

Dr. Michael Lanuti: looking for ways to reconstruct trachea with prosthetic materials is a challenge in tracheal surgery

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Editor's note

At the 6th Oriental Congress of Thoracic Surgery (OCTS 2019) in Shanghai, we were honored to invite Dr. Michael Lanuti (*Figure 1*), from Massachusetts General Hospital (MGH), to have an interview with us, sharing his perspective on tracheal surgery.

Expert's introduction

Dr. Lanuti is a board-certified thoracic surgeon with special interest in lung cancer research, new techniques for lung cancer staging, and minimally invasive lung surgery. His specialties include esophageal cancer, lung cancer, mesothelioma, tracheobronchial disorders, mediastinal tumors, etc.

After receiving a bachelor of science in bioengineering from the University of Pennsylvania, Dr. Lanuti received his M.D. degree from the University of Pennsylvania School of Medicine (where he received the I.S. Ravdin Award for excellence in surgery). He completed his internship and residency in surgery at the Hospital of the University of Pennsylvania and a 2-year research fellowship in a thoracic oncology laboratory focusing on gene therapy for lung cancer.

He continued with sub-specialty training, and finished a Cardiothoracic Fellowship at the Massachusetts General Hospital. He was recruited in 2004 to the staff of the Division of Thoracic Surgery, and holds a parallel appointment as Associate Professor of Surgery at Harvard Medical School (HMS). He has been the Friedman-Lambert Scholar in Academic Thoracic Surgery at MGH/HMS since 2004. He is the director of Thoracic Oncology for the Division of Thoracic Surgery.



Figure 1 Dr. Michael Lanuti.

Interview (*Figure 2*)

SHC: *Could you please briefly introduce your speech on “bioprosthetics in airway surgery”?*

Dr. Michael Lanuti: During the conference today, one of my scheduled talks is about bioprosthetics in airway surgery. It focuses on materials that are used to replace trachea for airway tumors or injured airways from erosion or fistula. So the topic goes into some detail about their use in both experimental and clinical models.

SHC: *What do you think is the current challenge in tracheal surgery?*

Dr. Michael Lanuti: One of the major challenges remains how much trachea can be removed safely without tension. Currently, surgeons can only remove about 4 or 5 centimeters of trachea. If one removes more than roughly one half the trachea, the risk of anastomotic



Figure 2 Interview with Dr. Michael Lanuti: looking for ways to reconstruct trachea with prosthetic materials is a challenge in tracheal surgery (1).

Available online: <http://www.asvide.com/watch/33009>

complication is extremely high. So we're looking for ways to take out more tracheas and reconstruct them with some prosthetic materials. This has been a challenge for decades. Fortunately, we have some more options compared to a decade ago. The ideal tracheal replacement should be able to resist infection, incorporate into local tissue, maintain structure, and allow clearance of secretions, just similar to the native trachea.

SHC: *For young surgeons, do you think what is key point to communicate with patients?*

Dr. Michael Lanuti: One thing that I think is important is to listen to the patient and of course understand the disease. One thing that I find very useful is careful attention to detail. It's very important to focus on the details of patient history, patient disease, mastering interpretation of CT imaging and achieving excellent outcomes. Young surgeons should learn fundamentals and learn how to manage patients in the clinic and in the operating room. They need to be excellent surgeons. The last point is that if there is a surgical complication, we can't ignore it, but to regard it as a challenge and to act immediately to find a safe solution.

SHC: *You have been in thoracic practice for more than 25 years. What drives you to be a thoracic surgeon?*

Dr. Michael Lanuti: What drove me was macroanatomy.

The field of thoracic surgery is complex and stimulating. I studied cancer and lung cancer very early in my career. Since I was always a hands-on person, surgery was a natural choice for me. I think the field of cardiothoracic surgery is very extremely technical and thoracic is particularly cerebral. What's more, my background is in engineering, so this type of discipline fits me very well.

SHC: *What do you do to balance work and life? How do you relieve stress at work?*

Dr. Michael Lanuti: I think that you need to have activity outside of the hospital. Thoracic surgery is demanding and we all work very hard. Distractions such as sports, music, family time, or travel are very important. And as I get older, vacation is a good way to relieve stress.

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References

1. Liu X. Interview with Dr. Michael Lanuti: looking for

ways to reconstruct trachea with prosthetic materials is a challenge in tracheal surgery. *Asvide* 2019;6:324. Available online: <http://www.asvide.com/watch/33009>

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