SPEAKER 1: We're going to move on to the great Sergey Kantsevoy. And he's going to dazzle us in I forgot what room. Oh, we're going do a case presentation before Sergey does his magic. So let's do that.

SPEAKER 2: Good afternoon. The next case is going to be a LumenDi-assisted colon endoscopic submucosal dissection. This patient is a 52-year-old man with no significant past medical history who underwent his first screening colonoscopy on October 29, 2017.

You can see the image on the right side that shows a polyp at the hepatic flexure. Biopsy showed a tubular adenoma without high-grade dysplasia. CT scan was performed and found no evidence of metastatic disease.

The patient was referred to colorectal surgery, who recommended a colonoscopy with endoscopic ultrasound. So this is the colonoscopy with EUS. The lesion was found to be 5 centimeters, with centrally depressed area, Paris classification. On probe EUS the muscularis propria was found to be preserved. Consulted-- colorectal surgery was once again consulted, who then recommended endoscopic resection.

So the patient now presents for a LumenDi-assisted staging endoscopic submucosal dissection. The benefits include minimally invasive technique to assess histopathology and resect en bloc to ensure zero chance of recurrence.

SERGEY KANTSEVOY: Thank you very much, Chris. So first of all, I want to say that this lesion is much more than 5 centimeters. My estimate is at least 10 but maybe even more. I don't even see the end of it. Let me show you what I have.

So we put LumenDi in place. It took about three minutes to get there. But it's all big lesion. I am trying to do circumferential incision. And usually it takes me maybe 10, 15 minutes. And all this time that you were doing presentations, I was trying to do circumferential incision, and still did not complete it. It's a huge, huge lesion. I don't know what will be the final size of it.

SPEAKER 1: OK, Sergey, surrogate that's why we gave it to you.

SERGEY KANTSEVOY: Yeah, no question I did something wrong.

SPEAKER 1: No. No. It's just that you're that type of guy, right? I got a question for you. I see in the distance the deflated second balloon of the device.

SERGEY KANTSEVOY: Yes.

SPEAKER 1: So when do you put that up? What's the timing for that?

SERGEY KANTSEVOY: I rarely inflate the second balloon, only if I really have to. Most of the time I can get away with just one balloon. Stavros, uh-huh. Thank you. So you can probably see that I did not ask any help to advance. And I don't ask any pressure right now.

Everything is kind of done by LumenDi itself. Can you inject please? We are using Dual Knife J, which allow us to inject through the knife. But you really need to have a strong man in the union. A couple women already gave up on this injection. And I'm lucky we find finally somebody who is going to the gym regularly. And this is working. So [INAUDIBLE].

No, seriously. I'm in luck here. I'm not lucky with the choice of the [INAUDIBLE]. But I'm lucky with the choice of assistants. Can you inject, please? It definitely saves time for exchange of the needle if you can do it like this. Thank you.

So I think that [INAUDIBLE] started to [INAUDIBLE] Dual Knife J. It usually requires-- if you want to use it with the pump, then it will be a much less effort. But it's one extra piece of capital equipment in the room.

Can you please close it?

SPEAKER 1: Sergey, do you any magic formula for your submucosal fluid?

SERGEY KANTSEVOY: No, no. I'm using [INAUDIBLE]. And that's what we use in here. [INAUDIBLE], or you can use [INAUDIBLE]. It's a good thing to have [INAUDIBLE] in the unit, even if you don't use it. The good thing is that it gives you the right color. So then [INAUDIBLE] can look at it, and they produce the same color. It's already prepared.

Because if your injection solution is too deep, then you will not-- it has too much blue in it. Then you will not be able to see blood vessels. If it's too light, then you will not see the difference between the muscle and submucosal tissue. So it has to be the right color. Can you

inject, please?

SPEAKER 1: How about the color of your assistant's T-shirt? What do you think about that?

SERGEY KANTSEVOY: No, that's a little too dark.

SPEAKER 1: OK. But it's got right logo on it, right?

SERGEY KANTSEVOY: [INAUDIBLE] will be the right color. Right now, if we made it this color, I will not be able to see a blood vessel. So I was finally able to get from the-- can you please close it? You can see how many blood vessels, big blood vessels there. It's definitely a big lesion. And so it required a lot of blood supply.

SPEAKER 1: And you're not using a spray. What kind of--

SERGEY KANTSEVOY: Spray is my favorite. But I was offered to use a forced coag, so--

SPEAKER 1: I see.

SERGEY KANTSEVOY: I'm afraid that if I use spray, they will give me even bigger polyps. So I did not ask for spray. Can we inject this?

SPEAKER 1: That's good, maintain a low profile.

SERGEY KANTSEVOY: Yeah, a very low profile. Thank you.

SPEAKER 1: Well, you seem to be doing well with this size lesion so far.

SERGEY KANTSEVOY: I am not circumferential. The real fun will start when I complete circumferential incision from below. Then it will be a little easier. Then I will be able to-- I left one place because that's where they injected in there. You see here?

SPEAKER 1: Yes.

SERGEY KANTSEVOY: It's an adhesion. Can we inject this? So this the place which will be especially difficult. OK, stop, stop, stop. Can you hold them, please?

SPEAKER 4: [INAUDIBLE]?

SERGEY KANTSEVOY: Mm-hmm. So I have to be really careful. This is the place not to perforate. And you don't want to leave any bridges. So you can see how much in the [INAUDIBLE] problem in regards to submucosal fibrosis.

SPEAKER 1: Do those tubes get in the way?

SERGEY KANTSEVOY: No, you can't avoid them. They're just pushing [INAUDIBLE]. Plus, I can adjust their position if they're on my way. So you see I got there. Now I need to find out-- so you see, I pushed the rods away and put the front balloon forward.

So I want to see if I completed circumferential incision on this side or not, most likely not. It's still quite big here. That's where--

SPEAKER 1: Sergey, were you able to-- are able to retroflex? The question came up.

SERGEY KANTSEVOY: I can. But I did not try here. Usually with LumenDi-- can we inject, please? With the LumenDi, I can just work in straight forward direction, no need for that reflexion. Please inject. Stop, stop, stop.

Still you can see that it's still not completed circumferential incision.

SPEAKER 1: Yeah, but you're making pretty good progress with it.

SERGEY KANTSEVOY: This is dependent portion where all the water is, and it's obscured in my view. I rarely change patient position, so I try to complete everything without it, without change of position, especially when the patients are big. You are not going to win popularity contests if you start asking to change position.

Can we inject, please? Inject, please. Stop, stop, stop. So the big advantage for using this knife with injection is that I can just inject a small amount and then move forward. And when I use all this, then I can inject again. That's the huge advantage of this knife, conveniently, the same as [iNAUDIBLE] knife. With [INAUDIBLE] knife, you don't need any long-lasting solution because you can always just add.

Can we inject, please? Stop, stop, stop. Please inject. Stop, stop. Can we inject, please? The time saving with that Dual Knife J is just impressive, very impressive. Stop, stop.

SPEAKER 1: Sergey, so this lesion's up in the hepatic flexure?

SERGEY KANTSEVOY: Yes.

SPEAKER 1: And have you foreshortened the colon with the LumenDi?

SERGEY KANTSEVOY: Yep. So you can see that I'm proximately hepatic [INAUDIBLE], but I'm only on 70 centimeters by endoscope position. So the colon is pretty straight. Please inject. And as I said, I went there in three minutes.

You see there is this cut from the LumenDi right in front of me. You don't see him. But he's the one who keeps the track of time and so forth. OK, stay here. And so he's [INAUDIBLE] time in his [INAUDIBLE].

SPEAKER 4: Sergey, do you how do you decide where to start the incision? Is it upstream or downstream, oral, anal?

SERGEY KANTSEVOY: It doesn't really [INAUDIBLE] difference in that situation. I started from the oral side. Please inject. And then I just moved to where I can see. Stop, stop, stop. And I was going from there up a portion of it [INAUDIBLE] because-- can we inject, please-- because it was accessible. And then I went to a more difficult portion. Stop, stop, stop.

The main thing is that you see that I'm leaving there healthy margins. So I'm going to cut in it within the healthy tissue. It looks like I'm getting close to the end. Here's my end. And this will complete circumferential incision. And then we will deploy LumenDi and start doing the dissection itself.

Can you inject, please? Stop, stop, stop. I don't think I got it. It's a little bit difficult to see. And I don't want to cut unnecessarily.

Those mucosal bridges you have to eliminate right away because later on they will be on your way and [INAUDIBLE] you and preventing you from effectively dissecting. So you see how it opens up when you eliminate the bridge.

SPEAKER 1: So Sergey, do you-- you used to use LumenR right?

SERGEY KANTSEVOY: Yep.

SPEAKER 1: And in the absence of that tool, do you use any special tricks to elevate the tissue as you're resecting it to kind of hold up? Do you create a pulley of sorts with the suturing device?

SERGEY KANTSEVOY: So once again, there is a big difference between training in ESD in the United States and in Japan. In Japan, on average, it takes about three years to prepare a specialist who can do ESD. And in the United States, we don't have this luxury.

Right now most of the people who are interested in ESD out of their fellowship. So I think that in the United States ESD will be done with the help of technology more than it is done in Japan. In Japan, it is basically individual skills. Here I think that we will be technologically facilitated. It's either LumenR, which is now called [INAUDIBLE], or LumenD, but this is the way to do it.

Thank you. I need the clip. So Chris, we completed circumferential incisions. [INAUDIBLE], how much time it took?

SPEAKER 5: 36 minutes.

SERGEY KANTSEVOY: 36 minutes for circumferential incision. And now we are moving toward dissection. I'm just trying to aspirate all this fluid and blood.

SPEAKER 1: I knew you could do it.

SERGEY KANTSEVOY: I'm not finished yet. And it may be that we will encounter some unknown problem yet. But you see, guys, how big is that lesion, right? It's huge.

SPEAKER 1: Yeah, it is.

SERGEY KANTSEVOY: Not 5 centimeters. By the way, this is a very common problem when referring physicians misrepresent in the size of the lesion. So when we do an ESD, we remove the area. We don't remove diameter or [INAUDIBLE]. And the size of the are in square centimeters is-- can you open, please? It's counted as a P, which is 3.14 multiplied by a radius in square.

So if-- can you please close? No, no, open. We grabbed too much. Close, but do not squeeze. So you can see, Chris, I grabbed-- oh, you know what? It can be opened. Open, no, no open. I just want to grab [INAUDIBLE]. No, no, please keep it open. I want to grab a different part of it. Yeah, can you close? Close, please. Open, open. Close. Mm-hmm.

So the size of the lesion is P on the radius in square. So if somebody mistaken it by the factor

of two, let's say they said it's 1 centimeter, but it was 2 centimteters, it takes four times more time to resect it. And if somebody mistaken like this, one by a factor of three, it takes even much longer. So this referring physician really misunderstanding the size creates a problem with the schedule.

Can you open it, please? Open. Close. I'm trying to see whether I grabbed the lesion or not.

SPEAKER 1: Sergey, a question came up. Does it make a difference how you use that clip, where you place it?

SERGEY KANTSEVOY: You want to place it so that it facilitates your traction. So you want to place it to the most distal part of the lesion. But you don't want to put it on the fragile [INAUDIBLE] tissue. You want to grab the edge of the lesion, and the lesion is just so big that-- can we close, please-- that I don't see the edge.

Can we open it now? Open, please. Close. Squeeze. Deploy, please. Thank you. Open. OK, Chris, so the lesion is now tightened with my snare, with my loop. And now watch. I'm pushing LumenDi forward to open submucosal space and create traction. I will need the knife again.

You can see already how it exposed me that bleeding blood vessel. Please keep closed. Can you inject, please? Stop, stop, stop. Can we open?

Now I'm identifying the tissue which is on the traction. And that's where I cut. Can I have-- the LumenDi is against the wall. I want to move it forward a little bit. Can I have again the biopsy forceps? Remember we used in the beginning?

So you see there the front portion of the LumenDi is against the wall. So I want to direct it because we are in the hepatic flexure. So I want to direct it into the lumen rather than to the wall. And then it will be much more effective use.

SPEAKER 4: So Sergey, in this case, the polyps spans, of course, more than 2, in fact, several [INAUDIBLE]. What is a limitation of this technique? I mean, at what point will you say, it's probably not resectable in your hands and just generally?

SERGEY KANTSEVOY: Right. Can we open it? So far it is just a question of time, how much time you can allocate. In reality, there is no really size limitation how much you can remove. It's all about the time that you allocated to that.

I remove 20 centimeter polyps. And Dr. [INAUDIBLE] has a presentation where the polyp is like size of their average head, and still he was able to take it out in one piece. So the only problem is-- can you close, please-- is when you are dealing with circumferential lesions-- close, please-- because then you are running into possibility of causing a stricture. And then it may not be a good idea because you will commit the patient-- thank you. You will commit the patient to multiple dilations anyway. So maybe it is a better option to send patients like that to surgery right away.

SPEAKER 4: And will you be paying attention to high-risk features, such as ulcerations or maybe central depressions or if it's not lifting well? And how do you go about those?

SERGEY KANTSEVOY: That is definitely a limitation.

SPEAKER 4: [INAUDIBLE]?

SERGEY KANTSEVOY: That is definitely a limitation. If you see those high-risk features, then this is beyond what you can remove endoscopically. So you can see how effective now the traction. I pushed LumenDi forward. And you can see how far it propelled the polyp. Now-- oh, sorry.

Now I have really expanded the submucosal space. This is the place where there were adhesions, and that's why it's not pulling and lifting.

SPEAKER 4: So going back to the issue of high-risk lesions, how do you deal with them? Will you still go ahead and resect it?

SERGEY KANTSEVOY: [INAUDIBLE] surgery.

SUBJECT 4: And then wait for-- or wait for the biopsies to come back or the histology to come back and then sort of [INAUDIBLE] at that point?

SERGEY KANTSEVOY: If the lesion is ulcerated, then by definition it penetrate already deep into submucosal layer. So it is more than what we can remove with submucosal dissection. So this lesion either will be full-thickness resection or should go for surgery.

I would suggest if the lesion has a deep ulcer in it, that is more than what we should be even removing endoscopically. Similarly, if the lesion is not lifting, it means that there is already

submucosal infiltration. And this probably better served by sending patient for surgery as well.

So this is what should not have been done by referring physician, creation of injection right down to the lesion. Definitely it caused extensive fibrosis. And making chance of perforation very high. I cannot leave that area with submucosal injection. Can we try again? Stop, stop, stop. No. Not with that.

So you can see, Chris, that this area of the lesion is not lifting. I'm kind of scraping it and-- can you close, please?

SPEAKER 1: So is there-- you haven't used your balloons again. So--

SERGEY KANTSEVOY: I use the balloon-- my balloon, distal balloon, is distended, holding me in place. That's why I'm not falling. You see, the biggest problem when you're work in the hepatic flexure is that you will be either falling too far and then into [INAUDIBLE] colon. And then you don't see the lesion. You're already passed it. Or you fall into proximal into transverse colon. And then, again, you are too far before the polyp.

But here LumenDi's holding me in the right position. I don't even have to adjust it much.

SPEAKER 1: Go ahead, [INAUDIBLE].

SPEAKER 5: So most of the polyps we get are either injected or partially biopsied and have fibrosis. I, for some reason, have not yet got [INAUDIBLE]. My question is, the dual knife, I understand. It's very short, safe for the colon. But for fibrotic lesions, among the whole gamut of knifes that are available, anyway one of them safe and effective?

Or is there any one setting? There's so many settings now, forced coagulations, I guess, what I use for the dissection. But any comments on that?

SPEAKER 1: Well, no. I don't have any. I don't think I give you any direct comments. My general advice is that any individual should get really conversant with two types of knives and just focus on two knives that work the best in your hands, whether it's a hook knife and a IT knife, or a dual knife. That's probably the best starter point.

Head to head in the colon with flat lesions, is one preferable to the other? Boy, I think there's going to be so much user preference. It's hard to answer that question. So far as electrosurgical devices, there's many of them out there.

I was surprised the number of hands that are not using RB And so that means lots of people are using I don't know what, Olympus devices, CONMED devices. And it's the same. Fortunately, most of the intelligent electrosurgical devices have similar settings that you can be guided towards.

But I think for a large part, again, it's user preference. You have to get comfortable with forced coag, what level, those kinds of things that work best in your hands and with that particular knife. It's not a refined enough science yet to give you those answers.

SPEAKER 6: And this clutch cutter, am I saying that correctly? Is that FDA approved? And is that safe for colonic use? Or is it only for gastric use?

SPEAKER 1: It's basically a hot scissor. That's been around for over 10 years, believe it or not. I remember testing it in our developmental endoscopy unit before 2010, that's for sure. And I'm surprised-- I think it-- I'm surprised it's available in the US. It must be.

I don't think he would be using it if it weren't FDA approved. It's a hot scissor, in essence. So it's clunky in that sense. Is it a good idea to use in a colon? Well, it's a slower procedure. It's less risk of slipping. It can do the job.

It would be a lot of effort in orienting it to get it to go around, especially in this lesion here. But you could do it. That's a tool that you could get comfortable with. You had a question about Mesna. So I always use Mesna in flat, large polyps like this. I use Mesna. There's no doubt about it.

SPEAKER 6: It's easily available.

SPEAKER 1: It's easily available. We happen to make our own solution, and that's methyl cellulose and saline. And so I have them make that solution up. And then they just literally open the Mesna jar up and dump it in there.

It's got a sulfur smell. But it's not obnoxious. And I use it on all flat lesions. Just, I think it speeds things up. There have been head-to-head studies done. My former fellow in Dr. Kazuki Sumiyama at GK has done head-to-head studies looking at ease of dissection using Mesna, without Mesna, with fibrosis, and without fibrosis. And it's a useful adjunct, I think.

SPEAKER 6: How do you mix it again if you have [INAUDIBLE]?

SPEAKER 1: So whatever solution you use, yeah if you use Gonak, I don't know what you dilute it down to.

SPEAKER 6: One and three is [INAUDIBLE].

SPEAKER 1: OK. So you could do-- you do you're one in three and then dump the mixture. The Gonak comes in, I think, 5 CCs or something. You just dump in that in there. So it dilutes out your Gonak a little bit, but it's not terrible. But it does the job. You'd be surprised how it really loosens up that mucosa for you to grab and get.

SPEAKER 6: Thank you.

SPEAKER 1: You're welcome. But it's not that expensive. Yeah, I think it's $35 or something like that.

SPEAKER 7: [INAUDIBLE]

SPEAKER 1: Yes. OK, Sergey, you're quiet.

SERGEY KANTSEVOY: I'm just trying to put a second clip too to increase the--

SPEAKER 1: Oh, I though you were using some new type of sign language, body language, maneuvering. So here's a question for you. Will traction with the LumenDi balloon and over-tube device, I guess, when everything is in place, will that predispose to any muscle injury?

SERGEY KANTSEVOY: It may, yes. If you pull in muscle, then, yes, definitely you can create it. Can be open here? Open. Yes, definitely, if you did not see that you are pulling muscle. And that was the problem with another device called EndoLifter. Close, please.

If you applying it too much-- OK, squeeze, please. Open. Yeah. So what I'm going to do now, I'm going to just see how it looks. And I am coming out. I'm using LumenDi as a conduit to get out and clean the lens.

Remember I said about this that I have now conduit through which I can easily go back and forth. And can we have a--

SPEAKER 1: And so the over-tube doesn't kink or anything like that? It's stiff enough that allows you to go in and out. Of

SERGEY [INAUDIBLE]. And then if you could put it on this. Thank you, Scott. Huh? DiLumen, yeah.

KANTSEVOY: Yeah, I just got corrected. It is the LumenDi's name of the company. But the name of the product is DiLumen.

So you see, Chris, we're back into the place where we were effortlessly. And it took no time. And to [INAUDIBLE] and if I did not have LumenDi in place, then it would be like new intubation again of the colon.

I'm trying to see where is that irritating bleeding coming from. Thank you.

SPEAKER 1: Here's another question for you and the DiLumen device. Do you worry about any pressure necrosis if you get stuck in an unusually long case that you hadn't anticipated?

SERGEY KANTSEVOY: So the DiLumen has evolved. So when it comes to this certain pressure, then it started to release it. So far, there was no problem. Although theoretically, you may think of something like that. But so far, it was not reported.

Can we inject, please? Stop. Stop. Stop. I don't think I'm doing it right way. Can you inject?

SPEAKER 1: So you're mumbling back and forth. Are you telling jokes that we're not supposed to hear?

SERGEY KANTSEVOY: No, no, I'm saying to inject. I'm asking to inject, Chris. Again, I just increased the pressure for a second. I mean increased the tension. As I said, it is dynamic retraction.

SPEAKER 1: And you're doing that how?

SERGEY KANTSEVOY: Pushing forward the balloon, the front balloon, which has a polyp attached to it.

SPEAKER 1: Right. And do the balloons--

SERGEY KANTSEVOY: There, the balloon is holding me in place.

SPEAKER 1: Yeah, do they lock? Can you lock the distance between the balloons?

SERGEY KANTSEVOY: Yes, yes. There is a regulation. So I can do that as well, although I don't need it right now. But I can fix it, and it will be on the same position. So here you can see I just push it. [INAUDIBLE] please. Thank you.

So as soon as I release this corner, it will be like we Stavros's case. It will start pulling it out

and when it will expose the other part, since we'll be a little bit more manageable. Can we close?

Additional problem is you see how many of those blood vessels-- close, right? Thank you.

SPEAKER 1: Sergey, we're going to interrupt you to go to room 5 for a case presentation, OK?

SERGEY KANTSEVOY: OK.

SPEAKER 7: Good afternoon, everyone. This is Dr. Stavropoulos's next case. It's a tunnel-assisted ESD of a gastric high-grade dysplasia. It's a 74-year-old man with a history of coronary artery disease, hypertension, obesity, who presented for treatment of a gastric high-grade dysplasia. He underwent an upper endoscopy for evaluation of dyspepsia earlier in February and was noted to have a gastric antral ulcer, which on biopsy revealed high-grade dysplasia.

These are the endoscopic images and EUS. It shows a 2-centimeter lesion within the posterior antral wall. The Paris classification of 2 AC and approximately 5 centimeter proximal to the pyloric channel. On EUS, the legion was limited to the mucosa.

The plan is for a gastric ESD. It's a minimally invasive technique that provides accurate histopathologic assessment of margins and depth to determine stage. And if it's a T1a endoscopic lesion, endoscopic resection is considered curative. Thank you.

STAVROS STAVROPOULOS: Yes. So the difficult part of this case is actually finding the borders of the lesion. So the lesion is again on the posterior [INAUDIBLE]. I guess, a few weeks of PPIs healed that ulceration. And there's now this depression with just a little bit of a healing [INAUDIBLE].

You see I'm on maximum magnification with a near focus on NBI. Actually, I called now [INAUDIBLE] in the room to see how far he thinks the resection should go. This box is from here, so it's high-grade dysplasia. You can see there's some irregularity there in the center. Maybe this red is nodule to the right of the erosion.

But then once you move further out-- I put some marks already while waiting. But if you move out here, it's all intestinal metaplasia with nothing particularly conspicuous. So I gave it about 10 millimeters from the two areas of depression.

So there's one area of fine depression here with a bit of an erosion. So I gave 10 millimeters

distally from there for my mark. And then there's this other one here in the front. So I gave another 10 millimeters proximately from there and then came all the way around.

Now, I'm going to show you how inconspicuous it looks once we insufflate and remove the water and the near focus. But this is basically what we're dealing with, a very slight depressed lesion with 2a rim around it. That this high-grade dysplasia.

So let's insufflate. I'll show you what it looks like. And then the tunnel ESD makes ESD a lot faster because there's no need to fight the flap or use traction. And it gives a much thicker specimen. So, yes, especially, if you're concerned about the depth of the lesion, the EMR specimens obtained with tunneling is they tend to be significantly fatter.

So this is an NBI. I'm taking the NBI off. You can see there this relatively [INAUDIBLE] lesion in the background of intestinal-- You see that intestinal metaplasia involves this whole area. But in the center of it there, these two depressions, there, there, with some nodular raised rim all around this depression mainly.

So I wonder if this is the lesion itself, and this was a healing second biopsy over here because this looks like a crater here, at least from afar. So it can be very subtle. In those situations, sometimes [INAUDIBLE] has been shown to help. Here I don't think it will help because I truly believe that the dysplasia might be a 10-millimeter area in the middle. And what [INAUDIBLE] will show here is just intestinal metaplasia.

So I have a perfectly adequate margin. And it's a straightforward tunnel ESD of the [INAUDIBLE]. So we're going to tunnel through, and then we use a SB knife, which is perfect for this. So that in literally three seconds, we can take [INAUDIBLE]. The [INAUDIBLE] thing about tunneling [INAUDIBLE] is that tunneling's super fast, especially if you have a lot of experience with [INAUDIBLE]. And then when you go to the lateral attachments, you spend more time on those than you spend on the tunnel when you think that those are going to be fast, because you have a very thick attachment.

You have left some of the submucosa and the mucosa. So now you have to do maybe a 6-millimeter column with a point knife. This can be tedious. But with a nice, big scissor knife, it's perfect for those attachments for tunnel ESD. Also in the esophagus, some of you have to be careful not to hit the specimen because it's a very small space. You don't want to get-- it's very easy to get R1 margins in the [INAUDIBLE] in the esophagus.

So knives that don't transmit a lot of electricity, like that Sumitomo, has a diathermic stripe. The [INAUDIBLE] knife, the whole knife is electrified. So if you want precision, maybe the Sumitomo [INAUDIBLE] less cautery, especially the esophagus, where your margins can very rapidly evaporate. So anyway, that's it. Now you can return to the other ESDs.

SPEAKER 1: Yeah, let me ask you a question. So this is the perfect scenario for doing blunt-balloon dissection with a small dissecting balloon. Why aren't you doing that?

STAVROS STAVROPOULOS: I knew you would say that. You know what?

SPEAKER 1: Every time I hear somebody say tunnel, I'm thinking, what the heck? When are they going to break out the balloons? It's such a safe, quick, procedure.

STAVROS STAVROPOULOS: I just forgot how to do the balloon.

SPEAKER 1: Yeah, well, you know what?

STAVROS STAVROPOULOS: You mean the spherical extraction balloon?

SPEAKER 1: Yes, right. Right. Right. Right.

STAVROS STAVROPOULOS: Well, at this point, I can do ESD faster than that.

SPEAKER 1: Well, you should try it.

STAVROS STAVROPOULOS: OK, fine.

SPEAKER 1: We have a question from the audience first.

STAVROS STAVROPOULOS: Just for you, I give it a try. [INAUDIBLE] of my time, and then [INAUDIBLE] that I look as good. Sergey's going to do that 10-centimeter polyp faster.

SPEAKER 1: Listen, the zoom in near focus, is that special scope that you've got? That's a question from the audience.

STAVROS STAVROPOULOS: No.

SPEAKER 1: Standard [INAUDIBLE]?

STAVROS STAVROPOULOS: This, we have the 190 scope from Olympus. Near focus is standard. You have to have an HQ 190. That has the near focus. There's a thinner scope, the H190, which is still high def. It's still has NBI, what Olympus calls new NBI, which is not as dark and low light as they 180 NBI was.

But the HQ 190 has near focus. The H 190 doesn't have near focus. Also, it seems like with the colonoscopes, the pediatric colonoscope that I use for a lot of my colons, is this doesn't have near focus. The adult one has near focus. It's very useful, I think, as you saw.

SPEAKER 1: And the water immersion, do you advocate that universally or just for these tricky [INAUDIBLE]?

STAVROS STAVROPOULOS: It provides another 30- to 40-degree magnification. So it's my kind of zoom. See, I use near focus, and then the water zooms it even further. You get, I think, close to 100 times magnification with the water and the near focus. So it's very nice.

SPEAKER 1: OK, we're going to switch off to Dr. Yahagi.

STAVROS STAVROPOULOS: OK.

SPEAKER 8: Good afternoon. So we have an endoscopic submucosal dissection of gastric adenocarcinoma with Dr. Yahagi. So we have a 74-- he's actually 75 years old now. His birthday just passed-- year-old man with a history of hypertension, sick sinus syndromes, status/post pacemaker, stage-4 chronic kidney disease, obstructive sleep apnea, and a history of a TSN1 colon cancer status/post right hemicolectomy 2008, and chemotherapy, who presents now for the management of gastric adenocarcinoma.

He had a workup with an EUS for elevated LFTs and was incidentally found to have 2-centimeter gastric Paris IIc lesion on the study. So on the endoscopy here you see the EUS, where you have a 2-centimeter Paris IIa plus IIc lesion in the proximal antrum at the junction or the greater curvature and posterior wall. The EUS shows no involvement of the muscularus propria.

So we're planned for staging gastric ESD right now. The benefits is that it's a minimally invasive technique that provides accurate histopathologic assessment of margins and depth to determine stage. T1a endoscopic resection is a curative resection. T1b is concerned for risk of lymph node metastasis and need for further treatment, chemotherapy or gastrectomy, for example.

NAOHISA YAHAGI: Welcome back. I already inserted the gastroscope very close to the [INAUDIBLE]. This is [INAUDIBLE] and slowly move back to the oral side. We can see the relatively rigid lesion here at the posterior wall of the gastric antrum. And as you can see here, the lesion size is probably around 1.5 centimeters.

Even though the small size, this lesion has an irregular shape. And when we suck the air, the shape of this lesion doesn't change. That means that it has certain thickness [INAUDIBLE] rigidity and come close to the target area and switching on the NBI and using the near-focus mode, we can nicely get a demarcation line between the left side and the right side.

Now you can see the irregular surface on the left side. This is typical appearance [INAUDIBLE] lesion in the stomach. On the contrast in this area, you can nicely appreciate the regularly arranged [INAUDIBLE] structure. This is completely normal background mucosa, although there is some intestinal metaplasia. And coming close to the center part of this area, we see the amorphous area here.

That means that this might have the deep submucosal invasion. And at least from the close appearance of this region, I strongly suspect deep submucosal invasive cancer. And before starting actually ESD procedure as usual, I spray indigo carmine dye on the surface of the target area to enhance the surface structure and check the gravity.

So this is very good location to do an ESD because there is no gravity effect on this lesion. This is [INAUDIBLE] according to that gravity. And the maneuverability of the endoscope is usually very good. That's the antrum.

So I'm going to perform ESD to remove the entire lesion to have very precise [INAUDIBLE] variation. I'm going to [INAUDIBLE] marking that using Dual Knife J. I always use [INAUDIBLE]. Oh, it doesn't work. Could you check the connection.

There is no electric current. I usually use soft coagulation [INAUDIBLE] for [INAUDIBLE] marking the stomach. And for the cutting, I prefer to use [INAUDIBLE] effect three

[INAUDIBLE]. And for the submucosal dissection, I usually use [INAUDIBLE] effect three [INAUDIBLE] or effect four [INAUDIBLE]. That's usually very good for the gastric ESD procedure. And of course I usually use 2 millimeter Dual Knife J for all the gastric ESD procedures.

OK, we'll check it again. Oh, it doesn't work well. What happened? Again, looking back the center part of depressed area, we can see the small protrusion at the center part of the depression. This usually suggests deep submucosal invasion. Therefore, at least at my institution, we usually send this kind of deeply invasive cancer to surgery because our surgical [INAUDIBLE] has very good, skillful laparoscopic surgery.

Therefore, every patient who receives the laparoscopic surgery has a good screening [INAUDIBLE]. So we carefully [INAUDIBLE] the target region before deciding our treatment strategy. And I think that if we can use more precise EUS variation, we can recognize the irregularity of the submuscosal [INAUDIBLE], then recognize the deep submucosal invasion.

Now, [INAUDIBLE] guys checking the VIO 300 D. Is it ready? Oh? Change it again?

[INDISTINCT CHATTER]

Do you think it's OK? Not yet. And for the gastric ESD procedure in the antrum, I usually start inital mucosal incision at the distal side, because I usually perform the submucosal dissection from the oral side in a straight position. Therefore I would like to make sure that the end point of the submucosal dissection at the beginning of the procedure. And fortunately, the lesion size is quite small, so it is quite easy to make a submucosal incision from the oral side.

I will try to use it. Still it doesn't work.

SPEAKER 1: OK, we're going to temporarily switch to room 5.

NAOHISA YAHAGI: Yeah, yeah, please.

STAVROS STAVROPOULOS: So we did close the knife.

SPEAKER 1: We're watching you carefully now.

STAVROS STAVROPOULOS: We did with the, what do you call it, the proximal and distal incisions. This is the entry to the tunnel. And this is the exit back here. So this is the exit. And this is the entry.

So let's try the balloon, yeah? That's what you want, Chris, balloon?

SPEAKER 1: Yes.

STAVROS STAVROPOULOS: So which balloon?

SPEAKER 1: Well, you have to have the right balloon there.

STAVROS STAVROPOULOS: [INAUDIBLE] done with a CRA balloon.

SPEAKER 1: No. No. No. No. Olympus makes a blunt-tipped stone-extraction balloon. It's a white catheter. It's a little longer than the average ERCP balloon. That's one you got to use, the other ones have too long of a nose at the end of it, and then you can run the risk of perforating with them.

STAVROS STAVROPOULOS: Yeah.

SPEAKER 1: I don't think you have it.

STAVROS STAVROPOULOS: Yeah, we have--

SPEAKER 1: Pretty unusual.

STAVROS STAVROPOULOS: -- Boston balloons, the ones with our rec system.

SPEAKER 1: I don't think that's-- they're going to have a sharp nose on it. You could try it, but I wouldn't use it for that reason. I would only use it if I had a complete circumferential mucosal incision. So if the balloon tracks off where I'm putting it, it comes out through the side mucosal excision. But if you have just a front and back mucosal incision, you're going to need a pretty safe balloon to use.

STAVROS STAVROPOULOS: OK.

SPEAKER 1: Next time.

STAVROS STAVROPOULOS: OK, next time, fine. So I was going to just stick the CRE balloon. But the [INAUDIBLE] balloon will do it in one dilation, but it may perforate the muscle.

SPEAKER 1: Yeah.

STAVROS STAVROPOULOS: That would be a bummer.

SPEAKER 1: You're going to use the CRE balloon? No. No.

STAVROS STAVROPOULOS: No, because I'm afraid it might perforate the muscle.

SPEAKER 1: Yeah. No, I wouldn't use it.

STAVROS STAVROPOULOS: [INAUDIBLE] avoid the mucosal.

SPEAKER 1: I wouldn't use it after-- no. Yeah.

STAVROS STAVROPOULOS: Just going through the muscle. Inject.

SPEAKER 1: So a question came up from the audience, optimal position for the endoscopist during POEM, in the usual standing to the left side of the patient or at the head of the patient? Do you have any preferences?

STAVROS STAVROPOULOS: Well, my usual position for posterior POEM is in a regular endoscopy position. I'm slightly facing towards the patient's feet, slightly. Slightly off from--

SPEAKER 1: Yeah. I would the patient on [INAUDIBLE] back and in the usual position as well.

STAVROS STAVROPOULOS: And some people do love the [INAUDIBLE] or things like that. I leave them supine. That helps to compress that [INAUDIBLE] peritoneal, gives you access.

SPEAKER 1: Gives you more access to the patient, I think.

STAVROS Yeah. So this is going to be a quick tunnel. And then we'll cut the edges. See, there's some

STAVROPOULOS: vessels. But we are using the knife. That's a little bigger, but still very amendable to knife coagulation.

It's a bit like doing a Z-POEM, when [INAUDIBLE] in the posterior antrum, just a little further up from the pylorus. So this is a big vessel there. That may not be so amendable to the knife right here. See, there's a pair of them, both arteries.

We could leave this and see if the SB knife will take care of it, I think. So we're just going to zoom all the way to the other end without bothering as much to extend the tunnel. But you see why the specimen ends up being much more plush. Look at the thickness of the specimen already.

The tunnel really forces you to dissect consistently very close to the muscularis. So you get a very nice, deep margin, pretty extravagant. That will be very useful on the case that Naohisa is doing, because the tip margin there will be hotly contested since it's likely a T1b lesion.

SPEAKER 1: Right.

STAVROS STAVROPOULOS: So we're getting to a big vessel, one of these penetrators that you find on Z-POEM also. And you have the same instability of the scope that you have on Z-POEM. It sort of goes back and forth because of the curvature of the stomach. So this is a sizable one.

I don't know. Sometimes you can try and go for broke, but-- especially at the end of the day.

SPEAKER 1: Yeah. I was just going to say that. It's the end of the day, not a good idea.

STAVROS STAVROPOULOS: Let's give it a try. I'm [INAUDIBLE] forced? So for this one, you need forced. And let's give it a try. Very gently. I think we've got away with it. OK, we got away with it.

Now, if you're incision in the back is not deep enough, you can overshoot the goal with the pylorus. So I'm having the feeling that I should be out by now. Let's see. I'll extend a little bit and then try to-- if you feel that you overshot, you need to deepen the incision.

So I'm not sure that I see the incision here.

SPEAKER 1: OK, we're going to go back to Dr. Yahagi here for a second.

STAVROS STAVROPOULOS: OK.

SPEAKER 1: OK?

STAVROS STAVROPOULOS: Mm-hmm.

NAOHISA YAHAGI: Yeah, OK, I already put the marking dot along the lesion and injected the [INAUDIBLE] solution again to the surrounding tissue, especially at the anal side because I'm trying to make an initial mucosal incision at the anal side part in order to make sure the endpoint of the submucosal dissection. So fortunately, this lesion was nicely lifted up with the submucosal injection.

So I'm planning to make a mucosal incision from here. Open it, please. This is Dual Knife J, 2 millimeter, and make a small puncture here. And pushing the endoscope, I can forward the tip of the endoscope slowly, slowly, and keeping outside from them marking dot.

If part of the tumor goes into the [INAUDIBLE], it becomes really a bit difficult. But looking at the marked area and catch the target tissue and make a mucosal incision from the anal side and [INAUDIBLE] to the oral side. And I'm using [INAUDIBLE] mode.

Therefore, I usually [INAUDIBLE] the [INAUDIBLE] in the [INAUDIBLE] because there is no [INAUDIBLE] for the [INAUDIBLE] mode. Unfortunately, because of the hematoma within the submucosal area, it becomes a little bit [INAUDIBLE]. But it's OK. I was right to extend the mucosal incision a little bit more to the upper side, catching the edge of the incised area and the push forward to the upper side. And to control the direction by torquing my wrist, it becomes a little bit [INAUDIBLE] here.

But to stabilize the movement of the endoscope by using the transparent [INAUDIBLE], and we don't have to hurry. Go slowly. Go slowly. And changing their direction by torquing my wrist only a little bit. And as I mentioned during my talk this morning, it is very important to keep the appropriate distance from the target region and to keep the good contact with the target tissue.

Otherwise it doesn't cut well. And it is very important to trace the same line, using coagulation current to open the submucosal space right after the initial mucosal incision. Therefore, I already switch to the [INAUDIBLE] mode and trace the same line. And I can open the submucosal space. And again, there is no interval for the [INAUDIBLE] coag.

Therefore, I always stick [INAUDIBLE] intermittently. Catch this area. Then go slowly. Go

slowly. That's usually good enough.

SPEAKER 1: All right, we're going to zip back to Stavros, who's finishing his tunnel, OK?

NAOHISA YAHAGI: OK.

STAVROS STAVROPOULOS: OK, so this is the tunnel now. See, it starts here. It goes all the way to here. And then we are emerge right before the pylorus here. You can thin out the edges a little, if you want, or not, and then try to go on cutting with a scissor knife. The SB knife.

But you can see how thick now that attachments can be, which can make life difficult. See, let's pretend you're trying to dissect them like this. This can be a bit of a tedious business. Now he's contracting, so we'll wait for the contractions.

But see, you can go here and start dissecting with a knife. But it's basically you have to do like 1,000 little cuts to try to be able to cut whatever submucosal you left and the mucosa. But now I'll show you how the SB works.

Well, the standard SB, the standard one. So the small length or large length? The standard is a large-length knife. So we're going to go outside our marks and just take it all down. You see why it's difficult with a knife to do this, because you have left all these attachments here with vessels that need to be individually cut with a needle-type knife, as opposed to--

SPEAKER 1: Stavros, these cutting scissors are available in the US?

STAVROS STAVROPOULOS: Yes, they are. Olympus is the distributor. They are made by Sumitomo. And rotate, the other way maybe. All right, fine. You want it this way? So we can grab a nice big chunk [INAUDIBLE]. And then we can coagulate a little and then cut and pull, open, close, and pull.

So you see even the scissor knife, you see how much trouble he has cutting? Because you have to cut not only mucosa, but all the side attachments. But that's OK. Open. Turn it. We need to catch the submucosa and the mucosa. So you turn it like this, OK? So like this. Close, coagulate the vessels and then cut them.

See, we're almost done with this side basically. So the incision is down to here. We just have to cut this. Open. Like this, close.

SPEAKER 1: It seems to be cutting fairly well, even though it's maybe a little tedious.

STAVROS STAVROPOULOS: Well, it will be more tedious to try and do this with a hybrid knife, which is actually a pretty long knife, too. If you have something like a dual knife, cutting this attachments could take forever. Open. Close. And I get this vessel.

So what's left is this little bridge here. So I'm going to leave these, because you really shouldn't cut the side that is being pulled by gravity in case it flops over and makes your life difficult. So right now-- I didn't check where gravity is. Let's see.

It looks like it's going on this side. So gravity is on this side. So you can cut completely the gravity side if you want. But it's better to have it stretch for you. You see how I only have to cut this final attachment here. So I could let it stretch there while I do the other side and then leave a little bit at cut it at the end. Open.

No. No. 4 o'clock. That's not 4 o'clock. That's 6 o'clock. That's OK. It will do. Close. There goes this. And then another one, open. Close. So now let's see. Open. Turn it up and down. There you go.

See, I'm almost at the back now. Close. You don't realize how fast this is going until you're done. And then you're like, whoa, this is fast. So open. Close.

So see, this is flopping more because it's on the anti-gravity side. So we can just cut a little more open, then cut the other side, and then come to finish this side. Close. But you see there is even with this knife, there's quite a bit of cautery escaping. Open. And we should clean. Why don't we clean it?

So if the margins are going to be closed this is clearly not the knife. You should really have a very precise incision with the other knives. But here we did a very generous margin around this, maybe 10-millimeter, 15-millimeter lesion. So we don't really have to worry about it. Open.

Are you connected? Yes? So you can go from underneath and see what's holding it. What's holding it, it's really this strand of submucosa. So we can go on the other side now and finish the side. Open. So turn it at 2 o'clock, 2 o'clock. There you go. Close. And then that's what's left here. Open. Turn the other way. Right there. Close.

So this is almost done. Open. Close. And you should really clean that knife. You see, it should cut better than that if you clean regularly. But we're just going faster. Open So that leaves only that little strand of submucosa over here that you can even do it with a knife closed or not.

[INDISTINCT CHATTER]

Yeah, see? This, unlike the [INAUDIBLE] knife, the [INAUDIBLE] remains on a little strip inside of the arm. So let's do it the regular way. There you go. Close. Here you go. So it's a very quick and dirty way to do this.

SPEAKER 1: Very nice. We're going to go to Sergey's room, OK?

STAVROS STAVROPOULOS: Sure.

SPEAKER 1: Sergey, we're back. Did you miss us?

SERGEY KANTSEVOY: Not really. I'm just fighting with that thing. And there is a lot of scar tissue under the lesion. And I got into a lot of blood vessels. So I am having a blast. Can we inject, please?

SPEAKER 1: OK, we're just checking.

SERGEY KANTSEVOY: Yeah. Not getting much lately. And kind of cannot see where is exactly the end of the polyp and where is the muscle there. So let me express it [INAUDIBLE] dangerous.

The traction is definitely working for me. And you see I'm kind of following polyp forward, pushing it away. And can we inject, please? Each time when you don't see-- please. If you don't see blue, you cannot cut. That's the main rule of ESD, because then you're either going into the muscle layer or perforating. So here I kind of lost all my submucosal injection. And I cannot figure out where to get it back.

I'm on fourth quadrant.

SPEAKER 1: Sergey?

SERGEY KANTSEVOY: Yeah?

SPEAKER 1: [INAUDIBLE], who's almost done with his case, OK? And then we'll come back.

SERGEY KANTSEVOY: OK.

SPEAKER 1: All right?

SERGEY KANTSEVOY: Yeah,

NAOHISA YAHAGI: Welcome back. I already made a second [INAUDIBLE] mucosal incision and conducted more than 80% of the submucosal dissection from the oral side. Still, it looks like attached tumor. But the once we open the submucosal space utilizing the transparent [INAUDIBLE], you can recognize the remaining submucosal tissue here. And there was a very thick blood vessel here.

So this is the bundle of the artery and the vein. Reddish one is the vein. And the whitish one, behind the reddish one, is artery. So we should be very careful not to cut this kind of very thick blood vessel.

For the submucosal injection, I can use the Dual Knife J. Inject, please. I can inject additional solution-- OK, stop it, please-- directly through the knife itself. It's very convenient. Then night after the additional injection, I can dissect submucosal tissue very smoothly. And utilizing the gravity and the effect of the transparent hood, I can open the submucosal space. Then it becomes very easy and very safe condition to do the submucosal dissection.

Now I'm opening the submucosal space. And as a result of the cutting the distal edge, I can easily open the submucosal space like this. So this is nearly the end of my procedure. But before completing my procedure, I have to coagulate this one.

Previously, I usually used [INAUDIBLE] for this type of thick broad vessel. But now I usually coagulate this kind of thick, broad vessel using Dual Knife itself. Could you switch down the effect of [INAUDIBLE] coag to effect 1 and 7 watt. Maximum watt is 7 watt.

Using very low power of the [INAUDIBLE] coag, I can coagulate this kind of broad vessel. But we should stay the same location without moving until it's completely coagulated. OK. Now our final result was bad. So switch back to the effect 4. Effect 4 [INAUDIBLE].

Even with this bleeding, I can stop it, Close it. Gently attach to the bleeding point. And press [INAUDIBLE] of the coagulation. Again. Gentle touch. That's usually good enough. I can coagulate this very precisely.

This is a great marriage of the Dual Knife. And injection, please. And by using closed tip of

Dual Knife, still we can inject some [INAUDIBLE], then keeping the safe condition to give additional [INAUDIBLE] effect to the exposed blood vessels.

I think this is good enough. Let's finish. Open it, please, catching the edge, then finish. Fortunately, there is no severe fibrosis within the submucosal area. That's why I could remove this lesion very smoothly without any difficulties.

But I strongly believe that this has already become a deeply invasive submucosal cancer. We have to confirm the histology.

SPEAKER 1: Yeah, I'm surprised you didn't encounter any fibrosis, with the appearance of that lesion. But--

NAOHISA YAHAGI: Yeah.

SPEAKER 1: We'll find out just how invasive it is now.

NAOHISA YAHAGI: Oh, where is the lesion? I dropped probably inside the mouth. Where is it? Oh, yeah, here.

[INDISTINCT CHATTER]

Sorry. Yeah, I can suck it in.

SPEAKER 1: OK, we're going to switch over to Stavros now.

STAVROS STAVROPOULOS: OK, so this is the crater. And it's very close to the pylorus, you see? It's like 10, 15, 20 millimeters from the pylorus. So generally, when we suture those, we get a significant number of strictures. That can be extremely hard to deal with.

So we are not going suture, even if it will provide some protection. We'll do what the Japanese do, which is preemptively coagulate exposed vessels, which they have shown that it has a protective effect from delayed bleeding for gastric ESD. So we do that.

It's obviously small vessels. But we coagulated already one big one over here and then another one over up on this edge and some other ones here. So it's all good. So we're just going to leave the crater alone. And that's what I wanted to show. Because also, if you suture, this was high-grade dysplasia And that big background of intestinal metaplasia.

If I suture-- you see all the intestinal metaplasia here, right? If I suture, it's going to create all kinds of artifacts from the foreign body reaction to the sutures, as opposed to having a nice, clean, flat scar that may make surveillance a bit problematic. So I'm going to leave it like this. And we're going to suck the specimen out. And maybe when you come for the next case, maybe the deep one, we'll also show you the [INAUDIBLE] specimen.

SPEAKER 1: OK. Maybe we can flip back to Stavros.

STAVROS STAVROPOULOS: To Yahagi you mean? Where are you going?

SPEAKER 1: Right. I'm sorry. Kantsevoy, yeah.

SERGEY KANTSEVOY: Oh, my god, I got mistaken with Dr. Yahagi. That is the biggest compliment I got so far.

SPEAKER 1: Oh, we're just kidding, actually.

SERGEY KANTSEVOY: I see. Yeah. Yeah. I knew that. I knew it was just a joke. OK, Chris, I finally found some place where I can do dissection. And before it was just very limited submucosal space.

Can we inject this? And definitely dual knife J is-- stop, stop, stop-- is definitely helping in the sense that it gives me-- can you please inject-- chance to inject without switching. Stop, stop, stop. And you see another problem with that lesion, a lot of big blood vessels.

Can you close, please? Open. So my team here, I want their opinion if they feel that LumenDi's helping during procedure or not. What do you think, guys?

TEAM: Absolutely. Yeah.

SERGEY KANTSEVOY: Can you inject, please? You see, Chris, I never had to change my position. Thank you. And several times I already had to come out with the endoscope to clean the endoscope. And each time going back is just no problem. So it does save me a lot of time just by that reason alone.

SPEAKER 1: It looks like you've got a fair amount of this dissected off, right?

SERGEY KANTSEVOY: Yeah, but still much more left, probably more than what I achieved. It's still on. You see how much it's still attached?

SPEAKER 1: Yeah.

SERGEY KANTSEVOY: Can you close, please? And each time when I think that I am doing better, I get into another vessel. Can we inject, please? Stop, stop. Not [INAUDIBLE] very well. Can you close, please?

So this is all scar tissue, Chris, which is on my way dramatically. And you see all this [INAUDIBLE] ink injected right on to the polyp. I cannot really leave it here. An injection is very, very dangerous. I mean, cutting is very dangerous.

SPEAKER 1: So a question came up from the audience. Is dual knife available in the United States? I'm sure it is.

SERGEY KANTSEVOY: Dual knife, yes.

SPEAKER 1: Dual Knife J?

SERGEY KANTSEVOY: Dual Knife J, they start the markets in next week.

SPEAKER 1: OK.

SERGEY KANTSEVOY: They decided that they will not give it till Stavros's course is over. Can you close, please? So I don't know how he was able to get some for this course. But we all cannot get it till Stavros uses it and demonstrates it during his course.

I think I will need again the needle because this place, I cannot inject. So look at the size of the polyp, how much we separated.

[INDISTINCT CHATTER]

Yeah. I'm trying to inject with the needle because otherwise it is too firm. And Dual Knife J cannot inject into that area.

SPEAKER 1: We were just talking that your average procedure time has just been really seriously messed up by this case.

SERGEY KANTSEVOY: Yeah.

SPEAKER 1: You're going to have to change--

SERGEY KANTSEVOY: That was the whole point to assign me a case like this.

SPEAKER 1: It's good thing this wasn't on your schedule.

SERGEY KANTSEVOY: Yeah. Inject, please. Stop, stop, stop. So yesterday, when I looked at the pictures, and the pictures were showing not the entire polyp, just some part of it, I thought that at some point it will be a full thickness resection. And that's how it looks to me now.

I don't see a place here. [INAUDIBLE], please, in here.

SPEAKER 1: OK, I was wondering when you might arrive at that impression that this could be converted to full thickness.

SERGEY KANTSEVOY: Yeah, because these areas are not lifting at all. I have no submucosal injection and--

SPEAKER 1: We're going to jump to room 5 real quick to take a look at Stavros' specimen, OK? And then we'll be back.

SERGEY KANTSEVOY: Let me have a knife, please.

STAVROS STAVROPOULOS: OK, so this is the specimen. You can see the burn marks. They're all here, right? And then this is the central depressed eroded area right there. The specimen is 4 centimeters there. And the lesion is about 2. So with the 10 millimeters of margin on either side of it, so, yes, it's really very straightforward. So I think we got it.

The high-grade dysplasia is this area there in the center. OK, thanks.

SPEAKER 1: OK.

SERGEY KANTSEVOY: OK.

SERGEY KANTSEVOY: No NBI.

SERGEY KANTSEVOY: Can you open, please? Close.

[INDISTINCT CHATTER]

Yeah. But-- sure, sure. So I'm trying to use a little more traction on one place here on top, hoping that it will help me to pull away that portion which is fixed in scar tissue. Can you please open? And close, please. Close. Can we close. Uh-huh. Squeeze. Open.

So I'm again-- I rarely use more than one clip. But the size of this polyp and scar tissue kind of forcing me to constantly increase my tension in different directions. Another problem is that I'm working independent portion.

You see all this water is constantly in my view. And I wonder if I should change position of the patient in order to kind of eliminate that. The clips are not effective. This part of the polyp is not lifted by the clips.

SPEAKER 1: Did you consent the patient for a full-thickness resection?

SERGEY KANTSEVOY: No.

SPEAKER 1: Ah. Now, in your practice, do you routinely do that as part of your consent?

SERGEY KANTSEVOY: No, I don't take consent for a full-thickness resection, just like you don't consent patient for perforation. It just happens.

SPEAKER 1: Yeah, I guess so, you know? It's just like snow storms. They just happen. Nobody consents for those. Well, Sergey, this is a real challenge. We're watching you struggle here, trying to find a plane. You've got polyp flopping and in the way. "DiLumey" or "DiLumeny" or Di-something is helping you. But it's still not giving you the edge.

SERGEY KANTSEVOY: Yeah, the problem is that there is extensive scar tissue. And that scar tissue is on my way.

SPEAKER 1: So this is really a case for a fellow.

SERGEY KANTSEVOY: Yeah.

SPEAKER 1: Are you going to change the patient's position, you think? That might help kind of get something in.

SERGEY KANTSEVOY: And we rotate the patient, because if you are doing something and you are not succeeding, to continue it in the same way, it's just not productive. So I think that we need to improve our odds by changing location and hoping that the polyp will fall against this wall, away from this wall. And that will be some help.

You see, this is the place where I have no injection. This is all scar tissue. This is all [INAUDIBLE]. And that is the place where I'm looking to cause perforation unfortunately if I continue to do it like this. There is no other way.

Injection is not working here. Can we have IT NanoKnife? One more thing I will try before I rotate the patient.

SPEAKER 1: Are you going for an IT Nano because you're--

SERGEY KANTSEVOY: Because I want to pull the tissue towards me. It's either IT Nano or Hook Knife in that situation. I have just very limited choices. Can you open, please? So you see what I'm doing. It still appears too dangerous.

Can we clean [INAUDIBLE]? I think it's not cutting anymore.

SPEAKER 1: So what percentage of the polyp do you think you've got dissected off at this point?

SERGEY KANTSEVOY: Difficult to say, Chris.

SPEAKER 1: OK.

SERGEY KANTSEVOY: Really impossible to say.

SPEAKER 1: All right.

SERGEY KANTSEVOY: The polyp is just so big.

SPEAKER 1: So the question came up again about the availability of the Dual J Knife in the US. And as Sergey had mentioned earlier, that knife will be released for sale in the US next week?

SERGEY KANTSEVOY: On Tuesday, yeah.

SPEAKER 1: Tuesday, to be precise.

SERGEY KANTSEVOY: But the truth is that Olympus representatives are here. So they probably can give more details about this. I'm not really aware of anything else. I was told that I will have it in my unit on Tuesday, so.

SPEAKER 1: Sergey, we're going to switch to room 3 to take a look at a specimen from Dr. Yahagi.

NAOHISA YAHAGI: OK, I would like to show you resected specimen. I completely removed this tiny lesion. It was size 18 by 40 millimeters. And it was completely free of margin.

But as I mentioned, it was a relatively [INAUDIBLE] lesion. I feel a certain thickness and the rigidity. Therefore, I think this is submucosal invasive cancer. But because of this age of the patient and also some underlying diseases, sometimes just local resection is good enough for the patient. Thank you very much.

SPEAKER 1: Thank you. Yes, back with Sergey.

SERGEY KANTSEVOY: Yeah, hmm. Yeah.

[INDISTINCT CHATTER]

That's my question. I wish I could answer this one. My traction keeps losing it. I don't have effective traction to start with. I could create some [INAUDIBLE]. [INAUDIBLE] not holding. I need them here.

Can we try to change position of the patient? So by changing position, I'm hoping to achieve two things. The polyp will move away and give me some extra space. And the other thing is that the fluid, which is right here, right at the place [INAUDIBLE]-- yeah, probably-- where I do procedure may also fall.

SPEAKER 1: What position are you putting the patient in, on the back?

SERGEY KANTSEVOY: The patient went on the back, yeah. Can I have, again, the forceps, the biopsy forceps to direct. So DiLumen full proximal to hepatic flexure, so I want to push it again beyond the flexure.

[INDISTINCT CHATTER]

No, no, I'm just using it to direct it. Can you open, please? Open. Open. Close.

SPEAKER 1: So the forceps won't tear that balloon?

SERGEY KANTSEVOY: No, they won't tear. They actually slide in from the balloon. You need something stronger than the forceps to tear it. Now the whole fluid is the other way. Can you open, please? Close.

Note, the forceps are not really designed to hold the plastic. So let me see if anything changed. Open. Open. So let's see how much we achieved here.

[INDISTINCT CHATTER]

Not yet. Not yet. I will just want to see if my position is better. You see the size of this beast.

[AUDIO OUT]

SPEAKER 1: Sergey, so is it is it working? You think you got some advantage here?

SERGEY KANTSEVOY: I think I've found some place, at least.

SPEAKER 1: It looks like you've got a plane.

SERGEY KANTSEVOY: Yeah. You see, I found some plane which accept my solution. Stop. Stop. [INAUDIBLE] there. Inject. Needle in. Can I have hook knifed not hook, this IT Nano knife.

So you see, if I have submucosal injection, it's a different story. But I did not have it for quite some time. And continue to do it without submucosal injection is looking for a perforation.

SPEAKER 1: A question came up from the audience. If you could retroflex in the treatment space with the DiLumen device in place?

SERGEY KANTSEVOY: Yes, you can. But unfortunately, in this case, it is not going to help much.

Can we inject again? And next I will take a dual knife, please. Needle out. Please inject. Stop, stop. How about-- I'm trying to get there. Needle. Please inject. Inject in there. Inject, mm-hmm. Needle in. Can I have dual knife?

TEAM: Dual knife?

SERGEY KANTSEVOY: Mm-hm. Close, please. Big blood vessel. On Can you please inject? Please, the dual knife. Stop, stop, stop. Please inject. Stop, stop. Dual knife is not effective for this type of [INAUDIBLE].

Can you open? No, the hope was that it will help me. But it probably did for a few minutes, and then it didn't anymore. Can you inject? It anything, I'd say it's just worse.

SPEAKER 1: So, Sergey, we decided we're going to use this case to show to Congress to enlighten them of the value of appropriate reimbursement for minimally invasive procedures such as ESD. It's a great case for it. $300, no?

SERGEY KANTSEVOY: Yeah, $300 for all this trouble. OK, let's inject with the needle. So dual knife is not really injecting here at all. And I really don't want to go full thickness, but I have absolutely no submucosal space, Chris.

SPEAKER 1: I can see that. It's pretty--

SERGEY KANTSEVOY: Pretty bad. Can you needle out? Please inject.

SPEAKER 1: That looks promising.

SERGEY KANTSEVOY: Yeah. Miracle. Can we inject again? Stop, stop. Can I get IT Nano knife again?

SPEAKER 1: So, Sergey, after a full day of doing five colon ESDs, what do you do at the end of the day?

SERGEY Go home.

KANTSEVOY:

SPEAKER 1: Take drugs or--

SERGEY KANTSEVOY: Go home.

SPEAKER 1: --yoga? What makes you get up for the next day?

SERGEY KANTSEVOY: Nothing. Just keep going.

SPEAKER 1: So you lay your head on the pillow at night and dream of tissue planes.

SERGEY KANTSEVOY: Yeah.

SPEAKER 1: Strandy tissue planes.

SERGEY KANTSEVOY: That was not part of my dream. This case was not part of my dream.

SPEAKER 1: Well, the good news [AUDIO OUT] a lot of bleeding, right?

SERGEY KANTSEVOY: Oh, I had a lot of bleeding, Chris. Another thing is that about IT knife or any knife except a dual knife, they occupy a lot of space. So the suction, when those knives are inside the channel, is not effective. So that's why I had to pull it out right now.

Look at this. Look at this. This is just still attached. So my hope that it will help me did not really play well. I think we need to change back to the previous position because now everything is-- like polyp is lying on itself. So it doesn't really create any traction.

So can we change? I also think that while I was rotating, I completely lost all the clips from DiLumen. They tear the polyp, and I do not have any traction.

Look at the size of this lesion, Chris.

SPEAKER 1: Yeah, it's formidable.

SERGEY KANTSEVOY: Much more than 5 centimeters, I can tell you that. But the thing is that if there was not this problem with the injection under the polyp and scar tissue, beginning of it went very well. I had

no suspicion that it will be so bad. But when it came to that, that's how a referring physician can completely ruin the whole case, by doing unnecessary thing-- cutting out portion of the lesion or injecting [INAUDIBLE] under the lesion. There was no, really, reason to do that.

Can we try to inject, please?

[INDISTINCT CHATTER]

You don't need them. Needle out. Please inject, inject. Stop, stop. Stop, stop. I don't think it's gone.

SPEAKER 1: It's starting to look like a G POEM.

SERGEY KANTSEVOY: Can you inject? So you see, Chris, it's going not where I wanted, but proximal to the place. So that place where I wanted it to be is just scar tissue. Needle out. Inject. Needle in. Let's try dual knife.

[INDISTINCT CHATTER]

Dual knife. No, no, dual knife, dual knife. Sorry.

[INDISTINCT CHATTER]

SPEAKER 1: So as you're doing this and struggling with poor tissue planes, if you inadvertently cut through completely, would you then move straight to a full-thickness resection, or just fix the hole and keep--

SERGEY KANTSEVOY: No, no, I finish and then suture. I don't want to do anything in between. It's not going to help.

SPEAKER 1: Stavros, we're going to give you a little breather from all of us. We're going to listen to history of the next case, OK? And then we're going to go to Stavros's room. So we'll give you a little break.