

Prof. Robert J. Cerfolio: super performing at home and at work—the athleticism of surgery

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Prof. Robert James Cerfolio is currently Professor of Surgery and Chief of the Section of Thoracic Surgery at the University of Alabama at Birmingham. Dr. Robert James Cerfolio is a surgeon with considerable achievement in his life of sports and career as a surgeon (*Figure 1*).

He graduated from medical school in 1988 and later elected to Alpha Omega Alpha (AOA). He was inducted into his high school Athletic Hall of Fame in 1997 and his college Athletic Hall of Fame in 2014.

He has written over 160 original peer-reviewed articles as well as 60 book chapters and is first author on over 95%. In April 2010, he received the James H. Estes Family Lung Cancer Research Endowed Chair. Recently he has developed and championed a completely portal 4-arm robotic approach to thoracic surgery and now has performed more than anyone else in the world, over 1,000.

His technique is used for pulmonary resections, esophagectomy and mediastinal tumor resections and has been adopted all over the world. Over 1,200 national and international visiting surgeons, anesthesiologists and their teams have come to UAB to learn this technique (*Figure 2*).

His is now a world-renowned surgeon and clinical researcher and has been labeled one of the busiest thoracic surgeons in the world, in recognition of performing over 1,000 operations for several consecutive years since 2004. He performed 1,154 operations in 2006 and 1,240 in 2007.

He was recently elected one of the youngest Presidents of the Southern Thoracic Surgery Association, which is one of the oldest and largest thoracic surgical associations in the world. He delivered his Presidential address in November, 2013.

His wrote his first book: *Super Performing at Home and at Work: The Athleticism of Surgery and Life* which was published in June 2014 by Greenleaf Publishers.

Under all the halos, he is a just father who has an admirable family. He thinks being a good human being first to make



Figure 1 Snapshot of Professor Robert J. Cerfolio.

all the progress possible. In the award ceremony of the AME-ESTS Special Competition for the Selection of Junior Chinese Surgeons for the Asia Team held in Guangzhou in March 20, Prof. Cerfolio gave a lecture on “Creating a Database to Track, Report and improve your results” (*Figure 3*).

“I did have had dreamed of being an athlete. However, I think the problem of professional athletes is their career end up too early. And so what do you do when you’re thirty and retire? You want to get better and better but their careers are finished. I never like this model. Surgeons keep getting better and better until maybe they are sixty because their eyes are becoming bad. But with robot, I think you can get better and better up until seventies. And I want to get better every day and don’t want to be too old that I can’t perform”—Prof. Robert J. Cerfolio.

We are honored to invite Prof. Cerfolio to further share with us the updates in robotic surgery and some of his philosophy in life and work.



Figure 2 The surgical demonstration of robotic right upper lobectomy performed by Professor Robert J. Cerfolio (1). Available online: <http://www.asvide.com/articles/498>

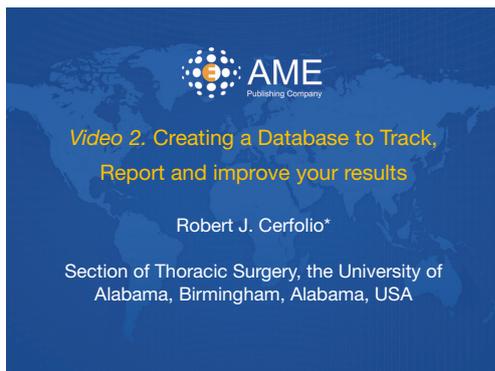


Figure 3 Keynote Lecture on “Creating a Database to Track, Report and improve your results” given by Professor Robert J. Cerfolio.

JOVS: *As the world-renowned surgeon also with the most experience in robotic surgery, would like to share with us what is the most prominent advantage?*

Prof. Cerfolio: Less pain, less blood loss, better lymph node dissection. Although the cost may be high, the overall cost goes down if the patient goes home sooner, has less pain, gets more lymph node removed and doesn't get readmitted to the hospital.

JOVS: *When did you perform your first robotic surgery? What is the most challenging part at the beginning?*

Prof. Cerfolio: In 2010, not that long ago. This first case is nervous. Anytime you do something new, change is hard and difficult. You get thrown out of your comfort. It's ok if

you are vacuuming the rock where you could only hurt the rock. But if you're operating on a human being, the risk is high. So you have to really believe that this new process is offering great value to change. The very reason for my vote on robotic surgery is that I saw the value in the robot and its value in the patients and I knew that I needed to change.

Then challenges come for me, for anesthesiologist and for the team to perform robotic surgery. For the surgeon, the main challenge is that you don't have your hands in the chest and you can't feel. You're afraid if you put a hole in the artery. The distance between the surgeon and the patient poses the biggest challenge for the surgeons. For the team, the nurse now is putting a stapler on the pulmonary artery in vein. That is challenging for them. For the anesthesiologist, the robot is just over the patient's head, which is also challenging.

Currently, in our hospital, all esophagectomy is performed by robot whilst robotic lobectomy accounts for 95%. I do everything with the robot, because it's better for the patient. Even chest wall resections will make a little incision and take a few ribs out, but then we'll go ahead and do along with the robotic surgery.

JOVS: *Is there any indication for the robotic surgery?*

Prof. Cerfolio: Almost every thoracic operation can be done robotically, just about every single one. Therefore I would say the indication is cancer. Now there're situations we don't do with the robot because the added cost is not worth the limited benefit. For instance, we prefer VATS for pleural effusion, emphysema and sympathectomy for hyperhidrosis. For lung cancer and esophageal cancer, we do them all with the robot.

JOVS: *For the beginners of the robotic surgery, what would be your suggestions?*

Prof. Cerfolio: I've read many papers on what's called the pathway to excellence or a pathway to teach your credential. So you start with knowing how the robot works, start with simulation, and start with practice on cadavers. Then when you come back, you get a prompter that taught you all the correct ways to do it. And you start on very simple cases first. You even convert your first ten cases to VATS or thoracotomy just to get good result. Slowly, you add it to your practice.

We've done many studies on the learning curves for robotic surgery and it depends on the surgeons: their

experience, their age and the number of cases they have done. In general, about 25 to 30 lobectomy is the real learning curve for the robotic role.

JOVS: *Do you think robotic surgery is going to take a larger place in thoracic surgery? When would you expect it is coming?*

Prof. Cerfolio: There is no question about it—100% sure. The Robotic surgery will take a larger place in thoracic surgery just as the robot has taken in place in factory and the computer has taken over in our society. The question now is how we do robotic surgery safely and how to reduce the cost.

Nevertheless, the coming of the trend depends on the country. In countries like India, which has very little money, may have to encounter more hindrance for the development of robotic surgery. India has 1.2 billion people and only 22 robots. China with 1.3 billion people, like the size of India except much bigger, has many robots. But in the United States with 300 million populations, we have 1,500 robots. The progress is much faster. So it depends on the country's health system and dollars and how they track the value and quality.

JOVS: *You have built quite a career at work and life. Would you like to share with the young surgeons how to keep balance between work and life?*

Prof. Cerfolio: A lot of important things are written in my book called *Super-Performing at Work and Home*. I would tell the young surgeons that I want you be the best surgeon you

can be, but it doesn't matter if you are not the best father or the best husband. The really most important thing in life is to be a good human being first. Surgery is so time concerned and such a difficult profession that it can become all incompetence and it can take them away from the more important roles. They have to keep balance in their life and find balance and achieve while this may be hard to do. That's what we must do as human beings. My wife tried to teach me that before she passed away and now she teaches me from heaven. We have to find a way to be a good father or a good wife or a good mother or a good child. That's more important to be a good surgeon, but you have to do it all really very well. That's my single most important thing.

JOVS: *Thank you for your sparing your time with us.*

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None.

Footnote

Conflicts of Interest: The author has no conflicts of interest to declare.

(Science Editor: Grace Li, JOVS, jovs@amepc.org)

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