Advances in the Treatment of Cervical Cancer
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Introduction

Andrew Schorr:
This year it’s expected there will be about 11,000 women in the U.S. who will be diagnosed with cervical cancer. Now HPV or the human papillomavirus is most commonly the cause of cervical cancer, and of course now there’s a vaccine for it. Coming up next Dr. Pamela Soliman of M.D. Anderson and her patient will discuss the latest in the advances, treatment, and prevention of cervical cancer.

Hello and welcome to Patient Power sponsored by M.D. Anderson Cancer Center. I’m Andrew Schorr. Well there’s been a lot about all kinds of screening for breast cancer and even cervical cancer. We’re going to discuss that in greater depth, and also if someone is diagnosed with cervical cancer, as it is expected about 11,000 women will be in 2009, we want to help women understand what the options are and certainly prevent fatality. Now unfortunately there are about 4,000 women who die each year with cervical cancer, and there are lots of things going on to help reduce the incidence of cervical cancer. One of them is the vaccine that’s now available for girls and younger women, and we’ll talk about that too.

Somer’s Story

Andrew Schorr:
First I want to introduce you to what I think is a younger woman, a lot younger than me, 31-years old, who was in fact treated for cervical cancer, and that is Somer Vertucci who normally is in Texas, but she is with her friends and family visiting in New York City at Thanksgiving time ready for the Macy’s Parade. Somer thank you for taking time out of your family vacation to be with us and to help others understand cervical cancer.

Somer:
Sure, no problem. Glad to do it.

Andrew Schorr:
So Somer you’re 31-years old, and about a little over a year ago you were treated and had surgery that we’ll talk about that has preserved your fertility we hope, and you’re engaged to be married next year, and so fertility is certainly important. You want to have a family.
We’re going to talk about that, but let’s back up because we talked about how cervical cancer is so often connected with HPV. You had sort of an HPV scare years ago in college, right?

Somer:
I did. I went in for a regular yearly Pap smear, and this particular time it came back abnormal, with some abnormal cells, and also positive for HPV. So I had to go back into the office for some further testing.

Andrew Schorr:
All right, and that’s all the appropriate procedures, and you were having Pap smears and trying to be as healthy as you could be. Now we should mention that they say just about anybody who’s sexually active may well be exposed to HPV and have it at some point, but typically your body kind of clears it out. In your case then you had some exams and then later came back for a repeat Pap smear. What did it show then?

Somer:
On the follow-ups everything appeared to be normal. I had normal Pap smears from there on out.

Andrew Schorr:
All right. So that’s like 1999, you’re finishing college, you go on and have regular well-woman exams and Pap smears; negative, negative, negative; everything’s fine. What happens in 2008?

Somer:
In 2008 I went in for my regular yearly exam, and it came back with an abnormal result, and so I thought just like before, go back in for further testing, and have a colposcopy and a biopsy and do some further investigation.

Andrew Schorr:
Right, and I know it’s been this way most of the time in my life, although I am a leukemia survivor, but up until that I was used to just well we did the test, negative, no worries, see you later, right, and that’s what you expected.

Somer:
That’s right.

Andrew Schorr:
What happened? What call did you get?

Somer:
My doctor actually asked me to come in and talk to her that day, which was a little disheartening, and she discussed with me the results which showed an adenocarcinoma, which she explained to me wasn’t necessarily even a pre-cancer, but there was some cause for concern.
Andrew Schorr:
Now we should mention that you’d been around M.D. Anderson before because you’d actually studied there and also that you work in the pharmaceutical industry, so you were pretty savvy about the whole medical process and disease and genetics and now suddenly it was happening to you.

Somer:
That’s right. This was my first time experiencing being the patient and not the investigator.

Andrew Schorr:
All right. So you’re then connected with a gynecologic oncologist, a surgical oncologist who we’re going to meet in just a second. That’s got to be, I mean M.D. Anderson makes a lot of strides to lower people’s anxiety, but I’m sure your heart was beating fast as you were going down this route.

Somer:
It was. It was very nerve-wracking especially having worked there and been a student there and even being familiar I was still nervous.

Andrew Schorr:
And you’d done everything you thought you should. You’d been having exams for years.

Somer:
Yes.

Andrew Schorr:
Okay. Well let’s meet your doctor who helped you, and then we’ll continue the story. That’s Dr. Pamela Soliman. She’s an assistant professor of gynecologic oncology. She’s a surgical oncologist at M.D. Anderson. Dr. Soliman, so here’s a woman who, I know it’s not always the case, there are many women diagnosed with cervical cancer who have symptoms and they come to you; here’s a woman with no symptoms. What was actually being found by the pathologist? Would there have been any way that Somer could have known herself?

Dr. Soliman:
The reason we do a screening test like a Pap smear is that fortunately in most cases we’re able to either pick up an abnormality before it becomes a cancer, so sometimes we pick up a dysplasia or just the abnormal cells, or in patients that do have a cancer we’re often able to pick up the cancer at a very early time before a patient would ever have symptoms.
**Diagnostic Testing and Treatment Options**

**Andrew Schorr:**
So what would have been the size, if you will, of these cells at this point? Are we talking about something that could actually be seen easily or really, really tiny?

**Dr. Soliman:**
Actually in this particular case it was not, you weren’t able to see it. For example if she had just had an exam where you look at the cervix to see anything abnormal, we wouldn’t have seen anything abnormal. So when you do the Pap smear that takes a brushing of some of the cells on both the outside part of the cervix as well as the inside, and then when those show up abnormal then you have to go on and do more of what we call a diagnostic test. So typically the workup for an abnormal Pap smear starts with a colposcopy.

**Andrew Schorr:**
What’s that?

**Dr. Soliman:**
Essentially a colposcopy is an outpatient procedure where we do a speculum exam just like we’re going to do a regular Pap smear. We put some acetic acid, which is a vinegar-like solution on the cervix, and then we look at the cervix under the microscope. Basically what the vinegar-like solution helps identify is any areas that may have abnormal cells that you can’t see with the naked eye. So when you look under the microscope there are areas that turn whitish, which are often some early dysplasia. Sometimes you can see some new blood vessels that you wouldn’t be able to see without a microscope, and then that helps guide the physician on where the abnormal areas are so we can do a biopsy and see if there’s an underlying cancer or an underlying dysplasia.

**Andrew Schorr:**
So you’re looking for whether there are sort of cancer cells hiding at a deeper layer?

**Dr. Soliman:**
It’s just that they’re so small that you can’t see them with the naked eye. The colposcope and that technique helps highlight areas that may be abnormal, and then when you do a biopsy you take that piece of tissue and send it to the pathologist, and then they’re able to look under the microscope and let you know whether it’s a cancer or whether it’s a pre-invasive lesion like a dysplasia.

**Andrew Schorr:**
All right, so there are a number of terms I want to go over. So there’s precancerous, and I know like those of us who have had colonoscopy we know that those polyps can be precancerous.
Andrew Schorr:
So talk about that, and then there are these terms that have come up related to adenocarcinoma and then also squamous cell carcinoma. So help us understand sort of this continuum or connection.

Dr. Soliman:
Yes, so when you talk about pre-cancer or a dysplasia, basically what that means is there are some abnormal cells on the surface that have not gone into the deeper tissues of the organ that you’re talking about. So you know you kind of alluded to a colonoscopy. So we see polyps that have hyperplasia, which means that there’s an overgrowth. It’s only caught in cancer when those abnormal cells go below what we call the basement membrane, which separates the surface from kind of the underlying structures of the organ.

If you’re talking about cervical pre-cancer, we often call them dysplasia or sometimes you’ll see the terminology CIN 1, 2, or 3, which means a cervical intraepithelial neoplasia. Again that means that there are some atypical cells on the surface that haven’t gone into the deeper tissues. So those are non-cancerous.

Once you see these abnormal cells go into the basement membrane or into the deeper tissue, that’s when it’s called a cancer.

Andrew Schorr:
All right, and what’s an adenocarcinoma?

Dr. Soliman:
When you’re talking about the cell type, the most common abnormality in a cervix is a squamous abnormality. Squamous cells are the normal lining of the outer portion of the cervix. So when those cells become abnormal you can have what we call a squamous dysplasia or an abnormality of those types of cells or a squamous carcinoma when those cells become abnormal and then invade the basement membrane. So squamous is actually the most common and makes up about 85% of cervical cancers.

Adenocarcinomas are when you have the glandular cells in the cervix, those are typically the ones that are in the cervical canal, not necessarily on the outside, and then they also can become abnormal and turn into a cancer, and we call those adenocarcinomas.

Andrew Schorr:
Now Somer, when you heard the pathology report on you, you felt that, not that you were happy at all with the diagnosis, but you felt there was something discovered that maybe wouldn’t have been, and you thought that was fortunate. Maybe you could explain that.
Somer:
I have always felt that if it hadn’t had been for the adenocarcinoma, for that diagnosis, which the treatment for that is a LEEP cone, which is another in-office procedure that I had done at M.D. Anderson, that we wouldn’t have found the squamous cells as quickly as if I had just maybe just kept going to just having my normal Pap smears.

Andrew Schorr:
Doctor let’s talk about that. So here’s a woman though that was being followed or had regular procedures, so is what happened that there were two types of cancer cells identified with Somer?

Dr. Soliman:
There was actually in kind of looking back at her pathology she, initially when she had a biopsy she had something that we call an adenocarcinoma in situ, which is a type of pre-cancer of the gland cells. Now like Somer said because she had that abnormality then that led to the next procedure. So a LEEP cone or sometimes patients will have a cold knife cone which is essentially a bigger biopsy of the whole outer part of the cervix so that if there is a cancer you can not only pick it up but that potentially could also be treatment. So her initial biopsy with the adenocarcinoma in situ then led to the bigger procedure that gave us the cancer diagnosis.

Now as far as the cell type, she didn’t actually have two cancer types, but she did have some of the what we call squamous dysplasia, so there were some abnormal squamous cells, but the actual cancer itself was an adenocarcinoma. So one type of cancer but there were also abnormal squamous cells as well.

Andrew Schorr:
All right. So related to this LEEP cone or knife cone, so that procedure, can that be done in the office typically with or without anesthetic? I’m sort of thinking of a continuum of ways you get at these cells.

Dr. Soliman:
Yes, like I said a LEEP procedure, which is you use a loop electrocautery, so it’s an instrument that we can use in the office without putting someone under anesthesia where we can actually do a larger biopsy of the cervix and have minimal bleeding. So oftentimes they can be done in the office. Depending on the practice sometimes these are also done as an outpatient procedure like in a surgery center. Part of that depends on the patient themselves. Some patients are able to tolerate this type of procedure as an outpatient. If an exam is really uncomfortable or it’s difficult to see, sometimes they will be done as an inpatient.

A cold knife cone is a little bit different. The goal of the procedure is the same, so to get a larger biopsy of the cervix but instead of using a cautery device we actually
use a knife. Because of that, that needs to be done in the operating room where anesthesia is administered because you may need to put in some sutures or do something to stop the bleeding.

**Andrew Schorr:**
In a case like Somer’s, so you’re trying to say well what am I dealing with, I want to get these cancer cells out, but I also want to know the full extent. At M.D. Anderson, what tests would you do to try to understand what you have?

**Dr. Soliman:**
I think for cervix cancer or dysplasia really the most information that we can get is from the actual biopsies and your clinical exam. We do the biopsy to know well is this is pre-cancer or is it a cancer because the treatment would be different. Once a cancer is diagnosed then we assign a stage to the cancer really based on a physical examination. So what that includes is doing a pelvic exam, so taking a look at the cervix to see if you can see anything that’s abnormal. You do a manual exam to see whether you think the cancer if it’s visible is in the cervix alone or whether it’s spread to some of the local tissues and to see whether the bladder or the rectum are involved because that will help you identify what stage the patient is, how extensive their cancer is, and what are the best treatment options for them.

**Andrew Schorr:**
People who listen to our programs with M.D. Anderson on a variety of cancers also hear about CT scans and a variety of others, PET scans, but it doesn’t sound like it comes into play here.

**Dr. Soliman:**
I think one of the sort of issues with cervix cancer is that even though it’s, you know like we talked about there’s only about 11,000 cases in the U.S., it’s a relatively uncommon cancer here in the United States. Worldwide it’s the second leading cause of death for women. So it becomes a much more prevalent disease in third world countries.

Now the way staging is assigned we do it primarily on clinical exam for a couple of reasons. One is the way cervix cancer spreads is it tends to spread locally. So once a tumor starts in the cervix usually before it spreads outside of the pelvis it will spread to the vagina or to the tissue next to the cervix which we call the parametria, and so it’s often a locally spreading disease. So a lot of information can be obtained just on the exam itself.

Here in the United States part of what we do as a workup is also a chest x-ray because you want to know has there been any spread to the chest, and then depending on the size of the tumor sometimes we will get a CAT scan or an MRI to look at the lymph nodes and things like that, but that’s not necessarily part of the standard workup.
Andrew Schorr:
Somer, so you hear all this, we’re going back to 2008, and you start saying, ‘Well what are my options?’ You were a single woman at the time. You’re still single but now you’re engaged, and fertility was important to you. So as you began to find out your options, what were you expressing to Dr. Soliman that was important to you?

Somer:
I think what was most important first and foremost was how are we going to treat the cancer.

Andrew Schorr:
Beat the cancer, yes.

Somer:
And get rid of it. And then secondly of course fertility came into play because it’s a cervical cancer, and I think right off the bat she presented the trachelectomy option to me because we had found the cancer so early and because of my age and also being single.

Andrew Schorr:
And your hope of course is to have a family, and we’re going to talk more about that as we go on and also you’ll give some advice to other women as far as follow-up and certainly early detection if there’s something unusual.

Doctor, let’s just get an overview of procedures. We talked about what you might do in the operating room where it could happen or in the office first. This term that just came up, trachelectomy, what is that, and we’ll get into greater detail after we take a break in a minute, but what is it?

Dr. Soliman:
Essentially what a trachelectomy is, is where you essentially amputate the cervix or detach the cervix from the body of the uterus without doing a hysterectomy. So it gives patients the ability to keep the fundus of the uterus, which is where you would carry a baby, and still hopefully get the surgical margin around a cancer or a dysplasia.

Andrew Schorr:
All right, I just want to give people, and we may have some men listening too, just a little anatomical lesson for a second. So we have the vagina, but then the cervix is the opening, the neck, that leads to the uterus, correct?

Dr. Soliman:
Correct.

Andrew Schorr:
Okay, and when you do a hysterectomy, what are you removing?
Dr. Soliman:
So for a simple hysterectomy, which is a procedure that people have for all different reasons like fibroids or abnormal bleeding or some cancers, you remove the uterus itself; so the body of the uterus and the cervix, just those two parts. When someone has a cervical cancer typically we do what’s called a radical hysterectomy. So in addition to removing the uterus and cervix we also remove the upper vagina as well as what we call the parametria, which is the tissue that is essentially right next to the cervix on the inside.

Andrew Schorr:
And when you do a trachelectomy how is that different?

Dr. Soliman:
So when we do a radical trachelectomy we do the same thing we would do for a radical hysterectomy except we leave the body of the uterus. So we remove the cervix, the upper vagina, the parametria, again which is a tissue sort of adjacent to the cervix. So we cut out that block where the cancer is and spare the uterine body or the womb, and then we reconnect that to the upper vagina.

Andrew Schorr:
And what holds it together, if you will, if the cervix was kind of in between, what takes its place?

Dr. Soliman:
Right so what we usually do, most patients have this procedure because they’re interested in possible future fertility, and so like you said the cervix provides a lot of support to the base of the uterus so that when a woman does get pregnant that kind of helps hold the baby and the fluid and everything inside, so at the time of surgery we put in what we call a permanent cerclage which is a suture that we use to help give support to the base of the uterus, and then we actually reconnect the base of the uterus to the vagina with stitches that over time heal.

Andrew Schorr:
So Somer, hopefully when you’re pregnant then you would have a cesarean section?

Somer:
Correct.

Andrew Schorr:
Okay, and that’s fine with you, cancer free, and with a baby or two or three.

Somer:
That’s right.
Andrew Schorr:
All right, we’re going to take a quick break, and when we come back we’re going to learn a lot more about the procedures. We’re also going to learn about prevention. We’re going to talk a lot more about cervical cancer in depth and hear from our expert patient now and our expert physician from M.D. Anderson. It’s all coming your way as we continue Patient Power right after this.

Processes for Determining the Best Treatment Option

Andrew Schorr:
Welcome back to Patient Power. Andrew Schorr here with Dr. Pamela Soliman assistant professor of gynecologic oncology at M.D. Anderson and a surgical oncologist and her patient, Somer Vertucci, who had a radical trachelectomy that hopefully took care of the cervical cancer that had developed even just microscopically but also preserved her fertility, and we’re going to learn more about that and even refinements they’re making in the procedure since she had it just over a year ago.

So let’s understand more about these procedures Dr. Soliman. So hysterectomy is done it sounds like when the cancer is more advanced or where preserving fertility is not an issue, right? I mean how do you decide who gets what I guess, or what you’d recommend.

Dr. Soliman:
The first thing you start out with is once a patient has a diagnosis of cervix cancer we need to know how large the tumor is, is the tumor just in the cervix itself, or has it spread anywhere else? In patients that have what we call a stage I cancer where the cancer is just in the cervix, the options for surgery depend on the actual size of the tumor itself.

Now in Somer’s case she had what we call a microscopic tumor. So if you looked at her cervix you did not see anything abnormal, but when she had the LEEP cone the pathologist saw a cancer that had gone into the cervix about 3.5 millimeters. That becomes important because in patients that have a tumor that’s less than 3 millimeters deep their options for treatment are a cold knife cone, which is just a big biopsy of the cervix, or what we call a simple hysterectomy, which is a hysterectomy, the same procedure you’d have for other things like fibroids or abnormal uterine bleeding.

If the cervix cancer goes more than 3 millimeters into the cervix itself or is a visible tumor up to 4 centimeters, then the surgical option is what we call a radical hysterectomy. So we remove not only the uterus and cervix but we remove the upper vagina and then the parametria which is the tissue adjacent to the cervix. The reason we remove that area is because we don’t only want to remove the tumor itself, we want to get a rim of normal tissue around the tumor to make sure that we get everything out.
At the same time we also do a pelvic lymph node dissection. So we remove the lymph nodes in the pelvis to determine whether the cancer has spread outside of the cervix and into the lymph nodes. The reason we do that is that helps determine what type of treatment patients need after surgery if they need any at all.

Andrew Schorr:
Now let’s just cover that for a minute. So let’s say you find something in the lymph nodes, what happens then at a M.D. Anderson to decide what is needed?

Dr. Soliman:
It kind of depends. If we think patients have an early cervix cancer that’s less than 4 centimeters in size then they’re scheduled for a radical hysterectomy with a lymph node dissection. At the time of surgery before we do the whole procedure we do an evaluation of the lymph nodes. So we kind of take a look to see if anything looks enlarged or suspicious for cancer. If there is anything that’s suspicious we often remove that first and have the pathologist do what we call a frozen section or a preliminary evaluation, and if a patient has a positive lymph node then we do not do the hysterectomy or proceed because we know that patient is going to require both radiation and chemotherapy, and then when you combine that with a big surgery then the risks of complications are higher for the patient.

So if there is something that we find abnormal at the time of surgery sometimes we actually don’t proceed with the radical hysterectomy as scheduled. That happens I’d say maybe five percent of the time if that.

Normally what happens is you go in, you look at the lymph nodes, you look in the abdomen and everything looks pretty much normal. So in that situation then we go ahead and do the radical hysterectomy like we talked about, and then we remove all of the lymph nodes in the right and left pelvis and send everything to the pathologist. Then the pathologist cuts everything up, processes it, and if they find any evidence that the cancer’s in the lymph nodes, then once the patients recover from the surgery they often get treated with a combination of radiation and chemotherapy.

Andrew Schorr:
Doctor, in your experience when cancer is advanced like that, a woman I would think would have had symptoms. What would the symptoms be?

Dr. Soliman:
Usually in that situation if on physical exam you see the tumor just on the cervix itself most patients don’t have symptoms. As a cervix cancer progresses or spreads locally patients can have some abnormal bleeding, so they’ll have bleeding in between their periods. Sometimes patients will have what we call post-coital bleeding so after they have intercourse they’ll notice some spotting. Lower abdominal pain is a possibility. Sometimes the patients have back pain, but really most patients don’t have any symptoms until the cancer had progressed.
Fertility-Sparing Treatment

Andrew Schorr:
Somer had this radical trachelectomy but you didn’t mention anything about chemotherapy or radiation there. Help us understand.

Dr. Soliman:
So in patients that want to spare their fertility there’s a relatively new procedure that’s been done primarily in Canada and Europe until probably about the last five years it’s been offered here in the United States. Unfortunately a lot of the women diagnosed with cervix cancer are pretty young so we often see patients in their 20s or early 30s that haven’t had children, and so really the options for these patients have been explored because a lot of women would like to have children if that’s a possibility.

So the radical trachelectomy we offer to patients who have what we categorize as lower risk tumors so either cancers that are microscopic or typically less than 2 centimeters in size that we think are limited to the cervix itself then a radical trachelectomy becomes at least an option that we discuss with them.

Andrew Schorr:
But not a need for chemotherapy or radiation afterwards?

Dr. Soliman:
No. I mean typically what happens even when a patient decides that they want to go ahead and try this fertility-sparing procedure at the time of surgery itself again we do an evaluation of the lymph nodes. If there’s anything that looks suspicious we would go ahead and remove that first. If there’s any evidence of cancer spread at that time then we would stop the procedure and go ahead with radiation and chemotherapy. In patients that everything looks normal we first perform the trachelectomy so we do the dissection to remove the bladder from the cervix, mobilize the tissue, and then we remove the cervix, upper vagina, and parametria. At the time of surgery we send that to the pathologist, and we have them look at the upper part of the trachelectomy specimen so the part that right next to the uterus.

The reason we do that is if there’s any cancer in that part that’s really close to the uterus then we actually go ahead and do a hysterectomy at that time because ultimately the primary goal of the surgery is to treat the patient for their cancer, and even though fertility is an important thing to a lot of women it comes second when we’re talking about treating cancer and doing the right thing.

Andrew Schorr:
All right, so Somer you were of course “out” under general anesthetic. When you woke up did you have a question for your doctor?
Somer:
I think the first thing I asked her is if I still had a uterus.

Dr. Soliman:
Yes, and that’s very common because you know that’s what people think about. Obviously we want to give patients the best options that we can with the best cancer care, but I think most patients understand that if we’re going to compromise our cancer care then we’re not doing the right thing and so we spend a lot of time before the surgery kind of going through what the options are and if the cancer is in that upper part of the cervix then we think the safest thing is to go ahead with the hysterectomy. So that’s always discussed way before the surgery itself.

Somer:
And it’s very scary because you’re going into surgery not knowing what you’re going to come out with.

Andrew Schorr:
Right, right. So good news for you. So how long were you in the hospital Somer?

Somer:
I was in the hospital for I think three days and recovered there, and then I was allowed to go home and finish up recovery, and I stayed home from work for about six weeks.

Andrew Schorr:
And then after the six weeks how did you feel?

Somer:
I felt pretty much back to normal.

Andrew Schorr:
Okay and today we’re a year or a year-and-a-half later, active lady?

Somer:
Active. Everything is working great.

Andrew Schorr:
Let me ask you about that if you don’t mind. So a woman would, I’m going to ask you the question people would wonder. We talked about part being removed. You’re an engaged woman. I imagine you have sexual activity. Is anything different? I mean people are going, you know if you were on Oprah they’d ask you.

Somer:
Yes, and I think I even asked Dr. Soliman, I was very curious, but yes everything is just like it was before.
Andrew Schorr:
Okay, all right, well that’s good news, and I’m sure Dr. Soliman you’re happy to hear that too.

**Advances in Abdominal Surgery**

Andrew Schorr:
Now she had a recovery like one would have with hysterectomy, so abdominal surgery, but what about refining ways to do this now whether either standard or experimentally one would wonder where you can’t go anywhere now wherein a number of procedures they’re talking about; minimally-invasive or robotic procedures. Where do you stand with that now related to what’s needed here?

Dr. Soliman:
Yes so I think that’s a great question. I think you know just like in other fields whether they’re other oncology fields or just other surgical fields, minimally-invasive surgery has really changed the type of procedure that we offer patients. I would say before 2004 all of these radical procedures whether it was a radical hysterectomy or at the time we didn’t even do radical tracheectomies, had to be done with an open procedure; so an incision either up and down on the abdomen or a bikini cut, patients would typically be in the hospital about three or four days, and the recovery is about six weeks.

Now probably I think in 2004 is when we first started to offer patients a laparoscopic radical hysterectomy. So like other laparoscopic procedures we think that the procedure itself is equivalent, so we think that we’re doing the same thing as far as the radical hysterectomy part, we do the pelvic lymph nodes laparoscopically, and most patients are able to go home from the hospital the day after surgery. So even though they had a big procedure they typically have less pain, they usually recover more quickly, get back to work quickly if they want to, and are in the hospital a lot shorter period of time.

Now for a radical hysterectomy we’ve been doing them laparoscopically, but I’d say over the last two years the da Vinci robotic system has also sort of worked its way into gynecologic oncology as well as other surgical specialties. Personally I like to do robotic surgery. I think that it is an advantage to the surgeon when you’re doing a radical hysterectomy. I had the benefit of training how to do them laparoscopically, but it’s a difficult procedure. It often takes about five hours or so longer than it would open, and I think the robot allows us to make it a little bit easier for the surgeon themselves to do this type of difficult procedure.

Andrew Schorr:
And the trachelectomy as well now you’re doing robotically?

Dr. Soliman:
When we first started doing radical tracheectomies here at M.D. Anderson, which actually when I was a fellow here in 2005 I remember doing the first radical
trachelectomy here. Because it was a new procedure that we were trying we still did it with the open approach because that was probably the safest thing, and really over the last two years that’s what we’ve done primarily. In the last six months both myself as well as one of my colleagues has started doing these procedures robotically, so we’ve now had I think six patients who have had robotic radical trachelectomies with pelvic lymph node dissections, and so far they’re doing well.

I think just like any new procedure it takes time to sort of learn a little bit more about what the risks are and benefits. Things come up as you do the procedure more and more, and we’re still kind of in the learning phase when it comes to that.

Andrew Schorr:
Right and the key question of course is that Somer said is, ‘I want to make sure you get the cancer.’ So for a woman who’s sitting across your desk now, do you feel they’re equivalent now or where are you with it?

Dr. Soliman:
Based on the information that we have, you know we don’t have a lot of long term follow-up here because we’ve only been doing the procedure for about four years. In Canada and in Europe they’ve done the procedure for a longer period of time so they have a little bit longer follow-up, and based on the information that we know we don’t think that we’re compromising patient’s cancer care because we wouldn’t offer it to them if we were.

Andrew Schorr:
All right. Let’s talk about follow-up now. Now Somer you’re doing well, but it was your vigilance really in going to the doctor regularly for your annual exams that led to this being detected early. So what do you do now as a cancer survivor as far as your follow-up care?

Somer:
I’ve been under the care of Dr. Soliman since the procedure, and I started out having regular checkups and follow-ups with her every three months I believe, but I think after my one-year mark of everything being clear I’ve graduated to every four months. So every four months I get to see her, and every four months hopefully she tells me I have a good, clean result.

Andrew Schorr:
So doctor, put that in perspective for us. So does that mean a Pap smear at that time, a physical exam, maybe even an HPV test? What do you do?

Dr. Soliman:
Exactly. So once patients are done with their treatment, whether that’s the surgery itself or surgery and chemo/radiation or whatever the treatment is, once they’re to a point where we think they’re cancer-free the risks for the patient are highest in the first two years. Because of that we see patients more frequently initially. Like Somer said in the first year after her surgery I saw her every three months. At that
visit we did a physical exam including a pelvic exam and a Pap smear again so that we could potentially pick up any abnormal cells that we couldn’t see with our eyes. We also do a chest x-ray once a year as part of the routine screening. Once you get past the first year we space it out to every four months for the second year, and then if you’re still cancer-free we see people every six months until they’re five years out and then go back to yearly exams.

**Risk Factors and Avoiding Cervix Cancer**

**Andrew Schorr:**
Do we know whether this condition runs in families at all? In so many cancers we’ve talked about genetics. I know it’s not common in breast cancer or ovarian cancer, but there are some groups that have a higher risk. What about here as far as just risk factors?

**Dr. Soliman:**
Yes, as far as we know cervix cancer is not genetic. It doesn’t tend to run in families. There are also genetic syndromes which make sort of a family at risk for different types of cancer, and as far as we know right now it’s not a genetic cancer.

**Andrew Schorr:**
So if we were further along in Somer’s life and she already had a teenage daughter with mom being treated for cervical cancer didn’t mean that there needed to be a different screening algorithm I guess you’d call it for her daughter?

**Dr. Soliman:**
Correct.

**Andrew Schorr:**
Okay, wherein breast cancer maybe so.

**Dr. Soliman:**
Yes.

**Andrew Schorr:**
All right, so let’s talk about how to avoid this in the first place. Here Somer was the case where she was going regularly, and I know that’s not as typical, and it’s good, certainly it was great that she was having these well-woman exams. So first of all you recommend those, right? I mean people should be screened. I know the screening guidelines have been moving around a little bit, and I’m just looking as we record this now the American College of Obstetricians and Gynecologists is now recommending women begin cervical cancer screening at age 21 instead of 3 years after the onset of sexual activity. I know M.D. Anderson has its own guidelines as well. And then if everything looks good the feeling is they don’t need to have it every year. Do you have any feelings about that? I know it’s typically people who are diagnosed with cancer who see you.
Dr. Soliman:
Right, I think even in the time since I finished my OB/GYN residency 11 years ago the guidelines for cervical screening or Pap smears have really changed because initially we used to screen everyone starting at 18 years old or 3 years after patients became sexually active. So if someone became sexually active early, at age 13 for example, we would say okay when you’re 16 you need to start getting your yearly exams and Pap smears, and you need to do it every year.

Now what we’ve found is that even though you screen patients this may lead to something abnormal like abnormal cells and further testing, but really if you’re trying to just identify the patients who have cancer, then the likelihood of that happening in someone so young is really, really small. So we think we were putting a lot of people through unnecessary testing, maybe a little more anxiety because the Pap smear is abnormal and now I have to go back to my doctor again, and people got nervous, and really the risk of cancer in the patients under 21 is really, really small. So over the last 10 years probably every couple of years the guidelines for screening have changed. So now instead of starting at 18 the recommendation is to start at age 21 or 3 years after first intercourse. Instead of yearly exams once patients have 3 Pap smears in a row that a normal then you can go to every other year exams if you’re under 30. In women that are older than 30 and they’re in a monogamous relationship if they have a Pap smear that’s negative and an HPV test that’s negative then they really need to only be screened every 3 years.

Now that doesn’t mean that you don’t have to see your gynecologist for an exam. It just means that a Pap smear doesn’t need to be done every year as we did in the past.

Andrew Schorr:
We’re going to talk more about HPV after the break, but one quick question for you now. How reliable do you feel the Pap smear test is?

Dr. Soliman:
I think it’s, you have to remember it’s a screening test, so the goal of a screening test is to take a large population of people, screen everybody, and try and pick up the people that may be affected. So it’s not 100%, but it does probably pick up about 85% to 90% of abnormalities and with the correct follow-up we think we can catch most of the cancers. So I think it’s not 100%, but definitely here in the United States once we instituted the Pap smear I think in the 1950s, the number of patients with cervix cancer has really gone down because we’ve been able to identify patients who are at risk and treat them appropriately.

Andrew Schorr:
A lot more questions as we continue our Patient Power program with Dr. Pamela Soliman who specializes in cervical cancer surgery and treatment, and we’ll also have some other questions for her patient, Somer Vertucci, who’s doing so well now. We’ll be back with more of Patient Power right after this.
Human Papillomavirus Vaccine

Andrew Schorr:
Welcome back to Patient Power sponsored by M.D. Anderson Cancer Center as in this program we’re talking about cervical cancer. So we’ve been learning about the various procedures, exams, and I want to talk a little more about screening as we started to discuss with the Pap smears and the screening recommendations and also about what we’re looking for, and we hear these three letters “HPV” and it’s so often connected with cervical cancer but how come? So let’s go back to Dr. Pamela Soliman who sees the women who in fact are diagnosed with cervical cancer.

Dr. Soliman, HPV, human papillomavirus. Now I know there are different strains of it. Some can lead to genital warts, but some can lead to cervical cancer, but not in everybody, so what do we know about it? It sounds like the bad guy here.

Dr. Soliman:
Yes, so what we know about HPV or human papillomavirus is it is a sexually transmitted disease that can be transferred from person to person basically with any sexual contact. Now although that in itself sounds pretty scary, it makes you think of other things like gonorrhea and chlamydia it’s a little bit different because when we’ve looked at sort of groups of sexually active teenagers or women in their 20s, college students, most women, so probably about 70%, have been exposed to HPV. So even though it is a sexually transmitted disease it’s something that almost all women have been exposed to at some point in their life, so it’s a little bit different in that respect.

Now for most women even if they’re exposed your own body’s immune system often clears the virus, and you really don’t have any symptoms or any long-term risks associated with that, but in patients that eventually develop cervix cancer there are certain types of HPV, and for whatever reason one patient may not clear the infection and then that can cause some changes in the cells in the cervix and eventually lead to either a dysplasia, which is a pre-cancer, or a cervical cancer itself.

Andrew Schorr:
So we’ve identified HPV as the cause typically right in cervix cancer, so then we hear the news over the last couple of years about a vaccine. So what does that mean? Does that mean that it’s going to be on the lookout for this HPV virus and sort of knock it out so that it never develops or hopefully almost never develops to a cancerous stage?

Dr. Soliman:
Right, so the goal of any vaccine is to for example expose somebody to a small amount of the virus whether that’s chicken pox or smallpox or in this case HPV so that your body’s immune system recognizes the virus as an abnormal thing. Then it forms what we call an immune response. So you build up not only the recognition
of the virus but also the ability to clear the virus. So the thought with HPV is that if you can give people a vaccine at a young age, so whether that’s 9, 10, 11, 13, before they would have any sexual exposure that if they got infected or if they had the infection in the future then their body would be able to clear the infection more rapidly, and you wouldn’t necessarily have the long-term risks of either cervix cancer or pre-cancer.

Andrew Schorr: All right, lots of questions about this. It’s a series of three shots I think that are recommended now, correct?

Dr. Soliman: Yes.

Andrew Schorr: So it’s recommended for younger women, teenagers, like I have a 16-year-old daughter, and she’s had her shot, but also women I think 26 or under if I’ve got it right. So what’s the thinking there because those women may have been sexually active. If you have the shot it’s not too late?

Dr. Soliman: As far as we know, you know, I guess the initial group that was targeted when the HPV vaccine first became FDA approved was like you said people who were young between 9 and 13 with the goal of treating them before they could have any exposure. Now, the current recommendation or insurance companies will pay for women up to age 26 I believe, although being a cancer doctor we actually don’t often see patients in this sort of prescreening setting, but the thought is that even if patients have been exposed and if the virus is cleared giving them the vaccine may help their body build more immunity so that if they’re re-exposed in the future that potentially they would be able to clear the virus as well. So we think that even though ideally you would give people a vaccine before they’re ever exposed that there may also be benefit after they’ve been exposed already.

Andrew Schorr: So the hope is I guess, you talked about Pap smears and what a difference that made, a vaccine now, I mean I don’t want to put you out of business, I’m sure you have other procedures to do.

Dr. Soliman: That’s okay. If we cure cancer that’s fine with me. I can find something else to do.

Andrew Schorr: So your friends who have teenage daughters or younger women, it would seem like the vaccine is a good idea in your opinion?
Dr. Soliman:
Yes. I think the way I look at it is just like any decision you make you want to look at sort of the risks and benefits, and based on the studies that have been done and published the risk of getting the vaccine is pretty low. Obviously it’s no fun to get a shot. Sometimes there can be a little swelling at the site or a little inflammation, but really there haven’t been any long-term side effects that have been identified, and so to me the risk of getting the vaccine is pretty low, and the potential benefit is great whether that’s preventing either a pre-cancer or a cancer itself.

Andrew Schorr:
Doctor, so I am a leukemia survivor, and I’ve learned by doing a lot of programs that many of us who’ve been treated for cancer are at risk, a bit higher risk, for a cancer down the road. If someone is treated, particularly with more advanced cervical cancer, are they at risk for another cancer?

Dr. Soliman:
In patients that are treated, for example with radiation to the pelvis who do not have a hysterectomy, typically if the cancer is bigger than 4 centimeters we treat with primary radiation and do not do surgery, long-term they are at a little bit higher risk for other types of a uterine cancer, but overall the risk is relatively small.

Andrew Schorr:
Is there any connection between cervical cancer and other gynecologic cancers like let’s say ovarian cancer?

Dr. Soliman:
Not that we know of.

Andrew Schorr:
All right, and related to HPV other cancers from HPV, of the vagina for example?

Dr. Soliman:
We do think that vaginal cancers are also related to HPV. We also think that there may be some association with the vulvar cancers, and then there’re also head and neck cancers and other things as well that can be related. But as far as we know almost all of cervix cancer patients have a positive HPV, so there’s a really tight link between those two specifically.

Andrew Schorr:
Now if something’s going on for a woman then the question is what to do. Somer now let’s face it, you had had education at M.D. Anderson, well familiar. Some of your initial workup was not at M.D. Anderson. Was it your experience there that you said, ‘That’s where I’m going.” What led you to M.D. Anderson?
Somer:
It was my experience there. I live in Houston so it was a great resource. After I got results from my primary gynecologist that had anything to do with cancer or the possibility of cancer I went ahead and did a self referral.

Andrew Schorr:
Dr. Soliman, so for instance the procedure you talked about, the trachelectomy or even done robotically, I’m not sure everybody does that. If a woman, particularly if she wants to have the full range of options, what are the questions she should be asking before she embarks on therapy?

Dr. Soliman:
I think every patient is different, every physician is different. We all offer patients different procedures. Even within our practice here at M.D. Anderson not everyone offers patients trachelectomy because they don’t have that experience necessarily. I was fortunate enough to be able to do these procedures during my training and so now in my practice I offer them to my patients as well. So I think the important things for patients to know is, number one, once they’re diagnosed with a cancer what are the best treatment options? What is the standard of care? Then beyond that if fertility’s an issue or there are other questions about what’s going to be compromised with treatment then you just need to ask your doctor if there are other options.

I’ve seen a lot of patients who have come here in particular for this type of surgery because it’s something that they saw on the Internet or they learned that fertility-sparing options were a possibility, but sometimes if the patient doesn’t ask they won’t necessarily know that those options are out there.

Andrew Schorr:
We call our program Patient Power, and I really believe people need to ask questions. So some people come see you for a consultation or a second opinion, or they may even see you first and say, ‘Well I’m thinking of getting a second opinion.’ Are you okay with both?

Dr. Soliman:
Yes absolutely. Because we’re a big referral center we often have patients that come from out of town sometimes because their doctor recommends them getting a second opinion, sometimes patients come here on their own and almost feel guilty like they don’t want to tell their doctor they’re coming here, but what I tell all of my patients is that ultimately this is them and they’re the one who has the cancer and they’re going through the cancer treatment, so whatever it takes whether it’s a second opinion or being treated at a certain place that they need to do what they’re comfortable with and that it’s not about the doctor.

So if the doctor doesn’t like that you’re getting a second opinion well then they can grumble over it, but a patient should never ever feel bad about doing that.
Andrew Schorr:
Good for you. I couldn’t have said it better, but I believe all that for sure.

Dr. Soliman, so in Somer’s case she will have, we talked about if she gets pregnant she would have a cesarean section, but are there any other concerns she would have in pregnancy because of what has happened already?

Dr. Soliman:
Any time a patient has a procedure on the cervix whether it’s a radical trachelectomy, which is probably the most extreme procedure, or even like a cold knife cone or biopsies that does change the risks during pregnancy a little bit. Like I said this is a relatively new procedure so we don’t have a lot of long-term data on pregnancy, and most of the information we know has come out of Canada where they’ve been doing this procedure longer. Before we do this procedure we kind of talk about the risks of pregnancy, what are the pregnancy outcomes, and based on the patients who have had this procedure at other institutions and been pregnant many patients, 65% to 70% can have a successful pregnancy once they get pregnant.

So we do know that the risk of a first trimester miscarriage is a little bit higher than if you hadn’t had the procedure. We know the risk of preterm delivery is also a little bit higher than if you didn’t have the procedure, but again most patients are able to have a successful pregnancy.

Andrew Schorr:
One question just occurred to me. Let’s face it. Some people wait some to have children and sometimes fertility procedures come into play. Would the ability to have fertility procedures change?

Dr. Soliman:
I’m probably not the right person to ask. I think that certainly in patients who have the procedure done, like Somer’s case, she had never tried to get pregnant before so we don’t know if she had difficulty getting pregnant is that something that would have happened whether she had this procedure or not? Certainly I think that patients are often seen by infertility specialists. I don’t think the procedure itself would prevent them from having other, what we call assisted reproduction, whether that’s in vitro fertilization or other techniques that are used, but again I’m not really an expert in that area.

Andrew Schorr:
Okay, well that’s fair. Somer, I hope you don’t need any extraordinary means. Have you and your fiancé talked about family and how many children you might like to have? I have three. It’s a handful.

Dr. Soliman:
That’s not a fair question if she’s just engaged, right? <laughing>
Somer:
<laughing> You know this whole process, we’ve been together throughout the whole thing, and it definitely gave us cause for some conversations that we may not have had until later on, and we have talked about children in depth and the possibility of them or how they’re going to come into our lives, and I think at this point we’ll just be happy with whatever we get.

Closing Comments

Andrew Schorr:
I wish you all the best. Somer, one more question for you. So there are women listening, and it may be the middle of the night anywhere in the world, and maybe cervical cancer is suspected. Maybe they’ve had an abnormal Pap or maybe they’ve been told there’s something that’s been seen, and as you know it was such a shocker to you. So what would you say to guide them so that they can get the best care and come out the other side as you have with hopefully a very bright future?

Somer:
I would say to those women just to not get ahead of themselves. Get all the information they can get. Listen to their physicians and take in all the information they can, and do what’s best for them.

Andrew Schorr:
Right, and advocate for themselves we’ve heard Dr. Soliman saying.

Somer:
100%. You’re the patient and you have to do what’s right for you.

Andrew Schorr:
What’s your outlook on the future now?

Somer:
My outlook is great. I’m cancer free and getting ready to get married, and so everything’s good.

Andrew Schorr:
Well Dr. Soliman, I know you love hearing stories like this where you can help and where your newer procedures come into play, and you’re really okay about being put out of business, right?

Dr. Soliman:
Absolutely, absolutely. Our goal obviously is to take good care of patients, but our second goal is to cure cancer, and I hope, I don’t know if I’ll see it in my lifetime, but I hope I do. All the oncologists, we can all find something else to do I assure you.
Andrew Schorr: Well my M.D. Anderson leukemia doctor, Dr. Keating, says he’s not going to retire until he’s cured chronic lymphocytic leukemia, and he’s close to retirement age, so I hope does. I hope he retires next month.

Dr. Soliman: He needs to get on that right?

Andrew Schorr: Yes, he needs to retire next month, and we can call it quits, okay. Well thank you so much ladies for being with us helping us understand what’s available at M.D. Anderson related to the treatment of cervical cancer and also a better understanding of prevention, screening, vaccines, the whole thing, and we hope the numbers related to cervical cancer can keep going down. Dr. Pamela Soliman, thank you so much for being with us.

Dr. Soliman: Absolutely, and can I just say one more thing?

Andrew Schorr: Yes ma’am.

Dr. Soliman: I think that one thing that patients don’t always realize is that even if you have a new diagnosis of cancer, and there’s a lot of things that are going on in your mind, it’s really important to get as much information as you can. It doesn’t necessarily mean that you have to travel across the world to get some unusual procedure, but most of the people in oncology really want patients to have good outcomes from their cancer and the best options, and so you know whether it’s a phone call or a visit just make sure you reach out to the people who you think can help you.

Andrew Schorr: Thank you so much for that. And Somer all the best to you. Have a great wedding coming up. Have a great time on your vacation in New York City and fun at the Macy Parade okay?

Somer: Thank you.

Andrew Schorr: As Dr. Soliman just said, it’s so important to have information, and that’s why as we always sign off our programs I say I’m Andrew Schorr. Remember, knowledge can be the best medicine of all. Thanks for joining us.

Please remember the opinions expressed on Patient Power are not necessarily the views of M. D. Anderson Cancer Center, its medical staff or Patient Power. Our discussions are not a substitute for seeking medical advice or care from your own doctor. That’s how you’ll get care that’s most appropriate for you.