RESIDUAL) 09/20/2011

**FINDINGS:** Real-time ultrasound demonstrates normal size right pelvic transplant kidney measuring 12.5 cm in length. No sign of collecting system dilatation or perinephric collections. The urinary bladder is normal in appearance. Color and spectral Doppler interrogation was utilized for evaluation of renal vascular flow. Interlobar artery waveforms are normal with resistive indices ranging from 0.65 to 0.73. Normal main renal venous flow is seen. Main renal artery peak velocity within the renal hilum measures 112 cm/s. At the anastomosis, peak velocities measure up to 195 cm/s.

The pre-void urinary bladder measured 8.9 x 10.5 x 6cm (280cc volume). The post-void bladder measured 2.5 x 3 x 2cm (8cc volume).

### **IMPRESSION:**

1. Normal appearing renal transplant.
2. Unremarkable vascular study.
3. Satisfactory emptying of the urinary bladder. No significant post-void residual.

## Pelvis - Female

- a. Pelvis
  - a. Normal
  - b. Post-hysterectomy
- b. Transvaginal
  - c. Normal
  - d. Post-hysterectomy
    - i. *Pelvis and Transvaginal*
    - ii. *Transvaginal (after initial pelvis with no pelvis charge)*
    - iii. *Limited pelvis – postvoid bladder*

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## **Normal Pelvic Ultrasound:**

**CLINICAL INFORMATION:** Lower abdominal and pelvic pain.

**EXAMINATION:** PELVIC ULTRASOUND, 09/05/2011

**FINDINGS:** Real-time pelvic ultrasound demonstrates a normal appearing uterus measuring 8.3 cm in length x 3.5 cm in AP diameter x nearly 4.5 cm in transverse width. Myometrial echotexture is normal. The endometrium is normal in appearance and thickness, measuring 5mm in double AP thickness. The cervix is unremarkable in appearance. There is no free pelvic fluid. The ovaries are both normal in appearance. The right ovary measures 4.2 x 3.1 x 1.9 cm and the left ovary measures 3.7 x 2.9 x 1.8cm. (Tiny follicles are seen in each of the ovaries.)

**IMPRESSION:** Normal appearing uterus and ovaries.

### ENDOMETRIUM ALTERNATIVES:

#### Premenopausal

1. Periovarian endometrium: The endometrium has a normal triple stripe appearance consistent with periovarian phase. It measures 12mm in double AP thickness.
2. Secretory phase endometrium (check the LMP to be sure): The endometrium is prominent, measuring 15mm in double AP thickness, consistent with secretory phase.

#### Postmenopausal

1. Not bleeding, can measure up to 8mm thickness: The endometrium is normal in thickness, measuring 7mm in double AP thickness.
2. Bleeding, can measure normally only up to 4mm: The endometrium is normal in thickness, measuring 4mm in double AP thickness.

### PELVIC FLUID ALTERNATIVE:

Small amount of free fluid is seen in the posterior cul de sac, in a physiologic range.

## Post-hysterectomy pelvic ultrasound

**CLINICAL INFORMATION:** Pelvic pain.

**EXAMINATION:** PELVIC ULTRASOUND, 08/02/2011

**FINDINGS:** Real-time pelvic ultrasound demonstrates no uterus, consistent with previous hysterectomy. There is no free pelvic fluid. The ovaries are both normal in appearance. The right ovary measures 4.2 x 3.1 x 1.9 cm and the left ovary measures 3.7 x 2.9 x 1.8cm. (Tiny follicles are seen in each of the ovaries.)

**IMPRESSION:** Previous hysterectomy. Normal appearing ovaries.

### PELVIC FLUID ALTERNATIVE:

Small amount of free fluid is seen in the posterior cul de sac, in a physiologic range.

## Post-hysterectomy transvaginal ultrasound

**CLINICAL INFORMATION:** Pelvic pain.

**EXAMINATION:** TRANSVAGINAL ULTRASOUND, 08/02/2011

**FINDINGS:** Real-time transvaginal ultrasound demonstrates normal vaginal cuff consistent with previous hysterectomy. There is no free pelvic fluid. The ovaries are both normal in appearance. The right ovary measures 4.2 x 3.1 x 1.9 cm and the left ovary measures 3.7 x 2.9 x 1.8cm. (Tiny follicles are seen in each of the ovaries.)

**IMPRESSION:** Previous hysterectomy. Normal appearing ovaries.

### PELVIC FLUID ALTERNATIVE:

Small amount of free fluid is seen in the posterior cul de sac, in a physiologic range.

### ALTERNATIVE BEGINNING OF REPORT WHEN INITIAL PELVIC ULTRASOUND IMAGES OBTAINED BUT FULL PELVIC NOT PERFORMED:

Initial attempt at pelvic ultrasound converted to transvaginal ultrasound for better demonstration of adnexal structures and endometrium.

## **Normal Transvaginal Ultrasound:**

**CLINICAL INFORMATION:** Lower abdominal and pelvic pain.

**EXAMINATION:** TRANSVAGINAL ULTRASOUND, 09/05/2011

**FINDINGS:** Real-time transvaginal ultrasound demonstrates a normal appearing uterus measuring 8.3 cm in length x 3.5 cm in AP diameter x nearly 4.5 cm in transverse width. Myometrial echotexture is normal. The endometrium is normal in appearance and thickness, measuring 5mm in double AP thickness. The cervix is unremarkable in appearance and contains a Nabothian cyst measuring 1.3cm in diameter. There is no free pelvic fluid. The ovaries are both normal in appearance. The right ovary measures 4.2 x 3.1 x 1.9 cm and the left ovary measures 3.7 x 2.9 x 1.8cm. (Tiny follicles are seen in each of the ovaries.)

**IMPRESSION:** Normal appearing uterus and ovaries.

### ENDOMETRIUM ALTERNATIVES:

#### Premenopausal

1. Periovulatory endometrium: The endometrium has a normal triple stripe appearance consistent with periovulatory phase. It measures 12mm in double AP thickness.
2. Secretory phase endometrium (check the LMP to be sure): The endometrium is prominent, measuring 15mm in double AP thickness, consistent with secretory phase.

#### Postmenopausal

1. Not bleeding, can measure up to 8mm thickness: The endometrium is normal in thickness, measuring 7mm in double AP thickness.
2. Bleeding, can measure normally only up to 4mm: The endometrium is normal in thickness, measuring 4mm in double AP thickness.

### PELVIC FLUID ALTERNATIVE:

Small amount of free fluid is seen in the posterior cul de sac, in a physiologic range.

### OVARIAN CYST ALTERNATIVES:

#### **PREMENOPAUSAL SIMPLE CYST UP TO 2.5cm in DIAMETER**

There is a simple cyst in the right ovary measuring 2.5 x 1.9 x 2.4cm, consistent with mature follicle or a corpus luteum.

PREMENOPAUSAL FILLED IN CYST, UP TO 2.5CM IN DIAMETER

There is a filled in cyst of the left ovary measuring 2.2 x 2.3 x 2.0 cm consistent with hemorrhagic corpus luteum.

ALTERNATIVE BEGINNING OF REPORT WHEN INITIAL PELVIC  
ULTRASOUND IMAGES OBTAINED BUT FULL PELVIC NOT PERFORMED:

Initial attempt at pelvic ultrasound converted to transvaginal ultrasound for better demonstration of adnexal structures and endometrium.



## OB

- a. 1<sup>st</sup> Trimester – Limited Ob
  - ii. Limited Ob (no sac)
  - iii. Limited Ob (sac)
  - iv. Limited Ob (sac/yolk sac)
  - v. *Limited Ob (embryo)*
- b. 1<sup>st</sup> Trimester - Transvaginal Ob
  - vi. Transvaginal Ob (no sac)
  - vii. Transvaginal – (sac)
  - viii. Transvaginal – (sac/yolk sac)
  - ix. Transvaginal – (embryo <8wks)
  - x. *Transvaginal – (embryo > 8wks)*
  - xi. *Transvag Ob – 1<sup>st</sup> Trim after initial pelvis (no Lim Ob charge)*
- c. Limited Ob & Transvaginal Ob – 1<sup>st</sup> Trimester
  - xii. Limited Ob & Transvaginal Ob – no sac
  - xiii. Limited Ob & Transvaginal Ob – sac
  - xiv. Limited Ob & Transvaginal Ob – sac/yolk sac
  - xv. Limited Ob & Transvaginal Ob - embryo
- d. *Limited Ob – 13w – 21w6d*
- e. *Limited Ob – 22w – 32w*
  - xvi. *Limited Ob, including biometry*
  - xvii. *Limited Ob, without biometry*
- f. *Limited Ob – 32w1d – term*
- g. *Fetal Biophysical Profile*
  - xviii. *Fetal Biophysical Profile*

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**FIRST TRIMESTER LIMITED OB – TRANSVAG OB: No sac seen**

**CLINICAL INFORMATION:** Pregnant. Abdominal pain. Positive pregnancy test.

**EXAMINATION:** LIMITED OBSTETRICAL ULTRASOUND, 09/15/2011

**EXAMINATION:** TRANSVAGINAL OBSTETRICAL ULTRASOUND, 09/15/2011

**FINDINGS:** Real-time pelvic ultrasound demonstrates normal size uterus. No sign of intrauterine gestational sac. The right ovary contains a cyst measuring 2.8 x 3.1 x 3.7 cm. No free fluid seen within the pelvis or upper abdomen. Because no sign of a gestational sac could be detected, transvaginal ultrasound was also performed.

Real-time transvaginal ultrasound demonstrates no sign of an intrauterine or extrauterine gestational sac. The uterus and endometrium are normal in appearance. The right ovary contains a cyst measuring 2.8 x 2.9 x 2.8 cm with a small amount of rim vascularity consistent with a corpus luteum\*. The left ovary is normal in appearance with tiny follicles. *[Small amount of free fluid in the posterior cul de sac in a physiologic range.]*

**IMPRESSION:**

1. No sign of intrauterine or extrauterine gestational sac. Findings are consistent with early intrauterine pregnancy prior to demonstration of a gestational sac vs a failing or failed intrauterine pregnancy vs an ectopic pregnancy. Recommend correlation with serum hCG levels and possibly with serial serum hCG levels.
2. Right corpus luteum.

*\* Corpus luteum terminology variations:*

*[Right, Left] ovary contains a [thick-walled, simple, filled-in] cyst [with rim vascularity] consistent with a corpus luteum.*

**FIRST TRIMESTER LIMITED OB – TRANSVAG OB: Tiny, indeterminate sac seen**

**CLINICAL INFORMATION:** Abdominal pain. Nausea. hCG 1095.

**EXAMINATION:** LIMITED OBSTETRICAL ULTRASOUND, 09/15/2011

**EXAMINATION:** TRANSVAGINAL OBSTETRICAL ULTRASOUND, 09/15/2011

**FINDINGS:** Real-time pelvic ultrasound demonstrates normal size uterus. No sign of intrauterine gestational sac. The right ovary contains a prominent cyst measuring 5 x 3.1 x 3.7 cm. No free fluid seen within the pelvis or upper abdomen. Because no sign of a gestational sac could be detected, transvaginal ultrasound was also performed.

Real-time transvaginal ultrasound demonstrates a tiny intrauterine fluid space measuring 3 mm in average inner diameter. It is too small to accurately characterize as an intrauterine gestational sac versus a pseudogestational sac. Yolk sac, embryo and cardiac activity not yet identified, not unexpected with a sac of this size. The right ovary contains a cyst measuring 2.8 x 2.7 x 2.8 cm with a small amount of rim vascularity consistent with a corpus luteum\*. The left ovary is normal in appearance with tiny follicles.

**IMPRESSION**

1. Tiny fluid space within the endometrial region of the uterus. This could represent a very early intrauterine gestational sac prior to demonstration of an embryo or yolk sac. However, it is not a very specific appearance and a pseudogestational sac may produce a similar appearance. Therefore, recommend followup, possibly with serial serum hCG levels to confirm normal rise. Alternatively, a followup ultrasound in approximately 1 week should demonstrate appearance of a yolk sac if this is a normal ongoing intrauterine pregnancy.
2. Right corpus luteum.

\* *Corpus luteum terminology variations:*

*[Right, Left] ovary contains a [thick-walled, simple, filled-in] cyst [with rim vascularity] consistent with a corpus luteum.*

**TRANSVAG OB: Small gestational sac with yolk sac (gestational sac less than 16mm)**

**CLINICAL INFORMATION:** Pregnant. Bleeding

**EXAMINATION:** TRANSVAGINAL OBSTETRICAL ULTRASOUND, 09/20/2011

**FINDINGS:**

Real-time transvaginal ultrasound demonstrates a small intrauterine gestational sac measuring 11 mm in average inner diameter containing a yolk sac. Embryo and cardiac activity not yet identified, not unexpected with a sac of this size. The left ovary contains a [\*] cyst measuring 3.2 x 3.5 x 3.4 cm with a small amount of rim vascularity consistent with a corpus luteum. The right ovary is normal in appearance [*with tiny follicles*].

**IMPRESSION**

1. Early intrauterine pregnancy at approximately [5] weeks gestational age based on size and appearance. Demonstration of an embryo and cardiac activity expected within approximately [1] week if this is a normal ongoing pregnancy.
2. Left corpus luteum.

[3. Etiology of bleeding not identified sonographically.]

\* *Corpus luteum terminology variations:*

[*Right, Left*] ovary contains a [*thick-walled, simple, filled-in*] cyst [*with rim vascularity*] consistent with a corpus luteum.

**ALTERNATIVE BEGINNING OF REPORT WHEN INITIAL PELVIC ULTRASOUND IMAGES OBTAINED BUT FULL PELVIC NOT PERFORMED:**

Initial attempt at pelvic ultrasound converted to transvaginal ultrasound for better demonstration of adnexal structures and endometrium.

**TRANSVAG OB, Live Early<sup>1st</sup> Trimester Embryo (less than 8 weeks)**

**CLINICAL INFORMATION:** Pregnant. Pain.

**EXAMINATION:** TRANSVAGINAL OBSTETRICAL ULTRASOUND, 02/01/2010

**FINDINGS:** Real-time transvaginal ultrasound demonstrate intrauterine gestational sac [*within a retroverted uterus*]. The gestational sac contains a yolk sac and an embryo next to it. The embryo measures approximately 5 mm in length consistent with a gestational age of 6W1D plus or minus 7D. This is consistent with a due date of September 26, 2010. There is normal embryonic cardiac activity with a heart rate of 111 beats per minute. Gestational sac size is normal. [*There is a prominent venous lake seen at the edge of the gestational sac, not clinically significant.*] The left ovary contains a 1.8 x 1.5 cm filled in cyst with rim vascularity consistent with a corpus luteum\*. [*A small follicle is seen in the left ovary as well measuring approximately 1 cm in diameter.*] The right ovary is normal in appearance [*with tiny follicles*]. No free fluid seen in the pelvis.

**IMPRESSION:** Live early intrauterine embryo at 6W1D plus or minus 7D based upon current ultrasound biometry with an EDD of September 26, 2010. [*Retroverted uterus.*] Left corpus luteum.

\* *Corpus luteum terminology variations:*

[*Right, Left*] ovary contains a [*thick-walled, simple, filled-in*] cyst [*with rim vascularity*] consistent with a corpus luteum.

**ALTERNATIVE BEGINNING OF REPORT WHEN INITIAL PELVIC  
ULTRASOUND IMAGES OBTAINED BUT FULL PELVIC NOT PERFORMED:**

Initial attempt at pelvic ultrasound converted to transvaginal ultrasound for better demonstration of adnexal structures and endometrium.

TRANSVAG OB or Limited Ob , Live 1<sup>st</sup> Trimester Embryo > 8 weeks

**NOT COMPLETED**

## EXTREMITIES

- a. Venous US – for DVT
- xix. Unilat Lower Ext – for DVT
- xx. Bilat Lower Ext – for DVT
- xxi. Unilat Upper Ext – for DVT
- xxii. Bilat Upper Ext – for DVT
- b. Arterial US
- xxiii. Bilat Lower Ext – with segmental pressures
- xxiv. Bilat Lower Ext – without segmental pressures
- xxv. *Unilat Lower Ext – without segmental pressures*
- xxvi. *Groin US for pseudoaneurysm*
  - c. *AVF evaluation*
  - d. *Venous US – Mapping*
- xxvii. *Upper Extremities – AVF planning*
- xxviii. *Lower Extremity – GSV for Arterial Jump Graft planning*

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## **LOWER EXTREMITY VENOUS ULTRASOUND, UNILATERAL**

**CLINICAL INFORMATION:** Right lower extremity swelling.

**EXAMINATION:** RIGHT LOWER EXTREMITY VENOUS ULTRASOUND,  
02/02/2010

**FINDINGS:** Real-time ultrasound with the assistance of color and spectral Doppler demonstrates normal deep veins of the right lower extremity from the common femoral vein, through the femoral vein, and popliteal vein. Veins are normally compressible with direct transducer pressure and reveal normal responses to physiologic maneuver. Segments of the right posterior tibial and peroneal veins were visualized with color Doppler and were unremarkable in appearance. Comparison imaging of the left common femoral vein unremarkable.

**IMPRESSION:** No sign of DVT involving the right leg.



## **LOWER EXTREMITY VENOUS ULTRASOUND, BILATERAL**

**CLINICAL INFORMATION:** Leg pain.

**EXAMINATION:** BILATERAL LOWER EXTREMITY VENOUS ULTRASOUND  
ON 10/04/2011

**FINDINGS:** Real-time ultrasound with the assistance of color and spectral Doppler demonstrates normal deep veins of both legs from the common femoral veins through the popliteal veins. Veins are normally compressible with direct transducer pressure and reveal normal responses to physiologic maneuvers. Segments of the posterior tibial and peroneal veins were visualized with color Doppler bilaterally and were unremarkable in appearance.

**IMPRESSION:** No sign of DVT involving either leg.

## **UPPER EXTREMITY VENOUS ULTRASOUND, UNILATERAL**

**CLINICAL INFORMATION:** Left upper extremity swelling and pain

**EXAMINATION:** LEFT UPPER EXTREMITY VENOUS ULTRASOUND,  
02/01/2010

**FINDINGS:** Real-time ultrasound with the assistance of color and spectral Doppler ultrasound demonstrates normal deep veins of the left upper extremity, including the internal jugular vein, subclavian vein, axillary vein, and brachial veins. Accessible deep veins are normally compressible and all of the veins manifest normal flow patterns. The left basilic vein and cephalic vein are normal in appearance. Comparison imaging of the right internal jugular and subclavian veins unremarkable.

**IMPRESSION:**

No sign of DVT involving the left upper extremity.

## **UPPER EXTREMITY VENOUS ULTRASOUND, BILATERAL**

**CLINICAL INFORMATION:** Bilateral upper extremity swelling and pain

**EXAMINATION:** BILATERAL UPPER EXTREMITY VENOUS ULTRASOUND,  
03/15/2010

**FINDINGS:** Real-time ultrasound with the assistance of color and spectral Doppler ultrasound demonstrates normal deep veins of the both upper extremities, including the internal jugular vein, subclavian vein, axillary vein, and brachial veins. Accessible deep veins are normally compressible and all of the veins manifest normal flow patterns. The basilic vein and cephalic vein are normal in appearance bilaterally.

**IMPRESSION:**

No sign of DVT involving either upper extremity.

**LOWER EXTREMITY ARTERIAL DOPPLER ULTRASOUND W/ PRESSURES, BILATERAL – (Normal)**

**CLINICAL INFORMATION:** Peripheral vascular disease. Nonhealing ulceration left toe. Diabetes

**EXAMINATION:** BILATERAL LOWER EXTREMITY ARTERIAL DOPPLER ULTRASOUND WITH SEGMENTAL PRESSURES, 10/04/2011

**FINDINGS:** Segmental pressures presented as follows (right, left) in mmHg.

Brachial: 125, 115.

Upper thigh: 160, 132.

Lower thigh: 135, 140.

Calf: 141, 150.

DPA: 132, 129.

PTA: 126, 126.

ABI: 1.06, 1.03.

The ABIs are normal bilaterally. There is no significant fall in pressure at any level. PVR waveforms are normal at all levels bilaterally.

Color and spectral Doppler interrogation utilized for evaluation of arterial waveforms in both legs. Gray-scale imaging demonstrates no definite evidence of calcific plaque in either leg. Triphasic waveforms are seen in both legs at all levels including the common femoral arteries, the superficial femoral arteries, the deep femoral arteries, the popliteal arteries, and the posterior tibial and dorsalis pedis arteries.

**IMPRESSION:** Normal examination.

**LOWER EXTREMITY ARTERIAL DOPPLER ULTRASOUND WITHOUT PRESSURES, BILATERAL - (Normal)**

**CLINICAL INFORMATION:** Peripheral vascular disease. Nonhealing ulceration left toe. Diabetes

**EXAMINATION:** BILATERAL LOWER EXTREMITY ARTERIAL DOPPLER ULTRASOUND, 10/04/2011

**FINDINGS:** Segmental pressures not obtained as the patient could not tolerate the pressure of the cuffs.\*

Color and spectral Doppler interrogation utilized for evaluation of arterial waveforms in both legs. Gray-scale imaging demonstrates no definite evidence of calcific plaque in either leg. Triphasic waveforms are seen in both legs at all levels from the common femoral arteries to the superficial femoral arteries to the popliteal arteries to the posterior tibial and dorsalis pedis arteries.

**IMPRESSION:** Normal examination.

- Alternate phrasing: Segmental pressures not obtained...
  - 1. due to patient's inability to cooperate
  - 2. due to significant patient contractures
  - 3. due to bandages over the calves (or calf, or ankles, or ankle)
  - 4. due to open ulceration over the ankles (or right/left ankle)
  - 5. due to (right, left) BKA (AKA)
  - 6. due to portable nature of the examination
  - 7. due to the emergent nature of the examination

## TERMINOLOGY FOR ABNORMAL PERIPHERAL VASCULATURE

1. Elevated Segmental Pressures
  - a. Unable to occlude vessels due to [diabetic][calcific] vascular disease
  - b. Pressures spuriously elevated, likely secondary to [diabetic][calcific] vascular disease
2. Low Segmental Pressures
  - a. There is a significant fall in pressure from \_\_\_\_ to \_\_\_\_
  - b. Pressures are significantly lower in the \_\_\_\_ compared with the contralateral side.

*Tentative*

**CLINICAL INFORMATION:** Peripheral vascular disease. Status post bilateral BKA. Nonhealing wound of lower extremity.

**EXAMINATION:** BILATERAL LOWER EXTREMITY ARTERIAL DOPPLER ULTRASOUND, 07/06/2012

**FINDINGS:** Segmental pressures not obtained due to the previous bilateral below-the-knee amputations. Gray-scale ultrasound demonstrates extensive bilateral calcific atherosclerotic disease. Color and spectral Doppler interrogation utilized for arterial waveform analysis in both legs. There is an irregular cardiac rhythm which causes some changes in waveform morphology at different times. Triphasic waveforms are seen in the right leg at the common femoral artery and superficial femoral artery. Lower amplitude biphasic waveforms are seen in the right profunda femoral artery. Monophasic waveforms are seen in the right popliteal artery. Triphasic waveforms are seen in the left common femoral artery and profunda femoral artery as well as the superficial femoral artery and popliteal artery.

**IMPRESSION:** Extensive calcific atherosclerotic disease seen in both legs. No Doppler evidence of significant arterial occlusive disease.

*Tentative*

**CLINICAL INFORMATION:** Weak pulses. Leg pain.

**EXAMINATION:** BILATERAL LOWER EXTREMITY ARTERIAL DOPPLER ULTRASOUND, 07/06/2012

**FINDINGS:** Segmental pressures not obtained as the patient could not tolerate the pressure. Real-time ultrasound demonstrates scattered calcific atherosclerotic disease. Color and spectral Doppler interrogation utilized for arterial waveform analysis in both legs. Triphasic waveforms are seen in the right leg at the level of the common femoral artery, the deep femoral artery and the upper superficial femoral artery. Monophasic waveforms are seen at the level of the midright superficial femoral artery, the lower superficial femoral artery, the popliteal artery, posterior tibial, and dorsalis pedis arteries. Triphasic waveforms are seen in the left leg at the level of the common femoral artery, deep femoral artery, superficial femoral artery, popliteal artery, dorsalis pedis artery, and posterior tibial artery. Overall velocities are diminished in the right popliteal, posterior tibial, and dorsalis pedis arteries.

#### **IMPRESSION**

1. Scattered calcific atherosclerotic disease.
2. Findings consistent with arterial occlusive disease involving the right popliteal and distal runoff vessels.

**CLINICAL INFORMATION:** Intermittent claudication.

*Tentative*

**EXAMINATION:** BILATERAL LOWER EXTREMITY ARTERIAL DOPPLER ULTRASOUND WITH SEGMENTAL PRESSURES, 07/09/2012

**FINDINGS:** Segmental pressures presented as follows (right, left) in mm/Hg:

Brachial: 141, 142

Lower thigh: 161, 189

Calf: 162, 191

DPA: 142, 174

PTA: 143, 194

ABI: 1.01, 1.37

The ABIs are normal bilaterally. Pressures are spuriously elevated at multiple levels, possible due to calcific atherosclerotic disease.

The PVR waveforms are somewhat blunted in the ankles bilaterally. They are unremarkable in the lower thighs and the calves.

Real-time ultrasound demonstrates scattered calcific atherosclerotic change in both legs. Color and spectral Doppler interrogation utilized for evaluation of arterial waveforms in both legs. Monophasic waveforms are seen in the right common femoral artery. Triphasic waveforms are seen in the right deep femoral artery. Satisfactory upstroke monophasic waveforms are seen in the right superficial femoral artery, popliteal artery, and posterior tibial artery. Triphasic waveforms are seen in the right dorsalis pedis artery. Triphasic waveforms are seen in the left common femoral artery, superficial femoral artery, popliteal artery, posterior tibial artery, and dorsalis pedis artery. Biphasic waveforms are seen in the right deep femoral artery.

**IMPRESSION:** Monophasic waveforms seen within the right common femoral artery through the popliteal artery and into the posterior tibial artery consistent with arterial occlusive disease in this leg. This is consistent with the lower pressures measured in the right leg compared in the left leg, although the ABIs are noncontributory due to probable spurious elevation of pressures secondary to vascular calcification.



## NECK & HEAD

- a. Carotid, Normal
- b. Carotid, plaque but no significant stenosis
- c. *Thyroid/Parathyroid*
- d. Transcranial Doppler

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## **CAROTID ULTRASOUND, NORMAL**

**CLINICAL INFORMATION:** Syncope.

**EXAMINATION:** DUPLEX DOPPLER CAROTID ULTRASOUND, 02/12/2010

**FINDINGS:** Real-time ultrasound demonstrates normal-appearing carotid arteries bilaterally\*. Color and spectral Doppler ultrasound demonstrates normal flow velocities bilaterally yielding a normal ICA/CCA peak systolic velocity ratios of 0.6 bilaterally. Peak systolic velocities within the distal right CCA, ICA, and ECA are as follows: 102 cm/s, 57 cm/s, and 61 cm/s. Peak systolic velocities within the distal left CCA, the ICA, and ECA are as follows: 89 cm/s, 53 cm/s, and 68 cm/s. Antegrade vertebral artery flow bilaterally.

**IMPRESSION:** No sign of plaque or significant stenosis. [Minimal plaque but no significant stenosis].

\* Alternatives:

...demonstrates mild bilateral intimal thickening and a small amount of scattered plaque.

...demonstrates moderate bilateral intimal thickening and a small amount of calcified plaque at the origins of the internal carotid arteries.

## **CAROTID ULTRASOUND: PLAQUE BUT NO SIGNIF STENOSIS**

**CLINICAL INFORMATION:** Preoperative major vascular surgery. Precerebral carotid stenosis.

**EXAMINATION:** DUPLEX DOPPLER CAROTID ULTRASOUND, 02/02/2010

**FINDINGS:** Real-time ultrasound demonstrates moderate noncalcified plaque in the right mid to low common carotid artery and in the left mid common carotid artery. There is a small amount of calcified plaque within the left internal carotid artery and partially calcified plaque within the right internal carotid artery. Color and spectral Doppler interrogation reveal normal flow velocities bilaterally yielding normal ICA/CCA peak systolic velocity ratios of 0.8 on the right and 0.9 on the left. Peak systolic velocities within the distal right CCA, the ICA, and ECA are as follows: 64 cm/s, 54 cm/s, and 104 cm/s. Peak systolic velocities within the distal left CCA, the ICA, and ECA are as follows: 80 cm/s, 51 cm/s, and 81 cm/s. Antegrade vertebral artery flow is seen bilaterally.

**IMPRESSION:** Scattered bilateral calcified and noncalcified plaque. No sign of hemodynamically significant stenosis.

## **TRANSCRANIAL DOPPLER ULTRASOUND, NORMAL**

**CLINICAL INFORMATION:** Intracerebral hemorrhage. Vasospasm.

**EXAMINATION:** TRANSCRANIAL DOPPLER ULTRASOUND, 09/26/2011

**FINDINGS:** Examination performed at bedside. Real-time ultrasound with the assistance of color and spectral Doppler utilized to evaluate the intracerebral circulation. Time-averaged maximal velocities are as follows (right, left) in cm/s.

MCA: 35, 86

ACA: 43, 55

P1: 41, 39

P2: 43, 46

ICA: 29, 42

VERTEBRAL: -, -

BASILAR: -

MCA/ICA RATIO: 1.2, 2.1

The velocities are all within the normal range.

**IMPRESSION:** No Doppler evidence of vasospasm.