The Integrated 0-5 Pathway to Vascular Surgery Training

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Disclosures

- NONE

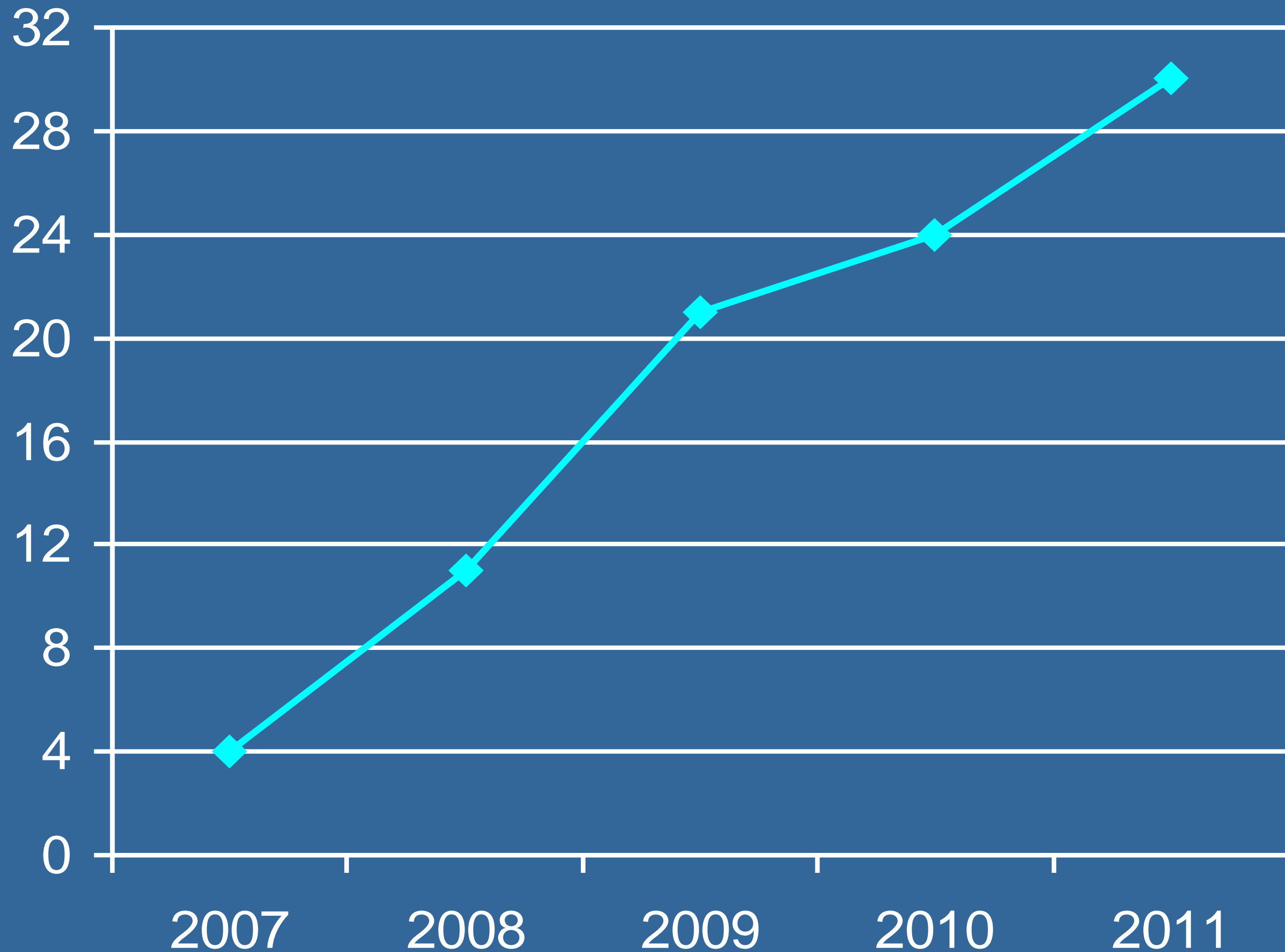
Training in Vascular Surgery

The Plunge

<u>Inaugural Year:2007</u>

Dartmouth
Pittsburgh
Michigan

Integrated Vascular Positions offered/Yr



Integrated program becoming one of the most competitive specialty matches: 8 to 1 ratio

EDUCATION CORNER

From the Society for Vascular Surgery

An increasing demand for integrated vascular residency training far outweighs the limited supply of positions

Andres Schanzer, MD, Jeff Nahmias, MD, Kathleen Korenda, NP, MBA, Mohammad Eslami, MD, Elias Arous, MD, and Louis Messina, MD, *Worcester, Mass*

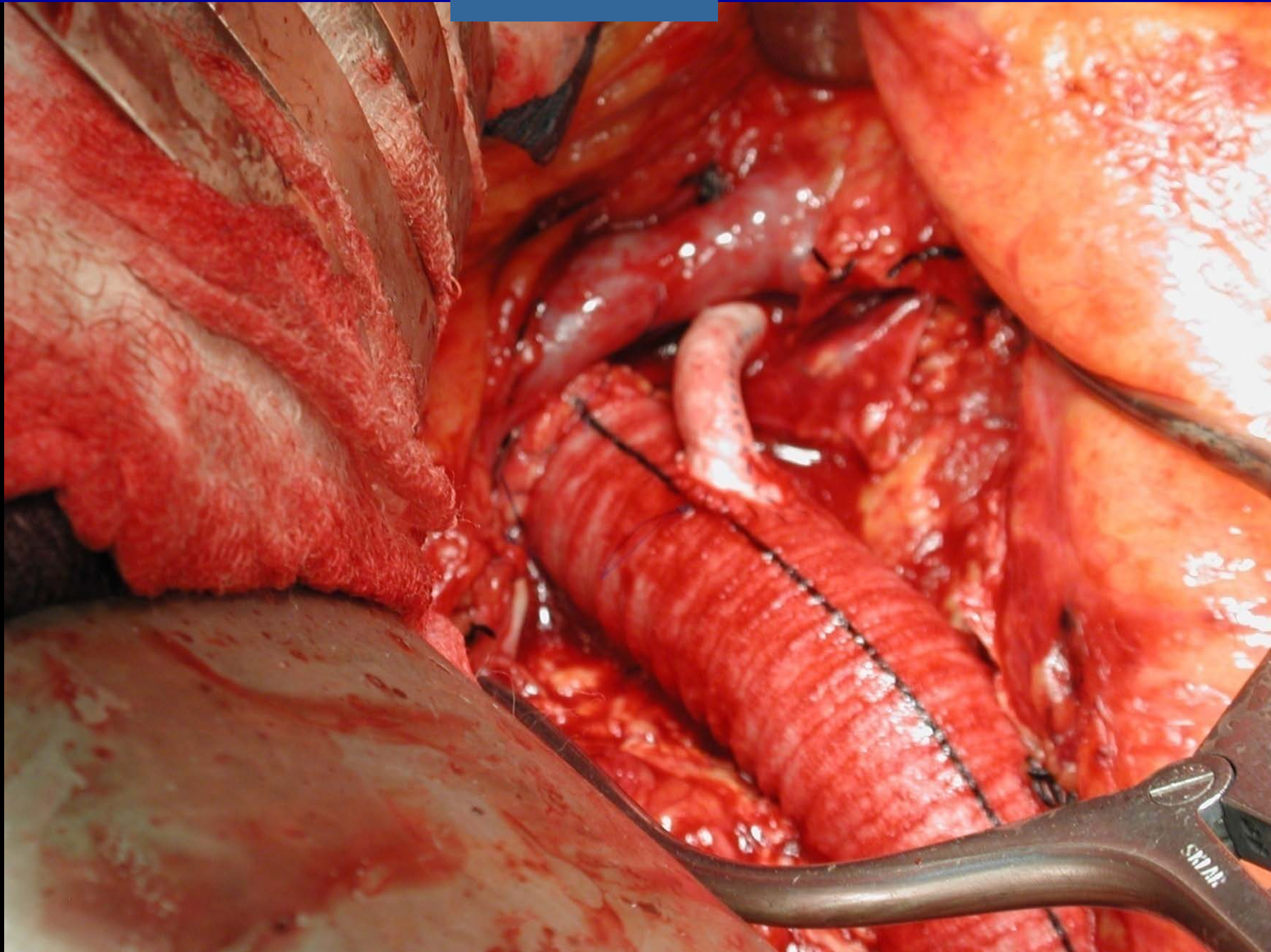
Objective: The integrated vascular surgery residency training paradigm ("0 + 5") was first approved by the Accreditation Council for Graduate Medical Education (ACGME) in 2006, with the first residents beginning in 2007. We sought to evaluate the demand for these new positions and to better understand applicant pool demographics.
Method: The Association of American Medical Colleges (AAMC) was petitioned for data on applicants to traditional vascular surgery fellowship and integrated vascular residency training programs (years 2006-2009). In addition, 111 applications received at a single academic institution for the year 2009 were reviewed in depth.
Result: The number of traditional vascular fellowship applicants and the corresponding number of positions remained stable. In contrast, the number of integrated vascular resident applicants increased dramatically, with 152 applicants seeking to match into 19 available positions in 2009. For the year 2009, 88% of integrated vascular residency applicants

- What is the Imperative?
- Why do we need NEW Training Paradigms?

1. Vascular Surgery Has Changed Dramatically!

The Transformation of Vascular Surgery

1993

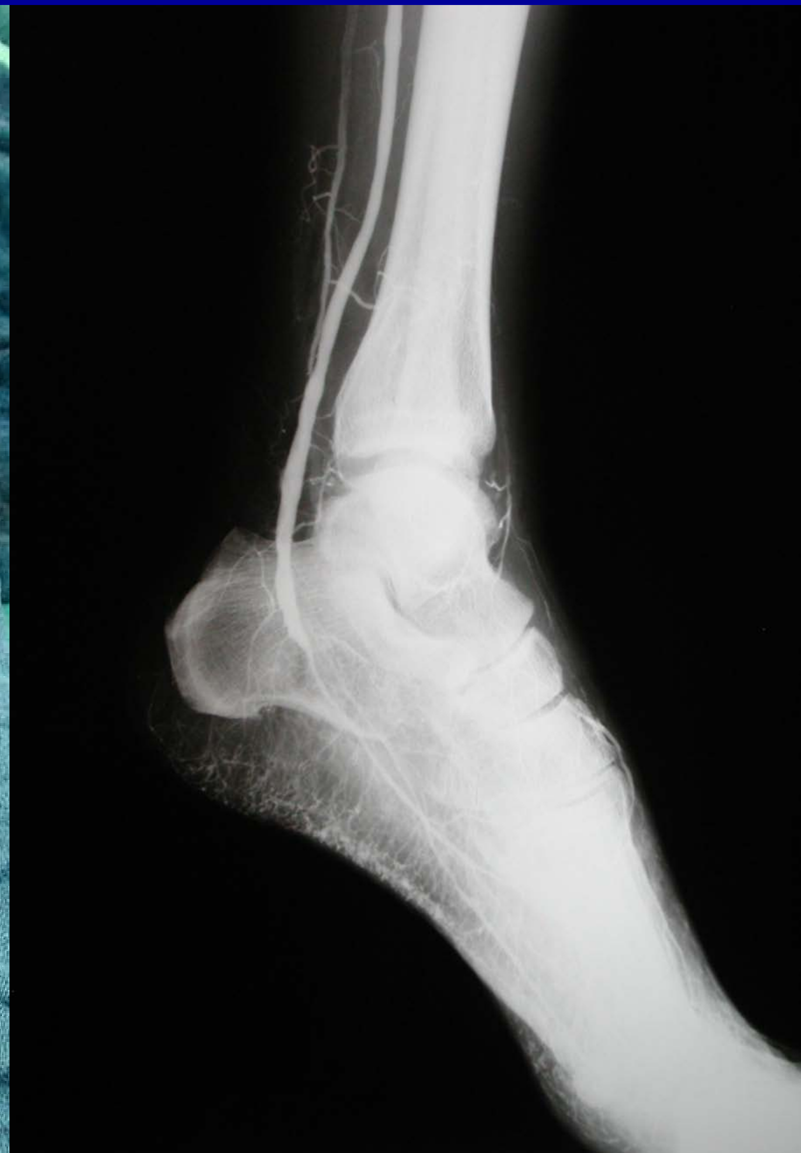


The Transformation of Vascular Surgery

2005

The Transformation of Vascular Surgery

1994



The Transformation of Vascular Surgery

2007

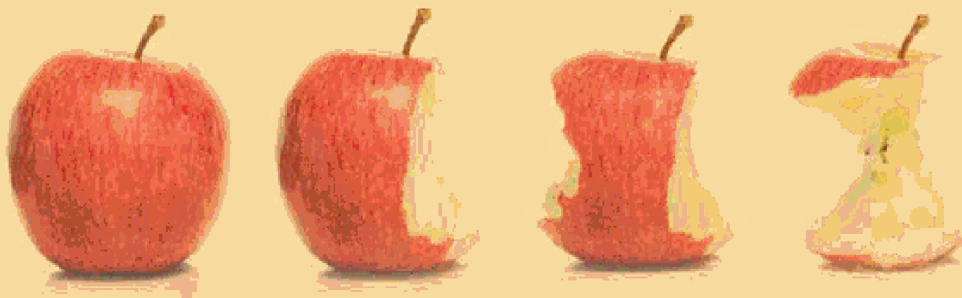
Vascular Spectrum: Partial Listing

- ❑ Arch branches reconstruction
- ❑ Aorto-Inominate bypass
- ❑ Carotid Artery disease: TIA, Stroke
- ❑ Carotid Endarterectomy CEA
- ❑ Carotid Artery Stenting CAS
- ❑ Cerebral protection devices
- ❑ Vertebral artery reconstructions
- ❑ Fibromuscular dysplasia
- ❑ Carotid body tumors

General Surgery Woes

- Vascular Surgery Fellowship after a General Surgery Residency is ***NOT EFFICIENT***
- The Identity of General Surgery is no longer clear

General surgery training and the demise of the general surgeon



Consider the following hypothetical family: The Williams family, from a U.S. town of 25,000 people, has been fortunate to have health insurance and thus access to good health care. They have always felt that they have two "family docs," as they like to put it.

First is Dr. Smith, who is board certified in family medicine. He looks after Grandma's arthritis and Grandpa's hypertension and diabetes. He helps Mr. Williams with his chronic low back pain and Mrs. Williams with her routine gynecologic needs. He cares for Joey and Janey when they have a sore throat or an ear infection. Finally, Dr. Smith ensures the entire family's health maintenance through routine screening and annual physicals.

However, the Williams family has another "family doc." Dr. Jones removed Grandma's gallbladder when she had biliary colic and did a right hemicolectomy when Grandpa had colon cancer. He fixed Mr. Williams' inguinal hernia and biopsied Mrs. Williams' breast for a suspicious lump. Dr. Jones also performed Joey's emergency appendectomy and removed a lipoma from Janey's thigh. The entire family considers Dr. Jones—a board-certified general surgeon—their other "family doc." They can't imagine life without him; he is essential for their good health and well being.

In the U.S. today, families like the Williamses are increasingly unlikely to find surgeons like Dr. Jones. Their primary care providers, like Dr. Smith, are often unable to refer their patients locally for common surgical interventions such as hernia repairs, soft tissue biopsies, and cholecystectomies. The imminent demise of the general surgeon has been a growing concern for the medical community and the general public, both who fear an end to a once robust medical

by Heena P. Santry MD; Nikunj Chokshi, MD; Nicole Datrice, MD; Julian Guitron, MD; *and* Mecker G. Möller, MD

Bulletin of the ACS

2008;93:32-38

- **General Surgery as we knew it no longer exists**
- **GS has unrealistic expectations. It is attempting to train ALL surgeons to be "competent" in TOO many areas**
- **Vascular Surgery training is far too long. 7 +2**
- **Serious Debt for students discouraging surgical careers**
- **Residents are starting at an older age : 26-30**

J Vasc Surg 2001;34;826-30

General Surgery Woes

- Nearly 100% of our GS graduates seek fellowships even in the traditional CORE of GS
  - **Critical Care**
  - **Laparoscopy or minimally invasive surgery**
  - **Surgical Oncology**
  - **GI (pancreatic)**
  - **Endocrine**
  - **Colorectal**
  - **Liver Surgery**
- Acute Surgery Fellowships started in 2009 across the US

Integrated 0-5

Must Include:

✓**36 months Vascular Rotations:**

➢ **Can include electives such as Cardiothoracic, Transplant, Interventional radiology, vascular Medicine…**

✓**24 Months Core Curriculum**

➢**Basic Surgical Principles, ICU care, Nutrition, Abdominal Surgery….**

Integrated 0-5

UPMC

	PGY 1	PGY 2	PGY 3			PGY 4	PGY 5
Month 1	Vascular	Cardiology	Vascular UPMC PUH			Vascular UPMC Pass	Vascular UPMC PUH
Month 2	Vascular	Vascular					
Month 3	Anesthesiology	Gen surgery	Vascular UPMC Shady				
Month 4	Gen Surgery	Gen Surgery-VA				Vascular UPMC St Marg	Vascular UPMC Shady
Month 5	Gen Surgery	Gen Surgery	Vascular UPMC PUH				
Month 6	Gen Surgery	Gen Surgery					
Month 7	Gen Surgery VA	Gen Surgery	Vascular UPMC Shady			Vascular UPMC Pass	Vascular UPMC PUH
Month 8	Trauma	CT MR Imaging					
Month 9	Critical care	Critical care	Vascular UPMC PUH				
Month 10	Plastic Surgery	Kidney transplant				Vascular UPMC St Marg	Vascular UPMC Shady
Month 11	Thoracic	Cardiac Surgery	Vascular UPMC Shady				
Month 12	Cardiology	Trauma					

0-5 vs. 5-2

Vascular Procedures /Techniques and General Surgery Procedures /Techniques are increasingly diverging

- **Laparoscopy vs Fluoroscopy**
- **Value of procedural training in general surgery somewhat limited (robotics, etc…)**

Integrated Vascular Surgery Program

1) Provide a CORE training that is partially customized to VS
   - **General surgical principles: Infections, stress reactions, nutrition..**
   - **Critical care**
   - **Advanced Imaging techniques: CT, MR, Workstations..**
   - **“Vascular Medicine” background: HT, Lipids, DM, coronary risk**
   - **Exposure to abdominal and cardiothoracic surgery**

2) Focus most procedural training to vascular procedures

The 0-5 Surgical Specialty Training Model

- Allows Resident to clearly identify with a specialty service and help develop a vascular identity

- Allows Residents to integrate clearly with the Fellows during their 3 Clinical Years

- Sharing in call can allow quicker maturity and readiness

- Two senior years allow for a more independent experience

This Model was made Easy by:

- Multitude of Rotations on our services
  - 7 distinct ALL VASCULAR rotations.
  - 1 outpatient 6 inpatient
  - Some rotations have VS juniors and some GS juniors
  - All have Vascular trainees as seniors.
- Large Faculty that staffs all the services

Assessment of our Integrated Program

- May be too soon to be able to evaluate objectively
- Surrogate markers
  - Number of cases
  - In-service scores

INTEGRATED RESIDENT first 3years experience	Resident A	Resident B
Aneurysms	21	12
Cerebrovascular	17	15
Peripheral obstructive	108	87
Abdominal obstructive	3	3
Upper extremity	8	8
Extra-anatomic	6	6
Thrombolysis	15	16
Miscellaneous Endovascular Therapeutic	22	33
Trauma	8	15
Venous	25	85
Endovascular Diagnostic	38	72
Miscellaneous vascular	19	19
Vascular access	52	90
Amputations	46	61
TOTAL VASCULAR	**388**	**522**
General surgery cases	**250**	**240**

In training Exams 2010

ABSITE

- Interns:
  - 88th percentile
  - 52nd percentile
- 2nd year residents
  - 71st percentile
  - 57th percentile

V site

- **3rd Year residents**
  - 85th percentile
  - 79th percentile

0-5 PROs

- Shorter, focused training
- More exposure to vascular
- Training as a vascular specialist: imaging, vascular medicine, etc..
- Vascular research, career planning
- Earlier debt repayment

Will the Integrated residents be the equals of the Independent 5+2 Fellows?

Maybe early to know!
I would like to think that
it is not a matter of being equal
but equally competent in Vascular care!

0-5 Integrated