Breast Reconstruction: Understanding Your Options

Speaker: Maurice Nahabedian, MD
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ELYSE CAPLAN, MA, LIVING BEYOND BREAST CANCER:
Welcome to Living Beyond Breast Cancer’s teleconference, “Breast Reconstruction: Understanding Your Options.” This interactive program will provide you with some of the latest research and information on breast reconstruction techniques for women and families affected by breast cancer. Some of the topics you will learn much more about today will include saline and silicone breast implants and other tissue flap options, nipple replacement choices, preserving sensation in the areola area after surgery, affects of radiation therapy on breast reconstruction and some of the challenges and possible risks of surgery itself including abdominal bulges or hernias. We will also cover recovery time for various procedures and postoperative care.

I am Elyse Caplan, the Education Director at Living Beyond Breast Cancer, and I will serve as the moderator for today’s program. I was diagnosed with breast cancer nearly 14 years ago and have dedicated my career to working with women and families affected by this disease. Breast reconstruction was a part of my surgical treatment, and I am pleased to say that during the years following my diagnosis many new procedures and enhancements to past procedures have been made. You will be hearing these updates and the various new developments and refinements. I would like to thank Mentor Corporation for providing an unrestricted educational grant for today’s program.

I am pleased to welcome our speaker, Dr. Maurice Nahabedian. He is an associate professor of plastic surgery and director of reconstructive and aesthetic surgery at Johns Hopkins University. His practice focuses on breast surgery including reconstruction and cosmetic procedures. Dr. Nahabedian’s research interests include improving outcomes after DIEP flap reconstruction, preserving sensation around the nipple, preventing hernias and abdominal bulges, and evaluating the safety of breast implants. He has published widely in the fields of breast reconstruction and microsurgery and frequently presents at national and international meetings:

Dr. Nahabedian has performed hundreds of reconstructive surgeries, including free TRAM, pedicle TRAM, implants, latissimus dorsi flap and other perforator flaps. He is very well known for helping women choose the type of breast reconstruction that will best satisfy their emotional, psychological and medical needs. I am very pleased to welcome Dr. Maurice Nahabedian to today’s program:

MAURICE NAHABEDIAN, MD, JOHNS HOPKINS UNIVERSITY:
Thank you very much, Elyse, and welcome to all of the listeners out there. What I wanted to review for the next 20 or 30 minutes was some of the options that are available for breast reconstruction following mastectomy and also discuss a little bit about some of the indications and some of the other subtleties such as the risks and complications and other benefits that can stem from these operations:

Now, I’d like to start by first saying that most women today are having lumpectomy with lymph node biopsy and radiation. Usually in those cases breast reconstruction is not necessary. There are a small number of women who will have some contour abnormalities following a lumpectomy, in which case there are reconstructive options that are available. We refer to this as kind of oncoplastic surgery. Now, I’m not going to get into a lot of those details. I’m going to focus more on women who are going to undergo mastectomy and require total reconstruction:

Now, in the event of mastectomy there are a variety of options that are available. The two basic subgroups of options include using your own tissues and also using implants or other synthetic devices. Now, when you use your own tissues we can harvest the skin and fat and in some cases muscle from a variety of areas on the body. These different areas include the abdomen, which is probably the most common site, as well as the back and the buttock areas:

Now, I’d like to focus first on the abdominal donor sites. From the abdomen there are the traditional TRAM flaps. Now, TRAM is an acronym and it’s basically an operation that takes the skin, fat and the muscle from the lower abdomen and transfers it up into the chest. The muscle that we are talking about is the rectus abdominis muscle, and this is the muscle that allows you to do a sit-up. Now, in the event that that muscle is used, there may be some associated weakness. But usually this is not of significant functional consequence:

Now, there is a type of TRAM operation called the free TRAM, and what we do with the free TRAM is we take a smaller amount of that muscle and then we have to physically detach that skin, fat and that small portion of muscle and then transplant it to the chest wall. So this requires microvascular surgery. And what we do is we will hook up the artery and the vein that is supplying that abdominal skin and fat and attach it to an artery and vein that is near the chest where the mastectomy was performed
And the two most common recipient vessels in that area are the internal mammary artery and vein, which runs right along the breast bone, as well as the thoracodorsal artery and vein, which is running in the axilla or armpit. Both can be used. It just basically depends on the surgeon's preference which one that is selected. But both can result in a successful operation.

Now, there is another more current variation that is kind of an evolution in using the abdominal tissues called the D-I-E-P flap or more common known as the DIEP flap. And this is another acronym that stands for deep inferior epigastric perforator. So this is one of the newer perforator flaps. Now, the advantage of using a perforator flap or more specifically the DIEP flap is that no portion of the muscle is removed. So that rectus abdominus muscle will have an incision in it but no portion will be removed.:

The difficulty with this operation is that we have to take that small perforating vessel that supplies the skin and fat and dissect it out of that muscle. And we basically follow that little blood vessel until it connects with its larger parent vessel, the inferior epigastric artery and vein. So once that process is completed then we can, again, detach that blood vessel and then transfer that tissue to the chest wall and reconstruct a breast. Again, the same recipient vessels are used:

So just to kind of review, there's the pedicle TRAM, which requires the entire muscle; the free TRAM, which takes just the small portion of the muscle; and the D-I-E-P flap, which doesn't require any of the muscle. Women who have had the D-I-E-P flap will report an increased ability functioning in the axilla or armpit. Both can be used. It does require that we put some drainage tubes into the area where the flap is harvested. And this occurs in about a week or two in order to prevent fluid accumulation. That is one of the things that can be inserted. :

Let me now talk about some of the other options using your own tissues. This includes the latissimus dorsi flap as well as another perforator flap called the superior gluteal perforator flap or SGAP. Now, the latissimus dorsi is a very traditional operation. It's been around for almost 30 years and has provided women with excellent outcomes. The thing to keep in mind with the latissimus flap is that this tissue has to be used in most cases with an implant, because there usually is not enough skin and flap on the back, which is where this flap originates from, to reconstruct a breast that's going to provide adequate symmetry with the opposite side. :

So it will usually require the use of an implant. And the technique for doing that is well described and is usually very safe and can provide a very good outcome. It does require that we put some drainage tubes into the area where the flap is harvested for about a week or two in order to prevent fluid accumulation. That is one of the things that the latissimus flap will have is what's called a seroma after its harvest. And this occurs in about 20 percent of women. :

Now, the final option that I want to discuss using your own tissues is the superior gluteal perforator flap or the SGAP. This is an operation where the skin and fat are removed from the upper buttock. Now, the indication for using this is usually in somebody who is quite thin and does not have enough abdominal tissue for a breast reconstruction. They also usually are not interested in an implant reconstruction. So for these patients the gluteal perforator flap is a good option. :

It is a little bit more difficult to perform, primarily because it requires that we change the position of the patient during the operation. So they'll start the operation lying on their back and then we have to flip the patients over onto their stomach and then we have to flip them a third time onto their back again. So this adds to the length of the operation and to the complexity slightly. :

This tissue, however, can provide a very nice aesthetic outcome. It's using your own tissues. So again once everything is successfully inset and performed this will last forever and usually get better with time. And that's true for all options using autologous tissue or your own tissues. So again all of these are very good options and should be considered when deciding upon breast reconstruction:

Now, most patients will be candidates for using the abdomen. And I've found in my practice probably 90 percent of women that I see are potential candidates using the abdomen. The other ten percent are probably better candidates for a latissimus or a gluteal artery perforator flap. Now, these percentages will vary based on your surgeon and what their specific area of expertise is. So my advice is don't judge your surgeon based on the operation they may or may not perform, but judge them based on the quality that they are able to deliver. Talk to other women who have had procedures by these physicians and just make sure that they're very good at what they do:

Now, I want to get away from the autologous options and talk a little bit about implant reconstruction. There are different ways in which implants can be inserted. There are surgeons who prefer one-stage reconstruction and there are surgeons who prefer two-stage reconstruction. The one-stage reconstruction basically involves inserting a permanent implant that is used as a stretching device and as the permanent device at one setting. So you do not have to undergo an exchange of that implant. :

The two-stage operation is done by the following technique: We first will insert a tissue expander or a temporary device under the pectoralis major muscle following the mastectomy, and then we will partially fill that temporary device and then fill it over time in the office until we get to the size that the woman desires. Now, once we've attained that size then we go back to the operating room for the second stage in which that temporary device is removed and a permanent implant is inserted. :
These permanent implants can be of various types. They can be smooth or textured surface. They can be round or contoured. Or they can be saline or silicone. Now, there’s been a lot of press lately about silicone gel implants. They are available for women who are seeking breast reconstruction. It does require that your surgeon participate in the adjunct study that is available through either of the two companies that make these silicone devices. And the FDA is currently evaluating the premarket applications for both of these companies to decide if perhaps one day in the future these will be available to all women.:

Now, there are different shapes that these implants can come in. They can be round implants and they can be contoured implants. The contoured implant is more of a teardrop-shaped implant. And again these are primarily saline implants, but there are some silicone implants that are available in these shapes as well:

Now, the round implants are advantageous to women who desire more of a ptotic breast in order to obtain symmetry with the opposite site. By ptotic, I mean the breast will fall more naturally. The contoured implants will give you a little bit more projection. So perhaps for the younger patient a little more projection may be more important than a breast that drops more like what we would see with advancing age.

Now, the texture of the implant also varies. There are some smooth surface implants and there are textured implants. Now, all of the contoured implants are textured because you don’t want a contoured implant to rotate once it’s in the body. So you want to basically insert it in the proper orientation and allow the scar tissue to kind of maintain that orientation so it doesn’t rotate on you. A round implant can be smooth because it doesn’t matter if it rotates on its axis a little bit because the contour is the same throughout the full circumference.

So implants can result in a very nice aesthetic outcome. There are some things that we have to keep in mind when doing implants. The first thing is the recognition that no implant will last forever. It is a medical device and all medical devices will fail over time, just like a total knee joint or a total hip joint or a pacemaker. Medical devices do not last forever.

Some of the local complications that can occur would be rupture. If a saline implant ruptures then basically the breast will just go flat. And this will happen over a day or so. If a silicone implant ruptures the detection can be a little bit more challenging. If the implant has been in for a number of years then usually there will be a reported change in the shape of the implant. If the implant has not been in that long then we might have to do some additional imaging studies to ensure that the integrity of the implant is still intact:

Now, other complications or issues with implants include wrinkling or rippling. This is something that we see more often with saline implants because the implant itself has a density that is very different than natural breast tissue. So you can really feel that implant. We do not see as much rippling and wrinkling with the silicone implant, so this would be an area of advantage for the silicone.

Capsular contracture is another potential risk with implants. Any time you insert a foreign material inside a person’s body they will form scar tissue around it. How much scar tissue really depends on the person and it’s difficult to predict. Over time that scar tissue will become more palpable. And it may result in a visible distortion of the breast and the implant may have to be exchanged or removed.

Now, asymmetry is another potential complication. And this can occur with using your own tissue and implants as well. So it’s not uncommon for us to have to do some secondary procedures either on the reconstructed breast or on the opposite breast in terms of obtaining symmetry.

So I hope I have covered implants and the flaps in sufficient detail. I’m sure there will be a number of questions regarding these options. What I wanted to talk about was nipple reconstruction. Now, nipple reconstruction is kind of the final stage of the reconstructions that we do. And this is something that we do generally three months or so after the final operation. And there are a variety of techniques in which nipple reconstruction can be accomplished:

In my personal practice I would say about 85 percent of women go on to have nipple reconstruction. There is about 15 percent that choose not to have nipple reconstruction, and that is totally okay, because having a nipple reconstruction is purely elective. It’s a cosmetic procedure. It is all covered by insurance, but it is not a necessary procedure. But it will add the final touch and really make the breast reconstruction complete.

Most of the available techniques for nipple reconstruction involve the use of adjacent tissue rearrangement. In other words, we’ll make some incisions on the breast mound, elevate those little flaps of skin and fat, rearrange them into the shape of a nipple and then suture them closed. There are probably about eight or nine different ways to do that. And obviously I’m not going to go into detail on all of the different ways, but you can certainly find out what your surgeon’s preference is by just asking them:

All of them will work well. The thing to keep in mind with nipple reconstruction is they will all shrink to some degree. And I tell patients that the nipple will shrink by about 50 percent over the course of a few months. And then once it gets to that plateau then it stays relatively constant. In probably about nine or ten percent of patients the nipple will shrink a little too much and patients will request that it be redone. And redosing a nipple reconstruction is not a problem. It’s very easy to do, and it can be done as a little outpatient procedure:

Once the nipple is completed then the final stage to use is to do the tattooing. And this is usually done in the clinic or in an office. It’s a very simple procedure. Usually it can be done without any local anesthetic, but occasionally patients will report sensation in that area and a little local anesthetic is used. And this will take care of the problem. The tattoo pigments that we use are all safe. They’re medical grade. Tattoos will tend to fade over time, and occasionally women will request that the tattoo be redone, and this is usually not a problem at all:

So that’s all I was going to say about nipple reconstruction. I also wanted to touch a little about the sensation. One of my areas of interest is preserving sensation around the future nipple-areolar complex. Now, it’s important to keep in mind that when we do a flap or use autologous tissue, all those nerves to that segment of skin and fat are cut. Now, there are techniques in which we can attach some of these nerves in the operating room during that initial reconstruction. When we attach those nerves it still will require about six or eight months before we would ever see the effects of that connection:

Now, if we choose not to make any connections, what will happen is the nerves from the surrounding area where the flap has been inset will actually grow into that flap and eventually find their target on the skin’s surface. Now, this will happen in about 50 percent of patients, which also is the success rate for attaching nerves directly. So at the present time I have decided not to attach any nerves directly but rather just let the reinnervation...
Most patients will regain sensation after one year. This won’t be normal nipple-areolar sensation. It is sensation that allows you to feel both a pinprick or a painful stimuli as well as hot, cold and various vibrational senses. So it does happen spontaneously. The younger a woman is the greater chance of return of sensation. So this is something that I think is important for people to realize.

I also wanted to talk about radiation therapy. This is something that we are seeing quite a bit of today. Radiation is necessary in patients who have certain stages of their tumor. This may also be based on the size of the tumor. The radiation can be done before reconstruction and it can sometimes be done after reconstruction. When we know ahead of time that a patient is going to have reconstruction, then we always prefer that the chest wall be radiated and then we do a delayed reconstruction.

Sometimes we don’t know that the patient is going to have radiation until the mastectomy has been done and then the reconstruction has been done. In those cases what I like to do is this. If a patient has had an implant or an expander inserted then I like to rapidly expand the skin and radiate the expanded skin with the tissue expander. We then go back several months after the radiation has been completed and exchange that implant for a more permanent implant. And this way I can go ahead and remove some of the scar tissue and contour the breast.

The side effect of the radiation that makes it undesirable is that it creates additional scar tissue and it results in decreased elasticity of the skin. So we are not able to stretch radiated skin very well. Now, if somebody has used their own tissues some of these tissues will tolerate radiation very well because there’s such good blood supply. But there have been reports of shrinkage of flaps up to as much as ten percent following radiation. So this is something that we have to keep in mind and be prepared to deal with if it does occur.

But for the most part, radiation is clearly a necessary component in the treatment. And I always tell patients, the treatment comes first. Because the last thing I want to do is be in a situation where the reconstruction interferes with the treatment.

So that said, the final thing that I wanted to talk about was postoperative recovery. Usually patients are admitted to the hospital for three or four days after they’ve had a flap procedure. They stay overnight if they’ve had an implant. With the flaps they usually have three to four drainage tubes, and with an implant they usually have one drainage tube. The drainage tube stays in for anywhere between about three to seven days usually but it can stay as long as ten days depending on how much fluid is coming out.

For patients with expanders I usually start expanding two weeks after they’re inserted and then expand weekly until we obtain our desired volume. I don’t do the exchange for one month after the final expansion. As far as the flaps go, I tell patients that they will have to avoid all strenuous activity for about six weeks in order to allow for the healing process to occur. So it’s not so much just on the outside but also on the inside. I want the different layers on the abdominal wall to completely heal, and at six weeks they have attained their maximal wound-healing strength.

So I think we’ll go ahead and stop there. I’ve tried to be somewhat comprehensive and cover everything in a little bit of detail. I know there’s much more that I could talk about, but I wanted to leave enough time for questions.

ELYSE CAPLAN, MA: I just want to thank Dr. Nahabedian for giving such a clear overview of a variety of procedures, some of the concerns that women need to ask their doctors about and really spell things out. And at this point I would like to [take the first question].

CARLI: Your next question is coming from Downington, Pennsylvania.

CALLER: What would cause a breast implant to drop, say, within three months of the implementation?

MAURICE NAHABEDIAN, MD: Now, was this a single-stage implant reconstruction or a two-stage implant reconstruction?

CALLER: The mastectomy was performed, then approximately a month later there was the tissue expander inserted and then inflated, and then the permanent ... it’s a silicone/saline combination implant. And there was supposedly quite a bit of scar tissue.

MAURICE NAHABEDIAN, MD: So it’s that permanent implant that has now dropped lower than the opposite breast.

CALLER: Correct.

MAURICE NAHABEDIAN, MD: And at one time they were equal.

CALLER: Well, at one time I believe the implant was even higher than the natural breast.

MAURICE NAHABEDIAN, MD: Well, the natural tendency for implant is to drop and settle. Now sometimes, especially in cases where you’ve had a lot of scar tissue with the tissue expander, the surgeon will free up some of that scar tissue down at the base of the breast and that may create a little bit of an opening or ability of that implant to descend a little bit more than it did during that first phase. The other thing is that the rounder implants do tend to create a little bit more of a ptotic look or a natural drooping to the breast, so that may be another reason that it’s lower than you would like.

CALLER: Thank you.

MAURICE NAHABEDIAN, MD: You’re welcome.

CARLI: Your next question is coming from Newport Beach, California.

CALLER: I just recently completed my breast reconstruction. A year ago I had a mastectomy of the right breast with an immediate saline implant and lat flap. And then went through chemotherapy and again just two weeks ago I had an implant exchange at the mastectomy site, a little bit larger, and then a saline implant was also added to my left breast. My question is, you touched on it briefly, as far as recuperation. I’m wearing one of these positioning bands around my breasts right now to keep the implants in place. But I’m just wondering as far as working out, doing arm exercises, again, as the six-week time for rest, is that appropriate? And is there anything else we can do in the meantime? Or just let everything rest?

MAURICE NAHABEDIAN, MD: Well, I think in the meantime what you can do is range of motion and stretching exercises as well as gradual stretching. But I tend to recommend that patients wait a full six weeks before they resume their normal activities. And again the reason for that is to allow for all the internal incisions...
and wounds to totally heal. Because you basically get your collagen production up to three weeks and then you start to mature that collagen. And by six weeks the strength of all of those incisions and all of those support layers is as strong as it's going to be. So that's why I like that six-week mark. But you can still go ahead and do some gradual range of motioning and strengthening before then.

CALLER:

And just a final addendum. I've been poked and prodded for the last year and a half now, but the nipple will be the next step. And first I thought I want to do this, then I toyed with just tattooing. But in order to have the perfect completion of everything and come full circle, with the nipple addition do they usually pull skin from the thigh? Is that a painful procedure?

MAURICE NAHABEDIAN, MD:

That is an option, and unfortunately I did not talk about that and I probably should have. It's not an option that I usually perform but it is something that some surgeons will still continue to do. It does have a little bit more pain associated with it because you're making an incision in a remote area and you're having to allow that to heal. So all those nerve endings and things like that have to go through their healing process. Using skin from the groin area does result in a nice nipple projection and it can give a nice texture that seems to be very long...long or longer lasting than maybe some of the traditional flaps that we use that tend to flatten over time. Again the only down side is that you're having to create an additional incision somewhere else in order to do this. But if your surgeon is skilled at this and is comfortable with this then I would basically follow their lead and go with that.

CARLI:

Your next question is coming from Westville, New Jersey:

CALLER:

In December of this past year in 2004 I had a bilateral mastectomy with latissimus flap reconstruction at the time with tissue expanders put in. And I've been suffering from chronic back pain and even back spasms ever since. And I finally found a PM&R [physical medicine and rehabilitation] doctor who had seen it before. And I wanted to know if you've ever seen this type of reaction and how it affects the rest of the reconstruction process since I haven't been injected and my surgeons basically delayed any implant exchange surgery:

MAURICE NAHABEDIAN, MD:

Yeah, it's unfortunate that that happened. You can get pain syndromes with any kind of operation that we do, whether it's the abdomen, the buttock, the back. Fortunately they are not common but when they do occur it can kind of slow down your progress. It may be related to nerve entrapment. Sometimes when we do these operations little small nerves will get caught up in some scar tissue and be a constant source of irritation and pain.

And the difficulty then comes in trying to sort out what the cause of this pain is. There are some specialists who are very good at sorting these things out. And what I've done in the past is make an appropriate referral to somebody who is skilled at this. But certainly if you're very uncomfortable now you're probably better off dealing with the pain issues at hand and getting that resolved before you go ahead and do any additional surgery:

CALLER:

Because during my surgery they had accidentally cut a blood vessel by mistake and performed the surgery the next day. And I had a blood transfusion and an additional surgery to stop the bleeding, and I was wondering if that possibility related or if it's just the way my body reacted to the surgery.

MAURICE NAHABEDIAN, MD:

Well, it's hard to know for certain. Sometimes if there is bleeding and there's a little bit more blood in the wound over time that blood may contribute to additional scar formation and you may have perhaps more scarring inside the space than you would normally expect, which could potentially capture some nerves and pull and tug on some nerves which could be causing this discomfort.

CARLI:

Your next question is coming from McAllen, Texas:

CALLER:

I basically am at the point where I've had the bilateral mastectomy and I went through a two-stage procedure and also had two other surgeries on both the left and right to do the capsular contracture. And I'm at the point where I'm still not happy and also it's causing some pain now because of it. So I'm going to go in and have the saline taken out, silicone put in and also having what's called the capsulectomy where he's going to take out some scar tissue. Now, I just wanted to get your best judgment, opinion, after that if it does come back, I'm basically still left with just some kind of tissue transplant. But then my only problem with that is that I'm really very thin. I'm pretty sure I don't have any abdominal tissue to take. So in your best judgment it would sound like maybe the buttock area would be the best if this procedure doesn't work:

MAURICE NAHABEDIAN, MD:

Unfortunately some patients will produce more scar tissue. Again we don't really have a good explanation as to why that happens or who's going to happen to. But since you've already had a couple of capsulotomies and now they're going to do a full capsulectomy with this new implant I would say that if this does happen again you're probably in that group that just makes a lot of scar tissue in response to the implant, and perhaps the best course of treatment would be to have those implants removed and then proceed with an autologous reconstruction:

CALLER:

Right. And then like you mentioned it would probably be...in my case, wherever the best tissue...and the next point, did you mention that the buttocks you wouldn't necessarily put an implant in. You could just use your own tissue?

MAURICE NAHABEDIAN, MD:

That's right. The buttock area, fortunately, has a little bit of excess skin and fat. So it's a readily available site. It is a little bit more difficult. And you were a bilateral, you said:

CALLER:

Yes, bilateral. And actually I'm pretty sure that because of the radiation, which I did have the expanders put in first and then they did the radiation. I think invasive on the right and in situ on the left. So on the right is where I noticed more of the hardening. So I'm pretty sure that that's because of the radiation, like you had mentioned:

MAURICE NAHABEDIAN, MD:

Absolutely. I mean, the radiation is a big factor in the amount of scar tissue that you've developed. And knowing that now it's probably more likely than not that you will again form a significant amount of capsule formation around this new implant. So at some point in the future my recommendation would be that you really con-
And it is nice because it will give you a better quality outcome. So the aesthetics will look better. Let's talk about that a little bit.

MAURICE NAHABEDIAN, MD:
Depending on how you look at it it could be a good thing or a bad thing. But, yes, if you take your own tissues and transplant them, if you gain weight generally the breast will gain weight and if you lose weight the breast will lose weight as well. So it is your own tissue so it will behave the way your tissues would behave.

CARLI:
Your next question is coming from Blue Springs, Missouri.

CALLER:
I've heard a little bit about this skin-sparing mastectomy and reconstruction. Could you just talk about that a little bit?

MAURICE NAHABEDIAN, MD:
Sure. Skin-sparing mastectomy is when the nipple and the areolar complex are removed with the glandular tissue of the breast so the surrounding skin around the breast is left intact. Now, the advantage of doing a skin-sparing mastectomy is that when you do a reconstruction you can leave a lot of that natural breast skin in place and get a very nice cosmetic result.

Fortunately people have looked at skin-sparing mastectomies and compared it to traditional mastectomies and found that recurrence rate and the survival statistics are the same. So the oncologists and the plastic surgeons now really have no qualms about performing skin-sparing mastectomy. It's a very safe procedure and it's effective. And it is nice because it will give you a better quality outcome. So the aesthetics will look better.

CALLER:
Then how would they do the nipple reconstruction if you had the skin-sparing?

MAURICE NAHABEDIAN, MD:
Well, if you have your own tissues used for the reconstruction then the only visible portion of the flap will be in that central area where the nipple-areolar complex was removed. So we will make the nipple right in the middle of that and then tattoo right around the nipple so that entire visible portion of skin from whatever part of the body it was taken from will be covered, so it will look just like your normal breast.

And if you have an implant and then had a skin-sparing mastectomy, the advantage of that is that we don't have to stretch as much. We can fill up more in the operating room. And the scar that's going to be visible after the operation will be a shorter scar. And then we just make the nipple right either above or below the incision based on where the opposite nipple is. So it can be done without difficulty no matter what kind of reconstruction you do.

CALLER:
Thank you.

CARLI:
Your next question is coming from Glen Ellyn, Illinois.

CALLER:
I have just a couple of questions actually. My first question is regarding inflammatory breast cancer, which I have recently been treated for over the last year and a half, and completed everything about a year ago, beginning to think about reconstruction now. My surgeon and my oncologist would like me to think about it longer because of this high incidence of skin metastases.

So my question to you and to the reconstructive surgeon I'm hoping to see here in the Chicago area is what are my chances of having this reconstructive surgery and then missing a potential skin metastases that is pretty significant with inflammatory breast cancer. All three of them have said to me that they have seen skin metastases with reconstruction. Any insights or suggestions or guidance regarding that?

MAURICE NAHABEDIAN, MD:
Yeah, it's a difficult question for me to really answer because there's lots of information that is necessary in coming up with an answer. It's difficult and nobody would recommend immediate reconstruction, and clearly delayed reconstruction is the way to go. I would say that you need to wait at least a year following the radiation phase for the treatment. And then it just becomes a judgment call. And a lot of it will depend on the ... inflammatory is basically stage III by definition, but depending on how large the tumor was and some of the other factors that determine the aggressiveness of the tumor and the likelihood of recurrence have to be considered. So if there was a lot of perineural invasion then you're probably better off to wait because you could still get a recurrence even after the reconstruction is performed, and you really wouldn't want to miss anything with the reconstruction.

Now, fortunately reconstructions have been shown not to really mask a recurrence because you can still do an adequate exam and you can still get imaging studies to look on the deep surface and visually look on the surface. So you can still monitor yourself but again it's hard for me to give you a risk ratio.

ELYSE CAPLAN, MA:
And I think that raises a good point which I forgot to mention earlier in that we need to try to keep our questions framed in a broad manner so that they may apply to more women who are on the call, understanding that Dr. Nahabedian, who may not be your physician, cannot engage in any detailed personal consultation, because of the individual nature of everybody's breast cancer. Each woman's breast cancer is uniquely different. So I just wanted to put that reminder out.

CARLI:
Your next question is coming from Seattle, Washington.

CALLER:
My question is between two different kinds of flaps. We're talking about a fit 33-year-old athletic woman, not thin but has no extra ... TRAM flap is not possible. No abdomen. So between a lat flap and a gluteal flap, which in your experience has less impact on the body, primarily for athletic purposes but also the aesthetic impact when you take the tissue away. What have you found with women you've worked with?

MAURICE NAHABEDIAN, MD:
Well, the latissimus dorsi flap, the traditional latissimus dorsi flap does require that the muscle be harvested with it. And that is the way the majority of plastic surgeons will do that operation. Now, you can do the latissimus dorsi flap as a perforator flap, and it's one that I did not mention because it's not commonly performed. But that's called a TAP flap, T-A-P, it's thoracodorsal artery perforator. That would probably result in the least morbidity or adverse sequelae.

The gluteal flap again is just a skin/fat flap. So functionally it's not going to have any adverse effect. The problem is finding surgeons who do...
the SGAP flap, because it's not commonly performed in this country because of technical issues related to it. It is difficult to do.

And there are probably only a handful of places that I'm aware of in the US that do the gluteal artery perforator flap:

And then there may be some functional consequences. Like you will not be able to do a pull-up, for example. It could have impact if you are a swimmer. Swimmers tend to use their latissimus dorsi muscles a lot. So that's probably as best as I can answer that for you.

CARLI:

Your next question is coming from Wisconsin:

CALLER:

Five years ago I had a modified radical on my left side and lymph node removal. And I'm scheduled in two weeks to have the flap from my abdomen, the reconstruction. And I was wondering will this make the lymphedema worse?

MAURICE NAHABEDIAN, MD:

It should not. Is your surgeon planning on doing the traditional TRAM flap?

CALLER:

Yes.

MAURICE NAHABEDIAN, MD:

What they will do is they will open up the incision on the chest and then undermine those skin flaps. Now, fortunately they will not have to go into the armpit area, so they will not create any additional scar tissue or disrupt any of the lymphatics that are there. So doing a delayed TRAM flap should not have any impact on your lymphedema:

CALLER:

Thank you very much.

CARLI:

Your next question is coming from Churchville, Pennsylvania:

CALLER:

Six years ago I had lumpectomy and radiation. This past October I had a mastectomy with an expander put in. Now, I had the 30 treatments of radiation. My problem is we're having such a hard time expanding the skin. Most people can take 50, 100 ccs. I will tell you I am thin. I am small-chested. I work out a lot, so I don't have a lot of fat on my chest. My surgeon at this point has said we can go as far as we can go, because the skin is so thin. I was hoping to expand the breast that had the mastectomy and have an implant put in the opposite breast, be a little bigger. Make lemonade out of lemons. Is there anything that can be done that can help this skin get thicker?

MAURICE NAHABEDIAN, MD:

I understand. Even six years out following radiation the effects of radiation will not be eliminated. The radiation is very good at killing cancer cells. Unfortunately, it also damages some of the normal cells and the ability of those normal cells to maintain their elasticity. So that scar tissue even five, ten years out will prevent adequate expansion of the skin. So it's very difficult to get a good expander reconstruction in the face of prior radiation:

In order to thicken the skin and allow you to tolerate that expansion process better, the only way that I'm aware of to really do that is to combine a latissimus dorsi flap with the implant. And what that will allow you to do is take skin, fat and muscle and bring it over to the chest wall. And that is healthy tissue that has not been radiated and that will expand. So in that way you can get the reconstruction that you seem to desire:

CALLER:

Or otherwise just leave it as it is. At this stage of the game I could take only 30 ccs.

MAURICE NAHABEDIAN, MD:

I've been in this situation before and it's very difficult, because that capsule surrounding the implant is so hard and so inelastic that it just doesn't stretch. And you'll put in 20 or 30 ccs and there's enough back pressure from the implant to push the fluid into the syringe rather than the other way. So rather than pushing it and getting a complication I would probably back off a little bit:

CALLER:

Back off and just do the one implant and just be a triple "A" instead of being a "B"?

MAURICE NAHABEDIAN, MD:

Well, yeah, I mean, I think that's something you'll have to discuss with your surgeon:

CALLER:

Well, she's ready for stopping. I was going to postpone it and I thought, well, maybe if I postponed it and waited the tissue would heal a little bit more and thicken a little bit more and perhaps get a better result. Her idea is let's just get this done and over with and move on:

MAURICE NAHABEDIAN, MD:

In my experience it doesn't usually get better. It just stays firm:

CALLER:

I knew that was the answer but I was hoping maybe there was something else out there. Thank you very much, Doctor, for your call:

CARLI:

Your next question is coming from Glenwood, Pennsylvania:

CALLER:

You may have answered a couple of these, because I'm getting my chemo right now and I kept getting distracted. Do you get more rejections with the DIEP than with the TRAM?

MAURICE NAHABEDIAN, MD:

No, the failure from microvascular surgery really relates to the blood vessels in the hookup. So my failure rate with a DIEP flap is two percent and my failure rate with the free TRAM is two percent. Now, if you do a traditional pedicle TRAM, the failure rate is probably going to be a little bit less, probably in the range of one percent because you're not having to do microvascular surgery. So in that sense there is a slight improvement in the success rate from 98 percent to 99 percent:

CALLER:

And a person who has a weak back to start:

MAURICE NAHABEDIAN, MD:

If you've got back problems then you really need your abdominal musculature to help support your back, so those patients are ideal candidates for the DIEP flap procedure:

CARLI:

Your next question is coming from New York, New York:

CALLER:

I have one quick question. In a young, BRCA-positive female in relatively good health, who's opting for prophylactic bilateral mastectomies, do you have any specific recommendations or do you just go by the same recommendations as with other patients?

MAURICE NAHABEDIAN, MD:

Again, I think anybody who's having a mastectomy who is a candidate for reconstruction I evaluate basically for all of the options. I find out
from the patient what’s important. If they don’t have any objections to implants certainly we’ll go the implant route. It’s very quick and simple. You don’t burn any bridges. If they don’t want implants and they want their own tissues, again, I’ll use the abdomen as my primary donor site and then look elsewhere if that’s not suitable. But it’s kind of wide open. So whatever they’re interested in we can discuss and evaluate.

CARLI:
Your next question is coming from Toronto, Canada.

CALLER:
I’m having a DIEP reconstruction in August. And I’m just wondering, if the flap fails what other options would I have at that point?

MAURICE NAHABEDIAN, MD:
Well, you will not be able to use the abdomen as a donor site again. You may be able to use the buttock. You certainly will be able to use the latissimus as a donor site again. You may be able to use the abdomen as a primary donor site and then look elsewhere if that’s not suitable. But it’s kind of wide open. So whatever they’re interested in we can discuss and evaluate.

MAURICE NAHABEDIAN, MD:
Well, you will not be able to use the abdomen as a donor site again. You may be able to use the buttock. You certainly will be able to use the latissimus as a donor site again. You may be able to use the abdomen as a primary donor site and then look elsewhere if that’s not suitable. But it’s kind of wide open. So whatever they’re interested in we can discuss and evaluate.

MAURICE NAHABEDIAN, MD:
A lot of times during a mastectomy they will have to sever one of the nerves that goes from the chest wall to the inner arm, and that’s called the intercostal brachial nerve. That is a sensory nerve, and it can ... any time you cut a sensory nerve there is the possibility of forming a neuroma or what’s basically a painful nerve stump. And it may be that you have a neuroma in that vicinity. You could also have a neuroma of some of the intercostal nerves that may be trapped within the scar tissue of the capsule. So they’re difficult to diagnose and treat, but there are some people who are very skilled at that:

CALLER:
Because I had radiation as well:

MAURICE NAHABEDIAN, MD:
If you’ve had radiation then my preference in that setting is to avoid an implant, but you can certainly consider either latissimus dorsi with or without an implant or the gluteal artery flap. If you combine the latissimus with an implant you can use that in the setting of prior irradiation because the implant will be covered by healthy, well-vascularized skin and fat:

CALLER:
And what signs do you have that the flap has failed:

MAURICE NAHABEDIAN, MD:
Oh, there’s a variety of things. Usually the flap may either turn cool or pale or become adenomatous and congested. And those are all things that will be monitored while you’re in the hospital.

CARLI:
Your next question is coming from Lexington, Kentucky.

CALLER:
I have a Becker implant that was put in last July. I had a second surgery to do the nipple reconstruction, which was a big success. And scar tissue removal, deflation a little bit, the prosthesis and then the implant was moved down to match just a little bit more, more like the other one. So my biggest problem has been pain and especially pain under my arm. And I’m concerned that I’m [developing] more scar tissue. My surgeon took some out at the last surgery, and I know the exercises to move the implant around, and it is moving fine. But I don’t know much about the underarm pain and numbness:

MAURICE NAHABEDIAN, MD:
A lot of times during a mastectomy they will have to sever one of the nerves that goes from the chest wall to the inner arm, and that’s called the intercostal brachial nerve. That is a sensory nerve, and it can ... any time you cut a sensory nerve there is the possibility of forming a neuroma or what’s basically a painful nerve stump. And it may be that you have a neuroma in that vicinity. You could also have a neuroma of some of the intercostal nerves that may be trapped within the scar tissue of the capsule. So they’re difficult to diagnose and treat, but there are some people who are very skilled at that:

CALLER:
So contact a pain management specialist for help:

MAURICE NAHABEDIAN, MD:
That would be my first recommendation for you:

CALLER:
Great. That gives me some ideas to talk with my doctor about.

CARLI:
Your next question is coming from Brick, New Jersey.

CALLER:
I had a TRAM flap ten months ago with a wonderful result. My question is, though, my abdomen is so hard. Does that soften as time goes by? I really didn’t have any complications, and I haven’t seen my plastic surgeon. I just have this very hard abdomen, and I was wondering if you could comment on that:

MAURICE NAHABEDIAN, MD:
Do you know if your surgeon used mesh or any other synthetic material to reinforce:

CALLER:
I don’t know that:

MAURICE NAHABEDIAN, MD:
I would probably inquire about that first.

CALLER:
Hello, I’d like to find out if you do decide to use implants, how does this impact monitoring a recurrence of cancer if it comes back on the chest wall:

MAURICE NAHABEDIAN, MD:
That’s a very good question. If you have an implant reconstruction what you’re doing is you’re putting the implant underneath the pectoralis major muscle. So what you will have to do for monitoring is usually just a good self exam and palpation. Now, if there is a recurrence and it is on that muscle that is technically a chest wall recurrence. If the recurrence is on the skin or just underneath the skin in the fat that would be just a local subcutaneous recurrence. The best way to monitor yourself after implant reconstruction is just a good self exam. If there are questions or you are at high risk of recurrence then you can consider things like MRI that can better define the anatomy and the tissue:

CARLI:
Your next question is coming from Arcata, California:

CALLER:
I had a bilateral mastectomy with silicone...
implants and I had tissue expanders put in first and then the implants put in a few months later. After each surgery I had real bad pain in the joints of my shoulders and my hands. And after the second surgery I got a rash as well, but no one admits that it’s related to the silicone implants, but I am kind of expecting that it is. It is resolving but I’m just wondering if there is any truth to that.:

MAURICE NAHABEDIAN, MD:

It is obviously a controversial topic. The science that has been conducted to date doesn’t really demonstrate any association with the silicone implants and some of these issues. But again I think that what you’ll need to do is talk to your physician, get a complete history and physical and really be referred to the appropriate person to manage some of these conditions.:

CARLI:

Your next question is coming from Mandeville, Louisiana.:

CALLER:

I did not have a complete mastectomy. I had a lumpectomy but they had to go back three times to get clean edges, and so that right breast, the bottom half of it is basically not there. They had suggested if I wanted to do some cosmetic surgery that I could not consider an implant because of the radiation. Now I’m ready to consider reconstruction of some sort. I am still concerned, is an implant still out of the question? I guess you’re saying it is because of the radiation.:

MAURICE NAHABEDIAN, MD:

I think that you’ll find that the implant will make an improvement but it in the long run will probably not be advantageous just because eventually the radiation effects and the fibrosis and the scarring will make it a little bit more uncomfortable. Usually in cases like yours the latissimus dorsi flap is an excellent option because you can replace the missing tissue with soft, healthy, natural tissue and get a very good result.:

CALLER:

And what did you call that one, when it was done without taking muscle?:

MAURICE NAHABEDIAN, MD:

Oh, the TAP flap, T-A-P. And that’s another one of the perforator flaps that uses the skin and fat from the back.:

CALLER:

I live in Louisiana. Are there good surgeons here?:

MAURICE NAHABEDIAN, MD:

Oh, yeah, Bob Allen is who’s really the pioneer of most of these perforator flaps, and he’s probably got more experience than anybody in the entire world with these procedures. He’s in New Orleans.:

CARLI:

Your next question is coming from Miami, Florida.:

CALLER:

I had a mastectomy on the right side. I’m having radiation now. And from listening to you I think my best option might be the latissimus. I’m athletic and I would like to preserve as much muscle as possible. I’m in Miami, Florida. How would I find a good plastic surgeon to maybe do the TAP flap?:

MAURICE NAHABEDIAN, MD:

Probably the thing you should do is contact the American Society of Plastic Surgeons’ office, and they have a referral system set up and they could match you with a plastic surgeon in your area.:

ELYSE CAPLAN, MA:

Do you know a web site for that, Dr. Nahabedian?:

MAURICE NAHABEDIAN, MD:

It is www.plasticsurgery.org.:

CARLI:

Thank you, your next question is coming from Bensalem, Pennsylvania.:

CALLER:

Hello, I had just a bilateral mastectomy four weeks ago. And I know I have an expander, and I know I don’t have to make a decision yet about a permanent implant, because we have to expand over the course of time. But my physician feels that he’s very comfortable with a saline/silicone coating kind of implant. Do you know much about them? Are they safe? Because I’m scared with the silicone, you know.:

MAURICE NAHABEDIAN, MD:

He’s probably going to put in a Becker implant, which is the implant that has two shells. The first is a silicone gel on the outer, and then the inner core is saline. Is that what they told you they were going to put in?:

CALLER:

Yes, that sounds right.:
thinning the tissues out and you're not going to want to go beyond that. So again it's going to be up to your surgeon and you as to when the proper time to stop is, so it's hard for me to say how much expansion you'll be able to get.

**CARL**

Your next question is coming from Gordonsville, Virginia.

**CALLER**

I had a bilateral mastectomy two and a half years ago and did not choose to have reconstruction. Very small, very athletic, and honestly I just didn't want more stuff done to me. But over time I have decided that one thing I would like, and I'm sure that this is fairly unusual is that I would like nipples, and I don't have them obviously. Have you ever done a procedure where you just create a nipple over a scar?

**MAURICE NAHABEDIAN, MD**

In somebody who has not had breast reconstruction?

**CALLER**

Yes.

**MAURICE NAHABEDIAN, MD**

I personally have not, but, I mean, if that's something that you're interested in then there's no reason not to do that.

**CALLER**

But, I mean, is it possible to do on a scar without a reconstructed breast there?

**MAURICE NAHABEDIAN, MD**

Oh, absolutely. Yeah, you don't really have to have a mound. You just need to have a surface that you can make incisions and then rearrange the skin and fat into the shape of a nipple. So it does not have to be a breast mound. It can be a flat surface as well.

**CALLER**

And a very quick second question. What kind of scarring is involved in the SGAP procedure where you take the skin from the buttocks?

**MAURICE NAHABEDIAN, MD**

The incision will be a linear incision and it will basically go from the upper aspect of the gluteal crease all the way out towards the hip on one side. So if you're having bilateral it will be a symmetric incision without much distortion at all.

**CALLER**

So they're fairly well hidden?

**MAURICE NAHABEDIAN, MD**

Oh, yeah, you can easily hide them in your clothing.

**CALLER**

In a bathing suit? Maybe not?

**MAURICE NAHABEDIAN, MD**

Depending on the kind of bathing suit. But yeah usually you can hide it.

**CARL**

Your next question is coming from Plymouth Meeting, Pennsylvania.

**CALLER**

Hello? Hi, if the person had liposuction in the past, what are the types of reconstruction that are available to that person?

**MAURICE NAHABEDIAN, MD**

Well, that's been actually studied. If you've had abdominal liposuction I think that if an adequate amount of time has passed I think you can safely go ahead and do a reconstruction using your abdominal skin and fat, because usually the cannulas for liposuction are kind of blunt, so they don't really damage the blood vessels that are supplying the tissues. So liposuction does not impede your ability to do a TRAM flap or a DIEP flap.

**CALLER**

That's not what I was told. Two surgeons [I met] said they don't want to do that.

**MAURICE NAHABEDIAN, MD**

Well, again, you have to individualize to a certain extent, but it just depends on how comfortable you are with a particular procedure.

**CALLER**

I mean, it's been many years. So I would think it would be quite healed and I didn't know if I could just automatically go to the lat or something like that, something that's not involving the abdomen.

**MAURICE NAHABEDIAN, MD**

Well, it certainly is an option. You've already got two opinions and they've both told you the same thing. I think a lot of it just depends on the comfort level. I mean, I can tell you that when I do a breast reconstruction using the abdomen I'm actually looking at the blood vessels as they come up through the fascia and going into the skin and fat. So, I mean, I can tell if the perforator is adequate and if it's going to be suitable. In my experience it hasn't been a problem. But again it's just surgeon comfort and everybody is a little bit different.

**ELYSE CAPLAN, MA**

I think we have time for one last question before we conclude.

**CARL**

Your final question is coming from Chicago, Illinois.

**CALLER**

Hi, I have a question regarding the harvest site. I recently had a DIEP flap procedure done back in December where he had to use two different sites. Does that make sense?

**MAURICE NAHABEDIAN, MD**

Yes.

**CALLER**

And I have had significant tightness throughout my abdominal region continually, but within the last month I've developed a bulge. And actually it's gotten bigger. I've been told that it could be a hematoma, but that that's unlikely to occur so far out from surgery. Any other reasons that my surgeon that I spoke to thought that hernia was not likely since it's on the right side? And that was the side that he did the SIA. So it was not very deep. Any other reasons that might cause a bulge?

**MAURICE NAHABEDIAN, MD**

It's difficult for me to know how much skin and fat your surgeon took and how tight the closure was. Usually with the SIA flap you do not have to cut into the supportive layer of the abdominal wall. With the DIEP flap you do not have to cut into the supportive layer. The incidence of a bulge in my practice with the unilateral DIEP flap is about two percent. Now, that bulge usually occurs on the side that you cut into that supportive layer. Why you have a bulge on the side you did an SIA flap, it's hard for me to know without examining you.

**CALLER**

Have you seen anything like that? I mean, it's fairly good size. It's about 18 centimeters by 2.9 by 3.8. Have you seen that at all for any other reason?

**MAURICE NAHABEDIAN, MD**

Usually it's just because of an attenuation or a stretching of those supportive layers after a DIEP flap. But you may want to see if they want to
like a CT scan or an MRI to better define what the anatomy looks like inside there. And then that way if there is a fluid collection they'll be able to see that.

**CALLER:**
And that's better than with an ultrasound?

**MAURICE NAHABEDIAN, MD:**
An ultrasound will show fluid as well, but the other imaging studies will show you the anatomy in more detail.

**CALLER:**
When will the tightness go away... will that sensation come back and will my abdominal muscles feel like they're in the appropriate place again? Will that ever resume?

**MAURICE NAHABEDIAN, MD:**
It's difficult for me to answer. Again, the tightness issue ... I'm assuming they did not use any mesh or anything. So, I mean, normally that gets better over time. And it's a little bit different for each individual. But usually I would say by one year it should be resolved if it's just tissue tightness, because the skin is elastic and it will stretch. So, that's probably the best that I can answer that question without having done an examination.

**ELYSE CAPLAN, MA:**
Well, I think this is the point where we'll need to wrap up and conclude, and I want to thank all of the participants for hanging in with us for the past 90 minutes, and Dr. Nahabedian for sharing his time, his talent, his expertise with us today. I know you covered a lot of material. The question and answer sessions are always very lively and interesting to us because of the myriad of issues, particularly this topic, which is so unique and different and not often reported on.

So we appreciate everyone's participation.
Please remember to complete your evaluation forms. They are e-mailed to you already and we really do pay attention and improve programs.
Check Living Beyond Breast Cancer's web site, lbbc.org, regularly for updates on our upcoming programs.

For peer support at all times please call our toll-free Survivors' Helpline at 888-753-LBBC.
Dr. Nahabedian, I offer you one last opportunity if you have a closing comment to make.

**MAURICE NAHABEDIAN, MD:**
I'd just like to say that breast reconstruction is a very important portion of the whole process and it can provide a lot of emotional and psychological benefits for most women who undergo these procedures. And I would encourage people to at least inquire about the reconstructive options that are available.

**ELYSE CAPLAN, MA:**
I think that's a perfect point to make and it's very consistent with Living Beyond Breast Cancer's mission, to empower women to live as long as possible with the best quality of life. So thanks again to everyone for your time and participation on today's call, and we look forward to having you tune in to the next program. Take good care.