# ALESSANDRO BRUNELLI

## SURGEON OF THE MONTH

**You are one of the busiest thoracic surgeons in the UK, performing 80-90 anatomic lung cancer resections annually. But can I ask you to recall the first time you experienced thoracic surgery?**

The first time I was able to see a thoracic surgeon at work was after my graduation as a medical doctor, when I spent a period at Duke University as a visiting physician. I was a very young doctor who had it very clear in my mind that I wanted to become a surgeon, but no clue which specialty to choose. My mentor at that time sent me to Duke, to stay with one of his friends and to meet Dr. Sabiston, one of the monuments in Cardiothoracic Surgery. For a month, I was allowed to visit all ORs at Duke University Medical Centre, meet all the specialists and watch their surgeries. I fell in love with cardiac surgery, but when I came back home, I realised that there was no cardiac surgery residency programme in my city / university and that, as an outsider, getting onto programmes in other cities was extremely difficult.

However, my mentor encouraged me to try thoracic surgery, a programme available in my hospital, instead, and introduced me to the person who would have become my surgical mentor in thoracic surgery, Prof. Fianchini. The rest is history. When I started the training programme, I was the only trainee, and even though I was working in a small and newly created department, I had wide exposure to surgical operations and was left free to contribute to the implementation of new protocols, pathways of care and create a database for the unit which was the seed for my future academic career.

**What do you wish somebody told you before embarking on a career in thoracic surgery?**

I wish I had more mentoring and advice to protect and nurture the academic aspect of my career. Unfortunately, when I started my residency and then my early career as a consultant, I had no such academic “protection” and all I have done in this aspect had to be done by sacrificing my weekends, holidays, early mornings and nights. Although this was done out of my love and passion for this profession and for clinical research, and I would do it again if put in the same situation. Equally, I appreciate the enormous toll this took on my personal life and with everyone around me having to come second to my professional passions.

I also think, whilst advice from seniors is always important to consider at any stage of your career, most of your professional profile is eventually shaped by your own motivation, values, skills, passions and priorities in life and circumstances may change in your life that affect your initial plans. Perhaps a good piece of advice I would have liked to hear, and one I like to give to young surgeons, is to remain flexible, open-minded, and positive, and be ready to adapt to opportunities which life and the profession will present to you. If you nurture your passions and like what you do, you will eventually always find the way to be satisfied and accomplished.

**You are a pioneer of the uniportal VATS technique for operations on the lung and mediastinum in Europe. What challenges have you faced in your career and how did you overcome them?**

Uniportal VATS means performing keyhole surgery through a single small incision of 2-3 cm. This technique has been in use for decades by the chest physicians, who use it to perform diagnostic thoracoscopies. What thoracic surgeons have done, is to use it to perform more extensive diagnostic and curative resections, including lung resections and other procedures in the chest. The approach was popularised among thoracic surgeons here in England by Dr. Gaetano Rocco, working in Sheffield at that time, nearly 20 years ago. I was probably the first one to implement this approach in Italy, and one of the first in Europe, although I still prefer to use 2 ports for more advanced resections. Nowadays, the approach is widely adopted even for very complex operations globally.

The major challenges I faced when I originally tried to start it in the unit I used to work in, in Italy, was to gain team consensus. I think that, without a team approach, every initiative is doomed to failure and ultimately this may impact on patient outcome. I was fortunate enough to work with some other collaborators who were open-minded and embarked to pilot and audit this approach.

**What inspires your work?**

Passion is what always moved my steps in this profession. What I enjoy most about my work, is the relationship with patients and the unique possibility we as surgeons have to really make a difference in someone's life. This is a tremendous responsibility, as we generally intercept a person's life trajectory when this person is very vulnerable, and we have the opportunity change this.

There have been a few people who have really inspired me in my personal and professional life. My surgical mentor taught me how to operate and to move my hands. He was a very talented surgeon and I remember watching him operating in awe. My father was also a doctor, an accomplished paediatrician (one of the first neonatologists in Italy). He was very famous in my community and raised children for at least 3 generations in my town. From him I learned dedication and sacrifice for this profession and the sense of correctness, humility and transparency. He was not an academician, but a pure clinician who devoted most of his life to the work, and in return, he received the unconditional love of hundreds of children and then adults. That is still the way to go.

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**You have held a number of prestigious roles throughout your career. How important are leadership roles in developing the skills of a surgeon?**

Holding leadership roles within your hospital, national or international scientific societies/organisations is usually the effect of already acknowledged high clinical or academic levels. Nevertheless, these are also roles, regardless of your seniority or previous experience, that invariably end up enriching your leadership skills.

I was very fortunate to have the opportunity to collaborate for so many years with some of the most famous and talented surgeons worldwide, sitting at the same table and discussing matters to shape our specialty for the betterment of patient care. This was enlightening and inspiring, and I learned so much about how to handle and lead difficult conversation and how to negotiate different standpoints by intrinsically and extrinsically regulating emotions. It was a massive cultural learning as well, to understand and respect the different personalities and cultural backgrounds coming from so many different countries.

Eventually, you process all these experiences and transfer them consciously or unconsciously into your day to day professional environment, including the operating room setting, in which a team approach and team culture is critical.

**Congratulations on your appointment as President of the European Society of Thoracic Surgeons. Can you tell us more about ESTS and what you hope to achieve during your tenure?**

ESTS is the largest Organisation of Thoracic Surgery globally, with more than 1500 members worldwide. It was funded about 30 years ago and now has become the leading scientific society in our field. Most of our efforts are focussed on education. In addition to our annual congress, which is attended by more than 1000 delegates from all over the world, ESTS organises several theoretical and practical (basic and advanced) courses. In addition, it offers clinical and research fellowships to visit European Centres. Our mission “is to improve quality in all aspects of our specialty: from clinical and surgical management of patients to education, training and credentialing of thoracic surgeons in Europe and worldwide”.

My main focus this year will be to establish a strong link with national societies, by implementing initiatives at a local level, engaging more surgeons in individual countries and offering them a platform for networking and engaging with the organisation. In the previous years we devoted our energies to expand globally and increase the international reputation of the Society in continents such as America and Asia. Now, it is probably time to work more intensely at a local level, listening to our European members and adapting to their needs in each individual country.

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**You are author of more than 330 articles with over 10,000 citations and a member of the Editorial Board of the Journal of Thoracic and Cardiovascular Surgery. What is the role of clinical research in contributing to innovation in thoracic surgery?**

Clinical research is an essential element of our profession. It is strictly intertwined with clinical practice. It serves the purpose of checking and evaluating what we do, and whether we need to implement any changes to improve patient care. This is mostly done using clinical databases, either at a single institution level, or multi-institutional. One example could be the analysis required to identify risk factors associated with a specific complication or postoperative mortality, which may be important to identify strategies to mitigate their impact on high-risk patients undergoing surgery. Another example may be the longitudinal measurement of changes in pulmonary function, exercise capacity or quality of life at different times after surgery, to explore the actual impact of surgery on patients, which can ultimately inform the shared decision-making process and the discussion at the MDT.

Another important type of research is set to explore the efficacy of new treatments or surgical techniques. This is mostly done using randomised trials. Examples are the several ongoing trials testing novel agents and immunotherapy in specific patients with locally advanced disease, in the neoadjuvant or adjuvant setting, compared to traditional chemotherapy. Or the recent breakthrough trial showing that segmentectomies have equivalent survival compared to lobectomies in stage I lung cancer. As you can see from these examples, there cannot be advancement in our profession without a continuous effort to apply audit or research. Personally, I always considered the clinical research an integral part of my profession, and one of the most fascinating aspects of it.

**You are the Chair of the European Respiratory Society/European Society of Thoracic Surgeons joint task force appointed to develop guidelines for the selection of patients for radical treatment of lung cancer. Why do you think the benefits are of international collaboration in thoracic surgery?**

Unlike other surgical specialties, thoracic surgery is a small community. Patients with lung cancer are similar globally. They have the same needs in terms of cure and care. In addition, globalisation and informatisation have broken down barriers across continents. Information travels quickly from Asia to Europe and America, through an effective exchange of communication amongst scientists. Nowadays, there are no secrets in how to best treat a patient with lung cancer and this obviously is to the benefits of patients.

Additionally, the radical treatment of lung cancer is more and more a multidisciplinary effort, involving not only the surgeons and respiratory physicians but also the clinical and medical oncologists, the radiologists and physiotherapists. In this climate of collaboration, exchange, and willingness to globally improve patient care, it does not make any sense to create multiple local guidelines. It makes more sense to try to establish partnerships between multi-specialist international organisations, with the aim of creating more comprehensive guidelines which can be widely accepted by the whole medical and surgical community.

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**At the 2021 Student Engagement Conference you delivered a lecture exploring the importance of practicing empathetic care in surgery. Can you share some top tips students can use early in their careers to enable them to practice such patient-centred care?**

Unlike the beliefs of most, empathy is not a quality you are born with. It is a skill we can learn and train. There are now studies showing that empathy can be taught. Unfortunately, this subject is too often neglected in our medical curricula. Patients are vulnerable people, who need our help. To be able to help people when they most need it, we should be able to take their perspective, process their emotion and respond in a compassionate way. This is the essence of empathy and patient centred approach.

Although surgeons in training are mostly focussed on learning the technical skills of their profession, they need also to train to have a patient centric vision, rather than task-oriented or disease-oriented approach. The most important tip I think to share, is to imagine that the person sitting in front of you in clinic, is a member of your family. They could be your parent or brother or sister. Would you behave differently, would you feel differently, would you respond in a different way to their needs? We should strive to offer our compassionate care to all our patients, remembering that showing empathy and warmth, makes us look more professional in the eyes of patients.

You can start from very small actions or behaviours, and you will see a lot of benefits in the relationship with your patients. Try to use eye contact more when you speak with patients. This shows that they can trust you and you are transparent and reliable. Try to really “attend” the meeting with your patients, without being distracted by other tasks. By adopting simple empathic behaviours, you will be able to appreciate the difference in how they will react to you and ultimately this will improve your satisfaction with work.

**Reflecting on your career, what advice would you give to the next generation of cardiothoracic surgeons beginning their career?**

My main advice is to follow your passion but be flexible enough to allow for opportunities to shape your future career. There is nothing wrong with adjusting or even make big changes in life, if situations require you to do so. If you follow your passion, you will never fail, because you will never betray yourself. But passion and love can take many forms and you should remain open minded to be able to see clearly which path to pursue. Cardiothoracic Surgery is hard work, long hours, and sacrifice. There will be dark days when you will perhaps doubt the choices you have made. But at the end, what will show you the way, your North Star, will be the gratitude of your patients. At that moment you will know that everything you have done was worth it. I have never hung plaques or certificates in my office wall. I never really liked the ‘ego-wall’ displayed in some of my colleagues’ offices. In my office I have a wall full of patients’ thank you cards. That wall represents my “humbling wall”. They are a continuous reminder of our real mission, which is to help and care for our patients.

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