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Key Words: non–small cell lung cancer, neoadjuvant therapy, surgery, pulmonary artery, nodal disease

Discussion

Presenter: Dr Hope Feldman

Unidentified speaker 1. Discussion will be opened by Lana Schumacher from the Mass General Hospital.

Dr Lana Schumacher *(Boston, Mass)*. Hi. Excellent presentation and thank you for your work. Thank you to the organization and the WTS for allowing me to discuss this, and I appreciate the fact that you did give me the paper to review. And I think you did an excellent presentation. And this is a novel study looking at—there are plenty of literature that we've seen with nodal complications leading to bleeding and how to deal with them and whatnot and what to predict. But this is a really nice study where you actually measured measurements of neoadjuvant therapy and the reduction in node response and how this can lead to increased adherence. I know there was a paper that was recently presented or published by [inaudible] that just looked at factors that contribute to nodal adherence but not in this degree, where you're actually looking at what did the neoadjuvant treatment regimen do to your nodes and how is this going to affect you? So, my first question is how do you think your group is going to use these data? Is it going to allow your group to look at the nodal responses measured by a radiologist and say, "Well, maybe I can do this in a minimally invasive fashion," as I noted that about 86% were done open. So, is it going to change the paradigm in how the surgeons look at this?

Dr Hope Feldman *(Houston, Tex)*. So, thank you for the wonderful question, Dr Schumacher, and I appreciate that you took the time to review the paper and send me such thoughtful comments. So first, I'd just like to say we don't aim to tell surgeons how to do the cases. Our goal was not to make a comment on the safety of doing these cases open versus minimally invasive. As you could tell, there was a high rate of open surgery among a group of surgeons that are rather facile at minimally invasive procedures. And we would like to reference Van Haren's 2018 paper that noted a minimal difference in outcomes in patients who undergo open versus Video-assisted thoracoscopic surgery resections. I think the goal of our paper is to talk about operative planning and resource utilization. So, MD Anderson is fortunate to be an institution where they have dedicated teams. There are 9 thoracic surgeons available and in several of these cases, a second thoracic surgeon was required to assist in a more challenging dissection. And so, our goal is to promote safe outcomes for patients. As the neoadjuvant regimen evolves, we hope that it can help community physicians begin to plan accordingly so that patients can undergo these more challenging dissections safely.

Dr Schumacher. Right. Right. I think that these are very valid points. I know that I mentioned that to you. How can we get this information out to the community? Should this be more standard? Should we be asking our radiologists to actually measure the nodal response more frequently and not just be looking at RECIST criteria? So, I think that—can you replicate this in the community, do you think, this type of study? Or you have plans for that?

Dr Feldman. I think it will be really important to validate the findings of our study. And also, especially to look at the outcomes of these more—what we would anticipate being more challenging dissections in the community setting—to evaluate in a setting that has different resources. Are they seeing the same types of outcomes with regard to complications? Is it safe to still do these procedures? And if so, what resources are going to be needed so that they can plan accordingly?

Dr Schumacher. Excellent. My last question, are you going to also look at this study with [newer?] agents? I know you had mentioned that, and hopefully, you will continue this.

Dr Feldman. Yes. Dr Antonoff is definitely continuing this work in the setting of targeted therapies.

Dr Schumacher. Great. Excellent job.

Dr Feldman. Thank you.

Dr Schumacher. Thank you.

Dr Robert Cerfolio. You have such a unique opportunity to teach so many people in this room. And you have a slide

that says, "Nodal adherence to artery forces change in approach to vasculature." No, it doesn't. It's changing approach to the bronchus. Cut the bronchus. If you just cut the bronchus, you don't have to get around the artery. So, I think that's the big trick. That's why we do—and I know you're not going to believe me, but enough people in the room have seen this—100% of these robotically. Every single one is done robotically, with a conversion rate of less than 2%. And it is better for the patient. So, it's good to say outcomes are the same, but they're not. You'd much rather have those minimally invasive than an open. And we do them together as a team. But I think the unique opportunity here is to teach people when you can't get around an artery, instead of digging around to get—yes, you get proximal control, but just take a bipolar, if you use a robot. You can lower the Fio_2 in the inspired air from the anesthesiologist, but you don't have to. Airway fires don't happen. But if you're worried about it, do it. And just cut the B2 or the B3 or the B1 bronchus. They're usually left upper lobes, almost all of these. If you cut the B2 and then start bringing it back down even to the B4 or 5, the artery's just hanging out in the breeze. And then you can go get it.

Dr Feldman. I appreciate that comment. I'm a second-year general surgery resident completing two years of research [crosstalk]. [applause]

Dr Feldman. So, I'll use that as a learning opportunity. Thank you.

Unidentified speaker 1. Wait. Robert, if you still have the node invading the artery, you've got to do the sleeve.

Dr Cerfolio. [inaudible].

Dr Mara Antonoff. Just to clarify, if you change the order of the steps that you're doing in the operation, that is technically a change in the approach to the vasculature. You're not taking the artery at the time when you otherwise might have done it. You're taking the bronchus first and then approaching the artery from a different angle.

Dr Feldman. Thank you.

Dr Schumacher. Excellent job. [applause]