Welcome to this OR Live webcast presentation of a minimally invasive colorectal cancer surgery premiering from St. Luke’s and Roosevelt Hospitals in New York City.

The first test that I had was a colonoscopy and a couple days later I was informed that, um, diagnosed with cancer.

A colonoscopy and woke up from that and found out that I had cancer.

I had never had any issues whatsoever in my life. I probably had seen a physician, well, prior to this, probably four or five times. Never been in the hospital. Never had any surgery. So this was very new to me. Two weeks prior for me to diagnose with cancer my wife was actually, uh, we were informed my wife was pregnant with twin boys.

Came in for a second opinion and met Dr. Whelan and have been with him for the last ten years. He actually met me in the office on Saturday morning. I called on a Thursday and he met me on a Saturday because he knew how serious it was.

Welcome. My name is Dr. Richard L. Whelan. I am the chief of colorectal surgery at St. Luke’s-Roosevelt Hospital and we are going to have a discussion about colon cancer and the surgical treatment options available to patients who have that diagnosis.

First a little bit of information about colon cancer. This is a disease which is diagnosed in about a hundred fifty thousand Americans each year. And unfortunately about fifty thousand Americans each year will die from colorectal cancer as well. The majority of patients with colon cancer are diagnosed through a colonoscopy or through a barium enema, and there’s a smaller percentage through other tests but the majority are through colonoscopy where it’s possible to get a biopsy of the actual problem and to verify the diagnosis. The fact that colon polyps will form and then slowly turn into cancers in the majority of patients has led to the development of colon screening programs which involve some type of test, again, possibly a barium enema or a virtual colonoscopy, but most commonly a standard colonoscopy at which time the colon is examined and when polyps are found they can be biopsied and removed, the idea being that if you can find a polyp when it’s behind and remove it at that point that it will not have the opportunity to turn into a cancer. We believe that the colon polyps turn into cancers over a period of five years of so for the majority although there’s a broad range here and some can develop more rapidly while others will take even longer to form and there’s no way of knowing from looking at a polyp or examining it outside the body just how long that would have taken to develop into something worse. The idea for patients who undergo colonoscopic screening on a regular basis is that you can decrease the chances of developing a cancer by doing that.

So by looking every five years or so one can hopefully decrease the chance of a cancer forming in yourself because doctors will be looking and if they find small polyps removing them as they develop. Now as far as symptoms that can develop in a patient with colon cancer, some patients may have bleeding, some patients may have signs of obstruction which may be a worsening constipation or difficulties having a bowel movement. Some patients may feel bloated. Some patients may have very black stool which indicates that they’re having some bleeding. But unfortunately many patients don’t
have any symptoms at all. So, as a matter of fact the majority of patients will not have any discernible symptoms at the time that their diagnosis is made, in which case their obviously getting screening examinations or having CAT scans or other examinations which actually reveal the problem and then lead to the diagnosis. So. A picture of the colon that you’ll be able to view and what this shows is that the colon has a question mark shape to it, and we’re looking at a patient laying down so we’re looking at the front of the abdomen with the head at the top of the screen and the feet at the bottom of the screen and the patient’s ride side on the left of your screen, the patient’s left side on the right of the screen. And we see that we start at the lower right-hand corner, the right colon is the very beginning part of the colon. The small bowel enters into the colon there and the bowel then travels up underneath your right chest by the side of your liver, and in fact that’s the next turn, and then we see the transverse colon and then down the left side of the screen would be the descending colon and then the sigmoid colon and final the rectum which is the final part of the large bowel prior to the outside. This is a picture that just explains how these cancers form. The majority of people who develop these cancers will develop a polyp first. And the polyp will be a benign polyp that will be different than the normal lining but will not yet be an invasive cancer that’s capable of spreading to other organs.

And the topmost set of drawings, the three drawings, shows a (inaudible) polyp which is one that’s like a mushroom. It’s growing from the side of the wall and those are polyps that are easy to remove with a colonoscope but if left inside the body with time they can turn into a cancer and then in fact eventually become a flatter lesion that invades through the wall and into a full-blown invasive cancer. The middle drawings on this picture show a flat polyp or sessile polyp. This is one that does not have a stalk, that just is growing right from the surface of the bowel, and these are a little harder to remove but also have even a greater chance of turning into a cancer in that there’s a broader surface area of contact between the actual polyp and the wall. So if there’s a problem in this type of polyp it would be quite a easier time to spread into the deeper levels of the bowel wall. The bottom drawing just shows a cancer that arises seemingly out of the blue so in this type of cancer there’s no signs of a polyp that was seen before. And it may have been that it was a polyp that was not detected but we do think that some cancers can just develop de novo from scratch, and this is an example of one of those.

Now, how are these diagnosed? I mentioned that colonoscopy is one of the most common means of diagnosing this, and so a patient takes a bowel preparation, they have to clean the intestines out first and then they would have the colonoscopy is a flexible scope that will go through the colon, it allows the doctor to look at the lining and the scope can be manipulated in many directions. It’s a very flexible tip and has a video chip at the end of it. It also has a hollow channel in it that allows the doctors to take biopsies and also to remove a polyp if one is encountered. And so this is the way that the cancers are usually found and diagnosed. An alternative to that is a barium enema that’s an x-ray test where you would again have a bowel clean out or laxatives would be taken, plus or minus enemas, and then you would have barium instilled in the rectum and then an x-ray test would be done which would reveal the shape of the colon with the barium outlining the colon shape. This also could reveal a tumor as well. A virtual colonoscopy is a special CT scan that’s done that actually can give you sort of a virtual ride through the colon that will actually show the actual lining as reconstructed from the CT scan that’s done, a very specialized CT scan. That also can reveal lesions in the colon. Only the colonoscopy, however, allows you to get a piece of tissue to actual biopsy the lesion and get a final verification on the identity of the polyp or the lesion.

Now what happens after you’ve gotten this diagnosis? Well, the work up that’s usually done is to do some type of test to look at the liver and to look at the rest of the abdomen to see if there’s any signs of spread to those organs. And this is an attempt to stage the cancer before the actual operation is done. And the most common method used in the US is to do a CAT scan or a CT scan of the abdomen and the pelvis and this includes the liver in that and that would tell us whether or not the liver is involved, at least if there’s anything that we can detect by the CT scan because of course they’re not, there’s a certain size lesion below which the CT scan will not pick up, but they’re pretty sensitive and it gives us a good idea. An alternative is to do an MRI which is a different test of the abdomen. It also gives us a good look at the liver. And yet another option these days is a PET scan which is a test that’s based on the fact that cancers will use different kinds of sugars than a normal healthy cell. That the uptake of a certain type of carbohydrate will be different in a cancer and allows the cancers to be detected by this PET scan method.
So these are ways of looking at the rest of the body to get an idea if there’s any other cancer spread elsewhere, and if there is then that may change the treatment a bit, but for the majority of patients who are found to have cancers these work ups will be negative and will reveal that there is no evidence of any spread.

Now the, how do we treat the cancer having this information in hand? The first line of treatment for colon cancer has been and continues to be surgery, to actually remove the lesion itself. Once the lesion is removed then decisions can be made about chemotherapy and whatnot, but it starts with removal of the tumor. What’s removed is not just the cancer but also the bowel around it so you need a margin, a boundary of normal tissue on either side that, that will insure that you’ve removed the entire cancer. And also we need to take the blood supply, the vessels that supply this section of the colon, whatever part that may be, because the lymph nodes in this region travel along the vessels that supply the colon with blood and then also they drain the venous blood from the colon as well. So this is very important. And so we do a wide resection to encompass the lymph nodes. And then the pathologist gets the specimen and they can verify the depth of the invasion of the cancer and the size of the cancer and the type of the cancer, and then also can tell us whether there are any lymph nodes involved. So a simple report would say there are twelve lymph nodes or fourteen lymph nodes and there was one or two lymph nodes that showed cancer, or hopefully we find out that none of the lymph nodes contain any cancer. Now patients who are found to have lymph nodes that are involved are usually advised to get chemotherapy. And this chemotherapy usually is begun four to eight weeks after surgery. Ideally it would be in a month, and with that treatment the various combinations of drugs that have been tested recently we have data to suggest that it’s worth giving those drugs because the survival rate for patients with lymph nodes that are positive who take the recommended chemotherapy regimens actually is significantly greater than patients who decide not to have that therapy.

With the diagnosis in hand and with a work up finished, what are the options for a patient who is facing an operation? Or are there any options? Up until 1990, 91, there really was only one option which was to have a large incision made in the abdomen, usually up and down although sometimes you can make it also sideways or transversely to gain entry into the abdomen, and then once inside the abdomen the colon can be mobilized and then the blood vessels divided and the bowel resected and then subsequently the bowel would be rejoined together. As of the early nineties, though, laparoscopic or minimally-invasive methods were introduced and this radically changed the way that we do surgery in the abdomen. And what laparoscopy is, is it’s a method of putting a small port which is just like a straw-shaped piece of metal or plastic that is inserted through the abdominal wall through a very small incision, in some cases just a centimeter or so in size.

With that port inside the abdomen we pump gas inside the abdomen through a tubing and this is carbon dioxide gas which is a gas that can be safely put in the body, and this actually inflates the abdomen so that like a balloon it blows up and creates space between the intestines which gravity will have sit against the back of the abdomen and the abdominal wall, the front of you, which actually is lifted by the gas and this creates a working space, and that’s called a pneumoperitoneum and within this space we place other instruments through the abdominal wall, so we place a number of these ports anywhere from three to five ports into the abdomen, and then with instruments that are long instruments we can then actually do an operation. We first put a camera and telescope in which has a video chip in its tip and then very strong light and this actually projected onto TV screens that are in the room, monitors that are throughout the operating room allowing the doctors to see the inside of the abdomen, and then with instruments placed through the other ports or the openings in the abdomen it’s possible to actually resect the bowel and to detach the blood vessels and to do the actual operation in terms of resecting the cancer. At the end of the operation we would need to then actually make a larger incision to get the specimen out. So the incision length here might be anywhere from an inch-and-a-half to two inches, two-and-a-half maybe, but we try to limit the incision to as small as possible but the, of course, the important thing is to get the cancer out safely and to put the two ends back together again.

This shows the what’s called a port arrangement or the places on the abdomen where we would place the ports, those metal tubes I mentioned, which would give us access to the abdomen. And again these ports have a valve on it so the gas that’s pumped into the abdomen cannot leak out and using four or five
ports like this it’s possible to take out any piece of the colon or rectum this way. Now, the ports, a variety of shapes. This just shows a few of them. The one on the far right is a type that has a thread to it. And actually it has no sharp point. It gets threaded in, screwed into the abdomen, literally, through the skin incision. The other ports shown on the left side, especially the far left, is one that may have a blade to it, that actually has a small knife at the tip that helps to cut through the tissue of the abdominal wall to get the port inside and the middle one is a different type of device that goes in through a needle and then can be stretched, it’s a synthetic or plastic sheath, it can then be, you can place another instrument through that, and again in each case you end up with access to the abdomen with a valve that will prevent the gas from leaking out.

This just shows a cross section of an abdomen and the spine is what’s on the floor side of this, and this closest to the floor is the patient’s spine. In this case the patient’s head is to the right of the screen and the bottom, and the feet to the left. And we see that the working space has been created and that’s the instrument you see going through the abdominal wall is one of these ports and in that space created, which is the pneuoperitoneum it’s possible to do the operation.

We’re never going to use all these ports to start the operation. So what we do is we grasp the bowel. I expose it for my partner here, Dr. Holtzma [sp], and then we will again begin this mobilization process. The colon in this location is actually attached along the back portion of it, the part near your spine, is adhered or attached to the structures that are outside of the abdominal cavity. This free space here is called the peritoneal or abdominal cavity and we’re working within that. Deep to this, \textcolor{red}{\textit{inaudible}} if you look down here, well we’ll show you in a few minutes we’ll show you some of the blood vessels. Here’s a blood vessel. This is a blood vessel going to your leg. Is that the internal? No that’s the external, right? Yeah. The external iliac vessel. That’s the artery that goes to your leg that becomes the femoral artery. And so down in that, in that, in the embedded stuff is where your kidney is and where your blood vessels, the great vessels of your body are and we’re going to, the colon is stuck to that area of it, and so we’re going to re- we’re going to mobilize it, lift it up. This is called the cecum, and that’s where this tumor is. And we’re not going to grasp the tumor, we’re grasping the fat around it. It’s very important that we don’t touch it if we can help it. And usually we can do that. I would just do a little bit more straight down. So beginning the process of lifting this up, so this, a colon resection involves mobilizing the bowel, meaning getting it, we don’t want it (inaudible) mobilizing the bowel so if it’s stuck to anything else we want to take the colon out alone. And also we have to then, once we’ve done that, we have to then divide the blood vessels that attach the colon to the main blood supply. Laparoscopically we can see these better because we can actually zoom in and magnify the image and we see a better, a much better image than we would get if we were looking through the open abdomen. See then this is the main blood supply of his right colon.

If we have to we’ll get a scissors and get it going too. This St. Luke’s-Roosevelt Hospital is part of the Continuum Cancer Center which involves Beth Israel Hospital downtown, St. Luke’s-Roosevelt Hospital which is two hospitals, one is Roosevelt and one is uptown at One Hundred Fourteenth Street is St. Luke’s Hospital. This is Roosevelt’s on Fifty-Ninth Street and Tenth Avenue. They share a common cancer center which is a very impressive center, I think, and which has I think a superb medical oncology department as well as radiation oncology as well and also of course surgical oncology which is seeing colorectal stuff today. The cancer patient who is trying to determine how, what to do after you get this devastating diagnosis it’s important to try to find a facility or a hospital that offers all the various things you need, so this cancer center has world class radiotherapy, medical oncology and also surgery including noninvasive surgery. So although there’s certainly lots of places one could go, this is a, in this region, is a very good one. Actually I moved here recently from another hospital and that was why I came, because I was very impressed with the cancer center here.

Do the left down a tiny bit further. That’s good. A little more. Tiny bit more. That’s good. \textcolor{red}{\textit{inaudible}} All right. I’m going – we’re going to clean this up a little bit. So this is the divided vessel there. Let me see it please. The colon, like I said before, is attached, it’s actually in this position and we’re just restoring it to how it is when the colon is first formed in before, at the fetal stage of life when it’s moving around and it’s not stuck, and then it becomes secondarily attached. And we’re just re-mobilizing it. It’s blood supply is based on just a couple of vessels that are located in the middle and that’s what we, that vessel we just
took was the main blood supply, so in the end it’s the blood supply that’s most critical. That’s okay. Be careful there. That’s the pancreas. So you can hold this. Slide over to the left a little bit. I’m going to reach in there and just. So now he has done that and I’m just going, we’re just going to join this up. And this is, again, what we’re doing, it’s attached to a lot of things and we’re just detaching them. The only vital attachments are the blood supply to the organ, which we took one vessel, and then we’re going to deal with the other vessel in a little bit. But these are the other attachments. You can’t take something out of the body until it’s fully isolated and so we have to protect the things that need to stay in and take out the other ones. And that’s what we’re – take out the one organ you’re here for but again protecting as you go along.

Once the bowel has been detached inside the abdomen and also the blood vessels have been cut, it’s time to remove the specimen from the abdomen. And here we see an incision made in the lower abdomen, below the, above the pubis or the bone down below that’s a transverse or sideways incision, and through this we can remove the specimen. Now this incision will vary in size from four centimeters to seven centimeters in size and once that incision has been made then a device is placed just to protect the wound. This allows us to protect the edge of the abdominal wall from, as we take the tumor out that we don’t, we don’t spread any tumor cells on this.

Now we have to, we’re going to, getting ready to remove the specimen so we have to, we put a lasso suture around – stay low on it. Okay, so this is the, the colon is coming up. Okay and at this point we are now working without the gas in the abdomen so this is just with the abdomen kind of dis-inflated or allowed to collapse. And then through that opening we bring the piece of intestine which is shown here being brought up through the abdominal wall, through that wound protector. So this is the small bowel that comes from the, when you eat something it goes in the stomach, small bowel all the way to the right colon. Tumor is right in this region here. Now this is the right colon. This normally would sit over here like this actually on the body. This is the right colon. And then the transverse colon is here. We’ve got it arranged a little, slightly different angle so you can see it but the, this is the main blood vessel that we divided. The lymph nodes will be along these vessels going up to the tumor. So we have the main vessel divided there. We also have this much of a margin, at least eight to ten centimeters margin beyond the tumor beforehand, and then afterwards we have the other blood vessel over here. This is that second blood vessel we divided. So the main blood supply to the colon are this vessel and this vessel. And then we’re going to divide the bowel somewhere over here so our distance between the tumor and the, and our margin towards the anus side, on the distal side, is over fifteen centimeters, so that’s a nice, broad resection that will surely remove all the cancer. And we hope that all the lymph nodes that are in the region that might be involved are also included in this. And this is a standard cancer operation for this, for this problem.

So once the specimen is outside the proximal bowel which is to be rejoined to the part of the remaining intestine close to the rectum is brought outside and then a portion of the stapler is inserted into that piece of the bowel. (inaudible) So this is now the bowel is joined together here. We’ll have an opening still left here but this is the first rejoining. First we’re going to place a few sutures though to just help keep the bowel, the two ends of the bowel aligned. So we’re just making sure there’s no bleeding from that first staple and those are titanium staples. There’s two rows of staples that are on each surface that’s cut and so occasionally you can have a little bit of bleeding from the staple line and so we, we take the time to look at it, reinforce it now so that we don’t have that problem. So it is we’re going to actually in one swoop we’re going to detach the specimen, the colon, and we also have, the bowel is rejoined. This is a method that, that again, I like. This device staples the bowel together with four rows of staples and then a knife comes between the two, the two sets of, two rows of staples and divides the structure in here. (inaudible) So we’re going to divide the bowel. I’m going to take that clamp off there. That’s all right. There’s the tumor going off. This is the, this is the finished, this is the small bowel, the small bowel comes up around and is joined to the colon so it’s re-hooked up. This is all the rejoining. Point. We’re going to put a few sutures in along this, along the second staple line just so there’s no bleeding. We’ve checked the orientation of this now. We’re happy with the blood supply and we’re going to push this back inside.

I’ve just described the laparoscopic assisted operation and that’s defined by an incision, the final incision sized at somewhere between four and seven centimeters. Not all surgeons agree on the different names
and labels for these, these procedures. I'm giving you the names that we use and others may have a different name for something, but basically we're describing similar things. This is the best we can do. In terms of laparoscopy it's the smallest incision possible, and that's just to remove the specimen and to help reconstruct the bowel together.

Now there is a different method that can be used for patients who have a larger lesion. Let's say someone has a cancer that's eight or nine centimeters in size or someone is a very, very obese patient or someone is very tall or perhaps someone has adhesions from prior surgery, things that may make the actual laparoscopic operation quite difficult. Or simply make the removal of the specimen once it's been detached impossible with making an incision that's at least, say, nine or ten centimeters in size. And this, this method I'm going to describe is a, is a, is a variant, it's a different minimally invasive operation and it's called a hand assisted laparoscopy or hand hand assisted laparoscopic resection. And in this procedure what's done is that incision I described which is done down low by the pubis, by the bone down by your bladder, that incision can be made a little bit larger and through that incision a protector can be placed into the wound and through that an actual cap is placed, it has a seal to it, and then we can pump the gas back into the abdomen again and again be working laparoscopically. This is called hand assisted surgery. Now I mentioned the incision being above the, above the pubis, which is the bone down in your lower abdomen. This is where we would place this if we were going to take out the sigmoid colon or the rectum. If we were taking out a different piece of colon then that device may be moved somewhere else, but I'm describing here a sigmoid or a high rectal type of operation. So with this, this device in the abdomen it’s possible for the surgeon to lubricate their hand and then pass the hand in through this device, which has a gentle type lid to it that's amazing material that allows us to actually through a small hole put our hand in and it maintains the seal so there's no leakage of gas.

And now we're working laparoscopically with one hand in the abdomen. This is very, very useful for again for big tumors, for patients that are very large or tall where the laparoscopic operation may be very difficult. So this is hand assisted laparoscopy. And so what are the situations where we might use this? Well one is again for large tumors or large inflammatory lesions, diverticulitis, say, or someone with colitis that has a very large, large inflammatory mass. Again if adhesions are present, that scarring inside the abdomen from other operations, it might be difficult to do an operation and the hand method may allow one to do that. You have to remember the goal of minimally invasive surgery is to avoid making a large incision in the abdominal wall so it's all, all of our efforts are to try to minimize what we, the incision that we make. The laparoscopic assisted with an incision that's four to seven centimeters would be the ideal thing or our best, best choice, but if that's not possible we would, we would settle for something that would be eight to eleven centimeters if the alternative was an open operation that might involve an incision that was twenty-five centimeters or even twenty to thirty centimeters in length, so there's still a good benefit to the patient if we can avoid that very large incision and that's why we use these methods. And we have to take each patient and do the best we can for them to minimize their incision length and just avoid the open operation if we can.

Now what are the benefits of laparoscopy? Why, why do it? Well, for one thing, it makes sense just from a common sense point of view if you have a choice between having an eight-inch or nine-inch incision or having something that's just a inch-and-a-half long, would you prefer to have the smaller one because the larger incisions are simply more painful. And this has been shown in trials that have looked at this where randomized patients either get an open operation with a big incision versus the laparoscopic and see how many times the patients need pain medications, the extent of their pain, how severe their pain is. These studies have shown that the laparoscopic procedure not surprisingly is less painful and the patients need less pain medication. Also after surgery it's important to get up and walk around as fast as possible and after an operation where your incision is only an inch-and-a-half or two inches, two-and-a-half inches, it's going to be easier to walk than if you have an incision that's the whole length of your abdomen and so it's also been shown that people can walk more rapidly and get to the hallway and actually have a longer walk sooner after the minimally invasive operations than an open operation. The other main thing that will keep a patient in the hospital after any kind of intestinal operation is the return of their bowel function, so after you do an operation on someone's intestines, they tend to go to sleep for a while and so you'll have no gas and you'll have no bowel movements for a number of days. The, um, normally we wait for that to
resolve, for the patient to pass some gas and to have a bowel movement before we can actually feed them and then send them home.

This is probably the most important single thing that limits them from going home. It’s been shown that the laparoscopic operations are associated with about a one to two-day benefit so the people will pass gas and have a bowel movement about one to two days sooner with a minimally invasive method than with the open method and so they can then be put on a diet, a more advanced diet, as we go along. But we try to give patients fluids right away but generally, at least in my practice I would keep a patient in the hospital until they were able to tolerate some solid food and also have a bowel movement. So these things are, happen sooner after a laparoscopic operation. Besides these obvious patient, you know, important end points in terms of your actual function and what you experience after, there’s also evidence that shows that the laparoscopic operation is less, less of a problem and less injurious to your immune system. And also to your protein makeup. After operations your body has been traumatized both with anesthesia but also more so from the surgery, and so that is manifested in many ways and we have a research laboratory that has actually done quite a few studies and there’s other laboratories around the world that have also looked at this and shown that there clearly is less changes, less drastic changes that occur to the protein makeup of the blood and also to the extent and the degree to which the immune system is suppressed after an operation. Laparoscopic operation is still causes problems but its significantly less than, in many cases, the open method, which is the standard one.

Finally, this, you know, is this safe to do for a cancer? This is a method that’s very different than what had been done for years and when this first came out these methods in the early nineties there was real concern about whether this would be safe to do. And in fact, randomized trials have been done around the world, I mentioned one of them in the States and also one from Europe and England, and these have compared laparoscopic to the standard open operations and followed patients for three to five years to see if their cancer recurrence rates or their survival is different and the critics of the laparoscopic methods thought that in fact their, the outcome would be worse. In fact the studies have shown that there is a difference in the long-term outcome in terms of cancer survival rates or recurrence rates if this is done laparoscopically. When you look at that point and then look at the fact that it has been proven that there’s clear cut short-term benefits in terms of pain, amount of pain medication, ability to eat, ability to have a bowel movement, which is all in favor of laparoscopy, it makes sense to then use the laparoscopic method as your basic method, your default method for the taking out of cancer, at least from our viewpoint.

I remember actually on the second day of my surgery I got out of the bed and I started walking. And everyone, you know, I went through the surgery for hours and hours, I believe it took about seven hours, and here, seeing me, you know, walking the day after the surgery, my whole family was amazed how I was walking. I was really glad that I did not go with the open or traditional surgery because that would have been more complicated and I would have stayed longer and I couldn’t even move because of the, the surgery, the open surgery, it’s about, you know, it’s, I guess it’s about nine, ten inches of cut in your chest so obviously the recovery, it’s going to take longer.

I started with soft foods right away in the hospital. I mean a day or two. They up and moving and soft foods, that part of the surgery was very, very easy. My recovery was very quick. I have no problems now with foods that I eat. I haven’t made any changes in my diet, lifestyle changes. Everything has pretty much stayed the same.

Now, what happens after your operation. You have your surgery done, it’s been done laparoscopically, and what can you expect the following day? Well, the day after surgery we would encourage all patients to get out of bed and to get into the hallway and we have nurses who try to help the patients with that and also some, some therapists who also come and get patients out of the, out of the room and into the hallway. That’s our first goal. Second goal is to have them do breathing exercises and coughing and things that intentionally try to inflate the lungs to try to make sure that pneumonia or doesn’t develop, or other lung problems which are common after an operation in the abdomen because abdominal surgery will cause pain and when it hurts to take a deep breath we tend not to breathe. After the operation there is a catheter in your bladder, a Foley catheter and that’s usually taken out on the first or second day after
a colon operation. Occasionally it may stay in longer, but generally that comes out quickly and then again we're just readying the patient to go home and also we're trying to help them get around in the hospital and get back to their normal life on their feet.

Normally the liquids, we start liquids the day after surgery. Clear liquids can be taken in, however it's important not to have too too much at first and we wait for the first gas to be passed, and that usually happens anywhere from two to five days is when that will happen after laparoscopic surgery it generally happens a little sooner, but it can take days for this to happen. It does not happen the first day, second day it can happen. Most commonly after laparoscopic operation gas will be passed on the third day. And with that gas passage, at least in my practice, we then would put the patient on a regular diet. And with a regular diet, usually will come soon after the bowel movement and then having had a bowel movement and tolerating it, a regular diet, the patient can then go home and be discharged. Again this usually takes three to five days. The alternative of an open operation on a length of stay in the hospital is generally five to seven days, so there's a difference of a couple days with that, and again each patient is taken individually and so some patients may actually be able to go home sooner and some may stay in longer if they have other problems associated with the operation or perhaps with the medical problems that they had.

Now besides the offering minimally-invasive surgery at St. Luke's-Roosevelt, which we are very proud of our strengths in this area, our, I've done about seventeen hundred of these operations and there's other surgeons in the hospital as well that also have a rich experience with this as well. Besides trying to find the best surgical method to use to remove the cancer so that the patient is able to recover more rapidly and perhaps get the chemotherapy as soon as possible, we're also looking for other methods of trying to further improve the survival and recurrence rates for patients who have colon cancer. If you think about, or look at the way we treat colon cancer patients, and actually this is true for most other types of cancer as well but not all, we, once the diagnosis is made the patient will try to make an appointment with a surgeon, they may get a couple of opinions, that will usually take a few weeks to decide where they're going to have their procedure done, and then they usually wait an average three weeks or a month for the, for an operative date, and so you have a period of at least a month, generally, where patients are waiting for surgical.

And this seems logical that we would give some drugs that would kill cancer cells during that time window to utilize that so that the patient goes into the operation in the optimal condition and the tumor is perhaps less able to spread after being given some drugs beforehand. However right now around the world for that month immediately prior to an operation for almost all cancers no therapy is given at all, which is unusual and it's a window that should be used we believe. We think it is logical to use the month prior to surgery and the month immediately following surgery to give some type of an anti-cancer treatment. And here we see just a timeline to demonstrate the, how we use time for a patient who has colon cancer, how we utilize that time. The operation is shown by the arrow and is labeled and a month after the operation we show chemotherapy being started. This would be for a patient who has lymph nodes that are positive. But look, look to the left of the operation, there's nothing done at all, at least for that first month. If you have a rectal cancer you would get chemotherapy and radiation beforehand but then you would wait an average of six to ten weeks before you would have your surgery so you, in either case you have this gap of time where nothing is given. And so we're trying to find drugs that can be given safely in this time window. And there are few that can be given.

We recommend that our patients consider taking Tagamet or Cimetadine, which is an over-the-counter ulcer drug that's been around for decades, at least two or three decades, that has a very good safety record that has not been shown to be a very toxic drug at all. And the reason why we're not giving very strong drugs is that at the time of an operation the body has to be able to heal the wounds. Most important. If you sew the bowel together you have to be able to heal that wound. If you take a very strong chemotherapy drug right after an operation or right before it will impair your chances of healing and may lead to a complication. We're also doing the first trial in the world to look at a drug called Erbitux or Cetuximab. This is the drug that's been proven to work for colon cancer patients when given in the usual time frame which is usually several months after surgery or some time after an operation, well after the operation has been finished and recovery has occurred. And this is a drug that has been proven to work
in colon cancer setting, and the word is we’ve got permission from the IRB, the Institutional Review Board that looks at these research projects, and also from the company to, to give this drug in the month immediately prior to surgery, so for three weeks, two weeks, one week before surgery, a dose of this drug, and then also after surgery one week, two weeks and three weeks, so this would be a therapy that would fill this empty window, and again this is a drug that’s been shown to work for colon cancer patients. At St. Luke’s-Roosevelt we’re doing this type of research. In addition to doing cutting-edge surgery we’re also at the forefront of these efforts to try and find drugs that we safely take while you’re waiting for your operation and immediately following the operation that can improve your outcome.

To summarize, when faced with the choice of treating your colon cancer, we would urge you to consider an minimally-invasive option. Certainly both open and laparoscopic methods will get the tumor out or will do the job in terms of removing that. We feel that there are benefits to the minimally-invasive approach and we’ve gone over some of these, and again, most patients are candidates for this. Not all. Some patients needs to be done using open methods and that’s perfectly appropriate and that’s fine. But this is an option for many people. It’s something that you might want to entertain. And the other thing is to consider the idea of doing other things pharmacologically and safely to, in the window the month prior and the month immediately following surgery that may improve your odds of beating the cancer.

I have been ten years cancer free so after five years they kind of tell you that you’re cancer free. So I am ten years. I’m doing very, very well. I had a colonoscopy every year for the first six or seven years. Now I’m down to every other year, so that’s a positive thing. I come see him every other year now for a checkup and I have my blood work done every year to make sure that that’s still okay. That’s an indicator if there’s a problem. I would tell anybody that’s been diagnosed with colon cancer, or any kind of cancer for that matter, that it’s very do-able. You have to stay positive. I would definitely tell people to have a colonoscopy especially if you have family history. That’s huge. And I would also say to listen to your body. If you think there’s something wrong, there probably is something wrong because I was totally misdiagnosed the first time. If I hadn’t listened to how I felt, I wouldn’t be here probably. I think what’s different now is I appreciate every single day. I feel very, very lucky to have been with Dr. Whelan and to be his patient. I thank God for him every day. It’s the truth.

I enjoy life. I spent as much time as I can with my family, with my two-year-old twin boys. Life has become normal, like before. Even, you know, at some point in time and when I look back, what I’ve gone through, it’s just amazing at how I recovered from the two or two-and-a-half years of, you know, all treatments and surgeries and etc. As you see I’m just, you know, pretty much back to like a normal person.

Thank you for watching this OR Live webcast presentation of a minimally-invasive colorectal cancer surgery from St. Luke’s and Roosevelt Hospitals in New York City.