Optimal Timing of Cadaver Training for VS Residents

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What is the ideal time for cadaver training?
Fundamentals of Vascular Surgery

Basic Skills

1. Access
   - 1/8 inch diameter
   - Wire exchange
   - Sleave

2. Wire/Catheter exchange vs. stability

3. Imaging - Angle/Views
   - Virtual Anatomy - Landmarks

4. Push - pull

5. Catheter formation - e.g., Simmons

6. Selective catheterization
   - Antegrade / retrograde

7. Cannulization site

8. Cannulate - branch & neuret
Dissection?
Exposures

- **Upper Ext**
  - Axillary, brachial, radial
- **Aorta**
  - Thoracic, abdominal, retroperitoneal
- **Carotid**
- **Lower Ext**
  - Femoral
  - Popliteal
  - Tibials
Rare Exposures

- Lateral profunda
- Lateral peroneal
- Obturator
- First rib
- Spine
- Pedal
- Femoral vein harvest
## Cost Analysis

<table>
<thead>
<tr>
<th>CADAVER</th>
<th>OTHER</th>
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<tbody>
<tr>
<td>$3000-$4000</td>
<td>Facility fee</td>
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<tr>
<td></td>
<td>Disposable</td>
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<tr>
<td></td>
<td>• Gowns</td>
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<tr>
<td></td>
<td>• Gloves</td>
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<tr>
<td></td>
<td>• Masks</td>
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<tr>
<td></td>
<td>• Suction</td>
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<td>• Drapes</td>
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<tr>
<td></td>
<td>• Scalpel</td>
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<tr>
<td></td>
<td>Staff</td>
</tr>
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<td>Instruments</td>
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Fundamentals of Vascular Surgery
Hosted by the Louisiana State University Health Sciences Center, New Orleans, LA

February 14–16, 2013

Meeting Location: LSUHSC Center for Advanced Practice
Lions Building, 5th and 6th Floors
2020 Gravier Street
New Orleans, LA 70112

AGENDA

**Thursday, February 14**

1:00 – 1:15 pm  Welcome and Course Agenda
1:15 – 1:30 pm  Tibial Exposures – Lecture
1:30 – 2:15 pm  Tibial Exposures – Hands-on Cadaver Lab
2:15 – 2:30 pm  Thoracoabdominal Aortic Exposures – Lecture
2:30 – 3:30 pm  Thoracoabdominal Aortic Exposures – Hands-on Cadaver Lab
3:30 – 3:45 pm  Break
3:45 – 4:00 pm  Thoracic Aorta / Great Vessel Exposures – Lecture
4:00 – 5:30 pm  Thoracic Aorta / Great Vessel Exposures – Hands-on Cadaver Lab
7:30 – 10:00 pm  Welcome Reception and Dinner

**Friday, February 15**

7:00 – 7:45 am  Breakfast
8:00 – 8:15 am  Daily Agenda Outline
8:15 – 8:30 am  Explanation of the “Clock Face” Skill Trainer

Course Director:
Malachi Sheahan, MD

Invited Faculty:
Jean Bismuth, MD
Jeffrey Indes, MD
Jason Lee, MD
Mark Mattos, MD
David Rigberg, MD
William Robinson, MD
Murray Shames, MD

LSU Faculty:
Confidence - Tibial Exposure

- **Pre**
- **Post**

- **Junior**
- **Senior**
Confidence – Thoracic Aortic Exposure

![Graph showing confidence levels pre and post for Junior and Senior categories.](image)
Confidence - Abdominal Aortic Exposure

![Graph showing confidence levels for Junior and Senior groups pre and post exposure.](image-url)
<table>
<thead>
<tr>
<th>ACGME Case Log</th>
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<tbody>
<tr>
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<tr>
<td>Ruptured AAA</td>
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<tr>
<td>Open AAA</td>
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<tr>
<td>Complex AAA</td>
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<tr>
<td>EVAR</td>
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<td>TEVAR</td>
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<tr>
<td>Open AAA-ruptured</td>
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<td>Suprarenal AAA</td>
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<td>Thoracic Aneurysm</td>
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<tr>
<td>Thoracoabdominal aeurysm</td>
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<tr>
<td>Number of fellows</td>
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<tr>
<td>Procedure</td>
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<td>------------------------------------------------</td>
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<tr>
<td>Thoracic Aneurysm</td>
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<tr>
<td>TEVAR</td>
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<tr>
<td>Thoracoabdominal aneurysm</td>
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High fidelity simulators show better skill transfer.
What worked?

Pre and post self assessments:

- Significant improvement in:
  - Anatomic knowledge
  - Carotid stent proficiency
  - Renal stent proficiency
  - EVAR measurements
  - EVAR placement
  - Coronary anatomy
  - Neurovascular anatomy
Amazing!
- PGY 3

Best part of the course!
- PGY 6

Need more!
- PGY 2

More, more, more!
- PGY 3
Highest rated

- Suturing with the experts
- EVAR measurement
- Cadaver lab
What went wrong?

- Lecture Series – Coronary anatomy

I don’t want to be a cardiologist.
-PGY 1

Why was this necessary?
-PGY 4

What the heck?
-PGY 1
Translation to OR?

Carotid subclavian bypass time

Pre       Post
February 23, 24 & 25, 2017

The Houston Aortic Symposium
Frontiers in Cardiovascular Diseases

The Westin Oaks Hotel, Houston, Texas

SYMPOSIUM CHAIRMAN
HAZIM J. SAFL, MD
DAVID D. MCPHERSON, MD

PROGRAM DIRECTORS
ANTHONY ESTRELA, MD
ALI AZIZADEH, MD
What is the ideal time for cadaver training?
Future?

- Perfused cadavers
  - Bleeding
  - Clamping
  - Endo
  - U/S guided access – tibial
  - Preserved use
Thank you