I am Dr. Anthony Gonzalez, and welcome to South Miami Hospital. We’re here for a live webcast, a fully robotic gastric bypass, as I mentioned, we’re in the operating room at South Miami Hospital in South Miami, Florida. We have here the operating room, and I wanted to introduce you to my staff, the people that help make this is a Center of Excellence in bariatric surgery. We have Dr. Armando Sarasua [PH], my assistant. We have Shawna Augustine [PH], my other assistant, and my nurse, Straudy Ballinger [PH].

We will be doing today a fully robotic gastric bypass, one of the few robotic bypasses that you may see in the world. Now the patient is positioned. The patient is under general anesthesia. The head is over to the left side of your screen in that direction. The feet are in this direction. And the robot is brought and docked over the patient’s body and ready to be used. Once I introduce you to my partner, Dr. Jorge Rabaza, I will take my position in the console, in this location where I will be using the robot to perform this fully robotic gastric bypass. So without further adieu, let me send you out, right outside our doors to my partner, Dr. Jorge Rabaza.

Thank you, Tony. I’m Dr. Jorge Rabaza, and I will be moderating the operative procedure today. And basically what I’m going to be doing is giving you a detailed account of how the operation works. During that time, I’d like to answer questions that the viewers will have, and if you press on the webcast question button, you can text in the messages and any questions you may have. During the hour that we have for the webcast, I’ll try to answer as many questions as we possibly have.

By way of introduction, I’d like to tell you about our patient today. Basically, the patient is a 43-year-old white female who is five-feet-five-inches tall, weighs approximately 243 pounds, has a body mass index or a BMI of 41, which qualifies her for the surgery. Her risk factors are increased lipids, sleep apnea, gastroesophageal reflux disease, and depression. She has a previous open cholecystectomy, not laparoscopic, and that gives us a complication that can occur, which is adhesions.

Today we will do the fully robotic Roux-en-Y gastric bypass. Today in the United States there’s only approximately ten surgeons doing the fully robotic gastric bypass surgery, and two of them are here today, me and my partner, Anthony Gonzalez. By way of introduction, what I’d like to do is give you an animation of what the surgical procedure involves, and during that animation I’ll explain to you what’s going on so that you, during the operative procedure, the live procedure, you’ll understand it.

Basically, the gastric bypass works on two different principals for weight loss, one is restrictive in what we do. We actually take a small portion of the stomach and divide it from the rest of the stomach, and that’s the restrictive part of the procedure. And it’s self-explanatory, because as you can see, it’s a very small portion of the stomach. The other portion of the operation is the bypass part of it, the malnourishment part of it, malabsorption part of it. And what we do is we take part of the intestine, exclude it from the digestive process, and later, allow the nutrients that the patient is taking in to be digested and absorbed. So actually we’re taking the reactive products, the bile, the amylase, and the acid coming from the stomach and separating it from the food, and then allowing that reaction that digestive process to occur later and get absorbed less than it normally would. So in summary,
the gastric bypass works on two principles, one is a restricted procedure, and two is the malabsorbptive portion of the operation.

Now what I would like to have you -- Dr. Gonzalez is on the console now, and he’s going to be working on the first part of the operation. The first part of the operation that we do is the malabsorbptive part of it. Remember it’s restrictive and it’s malabsorbptive. And what he’s showing you is the beginning of the small intestine, and he’s going to run the bowel down -- this is the small intestine -- down to approximately 40 centimeter, and right there it’s marked with a suture. So this is the very first part of the operation. And what he’s going to be doing now, he’s going to be dividing the intestine and then doing the bypass part of it.

This is the stapler that we use to divide the intestine. It staples and divides the bowel. And as you can see, some of the advantages of robotic surgery is the manipulation, as you can see, how Dr. Gonzalez is manipulating the instruments. One of the great things about robotic surgery is you’re able to manipulate instruments in 270 degrees with seven ranges of motion, whereas a standard laparoscopic procedure, we just cannot do that, and we’re more hampered by our motion than the regular laparoscopic procedures. We have a little bit of bleeding there, and that bleeding will be stopped by what we call the “Harmonic scalpel.”

So once Dr. Gonzalez divides the intestine, now he’s going to measure it a certain distance, and that’s the amount of intestine that we’re going to be bypassing, and he’s going to be doing that shortly. Let me just point out some of the other advantages of robotic surgery, and one is visualization. Although it may not be showing up in the webcast, this is a three-dimension high-definition picture that we have as surgeons.

Laparoscopic surgery, which is the other common surgical procedure done for the gastric bypass, is done in two dimensions. Here we have an added dimension, and the depth perception is incredible and just aids the surgery a great deal. So Dr. Gonzalez now is going to be measuring out the small bowl, approximately 150 centimeters just to this area. And there you can see the instrument is doing that.

The surgery is done through five small incisions, and it’s measuring anywhere from 12 millimeters to 5 millimeters, and then we have the camera port also, and that’s one of the other advantages of laparoscopic and robotic surgery, it’s that you’re doing the operation through very small incisions and obviates the big incision that we used to do years ago and would hamper recovery, long hospital stays, infection rates, and cosmetically it’s also an advantage in that you have small incisions rather than the very big incisions.

Again, if there are any viewers that have any questions, they’re welcome to text the questions to us by pressing the webcast “question” button and texting the questions, and in the hour that we have, we’ll be happy to answer any questions. Now Dr. Gonzalez has reached the 150-centimeter mark, and now he’s going to do the Roux-en-Y anastomosis, and this is where the nutrients, what the person eats, and the elements that are important in the digestive process are going to meet right at this point, and then the digestion and absorption of the nutrients will occur after this anastomosis.

So what he’s going to be doing now, he’s going to be anastomosing two pieces of intestine that normally are not in this -- normally are not occurring, and this is the bypass part of the operation. He now has the two incisions in the intestine on what we’ll call the antimesenteric border, and he’s going to introduce a stapler into each of these two pieces of bowel and staple them together to make a common channel and then close that common channel. And see one arm of the stapler going into one piece of the intestine, and the other one will be going into the other.

The manipulation of the instruments and the visualization is what makes robotic surgery ideal and unique and allows us to do some of these procedures in other operative procedures. Robotic surgery can be used in other operative specialties including cardiac surgery, thoracic surgery, which is pulmonary surgery. The other procedure that we can use it in is urologic surgery, and one of the most common is gynecologic procedures. Here
OR Live
bah 2777 show

at south Miami Hospital, we some of the most experienced gynecologic robotic surgeons in the country and worldwide, with probably the most experience of anywhere in the United States.

Urologic surgery is another surgical specialty, which is used, and the most common procedure is the robotic prostatectomy, which is probably the standard of care today for prostate cancer. This is our eighth webcast. This is going to be the eighth webcast that we have today, and others that have been done are the gynecologic and the urologic procedures in the past.

So Dr. Gonzalez has now done the anastomosis, so he's hooked up the two pieces of bowel together. And again, this is where the nutrients and those elements that help in the digestive process are going to meet. And now what he’s going to do, he’s going to close that so nothing leaks out. Now this is one of the beauties of robotic surgery, you can see the manipulation of the sutures. So he’s going to suture shut that hole there. And you can see how well the bowel -- how well the sutures in and the needle is manipulating almost like a normal wrist, and this is called the “endowrist," the “endoscopic wrist,” and again, it has to 270 degrees of motion in seven directions, very similar to the human wrist, which is what the surgeon would be using during an open operative procedure.

Again, for those of you who have just joined us, this is Dr. Jorge Rabaza. I’m the moderator. Dr. Anthony Gonzalez is the surgeon today, and we are doing a robotic gastric bypass Roux-en-Y here at South Miami Hospital. Here, again, you can see him closing the anastomosis. And like I said, one of the other great things about robotic surgery is that Dr. Gonzalez is sitting at the console, comfortable, sitting down. His hands are manipulating comfortably in front of him. He’s not squatted over. He doesn’t have to be standing for long periods of time. And the ergonomics, just the manipulation of the hands in front of him is one of the great things about robotic surgery that you don’t have in any of the other surgical procedures like open or laparoscopic.

One of the important things that we here at South Miami Hospital, which is a Bariatric Center of Excellence is the education of the patients. The surgical procedure that Dr. Gonzalez is performing today is not the only part that’s important. Everything is important. The surgical procedure is important, the diet that the patients are advised on, exercise, so on and so forth. We have seminars on a weekly basis in which we explain the surgical procedures to the patients. We explain the risk and complications of the surgery, the different options of the surgical procedures that can be used for the weight loss. The education is extremely important, and most of the patients that we operate on are extremely educated before they come to the seminars and even more so afterwards. So education, the patient’s understanding, basic understanding of why they’re have the surgical procedure is one of the key elements.

One of the things that’s important is why do we do these surgical procedures? We know that patients who have morbid obesity or have a BMI greater than 40, that, by definition, are morbidly obese, have increased incidents of multiple medical problems, and these multiple medical problems make their lifestyle, their life a lot more difficult, and more expensive for one thing. An example of that are diabetics. People who are morbidly obese have high incidents of diabetes II.

As you know, diabetics are patients who have no blood control of -- no control of their blood sugar, and because of this, they may have to be injecting themselves with insulin, taking multiple medications, and having to check their blood sugar several times a day. Other problems that patients with morbid obesity have are hypertension, increased cholesterol and triglycerides, and we know that those patients who have hypertension, increased triglycerides, and cholesterol and are morbidly obese have higher incidents of heart problems. The other things that we see are sleep apnea. Sleep apnea is a disease that’s seen in a lot of the patients that we have, and it’s a disease that can be a problem.
OR Live
bah 2777 show

Dr. Gonzalez is now finishing up the anastomosis, and as you can see, he has closed, with stapler, the opening that was there previously. So this is the completed portion of the Roux-en-Y. This is the malabsorptive part of the procedure. Again, the procedure works on two different principles, the malabsorptive and the restrictive.

Tony, do you have any comments about it.

Thanks, Dr. Rabaza. Just as you saw and you described eloquently, we just finished the Roux-en-Y portion of the anastomosis, and as you mentioned, that’s the bypass, and our viewers can see it. And that’s the Roux-en-Y portion, and this is the portion that’s been marked with a stitch that’s going to come up to the gastric pouch, as we do the gastric pouch, and we’re on our way up to the gastric pouch. So, you know, for all intents and purposes, we’re almost halfway done with this operation. So back out to you, Dr. Rabaza.

Thank you, Tony. One of the questions that we had from one of the viewers is “How does this surgery compare to the band, the lap band,” which is another one of the common procedures that we do today. The lap band is a procedure that’s been in the United States for about seven or eight years now, and the lap band is an entirely restrictive procedure. It’s not a combination of restrictive and malabsorptive that we see with the gastric bypass Roux-en-Y.

Statistically speaking, the lap band procedure, the weight loss that the patients experience with the lap band is not as high and it’s not as effective as the gastric bypass. That doesn’t mean it’s not a good procedure. There’s no question that the lap band is a good procedure; that the patients do lose the weight; that they do lose a lot of the comorbidities, the diabetes especially. But as far as weight loss and the experience that we have, the gastric bypass Roux-en-Y is a superior procedure than the lap band. That given, we give the patients options. Some patients may not want to have a gastric bypass, some patients may want to have a lap band, just because it’s a more simple procedure, and it’s reversible.

It’s approximately, as far as a cost, it’s probably pretty close to it; however the patients stay in the hospital a little bit longer. For instance, at our program, a patient that has a lap band and he’s discharged the next day. With the gastric bypass, the patient comes in on a Monday, and he’ll go home two days later on a Wednesday.

As you can see now, Dr. Gonzalez is now creating the small gastric pouch, and this is the restrictive portion of the procedure. This is going to be the second part of the procedure, and what he’s doing on the left-hand side there, he’s got the stomach, and that’s going to be the pouch.

Tony, can you just show them the whole size of the stomach so they get an overview of what the whole stomach looks like.

Yes.

Tony, can you show them a whole view of the stomach, please.

Yes. Jorge, I got it. So as you described, what we have here is the left lobe of the liver over here, and we have the stomach. This is the esophagus up here -- and Bovey out, Bovey out. We have the esophagus coming down. This is his stomach, as you can see here, stomach back here. This is the spleen in this area. And this is the stomach. We’ll follow the stomach around. You can see your stomach about the size of a half a gallon of milk, maybe a quart. And then we come all the way around, and the stomach goes right into this area, which is called the “pylorus.”

As Dr. Rabaza stated, the patient’s had a gallbladder removal, cholecystectomy, and you can see all the scar tissue, which we have already taken down from up here. You can see the scar up here, and we took down all this scar tissue that was stuck up here, and we did that for the benefit of time. So then we’re creating this small
pouch, as you can see. The pouch is about the size of a small egg or a walnut in this direction where about. W began this transection, and we’re going up in the north direction now towards the esophagus. Back to you, Dr. Rabaza.

Thank you, Tony. One of the questions that we have is “Where are the ports?” The ports are evenly spaced around the abdominal cavity. Like I said, there’s five different ports. The center port usually is where the camera, so you’re centralized around the action or where the surgical procedure is being done. And our assistant is actually handling the stapler. That’s Dr. Sarasua, and he’s actually handling the stapler while Dr. Gonzalez guides him and shows him where to put the stapler and in what area.

So, as you can see, the stomach that is there is much larger than the pouch that the patient is going to be left with. So the way -- usually when you eat something, usually you eat and it’s solid, it’s liquid and fluid, and when you’re eating something, the stomach will start to dilate. As the stomach starts to dilate normally, it’s like a basketball, a muscular basketball, and as it dilates, there’s nerves along the surface of the stomach. When those nerves stretch, then the patient is satisfied, and they stop eating.

So what we’re doing with the gastric bypass, by creating the small pouch, we’re creating a mini stomach, but that mini stomach has the same nerves. And as that mini stomach gets dilated with the food and everything else that’s going into it, it will send the same signal to the brain that you’re full, and you’ll stop eating. So you’re sort of fooling the stomach into thinking that you’re eating a lot of food, and that is the restrictive part of the operation.

Now the da Vinci is also good with the sleeve, and that’s one of the other operations that we do, along with the lap band and the gastric bypass. Basically what the sleeve gastrectomy is that you take 90 percent of the stomach out and you leave a small sleeve of stomach, and that, again, is just a restrictive type of procedure. There’s no combined procedure like with the gastric bypass. So the sleeve and the lap band are two restrictive procedures, wholly restrictive procedures, whereas as the gastric bypass is a combination of restrictive and malabsorptive.

As far as how the weight loss goes, it probably is that the lap band is the one that the patients, on the whole, and this is not an absolute, but on the whole, lose the least amount of weight statistically. The sleeve is sort of in between the gastric bypass and the band, and the gastric bypass, again, is the gold standard for the weight loss.

Dr. Gonzalez now is almost finished creating the pouch. That part of the stomach that he’s bypassing stays there. We do not take it out because that part of the stomach produces acid, and add it is an important part of the digestion of food. Now that stomach is out of the -- there’s not going to be any food going through there, but like I said, it will be producing acid and hormones that are important in the digestive process, so we leave that part of the stomach there, as opposed to the sleeve gastrectomy where after we make the sleeve or produce the sleeve, we take out that part of the stomach because you’ve actually completely enclosed it, and you cannot leave an enclosed structure like that within the abdominal cavity.

Getting back to the operation, you can see Dr. Gonzalez working on the console now. And he’s going to be doing his last staple across the stomach in order to make sure that we have not kept any connection between the pouch and the bypass stomach. The part of the intestine that’s bypassed is important. This is another question from one of the viewers, and it’s a good question. “What happens to the portion of the intestine that was just bypassed? Does it serve any purpose, and are there any side effects such as getting tangled up?” That’s a good question.

The bypass intestine is important in that it’s carrying -- the elements are important in the digestive process; for example, the bile, the pancreatic enzymes and the acid that’s coming from the stomach, so that’s important. Without those things you can’t digest the food. The part that’s not getting bypassed is carrying the food down. So what you’re doing is you’re delaying the chemical reaction between the food, and those things are important in the digestive pre-process, the enzyme.
Now can it get tangled up? That’s a good question. One of the complications of the surgery is something called an “internal hernia,” and that can happen later on. It’s rare, but it can help. It’s something that we recognize today more than we did years ago, and we sometimes have to take care of it surgically.

Again, for those viewers that are just joining us, this is Dr. Jorge Rabaza. I’m moderating a robotic gastric bypass surgery by Dr. Anthony Gonzalez from South Miami Hospital in South Miami. Any viewer questions that you may have, if you click on the webcast “Question” button, you can text us the questions, and then the time remaining, we’ll be happy to answer any other questions you may have.

You can’t see the -- the view that we have now is the robotic view, the camera view. In the operating room, basically, the robot works as what we call a “master-slave relation”, and what you can see, this is the patient right there. That’s Dr. Sarasua with his back to you. He’s our surgical assistant, and he’s the one that’s stapling and doing the stapling from the side. Dr. Gonzalez is on a console, and as you can see, Dr. Gonzalez doesn’t have any surgical scrubs on because he’s sitting at a console, comfortably sitting at a console with his hands in front of him, doing the operating and manipulating the arms of the robot. There he is there.

We have the anesthesiologist at the head of the table and our nurse assistant, who is handing Dr. Sarasua some of the instruments that he’s going to be using to assist Dr. Gonzalez. Again, on the robotic view, we’re finishing up the creation of the gastric pouch. The size of the gastric pouch is about the size of maybe an egg, maybe a little bit smaller than the egg. And, again, this is the restricted portion of the operative procedure.

As a summary, the operation works on two principles; the restricted portion and the malabsorption portion. For the patients who have gastric bypass one of the questions is, “Are they going to be on medications?” An important thing about the gastric bypass is that it’s required that the patients be on vitamins for the rest of their lives. And it’s not just that we tell patients that it’s good for them to be on vitamins. It’s crucial that they be on vitamins because of some of the side effects that they can get.

Now this is the part of the intestine that’s going to come up, that you saw on the animation, that’s going to come up to the pouch, and Dr. Gonzalez is going to be doing the anastomosis there. So we’re going to hook up the gastric pouch to the small intestine, and that’s where the food is going to be traveling. And what the patient is eating will be traveling through the gastric pouch and into the small bowl. Anthony, do you have anything to add to that?

Yeah. And I just wanted to just reiterate just exactly what you had just described. We just finished the gastric pouch here, as you can see, right above in that area, and we’re bringing the piece of intestine up in order to create the gastric bypass, stomach, gastric, bypass, and so we’re about to position that, and that will be the next step of the operation.

This is one of the great things about the robot, and that’s this manipulation here. And it’s almost like there’s hands inside the abdominal cavity doing the surgery for you. The precision is an important thing and, again, the endowrist, the ability to move the instruments that Dr. Gonzalez has, which is the suture and needle on the right side, with a grasping instrument on the left, with 270 degrees of motion, it’s what’s key and what makes robotic surgery different than laparoscopic surgery.

The other thing that makes it unique is the view. And although it’s difficult for you to appreciate the view, again, it’s a three-dimension, high-definition view. Here is another question. “Does a robotic surgery take longer or shorter than regular surgery, and what’s the difference in recovery times?” As far as the time of the surgery, one of the important things and one of the nice things is that surgeons that used to operate -- remember this operation was done originally open. You would open the patients with a big incision and then you do this exact surgical
procedure open. And then laparoscopic surgery started approximately 1991 here in the United States, and a few years later, there was laparoscopic gastric bypass surgery.

The learning curve, which is the time that it takes for the surgeon to learn surgery from open to laparoscopic, used to be pretty long. You used to have at least a hundred cases under your belt to be able to say that you can do it proficiently; however the learning curve with robotic surgery is much shorter. In other words, going from doing it laparoscopic to doing it open is a much shorter learning curve, and the surgeons who are proficient robotic surgeons can quickly become very proficient doing the case robotically.

As far as the difference in recovery time, we don’t know yet. Basically because we don’t have enough robotic surgical cases done in the United States today to say whether there is a difference when it’s done robotically versus open. And with time, that will be able to tell us. We hope that just like with other specialties; for example, the urologic specialties, the gynecologic specialties, and the thoracic surgical specialties where the proficiency of the robot has been shown to be superior to the laparoscopic cases, that this will also be true in the robotic bariatric surgical procedures.

So what Dr. Gonzalez has down now, he’s creating a hole in the small bowel. He already created the one on the stomach side of it, and just like he did before, he’s going to place the stapler in both sides and then staple it together to make that anastomosis. So here he is opening the small bowel, just large enough to allow the stapler, the tip of the stapler to go through, and he’s going to do the same on the gastric part of it. There’s the gastric pouch as he grasps right there. So he’s aligning the bowel together in order to get it close enough so you can put each arm of the stapler, one in the stomach, one in the small bowel, and then staple them together, and then close that defect.

So anyway, one of the important -- again, what I wanted to reiterate is the importance of why do we do the surgery? We’re doing the surgery because we know patients who are morbidly obese and, for instance, this patient here, who has a body mass index of 41, we know that those patients are at increased risks of having multiple medical problems. Those are medical problems that can hamper the lifestyle of the patients and shorten their lifespan. We know patients who have morbid obesity live 8 to 13 years less than those patients who do not have morbid obesity. And the other good thing about it is that when the patients lose the weight through bariatric surgery, those issues that have decreased their lifespan and made their lives more difficult will go away.

If you go see your doctor today and you’re a diabetic, he’s got to put you on medication. He’s not going to be able to cure you of that diabetes. You cannot get cured of it. But through the surgical procedure like bariatric surgery, with the weight loss we can actually cure it so you’re not on any medications and go back to being a non-diabetic. And those are the important things. Those are the things that we want our patients to understand. We want them to understand that this surgical procedure is not done so that the patient looks better but so that feels better and so that they do not have any of the diseases, which are very serious diseases, so they can live a better life and a happier life.

Here’s another question that we have from one of the viewers. “If some form of complication occurs, how quickly can the surgeon switch from the robot-assisted surgery to an open procedure?” It’s very quick. Basically what we would do is we would remove the camera and de-dock -- what we call “de-dock” the robot and go ahead and open the procedure or move to a laparoscopic procedure.

Anthony, do you have anything to add to that?

No. I think, yeah, that was one of the questions that I always get asked by patients and even other physicians that are not familiar with robotic surgery. You’re exactly right. It takes, you know, under 10 seconds, 15 seconds to just basically undock the robot and, you know, convert to a laparoscopic case or open the patient if you need to. So, yeah, it’s not a problem getting the robot off the patient.
But in your experience, as well, Dr. Rabaza, you can say that we’re probably better off with the robot. We can do more with the robot in a difficult situation than we can even laparoscopically or even open, especially with these patients who are morbidly obese and who have very high BMIs. The visualization is incredibly difficult when the patient is obese when you have the patient open. So definitely, you know, if I’m having a trouble in the surgery and there’s a complication or there’s a difficulty, the robot is my ally. Really, it does help me rather than hinder me.

That’s absolutely true. And I would think that -- you know, when we fist started doing the surgery, I think our first hundred cases, years ago, were all done open, and then we started doing them laparoscopically. And what we would do, we would do half of it open, half of it laparoscopically. And just like we did back then, when we started doing robotic gastric bypasses, we would do a hybrid. We would do part of it laparoscopically and part of it robotically, and now we’re doing fully robotic. And again, there’s not many surgeons that are doing the cases fully robotic. It’s usually if they’re using the robot, it’s a hybrid procedure. But now we’re doing them fully robotic because we feel comfortable with it. And we’ve done our conversion rate of going from robotic to laparoscopic is very, very low compared to back then when we were doing them laparoscopically and open.

And again, the reason being is the precision that we have, the visualization, the precision, and the ergonomics, how easy it is. You’re sitting at a monitor. You’re comfortable. Your hands are in front of you. You have great visualization. It’s ten times visualization and the 3-D effect that we have. So it’s more detailed, much more precise surgery.

Again, we’re here, again, at South Miami Hospital today. We are presenting Dr. Anthony Gonzalez. My name is Dr. Jorge Rabaza. I’m the moderator, and Dr. Gonzalez is performing a robotic gastric bypass surgery. And as you all know, that is surgery for the morbidly obese patients, the patients who have a difficult time with their life because of diseases that they may have that hinders their lifestyle, the hypertension, the diabetes, the sleep apnea, so on and so forth, and if they don’t have it, they’re high risk of getting it later on. This is one of the most common procedures done in the United States today, and the gastric bypass Roux-en-Y is one of the most common procedures done for morbid obesity today.

One of the landmark studies that was done was the NIH Conference study in 1991 at the National Institute of Health in Washington, D.C. And what they looked at, they looked at multiple morbidly obese patients, and what they saw at the time was that those patients were morbidly obese and by definition having a BMI greater than 40; that if you put them on strict diet and exercise, supervised by a physician, that only one percent, that’s one percent of those patients were actually able to lose enough weight. And because of that, in 1991 the recommendation of the NIH was that those patients who could not lose the weight they, they should be recommended to have bariatric surgery, and the popularity of that surgery has gone up exponentially since that time.

Dr. Gonzalez is now closing, finishing up the operation. And what he’s doing is closing that area of the gastrojejunal anastomosis. And, again, you can see how the robot works, the endowrist, the 270-degree motion that you have. It’s almost as if there’s a hand in there doing the surgery for you. One of the questions from our viewers is, “What happens if the patient eats more than the stomach can handle?” Well, as you can see, the pouch is very small. Basically, at the beginning that can happen. The patient may eat more than they can handle, and if they do, they will vomit. Okay. That occurs frequently in most of the patients at the beginning; however, with time, the patient will learn how much they supposed to eat, and with further time, they’ll know how to serve themselves. They’re not going to be serving the same plate of food that they used to be serving themselves, and they’ll be able to portion their meals, which is all about what weight loss is, eating less amount of calories and less amount of food.
Another question is, “Do the patients go through any psychological therapy prior to surgery to ensure that they’re capable of controlling their eating habits.” Really, we put all the patients through a psychological evaluation, and it’s not to see if they have any psychiatric problems. The reason we put them through a psychological evaluation is that we want our patients to have insight as to why they’re having the surgical procedure. We want them to understand that the reason they’re having the surgical procedure is for their health, to improve their health so that they feel better and so that they don’t acquire any problems later on.

The psychological evaluation, again, it’s to make sure that they have good insight, so they understand why they’re having the surgical procedure. And again, this is part of the education of the patient. And us here as a Center of Excellence, we require several hours of education. There’s nothing better than a well-informed patient; that they understand why they’re having the surgery; that they understand in detail as to how the surgical procedure works. And I can tell you of all the types of patients that we operated on, not just the bariatric patients, I would venture to say that the bariatric patients are the most informed of all the patients that we have, just because of all the education that they’re going through.

Now, again, Dr. Gonzalez is finishing up a couple staples there. He’s going to put another suture line to finish up there. And the operation is almost complete at this time. As I mentioned before, for some of the viewers that may have joined us late, the robot is used for multiple surgical procedures. It’s used for heart procedures, the CABG, coronary artery bypass, valve procedures, and we have a surgeon at our hospital that is well experienced with valve procedures. It’s also used in thoracic surgery for lung cancer, for lung tumors, gynecologic procedures -- the hysterectomy being one of the most common ones -- urologic procedures, and robotic prostectomy for prostate cancer is a procedure that has been proven time and again to be superior to the open or the laparoscopic.

One of the questions we have from one of the viewers is “Is the infection rate higher or lower with the robot-assisted?” We don’t know the answer to that with this kind of procedure. In some of the other procedures that I mentioned, it is lower. And basically because you’re going through very small incisions, you don’t have the open abdominal incision. One of the common types of patients that we operate on are diabetics. And diabetics, as you all know, have a higher rate of infection because of their loss of glucose control. But our infection rates in those patients that we operate on that are diabetic compared to those who are non-diabetic are about the same.

Dr. Gonzalez is now putting a second layer. So this is a double layer of suturing that he’s doing to close the gastrojejunal anastomosis. Just above where he’s suturing is the gastric pouch, which is the small gastric pouch, like I said, about the size of an egg. And then that’s going to go down into the small bowel, and that’s the alimentary limb where the food is going down, and it’s now been separated from the digestive elements that the body produces, and they’re going to go down and meet further down in the Roux-en-Y portion, which is the first part of the operation for some of you who may have missed it. And probably when he’s all done, we’ll go by and review everything in detail, and Dr. Gonzalez can show us the pouch, the small pouch, and then the Roux-en-Y anastomosis, the completed portion of the operation.

This is our eighth webcast from Baptist Health. Other ones that we’ve had are gynecologic procedures, urologic procedures, and it just shows the vast experience that a lot of us surgeons in our health system have with the robot.

Okay. He’s almost done with it now. So this patient will be completing her surgery in a few minutes, and then she’ll be going to the floor, upstairs to a regular floor. Tomorrow in the morning, we’re going to get an upper GI, and the upper GI is going to make sure that the anastomosis that Dr. Gonzalez is completing now is watertight and that there’s no leakage of any of the food or fluids from that area. And this is one of the complications that occurred early with the experience of bariatric surgery in the United States. And the death rate, people were dying from leaks of that area. The leaks are now extremely rare, and I think one of the reasons it’s rare is just
because of how precisely the operation can be done and how detailed it is and what a great view you have of the anastomosis.

So tomorrow, after the patient gets an upper GI and everything looks good, the patient's nasal gastric tube, which Dr. Gonzalez will place in just a few minutes, will be removed, and the patient will be put on a diet. And what we do is we place the patient on a liquid diet for the first day and then a full liquid diet on the second day. So today is Thursday. On Saturday, the patient will be on a liquid diet. And if she's doing well, meaning that she's drinking her liquid diet, has no pain and no fever, the patient will go home.

Subsequently, we'll see the patient in our office next week to make sure the patient is doing well. She will have a detailed diet book that she's going to be guided by as to how she proceeds with her diet. Usually we put them on full liquids, then a soft diet, and puréed diet later on. So the important things here for this patient, this morbidly obese patients with all the medical problems she has is, one, the surgery; two, the diet; and three, exercise. And the exercise is extremely important. And we'll put her on an exercise program along with her diet and her surgery. And the fourth thing that's extremely important is support. This is a life-changing event for these patients, and they need support from their family and from other people around them. We have a support group here at South Miami Hospital that helps the patients. It's one of the bigger support groups here in South Florida, and it's extremely important. These patients have to relate to other patients who are going through the same things.

One of the questions from our viewers is, "Why do some of the patients regain some of their weight?" Usually it's going to be a behavior problem. Either they're eating the wrong kind of diet, they're not exercising. Occasionally, it can be something from the surgery itself. But 99 percent of the time, it's going to be behavioral issues. One of the things that we put the patients on is a high protein, low carbohydrate diet. And an important thing is nutrition, so we have nutritionists here at South Miami Hospital. The nutritionist will constantly be reminding the patients, what does it mean to be on a high protein, low carbohydrate diet? And a lot of the patients will know initially what it means and they'll have a great understanding, but as the months go on, they'll start forgetting what it means, and we bring them back in. We send them back to nutritionist. They review everything with them and they get back on the horse, back on their diet, as they should.

Again, if there's any viewer questions, please click on the "ask question" button and I will be happy to answer any of the questions you may have. Usually one of the questions we have is at what point does the patient stop losing weight? On the average, the patients will stop losing weight at about 18 months, about a year-and-a-half after their surgery. That's when they're going to plateau their weight loss. So most patients, by the time it's 18 months, they have lost most of the weight that they're going to be losing, and that's as long as they keep their diet and keep exercising. At about 18 months, that's when they're going to stop losing the weight. And that goes for all surgical procedures, the band, the gastric bypass, and the sleeve gastrectomy.

Another question is, "Does gastric bypass eliminate diabetes?" The morbidly obese patients that we see are those patients that have diabetes mellitus type II, and that's diabetes associated with obesity. And there's no question that the great thing about bariatric surgery is that the weight loss that's associated with the bariatric surgery will enable to the patients to be healed of their diabetes, which is a great thing.

The other question is, "Does gastric bypass eliminate diabetes and does the sleeve?" It's not the type of -- it's not actually the type of procedure that the patients have. It's just the weight loss. By losing the weight, whether it's by the gastric bypass, the lap band, or the sleeve procedure, they will be able to eliminate the diabetes or control it much better than its been controlled in the past.

Another question that we have is, "Are we removing any fat from inside the patient's body?" The answer to this is, "No." There's no advantage to doing this. The fat will be lost as you start to lose the weight.
Dr. Gonzalez now has finished the anastomosis and they have the NG tube within the anastomosis. You can sort of see it pouching out there, and he’s pointing at it right now. And what we’re going to do, it’s like when you were a kid and got a hole in your bicycle tire, the way to figure out where the hole was, you put the tire under water, you’d squeeze it, and then where it bubbled then we knew there was a hole. So he’s going to be doing the same thing right now. He’s clamping the small bowel, and then we’re putting water inside the abdominal cavity, and we’re going to insufflate air. Once he insufflates the air, the pressure within the small bowel will increase, and you will see -- if there’s a leak, you will see bubbling, and we’ll know that that’s a place where you have to put a suture in to close that leak off. So there he is insufflating the air.

Tony, can you show us where the pouch is at? It’s up at the top part right there.

The pouch is up here in this area, the connection of the pouch gastric pouch to the small intestine, and this is the suture line that we just finished. Let’s give me some air, please. Okay. Release it. Give me some air. Air. Clamp the blue. Give me -- release it. You can see the NG tube right here Jorge. The NG tube is through the connection. Let’s give me some air again.

So now this is like the tire under the water.

Air.

And there’s no leak. You don’t see any bubbling that you would see.


There you go. You see how the small bowel distended with the air in it, and there’s no leak.

You can see the pouch, the connection, and we did it. Let’s go ahead and give me some more water up her Armando. Let’s show our viewers this again, more water up here on the top. And this is the crucial part of the operation. The importance is to make sure that there’s no leak at the gastrojejunal anastomosis.

Good, thank you. Let’s give me some more air.

So what the robot does is allows us to have a precision anastomosis, which is the key of this operative procedure. One of the questions from the viewers is, “Is there signs of pouch stretching?” Some of the signs of pouch stretching could be that the patients are eating more food. You know, one of the things that we emphasize to the patients is the liquids. The liquids can go down quickly, whereas more solid foods may not. So you have to be careful to keep the patients from what we call “cheating” and taking high-calorie liquids, which is one of the things that can enable to patients to gain weight; however everything is good. The anastomosis is good and the size of the pouch is good.

What is the recovery time for the gastric bypass. The laparoscopic bypass or the robotically-assisted gastric bypass, I would say most of the patients, like I said, are in hospital for two days. They go home. We see them a week later. And most of the patients are back at work in two weeks. What do tell the patients is that they cannot do any heavy lifting for a month. And the reason being is we don’t want them to get any hernias at the sites of where the ports are inserted.

Antibiotics are given just prior to the surgical procedure, and then we give it for eight hours -- for the next 16 hours after the surgery, and then we discontinue the antibiotics after that.

Now let’s just go -- Tony, can you review everything sort an overview of how everything went?
Yeah, Jorge, I think that would be a great idea. We’re going to have Dr. Sarasua suction a little bit. But let’s start from the top. Since we did the operation from the bottom up, let’s start from the top. You know, for those that are obviously just catching the backend of this, this is the liver. We’re inside the patient’s abdomen, and this is the liver.

The liver is being retracted up. Normally when you go in the abdomen that liver is laying all the way over the stomach.

All the way over here. You wouldn’t be able to see this area and this area.

You won’t be able to see it.

So the liver would be covering it, so we’ve created this pouch here. This is the pouch, as you described, the size of like a small egg. We created this gastric pouch. This is the leftover stomach back here in this area that is covered with all this fat. You could see the leftover stomach all back here. Stomach, stomach in this area, all this is stomach, leftover stomach that the patient will no longer use in regard to food, leftover stomach, leftover stomach all the way over here. And then the food, as the patient eats, will come into the gastric pouch and then will come down what you described as the alimentary limb where the aliments will come down.

Then the distance from here, this area, all the way down to this area, which is the Roux-en-Y jejunal anastomosis, is 150 centimeters, about 5 feet. And you can see this anastomosis, which was the first part of the operation we did. This is what is called the “biliary pancreatic limb.” That is the bile and the pancreatic juices come in this way, and then this is the food. This is coming from the mouth. This is coming this way. The bile and the pancreatic juices mix with the food, and then head south. And this is called the “common channel,” which is obviously where the bile and the pancreatic juices will mix with the food, and that’s where the absorption begins. So the patient is at a disadvantage. They cannot absorb at the first 150 centimeters, or about 5 feet, and you know, patients will kind of feel, you know, or you kind of think that you’re removing intestine, but you’re not. You’re just bypassing it, and in that way you can obviously allow the weight loss to be efficient.

Tony, one of our listeners is asking “What is the yellow material?” Can you just tell them what that is?

Yeah. This is fat. This is just all fat. Obviously, you know, that are morbid hi obese will have more fat in them. This is fat in the abdomen. There is one large apron that we all have in our abdomen, which is called the “omentum,” here. This apron is kind of the watchdog. It’s described as the “watchdog.” Here is my assistant bringing in the glue. But this called the “watchdog.” Whenever anybody has an infection in the abdomen, whether it be an appendicitis or a gallbladder problem, this omentum in obese patients, obviously very thick, very fat, very heavy, as you can see in this patient, and in very thin patients, it would be almost transparent, and this omentum will go to the area. It will stick. As you can see, it’s stuck here in the area of the patient’s open gallbladder removal. It will stick down to an area of appendicitis. So that’s what it is, it’s fat, and it’s called the “omentum.”

Well the catheter I have in my left hand, this is my left hand. This is my right hand. And as you guys may have seen at the beginning, you know, I’m sitting a few feet away from the patient. We’re going to put some glue, you know kind of reinforce this. This has been a really beautiful case. There’s really no bleeding, even though we gave the patient anticoagulation before surgery because we do not like blood clots. We have not had, over two years, a blood clot in our Center of Excellence here at South Miami Hospital. We’re very aggressive with that, and so we will put some glue to help with prevention of any bleeding. Go ahead, let’s give me some glue there, Armando.

Yeah, just to summarize, this is a fibrin glue. This is biologic glue. This is not the glue you get at Walgreens. So it’s a glue. It’s made from human. It’s Evicel, and it’s a fibrin glue. And what it is, it’s putting a layer of coating of
glue -- biologic glue to it just in the case there’s a microscopic area that may be leaking. And he’s also putting it down at the jejunal anastomosis, the very first anastomosis. So, again, that’s just to sort of reinforce the anastomosis, not only with the sutures but also with the glue.

The next part, and we may not have time to see this, is we put a drain that goes through the belly up near the area of the stomach, small bowel anastomosis, and that drain is placed there in case there is a leak, in case all the things that we’ve done to ensure that a leak don’t work, if there’s a leak, it can be controlled, and anything that leaks out will come out of the abdomen through the drain, and we can monitor that because it’s coming out of the patient. And that drain, we usually leave it in for a couple days just to make sure, as another layer of confidence that everything is going well with the surgery.

One of the questions that we have is, “How is it going to change the patient’s eating habits?” Well as you can see, with the very small stomach that we have, they’re just going to eat a lot less. So it’s portion control, and they’re not going to absorb everything they eat. Because they’re not going to absorb everything, we need to have the patients on vitamins for the rest of their lives. That’s key also. The other thing is, again, we put them on a high protein, low carbohydrate diet. One of the sort of complications that can occur from this is what we call the “dumping syndrome.” And the dumping syndrome is something in that we know patients who undergo the surgery will not feel well if they eat things high in carbohydrates, high in sugar, and they’ll get sweaty. Their heart will race. They’ll get what we call “diaphoretic,” and they may get diarrhea. One of the good things, we don’t want the patients to be on a high carbohydrate diet, so if they get the dumping syndrome, they’ll avoid it, and that’s one of the advantages of it.

Another question, “You just said that patients after surgery should not do heavy lifting in order to not create a hernia in the spots where the ports placed.” The ports are placed, one, close to the umbilicus, and the other ports, which is four other ones, are laterally along the same level as the umbilicus. And again, they measure any where from 12 millimeters to 5 millimeter in size.

So basically this is the completed surgical procedure. The drain is in place. We’ve gone through the anatomy. And Dr. Gonzalez has actually performed the surgery within an hour, 60 minutes from the time that we started. It’s been a pleasure having you all here with us today. It’s been a pleasure having you all here today. As you can see, we have completed the robotic gastric bypass Roux-en-Y. For those viewers who joined us late, this will be able at the BAPTISTHEALTH.NET, and the OR-LIVE.COM. Anthony, do you got any other comments to make.

Yeah. Actually, I wanted to thank everybody for joining us here today at South Miami Hospital on BAPTISTHEALTH.NET and joining us for this beautiful fully robotic gastric bypass. I hope that Dr. Rabaza and I were helpful in educating, instructing, maybe even entertaining you in regard to what we are doing here, state-of-the art surgery here at South Miami Hospital. And as Dr. Rabaza mentioned, it will be able on the BAPTISTHEALTH.NET website as an archive, and you can just watch the surgery again at your leisure. So thank you for joining us here at South Miami at South Miami Hospital in our Center of Excellence Bariatric Program, and I’m signing out. Thank you, guys.