Funding for Yale Cancer Answers is provided by Smilow Cancer Hospital.

Welcome to Yale Cancer Answers with Doctor Anees Chagpar.

Yale Cancer Answers features the latest information on cancer care by welcoming oncologists and specialists who are on the forefront of the battle to fight cancer.

This week, it’s a conversation about breast reconstruction after cancer with Doctor Paris Butler. Doctor Butler is an associate professor in the division of Plastic Surgery at the Yale School of Medicine, where Doctor Chagpar is a professor of surgical oncology.

Paris, maybe we can start off by you telling us a little bit more about yourself and what it is you do.

The vast majority of my practice as a plastic and reconstructive surgery is in the breast reconstruction space.

The other majority of my practice really is in body contouring.

So I work pretty much from the clavicles all the way down when it comes to restoration of form and function, as we like to say.

So let’s talk a little bit more about breast reconstruction,
particularly after a cancer diagnosis. You know, for many women who are faced with a breast cancer diagnosis, that’s always a question that they have. Especially if they're faced with the loss of a breast, what will that look like? What will that feel like? How will that impact their sense of femininity, of sexuality, of body image.

So talk a little bit about the options that women have for breast reconstruction after a mastectomy. It’s a great question, and it’s a broad one and I'll probably back up a little bit. So the goal of breast reconstruction as we say is to kind of restore form and function as it pertains to the breast mound.

We as plastic and reconstructive surgeons are at least from my purview, I love what I do because we get to kind of bring some joy hopefully to a difficult conversation, particularly as it pertains to a recent diagnosis of breast cancer. So we know in the US about 250,000 new breast cancers are diagnosed every year that results in about 100,000 mastectomies.
So when the cancer is of a size that it can’t be removed locally through what we call a lumpectomy, then removal of the entire breast is indicated or sometimes the patient says, I’ve had a cancer in this breast, I don’t want the chance of a recurrence, so I’ll have the entire breast removed and a prophylactic mastectomy on the other side, prophylactic means that there’s no cancer in that other breast, but they’re removing it to prevent a cancer from ever occurring in the future, or at least that’s the hope. As a plastic and reconstructive surgeon that does a lot of breast reconstruction, our goal is to reconstruct a breast mound. We do about, in this country, almost 140,000 breast reconstruction procedures per year. That’s a big number. We think that about 65% of the time in the country when a mastectomy is performed, a patient will opt for some kind of breast reconstruction procedure. And that does come, as you alluded to, in various forms. 75% of the time when we perform breast reconstruction in the US.
It’s an implant based reconstruction where we use a prosthetic implant, either saline or silicone that we implant into the chest wall to reconstruct that breast mound. And then about 25 to 30% of the time we do what we call autologous reconstruction where auto is self. So we use a different part of the body, we remove a part of the body say from the abdomen, the thighs, the buttocks and we use that tissue through microsurgical techniques to create a new breast mound. The goal we say is to create a breast mound to get patients to look quote unquote, normal in clothes. I think many of us are proud to say that we can get our patients to look normal in underwear and normal in a bathing suit. However, as soon as the bathing suits is removed or the underwear is removed, there’s always going to be scars. There’s no such thing as scarless surgery and I don’t want to paint a grim picture, but I think it’s important to have that realistic expectation. Let’s dive a little bit deeper into these options.
So what are the things that you consider or that patients could consider when they’re thinking about first of all, do I get reconstruction or not? It starts with that initial conversation with the breast surgeon or the surgical oncologist pertaining to what kind of cancer surgery they’re going to need. You know, breast reconstruction in my opinion and many others is a full continuum of offerings. As an example, I mentioned the fact that about 65% of the time a woman will opt for breast reconstruction. That means 35% of the time in the US when a woman has a mastectomy. They don’t have formal breast reconstruction for one reason or another. They’re either too sick or have too many other medical challenges that would preclude them from getting additional surgery. Or they just say, you know what, I don’t want to go through any additional operations to reconstruct breast mounds. I’m fine with being closed. So our continuum as plastic and reconstructive surgeons that work and live in this space spans from what I call aesthetic flap closures,
that's for the woman who says, listen, I don't want reconstructed breast mounds. But I don't want to be left behind with a lot of redundant skin that can get rashes and irritation. So can you help the breast surgeon in just closing things flat so I can be fitted with an external prosthesis or so I can get tattoos or no tattoos or just once again to avoid that redundancy with excess skin. Then you move to more formal things like implant based reconstruction to flap surgery as we like to call it or autologous surgery to something that I'm actually fairly excited about of late where a patient will have a lumpectomy and they've always had larger breasts and they've always wanted a breast lift, and the silver lining of their cancer diagnosis is the fact that the breast surgeon can do the lumpectomy and then I can come in and do a formal breast reduction or oncoplastic reconstruction and in this circumstance actually make their breast maybe
aesthetically more pleasing than they were prior to their diagnosis. So the continuum of breast reconstruction offerings that many of us have in our toolkit continues to expand.

And so as you mentioned, you know the discussion about whether or not to reconstruct often has to do with patients' comorbidities, it might have to do with their cancer with whether or not radiation is expected after the mastectomy. Can you talk a little bit about that interface between radiation and reconstruction and how that kind of plays into your decision to either reconstruct versus not reconstruct immediately versus in a delayed fashion and or the type of reconstruction that you might choose.

It's a very good question, and one that could easily go for an hour or more in response. I will say, radiation does complicate things. I tell my patients because I'm very proudly boarded in general surgery and speak a lot of the cancer language although I'd never overstep my surgical oncology colleagues.
But I understand the magnitude of radiation therapy and as a plastic and reconstructive surgeon I understand the fact that radiation is necessary many times for the oncologic or the cancer care, but it's tough on skin and soft tissue. That's just the reality of it. But in light of that we still move forward. So it is my practice that as it pertains to radiation needs, we still will offer patients reconstructive options. Now sometimes that will depend upon when the radiation needs to be given, that impacts the kind of reconstruction that we are offering. If a patient has never had radiation before but is going to need radiation after surgery, in my opinion they can still be offered either an implant based reconstruction or an autologous reconstruction. And many times we still do that up front, we still do that at the time of their initial operation. There have been an increase in amounts of of studies that have
0:08:53.001 –> 0:08:55.22 shown that a woman waking up with  
0:08:55.22 –> 0:08:56.34 a breast mound  
0:08:56.34 –> 0:08:58.556 has significantly improved psychological,  
0:08:58.556 –> 0:08:59.11 social,  
0:08:59.11 –> 0:09:00.834 emotional and functional improvement  
0:09:00.834 –> 0:09:02.989 rather than being closed flat,  
0:09:02.99 –> 0:09:04.31 going through the process and then  
0:09:04.31 –> 0:09:06.26 trying to get a delayed reconstruction.  
0:09:06.26 –> 0:09:07.382 That being said,  
0:09:07.382 –> 0:09:10 we do have a subset of patients  
0:09:10.083 –> 0:09:13.03 that have to get radiation very  
0:09:13.03 –> 0:09:15.339 quickly after their mastectomy and  
0:09:15.339 –> 0:09:18.237 in those instances we would almost  
0:09:18.237 –> 0:09:20.152 always delay their reconstruction  
0:09:20.152 –> 0:09:22.507 until they are have completed  
0:09:22.507 –> 0:09:23.92 their oncologic care,  
0:09:23.92 –> 0:09:25.83 which would be both chemotherapy  
0:09:25.83 –> 0:09:26.976 and radiation therapy.  
0:09:26.98 –> 0:09:28.915 We can’t do the reconstruction  
0:09:28.915 –> 0:09:31.419 until they are at a minimum a year,  
0:09:31.42 –> 0:09:33.548 some would say a year and a half  
0:09:33.548 –> 0:09:36.168 to two years out from their last  
0:09:36.168 –> 0:09:38.183 radiation dose, once again because  
0:09:38.253 –> 0:09:40.545 that surrounding area is so  
0:09:40.545 –> 0:09:42.848 fibrous and sometimes still so,  
0:09:42.848 –> 0:09:44.384 so inflamed and recovering  
0:09:44.384 –> 0:09:45.536 from the radiation.  
0:09:45.54 –> 0:09:47.275 I hope I somewhat answered,  
0:09:47.275 –> 0:09:48.663 it’s a complex question.  
0:09:48.72 –> 0:09:51.432 Yeah it is a complex question and I  
0:09:51.432 –> 0:09:54.088 I wanted our audience to kind of get
a sense of the nuances that play into the decisions that go into breast reconstruction. The next decision point of course is do I do an implant based reconstruction or do I do an autologous reconstruction. Can you talk us through how you talk to patients about that in terms of the advantages and disadvantages of each and which might be best suited for which kind of patient? Yes, it’s a another very, very good question. And I’m kind of putting a plug in for the American Board of Plastic Surgery. But I think it’s really important and it can’t be missed. And I get these calls from loved ones and friends of loved ones around the country about finding and identifying a plastic surgeon to carry out their reconstructive needs. And I would say ensuring that you have a board certified plastic surgeon is really, really important and once again that cannot be over emphasized. Just go to the American Board of Plastic Surgery website. You can type in the surgeon’s name.
just to ensure that they’ve gone through the appropriate rather rigorous accreditation process to become board certified.

Next I would say when you meet with that plastic and reconstructive surgeon making sure he or she is willing to have the conversation of the full array of reconstructive options. If you happen to go into an office and the plastic and reconstructive surgeon is immediately pointing to implant based reconstruction and doesn’t talk about flap surgery or vice versa, just wants to talk about flap surgery and not implant based reconstruction without giving the full menu as I like to say and then having a real shared decision making experience, I think that can be problematic and it’s likely a time to get a second opinion. So when it comes to the different options, I’ve kind of given the two buckets of implant based reconstruction and flap surgery.

I give the patients the good, the bad and the indifferent on both and there are pluses and minuses to both. So for implant based reconstruction it tends to be a little bit of an
easier faster recovery for the patient. That initial operation with implant based reconstruction more times than not it’s done in two stages where the breast surgeon or the surgical oncologist performs a mastectomy and then we put in this device called a tissue expander. That tissue expander is a kind of a place holder for a couple weeks and then as the patient starts to heal in the office, the patient returns every other week and we slowly start to fill that tissue expander to get the patient to the size that they desire and as surgeons are comfortable with. And then about once we’ve gotten them to size about, I would say that takes about two to three months, we go back for a second operation which is actually a pretty quick operation, maybe an hour and a half, two hour operation where we take out that tissue expander. When we put in the soft implant. It’s a process. It takes two to three months to go through that. But once again, we’ve gotten outstanding results.
and we have a lot of control in that setting with flap surgery. The up front is rather significant. So instead of that initial 3 to 4 hour operation, this is more like a 8 to 10 hour operation if not longer where we take tissue frequently from the abdomen because that’s where most Americans have the tissue to donate and we use that abdominal tissue and we do microsurgery to connect the small little blood vessels in order to make that tissue live because the tissue couldn’t live without blood supply. So that process of moving tissue from the abdomen or the buttocks of the gluteal region up to the breast once again requires about three to four days in the hospital just for recovery and comes with the risk of, we use the term or the phrase you’re robbing Peter to pay Paul. So if we’re taking tissue from the abdomen we do worry about the potential of developing a hernia or a bulge at the abdomen because we have to take a strip of not only the abdominal skin and underlying subcutaneous tissue or fat,
but we’re also frequently taking a small amount of the muscle or the fascia that holds the muscle in place in the abdomen. So once again it’s a longer operation. We do worry about the donor site when it comes to flap surgery, so speaking at length with the patient I’m looking at their body habitus because if it’s a fairly thin patient, they may not have enough tissue to appropriately recreate breast mounds and implants is where we would kind of do our best to once again give them the options but kind of steer them in that direction. And then patients who are more robust, we don’t have really large implants and that’s where we kind of steer a little bit more towards the flap option. I’m doing my best to give you a short answer, but there’s no short answer when it comes to the extent of reconstructive options. Yeah, no, that was great. So we’re going to pick up the conversation right after we take a short break for a medical minute.
Please stay tuned to learn more about reconstruction after breast cancer with my guest, doctor Paris Butler.

Funding for Yale Cancer Answers comes from Smilow Cancer Hospital, where their liver cancer program brings together a dedicated group of specialists whose focus is determining the best personalized treatment plan for each patient. Learn more at smilowcancerhospital.org.

Genetic testing can be useful for people with certain types of cancer that seem to run in their families. Genetic counseling is a process that includes collecting a detailed personal and family history, a risk assessment, and a discussion of genetic testing options. Only about 5 to 10% of all cancers are inherited and genetic testing is not recommended for everyone. Individuals who have a personal and or family history that includes cancer at unusually early ages, multiple relatives on the same side of the family with the same cancer, more than one diagnosis of cancer in the same individual.
rare cancers, or family history of a known altered cancer predisposing gene could be candidates for genetic testing. Resources for genetic counseling and testing are available at federally designated comprehensive cancer centers, such as Yale Cancer Center and Smilow Cancer Hospital. More information is available at yalecancercenter.org. You’re listening to Connecticut.

Welcome back to Yale Cancer Answers. This is doctor Anees Chagpar and I’m joined tonight by my guest, Doctor Paris Butler. We are discussing breast reconstruction options after cancer and right before the break. Doctor Butler was telling us about how reconstruction might not be right for every patient. And even for the 65% of American women who after mastectomy choose to have reconstruction, there are options. So implant based reconstruction versus autologous reconstruction and Paris, I was hoping that in this half we could delve a little bit
more deeply into those options.

So one thing when it comes to implant based reconstruction, some people have concerns about the safety of implants, whether they leak, whether they need to be changed out periodically, whether they need to be followed with an MRI, whether they can in fact cause cancers.

Can you speak a little bit to those concerns and how you advise your patients with regards to that?

Yes, absolutely it’s a great question. I think the reason for this is because the same implants we use for reconstruction are the ones that are used for cosmetic purposes and anytime you put devices into celebrities to enhance their look, it comes with a fair amount of scrutiny and attention.

So the interesting thing, breast implants have been out for a really long time.
There was a moratorium on them. Before even my coming into practice I studied them to make sure that they did not cause additional breast cancers or connective tissue disorders and they identified the Institute of Medicine that they do not and the FDA we are now on our fifth generation of silicone breast implants. The first generation once they ruptured I say it’s something like Ghostbusters eco slime. This fifth generation of breast implants are much more sturdy and stable they’re actually given the terminology formed Stable breast implant. So I kind of equate it when I’m speaking with the patient that these new implants are like a gummy bear. And they sometimes are even advertised as such that if you cut a gummy bear in half, nothing leaks out. It kind of stays formed and that’s what these new silicone implants are like. The saline implants have a silicone shell and they are filled with saline. The silicone implants have a silicone shell and then are filled with this form stable silicone. When it comes to risks of the implants,
we’ve proven they do not cause connective tissue disorder. They do not cause breast cancer, but the textured implants, which I don’t put in patients and many of my colleagues don’t anymore, have been associated with a very rare type of lymphoma, anaplastic large cell lymphoma. It occurred in about 1 in 2700 women. For context, there are about 10 million women in the world that have implants and once again a very, very, very small percentage of women with those textured implants developed that rare type of lymphoma. The other implants are smooth, round implants that the majority of us have currently put in. Patients are safe. I’d put them in a family member if it necessitated for reconstructive purposes. So they’re very good questions. I have an in depth conversation with my patients about it, but that’s a little bit of the history. What about for autologous reconstruction? So you mentioned that these can be very long operations, 8 to 10 hours in fact. That you’re in the hospital for a few days,
so some patients kind of wonder about the risks of the surgery itself. What are the complication rates like?

Can you speak a little bit to that?

Another very good option is autologous surgery or autologous, we’ll call flap surgery, or taking tissue most frequently from the abdomen to reconstruct these breast mounds. Now it is much more involved and I don’t sugarcoat it.

I have a thorough conversation with the patient about what it entails.

As I said before, in order for the flap to live, it has to have blood flow, and that blood flow comes from when we take the flap, we take it with a blood vessel that goes into the top part of the thigh, and we actually connect that to blood vessels that are deep in the chest. Right under the the breastplate. And when we do that what we call anastomosis, the connection of the small blood vessels with our high magnification glasses or with our microscope sometimes the connection doesn’t work and the blood vessels clot off and that's a failed flap. Now thankfully that doesn’t happen that
often maybe 1 to 2% of the time in the country that occurs because we’ve been blessed to get so skilled with it. But it is something that we talk to patients about. The other is the donor site, one you’re taking tissue from another part of the body there’s sometimes ramifications, there can be infections, there can be wound separation at the belly. We don’t perform this operation on smokers because of that increased risk of wound separation in the abdomen because of that increased rate of infection in smokers. So I would say it’s a much more involved operation. You have to worry about implants for the duration of someone’s life. They have their own tissue, but once again it does come with a much longer, more involved operation, a much longer recovery, a good four to six weeks and then the risk at the donor site. One thing I failed to mention about the implants. Implants are not forever as it pertains to the lifespan.
There are three kinds of main implant manufacturers all of them say at the 10 year mark, we should be proactive rather than reactive and have those implants replaced. So it’s a rather short operation. We go through an existing incision on the breast. We take out the old implants and we put in new implants to swap them out before the likelihood of rupture, spontaneous rupture would happen, which is about 1% per year for the 1st 10 years. After 10 years it goes up to about 10 to 15% and then after 15 years it goes up to about 30-40%. So I try to get my patients in that window, the 10 to 15 year mark to say, hey, when the time is right in your life, it’s not an urgency, but we should have those implants replaced. Is that covered by insurance? And I’m glad you brought that up. So I go into the community a fair amount to kind of talk about and help to help raise awareness regarding breast reconstruction options and there are two subsets of the community that don’t tend to get breast.
reconstruction at the same rate as others.

Those are our ladies of color and then our more seasoned ladies. I’d say our ladies over 50.

And one of the things that many of these underserved communities tell me is that they’re concerned that they can’t afford breast reconstruction. And I very quickly inform them the fact that our country did a really great thing, our legislators in DC signed into law back in 1998, it’s called the Women’s Health and Cancer Rights Act of 1998, where it mandates that if a woman has insurance and she is diagnosed with a breast cancer, that insurance company is also required to pay for their breast reconstruction for their duration of their life and that would be either implant based reconstruction or flap surgery or autologous reconstruction.

The other very good thing is the fact that say a patient has cancer on one side and they’re only getting cancer surgery on that one side. The Women’s Health and Cancer Rights Act of 98’ also mandates and allows for a plastic surgeon to do a balancing.
operation on that other side. So say they have a left sided cancer, we do breast reconstruction on the left side and then we do a breast lift. Or breast reduction or augmentation on the opposite side to help enhance symmetry. And so that pertains to what you were talking about earlier in terms of oncoplastic surgery after lumpectomies, is that right that also pertains to that as well. Now some insurance companies try to push back and say, well, the Women’s Health and Cancer Rights Act was really only intended for mastectomy patients. But thankfully with the help of our surgical oncology colleagues, we have been speaking to insurance companies to say, listen these patients who have lumpectomies who are left with rather significant asymmetries and deficits should be entitled to some reconstructive procedures as well. Now the other question, you know, before the break you were mentioning that the prime goal is really the reconstruction of the breast mound. Many women are concerned about the nipple. Can you talk a little bit about
the options that women have for either keeping their own nipple versus nipple reconstruction? Yeah, so another very good question and I would not want to overstep my breast oncology or my breast surgery contemporaries. Nipple sparing mastectomy has been in existence for about 25 years. The initial mastectomies were quite a morbid operation where we removed all of the breasts inclusive of the skin and even in muscle. We have now gone as far as being able to remove the entire breast but leave all of the skin and including the nipple areola complex behind and have it just as a cancer appropriate and safe operation. So they will have a conversation with their breast surgeon or the surgical colleague regarding whether or not they are a nipple sparing candidate. If it is, then there’s no need for us to reconstruct a nipple areola complex. However, certain cancers don’t allow for that if the cancer is too close to the nipple areola. If the cancer is too great in size, or the patient is just too large.
breasted or too toxic or saggy, then the nipple areola complex must be removed as a part of the cancer surgery. If that happens, we reconstruct that breast mound and then six months to a year after we’re done with their breast reconstruction formally, we can go back. And then we have special techniques to reconstruct a nipple areola complex using that native tissue. Something else that has really enhanced our field is the capacity for us to perform or to send to an artist a 3D nipple areola tattooing. We have a nurse practitioner here at Yale plastic surgery that performs nipple areola tattooing after we’ve recreated that breast mound. So lots of options on that front as well. But the conversation really should be with the breast surgeon as it pertains to whether the nipple can be spared or not as a component of their cancer surgery. And then the other question that I think a lot of people have is what is their function and their sensation after a mastectomy. So does the nipple really work?
Do they lose sensation in the breast area?

Are there new techniques that can address that?

Can you speak a little bit about that?

I think that’s another good question.

Once again a lot of this is about setting expectations.

In my experience I’ve been in practice over eight years after training for 12 and what I have seen is that most of my patients say even when they aren’t nipple sparing candidates the sensations not the same and we should prepare our patients for that.

There are some techniques out there where we are doing nerve graphs but a lot of it’s in it’s infancy, and we’re studying to see how effective those techniques are.

Doctor Paris Butler is an associate professor in the division of Plastic Surgery at the Yale School of Medicine.

If you have questions, the address is canceranswers@yale.edu, and past editions of the program are available in audio and written form at yalecancercenter.org.

We hope you’ll join us next week to learn more about the fight against cancer here on Connecticut Public Radio.

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