

**About Health TV with Jeanne Blake**  
**Ovarian Cancer Research Update**  
**[www.abouthhealth.com](http://www.abouthhealth.com)**

JEANNE BLAKE: Welcome to *About Health TV*. I'm Jeanne Blake. On this edition of *About Health TV* we are going to discuss ovarian cancer and the progress being made against this disease. We're joined by Dr. Stephen Cannistra, an oncologist at Boston's Beth Israel Deaconess Hospital, and Helen Wilkinson, who lives with ovarian cancer. Thank you, Dr. Cannistra and Helen, for being here. Doctor, is progress being made against ovarian cancer?

DR. CANNISTRA: We are making progress on several fronts. We have better treatments for patients who present with advanced disease that has spread beyond the ovary, and we can talk more about that. But we are also hopeful that we're developing better screening techniques as well, and as you said, that's a very important aspect of this, because if you catch this disease early it's highly treatable and curable.

JEANNE BLAKE: I want to talk about both of those, the treatment and the detection, but the vast majority of cases are found in women that are over 50, and a large percentage of those cases are in women who have a survival rate of less than five years. So it's progressed very far. Is that because women don't have symptoms, or is it because they're confused with other symptoms, or, God forbid, are we not paying attention to our bodies?

DR. CANNISTRA: It's a little bit of all of the above. Many women don't have symptoms, and during that phase, the tumor starts in the ovary but then cancer cells are shed from the tumor itself into the abdominal cavity and they spread outside of the pelvis to the upper abdomen. This happens in a silent way. By the time the symptoms develop, they're usually due to the fact that it's already spread to the upper abdomen, and most of these can be very nonspecific, they can be such symptoms as bloating, they can be confused as stomach cramping. These are the sorts of things that, although they're not very specific for ovarian cancer versus a benign condition, by the time you develop these kinds of conditions, in a sense it's already spread and you don't like to see that.

JEANNE BLAKE: That's right, because that means that there's not a lot that you can do. Let's take a look at the symptoms on the screen. I just want to give folks an idea of how tough this is to diagnose, and for women to feel any of these symptoms – I think we all have had some of these symptoms – abdominal pressure, bloating, as you mentioned, nausea, indigestion or gas, frequent urination,

constipation or diarrhea, abnormal bleeding, unusual fatigue, unexplained weight gain or loss, and shortness of breath. I have to say that a friend of mine died from ovarian cancer a few years ago and she had, I remember in the six months prior to her being diagnosed, she had complaints – they weren't complaints, though, she wasn't a complainer. But the record said that maybe she had mentioned something. But it never kind of came together and looked like a diagnosis.

DR. CANNISTRA: That's very common. In fact, many patients ... I can relate the story of having your symptoms confused with an ulcer or hiatal hernia and going through a GI type of work where your stomach is actually looked at first. And although the symptoms oftentimes reflect the fact that the tumor has become more advanced and then involve the upper part of the abdomen, it's not to say that that they shouldn't be acted on, because we still want to pick it up as early as possible, even when it spreads beyond the ovary. Because patients who still have small amounts of disease, even if it has traveled to the upper part of the abdomen, tend to be better than patients that have larger amounts of the disease.

JEANNE BLAKE: That's interesting. Mrs. Wilkinson, he's in remission now two years after diagnosis, will be joining me a little bit later in the program. I guess I didn't understand that there can be different ... are some cases more virulent than others? My friend Janie died a year later, and nothing seemed to be able to stop hers, but it doesn't necessarily mean it was not progressed. Are there some that are just more virulent than others?

DR. CANNISTRA: There are. We know that even if tumors have spread to the upper abdomen, those that are bulkier such that a surgeon at the time of the original diagnosis cannot remove a lot of the disease, those patients tend to respond less well to chemotherapy, which is a main treatment for this type of tumor. There are certain types of ovarian cancer, like the clear cell type, that's general more resistant to chemotherapy than others. So yes, within the advanced stage subset of patients, there can be patients who'd do better and patients who don't do as well.

JEANNE BLAKE: Do we get any help from knowing who is at the greatest risk for ovarian cancer?

DR. CANNISTRA: We do, in the sense that we may be able to use certain screening strategies to detect cancer anywhere in those patients, even though it's still somewhat of an uncharted and untested area. So, for instance, there are some general risk factors that are not being so helpful. For instance, we know that there's an increased risk of developing ovarian cancer in patients who have not had children. We also know that certain things can reduce the risk of ovarian cancer, such as taking oral

contraceptives in the appropriate setting. However, the strongest risk factor for the development of this disease is a very strong family history, especially ovarian or breast cancer developing in a first-degree relative such as a mother or a sister, especially if it's under the age of 50 years old. That kind of family history may mean that the patient harbors a gene that she may have inherited from her father or mother that predisposes her to developing either of these two diseases.

JEANNE BLAKE: What's the link between ovarian and breast cancer?

DR. CANNISTRA: It's a link that is due primarily to two genes, one is BRCA1 and one is BRCA2. BRCA is breast cancer, that's how it was named, but that's because breast cancer is quite a dominant aspect of this. But ovarian cancer is clearly associated with it as well. If you inherit a normal BRCA1 or BRCA2 gene from a father or mother, this will predispose to developing breast cancer in up to 80% of women, sometimes even more than that, lifetime risk, and anywhere between 20 and 40% of women will develop ovarian cancer if she has a BRCA1 or 2 mutation. So if you ask what is the firmest risk factor that we have, it's family history as it relates to the possibility that an individual may have inherited a mutated BRCA1 or BRCA2 gene. If we know that ahead of time, there are certain things that one can consider doing to decrease this risk, such as removal of the ovaries after childbearing is complete. That clearly decreases the risk of developing ovarian cancer. It doesn't eliminate it completely, and you may ask ...

JEANNE BLAKE: Exactly. How does one get ovarian cancer without having any ovaries?

DR. CANNISTRA: The theory relates to the fact that the entire surface, the abdomen itself, the lining of the abdomen, is at risk for turning into cancer. In much the same way that this lining covers the ovary and can turn to ovarian cancer, the lining exists in other surfaces.

JEANNE BLAKE: That's so interesting. I never knew that.

DR. CANNISTRA: Now, it's not a big risk, but the reason why patients who have removal of the ovaries can still develop a cancer later on which very well looks like ovarian cancer. Removing the ovaries eliminates the biggest risk.

JEANNE BLAKE: I've got a question about the birth control pill. We recently, within the last six months, heard reports that the birth control pill is protective. Do we know why?

DR. CANNISTRA: The reason may relate to the fact that if you live in the general population at risk, as I said before, not having had children can pose a higher risk. That may relate to the fact that a woman who has never been pregnant has undergone many more menstrual cycles than someone who has been pregnant. When you're pregnant, the menstrual cycle shuts off. When the menstrual cycle occurs, what's happening? An egg is released from the ovary, travels down the fallopian tube. But as it's released from the ovary, a surface of the ovary is ruptured, and that defect has to be healed. And the way it's healed is by the cells and the covering of the ovary have to divide. And the more times you ask those cells to divide, the more times you are predisposed to developing a genetic change and mutation that could result in transforming those cells into cancer. What the birth control pill does is shuts that off, so that limits the number of times that the ovarian surface covering is called upon to divide and thereby decreases the chance of a genetic change. That's probably, at least in part, how the birth control pill decreases risk.

JEANNE BLAKE: Okay. Let's talk a little bit about detection, because as I mentioned, I lost my dear friend two years ago, and I had some of the symptoms that were on the screen, and so I went to my doctor, who said that if I was really worried about it, because during an exam he could feel nothing wrong with my ovaries, but I wanted more reassurance. I had just come through this horrific time with my friend and I needed reassurance. And so I got the sonogram, and that was not definitive, because there are some times when that can not be a perfect test, so I said I want this CA125 and my doctor said that's not going to do anything. So I said wait a minute, we are really in the dark ages on this. And you're shaking your head yes. So, Doctor, how do you go about giving women some kind of reassurance that there will be, somewhere on the horizon, some hope that we'll be able to find out about this cancer? It's the first leading kind of cancer death in the United States and yet it remains so elusive.

DR. CANNISTRA: Just to backtrack a little bit, the CA125 test, which is a blood test that measures the protein made by ovarian cancer cells, and it's not a very good screening test by itself, as you mentioned, because there are too many other causes of an elevated CA125 that have nothing to do with ovarian cancer.

JEANNE BLAKE: As he suggested, too many false positives, which at that point was the last thing I needed.

DR. CANNISTRA: And likewise, conversely it doesn't pick up as many new cases of ovarian cancer as we'd like it to. For instance, in the early stage, which we call stage one, only 50% of women will have an elevated CA125.

JEANNE BLAKE: But that's 50% getting an early detection that wouldn't.

DR. CANNISTRA: But 50% out of a larger population of elevated levels that mean cancer, and unlike diseases like breast cancer where it's a little bit easier, even though it's not pleasant to undergo a biopsy, it's easier to have a biopsy done because the breast is more accessible and it doesn't generally require a large operation. If we need to determine whether an elevated CA125 means ovarian cancer, we're generally talking about major surgery to look inside. So this is why screening tests for ovarian cancer need to be much more rigorous than they are for most other cancers. There is hope on the horizon. There is a new technique called proteomics, which involves a blood test as well, in which a panel of proteins, which are molecules secreted by cancer cells and other cells into the bloodstream, a panel is produced and placed on a microscope slide.

JEANNE BLAKE: What's a panel?

DR. CANNISTRA: A series of dots, each dot representing a protein, a different protein. We may not know what the protein is, and that's almost the beauty of the test. We don't have to be so smart as to understand what each protein is, just if it's there. It's the panel that forms, in essence, a protein fingerprint of that patient, and by putting enough of these protein fingerprints into a computer and asking the computer to tell us if there's a signature that identifies a patient with ovarian cancer versus no ovarian cancer. It looks like in preliminary testing that it's very possible to do just that. So the power of this technology is that you don't necessarily depend on your own protein, like we do with CA125. We can look at hundreds of proteins at a time. We don't even have to know what they are, but just like if you had your fingerprint, we don't understand why everybody's whorl is in exactly what place and what defines you as you.

JEANNE BLAKE: That's an interesting analogy. Where are we with that research? I can't wait.

DR. CANNISTRA: We're years away.

JEANNE BLAKE: Oh no.

DR. CANNISTRA: We're years away and here's why. Because although in preliminary testing in small numbers of patients it looks like it can identify ovarian cancer patients and separate them from normals, in order to make sure this is really as good as we think, it needs to be prospectable of that to find large numbers of patients, thousands of patients ahead of time, and you file them carefully by doing this test on a repeated fashion over years to really determine whether or not it is able to pick up ovary disease as well as we think it can. So a lot has to be done. But of all the tests that are available, that's the one that I believe has the most promise and is the most successful.

JEANNE BLAKE: What's your advice to women like me who have some raised level of concern because we've lived through so much because of this? So it's not something that I don't think about.

DR. CANNISTRA: The first thing is that, although the concern is valid and that many of the symptoms are nonspecific and everybody has them now and then, the risk of developing ovarian cancer in the general population, assuming that you're not in the high risk group, let's say based on your family history, the risk is still relatively low. And what I mean by that is, lifetime risk in this country is somewhere in the range of 1 in 70, 1 in 70.

JEANNE BLAKE: That does not seem low to me.

DR. CANNISTRA: Relatively low. Compare that to breast cancer, where the risk is 1 in 9.

JEANNE BLAKE: I worry about that too.

DR. CANNISTRA: So the first thing to keep in mind is that in general, this is a relatively rare tumor. The second thing to keep in mind is that unless you have a high risk profile based on some of the things that we've talked about, you probably are going to get into more trouble by forcing your doctor or advancing yourself to get CA125 tests and ultrasound tests, because, as I said, the chance that that will result in a positive timing that will require an operation is much higher than the chance that it will be a cancer. For the general population, I do not recommend routine screening with CA125 and sonograms. I think it's certainly reasonable to have pelvic exams every year, because occasionally we pick up an ovarian cancer symptom in a pelvic exam. Certainly if you're having symptoms, and I would add that one of the symptoms is pelvic discomfort, which is a common symptom, but if it happens out of the blue, what that can sometimes mean is that there is a tumor and that it's twisting and that can cause pain, and sometimes that's the first sign that it could lead to cancer. So these are the kinds of things

that women who have major risk factors can do. It's not fully satisfying but it's the best we have right now.

JEANNE BLAKE: Thankfully, I have not gone back and asked for the screen. It's not something that I live in fear of, because I think I've gotten it into perspective because of the risk factors you brought up.

DR. CANNISTRA: Certainly screening with CA125 and ultrasound testing is reasonable to consider in patients who are at high risk based on the genetic test. But even then there are other things that ought to be considered as well that have more proven effectiveness, like removal of the ovaries.

JEANNE BLAKE: If a woman is diagnosed and it's in the later stage, what are the treatment options that are now being developed?

DR. CANNISTRA: The first step is to remove as much of the tumor as possible as a preparation for chemotherapy. More women are alive today than 10 or 20 years ago because of the treatment of chemotherapy that we've developed. So the treatment approaches that are currently used in primarily tumor therapy with two drugs in particular. But the direction that we're moving in is to try to incorporate other kinds of kidney therapy drugs into the primary treatment approach so as to prevent, and of course stall, the development of drug resistance to chemotherapy. So that's an approach that is largely being studied right now.

JEANNE BLAKE: Explain that just a little bit.

DR. CANNISTRA: The problem with ovarian cancer is that the chemotherapy drugs that we have to fight this disease when it prevents in an advanced way are actually quite good at initially controlling the tumor. Many patients enjoy shrinkage of the tumor to the point where we can't see it anymore by exam or by CAT scan or even by CA125 levels. And by the way, although CA125 levels are not a very good way to screen for this disease, if the patient has the disease, it becomes a very good way to monitor the progress of chemotherapy, and it is not at all uncommon to have complete disappearance of the disease during first-line chemotherapy, that is, chemotherapy used at the initial diagnosis. The reason why ovarian cancer is such a problem for patients is that even though we establish that initial disease control, the chance that it will come back again is very high. And it comes back again because there were a few cancer cells that escaped the initial chemotherapy because they were resistant to it. And that's the biggest problem that we face.

JEANNE BLAKE: Isn't that the case with other cancers as well?

DR. CANNISTRA: In most cancers that are difficult to treat, yes, but there are some cancers where the cure rate is rarely chemotherapy, because the chance of having resistance, there's few cancer cells that are resistant from the start, is much lower. So not all cancers have the same tendency to harbor a population of resistant cells.

JEANNE BLAKE: What makes a cell resistant? Now we're getting right down into the nitty-gritty, but I'm so curious. I mean, why is a cell in this part of my body resistant when a cell in that part of my body isn't? I guess it's just the makeup of the cell.

DR. CANNISTRA: We're trying to understand that as we speak right now. It's a genetic reason. Some cancer cells have acquired genetic changes that cause it to metabolize the cancer, the chemotherapy drug, in additive ways so that they may exclude it from the cell or pump it out of the cell. Some other cancer cells have acquired genetic changes that allow them to repair the damage done by chemotherapy very quickly, and it's those kinds of mechanisms, the resistance, that we're very committed to understanding, because our approach is that we can understand the very reason for drug resistance, we may be able to circumvent it from any drugs. And so this is one of the directions we'll be taking.

JEANNE BLAKE: Doctor, we'll have to pause now, but you leave us on a note of optimism that there is hope and progress against ovarian cancer. Thanks so much for coming in today. And we'll be right back to meet a woman whose ovarian cancer is in remission. Stay with us.

[COMMERCIAL]

JEANNE BLAKE: We continue our discussion now about ovarian cancer, joined by Helen Wilkinson, whose ovarian cancer has been in remission for two years. Helen, you look great.

HELEN: Thank you.

JEANNE BLAKE: You feel good.

HELEN: I feel great. I really feel great, thank you.

JEANNE BLAKE: Things were very different a few years ago, when you learned that you had this disease. What was your reaction to finding out you had ovarian cancer?

HELEN: Devastating. Devastating. I just couldn't believe it happened to me, you know, like I said before. I had a lot of bad things in my life happen. My daughter, my granddaughter dying, and then three years later I'm diagnosed with ovarian cancer, and I thought, it just can't be.

JEANNE BLAKE: Did you know at that point how serious advanced ovarian cancer is?

HELEN: No, I did not. I just blocked everything out and I left everything up to my daughter-in-law. I just couldn't handle it. I just couldn't handle it. It was devastating.

JEANNE BLAKE: What symptoms did you have? I know that you learned about your cancer when it was pretty elevated.

HELEN: Right. Like I said before, I was at school, I worked as the cafeteria manager, and I happened to be lifting up a case of juice thinking that I pulled a muscle or something in my stomach, and I just said it can't be serious. I waited for a week and there was pain. Then I said, I'll have to go see the doctor. The doctor said, Well, maybe it is something to do with the lifting, so we let that go, and then after that my stomach started to swell up really bad. I had to cut my clothes to wear them. So finally I went back to the doctors and they put me through all these series of testing, and that's when they found out that I had ovarian cancer.

JEANNE BLAKE: So you went immediately to an experimental treatment?

HELEN: Treatment, yes. I thought what would be better. They said that if I took the standard treatment first I could never get into the experimental treatment. So my daughter-in-law said, Listen, you're going to go to this experimental treatment and then we'll do that other if necessary. So I went to Dr. Stephen Cannistra at Beth Israel Hospital and he explained all the things that could happen. There's still a risk when you're doing chemotherapy, like any chemotherapy you go through, there is a risk of infection. So I took that, and okay, I'm going to do this, I'm going to fight it, I have to, because I don't want anything else to happen to me, you know, in my life. So it was really devastating.

JEANNE BLAKE: But you responded so beautifully and you're in that percentage that does respond to the treatments that Dr. Cannistra has talked about, and in fact they can't find a trace of the cancer in you right now.

HELEN: Right now they can't, no. I did respond very well, like I told you, but it's because I just said I'm going to make up my mind. I'm going to do this. I've got to get this out of my system.

JEANNE BLAKE: How frustrated are you knowing that this is a disease that is so silent until it's in its advanced stages?

HELEN: Very bad. I mean, I wish they could find a way before it could happen and get it at its start. But they couldn't. They can't do it. There's no ...

JEANNE BLAKE: Dr. Cannistra did describe early in the program a test that detects a protein, so there is some hope.

HELEN: Right, but when I did, no. And they did the CAT scan and the ultrasound and then they thought it was in my lungs. But they took some fluid out of my lungs and it wasn't there, so I was kind of happy about that.

JEANNE BLAKE: You've had access to really good care, but you're also had a partner in your journey.

HELEN: Oh yes.

JEANNE BLAKE: Tell us about that.

HELEN: It's my lovely daughter-in-law. I won't say she's a daughter-in-law. I've got to call her a daughter, because that's what she is. She gave me more courage, and if it wasn't for her, I don't think I would have done it. I would have just gone to Framingham and had the surgery done there and everything done there, but she said no, we're going to do this, we're going to go for it. And I said, Okay, I'm going in, and I went in.

JEANNE BLAKE: It's important – I know from friends who live with cancer – to have that partner not just to encourage you and to keep you motivated, but also just for very practical purposes, to sit with

the doctor and translate what you're hearing, and to help you remember things that are said.

HELEN: She sat there every visit and still comes with me to every visit, right in the office, exam room, and everything, and she asks all the questions because I couldn't. I just wasn't up to it, you know. But she did everything, and she went on the Internet and found some particular information about this particular treatment and she said, We're going to go for it. And I said, Okay, I'm going to do what you say. But she's always with me all the way, sitting in the chemotherapy room, she wouldn't leave my side, she was right there.

JEANNE BLAKE: And what do you say to others who are living with cancer now?

HELEN: I would say to them make sure you have somebody like I had to go through this with you and be there, because when you have it yourself, you don't listen, you're not listening, you're so nervous about it, which I am, and I still am going into the three-month checkup. But have somebody with you and have that positive attitude, you know, I'm going to make this. And like I said with Deb and my son and my grandson and my sisters, they're the ones that are really pushing me, and Dr. Cannistra, he's a doll.

JEANNE BLAKE: Well, you're an inspiration, and I know that a lot of people who hear your words will be encouraged by seeing you look so well. So keep up the fight.

HELEN: Thank you very much.

JEANNE BLAKE: We wish you well. And I want to thank you for joining us on this edition of *About Health TV*. I'm Jeanne Blake. I'll see you next time.

*About Health TV* is sponsored in part by  
Harvard Pilgrim Health Care Foundation.  
Improving health through medical education,  
clinical research and community service.