

Yale CANCER
CENTER

answers

WNPR Connecticut Public Radio



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Surgical Options for Colorectal Cancer

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Yale Cancer Center Answers

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Welcome to Yale Cancer Center Answers with Drs. Ed Chu and Francine Foss, I am Bruce Barber. Dr. Chu is Deputy Director and Chief of Medical Oncology at Yale Cancer Center and Dr. Foss is a Professor of Medical Oncology and Dermatology specializing in the treatment of lymphomas. If you would like to join the conversation you can contact the doctors directly. The address is canceranswers@yale.edu and the phone number is 1888-234-4YCC. This evening Ed welcomes Dr. Charles Cha. Dr. Cha is Assistant Professor of Surgery specializing in gastrointestinal cancers at Yale School of Medicine. Here is Ed Chu.

Chu Why is colorectal cancer still such an important health problem here in the United States?

Cha Just to give a little bit of a definition, colorectal cancer is a cancer of the inside lining of the colon and it's very prevalent in the United States; about 150,000 cancers are diagnosed per year and some people estimate it to be as high as 190,000 for the upcoming year. Fortunately, when caught early, it is curable about 80% of the time when it is diagnosed in the United States, which is a quite a bit higher than it used to be prior to intensive screening like that that is suggested by most physicians nowadays. It's a disease that in this month in particular we will be talking a lot about. Increasing awareness of the disease, in particular screening so we can catch these tumors earlier, is going to be very important so that we can cure as many as these patients as possible and hopefully increase the number of patients that are eligible for curative surgery or therapies.

Chu What age group is typically affected by this disease?

Cha The peak incidence is around 60-65, but there could be a wide variability in terms of when patients present, ten years before or after that, but typically, as with most cancers, it is a disease of the older population, and there is an equivalent incidence in both males and females as well.

Chu The latter point is an important one to emphasize to our listeners because my sense is that for some reason women have this feeling that they are not at the same level of risk for developing colon cancer as their male counterparts.

Cha Absolutely, I think it's important to emphasize that this is the third most common cancer for both males and for females, and it's something that women have no protective element for being female and should be screened just as rigorously as any male.

Chu What are some of the risk factors that are associated with the development of colon cancer?

Cha There are some that are a little better established, and some that are a little bit less established, but certainly a strong family history, if there was a patient who has a relative, particularly a first degree relative diagnosed earlier than age 50 or so, that's going to increase their chance of getting colon cancer quite a bit. Furthermore, having a history of polyps is going to dramatically increase your

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risk for cancer and patients with inflammatory bowel disease, particularly ulcerative colitis, those patients have to be screened very regularly in order to try to catch colon cancer in that population, which is quite common. Less strong risk factors are things like smoking, fat intake, and sedentary life style, but those all have been associated with colon cancer.

Chu As you mentioned, we typically think of family history as being the major risk factor, but as you know the familial kinds of colon cancer really only account for 10 or 15 percent of all the colon cancers we see in the clinic, and it is the sporadic form of colon cancer. In sporadic colon cancer, what are the key risk factors that one has to worry about?

Cha When you're talking about risk factors I would say, in particular, age being greater than 50 is going to be the number one risk factor in terms of whether they are going to be at high risk or lower risk, but certainly we see patients who are less than 50 and older than 50. Diet has also been associated, particularly a high fiber diet, with lower incidence, and a high red meat diet is associated with high risk of cancer. Certainly countries or civilizations that have a lower intake of fatty foods and red meat have a lower incidence of colorectal cancer as well.

Chu What about African-Americans or other minority groups, because there is some talk that perhaps African-Americans may be at increased risk for developing colon cancer at an earlier age than say Caucasians?

Cha The data is not completely clear on that, but certainly it's pretty well established that when it's discovered in the African-American population it is discovered at a later stage, and it tends to be caught later and the ability to provide curative therapy for those patients are less. There are some data that potentially suggest that there might be more aggressive strains, there might be more aggressive disease in African-American populations. But some of that disparity may just be access to adequate medical care, or access to adequate screening, which is one of the reasons why we again have to emphasize screening as the most important aspect of Colon Cancer Awareness Month in order to get patient's in to see a physician when they have an earlier stage tumor so that the tumor can be caught and cured.

Chu Now you mentioned a moment ago, a polyp. Do most colon cancers come from polyps, how does colon cancer actually arise?

Cha As I mentioned earlier, it's a tumor of the lining of the colon and there are several layers, there is sort of a mucosal layer that these tumors come from, and in general, these tumors start out in a very set progression. They start out as small little polyps or lumps that start in the most inner layer of the colon and it usually takes about 10 to 20 years for that small little polyp to slowly grow and slowly mutate into an actual cancer, which is why we have about a 10 year range in order to catch

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these early to try to remove them. Also it's one of the reasons why if you get a colonoscopy at age 50, which is what the current recommendation is, and if it's clean, you have another 10 years before you need to have another one. So if you think of it in those terms, it's a relatively slow growing cancer and there is a lot of opportunity to catch it early.

Chu Do all polyps eventually turn into cancer or do only a small fraction of the polyps actually become cancer?

Cha A very small fraction actually become cancer, and there is sort of sub-classifications within how we describe these polyps histologically and physiologically, so to speak, in terms of their shape, and in terms of how high risk they are for turning into cancer. Certainly those that are more benign appearing can sometimes be watched, and those that might look more malignant, or on a biopsy appear more malignant or premalignant, we would be more aggressive about trying to take it out either through the scope or surgically.

Chu What are some of the common symptoms that are associated with colon cancer?

Cha For early stage tumors there are essentially no symptoms, and that's one of the reasons why screening is so important. Certainly as these tumors start to grow larger they are going to obstruct the lumen and cause problems with abdominal pain, bloating, and a lot of times, for even earlier stage tumors, they can be associated with some blood which is why fecal occult blood testing is also recommended starting at about age 40 and performed yearly. Sometimes patients can experience small caliber stools, particularly if they have a large circumferential tumor that's distal, but a lot of times it's very vague symptoms where they are caught because patients have anemia, fatigue, or weight loss, so it's very variable.

Chu We have a lot of close family friends and relatives who say to us, you know we are age 50 or greater but we have absolutely no symptoms so there really is no need for me to undergo screening. What do you say to those individuals?

Cha Well, I am a cancer surgeon, that's really all I deal with and there is a certain amount of denial and a feeling amongst the general population that it's not me, it's someone else, but if you look at the numbers, your lifetime risk, for an average patient, is about 6%. That means about 1 in less than 20 people will develop cancer sometime during their lifetime and that's why screening is so effective because we can hopefully catch these patients early. These are the same people who then later on, when they see you or I in clinic say, "why me" when they are found and as you mentioned, most of the time it's sporadic, there is no rhyme or reason to it, anybody and everybody is a potential

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colon cancer patient and we need to screen and try to catch these earlier so we can take care of them.

Chu Let's talk a little bit about screening. What are some of the common screening methods that are currently being used to try to identify colon cancer at an early stage?

Cha I know you discussed this quite extensively last week during your radio talk, but there are a whole set of different tests that are used, the least invasive being fecal occult stool testing where patients are given cards and essentially the stool is placed on the card and sent back by mail and that can be checked for occult blood. Moving forward, you have screening colonoscopies, which essentially are what I consider the gold standard, and with that you can actually observe the entire colon from the right side all the way down to the rectum. There are some technical issues in terms of how slowly the scope is withdrawn from the patient as well as how experienced the gastroenterologist or person who is performing the procedure is in terms of how effective that colonoscopy is, but from my opinion that's the gold standard. People also talk about flexible sigmoidoscopy, which really just examines the left side of the colon and is considered by some to be a little bit less invasive because you are not going through the entire colon. More historically speaking, people also talk about Barium enemas as a way to evaluate the colon, which really is not very good for right-sided colon lesions or really small lesions even in the left side of the colon.

Chu As you know there has been a lot of discussion, a lot of attention being placed on the use of virtual colonoscopy, and I am just curious, what are your thoughts on the role of virtual colonoscopy and screening?

Cha We use virtual colonoscopy in select situations. We do not use it for screening per se, but we are using it in situations where we can't actually perform a colonoscopy due to a tumor that might be causing too narrow of a stricture of the colon to allow the colonoscope to go past. In terms of using it for screening, I do not think it's really been well established, it's particularly not good for small lesions, if they are smaller than 5 cm in size, if you don't have really good prep a small stool particle can sometimes appear on virtual colonoscopy as a polyp because the computer just sort of models that stool ball as part of the wall of the colon, and ultimately the most important weakness is at the time of the procedure if you do find a polyp, you are going to have to have a colonoscopy anyway in order to get a tissue diagnosis. We sort of think of colonoscopy as one stop shopping where you can go in, you can screen, and if there is something you can biopsy it, or potentially if it is an early stage polyp, just take it out and you will be done.

Chu It's interesting though that many people have this inappropriate fear and anxiety about undergoing colonoscopy, can you maybe explain why that might be?

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Cha I think that attitude is changing over the course of the past 10 years, but colon cancer is something that people did not even want to talk about almost to the point where they were embarrassed about the fact that they had colon cancer, and it's something that as we have more awareness and understanding that it is a common disease and a potentially deadly disease, patients seem to become more open to the idea of screening and to the idea of saving themselves or their loved ones and moving forward with colonoscopy. We have seen a dramatic increase in the past decade in terms of screening colonoscopies, but even now the most recent estimate is that only about 50% to 55% of patients who should be getting screened are getting screened, but that's up from the 30% or so in the past decade. There is a psychological element to it and I think it's something similar to breast cancer where as we get more awareness, and as we understand more about the disease, patients are going to be more open and more willing to undergo a colonoscopy. Nowadays in the year 2010 it is a very comfortable procedure. It is something that is done as an outpatient procedure, it is covered by medicare and most insurance companies, and as I mentioned earlier, it is recommended for anyone who is at the age of 50 without any other risk factors.

Chu Great. We are going to take a short break for a medical minute. Please stay tuned to learn more information about the evaluation, screening, and treatment of colorectal cancer with my guest Dr. Charles Cha from Yale Cancer Center.

*Medical
Minute*

Over 170,000 Americans will be diagnosed with lung cancer this year and more than 85% of these diagnoses are related to smoking. An important thing to understand is that quitting, even after decades of use, can significantly reduce your risk of developing lung cancer. Each day patients with lung cancer are surviving thanks to increased access to advanced therapies and specialized care and new treatment options are giving lung cancer survivors new hope. Clinical trials are currently underway at federally designated comprehensive cancer centers like the one at Yale to test innovative new treatments for lung cancer and patients enrolled in these trials are given access to medicines not yet approved by the Food and Drug Administration. This has been a medical minute and you will find more information at [yalecancercenter.org](http://www.yalecancercenter.org). You are listening to the WNPR Health Forum on the Connecticut Public Broadcasting Network.

Chu Welcome back to Yale Cancer Center Answers. This is Dr. Ed Chu and I am joined here in the studio this evening by my good friend and colleague Dr. Charles Cha from Yale Cancer Center to discuss the screening, early detection, diagnosis, and treatment of colorectal cancer in honor of the fact that March is Colorectal Cancer Awareness Month. Before the break we were talking about the different screening methods that are currently being used, and I guess an important point to emphasize to our listeners is when would you recommend for screening to begin?

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- Cha For the average patient with no additional risk factors, the recommendation is for screening to occur at age 50, if you have a normal colonoscopy after that you don't need another for 10 years. If at the time of screening there is a small polyp found, then the recommendation is for another colonoscopy within 3 to 5 years after that. If you have any additional risk factors, for instance a family member who had colon cancer say at age 50, the recommendation is to get screening starting about 10 years prior to when that relative of yours had colon cancer. For the rare occasions where you have a genetic history such as familial adenomatous polyposis syndrome or Lynch syndrome, which are some of the genetic types of diseases that are associated with colon cancer, the screening is much earlier. For FAP in particular you will start while you are still less than 10 years old and those patients will have hundreds of polyps that will have to be monitored over their entire lifetime. For some of these genetic diseases, which are different from sporadic diseases, we will sometimes do prophylactic colectomies to prevent a cancer from occurring, which in the case of FAP is essentially 100%.
- Chu Again, in your view, colonoscopy sounds like the gold standard screening method that should be done.
- Cha Absolutely, there are a number of different screening methods available, but in my mind colonoscopy still remains the gold standard both in terms of diagnosing and treating patients who have early stage polyps. There's a lot of great data to show that for early stage polyps, even if there is a small focus of cancer within in it, through the colonoscope they can be resected and patients essentially would need a surgical resection after that, so both from a screening perspective and a diagnosis perspective in terms of biopsy as well as a therapeutic perspective, colonoscopy still remains the gold standard.
- Chu Our listeners out there that have tuned into the show in previous years, and last week's show, have heard me already say this, but yours truly, because I have a very strong family history of colon cancer at an early age, I have actually already had four colonoscopies, and I have to say it becomes easier and easier each time I undergo the colonoscopy procedure.
- Cha That's great, the more that people talk about having had one themselves and discussing it openly, the less of a psychological blockade there will be in terms of patients getting screening colonoscopies. There certainly was a big affect when Katie Couric had her colonoscopy shown on TV. There is even something that they call the Katie Couric effect where the rate of colonoscopies increased dramatically after that particular episode of the Today's Show, and I think that is going to continue to increase as people become more aware and are more open to getting screening colonoscopies.

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- Chu Let's talk a little bit about once a colonoscopy is performed, colon cancer has been diagnosed, what is the general approach to that individual then?
- Cha There is a multidisciplinary approach and you and I work very closely with patients, you're a medical oncologist and I am a surgical oncologist. For rectal cancer, radiation oncologists are involved, the pathologist, the radiologist, and we all work together to formulate the best plan, but in general, if we can remove it, then that is the best treatment for any type of colon cancer. As I mentioned earlier, for the earliest stage colon cancer, those that are not invading the wall at all and are just in that most inner lining of the colon, through the colonoscope you potentially can snare that, remove it, and that potentially can be it and no further therapy may be needed. As that tumor grows larger, the tumor starts to invade the wall and a surgical approach is often needed. Nowadays we have very good data that shows that a laparoscopic approach, where you use small incisions and TV cameras, is as effective as the old open procedure; they are equivalent to one another. I don't think there is a down side to doing a laparoscopic approach for colon cancers. We can talk about that a little bit later, but there is more debate in terms of whether the laparoscopic approach is as appropriate for rectal cancer, but clearly for colon cancer, which is the first part of the large bowel, a laparoscopic approach is as effective as an open procedure. There are certain technical issues that we don't have to go into, but getting an adequate distance away from the tumor, making sure that we acquire an adequate amount of lymph node drainage, are both very important aspects of doing a good cancer operation.
- Chu In your view, can a general surgeon do these kinds of what sound like a bit more sophisticated laparoscopic procedures, or should someone like yourself who is really focused and has a particular expertise in colorectal surgery be the one to perform these newer types of procedures?
- Cha That is somewhat of a loaded question, but I think traditionally general surgeons have always done open colon resections and surgical oncologists as well. There are also colorectal surgeons who are trained to do open resection. I think any of those people are well qualified, well trained to do open colon resection. In terms of laparoscopic surgery, it is unfortunately a little bit difficult to know and it's almost case by case situations where somebody has the expertise, has the training, and has experience doing those types of procedures. If you have a general surgeon who is well trained and does these types of procedures routinely, that's more than adequate experience to do that procedure. Surgical oncologists such as myself who have expertise in laparoscopic surgery and colon surgery in particular, or colorectal surgeons who have that type of experience and training, those are all appropriate people to perform those types of procedures. Unfortunately, for the general public it becomes a little bit difficult to know for sure whether your particular surgeon has those skill, and I would just say when you go to meet your surgeon you need to ask any important questions, how many have they done, or what type of training do they have? Is this something that you are uncomfortable doing? Because I think we are in the process right now where we are

transitioning from a point where these types of procedures were always done open, to a point where the data is pretty convincing that a laparoscopic approach is as good if not better than an open procedure, particularly in terms of length of stay in hospital, size of the incisions, and postoperative pain.

Chu I am just curious, is there a minimum number of say laparoscopic operations that a surgeon should be doing each year in order to have a patient feel like that person has the necessary experience?

Cha I don't think there is any established number. People talk about two of the biggest trials, one is the classic trial and one is the cost trial, and they use a cut off of about 20 procedures in those trials as having some expertise, but even within those trials as surgeons went along and did more of these procedures their conversion rate, meaning how often they had to go from a laparoscopic procedure to an open procedure, decreased suggesting that there is a learning curve even higher than 20, but I would say around 20 would be sort of a minimum number per year

Chu What about the role of robotic surgery?

Cha Robotic surgery is something that obviously for prostate cancer has been well established and even within prostate cancer there is some controversy. There is a recent New York Times article on whether it's a true benefit because it sounds very compelling, but the data for prostate is somewhat questioned for rectal cancer, which is what it is used for nowadays. There essentially is no data and it is something that I would consider still investigational and is something that I think has some potential advantages, but that has not really been teased out in any good data that I am aware of. What is also controversial is the role of laparoscopic surgery for rectal cancer, and for rectal cancer that would be what the robotic surgery would be replacing essentially, and I think that has also been considered more investigational as well, particularly for low lying cancer, low down in the pelvis, and it's something where there are currently ongoing trials investigating it.

Chu You are known as one of the leading experts in the surgical approach to patients who have colorectal cancer that spreads, specifically to the liver. Can you tell us a bit about when would be a situation in which you would consider operating on a patient who has got metastatic disease, but it seems to be confined only to the liver?

Cha This is one of the really exciting aspects that has changed in colorectal cancer care in the past decade or so. There used to be a very bleak outlook for patients who had cancer, particularly colorectal cancer that had metastasized to the liver, which is the most common organ for colorectal cancer to metastasize to. We now know from a lot of good data that if we can remove all the cancer that has gone to liver, there is still a relatively good chance for cure and there is a great chance for long term survival which is a huge difference compared to a lot of other cancers where

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once it has gone to the liver it is suggestive of more systemic disease; whereas for colon cancer, the liver seems to serve as almost a filter to prevent disease from going beyond the liver. So, we have become more and more aggressive with our ability to resect lesions that have gone to the liver. We are applying laparoscopic approaches as well to the liver and we are able to do both minor and major liver resection using laparoscopic approaches, which is something that's really new within the last five years. A lot of this is made possible because we have such good chemotherapeutic agents. As you well know, we have agents and targeted agents as well as standard chemotherapeutic agents that allow us to have response rates as high as 50 to 60% in some situations, and so we are getting to the point where we are able to resect patients who have five, six, sometimes ten liver lesions, sometimes in a staged approach, sometimes simultaneously, but we have a number of different techniques up our sleeves to benefit these patients.

Chu This actually is the one subset of patients with metastatic disease that we can really cure with a combination of surgical resection and chemotherapy.

Cha Absolutely, and there is good long term data now showing five year survivals for resection of liver metastasis as high as 50% to 60%, which if you think about it is not that different than patients who did not have liver metastasis, which is pretty remarkable.

Chu Thanks Dr. Cha, it has been great as always to have you on Yale Cancer Center Answers. The time goes really quickly, so I will have to have you come back and talk more about what your own research group is doing with respect to the treatment of colorectal cancer.

Cha Thank you very much for having me.

Chu Thanks for giving us a really nice overview of the importance of screening and early detection, especially since this is Colorectal Cancer Awareness Month. Until next week, this is Dr. Ed Chu from Yale Cancer Center wishing you a safe and healthy week.

If you have questions or would like to share your comments, visit yalecancercenter.org, where you can also subscribe to our podcast and find written transcripts of past programs. I am Bruce Barber and you are listening to the WNPR Health Forum on the Connecticut Public Broadcasting Network.