

[MUSIC PLAYING]

ERIC COOLIDGE: Welcome to our third Lumendi Learning Masters Series event. My name is Eric Coolidge, Lumendi's VP of Marketing. During this unique time of limited travel and human contact, it has been our goal to maintain virtual touch with our customers as much as is possible.

With the use of these video education platforms, we are fortunate enough to do so. This evening, we are pleased to introduce Dr. Patrick Saitta, Assistant Professor Department of Medical Education at the University of Tennessee Health Science Centers. And the Director of Interventional Endoscopy at Saint Thomas Midtown Hospital.

Dr. Saitta runs a successful advanced endoscopy program within a community hospital. Managing a program of this type in this environment presents unique challenges when compared to University-based medical centers. DiLumen is an integral part of his complex polypectomy practice and provides many advantages to help improve performance and efficiency.

Today, Dr. Saitta will present his experience in the community hospital setting and the benefits of the DiLumen platform in his hands. If during this program, you would like to ask a question, please feel free to use either the chat box or save your questions to the end of the presentation. And will reserve the last 15 minutes to respond.

So with that, I would like to turn it over to Dr. Saitta.

PATRICK SAITTA: Good evening, everyone. I hope that everybody can hear me OK. I want to welcome you to my office here and in Nashville, Tennessee, where we've been doing a lot of virtual visits here lately. Anyway, I hope everybody is doing OK and getting through this very chaotic time and everybody staying safe. And just in general, I hope everybody will be getting their practice up and running again here shortly.

So again, as Eric was saying, I want to talk tonight about EMR in my practice, how I've been implementing the DiLumen device into utilizing EMR in my practice. And just in general, how working in the community setting, how it differs from my previous experience in academics.

So in general, when we talk about EMR-- I think again, it's just important to do a quick recap in terms of what lesions are appropriate for EMR and for ESD and for surgery. In general, this again just shows-- I mean, I think in general, we would all be saying that for EMR, we're focusing on lesions that are confined to the-- more to the epithelial layer.

High-grade dysplasia lesions and lesions with villous features or just regular adenomatous features. As we start to talk about intramucosal cancer, we don't feel as comfortable in terms of EMR because of its low en bloc resection rate in terms of offering a curative resection. So some of us might still use it for intramucosal cancer.

But in general because of the piecemeal resection, we tend to not think about EMR as much unless we think the lesion is small enough to get an en bloc resection. And then when we start to think about lesions that have some mucosal invasion or lesions that we think have intramucosal cancer those are the ones that we start to shift over more to thinking ESD.

And, obviously, those with deep sub mucosal involvement or deeper involvement are the ones that we're referring for surgeries. So we're going to talk here over a few slides, again, features we use to help make those distinctions. So again, getting back to ESD principles. When we think about what lesions are suitable for ESD, again, we're focusing on mucosal lesions and we're focusing on lesions in the superficial sub mucosa.

So in the first 1,000 micrometer of the sub mucosa we know that the risk of lymph node involvement is negligible-- less than 1%. So that's why these lesions can successfully be managed with endoscopic resection without doing definitive surgery with lymph node dissection. And this endoscopic approach can potentially be curative for those lesions.

So just to give you some background in general, surgery for non-malignant lesions-- benign polyps is still very common practice. And approximately 25% of polyps that there-- are 25% of colon resection that are occurring in the US right now are still for benign disease. And that rate has actually been increasing since 2000.

In terms of EMR, the technical success in expert hands is very high, around 95%. But where it lacks is obviously with en bloc resection, where we know that en bloc resection, unfortunately, it's only successful for lesions greater than 2 centimeters less than 50% of the time. So that would be the knock on EMR and when we talk about EMR for cancer, why it's not oftentimes adequate.

And then when people tried to talk about why EMR and the piecemeal resection approach is also disadvantages is they tend to allude to the high recurrence rate, which depends on what studies you look at. But this recurrence rate can be up to 18% in certain studies. But what we also know is a lot of these recurrences are benign adenoma recurrences that can be managed endoscopically.

And when we talk about risk factors for these recurrence-- rates to occur, not surprising it's in our larger polyps. It's in polyps where we couldn't completely resect the polyp. And so we had to APC or do some sort of thermal treatment of tissue that we could not resect. And then intraprocedural bleeding is obviously-- that can affect our ability to complete a resection.

When we talk about surgery for non-malignant polyps, I mean, the important thing to understand-- all though surgeons would tell you that right hemicolectomy is really not a bad operation. And they love doing those. They're very easy procedures for the surgeon to do and patients generally do very well.

I mean, you can't avoid the fact that the 30-day mortality rate is just shy of 1% morbidity, still creeps up to around 25% with infection and leaks not being insignificant complications here. And then when you talk about hospital lengths of stay, you're still keeping a patient in the hospital, even if the procedure goes well, potentially up to a week.

And you're still talking about a recovery of potentially four to six weeks. So potentially, this can really alter someone's life for a short period of time. Other things, I mean, to look at. Repeat surgery rate, close to 4%. The dreaded colostomy is still something that has to occur in these operations close to 2% of the time.

So these are things that can't be ignored. It's not a completely benign procedure. And not to mention, the cost of this procedure is very high even without complications. And I've just listed the cost of some of these surgical approaches below. And just looking at CMS reimbursement in 2020, this is what, essentially, the hospital gets paid for these surgical resections.

Which, obviously, the hospital likes this. But if you talk about health care cost in general, you can see that you know just a routine laparoscopic partial colectomy the hospital's getting \$10,000 if there's no complications versus \$15,000 if there's complications. And \$30,000 if they have major complications.

So the health care cost impact here is potentially huge compared to endoscopic resection for benign disease. So when we talk about endoscopic resection, the mortality rate is not zero. But it's 0.08% on the high end when you look at studies. Length of stay, if you keep your patient in the hospital is about one night.

I mean, you might keep them in for 23-hour observation. But usually, you're sending them home with a very short recovery period. The complication rates, we're very familiar with the fact that perforation ranges maybe 1% to 1.5%. And bleeding somewhere in the 5% to 10% range. Again, depending on how big the polyps are that you tackle and what location they are in the colon.

And if you look at cost, we're looking at more like five grand versus closer to 20 to 30 Grand in terms of health care cost. And this cost is comprehensive. This includes not only your initial procedure, but this is including surveillance procedures as well. So when we talk, again, about lesion selection we alluded to this earlier.

So again, first we're thinking about the morphology of the polyp. I think most of us, since we are doing rear sections, are very familiar with characterizing polyps morphologically according to Harris classification. So I think the take home message here is anytime you have a depressed lesion or an area of depression in the lesion, you have to think about some mucosal invasion.

And if you look at a Paris IIa elevated with area of depression lesion, that risk of submucosal invasion, again, could be close to 30%. If you talk about a non-granular laterally spreading lesion with an area pseudodepression, again, you're talking about some mucosal invasion risk close to 30%.

And then as you talk about different types of other lesions, again, just kind of showing how morphology might dictate your decisions. And just for those of you, again, to clarify, a laterally spreading tumor-- an LST basically it is a non-polypoid, so essentially, a flat lesion like a IIa lesion greater than 1 centimeter in size. That's what we referred to as a lateral spreading tumor.

And these can either be smooth or non-granular. Or they can be granular, meaning they have a nodular appearance. And as we look through after depression in the lesion, the next kind of highest risk seems to be in lesions that have kind of this mixed nodularity to them. And we'll show a couple of pictures here in a second.

We're all very familiar, again, with Paris classifications so I'm not going spend time on that. But if you look at these pictures here, the top left is basically showing a typical IIa granular lesion. These are thought to have very low risk of submucosal involvement, usually less than 1%. If you look top right, you're talking about a type IIa non-granular. So these have a slightly higher risk, closer to 5%.

And then when you get into your nodular mixed lesions where we're moving down here, left middle, you can see a IIa plus Is nodular mixed lesion. But it's granular. And so the risk is a little bit lower, somewhere in the 7% to 10% range. But if you talk about a IIa plus Is non-granular, those are close to 15% risk of submucosal invasion.

And then when we talk about sessile lesions, which we might usually think of as being pretty safe to resect, again, it's important to know that a granular sessile lesion has a pretty low risk in general submucosal involvement. But if it has a non-granular smooth surface, that risk can be closer to 15%. So morphology can be very important.

And then aside from morphology, we're looking at the pit pattern. So we usually use NICE classification or Kudo Pit Pattern, again, to assess for some mucosal involvement. And then we might also use capillary patterns to assess this as well. Most of us are familiar with the NICE classification using NBI.

1 being our hyperplastic and sessile lesions. 2 being our typical adenomas. And type 3 being those lesions that have submucosal-- or deep submucosal involvement. And again, you don't have to know the specifics so much. But in general, we talk about type 3, we're talking about know kind of enlarged more irregular capillary networks that show up on NBI as being kind of darker areas.

And then you're looking for loss of pit pattern. So you're looking for areas where the pit pattern becomes more amorphous. Or you completely lose the pit pattern or the vascular pattern. And this NICE Type 3 lesion compares similar to a Kudo Pit Pattern Type 5, where, again, you're losing your pit pattern. You have this more amorphous pit pattern.

Generally, with our EMR lesions and benign lesions, were, again, talking about more Kudo Pit Pattern Type 4, sometimes these Type 3L lesions. And this just shows you again capillary patterns. Which again, in the US, we don't always have the same scope technology as what you're seeing in Asia. We don't always have the same zoom capabilities.

So you can't always get these detailed capillary vascular assessments that you see sometimes when this is presented by Asian masters. But I think again, important take home message is studying the capillary pattern, seeing if that looks regular, seeing if you're detecting more irregular vessels. Or most importantly, a loss of vessels or a loss of pit pattern.

Anytime you see that it's going to be more concerning for deep submucosal involvement. And again, those relations that you would think about tending to surgery. Or if you're not doing ESD yourself, referring to someone that does ESD. Or obviously, you do it yourself if you're starting to get into ESD as well.

So just in general to recap, lesion selection for EMR, again, we're sticking more to Paris 1s, especially if it's granular. And then IIa and IIb lesions maybe not where they nodule are mixed pattern necessarily. And then we talk about-- if we want to talk about in terms of laterally spreading tumors, granular laterally spreading tumors or non-granular flat elevated, not a nodular mixed.

And then Kudo pattern, all of them are safe except for Type 5 and NICE 1 and 2 are safe. 3 we think about referring for surgery or ESD. I'm not going to focus too much on EMR supplies. I mean, we're all very familiar with these.

But just quickly, important to have a good electrosurgical generator that has a built in microprocessor that can control voltage. And that you can control your various settings and adjust these settings. So when you're doing an EMR, you have your EMR setting-- you're Endo Cut Q setting programmed. You have your hot avulsion settings programmed. And you have your soft coagulation settings programmed if you get into a bleed situation and you want to quickly toggle over to a soft coag and use a coag grasper.

We're using CO2. I think all of us are using this nowadays to increase patient comfort post procedure. And if we do have some sort of issue with perforation, there's less complication there. Snares, we tend to use stiff snares. I tend to lean towards using hexagonal stiff snares.

And I don't use huge snares. I vary from a 13 millimeter to a 27 hexagonal. And then I'll use kind of a stiff 10 millimeter snare usually to clean my margins. 23 gauge injection needles because a lot of us are using viscous solutions like hydro starch, Eleview, Orise.

Hot biopsy forceps for hot avulsion. Coag graspers can obviously help with ESD because it'll help with coagulation bigger bleeding vessels during EMR endoclips or potentially endoscopic suturing device, if you'd prefer to use that to close your defects APC for thermal ablation either of tissue, which again, I said we don't recommend or treating your post EMR margins.

So as we go through the technique quickly, again, EMR is typically referring to resection of lesions greater than two centimeters, which we're typically going to have to piecemeal remove. We generally are doing a submucosal injection, again, using a viscous solution. We're then doing our piecemeal snare resection if we can't remove the lesion en bloc, which is typical that's greater than two centimeters.

Hot avulsion is removing potentially fibrotic or non-lifting areas or small areas along the margin that you might choose not to snare. Or if you leave these tissue islands in the defect, you can do the hot avulsion technique. And then once we resected our lesion, evidence shows that APCing a clean margin has been shown to reduce recurrence.

If we're APCing tissue again, recurrence risk is higher. So we can either APC, or to save costs, you can use snare tip to oblate the margins. You can consider the underwater EMR technique, which has been advocated as potentially a way to do a very efficient en bloc resection.

And then I guess, it's always important to talk about thorough inspection of the rest of the colon, as 40% of patients referred for EMRs are going to be found an additional adenomas. 20% are going to have additional lesions greater than 20 centimeters-- or sorry 20 millimeters. And around 0.8% can actually have a synchronous cancer.

And then when we talk about finishing up the EMR, we're talking about closing the defect, which has been shown to have benefit primarily in large colon polyps in the right colon. That's where there's been statistical significance. And again, when you choose to clip or suture, I mean, again, defects size would be an indication to potentially consider suturing if you don't think you can close it with clips and you have a big defect in the right colon, assuming you have the suturing device.

Another thing that comes into play is cost. As you know, it of depends on your hospital contracts. But once you place more than-- at my hospital-- eight clips, it's more cost effective to do suturing. In terms of coagulative vessels in your defect, that has not really been shown to reduce delayed bleeding. So I did not do that my practice.

We'll kind of quickly show an EMR video here. This just shows we're dealing here with a IIa laterally spreading non-granular lesion with a Kudo Pit Pattern, primarily Type 4. I'm just scanning the entire lesion here. Just looking at the pit pattern trying to study the capillary pattern. Again, it looks primarily like Type 4. Looks very safe to resect.

Here, I'm actually using the DiLumen device. I'm opening up my fore-balloon here, and I'm going to create a therapeutic work zone, which we're going to talk about shortly. Then we're lifting the lesion here. I used to primarily use Eleview. I've started to use Orise here recently. So we're getting a nice lift on the lesion here.

Then we're just kind of demonstrating that we've completely lifted our lesion. And then here, we just start to do a piecemeal resection. And I'm showing here, I kind of do a hybrid EMR-- sorry, a hybrid underwater EMR technique.

I don't necessarily feel completely comfortable with a total underwater EMR technique where I don't lift at all. I do do that occasionally. But I still like to utilize the principle of underwater EMR where I like to get the lesion essentially floating underwater and to enlute the mucosal and submucosal tissue. Kind of create that floppiness, separating it away from the muscularis mucosa.

And I find that just kind of getting this extra flotation with the lesion sometimes assists with resection. Here, I'm cleaning my margins. And again, as I clean my margins, like I said, I tend to use a small, stiff snare. I was examining the margin here. It's very important to closely examine your margin. I found a little piece of residual adenoma that I'm then resecting. Making sure to take a good extra margin with it.

Same thing here. Still examining the margin. Finding a little area of residual adenoma. You could use hot biopsy forcep hot avulsion on this, but I prefer to use a snare and go ahead and, again, take a good extra margin with that small piece. Just do everything I can to make sure there's no recurrence.

And then again, like I said, I will then typically, APC or use snare to if I want to cut cost to then treat my margin. And then this was a small enough defect and I didn't think it would require that many clips. We went ahead and did just a clip closure. And we'll kind of speed ahead here through the clip closure.

OK. So just getting to the device itself. So I think most of you are familiar with the DiLumen device. And this is just kind of demonstrating how the overtube looks and how it connects to the inflation device. It's just demonstrating, again, it's similar to a double-balloon system. It's got a overtube balloon. And it has a balloon that is not attached to the end of the scope, but rather advances out approximately 16 and a half centimeters past the tip of the scope to create a therapeutic work zone.

And this is just showing the specs of the 130 centimeter device, which is kind of the workhorse device. The most common one that you will probably use. There is a 168 centimeter and there's a 103 centimeter. This is the in-between one.

And when we started our program here, this was the only one that we were able to get. We're now carrying the 103 as well. And again, it's just kind of showing you know different specs of the device itself.

So what are the advantages to DiLumen? So again, it's going to help with manipulation of colon anatomy, improving access. Whether you're dealing with a loopy colon or a colon where you're having trouble getting position. Or whether you're dealing with a lesion that's behind the fold. Or if you're having difficulty exposing. It can help hold all of those things.

It stabilizes your endoscope tip in relation to the wall to stabilize you for resection. One of the features I really like, it acts as a conduit, allowing you to remove and reinsert the scope very efficiently. And it also helps with improving visualization in several ways.

So one of the advantages is the therapeutic work zone. And again, this is that 16 centimeter zone between the fore-balloon and the aft-balloon. And what this does is, again, it stabilizes your scope between two fully inflated balloons so you have good scope tip control and your scope is really not moving.

Again, if you like to do underwater EMR or you like to do a hybrid underwater EMR approach, it not only allows you to fill the area up with water and keep that water in the workspace, but it-- one of the disadvantages of underwater EMR is if you start to get a little bit of blood or you have stool, the work-- field of view gets dirty and it makes it hard to perform the resection. So this keeps your field of view very clean.

It also is limiting air leakage. It limits colon spasm. So a lot of different things you would battle, it's helping you with that. And this video, it really just demonstrates-- this was a procedure where I was dealing with a lesion at the hepatic flexure that was very hard to maintain position on. I kept falling back on.

This, believe it or not, was a very dirty colon. I had a lot of issues with getting a clean field to resect. But if you look at it here, when we had the DiLumen device in, and we've created a therapeutic work zone by inflating the balloons, I'm keeping the effluent out.

I've been able to fully submerge myself in a very clean field of water here. And I can clearly and easily see this lesion to tackle my resection. Not to mention, my position's now very stable.

So as we've talked about another advantage is the conduit function. This is by having the overtube and by maintaining the overtube in place, it basically anchors you in the colon to where you can then remove your scope and re-advance it within a matter of one to two minutes.

So we've all been doing resections and gotten in a situation where our screen gets dirty. Or we start to respect the polyp with piecemeal resection, you start to get a lot of polyp pieces that start to get in the way. And a lot of times you'll then have to pull the scope all the way out to clear those polyp pieces out of the way, or you have to come out potentially to clean your screen.

And again, I mean, depending on where you are in the colon or how difficult it is, this might not be that difficult for you. But let's say this was a lesion in the right colon, which most of the ones you get referred, that's where they are. And potentially, it was very difficult to get there. Well, you're not thrilled about having to come out and go back in.

This takes that hassle away and makes this very easy to do. So you can keep a very clean field of vision. You can keep polyps out of the way. If you needed to exchange your scope. If you wanted to, let's say, exchange to a pediatric colonoscope because you want a better retroflexion. Or if you want to exchange to a gastroscope, if you're using the short overtube to get retroflexion, you can do that.

If you want to do endoscopic suturing to close your defect, all of a sudden, you can get the double-channel gastroscope or the endoscopic suturing device through the colon very easily and efficiently. And so here, I'm just showing the conduit function. Again, I was doing a resection. I had multiple polyp pieces in my way. And it just kept getting into my field of view.

So I'm just quickly removing a polyp piece through the overtube the DiLumen device. And this is basically in real time. I drop off my polyp piece here. And then we're going right back through and quickly getting back up to our therapeutic work zone.

So this was roughly 45 seconds to come out and go back in and get me back into position. And I'm now going to have a clean field of view. I'm not going to have polyp pieces in the way. And I can continue my work here.

And then with colon manipulation, again, you can think of this in a couple of ways. One, you can think of this in terms of maintaining stability. So when you keep your aft-balloon, which is your overtube balloon up, it's holding you in place. It's keeping you in a stable position. It's allowing this conduit function where you can come back out and go back in.

But you can also use this essentially, like a double-balloon intrascopy, where you use the overtube in a difficult colon where you're having a lot of looping issues to essentially pull yourself through the colon and reduce loops. Or if you're dealing with a lesion that's over a fold or over a flexure, you can, again, use this to straighten out the colon to get better exposure to those lesions.

In terms of the learning curve-- so again, we introduce this into our practice in the last year. We're probably 15 to 20 cases in at this point. In general, I would say that the learning curve to get quite proficient with the device is about 5 to 10 cases. So early on, it's just a matter of getting acquainted with the device.

Getting your staff acquainted with the device. Getting used to handling this bulky overtube device that you're not used to, which again, that's pretty quick to get used to. Again, especially, if you have some experience with doing balloon enteroscopy, which fortunately, I had experience with double-balloon enteroscopy going into this. So that made it a lot easier for me to get used to an overtube device and working these balloons.

Then there's an adjustment to the initial change in the procedural flow. And why do I say that? Well, yes, in general, we're saying that this device is going to make you more efficient. But of course, like with anything, you're not going to be efficient at the beginning.

And a lot of that has to do with at first, you're trying to figure out what cases you want to use a device for. So you're going to probably go in. You're going to find the lesion. You're going to identify the lesion. Decide if you want to use the device. If you want to use it, you're never come back out. And then you're going to reinsert with the device. So again, you're losing some time there.

And then if, in general, when you start using this device there's going to be some learning curve getting to the cecum. But what I found, I mean, most of us would again say we're getting to cecum in a couple of minutes. Unless it's a difficult colon.

What I found within, again, 5 to 10 cases you should be getting to the cecum with this device, unless it's is really difficult colon, in about 10 minutes potentially, less. So that's not bad, but initially, you are losing some time there. But again, we're making up for that with other aspects of the device.

Learning how to best lubricate the device. This can't be stated enough I think. This has been one of the things we've really had to get an understanding of. And it sounds very simple. But as you start to use this, you realize lubrication is key. And applying enough lubricant is key.

And again all jokes aside, don't be shy with the Astroglide. I mean, they tell you using a few teaspoons of Astroglide is key. And it really is because if you don't lubricate that overtube enough, you create a lot of friction in the overtube, the overtube starts kicking, the rods kink.

And all of a sudden, you're losing the functionality of the device. It's not performing as well. You're not able to remove the scope as easily. And then all these things we've just been talking about, you can no longer really do. And then you have to think about, do you end up using another device?

Understanding how much scope tip to advance beyond the overtube. So this takes some getting used to also. The generally recommend you keep about 15 mil-- start 15 centimeters of scope out to allow for proper tip deflection and manipulation. But again, this is kind of a feel thing. And you need to get used to how much scope outside of the overtube works for you.

And the last point, again, is kind of just goes back to understanding how much lubrication you need, how often you need to relubricate, which are generally saying every 30 minutes to keep it well lubricated so that you're not developing too much friction. Understanding the appropriate overtube to length.

So like I said, there are different lengths where we typically say for right colon, you're going to use the 168 or the 130, left colon you use the 103. Again, this might depend on your facility in terms of what's available to you. They might agree to get you the device. They might not agree to get you all of the devices. And so you have to work with what they'll give you.

And sometimes, like I said, we were working with the 130, and we were trying to use that sometimes in lesions in the left colon. And we found out that sometimes, that might be too much overtube. And the extra friction that you're getting is not necessarily advantageous.

Now it's like I said, we have a 103, and so we shouldn't have those issues. But that was another thing we had to kind of adjust to and realize we needed the different sizes to really maximize the utilization of the device. And then maximizing utilization of that fore-balloon, the one you advance out past the overtube create your therapeutic work zone.

I find that that was something I wasn't doing at the beginning. And I find that as I've moved along the learning curve, that's one of the things that I'm still trying to get used to is utilizing the fore-balloon, getting a good feel for that, creating that therapeutic work zone.

But again, I think if you started doing that early on-- which it's not imperative for EMR that you need that. But if you started that early on then again, by 5 to 10 cases, you might be quite proficient in that as well.

Lastly I'm just going to talk about building EMR practice in the community setting. And I'm going to kind of quickly touch on this. And then I'll leave it up to questions. But again, just a few points here. I think as you start your program, it's important to understand the capital and disposable equipment pieces that you need and the deficiencies that your unit has.

You can't take for granted that stuff is going to be there because the reality is if someone was not doing EMR before you, you probably have a basic biopsy forceps and snares and needles and some clips, and not much else. So you're going to have to make up the deficiencies.

And that's not always easy, because it depends, again, on your purchasing committee and hospital contracts and how that works and how efficiently that works. In terms of building up your practice, again, it's utilizing your hospital and your practice marketing resources. You can build your online portfolio either through your practice, if they have a good website.

You can use Doximity, you can use LinkedIn. There's ways to put videos of things you're doing on those various websites so that others can see essentially, what you're doing and your skill set. Don't take for granted educating your partners, especially if your group is big.

Make sure everybody knows what you do. Make sure they're aware of your technical skills. Don't take that for granted. You'd just be amazed sometimes how certain partners in the practice have no idea what others are doing. And that's a lot of potential business. Stuff could be getting sent to surgery that you have no idea about.

And then the reality is many times, if you're partners you're not looking to do advanced procedures, they find out someone's doing EMR, I mean, they're probably quickly looking to pass those procedures on. Because they want to stay in the endoscopy center where they can be efficient, do basic procedures. Not be infected by the loss of reimbursement.

They don't want to go to the hospital. They don't want to deal with the extra time that's required going there. And so just putting it out there that you do this can get you a lot of business. And then identifying your oncologist, your surgical oncologist, your colorectal surgeons. Colorectal surgeons do a lot of colonoscopies.

And you would think they wouldn't want to refer these to you, but a lot of my referring physicians are colorectal surgeons that have realized I can take these polyps out. And they usually will ask me to take a crack at something before they will take it to surgery. So you wouldn't think about that. But that's potentially a good source of referrals.

As you try to build your practice, it's important that your staff understands everything you need for your cases. It's important to identify an EMR team who's very skilled, who is motivated to learn what you're doing, and try to build this program with you. And you'll quickly find there's people that want to help you, there's people don't want to help you.

Learning to optimize time management. So again, I'm in a community practice. I'm in a production model. There's not a lot of sympathy for me doing complex cases and wanting to do advanced procedures and build an EMR program. They still expect me to hit RDU targets. They still expect me to do general work. They still expect me to take a quick call.

So you have to find a way to make this work in your schedule. In general, right now, I've been in this practice a couple years. I'm doing about 100 EMRs a year. We're scheduling about two a week. So that gives me, again-- and usually I do one a day. And my nurse manager likes me to put it first.

Some of you might want to put it more at noon or the end of the day so you can do some general procedures-- some revenue you know procedures first before you get to your complex EMR that might tie you up. It's important in community practice, again, if-- I came from academics-- we sometimes are not necessarily communicating with privates and referring.

But communication is key. They expect to hear from you it's a good opportunity not only to tell them about the patient but, again, to educate them what you're doing. And as you get more comfortable with your referring to give them some feedback. Are they hacking at the lesion too much, which is causing fibrosis that you have to deal with? Are they tattooing too close to the lesion?

You can give them feedback as you build up that rapport with them. And then, again, just this kind of ties into what I was just talking about that the barriers and the disadvantages of building this program and the community setting. Again, just there's limited time for complex procedures in a production-based practice.

There are hospital dependent procedures which automatically makes you more inefficient. It affects the overall flow of your day, the predictability of your schedule. You're still expected to do equal call responsibility with your partners. You're still getting consults that you're having to go to see.

You have to be prepared that there's going to be some patient satisfaction issues because you're going to be the person that is late to clinic, late to other procedures, canceling patients in clinic, last minute if things kind of go awry with a case. But in general, we're used to this with our advanced endoscopy practice.

But as you take on EMR cases, again, you just have to be prepared for this. Potentially, you have to be prepared that this could aggravate surgical colleagues because it's affecting their volume. So like I said, when I do 100 EMR cases, that's 100 cases that potentially would have gone to surgery that are no longer going to surgery.

So you have to compensate by sending these surgeons other things. Using your advanced practice to send them other types of cases through your EUS ERCP practice. Finally, again, there's just a lack of support for academic endeavor, so you try to-- there's very much a desire to do these cases. But also, to collect data and do research and demonstrate what you're doing.

But there's not a lot of support. You don't really have fellow support. You don't have really time for independent clinical research. Generally, you don't have a research nurse to help you. And again, as you become more successful, unfortunately, that's going to increase the complexity of the cases.

So people start to realize you can take out big polyps, they realize you're doing good work. Well, all of a sudden, they're going to send you more. They're going to send you larger polyps. They're going to send you cases where you have five large polyps to remove. They're going to send you unfavorable locations, periappendiceal, ileocecal valve. cases that clearly they aborted because of location.

And then there's the reimbursement piece. I mean, at the end of the day, I'm in an RVU model. This really only gives you six RVUs. You can use a modifier-- 22 modifier to try to get a little bit more. But you're really not making much from these procedures. The hospital's not making much. You're using a lot of supplies.

And so you really have to be strategic with how you use your supplies so that this is cost effective for the hospital when they're not trying to shut your program down. But again, you can promote your downstream revenue from bringing all these cases in. And also promote the downstream revenue from all the other cases that you're bringing to the advanced program in general.

So in conclusion, again, approximately 25% of colon resections are still performed for benign disease. Surgical morbidity and mortality, as well as cost for management of benign colon polyps is not insignificant. Colon EMR has a high technical success rate in expert hands. And recurrent disease can typically be managed endoscopically.

Appropriate lesion assessment is paramount. So looking at morphology, pit patterns, capillary patterns to determine if submucosal invasion might be present and referring those patients appropriately for possible ESD or surgical referral necessary. The DiLumen device facilitates technical success and efficiency of EMR by providing improved color manipulation the therapeutic works and a conduit function with, again, a very short learning curve to practice implementation.

And finally, building a successful EMR practice in the community setting is not always a popular option for your practice or your hospital system. And it can require a significant time commitment with unsatisfactory reimbursement. And I thank you for your time.

**ERIC
COOLIDGE:**

OK, thank you, Dr. Saitta, for that extremely informative presentation. I think we covered a lot of very pertinent information regarding polyp selection, as well as the DiLumen itself. And setting up a advanced endoscopy practice or complex polypectomy to me practice in a community hospital setting.

At this point, we would like to ask anybody that's interested to ask questions. Please, utilize the chat box, which is on the lower part of your screen. And these questions will come in and we can ask them as we go for the next 10 or so minutes.

Just to get started, Doctor Saitta, was got a couple of questions here. One of the things that you had mentioned-- or several of the benefits you had mentioned regarding DiLumen. Early on, what would you say was one of the first things that you saw that was very useful about DiLumen? And the first thing that made a difference in your eyes when you started using it?

**PATRICK
SAITTA:**

Yes, so again, I think that early on, like I said, I wasn't really using the fore-balloon. I was using the afternoon or the overtube balloon. And again, with that balloon is doing is it's giving you stability. So like I said, I get referred a lot of polyps in difficult locations where many times, the procedure might have been aborted for a lot of different reasons.

But sometimes you can clearly tell their border because of position. And so I quickly saw the benefit of the stability that the aft-balloon was creating for me. So it was creating that stability. So I was able to maintain stable position. I was not falling back. I had good scope control on the lesion.

And then the conduit function. I mean, being able to quickly remove my scope and get back to my therapeutic work zone has been key. Keeping a clean field of vision. Getting polyp pieces out of the way. If I want to suture at the end, getting a double channel suturing device back to my site to do my closure in an efficient manner.

I thought that those were some really key advantages early on that have really been beneficial for me.

ERIC COOLIDGE: OK. I'm kind of under the same area of a focus. I have a question here regarding some of my biggest problems are respiratory movement, especially in obese patients. Do you have this problem? And has DiLumen helped with it?

PATRICK SAITTA: So in terms of respiratory movement, I guess, we tend to do general anesthesia for our EMRs. I know not everybody does that. I do find that in general, that is helpful. At the same time, we don't always paralyze our patients.

And again, that's kind of up to you whether you want to do that. That can obviously affect respiratory movement. Most of us would elect not to paralyze them for these procedures. So in regards to DiLumen, it can help.

Again, I find when the colon is jumping and moving a lot from these respiratory movements, again, by creating that therapeutic work zone, it's reducing that movement. It's reducing spasm.

So again, we've all had those lesions where the colon is just very spastic. We're giving glucagon, it's not really helping. You're dealing with respiratory motion. And again, that's something where as I've started to use the fore-balloon more creating the therapeutic work zone and just creating the stable workspace, I find that it does eliminate those additional movements and spasms and such that are typically an interference.

ERIC COOLIDGE: OK, great. Next question has to do with underwater EMR. Have you been doing this for a long time? And do you find that it takes longer to do underwater EMR? Or is it just as efficient as doing a standard EMR?

PATRICK SAITTA: So underwater EMR, I mean, when you look at Ben [INAUDIBLE] study, I mean, he promoted it as a very efficient technique. And the idea was that he was looking to do that and increase en bloc resection rate. And I think in the study, his in block resection rate was over 50%.

I mean, again, he's very talented, but his resection time was around three minutes for these lesions. So it's definitely promoted as a technique that can very much improve efficiency. I have been using it over the last couple of years. It really depends on the lesion.

I mean, again, certain lesions are going to be easy to remove en bloc. Whether it's underwater. Whether you're doing it whether you're doing a lift and snare. And others are not. And some of this has to do with the shape. I mean, if you're talking about a nodular mixed pattern where you have certain flat areas, certain modular areas, or you're straddling folds, different situations like that, it's going to be hard no matter what you do to remove that lesion in one piece.

So it probably depends a lot on the morphology of the lesion in terms of getting a successful en bloc resection. And I can't say that I've found in my practice that doing it underwater necessarily increases the efficiency of that. I mean, yes, you're not having to lift. And it saves some time there.

But if you use these modern lifting agents like Orise and Eleview, I mean, the lift stays for the majority of your resection. So I mean, you have the time of the initial lift. But you're not really losing a lot of time after that.

So I haven't found that it really changes things that much. Like I said, I do tend to do some of this hybrid underwater technique where I find being underwater kind of mobilizes the mucosal tissue better. Allows me to grip certain areas of it better with the snare. So I've found that helpful. But I probably employ that much more than like a just standard underwater EMR technique with no lift.

ERIC COOLIDGE: OK, great. I've received several questions related to your referral base and building that. Basically, how did you build a successful referral base of general GI docs? And what has your relationship with your colorectal community been like? I know you covered this a little bit, but can you expand on it a little more?

PATRICK SAITTA: Sure. So in terms of my general GI docs, so when I came to this area, again, I said about two years ago, the hospital did a good job of marketing right when I got here. And so we had a big marketing team as part of the health system.

I mean, in general, my health system essentially-- it's the Saint Thomas health system, which were under the umbrella of Ascension. But we have nine hospitals in middle Tennessee. And with that, 90 something clinics.

So we have a big reach in terms of our system. But through that, we also have a big marketing team. And the marketing team went out and basically identified all the general GI practices in the area that might be worth talking to. Same thing with surgeons, colorectal surgeons.

And when I first started, before I got busy, we did a lot of introductions. I went to offices. I talked about what I did. And that's what got things started. And then it's like anything else. I mean, you're going to gradually start to get referrals. And a lot of it depends on what kind of success you have, how you communicate with your referring after the fact, which again, is very important in the private practice model that you're keeping these referrals informed.

And what I've also learned just sometimes, just the efficiency with which we can accommodate a procedure makes a big difference. So even if a referring doesn't necessarily prefer me or there's a couple of people in town that are offering EMR and they're not sure who to send to, sometimes it just comes down to who's available first.

And so making yourself available and trying to dominate things quickly, once they learn that you'll do that, that's sometimes huge. Because all they want to do is get their patients taken care of, have successful outcomes. And get it taken care of in a timely fashion. And actually, that's been one of the benefits compared to our big academic system here.

We have very talented GIs there. But getting into that system, getting referrals into that system-- or referrals in that system is very difficult. It takes a long time. People don't hear a lot after the procedures. So I take advantage of that and basically, use that to develop and deliver a much better service that's more efficient and with better communication.

So I found that really just kind of the marketing of the hospital really helped. In terms of my colorectal surgeons, like I said, it was kind of surprising that early on, they became some of my key referrals. They were getting referred GI-- I guess what would happen is general GIs that didn't even know me from very remote areas of Tennessee were still just referring to our colorectal surgeons these benign polyps.

And once they knew I was there and they knew what I did, they started sending some of these my way. And again, same thing. We were taking them out. We were finding that these lesions were benign. We realized we were doing a better service for the patient. They weren't getting unnecessary colectomies-- partial colectomies.

And so from there, I started getting more referring-- or more referrals from the colorectal surgeons. And then I'm feeding them as well. Not all of these lesions are going to be successfully removed. Some of them are going to be cancer. Some of what I find I get a lot of very complicated lesions that have been manipulated, have been hacked out a few times.

Sometimes it's too much fibrosis. I can't do anything with it. And I would obviously, then feed my surgeons. And we maintain that relationship and feed each other.

ERIC OK. So I guess the lesson here is don't fear the colorectal surgeon.

COOLIDGE:

PATRICK No. I mean, they've been a very important referral source for me.

SAITTA:

ERIC Great. Great. So we're at the top of the hour right now. And I think we have time for maybe one more question.

COOLIDGE: Question here. Can you discuss the procedural time savings you have experience with DiLumen with EMR procedures?

PATRICK OK. So again, early on, again, you're going to notice that it slows you down. Because, again, you're trying to figure out what lesions are appropriate. You're going to end up examining the colon a couple of times. You have to get used to the feel of the overtube. You have to get used to slower cecal intubation times.

SAITTA:

But I think the efficiency really comes in-- again, this might not be for every lesion. We talked about a lot of advantages. And some of those are positional advantages, maintaining stability, and things like that. But I mean, if you're talking about a lesion in the left colon, it's not very hard to get to and is in a fairly stable position. Sure, it's not going to make you more efficient there.

But when you talk about lesions in the right colon that are very difficult to get to or that are located across a flexure, it's very hard to maintain stable position, you're falling back a lot, you're dealing with, again, a lot of spasm. Maybe you're dealing with a dirty work field because they weren't completely clean. That's where maintaining stability-- maintaining a very stable therapeutic work zone, a very clean work zone can help.

And again, as you're going through these resections and you need to pull that scope out at different points, if you're in the right colon and it was tough to get there, depending on how long it took you to get there, each time you come out go back in-- which rounds he tried to limit as much as possible.

But sometimes you know that's five minutes here, five minutes there. That's where you really start to get time savings and efficiency-- savings with the device. Again, I'm not collecting all my data at the moment in terms of time.

And one reason it's been very challenging to answer that question and to really gauge the benefit in terms of time is like I said, as I've started to tackle lesions and had success, what I find is now it's very uncommon for me to get one large colon polyp. I mean, it's hardly ever that I get just one polyp to resect.

Whether it was advertised beforehand or not, I'm typically going in and I'm finding that there's much more to the story. And I'm finding several other polyps to remove. Not necessarily small polyps. And so what I've been finding lately is as I've been using a device, it coincides with the complexity of the referrals that I'm getting during that time span. So it's hard to gauge.

If I had more cases where it is just one polyp, it'd be easier to look at how it saved me time. But when you're dealing with multiple polyps, it's sometimes hard to appreciate that. But in general, I think it does make the procedure much more efficient.

I can't quantify time-wise how much it saves me right now. It really depends on the location of the lesion, how unstable your location is. Is it in the right side of the colon? And in general, how many times you might have to come out with your scope, reintroduced your scope. Because each time you do that, like I said, depending on how fast you are, be losing you know five minutes or more with each time you come out go back to it.

**ERIC
COOLIDGE:**

Sure. And as you mentioned, as your reputation increases, you're getting even the tougher polyps. The kind of train wrecks that are coming to you. So hopefully, DiLumen will help you in those situations as well. OK.

So I think we're a little bit past 8 o'clock now. And I'd like to thank Dr. Saitta for spending that time with us for the past hour and providing very informative and beneficial talk on these subjects. So with that, I'd like to wrap things up. And again, thank you for everybody that attended tonight. And have a good evening. Bye now.

[MUSIC PLAYING]