

# Prof. Joel Dunning: the future of thoracic surgery is full of possibilities

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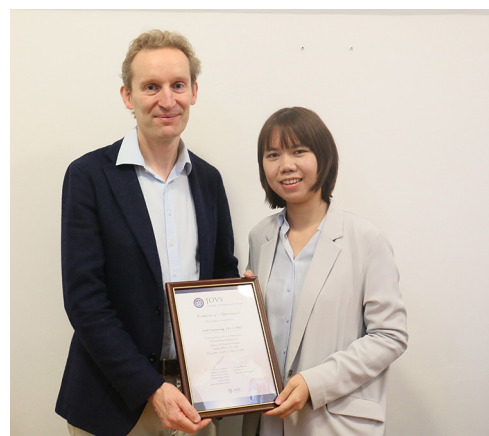
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From Oct. 20th to 21st, 2017, the 4th International VATS Symposium was successfully held in the Royal College of Physicians, London, UK. Gathering numerous well-known experts worldwide, the symposium discussed many hot topics of thoracic surgery, including the principles for Advanced Minimally Invasive Thoracic Surgery (MITS), advanced techniques in Lobectomy, Robotic Surgery, future of MITS, etc., providing an enjoyable and significant feast for all the participants.

During the symposium, Prof. Joel Dunning, from James Cook University Hospital, shared an attractive speech about the Microlobectomy, inspiring many ideas and discussion among the audience. Moreover, Prof. Dunning also had a debate with Prof. Robert Cerfolio, on the topic of “Whether Robotic Surgery is better than VATS”, bringing quite an interesting and impressive sharing to all the participants. Seizing this great opportunity, the Editorial Office of *Journal of Visualized Surgery* (JOVS) has invited Prof. Dunning (Figure 1) for a short interview (Figure 2), sharing his perspective and passion for the Robotic Surgery and VATS, as well as his invention of the Microlobectomy. Furthermore, as co-Editor-in-Chief of the CTSNet, Prof. Dunning also happily shared his experience as an editor and the secret to balance life and work!

**JOVS:** *You had a debate with Prof. Cerfolio yesterday, discussing “whether Robotic Surgery is better than VATS”. Since you are excellent at both Robotic Surgery and VATS, here would you share in which condition will Robotic Surgery have a better result than VATS and when will VATS be better than Robotic Surgery?*

**Prof. Dunning:** This is an interesting debate—Robotic vs. VATS—and it is difficult if you are a surgeon that don’t have access to a robot, then you’ll have to do everything through VATS. For me, I’m lucky to be able to have access to both robotic and VATS, and I’m 100% convinced that robotic surgery is beautiful and far better in sleeve resections and



**Figure 1** Presenting the *JOVS* Editorial Board Certificate to Prof. Dunning.



**Figure 2** Interview with Prof. Joel Dunning during the 4th VATS Symposium (1).

Available online: <http://www.asvide.com/articles/1849>

extended resections. They are absolutely a dream. A sleeve resection being able to suture the bronchus close but robotically is fantastic. Every time I try to do it by VATS it’s been terrible. Sleeve and extended resections is your number one reason to do robotic. It does also mean that

you need to be practised enough so that when you come to these extended operations you know you're good and able to do it. That means that you need to have a fairly good turnover of patients robotically, so that you can step up to these bigger cases. But for a standard operation, like with a standard lobectomy, my incisions are significantly smaller and my operative time is less by VATS. For a standard lobectomy, which is quicker and has smaller incisions, it probably is by VATS at this moment. But technology is always evolving.

**JOVS:** *What are the essential skills required for Robotic Surgery and VATS respectively?*

**Prof. Dunning:** Strangely, you need more skills as a VATS surgeon because it is more difficult to control the VATS instrument—the simple dynamics are that with VATS when you move your hand to the left, the instrument goes right, whereas the robot moves left when you move your hand left. The robot is designed to make your life easier, which is why it costs 1.4 million pounds. I think everybody would say robotics is technically easier, which is probably why you can do more with it, and the learning curve is less. But it just means that with VATS, you will have to practise and train yourself more to get those skills.

**JOVS:** *You have developed a novel technique for lung cancer resection called Microlobectomy. Would you like to share the features of this technique? Compared to the traditional technique, what would Microlobectomy bring to our patients?*

**Prof. Dunning:** Microlobectomy has a slightly different taken from a standard VATS lobectomy, and the reason I tried it is because I wanted to get rid of the lower utility of incision in between intercostal spaces. I thought I was doing a good job of getting the lobe dissected and divided without making a big hole. When I saw Jiang Lei doing a great job of the whole operation of subxiphoid, I thought this must be the solution for getting the lobe out. But for a lot of Western patients, and certainly for myself, I'm maybe not quite as technically good as him. I felt I needed a bit of extra help through the intercostal spaces. I think if you keep down to 5 mm ports then that benefits the patients. The rules for Microlobectomy are: no incisions bigger than 5 mm through the intercostal spaces, then you have a subxiphoid port for the 12 mm stapler there, and then a subxiphoid port to get the sample out. The benefit it has

is that there's virtually no pain from your chest afterwards. Now that's not to say that any other VATS technique isn't just as good, because I don't think we can really split hairs between them, but from my point of view it works very well for me. I like the fact that I can get the lobe out without making a big incision in the intercostal spaces and I feel very comfortable because it's really a three-port VATS technique.

**JOVS:** *What is your expectation for future developments of Microlobectomy? Do you expect any improvements for this technique?*

**Prof. Dunning:** I think the future might be somehow robotic. The moment I can put a single port robot through the subxiphoid incision means I won't need to have my three 5 mm ports anymore. I'm sure the future might well be uniportal and subxiphoid uniportal. Intuitive has a single-port system; there may be others coming along as well; there's something called Titan, and who knows what'll be discovered in the future. I think all VATS techniques are an evolution. Diego's not doing the same thing he did 5 years ago: he's more refined, he uses less instruments, and in Marcin Zielinski's case, he's done 16 neck-only uniportal VATS. There's a lot of different techniques involved and we're all evolving and that's the exciting thing about thoracic. Who knows what we'll be talking about in 5 years' time?

**JOVS:** *We know that you are the Co-Editor-in-Chief of CTSNet and have interviewed many surgeons by yourself, could you tell us what it feels like interviewing surgeons like yourself? What inspired you to take on an editorial role and conduct these interviews?*

**Prof. Dunning:** The really nice thing about CTSNet is that it's just a community of thoracic, cardiac, and vascular surgeons. We're owned by our three major societies; I'm not paid a penny to join in to make videos, and neither does anybody else, really, apart from the office that's got a few people. The great advantage of it is that thoracic and cardiac surgeons are just teaching each other and sharing what we find is interesting. The commercial assistance is kept to a minimum, and we have complete control. It's great because it has a strong community feeling, so when we ask people to submit videos they do so willingly and gladly because they know they get good feedback from other people. Today and yesterday, at this conference, we're very excited to do the very first

live webcasting of a conference, and over 4,500 people came and watched this conference live on CTSNet. I really think that's going to be the future of conferences—some people will come here so that you can talk afterwards to the great names, and those who can't travel will just watch it online, and people were sending in questions and it's great. It's a very exciting future for the Internet. I'm sure AME Journals will be able to come in; we could post up the articles and journals live at the same time, provide web links, and I know you've created a journal to go with this conference, and that again, is a brilliant pair-up. We're melding the boundaries between journals, conferences, and the Internet, and this is a great example today.

**JOVS:** *As a surgeon, an editor, as well as a co-founder of the CALS course, would you mind sharing with us your strategies to balancing work and life?*

**Prof. Dunning:** Somebody asked me about the question of 'busyness'; someone asked, "*what do you have as a hobby?*" and I stopped and I went "*oh no, how sad, I think my hobbies are doing videos*". That's pretty pathetic, isn't it? I think in another sense, if your job can be a little bit your hobby as well, if you love your job, and you enjoy it, and you like talking to other surgeons about gadgets and gizmos, then that's not such a bad hobby after all!

For more details of the interview, please check on the interview video as well (Figure 2) (1).

## Expert introduction

Dr. Joel Dunning is currently a consultant cardiothoracic surgeon at James Cook University Hospital, Middlesbrough, UK, where his team performed the first robotic diaphragmatic repair in the United Kingdom.

He undertook his medical training at Oxford University before completing his junior medical training in Manchester. During this time he completed his PhD, which contributed to the development of national best practice guidelines. His work in evidence based medicine and best practice continued into his career in cardiothoracic surgery, where he has authored and contributed to several

best practice statements, including the Guidelines and Management of Cardiac Arrest after Cardiac Surgery, and he believes is the most important guideline that he has created that has the potential to save the most lives.

Clinically he spends a lot of his time doing MITS. He particularly likes trying out new techniques for both robotic and VATS surgery including subxiphoid approaches for lobectomy and the thymus. He is involved in the development of a few novel devices including a new 5 mm stapler.

Dr. Dunning is also an Associate Editor of the *European Journal of Cardio-Thoracic Surgery*, managing the Cardiac General Section of the EJCTS and the Best BETs section of the ICVTS.

He is the CTSNet Co-Editor-in-Chief and has a series of videos and interviews on his own YouTube channel. He is a co-founder of the CALS course, which teaches safer emergency care after cardiac surgery to units and clinicians all over the world.

His enthusiasm in the field of robotics and VATS is infectious and he sees his role as a doctor and the creation of surgical videos his hobby. A man with genuine passion for his work, we are honoured to invite Dr. Dunning to talk to us about the pros and cons of Robotic Surgery and VATS, as well as Microlobectomy—a technique he has developed.

## Acknowledgements

None.

## Footnote

*Conflicts of Interest:* The authors have no conflicts of interest to declare.

## References

1. Gao S, Poon B. Prof. Joel Dunning: the future of thoracic field is full of possibilities. *Asvide* 2017;4:529. Available online: <http://www.asvide.com/articles/1849>

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