

## 2010 WTS Scholarship Recipients

### Meghana Kunkala, Medical Student, St. Louis University

As a junior-high student watching a CABG for the first time in my life, I was not only in awe of what the surgeon was able to accomplish but also utterly terrified of how I would ever attain those skills. These feelings led me to talk to cardiothoracic surgeons about what parts of their training most shaped the art that they now possess. Most comment that along with their fellowship, specific rotations in General Surgery, like Vascular, were essential while skill sets obtained in some, like Orthopedics, were not of the highest yield. Thus an integrated CTS training program would be ideal. Not only would it incorporate those portions of General Surgery that are most beneficial to CT Surgery, but it would also provide the flexibility to modify those rotations as the field itself changes. For example, many people say that “wire skills” will be essential for a CT Surgeon as endovascular techniques become more prevalent. The integrated program could modify to include for endovascular weeks in the first two years instead of trying to squeeze these rotations into an already short fellowship program. Integrated programs would offer four years of operating experience in CTS, compared to the two or three in most fellowships. So the integrated program is the best way to train CT surgeons because it not only includes the essential parts of the traditional method but also more experience and exposure to CT operations.

### Candice Lee, Medical Student, Drexel

In my mind, the ideal program for CT surgery is a six-year residency that leads to ABTS eligibility only. The program would provide exposure to CT surgery throughout all six years, but would be divided into two introductory years and three final CT surgery years. During the two introductory years, residents rotate through cardiology, pulmonology, radiology and general surgery. These years enable the interns to *build* a strong foundation for the medicine, while still allowing time in the operating room. The third year focuses on endovascular and interventional procedures by training with IR, interventional cardiology and vascular surgery. The last three years are structured similar to traditional CT fellowships, with residents rotating through cardiac surgery, pediatric cardiac surgery, and thoracic surgery. Overall, a six-year CT residency provides the time and freedom to cater to the specific needs of a future CT surgeon. Since most CT surgeons rarely, if ever, perform general surgical procedures, it does not seem imperative to spend 5 years training in general surgery. Time is better spent strengthening the residents' knowledge and experience in relevant areas: cardiology, radiology, pulmonology, vascular. In addition, technology is moving toward less invasive procedures and this program would prepare residents to adopt endovascular interventions. With more time devoted to CT surgery, residents would also gain more experience in complex cardiac and thoracic cases (e.g., lung resections, VADs, transplants). This program would be ideal for any highly motivated medical student, who is committed to becoming a cardiothoracic surgeon.

### Sarah Billmeier, PGY- 3, Brigham & Women's

The ideal cardiothoracic surgery training program must balance several conflicting priorities. First and foremost, a cardiothoracic surgeon at the end of their training must have developed the sound clinical judgment and technical expertise necessary to provide superior patient care. The responsibility of a training program to provide sufficient breadth of experience to fellows is ever more challenging in the environment of limited work hours, the explosion of medical knowledge and increasing surgical sub-specialization. Maintaining and improving cardiothoracic care in the future also depends on continuing to attract high quality candidates into the field. Barriers of entry into the cardiothoracic profession, including extensive length of training and lack of exposure in medical school, should be minimized. I believe that four years of general surgery, followed by three years of dedicated cardiothoracic surgery best balances these conflicting priorities. General surgery training develops technical skill, global clinical judgment and facilitates exposure and interest in cardiothoracic surgery. Generalized training teaches the platform of knowledge necessary to manage medically complex cardiothoracic patients, and the underlying surgical techniques

needed to perform intricate, high risk procedures. This baseline experience can then be further developed by three years of specialty training. While the total clinical training time in this model is the same, or one year shorter, it provides an additional year of cardiothoracic experience over the traditional five and two training model. Three years of specialty specific training would provide fellows with the strong foundation of knowledge needed to initiate a lifetime of successful clinical practice.

### **Lindsey Saint, PGY- 1, Washington University**

I think that the ideal training program to become a cardiothoracic surgeon should be defined first by proficiency in general surgery clinical and technical skills. Chief-level care of general surgery, ICU, and trauma patients is imperative to the development of complex postoperative, critical care, and crisis management techniques necessary on a cardiothoracic service. Chief-level general surgery operative experience is essential for competency regarding tissue handling, anatomic and functional planes, and operative technique demanded in a cardiothoracic operating room. None of these skills was meant to be learned rudimentarily in the chest, but mastered there on a foundation of clinical expertise and technical excellence. Especially during the infancy of less lengthy training programs, surgeons are at risk of emerging from specialty training with clandestine cracks in that foundation. To maintain quality of care and patient safety throughout the transition in cardiothoracic surgery training programs, I believe American Board of Surgery certification should be required at the end of a four-year preliminary track in general surgery. Four years of general surgery training would provide adequate time for progression to and acquisition of chief-level general surgery responsibilities. Furthermore, successful certification in general surgery would not only provide a valid measure of the quality of surgeon entering into specialty training as compared with years past, but also a quantitative assurance of surgical core competencies. In my mind, only after mastery of general surgery skills has been established would a three-year fellowship consummate the ideal training program in cardiothoracic surgery.

### **Helenmari Merritt, PGY- 1, UT Health**

There are three key concepts which must be addressed when considering the ideal training program: operative experience, curriculum and board eligibility versus length of training. A resident can most benefit from introduction to operative skills from surgeons already practicing within their field of specialty. Early establishment of appropriate techniques, and prevention of developing poor habits, can be best accomplished in a six-year residency program which allows for these operative skills to be taught by an attending cardiothoracic surgeon. As skill levels advance, these same attendings would continue to evaluate and critique the resident and tailor his or her participation in the operating room to reflect this progression. Additionally, a six-year curriculum would expose residents to all surgical subspecialties, and emphasize the aspects of cardiothoracic surgery from the very first day of residency. This curriculum would be essential in helping residents develop a knowledge base, define expectations at each level of training, and would also allow faculty to play a role in molding new cardiothoracic surgeons. Currently, many shy away from the field, despite an interest in cardiothoracic surgery, due partially to the length of post-graduate training. A six-year program would allow medical students to enter directly into training. Indeed, there are several other subspecialties of surgery who train their residents in a similar manner and it appears to suit physicians in these subspecialties well. In closing, a six-year program would re-invent the training of cardiothoracic surgeons, and I believe this would positively impact the specialty.