

**LAPAROSCOPIC ADJUSTABLE GASTRIC BANDING
TAMPA GENERAL HOSPITAL
TAMPA, FLORIDA
March 6, 2007**

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ANNOUNCER: Welcome to Tampa General Hospital. Over the next hour, you'll see a laparoscopic adjustable gastric band procedure for weight loss. The LAP-BAND system is the only minimally-invasive, adjustable, and reversible FDA-approved surgical obesity treatment. A saline-filled adjustable band is placed around the upper part of the stomach, creating a new, small stomach pouch. The food storage area in the stomach is reduced, giving the patient a feeling of fullness sooner and lasting longer. The inner surface of the band can be adjusted by adding or removing saline without further surgery. During the procedure you can email your questions to the OR by clicking the MDirectAccess button at any time. Now let's go live to the OR.

00:01:11

SCOTT F. GALLAGHER, MD, FACS: Good afternoon, and welcome to Tampa General Hospital in Tampa, Florida. My name is Scott Gallagher and I'm a surgeon here at Tampa General and an assistant professor of surgery at the University of South Florida College of Medicine and USF Health. Today we will be doing live surgery here at Tampa General. We're doing a laparoscopic adjustable gastric banding for obesity. My partner, Dr. Michel Murr, will be doing the surgery and will talk to you in just a moment.

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MICHEL M. MURR, MD, FACS: Hi, I'm Dr. Murr. I want to thank everybody for being here today. We got a head start for a few minutes before you started seeing what we're doing. I just want to take a minute and introduce my team. Dr. Shaw is behind the screen; you don't see him. He is the anesthesiologist who is administering anesthesia for our patient today. This is Dr. Rajesh Kuruba. He's a fully trained surgeon who is a fellow in bariatric surgery. He's here with Dr. Martinez, who's also a fully trained surgeon, to learn and hone their skills in obesity surgery and bariatric surgery. I have two critical helpers in the room: Mandy Vega, she's a surgical technician and she helps us lay out the instruments and get them ready for surgery and make sure patients' safety is paramount. Also is Christy, and Christy is a nurse who works with us on a daily basis. She makes sure patients come in, understand what the procedure is all about, and get the medications and the instruments ready with Mandy.

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Having started a minute, I want to take a second or two to introduce you and show you the field around. You can get a picture of the trocars that we placed in to get access into the abdominal cavity. And those are laid down here. The head is here, feet are here. Left side of the patient. Right side of the patient. We make small, tiny cuts ranging between about ¼ to ½-inch, through which we introduce trocars, which are conduits or tunnels to put our instruments in. Instead of the old days we used to make incisions that big, we now use smaller cuts to access into the abdominal cavity. Once we're in we inflate the stomach with CO₂ just to look like somebody's pregnant but to give us a chance to get in and get our instruments without hurting the abdominal organs.

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To give you an orientation from the inside look that we have, we have a camera that's in my left hand. And we're standing and looking towards the head of the patient. As you can see, you can see a beating heart here. This is the diaphragm, which is the muscle between the abdomen and the chest. The heart is here. Left is here. Right side of the patient is here. I'm going to pull back a little back and give you an overview. That's the liver, which is quite enlarged in somebody who's overweight because the same amount of fat that deposits underneath the skin is deposited in the liver itself. That's the gall bladder. Most importantly, I'm going to take you and show you where the stomach is hooked to the food pipe that comes from the chest. Now, we've done a little bit of work before you signed on, and I'm going to use this to point to you where things are. This is the liver, as we talked earlier. This side if the left, this side is the right. There's a bit of fat that I'm going to roll over and show you the connection between the food pipe, which is right here, to the rest of the stomach.

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Now, the stomach looks like it's stuck together, but it looks just like the palm of your hand, and it's actually the size of your hand. I'm going to pull it down to take a look at this. This is stomach, and I'm going to show you the stomach is the white one – is the white organ here between fat that has blood vessels in it. And you can imagine how large the stomach is. Of course, on TV it looks bigger than it is, but again, try the size of your -- the palm of your hand.

Now, what we're going to do is we're going to put the band here between the connection of the food pipe and the stomach. We're going to go behind the stomach and do a little bit of more work and get in behind it to be able to place the band. Now, I'm moving the fat away from the side of the stomach. We're going to operate from the right to the left side. With this instrument, I'm going to pull down to show you where the muscle between the chest and the abdomen is, and then I'm going to introduce another instrument.

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Notice that the view is a bit difficult sometimes because we are working underneath the liver, which sits and overshadows most of this part. Now, I'm going to take a second also to show you a couple more areas that you are interested in looking at. As we talked earlier, this is the food pipe right here. This is the muscle between the chest and the abdomen. This pulsating part here is arteries that run down to the abdomen. And this is here on the side – uh-huh – the vein that returns blood from the abdomen into the heart. So this is a critically important area, and we take great caution in going around this and dissecting in this area. Now, as you can tell, there is a large amount of adipose tissue, or fat, and we're going to do some dissection here between the food pipe and the attachments that are running behind it there.

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I'm going to reposition my instruments one more time to get a little bit more exposure. And reposition the camera here, and I'm going to hold it here. You're going to see it in a little different manner. Okay. And we're going to go from this area to the other area. Little bit of gentle dissection in this area. On the left of the screen, you see a lot of muscle. That's, again, the muscle between the chest and the abdomen. And on the right side of the screen you see a lot of fat. Just to give you an idea of what we're working with, this is an area that is about two inches in diameter. I'm going to introduce a suction device to pull out the body fluids that run down. For the occasional observer, when you see there's a lot of fluid or blood in there, this is about less than 1 or 2 cc's, but it gets in our way.

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And I'm going to pull back a little bit to show you how we're going to enter below the liver from this side here – uh-huh – and we're going to go in there slowly and gently just lift the liver up, get back to position, and once – in a millisecond or so, we're going to do some suction just to make sure we see as we go in. this is a critical portion, again, of a procedure that is done with a lot of...technical ease if it's done properly. Now, as we talked earlier, just

to give you an idea, again, the 1 or 2 cc's that you see of fluid here are about just a teaspoon or so. Now, Dr. Gallagher will pick up in a second or so just to talk to you a little bit as we go through this about the two different ways that the band is done. We're doing the newer technique that is associated with the least possible chance of slippage. Scott, you may want to talk a little bit about the previous ways that the band was put in and around the stomach, and they were associated with a lot of slippage.

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SCOTT F. GALLAGHER, MD, FACS: Yeah, the LAP-BAND has evolved. It's been available in this country for about five years, and technique has evolved to a new position around the – using the pars flaccida technique. They used to do a perigastric technique, and there were more complications. This band's been available outside of the United States for quite a while, including in Europe and Australia, but over the last five years in the United States, we've been able to accumulate enough long-term follow-up in patients that has established that the procedure is reliable and safe and actually can deliver durable weight loss. And when you have a LAP-BAND, you can expect to lose about 40 to 50% of your weight that's over your ideal body weight in the first year or two after the operation. Of course, there's significant variation, depending on the amount of lifestyle modification and exercise that you can do. The LAP-BAND, if you look at this picture – or the model here, this is basically an example of what Dr. Murr and Dr. Kuruba are doing there.

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And you've got the esophagus here, or the food pipe. This is the actual band that goes around the stomach. This is the stomach. And then the band is connected to this tubing that goes to a little port that's in the skin, and Dr. Murr will show you that later. The band has a balloon on the inside -- and you can't really see it, I'll show you a picture of it later – and by inflating this port down here, puts fluid in here and squeezes on the stomach and restricts the amount of food that can pass from the esophagus into the farther stomach – or distal stomach. I'm going to toss it back to Dr. Murr. He's ready to show you some more.

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MICHEL M. MURR, MD, FACS: All right. As we were talking earlier, we're coming from the right side behind the stomach, behind the food pipe, and going to the left side of the abdomen. These are the two instruments we use to get in. And we're coming across to this side behind the stomach. We take great care so we don't injure any structures behind the stomach or the esophagus. And as you know, it's gentle dissection under direct vision, and we go slowly and gently behind this area. As we talked earlier, this is a critically important area, and most of this part is done by feel and by a lot of experience. Gently as we go across from one side to the other, we're just about done with what we call blunt dissection behind the stomach and the esophagus, and we're going to come from the other side now. This instrument that we're using has a retractable finger that bends just like a finger to come across that tube in the back.

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As we take a minute to introduce our other instrument here, I'm going to pull this amount of fat down here on the left side of the stomach. We show you what we're going to go. And we want to exit in the area that's in the middle of the screen. I'm going to point to that area and using another instrument here and place it right here. So now, we're going to come from this to that side using this instrument that we usually call a finger because it has a retractable head. I'll show you this instrument as we pull out, but since we're positioned nicely here, we're going to go ahead and start behind the tip and see where we're going to come out on that side. Now, we've aimed this to come out right into that area. And as you can see, every minute or so we reposition our instruments to see. And as you can tell, we're merging with the tip of that instrument on the left side of the stomach.

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This is the instrument we passed behind the stomach. I'm moving it from up to down. We passed it, we see it's perfectly positioned here. We're going to come in a second or two and

then put the band in. And this lies in a very satisfactory position and situation. Now, I'm going to pull the camera just a little bit back here to show you what we're going to do next. We're going to put the band from here to here and then put the stomach on top of it and secure it. I'm going to turn you to Dr. Gallagher in about a minute – in about a second or so to talk to you about who is eligible for – who is a candidate for bariatric surgery and how to go about it.

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SCOTT F. GALLAGHER, MD, FACS: Well, this patient is a 46-year-old nurse who's been overweight for about 10 years. She's got multiple medical problems, including hypertension, reflux, and joint disease. Her blood pressure is elevated enough that she requires multiple medications, as are most patients who have hypertension associated with obesity. The process is not a short process. It takes approximately three to six months to get through. You're evaluated by a multidisciplinary team. The – you'll introduce multiple physicians, part of our Allied Health team along the way. The – you'll initially be introduced to our bariatrician, who will evaluate for medical co-morbidities and whether you need to be introduced to any of our specialists, such as a pulmonologist if you have sleep apnea, or a cardiologist if you have any cardiac disease or elevated cholesterol. You may be introduced to our psychiatrist or psychologist to evaluate for any other underlying depression, eating disorders, so on and so forth.

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In addition to that, we have nurse practitioner and physician assistants. We have multiple surgeons in our group. We have a dedicated OR staff here that you'll meet while -- during your time in the hospital. You'll have a dedicated Allied Healthcare team that you'll meet while you're in the hospital. Postoperatively you'll meet our dietitian, and then we have outpatient dietitians that you'll be able to talk to both before the operation and after the operation to educate you about appropriate dietary modifications to maximize your success with the LAP-BAND. In addition to that, exercise and other lifestyle modification is a very important part of using the LAP-BAND as a tool to help you lose weight. You know, obese patients in this country are significant. Twenty-five percent of adults are overweight or obese; twenty percent of children are overweight or obese; and an equivalent – equals about 15 million adults in the United States.

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Obesity is now the second most preventable cause of death. Approximately 300,000 people die annually from obesity, and it costs the United States' healthcare system about \$120 billion annually to take care of obesity and its co-morbid conditions. Obviously, patients who are obese are out of work a little bit longer and have decreased productivity. When I talk about obesity, we define obesity as in different categories, and so if your BMI is less than 25, then that's a normal weight, between 18 and 25. BMI is a ratio, or calculation, of figuring out your weight in kilograms divided by your height, and it's a reflection of your body mass. Once your BMI is over 40, you're a candidate for surgery, and if your BMI is greater than 35 and you have co-morbid medical problems, you're a candidate for surgery. I'm going to toss this back to Dr. Murr so he can show you where he's at right now.

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MICHEL M. MURR, MD, FACS: Well, thank you very much. Just to follow on what you were saying a minute ago, it is imperative for the success of this operation and those interventions that we put everybody through and interdisciplinary and comprehensive evaluation. This is not to put anybody through any hoops but to get everybody and to make sure everybody is emotionally and physically and medically ready for the procedure. I'm going to pick up where we left a minute ago. We still have the instrument that we call the finger positioned and right here on top of the stomach, as you can see it moving in there. This is one of my operator's hands, and we're going to show you what the band looks like. This is the leading edge of the tube. And I'm going to take you on a dizzying trip as I pull out and look and tell you we've introduced this as Dr. Gallagher was talking. And this is the

band inside the abdomen. Now, this is just about 2 to 3 cm in diameter, but it occupies the full screen. And we're going to thread this into the instrument here and then pull it and position it in place.

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Now, I want to tell you something that my son asked me at one time. He says, "How do you know your way inside the abdomen?" And my answer was very clear, just like the Mayo [?] brothers, right is the liver, left is the spleen, stomach is in the middle. So there is no labels in here, but as you can tell, we could navigate this with moderate ease. I'm introducing the band into the slit that's made for it in the finger. And we're going to straighten out that instrument just a little bit as we go, and then we are going to pull it behind it. You're going to look like we're losing some view of where it goes here, but as we pull slowly, we're encircling the stomach. I'm going to reposition my camera. I'm going to take you out to look in here. I'm going to position my operator instrument right here, and I'm going to reshow you, or reintroduce, the finger right here.

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As we straighten out that instrument all the way, straighten out all the instrument all the way. We're going to pull out slowly and you're going to see the band that's coming up with this. So we started at this point, we came out this point, and by the use of this instrument. I'm going to ask my Dr. Kuruba, my helper, to bend the finger just to show you what it looks like when we used it. And I move my camera a little bit to the left side of the patient. So that's the instrument we used when we went behind the stomach. It looks huge on the screen, but truly, this is about an inch or so. Now, as we pull out of the stomach, I still have the band in my hand. I'm going to introduce another instrument in here to thread the band around the stomach and pull it back. Now remember, we're going to come behind the stomach and pull slowly. We can tell our way around fat because of the anatomic orientation that we've talked to you a little bit about.

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I'm going to reposition and pull the liver out of the way just a little bit, and then come and grab this. As you can tell, we are working in tandem to get this through. As you can see, that leading edge, as we look up at the camera, is coming behind the stomach. The tube is made of very inert material and silicon, so it's easily flexible inside the abdomen. And we're going to push this through and come from this side. As you noticed, this little conical structure is coming up now. I'm going to grab it with this instrument here, position it for a second, we're going to look here down where we made that tunnel early on, and with this instrument I'm going to show you how we're going to deliver this just like delivering a baby. You pull slowly and gently from one side to the other, from this side to the other side, and pull up slowly, and then deliver just a little bit. Uh-hmm. And then we're going to turn into this side. Again, loose attachments behind the stomach is holding us in there.

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This is, as we talked earlier, a small slit opening here. And we take great care of not making it any bigger so the band doesn't slip in and out. And we've delivered the shoulder of the band. We are set to go. And next we are going to buckle the band and put it in place. Going to use the left hand and the right hand here. These instruments look like they're crushing, but they're not. They're specially made instruments, so they grab without crushing tissues, so we avoid any injury to the stomach or the band itself. We've secured the band around the stomach, and I'm going to go with you on a small tour to go find that tip of the instrument that's - excuse me, the tip of the band, the leading edge of the tube, to put it back into there and buckle it just like you have a belt.

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And we come from one side to the other. We're coming from the right to the left of the abdomen. I'm going to pull slowly here and until we buckle this. Now, you know you can email your questions and Dr. Gallagher will pick them up as we go. But as we talked earlier, we have introduced laparoscopic bariatric surgery in Tampa Bay since 1998. We're leaders

in this and have got a national recognition. We are the Center of Excellence for Medicare and the American Society of Bariatric Surgery, and we were the first in the nation to get a disease-specific accreditation for bariatric surgery through JCAHO. Now, this is an important designation because it tells you and us that those designations are given to centers and doctors who go beyond the minimum requirement to ensure quality assurance and patient satisfaction.

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Now, I got the band here. We're almost ready to buckle it in place. This is the last one and she'll fit. And both me and Dr. Kuruba are gently pulling, and we're going to deliver it slowly through this. This is a mechanism for it to lock in place and not come out undone. And as we pull slowly, we're going to see that comes out right in spot right there. Make sure there is none of the fat of the stomach is caught into this. We're going to grab the band here with the other instrument and bring it down. And we're going to take a minute or two to answer your questions with Dr. Gallagher.

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SCOTT F. GALLAGHER, MD, FACS: Well, thank you for emailing your questions, and I'll remind you if you have any to keep sending them in at MDirectAccess. The first question I have here is, "I have sleep apnea and was told that this type of surgery would be covered by my insurance, United Healthcare. Is that true?" Certainly that is individualized by your healthcare plan and your insurance policy. We do a lot of patients with obstructive sleep apnea and that's one of the co-morbid health conditions that is associated with getting approval, so that's individualized based on your plan, and we can deal with that as you move through the process. The second question after that is, "Is surgery any different for someone with sleep apnea?" And no, not at all, except that you have to use your CPAP before and after the operation until your sleep apnea gets better.

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MICHEL M. MURR, MD, FACS: You can talk a little bit, Scott, about this. I know we have the largest series in the world about the impact of surgically induced weight loss, bariatric surgery, and the resolution of obstructive sleep apnea. There is no cure for obstructive sleep apnea besides weight loss, and we proved it to the scientific community that this kind of surgery with a LAP-BAND or gastric bypass are the best modality to treat sleep apnea and resolve it completely.

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SCOTT F. GALLAGHER, MD, FACS: Yeah, certainly the reason why we chose to undertake laparoscopic adjustable banding was to study it and be academic about it, and one of the – We look at the resolution of co-morbidities as well as outcomes after the surgery, and one of the things that we look at is sleep apnea. Going back as far as 8 to 10 years ago, we started getting sleep studies before and after the operation to tell when patients had lost enough weight to stop their CPAP. And now we have, as Dr. Murr mentioned, the largest series in the world that's going to be published, or is being currently published in *Surgery*, describing resolution of sleep apnea after gastric bypass. Back in 1995, the initial – another article that was published in *Annals of Surgery* was titled, "Is Gastric Bypass a Cure for Diabetes?" and nobody ever would have thought about that as an operation possibly taking care of medical co-morbidities, and now it's routine and commonplace that the surgery, whether a gastric bypass or a LAP-BAND, takes care of medical co-morbidities. Dr. Murr is ready to talk to you now and show you stitching the stomach.

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MICHEL M. MURR, MD, FACS: I'm going to show you a very interesting and rather revolutionary device. You think surgeons did not think about this years ago. But in order for us to work inside the abdomen, we need the ability to make stitches and sutures in there, and this device is great. As you can tell, there's a needle in here and there's a thread, and we're going to show you how it works before we really make it work. The needle moves from one arm and we toggle it to the other arm. As we go from one place to the other we

put in stitches and put things together. What we will do now, as we talked earlier, is secure the band in place so it doesn't move around a lot and the stomach doesn't prolapse, or you know, get stuck inside. What happens, usually the band – the stomach can go underneath the band and get stuck like this, so to avoid that and prevent that from happening – because it makes people very ill – we are going to suture this part of the stomach and put it here to secure the band in place. And as we go, we'll show you slowly but surely how this is done and take it on this part of the stomach, which is called the fundus.

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We're going to get as big bite of the stomach as we can with the suture, toggle it to the other side, and come in – and come in to the other side, and then secure the band in place. Now, as you can see, those blood vessels right here – this is the stomach – this is what we call the fat pad, and this is what we remove from the anterior portion of the stomach and the esophagus for us to be able to put the band in place. As we negotiate the stomach and the fundus of the stomach, we're going to place our first suture here. Uh-huh. Trying to get a better grasp of the stomach. Uh-huh. And put a knot in there. Now, when we do this, part of the tying is outside the abdomen. Now, notice how we can pull it outside. These are two threads. Stomach is being approximated. And we're going to throw knots on the outside and slide them all the way down to the inside and secure the stomach and the band in place. Now, as Dr. Kuruba is helping me with this, we're pushing down the instrument all the way down and securing the knots in place.

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SCOTT F. GALLAGHER, MD, FACS: There's a question, Dr. Murr, about all the fat that's around the stomach and why you don't remove that fat during the procedure.. Would you like to talk about that?

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MICHEL M. MURR, MD, FACS: Yeah, absolutely. Now, the amount of fat that's present out there is – is a combination of two types of fat. Most of this is around the stomach and deposited in visceral fat. By the way, this is the most dangerous fat because it makes people ill with obesity with hypertension and their cholesterol shoots up and they have diabetes. We don't remove that part of the fat because it makes very little difference in the long run regarding the weight loss and resolution of obesity after surgery. Now, as you can tell, we moved a bit around for us to be able to go in, but we don't take it out. We're going to cut this suture and move on to put a couple more stitches. And I'll demonstrate to you the kinds of fat that we were talking about. This fat is adherent and adjacent to the stomach. We moved a portion of it out. There's fat in the liver; of course, you cannot take it out. You see these yellow spots? And there's free fat floating around the stomach.

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And this is connecting to the stomach, and it serves a purpose because a lot of blood vessels and nerves run through it. So we don't remove this routinely. This would weigh maybe 5 to 10 pounds if you take everything out, and it doesn't get us much in the long run. The purpose of this operation, of course, is to limit oral intake and caloric intake and induce weight loss. We're going to go in with another suture to get this band positioned and perfectly placed. And we use the same technique, just grab a portion of that stomach, roll the instrument down, and then get ready for the next placement of the suture on the other side. We're going to sneak in between these blood vessels and position it properly. And pull the thread in. You just slide it in like – you know, like you're cutting through mustard. And position this in. Now, the – this portion of the stomach is critical for us to use because that's called the fundus. It has those receptive properties. When we eat a large meal it gets taut in this portion of the stomach, so we put the band on top of that before the food gets into the storage area to prevent intake of large amounts of food. I'm sliding the second knot, and I think Dr. Gallagher had some questions coming through email.

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SCOTT F. GALLAGHER, MD, FACS: Another question that has come in is asking, "Are there different types of bands that you can use?" And so there are several types that are available. Basically, they vary by size, and we choose the appropriate size to fit around your stomach, as the one you can see here. Another question that's come up is, "My primary care doctor suggested that I have LAP-BAND surgery. My insurance company states that I have a multidisciplinary team. I can't find a doctor in the area where I live. Would it be in my best interests to have my doctor refer me to Dr. Murr's team?"

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MICHEL M. MURR, MD, FACS: You know, that's music to our ears. We'd be happy to help. We have to be sure that, you know, patients who come in through the door have a primary care who buys in to this because some of the long-term follow-up is going to be done at the primary care's office, and we want to make sure all the doctors are educated about the effects of weight loss and the long-term follow-up for this. You can find most of this information, as we mentioned as we were talking earlier, on our website through tgh.org, or you can go directly to our website just dedicated for patients, and it's zBMI.com. It has all the information about who's eligible or not, and the kinds of workup and assessments that we do. We're back into the abdomen, as I can see. Again, we placed one suture. This is the second one. This is the third and the last stitches that will secure the band in place. And we're going to use it to put it into the left side of the stomach. It's a bit of a critical angle that we are working worth. And we're going to come in right into this, take a portion of the stomach, a little bit of fat here is not the critical portion, the importance of this is to get the stomach secure to that stomach so no slippage or prolapse of the stomach or the band occurs at a later time.

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SCOTT F. GALLAGHER, MD, FACS: There's another question about the LAP-BAND and when you eat, does food back up in the – from the placement of the band? And so certainly, you know, without the band inflated, the food should not back up in the esophagus. One of the signs that the band may be adjusted too tight is in fact that you have reflux or heartburn, and so if that happens you want to let your doctor know. But with the band in place and not inflated, you should not have reflux or food backing up in the esophagus.

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MICHEL M. MURR, MD, FACS: You know, this is a trivia question. Can you identify the type of suture material we're using and its original color? Now, very few people know this, this suture is made of silk, and the natural color of silk is white or transparent. It's dyed black so we can see it. This suture is durable and it doesn't get dissolved by the body. In a couple days from now, there will be a covering that covers this silk and covers the band itself. Now, we're going to inspect and look around the band to make sure that we are in perfect position, but before we go I just want to give you an idea of what we do here. This is a scissors, and it looks like it's a huge scissors, but the length of this and the span of the blades is less than half of an inch. We're going to take a look. I'm going to introduce my other instrument from the right side and take a look. Now, the band sits in a satisfactory position. There is very little movement of stomach around it. We're going to lift up the liver and take a look. This is – looks like it's perfectly placed. The band is here, it's movable.

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We're going to put it on the side and proceed with the rest of our procedure. Now, since we put the band around the stomach, we're going to take a look here to make sure everything is okay. There's no bleeding that we can speak of. The little film of red fluid is, again, few cc's. I'm going to give you a rare view of the spleen as it's tucked in the bag on the left side. Liver is this larger organ that sits here. Stomach is here. The band is here. And we're going to pull out our instruments and then connect the band tubing to the port, as Dr. Gallagher was showing you a little bit earlier. Now we're going to change position of the camera to the other side so we can show you as we pull out the band out of the stomach. Remember – no, excuse me – as you can tell, these movements here and handling the organs leaves very

little scar tissue, and that's the advantage of laparoscopic surgery. It leaves minimal scar tissue and it's minimal access into the abdomen.

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And you may be a bit dizzied up now because I'm going to move my camera from one side to the other and reintroduce it in here. As you can tell, we're going inside the abdomen. It's a little bit of an oblique view. Now we're looking from the right side to the left side of the abdomen. We're on top of the liver. Spleen is tucked in into that area here. Heart is now on this side. Liver. We're looking from right to the left. And the band is here. We're going to pull the band out through one of our trocars. Now, to give you another idea of how it looks looking inside-out, that's the abdominal wall, that's the stomach, and these are the tubes we use to put our instruments in. I'm going to grab the end of the band here, pull it out through this trocar, and looking up here at myself going backwards, we're going to deliver the band tubing through the trocar and outside through the skin so we can complete the last portion of the operation.

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SCOTT F. GALLAGHER, MD, FACS: Dr. Murr, there's a question about whether or not the LAP-BAND ever has to be replaced over time as people lose weight.

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MICHEL M. MURR, MD, FACS: You know, that's a very important question, and you hear it from everybody that it's – it's reversible. The reversible part is you can take it out; the body has a minimal reaction to the band. But it is intuitive that everybody – and imperative that everybody understands that if we were to take the band out, most of the weight would be regained. Now, many people would be able to do this and not regain the weight, but we've learned over the last 25 years whenever we reverse a bariatric procedure, since the signals that our body are made for to add weight will come back and weight gain will be there. Similar, as we talked earlier, to somebody who has hypertension and blood pressure problems. They take a pill, their blood pressure gets better, you just don't pull the pill away because that's the thing that's keeping the blood pressure down. It's a chronic treatment for a very chronic disease. I'm going to take you back inside the abdomen again through the cameras and show you how we're going to pull – Now, we're pulling out through the skin. We're making sure there is no bleeding there, and we're going to come up from this side here, too. From above and around the liver.

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Now, these are awkward views for you compared to earlier because we've changed the way we look into there from a different angle. I'm going to go back and look into the -- this side of the liver. Right. And see when I'm pulling out the last trocar here. And now we go back in here. I know I am getting everybody dizzy, but that's the challenge you're facing. We're going to pull this trocar out here. Now, this hard plastic tube that's there comes out through the skin. And the band tubing is still suspending on the inside. I'm going to place my finger in, and I'll show you, this is where the skin comes out. The tube runs in all the way into the stomach. And we're going to leave it in there, of course. And now we're going to go back and look on the outside in about 10 seconds from now when we pull the last trocar in. This is one of the advantages of using cutting-edge technology because we have expandable trocars. This, as it pulls out through the skin and through the muscle, the trocar will collapse, and the muscle will heal without having to put a stitch in it.

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SCOTT F. GALLAGHER, MD, FACS: Can the patients feel the LAP-BAND or the port when it's in?

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MICHEL M. MURR, MD, FACS: Of course, you know, on the inside we're not sensate, we don't feel anything on the inside, but we – on the outside, we can feel the position of the port. And we usually ask patients to show us where the ports are by pointing to the side. The orientation on this is the heart and the chest is here, legs are here, this is right and this

is left-hand side. This is the tube that we connected to the band on the inside. We're going to cut it, we're going to connect it to one of the ports in a – excuse me, to the port of the band in about a minute or two. We're going to divide it right here and we're going to slide it in. While we're trying to thread this in, let's answer some of the emails that came to us, Dr. Gallagher.

00:41:13

SCOTT F. GALLAGHER, MD, FACS: There's a lot of questions about hiatal hernias regarding LAP-BANDS and is that a contraindication to having a LAP-BAND. And for the most part, at least in my experience, that has not been a contraindication for most hiatal hernias. What do you think?

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MICHEL M. MURR, MD, FACS: Well, you're absolutely correct. Now, hiatal hernias are a common condition that everybody who's overweight is told that they have a hiatal hernia. We've done more than about 1,200 procedures on patients whose weight and BMI is greater than 40 and we figured we found about 2 or 3 hiatal hernias that were not picked up before. So there is a little bit of weakness in and around the hiatus. This is the area, as we showed you earlier, where we put the band and it's the connection between the chest and the abdominal cavity. So – and-and in broad terms, hiatal hernia are not as common as everybody thinks in obese patients. Small hiatal hernias we can deal with without any difficulty, but large hiatal hernias, which means a portion of the stomach is up in the chest – and I'm not talking a little bit, I'm talking about, you know, half of the stomach -- if you put the band around there, the band will migrate into the chest and it'll be a problem. Now, to avoid that and to counteract that, we fixed the hiatal hernias ahead of time. But for the most part, that is a difficult procedure to do at the same time as we are putting the band in.

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As you notice, when we put the band in, we put it in a position that it doesn't slide in and out, so fixing the hernia would make it harder for the band to stay in one position and it may slide. So we caution patients a lot about this. And as you can tell here, this is – my finger is about 1-1/2 cm or so -- these are the cuts we made, this is the tubing that's connecting to the port, that's what we will put underneath the skin. And we will access it here with a needle to adjust and inflate the band. And I'm going to show you one way to do this is we have special needles that are beveled, meaning they don't core out as we go in. We go into this silicon diaphragm of the band and we inject as much as we need to to inflate the band in around the esophagus. We're not going to do this today. The band sits in a perfect position. It is adequately restricting the food pipe. We will do this in the office within four to six weeks. And we adjust the band just enough for everybody to be able to drink food but restrict how much they can eat after surgery. Dr. Gallagher?

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SCOTT F. GALLAGHER, MD, FACS: So just to refresh everyone and kind of give a demonstration of what everything looks like, this is the band around the stomach, which is at the top of the stomach just below the food pipe. It's buckled in place. It's got a balloon on the inside that inflates through this tubing and when you access this port with the Huber needles. So this is what's underneath the skin. It's much like a metaport that someone might have put in their vein; this one happens to be connected to the tubing. When you put saline in there, the fluid goes through this tubing connected right here, just like what Dr. Murr just did, into the inside of the LAP-BAND. And as you can see on the screen, you can visualize that there's a balloon, a silicone balloon that's on the inside of there, and that's what holds the fluid for the LAP-BAND. And by inflating that balloon, it increases the amount of restriction that people have to food going through, and that's how we adjust the band so that it's just right to allow you to be full from eating smaller portions, and then therefore limit your calories and the amount of food that you eat.

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MICHEL M. MURR, MD, FACS: Yeah, you know, it's – it's important also to point out that we do this in the office with a local anesthetic; just a little injection in the skin numbs the skin up. We put the needle in, find a port, and adjust it. So it's not a painful procedure. On average, we adjust it at six weeks after surgery and then every six to eight weeks as needed. Won't you think about two or three adjustments a year are enough for most patients?

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SCOTT F. GALLAGHER, MD, FACS: Yeah, I think so. You know, it's important that the patients are – that stay in touch with you and that they're well-educated, both from the physician, but from the dietitian, and that they are attuned to using the LAP-BAND to limit the amount of food that they can take in. And so, yeah, I mean, you know, most of the time we see people two or three times in the first year after their operation. Sometimes their first adjustment is appropriate, sometimes not, and sometimes we have to see them again. The important thing is that we're always available for them. And it's not just me or Dr. Murr, but we've got a multidisciplinary team with a bunch of surgeons, coordinators, nurse practitioners, dietitians both in the hospital and out of the hospital that help take care of our patients.

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MICHEL M. MURR, MD, FACS: That's fantastic. Now, I bet you had questions regarding putting bands in previous bariatric procedures. And you know, it's critical to talk about this because a lot of patients who had surgeries many years ago, some of the operations don't work very well and they come and asking us, "Can you put a band on top of what I have?" You know what? That's a tough – that's a tough question. And the way we look at it is, "Come in, let's take a look, let's get x-rays, let's – I'll see what the operation that you had before, and dive into and find out the reasons why this operation hasn't worked for you before we jump in into putting bands or cutting more tissues or relining the stomach."

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SCOTT F. GALLAGHER, MD, FACS: Yeah, that's interesting. You know, having been here for almost a decade, certainly we've become the most established bariatric practice on the gulf coast. We're done more than 1,200 bariatric procedures, and about 10% of them were actually revisional procedures, so we have people from all over the southeastern United States who come here with either failed weight loss or questions about their bypass, whether they've moved here or there just isn't a bariatric surgeon local that can take care of them. And so each patient's care is certainly individualized. I think that's an important thing to note, and you know, we take into a lot of things a lot of factors into account, including what prior operations they had done, and review operative reports, x-rays, upper GI's, and so on and so forth.

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MICHEL M. MURR, MD, FACS: The last view -- I wanted to take a look at it across the stomach. This may look a little different to you, but it's relatively painless. We had to enlarge the incision so we can put the band underneath the skin, which just slides in there, and it goes in and gets tucked in behind the skin and the subcutaneous tissue. So now we're going to close the skin, we're going to secure the band in place, we're going to close the skin using sutures. And this would be the area in six weeks from now when we introduce our needle and access the port of the band. All right. Dr. Gallagher?

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SCOTT F. GALLAGHER, MD, FACS: There's a question from Pennsylvania that wants to know about the LAP-BAND being an experimental mode of weight loss. And certainly initially, when the band first came out in this country, there was not very much data. Now that we've got about five years of data in this country, we've been able to show in the scientific literature that the band has been proven to allow patients to lose weight. Again, weight loss with the LAP-BAND is only going to approach the amount of weight loss you get after a gastric bypass.

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MICHEL M. MURR, MD, FACS: Well, you know, this term "experimental" is not – is not fair to anything that we do or to the band or to the bypass. Those are names and conditions, or classifications, that are made by insurance companies for reasons we just don't understand. But you are – you appropriately pointed out this has been out for about five years. Long-term data which tells us about the durability and the sustainability of weight loss is coming in. And as a group here, we feel very comfortable and confident recommending these procedures to patients with morbid obesity.

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SCOTT F. GALLAGHER, MD, FACS: Absolutely. There's a question about how you choose gastric bypass over LAP-BAND. And certainly in my experience, it's been a lot of patient preference. If a patient comes in and they want a gastric bypass, I do a gastric bypass. If they come in and they want a LAP-BAND, then unless there's a reason not to do a LAP-BAND, then the patient has a choice in their mode of care and tool of choice to help them lose weight. What do you think about that?

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MICHEL M. MURR, MD, FACS: Absolutely. Now, we all read from the same page when it comes to this. As you know, patients come in, they're well educated, they've looked this up, they thought about the rationale for their operation and they thought about the best tool for them. We want the patient buying in to this and making sure this is what they want to do and the way they want to change their life forever. Now, it's hard to tell, but most people come in with the band, they've already made up their mind, they looked into it, they liked the least – the less-invasive – no rerouting of the stomach or the intestines, and they want to put themselves into control – in control of their weight loss and adjust their weight. Now, in certain situations we weigh in with decisions to go from a band to a bypass or a bypass to a band. Those are usually at the extremes of age, like at adolescence or older people who need to lose maybe 30, 40 pounds just to get their cholesterol under control and to get their joints better. So if they – if they have a lot of risk from bad heart disease or lung disease, we tell them, you know, maybe the band would be a better option for you because it's less risky and it would get you enough weight loss to get your health better. The goal of what we do is not to make people lose weight, only the goal is to get their life and their health better.

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SCOTT F. GALLAGHER, MD, FACS: There's a question about weight loss in adolescents or children.

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MICHEL M. MURR, MD, FACS: Of course.

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SCOTT F. GALLAGHER, MD, FACS: Would you like to make a comment?

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MICHEL M. MURR, MD, FACS: You know, the whole country is talking about this, and it is a critical thing that we look at it in a way that childhood and adolescent obesity is the biggest silent epidemic. And the – most of the adolescents may grow into obese adults, therefore doubling the amount of the number of obese patients with clinically significant obesity 10, 15, 20 years from now. Now, we're working very hard at finding solutions for everybody to lose weight without an operation, but as you can tell, some people come in and they are ill with obesity, meaning they come in at the end of their rope. Imagine somebody who's 350 pounds and has been through high school, can't get to P.E. class, can't get to school sometimes, have no social life, academic life – or, I mean, academic performance suffers because they sleep in the class because of sleep apnea. And this is where surgical intervention, radical surgical intervention, is needed to get patients to a better life and to a better health. So we endorse it, we are actively looking into starting our program here, as you can tell.

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SCOTT F. GALLAGHER, MD, FACS: There's a question about the process here. How long after a patient sees us might they expect to be able to get their bariatric procedure? And certainly there's multiple factors that are involved in that, but for the most part, within a couple of weeks a patient gets an authorization for surgery and then we schedule the patient for an operation for about a week or two. Has that been your experience?

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MICHEL M. MURR, MD, FACS: Yeah, absolutely. Now, if you were to take the – the most expeditious route, if somebody calls the office today, says, "I'm interested in this," we say, "Let's get things ready for you." We'll send you an information package, we'll talk to your primary care doctor, verify your insurance benefits, and come and see us in an orientation or patient educational seminar. And this is where we sit down with everybody. As you can tell, we give them a lot of information about obesity, about the options of weight loss, and the rationale for obesity surgery. Based on that, we set them up to see Dr. Coach and her interdisciplinary bariatric team. That evaluation takes about four hours, but they see a dietitian, a psychologist, and a bariatrician who's an internist specializing in obesity. Now, if their – the medical conditions like sleep apnea, hypertension, and diabetes are all controlled, then we move forward to come in and see us in our surgical clinic.

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The biggest stumble to this is two things. One, insurance companies are requiring a prolonged, long history of weight loss, and it has to be supervised and it has to be documented. The shortest is six months; the longest has been about 12 to 18 months. So that is one of the most difficult stumbling blocks, but we help patients go through this through our clinics. And the second portion of – well, the second hurdle is to get the actual insurance authorization. And this is difficult because many insurances don't want to pay for this. They've changed the benefits and they've stopped paying for bariatric surgery because they don't see the benefit to their clients. Now, we of course disagree with that, and you know, we talk a lot to patients about how to go about this. One, you've got to verify with your insurance that this is a covered benefit. If not, talk to your human resource manager, get it sorted out through your company. If it is, we've got to meet all the requirements by insurance companies. And we respect that, just don't agree with it scientifically.

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And at the end of the day, a lot of people that come in and say, "I want to pay for this. Can you bypass all these requirements?" And you know, that's okay, but our philosophy and our stand has been from day one is, "Why don't you keep the money? Let's work through these hurdles, save that money for yourself, enjoy it, and we'll do it through insurance authorization and insurance approval." Critical to this is the long-term. You know, we've have a few people come in who had operations done somewhere else, not approved by their insurance – they paid cash for it – and they came in with a bowel blockage. Nothing – no fault on their own or their surgeon. And then their insurance said, "Well, this is related to the previous bariatric procedure and we're not going to cover for it." I mean, that's a hardship. So we-we-we will work with everybody to get it authorized through insurance and covered by their insurance company.

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SCOTT F. GALLAGHER, MD, FACS: Why is it – why is it that you think insurance companies want to limit patients' access to care through using this diet history?

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MICHEL M. MURR, MD, FACS: I didn't get you there. There was some interference, Dr. Gallagher. All right. You know, I'll take this up. We had a breakdown in the line from Dr. Gallagher. But I wanted to share with you the best part of my life and my practice. It's when we see patients in the office after a bariatric surgery. They've lost weight, they look wonderful, they feel wonderful, and uniformly they say, "You've changed our lives." That's not to make ourselves feel better about ourselves, but asking these patients, "How is it that

weight loss had helped you?" many would say, "My diabetes is gone, I don't take any medications, I don't take any injections, I've gotten rid of the sleep apnea machine, I don't have blood pressure problems, I sleep better, my joints don't hurt, and I don't need to take medicine for that. You know, by the way, Doctor, now I can play with my children, I can take my grandson to Disney. I have a better life." And it's necessarily they have lost 200 pounds and they're getting down to their ideal body weight, but they got down to a much healthier, much active weight loss.

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Now particularly in this situation, as we talked earlier, when we're going to adjust the band on this patient – it'll be in about four to six weeks – we want to make sure that she does well in this period. She's a bit restricted, so we'll put her on a clear liquid diet for the next four to six weeks. Come into the office, we'll adjust it, and then we will start targeting a weight loss of about four to six pounds a month, sometimes a little faster, sometimes a little slower. But it may take us up to a year, a year and a half, to get the weight down where her body would stabilize and she will feel better about this. Within the first 10, 20 pounds, much of the blood pressure will get better. Diabetes may take a little longer in her situation because she has a lot of visceral fat, as I showed you, and that makes diabetes a little harder to control. But as far as her outlook to life, her joints, and her reflux will be completely – her reflux will be completely eliminated after surgery. This has been an exciting experience for all of us, as you can tell. This is awesome that we have live surgery. You know, in the days we trained, we didn't have any of this, so I really want everybody to enjoy this. And you can reach us after the procedure through the websites that we've mentioned and through Tampa General Hospital.

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SCOTT F. GALLAGHER, MD, FACS: Okay. Well, thank you very much for joining us this afternoon for a live surgery from Tampa General Hospital and the University of South Florida. We're certainly here available for you 24 hours a day if you ever have any questions. And we thank you very much. Have a good afternoon.

00:59:04

ANNOUNCER: This has been a laparoscopic adjustable gastric band procedure, performed live from Tampa General Hospital. To obtain more information, to make an appointment, or make a referral, please click the appropriate buttons on your screen.

00:59:32

[END OF WEBCAST]