

**LAPAROSCOPIC SUPRACERVICAL HYSTERECTOMY
SHAWNEE MISSION MEDICAL CENTER
MERRIAM, KANSAS
October 18, 2007**

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NARRATOR: Welcome to Shawnee Mission Medical Center in Shawnee Mission, Kansas. Over the next hour you'll see a laparoscopic supracervical hysterectomy. In just moments you'll see the minimally invasive procedure which uses laparoscopic instruments to separate the uterus from the cervix. The uterus is then removed with a special instrument called the morecellator. You'll also discover how the procedure reduces pain, shortens recovery time and decreases scarring.

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MELANIE A. MARTIN, MD: Greetings, and welcome to today's live webcast. Over the next hour we will demonstrate a minimally invasive supracervical hysterectomy live from Shawnee Mission Medical Center in Merriam, Kansas. I'm Dr. Melanie Martin, your host for the program. I'm joined in the OR by Dr. Cranston Cederlind and Dr. Cori Cooper, who are performing the surgery.

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Before we go to Dr. Cederlind, I have just a few reminders for our audience. First, we will answer your e-mail questions later in the program. To send us your questions, just click on the MDirectAccess button on your webcast screen. We welcome your questions and we will try to answer all of them. Also, an archive of this program will be available through this website should you wish to share it with a friend or family or member. Now let me turn things over to Dr. Cederlind, who has already started the surgery. Dr. Cederlind?

00:01:48

CRANSTON J. CEDERLIND, MD: Thank you, Dr. Martin. First I'd like to take just a minute this evening to introduce the people who are here in the room with me. My partner, Dr. Cori Cooper here will be my first assistant this evening. My scrub nurse tonight is Jennifer [Minses?]. And my circulating nurse is Tina Bailey. Also in the room are Howard McGee and Ian Burrows, who represent Ethicon and [Surgex?] pharmaceutical and scientific instruments. Anesthesia is Jennifer Dickenson and our anesthesiologist tonight is Dr. Mark Brady.

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A quick little tour of the operating room that you can see where we are now. This is a very spacious room at Shawnee Mission Medical Center. We're very fortunate to have this much room in an operating room. Laparoscopic surgery requires a lot of different instruments, and you can see that there's a lot of instruments laid out here. We have two large video towers here. This is Dr. Cooper's video tower. This is my tower. This one controls the light source and the camera source for our laparoscopy. And this one over here controls our insufflator for carbon dioxide for the patient.

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The...the patient tonight, who graciously volunteered to be here for the surgery, is thirty-seven years old. She's been pregnant three times. She's had three cesarean sections. She's had a previous tubal ligation. Approximately two or three years ago she began having an awful lot of heavy vaginal bleeding with her periods. The bleeding became so severe that it started limiting her lifestyle. She actually was unable to get to work or even leave the house during her period time. Her blood count eventually dropped to 7.8, where normal is approximately 12 to 13. And, she was given a trial of birth control pills; this didn't work very well.

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She eventually underwent a D&C and a hysteroscopy, which means looking inside the uterine cavity, where benign fibroid tumors were found. She underwent an endometrial ablation at that point in time, and that really failed to stop any of her heavy bleeding. Her cramping continued. And, she was finally advised to have a total abdominal hysterectomy, which mean making a large incision in her abdomen to remove her uterus to stop her bleeding.

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Fortunately, she did some research and requested minimally invasive surgery. I saw the patient in consultation and she was very desirous of retaining her cervix. The cervix is the little organ at the end of the uterus which attaches to the vagina and empties into the vaginal area. We discussed other alternatives to hysterectomy, but decided to proceed with laparoscopic supracervical hysterectomy this evening.

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A little overview of the procedure itself. The first laparoscopic hysterectomy was done in 1989 by Dr. Harry Rich. I was fortunate enough to train with him for a couple of days in 1991 and did my first laparoscopic hysterectomy here in this hospital in 1992.

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In the 1990's, eighty-five, ninety percent of all hysterectomies were done with a large abdominal incision. And, only about ten percent were done vaginally, where the entire hysterectomy was done on a vaginal basis. It was known, pretty obviously, that a vaginal hysterectomy had lots of less morbidity pain, discomfort and a quicker recovery. But many pathological problems and surgical skills necessitated large incisions to...to complete the hysterectomies.

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The laparoscopic hysterectomy is designed to replace total abdominal hysterectomy. It's not designed to replace a vaginal hysterectomy; a simple vaginal hysterectomy is a...is a very easy operation. Most of the...most of the indications for an abdominal hysterectomy, a patient's had nothing but a cesarean section, she's never had a pregnancy before, large uterine fibroids, possible adhesions, possible endometriosis; all of those are exact indications for a laparoscopic hysterectomy. So, hopefully, through the nineties and into the two thousands we've been able to replace a lot of abdominal hysterectomies with laparoscopic surgery.

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Now laparoscopy just means looking inside the patient's abdomen. Through the laparoscope you can take an appendix, a gallbladder, portions of the colon and, of course, uterus and ovaries. To see into a patient's abdomen we put what we call trocars. And they're small, little plastic, hollow tubes. And these are inserted through the abdominal cavity. And through those, we can insert our instruments, which go through here, and this is where...this is what we use to operate inside the abdominal cavity. Obviously, these are long because it's a long way into the abdominal cavity.

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We work through three, what we call five millimeter ports. We put one in the umbilicus and two on the...either side. And five millimeters is just approximately a quarter of an inch, so these are very, very small holes that we're working through today.

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The camera is a...attached to a light source, which as you can see is really very bright. And, this camera goes through our little insert in the umbilicus and that's where we end up inside the patient's abdomen, which is...I would think, probably the picture you hopefully have right now.

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When we first do this, we look inside and this is the intestines and we be sure...in the small intestine and the large intestine, be sure that we did not injure anything when we put our trocars in. And then we take a quick...this is the other trocar through the other side. And then we take a quick look to be sure that we don't see any other pathology. This is the patient's liver and her gallbladder up here. And, working our way down to...back to the pelvis. And the colon...the other side of the colon comes down here and this is the patient's uterus. And, as you can see, it's fairly large. It's enlarged by the fibroids and what we call adenomyosis, which is a benign process causing the uterus to be enlarged and bleeding.

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This is the patient's left ovary. It has a small normal appearing cyst on it over here. And, the patient is thirty-seven and wishes to retain her ovaries. And we've done every...everything we can to retain ovaries, even in postmenopausal patients. So the left ovary is here. This little right...this little organ right there is the uterine artery, and this is the main blood supply to the uterus. And this is actually what we're eventually going to get to, and this is what we have to cauterize and...to perform our surgery.

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These are some of the major blood vessels on the pelvic sidewall. Underneath the left ovary is another organ we need to watch for. And this small organ...Cori, can you get to that? This small...right there. It's a little bitty white thing right there, and that's the patient's ureter. The ureter is the little tube coming from the kidney and goes all the way down past here and in through here and empties into the bladder.

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And the bladder is up here on top of the uterus, and it's...this is a catheter right here inside the bladder, so the bladder is emptied but the catheter is there and, as you can see, it's right on top of where we're working. In fact, in a cesarean section we actually take the bladder off, take the baby out and put the bladder back on. The other ovary is on the other side. It also appears normal and we're planning on leaving that ovary in place.

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Tonight, we're going to start by taking down this area right through here. And Dr. Cooper's going to put her instrument through there, because on the ovaries we try to work contralateral, which means that Dr. Cooper is going to work toward the left ovary, I'll work to the right, because it's really important that we stay as far away from the uterus at this point. There are major blood vessels and sometimes if we get too close these vessels can retract and have some bleeding. So, Dr. Cooper is going to stay as far away from the uterus as she can.

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And the instrument she's using is called EnSeal. And the first hysterectomies were all done with what we call the bipolar instrument. It was the only instrument we had that cauterized blood vessels. It really was designed to do tubal ligations and so it destroyed a lot of tissue, because you want to destroy a lot of tissue doing a tubal ligation. And it had a lot of what we call thermal spread. In other words, the burn that you see here is spread a long ways. And we wanted that, because that we didn't want the tubal ligation to fail.

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But there was some danger to that, because the more it spread...there's a possibility, as I've shown you, that there are organs down here that we did not want to be burning. And so, the bipolar was not anywhere near our best instrument for this, but it was all we had.

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The next instrument was a staple device that laid down a small layer of staples, and we used that extensively. I think my first thousand were done with a stapler, but it had problems too, in terms of expense and even it had the bleeding problems.

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Fortunately, companies were developing other means to coagulate these vessels and several instruments have been developed. And the one that we're using tonight is probably the latest generation; it's called EnSeal. The reason we like this one at the present time is...is the jaw is very wide. It compresses tissue all through the jaw. And it also has....Add one more there. It also has little temperature control devices so that...temperature controlled devices so that we don't have a lot of lateral spread. I'm going to go over and do my little side here. There you go, Jennifer.

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In fact, actually, the thermal spread on this instrument is a third of what several of our earlier instruments were. Now, one really, really good instrument is the Harmonic Scalpel, and we're going to get to that here in just a little bit because we're going to use it down here, when we get down to the vessels in the cervix.

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So most of this surgery was one designed for dissection and hemostasis up here on top. And the next thing was getting the blood vessels coagulated down low. And we're going to work our way toward that area right now. So this is cauterizing. And if you'll notice, there's a small little blade right in the middle of this instrument that as I squeeze it moves back and forth. So, not only does it cauterize the vessels, it also cuts at the same time. And as we slowly advance that little knife blade it cuts through and there's an audible beep going on from the machine that lets us know when we've gotten to essentially cauterization time.

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MELANIE A. MARTIN, MD: Dr. Cederlind?

CRANSTON J. CEDERLIND, MD: Yes?

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MELANIE A. MARTIN, MD: One of our questions that has come in is, can you remove the ovaries during this type of hysterectomy? Would you show where you would change your approach is you were going to remove the ovaries?

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CRANSTON J. CEDERLIND, MD: Certainly. Removing ovaries is very easy with the laparoscope. In fact, it's one of our actually easier operations. and it's actually an outpatient operation and people go home in a couple of hours. This, once again, was the ovary. The blood supply to the ovary is right back here. And, if we were going to take the ovary out, we would actually be making our cauterization right through here and working our way up this area. Whereas here, we're working our way down this area. So, yes, removing ovaries would be very easy for us here.

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However, I think...and maybe...Dr. Martin, you may want to comment on that, that we really try to retain ovarian function as much as we can.

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MELANIE A. MARTIN, MD: Right. There has been a lot of debate about that over the years; whether to try to remove ovaries in people who were close to the menopause in order to decrease their risk for ovarian cancer. The...the more recent thinking has been to leave ovaries as they do make a little testosterone even after they aren't making a lot of estrogen. So, we do leave them whenever possible.

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CRANSTON J. CEDERLIND, MD: Well, we've gotten down to the sidewall here and now Dr. Cooper...I've got a pair of scissors here, Cori, if you want them?

CORINNA COOPER, MD: Yes.

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CRANSTON J. CEDERLIND, MD: Okay. Can you pass this over, Jennifer. Ah, there they are. We have a little pair of scissors here and Dr. Cooper is going to open up...What I'm holding up is what we call a peritoneum, which is basically a lining over the uterus. And, Cori, I'm going to move the camera just a minute to get to this pedal. Sorry. Please. Thank you. There we go. Alrighty. Back to...

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Everybody does a little different laparoscope and I've just, for some reason, gotten used to holding the camera in my right hand and operate with my left hand, even though I'm right handed. Dr. Martin works just the opposite; she holds the camera with her left hand and operates with her right hand. I think it's just whatever you get used to.

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The tough part about laparoscopy is, of course, that we're looking up at these cameras and the area that we're operating on is actually below us and down...down below our level of eyesight. So it's a...there is a learning curve into using these little instruments. And I'm going to try to get this posterior leaf. This is the back side of the peritoneum we're taking off now so that we can skeletonize and isolate out these uterine arteries. That's perfect.

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MELANIE A. MARTIN, MD: The other step here that's really important is earlier when Dr. Cederlind mentioned the ureter, that tube that carries urine from the kidney to the bladder, by opening this posterior...this...this peritoneum here and making this come apart like this, you move the ureter out of the way.

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CRANSTON J. CEDERLIND, MD: Right. And I'll identify that ureter again here in just a second here. We're just right now continuing to kind of isolate out this uterine artery, which is going to be right underneath that bundle. Why don't I play with mine. I'll give you the pedal, would that be okay?

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CORINNA COOPER, MD: Yeah. That's [inaudible] right there.

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CRANSTON J. CEDERLIND, MD: All right. Okay. Yeah. Jennifer, I'm going to move over here with that. And let's go ahead and finish this bladder flap here. I'll trade you out. Thank you.

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MELANIE A. MARTIN, MD: A question that has come in is, I had an ablation done in May, a hysterectomy four weeks ago. What is the purpose for keeping the cervix?

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CRANSTON J. CEDERLIND, MD: Well, I...Mel, do you want to help with that one?

MELANIE A. MARTIN, MD: Sure. I'll be glad to.

CRANSTON J. CEDERLIND, MD: Please. I'm going to be work...I'm going to work on this bladder.

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MELANIE A. MARTIN, MD: Purposes for keeping the cervix are...And I think Dr. Cederlind will show you this later, that the support structures for the uterus and cervix come in from the backside and they insert in the back side of the cervix. So if you leave the cervix in place, you support the top of the vagina better. And we have...we believe that we will see less prolapse or less relaxation and...and dropping of the pelvic organs if we leave that cervix in place. We don't have long term studies on that. That's just one of the...sort of the things that we believe to be sort of self-evident about this.

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Another reason that some women want to keep their cervixes, there is some debate about sexual function being improved by leaving the cervix in place. And, again, we don't have studies that show, you know, a hundred women who had their cervix removed and a hundred women who didn't have their cervix removed looking at the...you know, the rates of

orgasm, and things like that, but...but it is thought to be a factor in preserving sexual function.

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Other reasons for leaving the cervix are that it can decrease the amount of operating time. Doing a supracervical hysterectomy takes less time, for the most part, than removing the cervix. Obvious downside to leaving the cervix are that if somebody has had any kind of a precancerous change on their cervix, you would not want to leave that cervix in.

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Which brings up another question. Can a woman still experience an orgasm after she's had a hysterectomy? Yes. The answer to that is yes.

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CRANSTON J. CEDERLIND, MD: Thank you, Mel.

MELANIE A. MARTIN, MD: All right. Where are you guys now?

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CRANSTON J. CEDERLIND, MD: Well, we're working on this last little bladder block here.

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CORINNA COOPER, MD: Just trying to get the left uterine artery isolated.

MELANIE A. MARTIN, MD: Okay.

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CRANSTON J. CEDERLIND, MD: Yeah, we're working on that right now here. Let's see if I can get back behind here, Cori. Let me try this here.

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MELANIE A. MARTIN, MD: Again, that's looking at the back side of the uterus. And opening that...that peritoneal, that...that covering that...that covers the uterine vessels. And we can't stress enough how important this step is. You have to get control of your uterine vessels or you can't do this surgery.

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A question that would be sort of...follow from whether or not you leave the cervix in, would I have to have to Pap Smears after this procedure? Yes. If you leave your cervix in, you know, hoping to gain better pelvic support and perhaps preserving sexual function better, you will need to continue to have Pap Smears regularly after this. We do our best to try to burn out the lining of the cervix a little bit, but you are...still have all the same risks for cervical cancer after having a supracervical hysterectomy.

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CRANSTON J. CEDERLIND, MD: Yeah, let's do that part there. Mel, in the paper this morning, in the Kansas City Star, it said that I don't need to ever...Well, me. Dr. Cooper doesn't need a Pap Smear anymore. She...she just needs HPV typing out of a Pap Smear. Have you... Did you see that?

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MELANIE A. MARTIN, MD: I did see that. Over the past few years we have moved away from looking only...What a Pap Smear does is it examines the cells that are sampled from the cervix. As many of you have seen advertisements recently for the HPV vaccine, the Gardasil, we have come to realize that cervical cancer is caused by a virus, the human papilloma virus. And so we have gotten away from just examining the cells and examine the tissue that comes off the cervix in a Pap Smear to look for evidence of certain types of virus that are more likely to cause cervical cancer.

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So, yes, viral typing is very important. If you have a high risk strain of the virus, definitely you... you can't miss a Pap. If you don't have a high risk strain of the virus, as you...as you continue through your years of Pap Smears, if you go a couple of years with normal Pap Smears you can space your sampling out a little bit. But you have to understand that this is only valid in the population that has no other exposure. HPV, the human papilloma virus is

a sexually transmitted disease. And...so if you are still having new exposure, you need to have Pap Smears every year.

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CRANSTON J. CEDERLIND, MD: And with the new vaccine, maybe leaving cervixes behind over...ten years from now will not be a real problem for us.

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MELANIE A. MARTIN, MD: Right. Another question that comes to follow is, since the cervix is left intact is there ever a chance that a woman might need to have the cervix removed at a later time? Yes. If you developed precancerous changes of the cervix or the cervix started to prolapse or relax out through the opening of the vagina, there is definitely a possibility that you might need to go back in at some point and remove that cervix.

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CRANSTON J. CEDERLIND, MD: Well, right now we're working on the left side uterine arteries here. It wasn't my best skeletonization, but I'm relatively happy with that. We're going to go over to Dr. Cooper's side now see if we can't get a little blood supply cornered on that side. Now there we go, Jennifer, if you wouldn't mind right there. That's perfect. There's a pretty good shot of that corner.

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JENNIFER: Laparoscope?

CORINNA COOPER, MD: Sure.

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MELANIE A. MARTIN, MD: They are...They have sort of skeletonized out, or exposed the uterine vessels on the right side of the patient and are coagulating those at this time. So this is the actual...this is the really, really key step to this procedure.

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One of the questions that has been sent in to us is, how long have you used this sealing device and can it seal big tissues or big blood vessels?

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CRANSTON J. CEDERLIND, MD: Well, the...the nice thing about the EnSeal is that it is okay for vessels up to seven millimeters, which is big because the uterine artery usually is approximately five millimeters. Now, the Harmonic Scalpel in a minute that the...Harmonic ACE that we're going to be opening up here in just a couple of minutes is also good for seven millimeter vessels too.

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I've used this for approximately...approximately a year, I think. And, as I said, I kind of like the size of the blade. It's also got some small teeth in it and tissue doesn't quite slip out of this - yeah, I think you're good - as some of the other instruments do. And so that's one of the reasons I've kind of used this, is I just feel like it holds the instru...the situation just a little bit better. I've got some vessels in the back we're going to need to get with that Harmonic.

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MELANIE A. MARTIN, MD: And that...that's the left side there/

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CRANSTON J. CEDERLIND, MD: That's right.

JENNIFER: What would you like?

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CRANSTON J. CEDERLIND, MD: My Harmonic. There we go. The Harmonic is...is a wonderful instrument. This little active blade down here is actually a vibrating blade that moves at about fifty-five thousand little vibrations a second. And what this ends up being is actually a mechanical energy. And so when the inactive blade is closed up here, it's basically coagulating tissue through a mechanical...actually works on the protein inside the blood vessels to cauterize. It does a good job and it does a great job of cutting across here.

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And what we're going to do now is see if we don't have these vessels enough that I can use this Harmonic to work my way across here. And, that's the plan. So I'm going to do this...Jennifer, you're ready to relax there for me. It works almost like a small little clamp and...Yeah, relax there guys. Yeah, thanks. And so that's what we're kind of doing right now is working our way. Just letting the instrument itself work its way through the vessels here.

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MELANIE A. MARTIN, MD: Here's a good one. Hi, Dr. Cederlind. Just saying my family is watching and wondering if this is exactly the procedure I will be receiving in the morning?

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CRANSTON J. CEDERLIND, MD: Yes, Leslie. Thank you...Thank you for checking in.

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MELANIE A. MARTIN, MD: She's glad you're practicing.

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CRANSTON J. CEDERLIND, MD: Yes. Well, that's good. That's funny. Let's see here where....

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MELANIE A. MARTIN, MD: How many cc's of blood do you lose in this surgery?

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CRANSTON J. CEDERLIND, MD: Well, we're already above what I'd like to see. We really basically do a pretty good job of not seeing too much here at all. Let's...Jennifer, why don't you pop loose if you could there. So it's really a fairly...fairly bloodless situation. We've had a uterine manipulator in and right now we're going to try to loosen that up. And, Cori, could you just bring that toward me there. Yes, please. It's really---

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MELANIE A. MARTIN, MD: I would....

CRANSTON J. CEDERLIND, MD: I'm sorry.

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MELANIE A. MARTIN, MD: In answer to that question, I would guess that the average is less than a hundred cc's, which is nothing.

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CRANSTON J. CEDERLIND, MD: Right. Thank you. That's...that's probably appropriate. As you know, we've kind of looked at some studies here on some of these and some of the blood supply...some of the blood loss is depending upon the city and places. There's a little bit more and I want to get that vessel there if I can here. Let's see if that will hold.

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MELANIE A. MARTIN, MD: We have some slides later.

CRANSTON J. CEDERLIND, MD: This is back-bleeding from that uterine artery here.

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MELANIE A. MARTIN, MD: We have some later that if we have time we'll get into some of the larger studies that have been done across the country comparing blood loss and comparing operating times, and things like that.

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I think another question that has been asked is, what kind of complications have been associated with this procedure. And as you can see from watching where we're operating, there's always the possibility that you could damage the bladder. Although, with this...with going above the bladder itself the chances for that are much less. Dr. Cederlind talked before about the...the ureter. And that's that tube that goes from the bladder down...or, from the kidney down to the bladder. And so if you're not going to get down in the bladder, the chances for damaging that tube are much less.

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There's always the chance for damaging the colon when you insert these trocars, because that's sort of a blind procedure and we...You may notice that the patient is sort of tipped

with her head down, and that helps to get all of the bowel up and out of the way when we put in the trocars. But that's always a possibility is that you could hit something that you didn't know was adherent under there.

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You know, one of the reason that we do this procedure is that we do it on people who've had prior abdominal surgery. And you always have to worry a little bit about what might be stuck up under there. So, we...we take all the precautions that we can and sometimes we go in...instead of just putting in the trocar we make an incision and we cut down to it and...and place the trocar in under direct visualization. They also make specific trocars that are designed so that you advance them very slowly and that you can see what tissue you're going through as you insert the trocar.

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CRANSTON J. CEDERLIND, MD: Melanie, have you got a slide there on that...

MELANIE A. MARTIN, MD: I do.

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CRANSTON J. CEDERLIND, MD: On that...We've done some of the ones on risks and complications there.

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MELANIE A. MARTIN, MD: Right. Let's see if I can find that. Here's a slide that talks a little bit about the impact on...on cervical...precancerous cervical changes. You know, we used to try to take the cervix out all the time whenever we did a hysterectomy. But with the current methods of detecting precancerous changes on the cervix, we feel that we don't have to be quite as obsessive about getting all those cervixes out.

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The current lifetime risk for someone to have cervical cancer is less than half a percent if they've had their normal Pap Smears. Now, again, you have to realize that this is someone who doesn't have new exposure. You know, somebody who's in that stable monogamous relationship. But after three normal Pap Smears, you really only have about a half a percent change of having...of getting cervical cancer.

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Another question that somebody might ask is, well, does it increase your risk for having cervical cancer after a supracervical hysterectomy? You know, is there anything that, you know, messing around with the uterus or messing around with the cervix might increase that risk? And the answer to that is no. But if you still have your cervix, you still have to do periodic cervical screening.

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CRANSTON J. CEDERLIND, MD: Melanie, what's your experience on when you've seen these the next morning to go home on...on---

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MELANIE A. MARTIN, MD: Oh. They do great. And, in fact, with the...with the supra-cervical laparoscopic hysterectomies, I would imagine that before long we will be doing these...or, we probably already can, do them as an outpatient and if the patient stays three or four hours after the procedure. We're not quite there yet. You know, we...we sort of still like to see them the next day.

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But, most of the time by that evening when you go by to see these patients, they are able to empty their bladder, they're up and around. They're eating. And the next morning when you arrive at eight o'clock in the morning they're packed and ready to go. They don't require much pain medicine. We don't usually even had to use narcotic pain medicine with them. A little bit of...a lot of them go home just on Motrin or Ibuprofen or naproxen.

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And...and there actually are some case studies where, you know, they talk about with the supracervical laparos...the supracervical hysterectomy that they're pretty much back to normal activity, including sexual activity, within a week.

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He's...They're cutting across the cervix right there.

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CRANSTON J. CEDERLIND, MD: I'm sorry. Yes, I'm sorry. We're right...I'm sorry, we are amputating the uterus off the cervix. I was getting excited about post-op care already. We're taking the uterus right off the top of the cervix here and working our way across with the Harmonic Scalpel. And as I said, I really like this instrument a lot. It's made Ethicon, who is a division of Johnson & Johnson. And, Ethicon has been extremely supportive of all sorts of laparoscopic surgery, and this is a very excellent instrument and it does a great job of coagulating across the cervix.

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There are other instruments and...that will do this, and I've seen a couple, but this certainly gives us...Kind of come to my side, Cori, if you don't mind. The...It gives us hemostasis and just...As you noticed, I think we buzzed the uterine artery two to three times, both of us. It's just...and it just may be my...my concern for being sure everything is hemostatic in here. But, this surgery can be done completely with just the Harmonic Scalpel without a problem.

00:33:04

Lift that just a little bit, Cori. So, we're just about, hopefully, getting close. We're trying to meet in the middle here, in terms of where we are. Just kind of relax that a little bit.

00:33:17

MELANIE A. MARTIN, MD: You can see how white the uterus has gotten. And that's just because there is no longer any blood flow to it. And they're coming right across the top of the cervix there.

00:33:33

CRANSTON J. CEDERLIND, MD: Let's go back that way just a little bit there, if you wouldn't mind. That should be good. And, it's important that we try to meet in the middle here with our...with our dissection here. And the uterus has been detached. And we're going to clean this up here a little bit. We need a little buzz here in a couple of spots. We're going to clean this up.

00:33:56

And as I mentioned earlier, there's three parts to this little surgery. And the first part was learning the...just the dissection and making sure that everything was hemostatic from the ovaries and everything. And then the second part was this amputation right here; getting these vessels covered and being able to amputate this off safely. Maybe one little buzz with the EnSeal right there.

00:34:23

And then the last thing was removing this uterus, which you now see is sitting here detached. And, the surgery didn't do any good at all if what we did was detach it and then had to still make a big incision to remove the uterus. So, the next step in this whole situation was the morecellator, which basically takes this uterus into small parts. And, in a second we'll introduce that. We're just going to cover this one little bleeding spot and probably come back after those that we can in a bit. But I'll put the morecellator through in just a minute.

00:34:59

I'm sorry. I'm grabbing with that. I should be grabbing with this. And we should be able to remove this uterus without much problem here. Maybe sideways on it. I'm thinking sideways back behind that one spot. See, there's that artery. Just grab right there. Yeah, I like that.

00:35:19

MELANIE A. MARTIN, MD: We have a question about what kind of uterine manipulator did we use.

00:35:23

CRANSTON J. CEDERLIND, MD: Right. I've been using...it's called a RUMI. It has a little plastic thing that goes up inside the uterus. There's lots of different ways to manut...maneuver the uterus. Dr. [McKarose?] in Celebration [Forward?], doesn't even use a manipulator, and that's probably appropriate too, but I tend to like the manipulator because it really does give me a chance to move...especially the bulky uteruses.

Because...Cori, can you hold that for me, please?

00:35:53

And right now I'm introducing the morecellator and it's just back through that same port or trocar hole. Especially the bulky uteruses. Size doesn't seem to be our problem on our uteruses as is mobility. If we can get to the vessels then we have done well. If we can't get to the vessels, then it's hard to do the surgery. And I'll be working this way through there. Very good. Now, the morecellator is just an extremely nice instrument for just what we're doing right here.

00:36:27

Now at this point Dr. Cooper has to control the...the camera and then she has to actually feed me the uterus. And the reason for that is, is because this morecellator is a lovely instrument, it's a very dangerous instrument. You've got to be very careful with it and there's a tendency to want to move this around looking for things, but I have to keep this very still and straight because, as you'll see here in a second, it's got a very active blade in it and Dr. Cooper has to keep that right in my area as we start taking this uterus apart and she'll start handing me pieces.

00:37:03

And, one thing I'll point out here very quickly is the fact that this is very important that this lady, and any patient, does not have any sort of cancer in her uterus. So it's important to have a sample of the inside of the tissue. This lady had a previous D&C, so we know that she did not have a cancer in here. But, obviously, you would not want to be morecellating and dissecting and pulling apart a cancerous uterus.

00:37:34

And, the uterus comes out in a long...I know that's probably not very pretty, but that's...that's what it comes out looking like. And, we'll hopefully be able to remove this one right through... Now, this uterus isn't much of a challenge for this morecellator. Some of the big fibroids that we have will calcify and even though this is a wonderful instrument every now and then we've actually had to trade out because we've actually dulled the blade getting out some of the larger uteruses. But, as I said, size doesn't mean as much as actually just being able to get to those uterine arteries.

00:38:19

MELANIE A. MARTIN, MD: One of the questions that has come in is, what are the contraindications to supracervical hysterectomy? And, one of the biggest ones is inability...If you can't get to the uterine vessels, you cannot do this procedure. Obvious other contraindications to supracervical hysterectomy would be premalignant or malignant conditions of the cervix or of the uterus.

00:38:57

Prior abdominal surgery, such that you could not access the intraabdominal cavity would be a relative contraindication. He's just pulling out additional chunks there.

00:39:14

CRANSTON J. CEDERLIND, MD: Right. Just working this. You might as well mention...I didn't mean to interrupt your follow there, Mel, but I'm going to point out here in a second that one of the real problems...not problems, but things that have to be done here is that we have to get all of these pieces out. As you'll see, we now have some pieces down below

there. There are many documented cases in the literature now of people growing fibroids in their intestine or on their liver because a small portion of this is left behind.

00:39:45

I know it seems hard to believe that this...a little fragment like that could actually live and survive and grow a big fibroid, but there are. And so we are going to be really careful here in a minute about getting all these pieces out. And we'll get out a large irrigator that will suck pieces out. But it's just important that we get every small piece of uterus out.

00:40:07

Normally we're...we're pretty good, but sometimes we really do have a lot of little fragments because of the size of things. Let's see, Cori, is there...Oh, there's a good piece. So, we're really careful about that. As Dr. Martin was pointing out, I mean, we're watching things and none of these complications we're talking about have we ever experienced. Dr. Martin is an experienced supracervical hysterectomy person. So is Dr. Cooper. Dr. Chris Lynch in our office practice can do this surgery as well as we can too, and we've really not seen any...any problems with the things that we're sort of talking about.

00:40:47

Is that a piece right there? I think there's a piece right there.

CORINNA COOPER, MD: Just right there.

00:40:51

CRANSTON J. CEDERLIND, MD: Yeah. Has anybody asked about spotting or bleeding post...

MELANIE A. MARTIN, MD: Afterwards?

CRANSTON J. CEDERLIND, MD: Yes.

00:40:59

MELANIE A. MARTIN, MD: No. Amazingly enough, no one has asked that, but we---

00:41:01

CRANSTON J. CEDERLIND, MD: Well, then we probably shouldn't either. So should we ignore that?

MELANIE A. MARTIN, MD: We shouldn't talk about that?

CRANSTON J. CEDERLIND, MD: Oh, okay, let's talk about that.

00:41:06

MELANIE A. MARTIN, MD: No. Obviously, when you leave the cervix in and when you come across the top of the uterus like that, sometimes it's difficult to be certain whether you have truly gotten all of the uterus. And there is an incidence of people having regular cyclic bleeding after having this procedure done.

00:41:26

And in reviewing the literature we've seen quoted rates everywhere from five percent to twenty percent. I can't imagine if twenty percent of your people were still bleeding afterwards that you wouldn't need to reevaluate how you were doing it. But...

00:41:42

CRANSTON J. CEDERLIND, MD: Melanie, have you actually even seen anyone, of...of the patients that we've done? Have you seen any back yet?

MELANIE A. MARTIN, MD: No.

00:41:48

CRANSTON J. CEDERLIND, MD: That were spotting a bit?

MELANIE A. MARTIN, MD: I haven't seen anybody who was bleeding. No.

00:41:52

CRANSTON J. CEDERLIND, MD: No. It's kind of hard to tell exactly what the...where those percentages are coming from, but we certainly haven't seen that much at all. But we're going to irrigate out here to make sure we don't have any little pieces floating around here.

00:42:06

MELANIE A. MARTIN, MD: I have a comment here. I'm thirty-four years old and had an LAVH, and it looks like bilateral salpingoophorectomy, in May of 2007 due to advanced

endometriosis and numerous large fibroids. I was told I still needed Pap tests even though my cervix was removed. Why would this be? Well, if you had ever an abnormality on your Pap, you should still be followed because the top third of the vagina develops from the same tissue embryologically as the cervix. So, people who've had abnormalities on their cervix can develop abnormalities of the top of the vagina.

00:42:45

Also, there are things that you can't see. I mean, there can be primary vaginal cancers. There can be melanomas and other kinds of skin cancers of the vulva. So, you still need to have an exam at least periodically. But like we talked about earlier, if you've gone three years with normal Pap's and you have no new exposure, you can probably relax on that somewhat. And she says, p.s., I can say for me sexual function, including orgasm, became better now that I'm not in pain or bleeding constantly anymore. So there you go.

00:43:18

CRANSTON J. CEDERLIND, MD: Well, she has a good point in the fact that that's why it's difficult to analyze this, because when they even talk to total abdominal hysterectomy patients that were having a horrible time with bleeding, pain, discomfort...I'm going to get in the cervix now. That, yes, they all are better. I just do not see people coming back after any kind of hysterectomy and they basically are very happy.

00:43:43

Right now we're cauterizing the end of the cervical canal. This is a place where if there's going to be some spotting that possibly this might be the area. So I'm trying to cauterize inside here. We've actually kind of almost done like a reverse cone down into the cervix. But, as Dr. Martin was pointing out, even when we are successful in getting this completely out and cauterizing this little in sort of the [word?], it seems like that some people, in the literature, tend to have some spotting and bleeding.

00:44:14

But we...I just...A I said, we're giving you observational information, not actual studies from the practice of Johnson County OB/Gyn. We just don't see it that often. I think that's clean, Cori. Another little thing that Cori and I were just talking about a second ago is that I've had some...I've had some people that have been told, oh, you can't see as well with the laparoscope. You can see better with a giant incision. Well, I think it's pretty obvious that we can actually see tons of things better with our laparoscope than we can see with a small incision down here by where a C-Section was. So, this really, actually, I think we have better visualization of everything we're looking for right here.

00:44:59

MELANIE A. MARTIN, MD: Well, and you have some degree of magnification with the laparoscope. So you can see small vessels that you might really not see very well looking with your naked eye.

00:45:07

CRANSTON J. CEDERLIND, MD: Right. We're going to let the pressure off. The pressure inside the abdomen from our CO2 is about fourteen. And Tina is going to turn it down to about six now, basically, because there are times when our pressure is holding back a small blood vessel. As you notice now, these arteries are really beating. This is the iliac artery and the pressure was actually making that stop. So we want to be sure that we don't have any little arteries here, or any little bleeding sites.

00:45:37

The whole point of this procedure is the...the blood loss is so small. We've got to make sure that there aren't any problems afterward. And I think you can see this little uterine artery right here that's been cauterized and it seems to be just fine. And if the pressure is running less than six-ish right now, so I'd have to say that that looks awfully dry to us.

00:45:58

One of the things we do too is that we put a little adhesive barrier in here. There...Some people do this, some people don't. But, there have been some reported cases of this raw

area down here, as it heals...Reduce it, please Jen. Where maybe a piece of bowel, or something, might stick to this. So, this is called intracade and it's...covers that area that we were just working in. And within about twelve hours...

00:46:32

This is actually a very viscous, sticky, slick area so that nothing can stick to it. Let me pull this piece down here. Okay. And so this kind of covers it up here. There's a...There is a piece of uterus. There we go. Hello. I think that came out of the trocar there when I was pushing it through. Take a look up under her liver and let's do that just to make sure we didn't leave fluid or anything that we need to get out up here, or pieces of uterus.

00:47:06

MELANIE A. MARTIN, MD: And you can see how clean that is and how they didn't really even come anywhere near the bladder. One of the questions here is, if you experience a problem with your bladder after surgery can Kegel exercises return it back to the way it was? Well, Kegel exercises are a way of strengthening the muscles of the pelvic floor. It sort of depends on what the issue is with your bladder. If you lose a little bit of urine with laughing, coughing, sneezing, strengthening those muscles can help with that.

00:47:40

If that...if your issue is a significant one that you are having to wear a pad, it's probably going to have to be surgically corrected. There are some other more minor issues that people can have after hysterectomy. Sometimes for a short time people experience a little bit of change in the way their bladder works, just because of having operated in the area. But most of the time that returns pretty much to normal if there wasn't an issue before.

00:48:11

But if you're contemplating having this surgery and you're having any issues with the bladder, you want to be sure and mention that to your surgeon so that that can be thoroughly assessed and...and any additional bladder procedures that might need to be done could be done at the same time.

00:48:29

CRANSTON J. CEDERLIND, MD: Melanie, Right now I'll just mentioned this as we're quiet there. Anesthetist just injected the patient with a little blue dye called indigo carmine and after we're done here in a second I'm going down below to check the bladder and the ureter function, even though I think pretty obviously we did not get anywhere near or have any problems. We always just double check that to be sure that there aren't any problems with the bladder, so that's our next step.

00:48:54

Right now we're going to close this one area, this port, which is one of the areas. This is where the morcellate went through; and the morcellate is a fairly big instrument, so we have to be sure that we don't...I think it's coming out behind there. Okay. There you go. This little instrument is a suture and I'm passing it through, and Dr. Cooper is going to pull it through. And...I've got the string, before you give it a jerk. And...probably the other side. And, this just allows us to close up this area and close the fascia so that this patient doesn't end up with any....

00:49:34

MELANIE A. MARTIN, MD: With a hernia.

00:49:35

CRANSTON J. CEDERLIND, MD: A hernia. Thank you. I knew there was something. I knew there was something going to happen. Thank you. So we're going to close ports now and basically we've done her [all pretty?].

00:49:49

MELANIE A. MARTIN, MD: But that's the only port that's bigger than five millimeters, so if you think about it, I mean, that incision there is about...a little over a centimeter and the other incisions are half of that, or less.

00:50:04

CRANSTON J. CEDERLIND, MD: Okay on yours Cori? So we're going to pull our ports out and close up. That will take us a couple of minutes or so.

00:50:19

MELANIE A. MARTIN, MD: There's a question about, I have a tilted uterus. Does that make hysterectomy more difficult? No, not unless it's...it's adherent and unable to be moved. What Dr. Cederlind was talking earlier that mobility of the uterus is very important. As long as we can use that manipulator and move the uterus side to side, that shouldn't be a problem.

00:50:40

Another question about a bicornuate uterus. Would that present any problems as far as this goes? No, as long as you could get to both horns of the uterus this way. Have you ever had a case where the uterus is too calcified to use the morecellator? Never had one that it was too calcified, but I think Dr. Cederlind sort of hit on this that some fibroids are more calcified than others and sometimes we go through more than one instrument in trying to chew up a uterus.

00:51:09

Somebody asks, what is the yellow substance the surgeons are operating around? And I think what you're talking about is the omentum. It's a fat pad that sort of lays over the intestines. But that's that bright yellow, aprony looking thing. Most of the yellow stuff in there is fat.

00:51:27

CRANSTON J. CEDERLIND, MD: Which we all have.

MELANIE A. MARTIN, MD: Yes.

CRANSTON J. CEDERLIND, MD: It does not mean this patient...no. No. We all---

00:51:30

MELANIE A. MARTIN, MD: No. No. We all have that fat in there.

CRANSTON J. CEDERLIND, MD: That's right.

00:51:34

MELANIE A. MARTIN, MD: Can this technique be used for selective lymphadenectomy and who is the ideal patient for this new technique? The robot can be used...has been used more for lymph node dissection in...in cancer cases. Although gynecologic oncologists are using it. The urologists are using it to sample the lymph nodes that lay up and down along the aorta and behind the peritoneum. But, yes, definitely the robot, which is not what we demonstrated here today. But the robot has been very important in...in lymph node sampling, yes.

00:52:16

Did I mention bleeding after the surgery, Doctor said, from bruising? What would cause bruising after the surgery? Well, when we put those trocars...I assume you mean of your abdominal wall. When we put those trocars in, we go through muscle and it's kind of a blind procedure.

00:52:36

It's a blind procedure and you can hit a small vessel in the abdominal wall. And sometimes that bruising doesn't reach the surface, you know, for a couple of days. So sometimes people are already home when they notice a little bit of bruising around a port site. But that's really nothing...nothing unusual. Occasionally you can hit a big vessel and sometimes that bruising can extend all the way around the back. But that's, again, unusual.

00:53:10

What percentage of procedures require the use of two morecellator blades? I would say not very many, unless you do have a really big uterus. And I think that's....And here we....here we have one from Shannon Cederlind. Who was that fantastic surgeon?

00:53:37

CRANSTON J. CEDERLIND, MD: I'm the one that paid for her education, paid for her cars, paid....

00:53:44

MELANIE A. MARTIN, MD: This question is, my doctor recently gave me this option as one...as none of the medications are working for control of my PCOS. That's polycystic ovarian syndrome. Would I be a good candidate for this procedure? Can the ovaries be removed as well in this procedure? Yes, they ovaries are...can be easily removed in this procedure. But as a thirty year old, I would not recommend having your ovaries removed. You...you need them to give you estrogen and progesterone and testosterone. You need to keep your ovaries.

00:54:19

If you're having a lot of problems with dysfunctional bleeding because of your polycystic ovarian syndrome, this would be an option. But generally, if the...if the hormonal abnormalities are controlled, the bleed...the bleeding comes along. It's just sort of a long process. I don't know what all medications you have tried, but I would certainly encourage you to explore every medical option before you have your uterus removed at age thirty.

00:54:48

CRANSTON J. CEDERLIND, MD: And...and ovaries.

00:54:51

MELANIE A. MARTIN, MD: Yeah, don't have your ovaries out. Has anyone died from cervical cancer? Yes. Lots of people have died from cervical cancer. I don't know if what you mean is has anybody died from cervical cancer after this procedure.

00:55:08

CRANSTON J. CEDERLIND, MD: No. There are no documented cases. No.

MELANIE A. MARTIN, MD: Cases.

00:55:11

CRANSTON J. CEDERLIND, MD: There are approximately four thousand deaths a year from cervical cancer. And I remember at one conference I went to someone was saying, my gosh, we've got to take the cervix out so they don't get cervical cancer. But they are just as many deaths from vaginal cancer. So, the point being, cervical cancer is a fairly rare situation in someone who is...where the follow-up...where you can see the patient and follow-up.

00:55:37

Dr. Martin alluded earlier that the person that we would not want to be doing something on leaving a cervix behind is someone we thought was maybe unreliable and would not come back to the office for their Pap Smears on a consistent basis. That's the type of person that even if they wanted to retain cervix it would be best to probably make sure that we take the cervix out.

00:55:56

That was non-voided. If you can see it, that's fine. If you don't want to, I'm okay with that one. Do you want to do those?

00:56:09

As I said, I'm going to go down and take a look in the bladder right now, which will just take a couple of minutes. Just as sort of a summary before we do go off the air, this patient will do extremely well and it's very impressive. And it's fun for us as surgeons to do this type of surgery because of how well the patients do. And I think that that's really been a reward for us too.

00:56:32

She'll be back at work. She has...she does have a sit-down job, but she'll back at work probably by the mid-portion of next week. And when I see people back in the office – that's a two week checkup – they're usually...usually going about eighty-five or ninety percent of normal activity by that point in time. So, I think that it's a...the surgery is not for everyone. It certainly is a surgery that has it's place.

00:56:56

Laparoscopic surgery is certainly something that should be looked in to. In fact, I would suggest that if anyone recommends that someone have a total abdominal hysterectomy that they at least pursue the option possibly of having minimal invasive surgery done, because it certainly is a reward for both us and the patient to do these type of surgeries.

Mel, do you have a follow-up?

00:57:19

MELANIE A. MARTIN, MD: Nothing really, other than just to expand a little bit further upon what you said in that everybody's definition of what is a big uterus is different. And some gynecologists will feel that they can't take out anything that's, you know, bigger than somebody who's about eight weeks pregnant, unless they make an abdominal incisions. And I think we are doing, you know, uteruses that, you know, eighteen week size. You know, almost up to the bellybutton. And those are...those are really...It just offers such a huge advantage to the patient.

00:57:54

So no matter how big your uterus is, I would...I would advise you to get another opinion and make sure that it can't be done laparoscopically before you have an abdominal procedure done. Now, certainly, if you have something that's malignant, you need to have it done abdominally. If you have a cancer, it needs to be done abdominally.

00:58:18

That's about all the time we have, I think. I want to thank you all for joining us. It's been a minimally invasive supracervical hysterectomy performed live from Shawnee Mission Medical Center in Merriam, Kansas. I'm Dr. Melanie Martin, and on behalf of Dr. Cederlind and Dr. Cooper, and all of the fine surgeons and staff at Shawnee Mission, thank you and good night.

00:58:37

CRANSTON J. CEDERLIND, MD: Thank you very much.

00:58:44

NARRATOR: This has been a laparoscopic supracervical hysterectomy performed from Shawnee Mission Medical Center in Shawnee Mission, Kansas. OR-Live makes it easy for you to learn more. Just click on the "Request Information" button on your webcast screen and open the door to informed medical care.

00:59:08

[End of Webcast.]