

## Vascular Ultrasound Resident Rotation

### Goals:

1. Be in the UAMS Vascular Lab from 8:00AM to 4:30PM, except for 1:00 PM conference.

Examinations to observe:

Venous duplex exams, lower and upper extremity  
Carotid duplex exams  
Extremity arterial duplex  
Physiologic arterial exams (Segmental Pressures, Ankle-Arm Indices, Toe pressures, Treadmill testing)

2. Keep a record of the examinations you observe and interpret.
3. Review the vascular ultrasounds from the outside hospitals each day (Arkansas Heart Hospital and Ouachita County Medical Center.) Correlate your interpretation with staff's reading. Choose a "down time" in the vascular lab. This may take 1-2 hours, make use of the "down time" in the vascular lab.
4. Attend Vascular Conference every week, currently this takes place in the radiology conference room Tuesdays, 4:00PM – 5:00PM.
5. Reading assignments: assigned chapters in Zeibel, Vascular Ultrasound and Physiologic testing and techniques. (Book will be loaned to you for the month)

**1. Introduction to Vascular Ultrasound 4<sup>th</sup> Edition, William Zwiebel, M.D., W.B. Saunders Co. 2000**

Chapter 2 Physics and Instrumentation in Doppler and B-Mode Ultrasonography

Chapter 3 Doppler Frequency Spectrum Analysis

Chapter 4 Color-Flow Imaging for Vascular Diagnosis

Chapter 8 Normal Carotid Arteries and Carotid Examination Technique

Chapter 10 Doppler Evaluation of Carotid Stenosis

Chapter 11 Misc. Carotid Subjects:

Chapter 12 Ultrasound of Vertebral Examination

Chapter 15 Arterial Anatomy of the Extremities

Chapter 16 Non-Imaging Physiologic Tests for Assessment of LE Arterial Dz

Chapter 17 Assessment of Upper Extremity Arteries

Chapter 18 Duplex Sonography of Lower Extremity Arteries

Chapter 19 Rationale for Duplex Ultrasound Assessment of Extremity Veins

Chapter 20 Extremity Venous Anatomy

Chapter 21 Terminology, Instrumentation, and Characteristics of normal veins

Chapter 22 Extremity Venous Examination: Technical Considerations

Chapter 23 Venous Thrombosis

Chapter 24 Definitive Diagnosis and documentation of chronic venous dysfunction

## **2. Physiological Testing: Techniques and Interpretation**

Robert Scissions, RVT (Unetixs, Inc.) book will be loaned to you

Objectives: At the end of the rotation, the resident will:

- 1) Understand the physics and instrumentation needed to perform vascular US examinations
- 2) Be able to supervise vascular ultrasound exams performed by a technologist
- 3) Be able to recognize a technically adequate exam
- 4) Interpret the following vascular ultrasound exams:
  - a) upper and lower extremity venous duplex exam
  - b) carotid duplex exams
  - c) upper and lower extremity arterial duplex exams
  - d) physiologic arterial exams

**Vascular Ultrasound Resident Rotation** Name \_\_\_\_\_  
Dates of Rotation \_\_\_\_\_

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Carotid duplex exams

Extremity arterial duplex

Physiologic arterial exams (Segmental Pressures, Ankle-Arm Indices, Toe pressures, Treadmill testing)

2. Keep a record of the examinations you observe and interpret.
3. Review the vascular ultrasounds from the outside hospitals each day (Arkansas Heart Hospital and Ouachita County Medical Center.) Correlate your interpretation with staff's reading. Choose a "down time" in the vascular lab. This may take 1-2 hours, make use of the "down time" in the vascular lab.
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    dysfunction

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Objectives: At the end of the rotation, the resident will:

- 5) Understand the physics and instrumentation needed to perform  
    vascular US examinations
- 6) Be able to supervise vascular ultrasound exams performed by a  
    technologist
- 7) Be able to recognize a technically adequate exam
- 8) Interpret the following vascular ultrasound exams:
  - e) upper and lower extremity venous duplex exam
  - f) carotid duplex exams
  - g) upper and lower extremity arterial duplex exams
  - h) physiologic arterial exams

**Vascular Ultrasound Rotation**  
**Post Review**  
**Accomplishments:**

**Name** \_\_\_\_\_  
**Rotation dates** \_\_\_\_\_  
**Date** \_\_\_\_\_

1. UAMS Vascular Lab from 8:00AM to 4:30PM, except for 1:00 PM conference.  
Examinations to observe:
  - Venous duplex exams, lower and upper extremity
  - Carotid duplex exams
  - Extremity arterial duplex
  - Physiologic arterial exams (Segmental Pressures, Ankle-Arm Indices, Toe pressures, Treadmill testing)
2. According to the log you kept, how many of the examinations you observe and interpret.
3. Review the vascular ultrasounds from the outside hospitals each day (Arkansas Heart Hospital and Ouachita County Medical Center.) Correlate your interpretation with staff's reading. Choose a "down time" in the vascular lab. This may take 1-2 hours, make use of the "down time" in the vascular lab.
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**PLEASE RATE THE FOLLOWING (10 Best ----- 1 Worst)**

1. Did you learn the physics and instrumentation used in vascular US?

1      2      3      4      5      6      7      8      9      10

2. Did you learn the indications for performing vascular US exams?

Yes                      No

3. Are you able to supervise vascular US exams performed by a technologist?

Yes                      No

4. Did you gain sufficient experience to independently interpret the following exams:

a) upper and lower extremity venous Doppler

1      2      3      4      5      6      7      8      9      10

b) carotid duplex

1      2      3      4      5      6      7      8      9      10

c) upper and lower extremity arterial duplex

1      2      3      4      5      6      7      8      9      10

d) physiologic arterial exams

1      2      3      4      5      6      7      8      9      10  
1      2      3      4      5      6      7      8      9