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dimensions, and the size of the chest wall.¹ Biodimensional planning with precise measurements will lead to greater success in breast augmentation. Three dimensional computer imaging and simulation programs now allow surgeons to better visualise and precisely plan for breast augmentation surgery. Such programs also help to communicate possible results with given implants to a patient. Chest wall asymmetries may be better detected and shown. Using this technology may reduce the likelihood of operations for implant size change. It should be clear that the images simulated are not an implied guarantee of the result.²

Plastic surgeons have the option of using saline or silicone breast implants which are smooth or textured, round or shaped, form-stable gel breast implants. Form-stable gel breast implants minimise the risk of wrinkling, rippling or capsular contracture while providing shape to the breast.

Choice of incision is critical. The choices include inframammary fold, periareolar, transaxillary, and periumbilical. The incidence of complications such as infection, altered sensation, and risks of capsular contracture are lowest with the inframammary fold incision.³ This incision provides direct access to the subglandular and subpectoral planes without violating the breast parenchyma. However, if the incision will not fall into the inframammary fold after augmentation or if the breast has a constricted lower pole, other options may be considered. The periareolar incision provides central access and enables one to lower the inframammary fold. The transaxillary incision allows one to avoid placing a scar on the breast; however, it requires one to operate on tissue other than the breast and is associated with a higher rate of complications. The same is true of the transumbilical approach. The key is to understand the benefits and disadvantages of each of these incisions and choose the most appropriate incision for each patient.⁴

The plane into which the implant is placed is also critical. Placing the implant in the subglandular plane in the absence of adequate soft tissue coverage may result in thinning of the tissues, rippling, and palpable implants. There is a higher incidence of capsular contracture with implants placed in the subglandular plane. Of note, textured implants in this plane may have a lower incidence of capsular contracture. All implants placed in this plane make mammograms more challenging to interpret compared to implants placed under the pectoralis major muscle. In practice, the majority of “subpectoral” implants are placed in the “dual plane” position whereby the upper pole of the implant is under the muscle and the lower pole of the implant is in the subglandular plane.⁵ Plastic surgeons have shown great success with the placement of implants in the dual plane to minimise the risks of developing complications associated with implants placed in the subglandular plane.

Of course, meticulous surgical technique with precise pocket dissection is key. Obtaining hemostasis throughout the case, observing strict sterile technique, avoiding the use of gloves with powder, using antibiotic solution⁶, and employing technologies such as The Keller Funnel™ which allow the implant to enter the breast without touching the surgeon’s gloves or the patient’s skin are all points to consider to minimise the risk of post-operative complications.

