

Welcome to Yale Cancer Center Answers with doctors Francine Foss and Anees Chagpar. Dr. Foss is a Professor of Medical Oncology and Dermatology, specializing in the treatment of lymphomas. Dr. Chagpar is Associate Professor of Surgical Oncology and Director of the Breast Center at Smilow Cancer Hospital at Yale-New Haven. 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 1-888-234-4YCC. This week, doctors Foss and Chagpar welcome Dr. Aileen Gariepy. Dr. Gariepy is Assistant Professor of Obstetrics Gynecology and Reproductive Sciences and Assistant Clinical Professor of Nursing at the Yale School of Nursing. Here is Dr. Francine Foss.

Foss Can you start out by telling us a little bit about yourself, I understand that you recently came to Yale?

Gariepy I was recruited to Yale about a year and half ago after finishing a family planning fellowship at the University of Pittsburgh at Magee-Womens Hospital and I was recruited to the department of OB/GYN to help start a family planning section. As we learn more in medicine, there are more subspecialties in obstetrics and gynecology, and family planning is the subspecialty that helps to prevent pregnancy in women who do not want to be pregnant and helps take care of women who have pregnancies that have gone horribly awry.

Chagpar Tell us a little bit more about how that intersects with the Cancer Center and with people who have a cancer diagnosis.

Gariepy I would love to. I think that for women who are cancer survivors or who are currently going through cancer treatment, the outcome of having an unintended pregnancy can be really devastating. For one, it can impact diagnosis and treatment if there is a delay in getting beneficial chemotherapy while balancing the concerns of teratogenicity, or fetal anomalies, that the chemotherapy or radiation therapy can have on a developing fetus. It can also be emotionally devastating for patients who have to make choices between their own treatment and their own wellbeing versus that of a fetus. And pregnancy itself has a lot of risks that can complicate cancer, for example, our greatest risk of developing a clot as females is during pregnancy.

Foss Can you tell us about the spectrum of women that you see? Do you see women of all ages, or are there certain ages, and this is a question some of us always ask ourselves, in which you really cannot get pregnant?

Gariepy I see women of all age groups, and often some of the best

conversations to have are with young girls who are not yet sexually active, and to be able to talk about their bodies and valuing their bodies and making good choices, up to women in their early 50s. The mean age of menopause, where we cannot get pregnant anymore in the United States, is 52. And as far as cancer patients, I have had a fair number of consultations so far with women that are BRCA 1 and BRCA 2 positive, so they have a genetic predisposition to developing breast or ovarian cancer and talking about timing their pregnancies and timing their prophylactic surgeries and talking about what kinds of contraception are safe for them and can be utilized. 3:40 into mp3 file <http://yalecancercenter.org/podcasts/2013%200331%20YCC%20Answers%20-%20Dr%20Gariepy.mp3>Chagpar Let's pick up there because I think that that is really an issue that a lot of our listeners may be thinking about in terms of genetic risk, particularly for those who have a BRCA 1 or BRCA 2 gene mutation. So these are woman who are at risk of developing breast or ovarian cancer. How do you counsel them? Because for a lot of them they are wondering, can I have a family, should I have a family, when do I time this? Walk us through the conversations that you might have with a person who has a BRCA mutation.

Gariepy That is a great question and probably the biggest point is that it is a multidisciplinary discussion as well in connection with the genetic counselors and with the gynecologic oncologists who are the subspecialists in obstetrics and gynecology that take care of the cancer portion of that and talking with reproductive endocrinology and infertility, which are the subspecialists that can help women get pregnant and the maternal fetal medicine doctors who are the high risk obstetricians that can take care of women during pregnancy and so having that conversation altogether it focusses on where the woman is in her child bearing and in her partnership, because if a woman is 18 years old and finally decides to get tested and comes back positive for BRCA 1, statistically speaking most likely she is not going to be in a relationship and ready to have a family, but she is going to want to look at things that can decrease her risk and we know that for example combined oral contraceptive pills decrease the risk of ovarian cancer. The downside of using birth control pills is that they are not as effective at preventing pregnancy as the top tier methods of contraception, which are the two different kinds of IUDs and the implant that goes in the arm. So, it is very much a tailored discussion, and an individual discussion weighing the risks and benefits of the contraception, where she is in terms of just having a diagnosis of an increased risk, or having had a history of cancer for people that are childhood cancer survivors, and then what her future planning looks like and I think that is the benefit of having a family planning specialist at Yale and at a lot of other major medical centers, is that we are the ones that can look at that literature to come up with an individualized plan for each person based on what they want and where they are at their life.

Foss Do many of your patients fall into that category or are many of them women who just got a cancer diagnosis, for instance?

Gariepy I think it is probably about half and half right now. Probably more women with a predisposition to cancer are coming in to see us.

Foss Can you talk a little bit about the options? You mentioned some of them with oral contraceptives and the implants and some of the other methods. Can you talk specifically about each one of those and how you integrate that with the therapy that the woman is going to receive?

Gariepy I think one of the most important things to share with patients and women that are listening and health care providers is the fact that not all contraception is created equally, and so there are differences in the effectiveness of contraception. In general, we can split contraception into three groups based on how well it works, the bottom level groups have about a 20% risk of failing. So a 7:11 into mp3 file <http://yalecancercenter.org/podcasts/2013%200331%20YCC%20Answers%20-%20Dr%20Gariepy.mp3> 20% chance of pregnancy over the course of a year, and that includes male and female condoms, the diaphragm, natural family planning where we try to abstain from intercourse around the time that we think we might be fertile, and withdrawal or pulling out when the man pulls out before ejaculating, those all have a 20% chance of failure. The middle of the road is the birth control pill, the birth control patch, the birth control ring and the Depo-Provera shot, and they in general have a 10% failure rate. So, a 10% chance of getting pregnant, and then the top of the line are the two IUDs, there is a copper IUD and a progestin-only IUD and then also an implant that goes in the arm and the three of those are just as effective as getting tubes tied, but 100% reversible, and they only last as long as there are in and they have a less than 1% failure rate. And that is the view point of efficacy of contraception, and that needs to overlay with what her cancer diagnosis is, where she is in treatment and having a conversation with the oncologist or the other surgeons about what her treatment plan is to come up with somethings that is going to meet her needs.

Chagpar So for different women who have different cancers, presumably when undergoing therapy, especially if it is chemotherapy, you may want to abstain or avoid getting pregnant while you are on therapy. How does the type of diagnosis influence that, or whether patients are on other kinds of treatment like radiation, and how do patients find their way to a family planning specialist or is this something they often try to do on their own? How does that whole process work?

Gariepy I think patients often try to do a lot on their own, and certainly being able to talk to your audience today I think is helpful because I want to let patients and providers know that we are here to help with those conversations. I think that we do not have a great idea of the burden of unintended pregnancy in cancer survivors. It is not something that we have talked a lot about, I think because cancer is so big and overwhelming, and rightfully is the priority of a lot of the discussion, but in surveys and some data that we have we know that female cancer survivors and patients undergoing cancer therapy have said that they feel their reproductive health needs were not met and that mostly has to do with concerns of preventing pregnancy. So, I do think that there is some work for us to do there. We know that patients that currently have cancer are more likely to terminate a pregnancy if they do become pregnant during their treatment. Then to get to the other question of matching up what kind of contraception is going to work best, I think the most effective contraception is always first line. So, the paragard IUD, which is the copper IUD has no hormones in it and so it can be kind of universally recommended for anyone with cancer, with breast cancer with ovarian cancer, with lung cancer, I mean the list can go on. One of the helpful tools that exists is something called the Center for Disease Control Medical Illegibility Criteria for Conception, which was really an effort on the part of my community and family planning to do many meta-analysis and many reviews looking at the different types of not just cancers, but also chronic medical conditions like hypertension and diabetes, and which of the forms of birth control, hormonal or not, and then within hormonal, which hormones are safer for people. Getting back to the idea that not all contraception is created equal, some women can have estrogen and progesterone and it is not going to affect their cancer, it might even be beneficial to their cancer or their risk of cancer, as we talked about combined hormonal birth controls in BRCA1 individuals 11:25 into mp3 file <http://yalecancercenter.org/podcasts/2013%200331%20YCC%20Answers%20-%20Dr%20Gariepy.mp3>

and for other women with a history of hormone receptor positive breast cancer, then combined hormonal contraception probably is not going to be the best option for them. That is where I think I can be helpful to our patients, is to be able to take a detailed history to be able to communicate and coordinate with other providers in order to come up with a tailored plan because it is all these competing interests that need to be balanced to help get her the outcome that she wants which is to be cancer free and not pregnant until she wants to be.

Foss Can you comment on the use of the IUDs in particular, as some of our patients with leukemia and hematologic malignancies where their blood counts are going to be low, their platelet counts are going to be low, there may be some risk of bleeding, how do you include that in your decision and is that a real risk with these IUDs?

Gariepy I think that is a great question. The IUDs are a wonderful form of contraception. The IUD that has been on the market longer, the copper IUD, some women who use it can have bleeding that is heavier, longer, and crampier. So, I would not recommend that for someone with anemia or at risk of bleeding, but the other IUD, the newer IUD, which is a progestin-only IUD makes our periods lighter, shorter, and with less cramping and is actually FDA approved and recommended for women who have heavy periods. So that would be a very good option for people who are having anemia related to their cancer or related to cancer treatment.

Foss Do you believe that we should be suppressing the periods completely? There is a philosophy out there that you should suppress ovulation during chemotherapy, is that necessary? Are there any benefits to that?

Gariepy Just thinking back to the risk of ovarian cancer, we used to think it was the number of ovulations that increased the risk of ovarian cancer in women who were BRCA1 positive, but now we think it actually has more to do with the fallopian tube and that is not actually the release of the egg and the repair of the trauma that comes from ovulation. So, I am not sure that we have the answers to that question yet.

Chagpar With that we are going to take a break for a medical minute, but when we come back we will talk a little bit more about family planning and how that plays into the lives of cancer patients as well as cancer survivors. Please stay tuned for our continued discussion of family planning and contraception during a cancer diagnosis with Dr. Aileen Gariepy.

Medical

Minute Breast cancer is the most common cancer in women. In Connecticut alone approximately 3,000 women will be diagnosed with breast cancer this year but there is new hope. Earlier detection, noninvasive treatments, and novel therapies provide more options for patients to fight breast cancer. Women should schedule a baseline mammogram beginning at age 40 or earlier if they have risk factors associated with the disease. With screening, early detection, and a healthy lifestyle breast cancer can be defeated. Clinical trials are currently underway at federally designated comprehensive cancer centers such as Yale Cancer Center to make innovative new treatments available to patients. A potential breakthrough in treating chemotherapy resistant breast cancer is now being studied at Yale combining BSI-101 a PARP inhibitor with

the chemotherapy drug irinotecan. This has been a medical minute brought to as a public service by the Yale Cancer Center. More information is available at yalecancercenter.org. You are listening to the WNPR Connecticut's Radio Station.

Chagpar Welcome back to Yale Cancer Center Answers. This is Dr. Anees Chagpar and I am joined today by my co-host Dr. Francine Foss. Today we are talking to Dr. Aileen Gariepy about contraception and family planning prior to a cancer diagnosis, during a cancer diagnosis and afterwards. Aileen, one of the things that you had talked about before the break were a variety of mechanisms that women can avail themselves of that will prevent them from getting pregnant. Can you talk a little about what the common misconceptions are that you see in practice that you think people may not be aware of and how you go about counseling patients about them?

Gariepy That is a great question and a very interesting and important topic as part of this conversation. One of the most unfortunate and common circumstances I see for women with a history of cancer or a current diagnosis of cancer is either a primary care physician or maybe even an oncologist worried about the risk of cancer of cancer recurrence or of a side effect of cancer like having a deep vein thrombosis coming from using certain kinds of contraception, advise the patient to stop contraception but might not give her a good avenue to pursue better options and then the patient is referred to me when she has an unintended pregnancy. I think that is an area where we are not serving women as well as we can. Most contraception is safe even for women with cancer or with a history of cancer and I think the important thing to consider is always the idea of compared to what? Because the risk of getting a clot in general for women on combined hormonal birth control pills is about 1 in 10,000 and the risk of getting a clot during pregnancy is about 25 times higher. So, if you are trying to avoid someone getting a clot, they are much better off being on a form of birth control than they are getting pregnant.

Chagpar And as you had mentioned before the break, there are a variety of forms of birth control that do not involve combined hormones, right?

Gariepy Right, the copper IUD does not have any hormones in it and then the progestin only forms of contraception, all the best evidence says that they are absolutely safe to take in people who have a history of clots even, and that there is not a significantly increased risk of forming clots in progestin-only contraception, so that would be the progestin-only IUD, which just delivers progestin locally and as we talked about it can make periods lighter, shorter, and with less cramping and has less than 1% failure rate. Then the etonogestrel, which is a type of progestin implant that goes underneath

the skin in the arm and can last for up to three years. That is the other important thing to say about top tier, or what we call long-acting reversible contraceptive methods, is that they are longacting and that is why they are more affective. The implant can last for up to three years, but it does not have to stay in that long. The copper IUD can last for up to 10 18:33 into mp3 file <http://yalecancercenter.org/podcasts/2013%200331%20YCC%20Answers%20-%20Dr%20Gariepy.mp3> years and the progestin-only IUD can last for up to 5 years and they do not have to stay in that long but for someone who is already taking a lot of medication, who already has disrupted their life with a lot of radiation appointments and chemotherapy appointments with physical therapy, and surgery, to be able to set it and forget it, I think that is a real benefit of these long-acting reversible contraceptive methods. And the reversible part is key, that they can be just as protected against pregnancy as sterilization, but their fertility will return to what it was when the contraception is removed.

Foss You brought up the issue of sterilization and I wonder how many women actually ask for that and if they do ask for that, do you try to convince them to use one of these other methods?

Gariepy A lot of women ask for sterilization. Sterilization is the most common method of birth control in the world, and it is the second most common method in the United States, second only to the birth control pill. Sterilization is definitely something that women are asking about all the time and I think it is a really important point to talk about. There are two different kinds of female sterilization and a third kind of male sterilization. The big issue with sterilization is that it is irreversible and some women, because we haven't done a good job of educating and increasing awareness about these long-acting reversible contraceptive methods, they think sterilization is their only option. And the down side of sterilization is #1, regret. For women under the age of 30 they have a much higher chance of regret than women that are older than that. Both methods of female sterilization are surgical, so there is a laparoscopic method, where we make a small incision in the belly button and access the fallopian tubes, which are the carriers and block that and there is a hysteroscopy method where we put a camera through the cervix into the uterus to find the opening of the fallopian tubes to put a coil there, but they are both surgical and they involve the risks of surgery whereas the IUDs and the implant are nonsurgical and they could be done in the office. I think anytime we put more steps in front of women to get to the outcome they want, like being sterilized, the more often we miss that outcome. So someone coming in saying that they want to have the best form of contraception possible, I could put an IUD in that day, I could put an implant in that day, I cannot sterilize her that day, and it is that sending her back out to make a preop appointment to come back in, to get her surgery scheduled, then have the surgery that all those steps increase the

chance of getting pregnant when you do not want to be.

Foss That is an excellent point because for many of our chemotherapies we really need to get started fairly quickly. So, there really is not a big window of time between the cancer diagnosis and the time that they need to start definitive therapy.

Gariepy And one point about vasectomy, which I highly recommend, is that for men it is a much simpler procedure than it is for the women, and that is just by design, the tube that we are trying to block for a man is on the outside and for women it is deep inside and with any discussion about female sterilization, male sterilization also needs to be included, and that is a discussion that I have with

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partners, trying to come up with what the best thing is, but ultimately if the male refuses to pursue a vasectomy, male sterilization, women, because unintended pregnancy is such a heavy weight on them, they will often pursue it so that they have it under their control.

Chagpar One of the things I wonder is if you are a young woman and you are faced with this incredible cancer diagnosis, which understandably turns your world upside down, and then you are thinking not only about your future, but ensuring that you do not hurt a potential fetus, how many women do you think, when you said that a lot of women come in asking for sterilization, how much of that do you think is based on fear and lack of knowledge or trust of other forms of contraception versus a true bona fide knowledge-based, evidence based judgment on their part?

Gariepy I think it is rare for a person who has never had a baby to come in asking for sterilization. I'd say it is more common in women who have one or two children. They thought they were going to have number 3, but they were diagnosed with breast cancer and so they have decided they don't want to risk it, and I can understand that, and my point of view is that I want to give women all the information so that can make the best choices for themselves and there is certainly something to be understood about not wanting to go through one more thing or not wanting to have the weight of uncertainty on them, but for the most part pregnancy can be very safe for women who are cancer survivors, and that is a discussion to have with my colleagues in high risk obstetrics maternal

fetal medicine or reproductive endocrinology and fertility, to make sure that we are all on the same page and all giving her the right information so she can make the best choice for herself and her family.

Foss It is common for people getting chemotherapy to think that they cannot get pregnant. Do you run into that a lot and also it is probably common for them to think that they will not be able to get pregnant after.

Gariepy Yes, I think we could do a better job there. Most chemotherapy can affect the ovaries and the ability for the ovaries to have eggs that could still be viable and get to a pregnancy, but there is a difference between telling someone that because of their cancer diagnosis and the treatment that they are going to get, that they are to have a decreased likelihood of getting pregnant, but that is not the same thing as you are prevented against pregnancy and so our bodies are magnificent. They are very good at figuring out sometimes how to release an egg and so if there is an egg and if there is sperm, it could happen, and I think we need to do a better job of differentiating between planning for a pregnancy and what the likelihood is of you having a successful pregnancy, and even if that is low, that is not the same thing as you do not need to worry about contraception, because you cannot get pregnant.

Chagpar All of that is well and good, and I think that we have really convinced people that if you are looking at a cancer diagnosis, and/or being treated for cancer, and are a woman, you really ought to be thinking about family planning. What happens if you do not? And now all of a sudden you find yourself in the unfortunate situation of having an unwanted pregnancy. I can only imagine

26:13 into mp3 file <http://yalecancercenter.org/podcasts/2013%200331%20YCC%20Answers%20-%20Dr%20Gariepy.mp3> what that feels like for the woman and her partner, and her family. What do they do? Where do they go? What are the options? How do they get advice?

Gariepy I agree that that can be a really devastating time and that happens even when you have done your best to avoid pregnancy, because nothing is 100%. If that happens they can come and see us. We take care of women who have complicated medical histories who need to end a pregnancy and we do that with a tremendous amount of care and compassion and good sound medicine. Getting to that step is a process. I think some people when they are faced with that reality of having an undesired pregnancy in the middle of a cancer diagnosis they know immediately what they want to do. They want

to end the pregnancy, but for others it is a time of needing to get everyone in the same room and talk about what the pluses and minuses are. What does it mean for their diagnosis? What does it mean for the treatment that would be available? What does it mean for the developing fetus? And again, I think that is a really key interdisciplinary process that we can participate and help them with.

Foss How do you advise women who have completed their chemotherapy or their definitive treatment plan? How do you advise them as to when they can start thinking about pregnancy again? I know that is probably very variable, but what is your general approach to that discussion?

Gariepy It depends on what type of cancer they had, but for women, for example with breast cancer, there are pretty good guidelines that they should wait for three years. For other types of cancers, I think it is a very individual assessment.

Chagpar And the good news is that when a woman wants to get pregnant, especially if they have used a reversible type of contraception and had a discussion with their oncologist and the rest of their health care team, that it is possible. I think that for a long time people thought that cancer equals the end of their life, the end of their family, the end of all decision making ability, but what I am hearing is a far more optimistic view.

Gariepy Absolutely optimistic and getting her what she wants, helping her to figure out what her reproductive life plan is and then helping her achieve it. That is really what my role is and I feel very privileged to do it.

Dr. Aileen Gariepy is Assistant Professor of Obstetrics Gynecology and Reproductive Sciences and Assistant Clinical Professor of Nursing at the Yale School of Nursing. If you have questions or would like to add your comments, visit yalecancercenter.org where you can also get the podcast and find written transcripts of past programs. You are listening to the WNPR Health Forum on the Connecticut Public Broadcasting Network.