

Panel Discussion

Augmentation Mastopexy: To Stage or Not

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Dr. Nahai: The first patient is a woman in her mid 30s (Figure 1). She has 2 children and wants her breasts to be larger and lifted. The thickness of her breasts in the upper inner quadrant measures 2 cm. Dr. Fisher, how would you help this woman achieve her goals?

Dr. Fisher: The first issue would be to find out what size she wants to be. One rule of thumb is that the larger the implant, the less lift is required. If you look at her side view, her nipple is almost at her inframammary fold. I think she has adequate tissue for me to consider subglandular placement of gel implants, using a periareolar incision. Once the implant is inserted, I could determine the amount of skin to excise in the periareolar area.

Dr. Nahai: You would be comfortable using the gel implant with a thickness of 2 cm in the upper inner quadrant?

Dr. Fisher: Yes.

Dr. Nahai: You feel that, because of nipple position, the augmentation alone might correct her ptosis. But if not, would you then alter the skin envelope?

Dr. Fisher: Exactly.

Dr. Nahai: Dr. Maxwell, how would you approach treating this patient?

Dr. Maxwell: I agree to a certain extent with Dr. Fisher, but this patient has a little too much ptosis for me to anticipate correction with an implant only. I would plan a periareolar approach augmentation mastopexy, incorporating an appropriate purse-string suture. I would use a silicone gel implant of appropriate base width, and I would place it subfascially.

I am more comfortable using the subfascial position. From my perspective it is a better “over-the-muscle cover” than subglandular placement. I would most likely (because of the adequacy of her soft tissue) use a textured gel device.

Dr. Nahai: You raise the question of subfascial placement. In your experience, where is the fascia thicker? Can you accurately gauge the thickness? Would it be in the range of 1 mm or would it be more like a fraction of a millimeter?

Dr. Maxwell: The pectoralis originates inferiorly and inserts into the humeral tendinous area. As the fascia over that muscle becomes more confluent, laterally,

the fascia becomes heavier. So it is rare that the fascia would have substance inferiorly. In the central to upper breast, it does have substance. Just as in the dual plane technique, where there is muscle above, but not below, here there is fascia above, but, perhaps, not below. The fascia in the upper portion, despite its thickness, has more structure and is a slightly better cover for an implant than the subglandular position.



Foad Nahai, MD



Jack Fisher, MD



Patrick G. Maxwell, MD



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Figure 1. This woman, in her mid 30s, has had 2 children. She would like her breasts lifted and enlarged.

Dr. Nahai: How would you change your plan if she declined to have a gel implant and insisted on saline?

Dr. Maxwell: I am not a fan of saline solution-filled implants used in augmentation mastopexy procedures. I would either make the decision not to offer the operation or, if I used saline solution-filled implants, I would definitely place the implant in the subpectoral position.

Dr. Nahai: Dr. Mills, what would your approach be?

Dr. Mills: I would probably use a larger implant here in Southern California than what is most commonly used in other parts of the country. Also, I keep in mind that I can always add a scar, but I cannot erase it, and that the larger the implant, the greater the pendulum effect.

I would definitely insert the implant under the muscle. When you place a breast implant on top of the muscle, and you add weight to the breasts, they have a tendency to droop. If you place the implant behind the muscle, it does not add weight to the breast because the implant is held back by the muscle and fascia. In this patient, I would place an implant and then see if she was happy. After 3 to 4 months, if she were unhappy, I could adjust the skin envelope.

Dr. Nahai: Would your views on retromuscular placement apply equally to saline solution-filled implants and gel implants?

Dr. Mills: Yes.

Dr. Nahai: Would anyone consider a shaped or anatomical implant in this woman? Since there are no comments, I will take that as a “no.” The next patient is in her late 30s and has completed her family (Figure 2). She would like to be lifted and have more projection, especially in the upper poles. She wants to be at least a “C” cup size. The thickness of her breast tissue measured in the upper inner quadrant is less than 2 cm. Dr. Maxwell, how would you help her achieve her goals?

Dr. Maxwell: This is a more challenging patient than the first one we discussed. My approach would be a single-stage operation, but I would view it as performing two operations in one. I would select the implant on the basis of dimensional concepts, and I would place it in the subpectoral position. Once it is in place, I would put the operating table in an upright position and, using tailor-tack techniques, I would reconfirm or adjust my preoperative markings; on the basis of that, I would proceed with the mastopexy.

I would say with great certainty that this would be a “circumvertical” mastopexy that perhaps would even have a small transverse component. My preference would be for a more projecting implant, and if it were an option, I would prefer a form-stable cohesive silicone gel implant because of the width of her breast. She needs a lot of width, but also would like to have some projection.

Dr. Nahai: Would you offer her gel- or saline solution-filled implants?

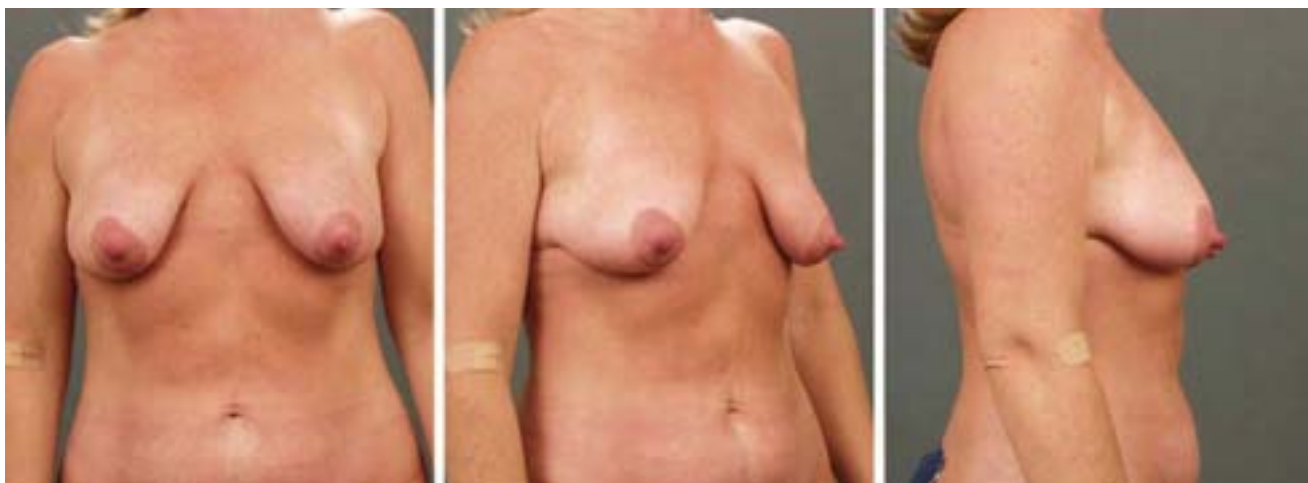


Figure 2. This woman, in her late 30s, has completed her family. She would like her breasts to be lifted, fuller, and more projecting, especially in the upper poles.

Dr. Maxwell: For this patient, I would definitely use silicone gel implants and place them submuscularly.

Dr. Nahai: If the “form-stable” implant was not available, would you use a moderate or high-profile implant?

Dr. Maxwell: The challenge here is getting adequate width, and while I would like to use a high-profile implant, the higher profile implants have a narrower base. So I would be selecting between the moderate plus and the high-profile, and my preference would be a textured silicone gel-filled implant.

Dr. Nahai: My understanding of the circumvertical approach is that to avoid a long vertical scar or the dog ear at the low end of the incision, you would remove more of the skin around the areola. Is that your understanding?

Dr. Maxwell: This patient’s breast base width is superiorly wide, but becomes narrow inferiorly. The more you tighten the breast and narrow it inferiorly, the narrower it will be in the lower aspect. By using a circumvertical technique (circumvertical, to me, means adding a purse-string suture combined with vertical skin removal), I will not narrow the breast as much. I think she will also need a transverse skin ellipse element removed inferiorly, which I will “tailor-tack” at the end of the procedure.

Dr. Nahai: Dr. Mills, would you approach her in one or two stages?

Dr. Mills: In the last 7 years, I have never performed a mastopexy at the same time as inserting an implant. Because my patients generally require that I use large implants, I am concerned about the possibility of damaging the perforators. If you are not trying to make a big pocket, and you want the implant to fit like a glove, this may not be so much of an issue—there may be greater safety as far as the blood supply.

My approach to this would actually be to do some sort of “tissue rearrangement” mastopexy. I like the modification that Dr. Flowers described a long time ago with the “flip-flap” mastopexy.¹

Dr. Nahai: When you do the two stages, which stage do you do first? Do you enlarge the breast or first deal with the ptosis?

Dr. Mills: I would rather insert the implant first because, as Dr. Fisher mentioned earlier, the more you fill up the skin envelope, the less lengthy the scars need to be. Having said that, there are some patients who would not be happy with an implant and that much sagging, even temporarily. So, in that case, you may need to address the ptosis first and then move on to the augmentation.

Dr. Nahai: Dr. Fisher, how would you approach treating this patient?

Dr. Fisher: I agree with Dr. Maxwell. I think one important point is that this patient has a very wide separation

between her breasts. If you look at her frontal view, the gap at the medium extension of both inframammary folds is quite wide. This is a patient in whom you have to be very careful.

I certainly would do this as a single-stage procedure because I feel it would give me a better ability to adjust both the volume and the skin, but you have to be very careful not to violate the breast fold, especially over the sternum. This is the kind of patient in whom a significant irregularity might result. One important concept is that sometimes we just have to work with whatever nature gives us. You could give her better cleavage, but at a higher risk. I would perform a single-stage subpectoral augmentation and mastopexy procedure very similar to the one that Dr. Maxwell described.

Dr. Nahai: Where would you put her initial incision?

Dr. Fisher: When I work around the areola, it keeps all my options open. I would draw a very specific pattern (I call it “intraoperative sequencing”) in which I make multiple markings that I can adjust during surgery. I like tailor-tacking, but I still need certain parameters to follow. If I have multiple markings, I can adjust them, but I probably would start out with an inferior periareolar dissection and then make my subpectoral pocket. Since you will have a vertical component in this patient, you could certainly also insert the implants through the vertical incision. I don’t know how long the incision would be or even if I would need a horizontal extension (such as a short T). However, this is the type of patient in whom I would prefer not to use that incision.

Dr. Maxwell: Dr. Nahai, may I interject? I like Dr. Fisher’s term “intraoperative sequencing.” I have described my approach as two operations in one, meaning the placement of the implant and then the adjustment of the skin. By placing the implant through the lower or the inferior periareolar approach, as Dr. Fisher described, I suture that pocket so I have completed one operation, and then I tailor-tack and do not have one suture line directly over another suture line. If I do not work vertically in terms of implant insertion, I do not have two vertical incisions on top of each other. I have performed a periareolar approach implant placement close to the parenchyma and then performed mastopexy in another tissue plane, using intraoperative sequencing.

Dr. Nahai: Dr. Mills brought up the question of perforators and the safety of the nipple and areola. If we

are using a retromuscular approach, we will worry less. Let us assume you had sufficient tissue and you wanted to put in a substantial size implant. What would your consideration be in terms of nipple-areola viability?

Dr. Maxwell: If I were interrupting the central vascular connections while performing this operation in one stage, I would maintain as much superior pole vascularization as possible; specifically, I would maintain my deepithelialized subdermal flap and as much of the central peripheral vascularization through the parenchyma from the entire lateral cascade—from the axilla to the superomedial perforators. My preference here would be a medium high projecting anatomic cohesive-gel implant, and my pocket dissection for that implant would be relatively snug (just around the base of the implant). Therefore, I do not think I would violate any of those perforators that I mentioned from the superomedial or superolateral access.

Dr. Nahai: The next patient is in her mid 30s (Figure 3). She has completed her family. The thickness of her breast tissue measured in the upper inner quadrant is 1.5 cm. She would like to be at least a “C” cup size and have fullness, projection, and improvement of her asymmetry. Dr. Mills, how can she achieve these goals?

Dr. Mills: She is very asymmetrical and has very large areolae. I would need to do a significant skin resection. I would plan on doing a standard mastopexy with at least a “keel” wedge excision at the 6-o’clock position.

Dr. Nahai: Would you do this on both breasts or just the larger one?

Dr. Mills: I would probably do it on both breasts because the right side has quite a bit of breast tissue below the inframammary crease that will bottom out over time if you do not resect part of it. But, of course, you would have to remove more from her left side than her right. Once again, if I resect enough skin to reduce her areolae to a reasonable size, I would be nervous about putting in an implant, stretching all that skin out at the same time. The most common implant size that I use is in the 390- to 450-cc range. That would be too much stretching. So I would not do this as a single-stage procedure. For this patient, I would remove the breast tissue first and then at another stage put in an implant.



Figure 3. This woman, in her mid 30s, has completed her family. She would like to be at least a “C” cup size and have upper pole fullness, projection, and improvement of the asymmetry.

Dr. Nahai: What type of implant and where would you place it?

Dr. Mills: I prefer to use a gel implant, placing it behind the muscle. She already has some tissue that is showing signs of drooping, so I do not want to add more weight.

Dr. Nahai: Would you use the gel and attempt to adjust the volume by adjusting the amount of tissue resection as opposed to using a saline solution–filled implant and adjusting the implant volume?

Dr. Mills: Yes, I would prefer to use a gel-filled implant.

Dr. Nahai: Normally, when you work in two stages, how long is the interval between the stages?

Dr. Mills: At least 4 months. Typically, I tell patients that they will also need a mastopexy, but I will put in the implant first because this will stretch out the skin so I won't have to tack it as far or make the incision as wide. Probably 30% of the time, the patient is pleased with the result, and we leave it at that. Five years down the road, I can do a lift and add the scar. In most cases, patients would rather try out the implant for awhile and not have a scar. But, as I mentioned earlier, there are some instances in which the ptosis is too disturbing to the patient for me to make it worse by placing an implant before doing a mastopexy procedure.

Dr. Nahai: Dr. Fisher, would you approach this patient with a single-stage procedure?

Dr. Fisher: I think there are several things that this patient demonstrates that are very important. First, if you look at her side view, there is a significant difference from the inframammary fold to the bottom of the breast, as Dr. Mills pointed out. She also has large areolae, and I think in these patients it is very important to remove transverse skin. I would use some type of inverted-T incision in her because that is the only way I could remove enough of the transverse skin.

I do not think that the left breast with its large areola would be easy to improve with the vertical incision. I have found it easier to obtain symmetry of breast tissue volume than attempting to put in different-sized implants. In some of these patients, I think it is reasonable to remove breast tissue on the larger side, so that when I insert implants, I already have some component of symmetry. I would feel comfortable doing this in one stage. If I do an inverted-T on one side, I would then have to do some component of an inverted-T on the other, probably with the shorter base incision. I would definitely be looking at the amount of tissue she has and placing the implants subpectorally.

As Dr. Mills has stated, there are certainly regional differences in implant size, and I cannot remember the last time I used an implant in the 400-cc range. It is easier to place an implant in a 325- to 350-cc range at the

time of the mastopexy. This patient wanted more fullness in the upper poles, and so the base diameter, Dr. Maxwell pointed out, becomes so important. I would use an implant in the moderate profile range, and I prefer using smooth-walled gel implants.

Dr. Nahai: Dr. Maxwell was concerned about two suture lines and (obviously) long-term safety issues of implant exposure. When you are doing a Wise pattern “T” skin excision and are also removing breast tissue to adjust volume, how do you attempt to minimize the risk of pressure, delayed healing, and implant exposure at the T junction?

Dr. Fisher: The way to do it, as Dr. Maxwell discussed, is to make the point of insertion of the implant and the closure not necessarily in the same area of skin excision. So, in this patient’s left breast, in which I am committed to some type of inverted “T,” I would not insert an implant anywhere near the apical closure where there is the greatest stress. I would insert the implant through either an inferior periareolar approach or through a vertical component, keeping away from the base of the breast. When I have completed the mastopexy, there will be no direct extension from the pocket around the implant to the transverse incision or the area around the “T.”

Dr. Nahai: When would you do a volume resection, and where would you resect the breast parenchyma?

Dr. Fisher: The upper poles of her breasts are fairly symmetrical. I think you could take out a small amount of tissue both medially and laterally. In these patients, because I am performing a mastopexy and augmentation in the same stage, I try to keep as much attachment to the nipple-areola complex as possible. I find that in most of these patients, I do not move the nipple a great distance, so I can usually keep both a superior and an inferior pedicle. I try to keep some central tissue, and I move the lateral and medial components underneath the breast. Even though I might sacrifice some breast tissue in those areas because I am “coning” the tissue, this will not result in a defect or a divot.

Dr. Nahai: Dr. Maxwell, would you place a form-stable implant in this patient?

Dr. Maxwell: This is a very difficult case as both other panelists have suggested. She has a narrow breast to begin with, and an extraordinarily large nipple areola

complex. She will need to undergo a lift, and she will be extremely tight inferiorly. In my mind that will limit the volume of the implant that I can place in one stage.

I would ask her to wear her bra and then observe her size and volume with an external lift. I would then tell her that I would have to limit the volume. I would select subpectoral placement of a textured round implant. There is a little too much mobility and laxity in this patient to be quite as comfortable with the form-stable anatomical implant.

Dr. Nahai: Dr. Fisher is certain that he would need to perform a Wise pattern “T” resection. You spoke earlier about the *circumvertical*, which is a wonderful way of minimizing the inframammary extension of the “T” and even avoiding it by removing the excess skin in the periareolar area. In your hands, would you plan a Wise pattern inverted-T?

Dr. Maxwell: It is rare that I actually plan the entire Wise pattern from the beginning, but I do usually draw an option for a transverse removal. I limit it as opposed to a classic predrawn Wise pattern. Once the implants are in, I do the circumvertical component. Unquestionably, I would end up with the transverse component on the left breast, not a full Wise pattern, and whatever degree was necessary on the right breast in this patient.

Dr. Nahai: The next patient is in her mid 50s (Figure 4). She has had children and desires a breast lift with upper pole fullness. The thickness of her tissues in the upper outer quadrant is 1 cm. Dr. Maxwell, what treatment would you propose?

Dr. Maxwell: In general, I am not an advocate of a two-stage approach to augmentation mastopexy. In fact, I do not understand the economics of how one does it; I would rather come back and perform a minor revision on the primary that was not perfect. Having said that, however, I do consider patients with extreme ptosis candidates for a two-stage augmentation mastopexy.

This patient has extreme ptosis. She’s already had an abdominoplasty and looks like she has had massive weight loss. I would perform a very aggressive mastopexy in this patient, only soft tissue. And I would actually consider recruiting some additional tissue from her axillary area to add some volume, as is often done in patients with massive weight loss. Then, in time, I would assess whether she needs an implant. In other words, I would encourage her to have an autogenous mastopexy as her operation of choice and then, down the line, assess whether she is a candidate for an implant.



Figure 4. This woman, in her mid 50s, is anxious to have her breasts lifted. She is looking for upper pole fullness.

Dr. Nahai: What type of pattern for the skin resection would you plan?

Dr. Maxwell: I do not generally plan a full Wise pattern in advance, but in this patient I would. This patient will require an extended lateral component. If you look at her lateral view, she has a lot of tissue in that area. She has already had an abdominoplasty, so we can see a lot of laxity in her torso.

Dr. Nahai: By definition, if you plan to use the lateral tissue for volume, you would definitely have to make at least a “J” or an “L” incision.

Dr. Maxwell: The length of the scar must be as long as is necessary to achieve form, and I would impress that upon her from the very beginning. There is no way I would approach treating this patient by trying to limit the scar to a vertical or minimal transverse.

Dr. Nahai: Dr. Mills, how would do you approach treating her?

Dr. Mills: I would approach her exactly the way Dr. Maxwell described. The only other challenge this patient presents is that her nipple-areola complex is pointing toward the center. When somebody presents with the nipple on the medial side of the breast, I see no way of proceeding without staging the procedures. I would do a full Wise pattern with an extension underneath her arm or along her bra strap to try to recruit some of that other tissue.

Dr. Nahai: In this case, how long would you wait between the two stages?

Dr. Mills: I would not even think of doing additional surgery in less than 4 months. If the patient will wait 6 months, even better. I would evaluate the scars to determine whether they are pliable and assess how much inflammation there is in the tissue.

Dr. Nahai: What type of implant and where would you place it?

Dr. Mills: I would evaluate her after performing the lift. She looks wide, and because of the width, I would probably want to use a silicone gel implant. If the mastopexy result was what I hoped for, I could place a smooth wall silicone implant behind the muscle, or a textured anatomic cohesive gel implant.

Dr. Nahai: Dr. Fisher, how would you handle this case?

Dr. Fisher: In my view, this is a patient that you do need to stage. Although some of us advocate trying to work in a single stage, the most important issue in this patient is how difficult that would be. To get those nipples in a better position, I feel that an inverted “T” gives the greatest ability to manipulate the location of the nipple-areola complex. (And again, I do not even like the term Wise pattern because that implies cutting from edge to edge on the inframammary fold, and I think most of the time you can be very conservative with the transverse incision.)

As Dr. Mills said, one of the more difficult challenges is not moving the nipple up and down in the vertical plane, but moving the nipple in the transverse plane. It will take a fair amount of movement to get that nipple into the midclavicular line. You need to ignore the actual areola complex position and create a reference line in the midclavicular plane and use this line for either placing or creating the new nipple location.

Dr. Nahai: How long would you wait between the two stages?

Dr. Fisher: I would like to wait at least 6 months. This patient may actually be happy with the amount of autoaugmentation that results, especially if you mobilize some of that lateral tissue. I agree that she looks like a patient with massive weight loss with a barrel chest, and if she wants fullness superiorly, the only way to accomplish that is with an implant. If I did use an implant in a patient like this, I would tend to be above the muscle or, at the most, just subfascial.

Dr. Nahai: Dr. Mills, what would you tell this patient about the longevity of her result? Would you tell her that this will hold up for 5 years, more or less?

Dr. Mills: She is so droopy; she has lost all of her internal Cooper's ligaments. She is probably going to have to come back for a wedge resection, probably in about 3 to 5 years. It is always better to underpromise and overdeliver. So I would rather tell her 3 years, and expect 5, but this is somebody whose tissue has become ptotic way beyond her inframammary crease. Suturing it will be temporary because it will descend and bottom out in the future; gravity will take it back down sooner or later. Her skin will have more weight, so I would estimate that she would probably have to have a second resection in about 5 years.

Dr. Nahai: Dr. Maxwell, do you agree with that? What would you advise her?

Dr. Maxwell: I would not get specific with her. I would do a single-stage autogenous type mastopexy. It is possible down the line that I would decide to put in an implant but my perspective would be that this is in the distant future. I would not (based on this photograph) plan this as a two-stage operation. As far as the outlook for the future, I would not offer advice. I would say, "This is a challenging procedure; let's do the very best

we can in the operation with no implant, and then we will see how you do over time."

Dr. Nahai: Dr. Fisher, in the first case (Figure 1) what would you tell the patient to expect in terms of the longevity of her result?

Dr. Fisher: I think the major issue is whether you are above the muscle or below the muscle. One of the things that happens (if you follow up these patients for 10 to 15 years) is that the implant that is above the muscle tends to distend along with the breast, as a unit. In comparison, an implant that is below the muscle may look good when the patient is younger but if the breast descends, the muscle tends to form an internal bra, holding the implant up, and then the breast descends around it. So what I would tell her depends on the location of the implant. The big factor is the quality of the patient's skin and tissue. Her skin looks fairly good, so I think there is a good chance things would hold up over a significant period of time, depending on weight gain or loss. We see many of these patients while they are still having children, and that can significantly affect the contour and the shape of the breast over time.

Dr. Nahai: Dr. Fisher, if I understand you correctly, you are saying that if the implant is over the muscle, the implant and the tissues will descend together with age.

Dr. Fisher: Correct.

Dr. Nahai: With implants under the muscle, the muscle holds up the implant and the tissues are going to slide over it. So, in your opinion, with implants under the muscle, she is more likely to come back for a revision.

Dr. Fisher: I made a point in my career of observing some of these patients 15 and 20 years later. One of the most common things I see in the submuscular implant is descent of the breast without the implant moving with that breast.

Dr. Nahai: Dr. Maxwell, care to comment?

Dr. Maxwell: The problem in trying to make these judgments is that we don't remember exactly how we dealt with the inferior portion of the muscle 15 years ago in a particular patient. We did not do subfascial release 15 years ago, so I think the difference over time has to do with how much we release the inferior pole of the muscle—whether we are

just using that muscle as an upper pole thickener or something that restricts the descent of the implant. The lower pole of the soft tissues develops the “snoopy” quality over time with more muscle release inferiorly.

Dr. Nahai: Now that you mention “dual plane,” I am going to ask Dr. Mills, if we can go back to [Figure 1](#), would you consider a dual plane approach in her without any skin removal?

Dr. Mills: To be honest, a lot of my approaches are transaxillary and so they are probably a kind of dual plane because you are releasing the fascia and the muscle low. If you are under the muscle or under the fascia and you have “broken through,” that seems to loosen the tight inframammary crease. What I mean by *dual plane* is that more superiorly the implant is behind the muscle. At about the sixth rib, we go through the muscle into the subcutaneous planes while leaving the muscle attached along the sternum. The implant usually sits at the level of the seventh to the eighth rib, so at the bottom two ribs, the muscle really isn’t covering the implant, so it is both submuscular and subcutaneous.

Dr. Nahai: Dr. Maxwell, would you do a biplanar approach on the patient in [Figure 1](#)?

Dr. Maxwell: I believe I said I would do a subfascial approach. On the other hand, *dual plane* and *subpectoral* with pectoral release are terms that mean the same thing to me. You can be specific in terms of saying exactly how much you release the muscle in different ways. But those things all have similar meanings unless one cares to define them further. And so for the patient in [Figure 1](#), I chose a subfascial approach, but I would not at all be opposed to a subpectoral replacement with an aggressive inferior pectoral release.

Dr. Nahai: I was pleased to hear that all of you vary the position of the implants from submuscular to subfascial to retromammary, and that all of you have an open mind in terms of staging the procedures. Each of you began your comments by remarking how challenging those cases were, and I would agree that these are challenging operations. Given the analysis and the thought process that all of you have demonstrated, we will all be able to have better and longer lasting results. ■

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