

Colon Cancer vs. Rectal Cancer: What is the Difference?

Webcast

March 31, 2010

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Introduction

Andrew Schorr:

What's the difference between colon and rectal cancer and how does treatment differ, particularly surgical approaches? Find out from a Seattle Cancer Care Alliance gastrointestinal surgeon who specializes in that area as we explore surgical options and various treatment choices for both cancers. It's all next on Patient Power.

Andrew Schorr:

Hello and welcome to Patient Power sponsored by the Seattle Cancer Care Alliance. I'm Andrew Schorr. Well, when you talk about colon and rectal cancer, often called colorectal cancer, it often gets lumped together. I know in my family, though, I had a grandfather who had rectal cancer and a mother who unfortunately died of advanced colon cancer. So are they the same? Are there differences? And particularly when you think about surgery which so often comes into play is it always the same, and what are the options? Well, we've invited a surgeon from the Seattle Cancer Care Alliance who specializes in that to visit with us today to help us understand the landscape and the options and the differences as well.

Joining us today is Dr. Karen Horvath. Dr. Horvath is a director of surgery. She's actually director of the surgical residency program at the University of Washington, and for the last 12 years she's really had a special interest in surgical options for people with colon and rectal cancer. Dr. Horvath, thank you so much for joining us.

Dr. Horvath:

Thank you very much for inviting me, Andrew.

Differences Between Colon and Rectal Cancer

Andrew Schorr:

Dr. Horvath, so, as I said, it often gets lumped together all the statistics. We talk about colorectal cancer, but there are differences. First of all, for you as a surgeon when you look at tumors through this whole lower part of the digestive tract does the tissue look the same, or what are some of the differences you think of from your perspective?

Dr. Horvath:

That's an excellent question, Andrew, and I think that, because I have gotten a lot of questions over the years from patients that don't understand the differences I think that the colon and rectum is essentially one long tube, but the way that it changes is that the, certainly the functions are different. The function of the colon is to, one of its primary functions is to deliver stool to the rectum and also to reabsorb water from the stool, whereas the function of the rectum is really to store the stool until the patient has a bowel movement and to give the patient sensation that the stool is present and ready to be evacuated. So the tube is one long tube but the functions are different.

I think the other way to think about the differences between the colon and rectum are also the surrounding structures. The colon lies within the abdominal cavity in kind of a big space. The abdominal cavity is a rather large space, whereas the rectum actually is an organ that essentially is found in the pelvis, which is a very small space. And there are a lot, there are many other organs that are in very, very close proximity to the rectum, like the uterus, the vagina, the prostate, the seminal vesicles, the ureters, the bladder, and everything is in a very small, tight space, and that essentially changes, is one of the main reasons for the significant surgical approaches to both, to cancers of the colon and the rectum.

Multidisciplinary Approach

Andrew Schorr:

All right. Let's talk about that. So, now, you have a multidisciplinary approach at the Seattle Cancer Care Alliance, so someone with these illnesses, there might be radiation oncology and medical oncology involved and pathology is involved in both, so you have a team approach. Now, sometimes some of these other modalities come into play and come first or come after surgery, so let's start to go through that now. Maybe we could start with colon cancer. You get the people where a tumor has been discovered and it's somewhere along the colon. How do you begin to approach whether there is a surgical approach, how aggressive it is and whether it comes first or not.

Dr. Horvath:

Very good question. I think for almost all patients, patients with colon cancer will really have surgery as their first approach. I think that the only time that that may change is if maybe their CAT scan might show some evidence of spread to the liver or things like that where a patient might get some chemotherapy first and then secondarily have surgery, but that's actually not the most common presentation. I would say the overwhelming majority of patients who present with colon cancer will go straight to surgery, and then depending on the staging of the colon cancer which is basically determined by the pathologist after the tumor is already out will then dictate whether a patient might need some chemotherapy after surgery.

Andrew Schorr:

All right. Now, as far as the surgery goes, I think back years ago I remember President Ronald Reagan was diagnosed with colon cancer, and there were all these

graphics in the *New York Times* and other publications about how much it had invaded or whether it had broken through the wall of the colon. So does the surgery vary depending upon that?

Dr. Horvath:

Usually it does not, I would say that again in the overwhelming majority of cases because when people talk about the depth of invasion of a tumor through the colon wall they're really referring more to the microscopic levels. And, I mean, it certainly is something that can be seen with the naked eye, but what they're really referring to is the histological or microscopic depth of invasion. It's possible to have a tumor that grows outside of the colon wall and then into a nearby structure like the small intestine or the stomach or something else where it's sitting next to it, but it's very uncommon. And again almost, most people really, we're just talking about the microscopic depth of invasion.

Andrew Schorr:

Now, for someone who might then have surgery first for colon cancer, tell us about that. So what are you doing? How well do people typically do with surgery and about the recovery as well?

Dr. Horvath:

I think the surgery for colon cancer is a very, I like to say routine because it really is. From the surgeon's standpoint it is routine and it's certainly, it's not routine for the patient because it's their one and hopefully only time, but it's a very, a colectomy for a colon cancer is a very straightforward operation. It generally takes just a couple of hours, and the patient will usually just do a mild cleansing of their colon like they would do for a colonoscopy before the surgery and then come to the hospital the day of surgery and leave within maybe three to five days. People do very well from the surgery.

Andrew Schorr:

Now, should they need further treatment then would that typically be chemo afterwards?

Dr. Horvath:

Correct. So once we take the tumor out in the operating room we send it right over to the pathologist who starts their analysis of doing their special work to determine the depth of the invasion of the tumor into the colon wall, and also part of the surgery that we do is to remove the blood vessels and the lymph nodes that are supplying that area of the colon. And they will also analyze the lymph nodes for spread of microscopic cells of cancer. And based on their report or all of that information we then will be able to stage the colon cancer, and then the stage will basically determine whether or not a patient might benefit from some chemotherapy after the surgery, really after they recover from the surgery.

Andrew Schorr:

Let's talk about recovery. So I've heard that the colon is quite long, so how much might you usually be taking out? And how does that affect someone's digestion afterwards?

Dr. Horvath:

Well, you know, it varies. It varies on the size of the tumor and, but I would say in general most colectomies for colon cancer involve about maybe 10 inches of colon that's removed, which really is not that much. I know it sounds like a lot, but patients typically don't notice that much of a difference in their bowel function after a surgery for colon cancer. People might notice, I don't know, maybe an increased frequency of bowel movements, maybe going from one bowel movement a day to two bowel movements a day or something very mild of that sort, but nothing very significant. People tolerate a colectomy for colon cancer very well.

Diet After Colon Cancer Surgery

Andrew Schorr:

What about diet? Does their diet have to change?

Dr. Horvath:

You know, I think that's a very individual answer, and what I've seen in my patients is that some of my patients are more sensitive to certain things like spicy foods or maybe raw fiber like salads and things, whereas other patients it doesn't seem to matter at all to them. So often what we might do is maybe make some general recommendations for diet after a colectomy for colon cancer, but what I tell my patients is that they really will need to figure it out for themselves over time because some things that might be on the list of foods to avoid, for instance spicy foods, really may not at all bother that patient at all and therefore they're free to continue to eat them.

Andrew Schorr:

Let's go lower down now to the rectum. So we've talked about the differences. So what are ones that come into mind for you as far as the way you're going to approach it? And one of the things we talked about was other modalities, whether they come first or second, what about with rectal cancer?

Dr. Horvath:

You know, the rectum is a very interesting organ, again going back to the anatomy that we discussed earlier. The rectum is surrounded by a number of other organs and one of the things that we always think about is if a patient has rectal cancer are any of the surrounding organs kind of invaded by the tumor. The other question that we always ask is how far away is it from the anal sphincter muscle because the anal sphincter muscle is a very important, has a very important function, and that is to allow someone to not have a bowel movement when they don't want to and to have one when they do, so it basically opens up or closes down under the control of the patient. And if a tumor is so low down in the rectum that that the anal sphincter muscle needs to be removed in order to remove all of the cancer then the anal sphincter muscle really cannot be saved, and there's no benefit at all to having the rectum basically hooked up to the skin because then you'll have no control.

And patients that fall in that very low rectal cancer group really will benefit from a permanent colostomy. And their quality of life, even though I think it's very difficult for patients to hear at first their quality of life is actually much better with a colostomy than it would be without one.

Andrew Schorr:

I'll just make a comment. Again, I was pretty young but I remember my grandfather, I mentioned, he had a permanent colostomy, and he had a pretty normal life. I mean, it had some requirements but if you're suggesting the alternative would be where can you go, what's your situation because you're not sure when it's safe to go where, that would be tough to carry on any quality of life at all so I'm sure it's an improvement. But there are some times when you would do surgery and there might be a colostomy and you'd have a second surgery my understanding is to put things back together. Am I right about that?

Dr. Horvath:

Yes.

Andrew Schorr:

Dr. Horvath, I know there are times when a colostomy can be reversed so maybe we'll get a clear understanding from you of rectal cancer and the approaches there when we continue our discussion with you right after this.

Andrew Schorr:

Andrew Schorr back with Patient Power as we continue our discussion learning about colon cancer and surgical approaches and rectal cancer and surgical approaches with a wonderful guest as we resume our discussion with Dr. Horvath, who is a leading surgeon at the Seattle Cancer Care Alliance and professor of surgery at the University of Washington. She's actually director of the surgical residency program at the University of Washington, and for about the last 12 years she's specialized in surgery for rectal and colon cancer.

Dr. Horvath, help us understand now about rectal cancer and the surgical approaches there, how it all comes together, and sometimes even if somebody has had a colostomy how one of the options is where that can be reversed.

Surgical Approaches for Rectal Cancer

Dr. Horvath:

A patient that presents with rectal cancer is usually within right in the lower part of the rectum, and the first thing that we need to do is to get some additional information with a staging endorectal ultrasound. And an endorectal ultrasound is important because it helps us to look at the tumor with the ultrasound machine, and it's kind of like a mini colonoscopy. It's much easier, though, than a colonoscopy, and the ultrasound will determine how deep the tumor has invaded through the wall of the rectum, and that will give us some information. It also can give us some information about the possibility for spread in some of the lymph nodes in the area that surrounds the tumor in the rectum.

And using that information together we'll be able to give patients an idea about what type of tumor stage they might have. What we know based on a number of studies that have been done through the years is that patients with T3 and even T4 tumors will definitely benefit from some chemotherapy and radiation therapy before surgery.

Andrew Schorr:

And is that designation, T3, T4, is that the depth?

Dr. Horvath:

It is, yes. That's correct. And some patients with T2 tumors also benefit from radiation and chemotherapy before the surgery. The addition of information that we get for the end stage or the nodal stage, the possibility of tumor cells present in the lymph nodes, is also used to make a determination. And so using all this information we can then recommend to the patient that they then have radiation therapy and chemotherapy before the surgery.

There are a couple of reasons why it's beneficial. In some patients we know that it can shrink the size of the tumor and then make it technically easier for us to get out. As I mentioned, the rectum is in a very small, enclosed space and even the difference of a centimeter or even a few millimeters here and there can make a difference in how successful we are in being able to get the tumor out.

The second thing is that the chemotherapy and radiation therapy may be able to shrink the tumor enough before the surgery that it enables us to save the anal sphincter muscle and attach the colon directly to that area, and I'm going to come back to that in a second.

And then the third reason why we might want to do chemotherapy and radiation therapy before the surgery is that in some groups of patients it actually has been shown to improve survival, but I want to talk a little bit more about the removal of the rectal tumor after the chemotherapy and the radiation.

Andrew Schorr:

Sure.

Dr. Horvath:

And then hooking the colon up to the anal area, and that's called a coloanal anastomosis. Because the coloanal anastomosis is so low down and because it's very technically a, it's a difficult area to operate in, what we will commonly do is do something called the protective ileostomy. And a protective ileostomy is taking a piece of the small intestine and creating an a stoma, a temporary stoma, usually in the patient's right side of their abdomen, and the patient will have a stoma for a few weeks after the surgery.

Andrew Schorr:

I just want to understand, we understand the term. So stoma, so they would void fecal material through this stoma and go into a bag.

Dr. Horvath:

Correct.

Andrew Schorr:

Sort of like what we talked about with a colostomy, but you're talking about a temporary approach.

Dr. Horvath:

Correct. This is a temporary approach. And what it does is it diverts all the feces out so that it's not going past the anastomosis in the pelvis and allows all the surgical sites to heal. Then once the surgical site has healed then we take the patient back to the operating room a few weeks later and do a much smaller surgery where we actually take down the ileostomy and close things off and hook everything back up again.

Andrew Schorr:

Now, I just want to understand the word anastomosis. Maybe you could define that for us.

Dr. Horvath:

Sure. Anastomosis is a very common surgical term, and it's used to define when we hook something up to something else. So a coloanal anastomosis is hooking the colon up to the anus. A colocolostomy anastomosis is when we're hooking the colon up to another piece of colon. And then you can use that for any numbers of connections anywhere in the body.

Andrew Schorr:

But the idea here is you're removing the cancerous tissue in the rectum and you're going to take the colon that was above it and connect that directly to the anus.

Dr. Horvath:

That's correct.

Andrew Schorr:

All right. I understand. Now, let's talk about the different surgical approaches. You're at an academic medical center, you've specialized in this, but people may be listening anywhere. Is there an approach that you have worked on, maybe done elsewhere as well but where you're very familiar with it, that maybe gives people the best chance of getting the cancer out when it's rectal cancer but also lowering the risk of complications with all those other things around, the bladder and nerves related to sexual function, for example?

Dr. Horvath:

Yes. I think what you're referring to, Andrew, is the total mesorectal excision technique. Some people will call it TME, and I think that from my surgical eyes I think it was one of the major surgical technical advances of the last century. I think it was absolutely revolutionary. This technique was actually discovered and described by a surgeon from England who was very disturbed by the high tumor

recurrence rates in patients that had rectal cancer and worked through this special surgical technique that is I think again a brilliant development.

And the total mesorectal excision technique is specifically designed to remove all of the tumor cells in cancer in the pelvis, and also at the same time it's also a nerve-sparing technique where we stay, where we can stay away from the nerves that supply the bladder and also sexual function, and it has a very, it's not a hundred percent but it has a very high nerve-sparing success rate in patients minimizing the chances of sexual dysfunction and also bladder dysfunction after the surgery.

Andrew Schorr:

It sounds like when you get to this issue of rectal cancer then there are different ways to attack it. Not every surgeon or team might agree. Would this be one of those situations where when someone is diagnosed with this, first of all, I think, it sounds like they would benefit from a multidisciplinary team, a lot of people talking about what are we dealing with, but also where a second opinion even might make sense where they come from somewhere else and seek someone like you. But sounds like you want somebody with experience and really think carefully about what's the right approach for them.

Dr. Horvath:

Absolutely. I think a multidisciplinary approach to rectal cancer and colon cancer is extremely beneficial and very beneficial for the patient.

Recovering After Surgery

Andrew Schorr:

So what about recovery here? Some people will have a permanent colostomy, but, as you alluded to earlier, they could go on and have a high quality of life. Some people will have temporary, and you talked about healing. Just to understand the time line, if they had that temporary stoma how long is it before they had the second, shorter surgery to put everything back together?

Dr. Horvath:

Generally it's about six to eight weeks after the first surgery, but in patients that are going to need some additional chemotherapy after surgery we always wait until after that chemotherapy is completed. So for instance a patient would come in to have their, maybe their chemotherapy and radiation therapy, then have their surgery, get the temporary ileostomy, recover from that surgery, and that generally is about six weeks, and then have some additional chemotherapy, and once that additional chemotherapy course is completed then come back and have their smaller ileostomy reversal surgery.

Andrew Schorr:

Now, everybody is different. Some people need a variety of approaches, some people's cancer is more advanced. Let's take in the case of rectal cancer. If it is knocked back by these other modalities and you're able to do a successful surgery, what's the outlook? Is there any way to predict that, or is that all individual?

Dr. Horvath:

You know, it is extremely individual, and there are so many different factors that go into it, so I think I would just answer in a more general way in that the outcome in a general sense is really quite good. People do very well from this surgery and they can return to their jobs and their life. Whether or not they have a colostomy, people with colostomy, as you pointed out with your grandfather, following the initial period of adjustment, just kind of getting used to a colostomy people can have a very, very normal life, and so people do very well with this disease.

Andrew Schorr:

Dr. Horvath, so unfortunately these cancers are pretty common and as we've said at the outset we lump them together, colorectal cancers, but I think you've helped us understand their different approaches. So when someone sits down with their doctor, their team, then, it's going to focus on their cancer site, maybe as medical oncology gets involved even the biology of their tumor, and then this whole discussion of which modalities when or which ones are called upon. But it sounds like having an experienced team all working for you makes a lot of sense.

Dr. Horvath:

Yep. I couldn't agree with you more, and I know how much I value as a surgeon my colleagues at SCCA and working together with them. They're all wonderful in each of their own areas and we really have an outstanding team. I'm very, very proud to be a part of it.

Andrew Schorr:

Dr. Horvath, just one last question. As you look forward, so I know you write chapters in books and go to all kinds of national and international conferences, do you see anything coming that would make it even better? You mentioned like this surgical approach that was developed in England years ago that you still think is great, anything coming that would make a further difference.

A Bright Future for Patients with Colorectal Cancer

Dr. Horvath:

You know, one of the most interesting things that I see coming down into the future in the area of colorectal cancer are some of the new chemotherapy agents. And certainly I think that a medical oncologist is going to be able to talk at a much different level, but I just think that some of the things I've seen even in the last five to ten years, some of the newer chemotherapeutic agents, I'm very, very excited about. I've seen patients respond in phenomenal, really, almost miraculous ways to some of these new agents, and I know there's a lot of very exciting work that's being done in this area. And so I really see a very bright future for patients with colorectal cancer.

Andrew Schorr:

That's very good to hear from you, with your perspective on working with it and recognizing that surgery remains a key part for so many people. Dr. Karen Horvath, professor of surgery with the Seattle Cancer Care Alliance and head of the surgical residency program at the University of Washington, thanks so much for



joining us and helping us understand more about colon cancer and rectal cancer and special approaches for each one. Thanks for being with us.

Dr. Horvath:

Thank you so much again, Andrew. This is a wonderful project that you're doing.

Andrew Schorr:

Thank you. Well, this is what we do on Patient Power. Thanks to the Seattle Cancer Care Alliance for supporting us as we interview true experts like Dr. Karen Horvath. I'm Andrew Schorr. Remember, knowledge can be the best medicine of all.

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