

## Hemoaccess Compression Evaluation

Purpose: To determine the presence and severity of steal syndrome.

### **INDICATIONS:**

- Steal syndrome

### **CONTRAINDICATIONS:**

- Patients with known acute DVT
- Bandages
- Patients with stents and/or arterial bypass grafts
- Incompressible vessels
- IV/PICC line

### **EQUIPMENT:**

- Parks Flo-lab
- VascuLab
- 5-8 MHz probe
- Cuffs ranging in sizes 2.5-12cm

### **PATIENT PREPARATION:**

- Introduce yourself to the patient
- Verify patient identity using patient name and DOB
- Explain procedure
- Obtain patient history including symptoms
- The patient should rest for at least 15 minutes prior to examination
- The patient should lay supine with the heart at approximately the same level as the extremities

### **GENERAL GUIDELINES:**

- The examination must be bilateral unless otherwise contraindicated
- A complete examination includes evaluation of the entire course of the accessible portions of each vessel
- Variations in technique must be documented (i.e., stents)
- Note any prior studies, clinical indications, and relevant history

### **TECHNIQUE:**

- Place 12 cm cuff at the upper arm, 10cm cuff at the wrist, and 2.5 cm cuff on the digits
- Brachial cuff should be placed on the contralateral arm
- Doppler waveforms must maintain an angle of 45-60 degrees between the skin and the transducer
- Do not perform brachial pressures over Peripheral IV's/PICC lines, grafts, or stents

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- Do not perform brachial pressures on the ipsilateral side if the patient has undergone a mastectomy or lymph node removal due to cancer
- Gain or size setting must remain the same throughout the entire exam
- Document waveform as triphasic, biphasic, monophasic, or absent
- The cuff should be inflated 30mmHg beyond the last audible Doppler signal
- If the brachial waveforms are abnormal, Doppler the axillary and subclavian arteries
- The fistula/graft should be manually compressed to obtain 2<sup>nd</sup> and 4<sup>th</sup> finger pressures
- Do not compress the fistula/graft for long periods of time

### **Parks Flo-lab**

- The finger pressures with compression should be documented in the notes section, do not delete the initial finger pressures obtained.
- Use the digit waveforms application to obtain PPG waveforms with compression, obtain a waveform in the 2<sup>nd</sup> and 4<sup>th</sup> digit before and after compression.
- Label on the paperwork which waveform is the 2<sup>nd</sup> digit and which waveform is the 4<sup>th</sup> digit
- Draw a line to show where you compressed

### **Vasculab**

- Use the Steal setting to document pressures and waveforms.

### **DOCUMENTATION:**

All studies should be bilateral, unless there are limiting factors

- **Doppler Waveforms:**
  - Radial artery
  - Ulnar artery
  - Brachial artery
- **Segmental Pressures:**
  - Brachial artery
- **Finger Pressures and PPG Waveforms:**
  - Obtain from the 2<sup>nd</sup> and 4<sup>th</sup> digits
- **Finger Pressures with compression:**
  - Obtain from the 2<sup>nd</sup> and 4<sup>th</sup> digits
- **PPG Waveforms with compression:**
  - Obtain from the 2<sup>nd</sup> and 4<sup>th</sup> digits

### **PROCESSING:**

- Review examination data
- Export all images to PACS
- Technologist must scan the requisition into PACS gear
- In the event of a significant finding, i.e. acute arterial occlusion, WBI of 0.34 or lower, acute graft occlusion, presence of pseudo aneurysm or A-V fistula, or progression of disease post intervention, the technologist will page the on call IR physician.
- Note any study limitations

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## **CHANGE HISTORY:**

<b>STATUS</b>	<b>NAME &amp; TITLE</b>	<b>DATE</b>	<b>BRIEF SUMMARY</b>
<b>Submission</b>	Kim Pong, RDMS, RVT	<b>8/16/18</b>	Submitted
<b>Approval</b>	Mark Reddick, MD	<b>8/17/18</b>	Approved
<b>Review</b>			Reviewed