



AUGUSTA UNIVERSITY
**MEDICAL COLLEGE
OF GEORGIA**

Clinical Ultrasound Curriculum 2021 - 2022

Ultrasound Curriculum Description

The clinical ultrasound curriculum is housed in the FMPC 5000 (Family Medicine), OBGYN 5000 (OB/GYN), GMED 5000 (Internal Medicine), SURG 5000 (Surgery), and EMED 5001 (Emergency Medicine) clerkship courses which are offered in Fall 2021 and Spring 2022 for the clerkship students. The curricular goals, objectives, dates / times, and assessments are outlined below.

Ultrasound Curriculum Director

Becky J. Etheridge, EdD, RDMS, RT(R)

Director of Ultrasound Education, Center for Ultrasound Education
Assistant Professor, Department of Academic Affairs / Emergency Medicine
Medical College of Georgia, Augusta University
1474 Laney Walker Blvd, Augusta, GA 30912
Office: CJ3101, Pavilion III
Phone: 706-721-2262
Email: retheridge@augusta.edu

For timely response, please email Dr. Etheridge at retheridge@augusta.edu and copy the mcguseducation@augusta.edu email account.

Ultrasound Curriculum Faculty and Staff

Matthew Lyon, MD

Executive Director, Center for Ultrasound Education
Medical College of Georgia, Augusta University
Office: CJ3101, Phone: 706-533-2936
Email: mlyon@augusta.edu

Allison Hagen

Office Specialist, Center for Ultrasound Education
Medical College of Georgia, Augusta University
Office: CJ3101, Phone: 706-721-5695
Email: ahagen@augusta.edu

Clinical Ultrasound Curricular Goals & General Objectives

The goals of the *clinical* ultrasound curriculum include 1) Advancement of Point-of-Care ultrasound technology as a clinical skills tool to expand the educational experience of MCG medical students with basic science content and to provide a pathway for integration of knowledge into the clinical patient care setting, 2) Transformation of basic science content knowledge and clinical

experience of MCG medical students with Point-of-Care ultrasound technology to expand and improve their role as future physicians, and 3) Enable MCG medical students to explore anatomy, physiology, and pathology using ultrasound as a personal educational tool.

The general objective of the *clinical* ultrasound curriculum includes: application of Point-of-Care ultrasound scan techniques for basic and advanced ultrasound procedures and examinations as part of the required and elective core clerkship rotations within the *clinical* curriculum.

The *Clinical Ultrasound Curriculum* is executed in each of the following clerkships listed on subsequent pages of this document.

Up-to-date information on the ultrasound requirements, image upload and report link, and clinical information on how to incorporate your ultrasound findings into your clerkship goals and objectives are all located on under the “UME – MCG Students” tab at MCGultrasoundEDUCATION.com There you will find all the information you need, including demonstration videos, to complete your ultrasound-related assignments.

Clerkship directors and coordinators may adjust ultrasound scanning requirements per rotation as needed.

Honesty in Academics Statement:

Students are expected to be familiar with and adhere to all Medical College of Georgia Clinical Policies and Procedures while completing their ultrasound requirements within the specified clerkships. In addition, just like all other courses, students are held to the standards set forth in the MCG Honor Code.

Clinical Ultrasound Curriculum Course Information Disclaimer:

The clinical ultrasound curricular information contained in this document includes proposed logistics and protocols for students completing their ultrasound clerkship requirements as part of their clerkship rotations and is subject to change. Students will be notified of needed changes in a timely manner by their clerkship coordinators or by updates to this document which is posted at mcultrasoundeducation.com.

FMPC 5000 –Family Medicine Clinical Clerkship

Clerkship Director: Dr. David Kriegal / Clerkship Coordinator: Ms. Dayna Seymore / US Faculty: Matt Lyon, MD

1. **General Requirement:** Perform five (5) Aorta and IVC scans on 5 SEPERATE patients using hand-held Philips Lumify ultrasound system and submit images using the MCGultrasoundEDUCATION.com FMPC5000 image upload and report link AND complete the FMPC 5000 Ultrasound Interactive Module with quiz (also at MCGultrasoundEDUCATION.com) by the end of rotation. **(ALL CLERKSHIP STUDENTS)**

2. **Aorta and IVC images with labeling:**
 - a) Transverse Aorta **above** the level of the SMA with Anterior to Posterior measurement
 - i. **Label:** Aorta Trans Proximal – Measure Aorta in Anterior to Posterior dimension on image and upload to the Image Upload and Report link
 - b) Transverse Aorta **at the level** of the SMA with Anterior to Posterior measurement
 - i. **Label:** Aorta Trans Middle - Measure Aorta in Anterior to Posterior dimension on image and upload to the Image Upload and Report link
 - c) Transverse Aorta **above** the bifurcation with Anterior to Posterior measurement
 - i. **Label:** Aorta Trans Distal - Measure Aorta in Anterior to Posterior dimension on image and upload to the Image Upload and Report link
 - d) Longitudinal Clip or Image of IVC at level of Hepatic Vein in liver and IVC entering right atrium
 - i. **Label:** IVC Long – Upload to the Image Upload and Report link

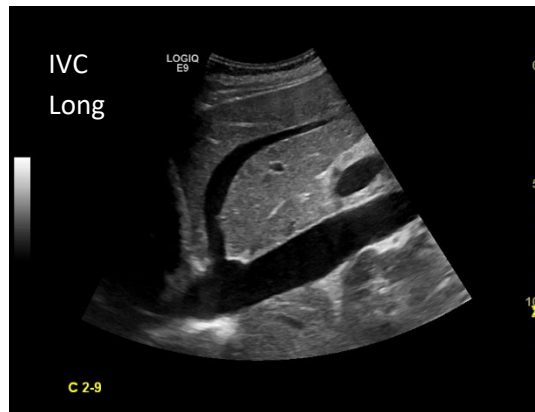
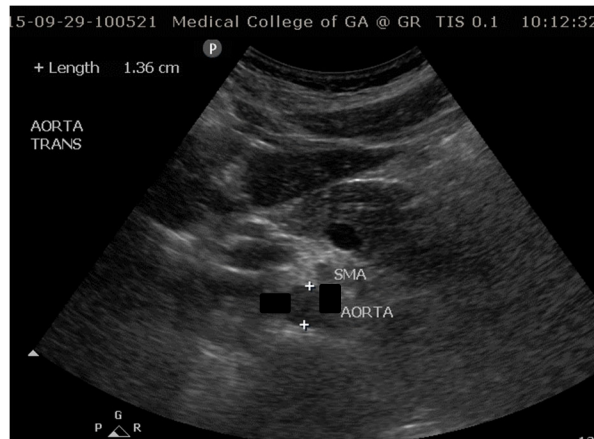
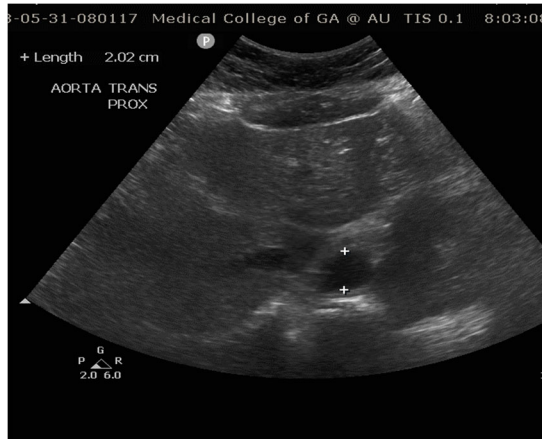
3. **Scanning:**
 - a. Ask your attending physician / resident to assist you in getting your ultrasound images.
 - b. Ask the patient if you can perform an educational ultrasound – tell them you are an MCG student. Obtain electronic consent from all patients. The patient consent is on the website. Go to mcgultrasoundeducation.com and click “UME – MCG Students” and then “FMPC 5000” tab. The “Patient Consent” form is located at the bottom of the page and can be completed on your smart device or on a tablet.

4. **Submission of Aorta / IVC Ultrasound Images:**
 - a. This assignment is due by the end of your FMPC clerkship rotation.
 - a. You must deidentify (take patient name off images) prior to exporting them from the ultrasound machine. Be certain the patient’s name is not visible on your image submission.
 - b. Upload your images by clicking the FMPC5000 Image Upload and Report link. The link is located on the website. Go to mcgultrasoundeducation.com and click “UME – MCG Students” and then “FMPC5000” tab. The Image Upload and Report link is near the bottom of the page and can be used to upload images wherever you have the images stored, either your smart device or computer.
 - c. You must complete the report and upload your images to be able to submit. Use your @augusta.edu email as you will receive feedback on your images at this address.

5. Completion of FMPC 5000 Ultrasound Interactive Module:

- a. Completion of this module with associated quiz is due by the end of your FMPC clerkship rotation. The Ultrasound Interactive Module contains content and questions and is located at the end of the FMPC 5000 webpage at mcg.ultrasoundeducation.com. After you complete the module, go to “Diagnose” in the module and complete the quiz for your grade.

Example FMPC 5000 Ultrasound Images:



Direct Access Weblink to FMPC 5000 Clerkship US Website:

<https://www.augusta.edu/mcg/ultrasound-education/fmpc5000.php>

QR Code to FMPC 5000 Image Upload and Report Link:

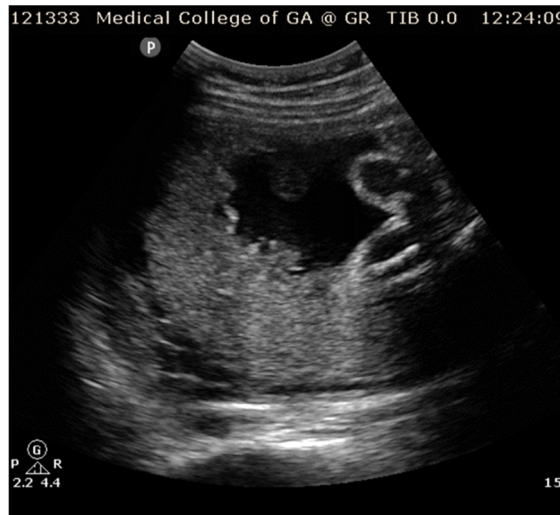
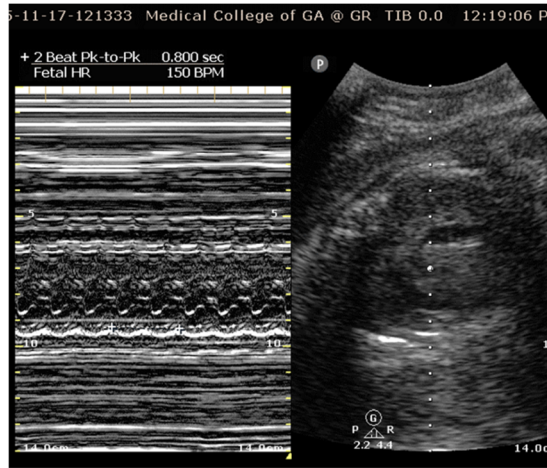


OBN 5000 – OB/GYN Clinical Clerkship

Clerkship Director: Dr. Erin Latif / Clerkship Coordinator: Ms. Amanda Zabala / US Faculty: Dr. B. Etheridge

1. **General Requirement:** Perform three (3) Intro to OB scans on 3 SEPERATE patients using OB clerkship site ultrasound equipment and submit images using the MCGultrasoundEDUCATION.com OBN5000 image upload and report link AND complete the OBN 5000 Ultrasound Interactive Module with quiz (also at MCGultrasoundEDUCATION.com) by the end of rotation. **(ALL CLERKSHIP STUDENTS)**
2. **Intro to OB scan images with labeling:**
 - a. Fetal heartrate with M-mode (Measure heartrate)
 - i. **Label:** Heartrate – Long or Trans – Measure fetal heartrate and report in the Image Upload and Report link
 - b. Fetal presentation
 - i. **Label:** Presentation – Long – Note whether Cephalic or Breech and report in the Image Upload and Report link
 - c. Placental location
 - i. **Label:** Placenta – Long – Note whether Anterior or Posterior placenta and report in the Image Upload and Report link
3. **Scanning:**
 - a. Ask your attending physician / staff sonographer to assist you in getting your ultrasound images.
 - b. Ask the patient if you can perform an educational ultrasound – tell them you are an MCG student. Obtain electronic consent from all patients. The patient consent is on the website. Go to mcultrasoundeducation.com and click “UME – MCG Students” and then “OBN 5000” tab. The “Patient Consent” form is located at the bottom of the page and can be completed on your smart device or on a tablet.
4. **Submission of Intro to OB Ultrasound Images:**
 - a. This assignment is due by the end of your OB clerkship rotation.
 - b. You must deidentify (take patient name off images) prior to exporting them from the ultrasound machine. Be certain the patient’s name is not visible on your image submission.
 - c. Upload your images by clicking the OBN5000 Image Upload and Report link. The link is located on the website. Go to mcultrasoundeducation.com and click “UME – MCG Students” and then “OBN5000” tab. The Image Upload and Report link is near the bottom of the page and can be used to upload images wherever you have the images stored, either your smart device or computer.
 - d. You must complete the report and upload your images to be able to submit. Use your @augusta.edu email as you will receive feedback on your images at this address.
5. **Completion of OBN 5000 Ultrasound Interactive Module:**
 - a. Completion of this module with associated quiz is due by the end of your OB clerkship rotation. The Ultrasound Interactive Module contains content and questions and is in located at the end of the OBN 5000 webpage at mcultrasoundeducation.com. After you complete the module, go to “Diagnose” in the module and complete the quiz for your grade.

Example OBN 5000 Ultrasound Images:



Direct Access Weblink to OBN 5000 Clerkship US Website:

<https://www.augusta.edu/mcg/ultrasound-education/obgn5000.php>

QR Code to OBN 5000 Image Upload and Report Link:

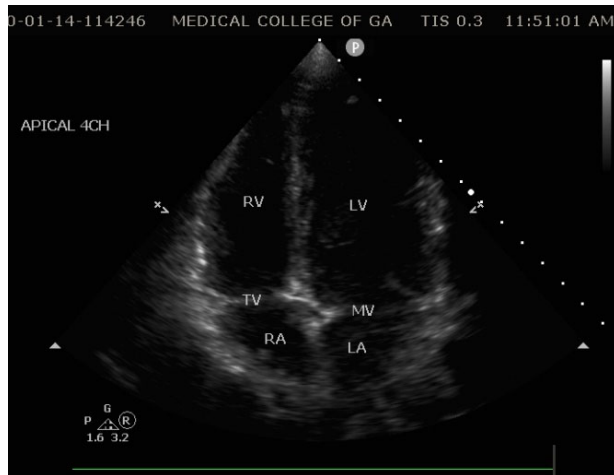
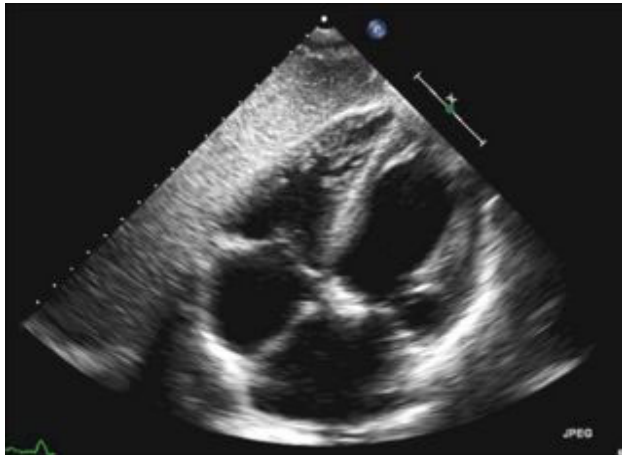


GMED 5000 – Medicine Clinical Clerkship

Clerkship Director: Dr. Thad Carson / Clerkship Coordinator: Ms. LizAndrea Jones / US Faculty: Dr. B. Etheridge

1. **General Requirement:** Perform two (2) Cardiac and Lung scans on 2 SEPERATE patients using hand-held ultrasound at site or checked out from Center for Ultrasound Education and submit images using the MCGultrasoundEDUCATION.com GMED5000 image upload and report link AND complete the GMED 5000 Ultrasound Interactive Module with quiz (also at MCGultrasoundEDUCATION.com) by the end of rotation. **(ALL CLERKSHIP STUDENTS)**
2. **Cardiac and Lung images with labeling:**
 - a. Subcostal 4 Chamber Heart
 - i. **Label:** Subcostal 4CH Trans – Label heart chambers and valves on image and upload to the Image Upload and Report link
 - b. Parasternal Long Axis
 - i. **Label:** PSLA Long – Label heart chambers and valves on image and upload to the Image Upload and Report link with ejection fraction estimation
 - c. Apical 4 Chamber Heart
 - i. **Label:** Apical 4CH Trans – Label heart chambers and valves and upload to the Image Upload and Report link
 - d. Pleural Lung Interface Long
 - i. **Label:** “Right” or “Left” Pleural Lung Interface Long – Label rib and pleura on image and upload to Image Upload and Report link
3. **Scanning:**
 - a. Ask the patient if you can perform an educational ultrasound – tell them you are an MCG student. Obtain electronic consent from all patients. The patient consent is on the website. Go to mcgultrasoundeducation.com and click “UME – MCG Students” and then “GMED 5000” tab. The “Patient Consent” form is located at the bottom of the page and can be completed on your smart device or on a tablet.
4. **Submission of Cardiac and Lung Ultrasound Images:**
 - a. This assignment is due by the end of your GMED clerkship rotation.
 - b. You must deidentify (take patient name off images) prior to exporting them from the ultrasound machine. Be certain the patient’s name is not visible on your image submission.
 - c. Upload your images by clicking the GMED5000 Image Upload and Report link. The link is located on the website. Go to mcgultrasoundeducation.com and click “UME – MCG Students” and then “GMED5000” tab. The Image Upload and Report link is near the bottom of the page and can be used to upload images wherever you have the images stored, either your smart device or computer.
 - d. You must complete the report and upload your images to be able to submit. Use your @augusta.edu email as you will receive feedback on your images at this address.
5. **Completion of GMED 5000 Ultrasound Interactive Module:**
 - a. Completion of this module with associated quiz is due by the end of your GMED clerkship rotation. The Ultrasound Interactive Module contains content and questions and is in located at the end of the GMED 5000 webpage at mcgultrasoundeducation.com. After you complete the module, go to “Diagnose” in the module and complete the quiz for your grade.

Example GMED 5000 Ultrasound Images:



Direct Access Weblink to GMED 5000 Clerkship US Website:

<https://www.augusta.edu/mcg/ultrasound-education/gmed5000.php>

QR Code to GMED 5000 Image Upload and Report Link:

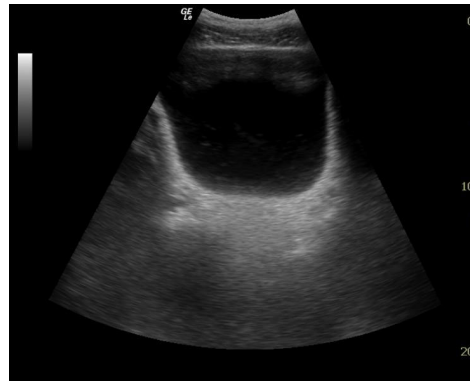
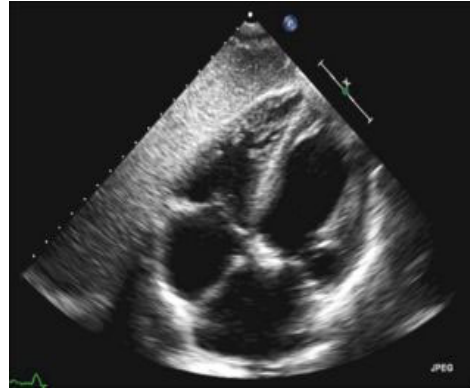


SURG 5000 –Surgery Clinical Clerkship

Clerkship Director: Dr. Bob Nesbit / Clerkship Coordinator: Ms. Tanya Simpson / US Faculty: Dr. B. Etheridge

1. **General Requirement:** Perform three (3) FAST and Gallbladder scans on 3 SEPERATE patients using hand-held ultrasound at site or checked out from Center for Ultrasound Education and submit images using the MCGultrasoundEDUCATION.com SURG5000 image upload and report link AND complete the SURG 5000 Ultrasound Interactive Module with quiz (also at MCGultrasoundEDUCATION.com) by the end of GENERAL Surgery rotation. **(ALL CLERKSHIP STUDENTS)**
2. **FAST and Gallbladder images with labeling:**
 - a. RUQ image with Liver, Right Kidney, Diaphragm, and Morison’s Pouch
 - i. **Label:** RUQ Long – Label image and upload to the Image Upload and Report link
 - b. Subcostal 4 Chamber Heart
 - i. **Label:** Subcostal 4CH Trans – Label image and upload to the Image Upload and Report link
 - c. LUQ image with Spleen, Diaphragm, and Left Kidney
 - i. **Label:** LUQ Long – Label image and upload to the Image Upload and Report link
 - d. Pelvis image with urinary bladder and uterus / prostate
 - i. **Label:** Pelvis Trans – Label image and upload to the Image Upload and Report link
 - e. Gallbladder long image
 - i. **Label:** GB Long – Label image and upload to Image Upload and Report link
3. **Scanning:**
 - a. Ask the patient if you can perform an educational ultrasound – tell them you are an MCG student. Obtain electronic consent from all patients. The patient consent is on the website. Go to mcultrasoundeducation.com and click “UME – MCG Students” and then “SURG 5000” tab. The “Patient Consent” form is located at the bottom of the page and can be completed on your smart device or on a tablet.
4. **Submission of FAST and Gallbladder Ultrasound Images:**
 - a. This assignment is due by the end of your SURG General clerkship rotation.
 - b. You must deidentify (take patient name off images) prior to exporting them from the ultrasound machine. Be certain the patient’s name is not visible on your image submission.
 - c. Upload your images by clicking the SURG5000 Image Upload and Report link. The link is located on the website. Go to mcultrasoundeducation.com and click “UME – MCG Students” and then “SURG5000” tab. The Image Upload and Report link is near the bottom of the page and can be used to upload images wherever you have the images stored, either your smart device or computer.
 - d. You must complete the report and upload your images to be able to submit. Use your @augusta.edu email as you will receive feedback on your images at this address.
5. **Completion of SURG 5000 Ultrasound Interactive Module:**
 - a. Completion of this module with associated quiz is due by the end of your SURG 5000 clerkship rotation. The Ultrasound Interactive Module contains content and questions and is located at the end of the SURG 5000 webpage at mcultrasoundeducation.com. After you complete the module, go to “Diagnose” in the module and complete the quiz for your grade.

Example SURG 5000 Ultrasound Images:



Direct Access Weblink to SURG 5000 Clerkship US Website:

<https://www.augusta.edu/mcg/ultrasound-education/surg5000.php>

QR Code to SURG 5000 Image Upload and Report Link:



March 29, 2021

EMED 5001 – EM Clinical Clerkship

Clerkship Director: Dr. Eric Zevallos / Clerkship Coordinator: Ms. Holly Andrews / US Faculty: Dr. Lee LaRavia

1. **General Requirement:** Perform three (3) extended RUSHed protocol scans on 3 SEPERATE patients using ultrasound equipment at site and submit images using the MCGultrasoundEDUCATION.com EMED5001 image upload and report link AND complete the EMED 5000 Ultrasound Interactive Module with quiz (also at MCGultrasoundEDUCATION.com) by the end of EMED rotation. **(ALL CLERKSHIP STUDENTS)**

2. **RUSHed images with labeling:**
 - a. Parasternal Long OR Apical 4 Chamber Heart view
 - i. **Label:** PSLA or Apical 4CH – Label image and upload to the Image Upload and Report link
 - b. Long IVC with hepatic vein entering RA view
 - i. **Label:** IVC Long – Label image or clip and upload to the Image Upload and Report link
 - c. 1 other RUSHed exam view decided by patient history (See list below)
 - i. **Label:** Label Appropriately – Label image and upload to the Image Upload and Report link
 - d. A 2nd RUSHed exam view decided by patient history (See list below)
 - ii. **Label:** Label Appropriately – Label image and upload to the Image Upload and Report link
 - e. **Images that can be included as your 2 additional RUSHed images include:**
 - a. Morrison's Pouch with Hemithorax View
 - b. Splenorenal with Hemithorax View
 - c. Urinary bladder view
 - d. Aortic Sweep View
 - e. Thorax/Pleural Slide view
 - f. Deep Veins/ Extremity Vein
 - g. Ocular/ Optic Nerve Sheath Diameter View
 - h. Gallbladder view

3. **Scanning:**
 - a. Ask the patient if you can perform an educational ultrasound – tell them you are an MCG student. Obtain electronic consent from all patients. The patient consent is on the website. Go to mcgultrasoundeducation.com and click “UME – MCG Students” and then “EMED 5001” tab. The “Patient Consent” form is located at the bottom of the page and can be completed on your smart device or on a tablet.

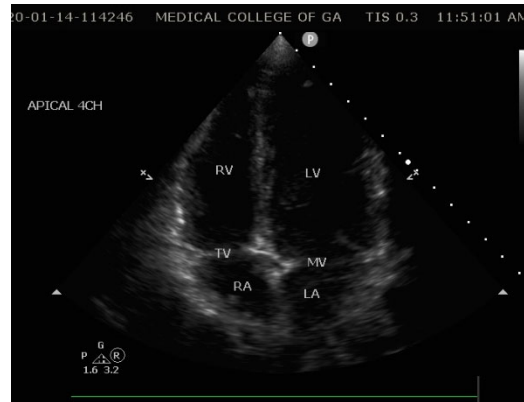
4. **Submission of RUSHed Ultrasound Images:**
 - a. This assignment is due by the end of your EMED 5001 clerkship rotation.
 - b. You must deidentify (take patient name off images) prior to exporting them from the ultrasound machine. Be certain the patient’s name is not visible on your image submission.
 - c. Upload your images by clicking the EMED5001 Image Upload and Report link. The link is located on the website. Go to mcgultrasoundeducation.com and click “UME – MCG Students” and then “EMED5001” tab. The Image Upload and Report link is near the bottom of the page and can be used to upload images wherever you have the images stored, either your smart device or computer.
 - d. You must complete the report and upload your images to be able to submit. Use your @augusta.edu email as you will receive feedback on your images at this address.

March 29, 2021

5. Completion of EMED 5001 Ultrasound Interactive Module:

- a. Completion of this module with associated quiz is due by the end of your EMED 5001 clerkship rotation. The Ultrasound Interactive Module contains content and questions and is located at the end of the EMED 5001 webpage at mcgultrasoundeducation.com. After you complete the module, go to “Diagnose” in the module and complete the quiz for your grade.

Example EMED 5001 Ultrasound Images:



Direct Access Weblink to EMED 5001 Clerkship US Website:

<https://www.augusta.edu/mcg/ultrasound-education/emed5001.php>

QR Code to EMED 5001 Image Upload and Report Link:

