New Procedures Offer Safer, More Natural Breast Reconstruction

For women undergoing mastectomy, breast reconstruction can now be offered safely in conjunction with the surgery, with less morbidity and better cosmetic outcomes than in the past, according to plastic surgeons at the Revlon/UCLA Breast Center.

“Previously, when breast reconstruction was done at the same time as the mastectomy, many patients experienced complications that could delay chemotherapy or radiation, which made many physicians reluctant to recommend immediate reconstruction,” says James Watson, M.D., UCLA plastic surgeon. “Today, we have more options and we can tailor the reconstruction to the individual patient, thereby avoiding a lot of the complications that we had previously.”

Primary-care physicians should refer their breast cancer patients to a plastic surgeon at the same time that they are referring to an oncologist so that the two can coordinate their treatment plans and, preferably, perform the surgeries at the same time, adds UCLA plastic surgeon Jaco Festekjian, M.D. “It’s very rare now that we would recommend delaying reconstruction,” he says. “Too often, women unnecessarily have to live without a breast for a period of time before the reconstruction.” Immediate reconstruction not only prevents the negative psychological consequences many women experience through their changed body image, it also provides the plastic surgeon with tissue that is softer and easier to work with, making a better result more likely, Dr. Festekjian explains.

The most significant advance facilitating immediate reconstruction has been the use of new microsurgical techniques that enable specially trained plastic surgeons to employ autologous tissues without the need to transfer muscle, which weakens patients. At UCLA, the most common procedures use excess skin and fat from the patient’s lower abdomen to replace the breast tissue. Two new techniques are employed: deep inferior epigastric artery perforator flaps (DIEP) and superficial inferior epigastric artery flaps. Another option utilizes skin and fat from the buttocks.

“We used to transfer muscle with the tissue during these procedures to protect the blood supply to the flap,” says Dr. Festekjian. “Now that we’re able to do it without using muscle, patients have less pain and a much faster recovery.” This option is particularly important...
“At UCLA we have a philosophical bias toward autologous tissues. Although it requires a longer recovery, an autologous-tissue reconstruction yields a more durable and natural result.”

—Christopher Crisera, M.D., UCLA plastic surgeon

Implants still represent an attractive option for many patients, notes UCLA plastic surgeon Andrew Da Lio, M.D. “Our results are getting better not only with the use of flaps in autologous-tissue transfers, but also with the use of implants,” he says. Dr. Da Lio explains that there are now multiple types of implants, using both saline and silicone, with a variety of shapes and textures. After a large study on the safety of silicone-gel implants, a Food and Drug Administration (FDA) advisory panel concluded that they are not causally related to autoimmune syndromes and recommended that the material, which tends to produce a softer breast than saline implants, be made more widely available.

In addition to the newer autologous-tissue reconstruction technique, refinements have occurred in previous approaches to expander implant reconstructions, notes Dr. Watson. The improvement involves use of an acellular dermal graft to cover the lower half of the implant. “This has allowed us to give the breast a much better cosmetic shape,” he explains.

Dr. Da Lio notes that as genetic testing is made more widely available and women with a strong family history of breast cancer become more aware of their risk, more are opting for prophylactic mastectomies, often with immediate reconstruction. “Certainly it’s an individual decision but in some cases, if patients and their physicians saw what we can now do, they would probably be more accepting of the idea,” says Dr. Da Lio. “For women who do elect to go through with prophylactic mastectomies, this no longer has to be looked at as a mutilating type of experience.”

Prophylactic mastectomies are also becoming more common among high-risk breast cancer patients, many of whom choose to have both breasts removed at the time of diagnosis on one side. “We’re gaining insight into genetic mutations that predispose patients to cancer, and we can test for some of those now,” Dr. Crisera says. “In addition, the Society of Surgical Oncologists has defined the patients who are at high risk and may benefit from having prophylactic mastectomy. As a result, a growing number of women are coming to us needing both breasts reconstructed at once.”

In some cases, Dr. Crisera explains, this can limit the available options. “If we want to do a bilateral reconstruction using autologous tissue, the best aesthetic outcome would be to start the
process at the time of the mastectomy,” he says. “That means the patient’s body has to be able to provide twice as much tissue as when we are reconstructing one side.” Certain autologous options lend themselves better than others to bilateral reconstructions, Dr. Crisera explains, the deep inferior epigastric artery perforator flap being one of them. For patients who don’t have enough tissue on their abdomen, it is not always feasible to reconstruct both sides at once.

Indeed, although immediate reconstruction typically provides the best result, it is important to tailor the approach to the individual patient, says Dr. Watson. “For patients who are actively smoking, have diabetes, have late-stage breast cancer, or are obese, it is safer in some cases to wait and do delayed breast reconstruction after chemotherapy and radiation,” he says. “Even in these cases, we can offer an excellent cosmetic result.”

When patients are receiving chemotherapy and radiation along with the mastectomy, oncologists should work closely with the plastic surgeon so that the procedures are properly coordinated to ensure the best cosmetic outcome, says Dr. Festekjian.

Whether reconstruction is immediate or delayed, Revlon/UCLA Breast Center plastic surgeons agree that close collaboration among the services is a key to successful outcomes. The Revlon center offers the advantage of all breast cancer services—including surgical, medical and radiation oncologists; plastic surgeons; psychiatrists; and social services—working together in a single facility. “It’s a one-stop shop for the patient to get an understanding of what is going to be involved in her oncologic management, including reconstructive options,” says Dr. Crisera. “It also helps plastic surgeons to be able to see patients in that environment because we’re better able to tailor the reconstruction to the individual patient.”

“It is very helpful to be able to provide patients with a complete treatment plan in one visit,” says Helena Chang, M.D., Ph.D., director of the Revlon/UCLA Breast Center. “Patients appreciate being able to see everyone on the same day. We also offer free surgical education classes every week with a nurse practitioner, a psychosocial team member, and a volunteer survivor who come together to make sure patients are happy with their choice and that they understand what is involved. Our center’s multidisciplinary approach ensures that we are covering all of the bases and providing patients with all of the options, including immediate reconstruction.”

Recommended Reading


Tissue from the abdomen may be tunneled or surgically transplanted to the chest wall to form a flap for an implant or to provide bulk to form the breast mound without an implant. After surgery, the breast mound, nipple and areola are restored. Scars will fade with time, but may never disappear entirely.
Breast Microsurgery Techniques Create Dramatic Reductions in Patient Morbidity

The most significant recent advance in breast reconstruction—the ability to transfer patients’ own tissues at the time of mastectomy with minimal or no muscle loss—has been facilitated by new microsurgical techniques being used by specially trained plastic surgeons. At institutions where breast microsurgery is performed in high volume, morbidity has been dramatically reduced and success rates are as high as 99 percent.

Microsurgery involves disconnecting a tissue and its blood supply from the body and reattaching it, transferring the vessels and sewing them under the magnification of a microscope. The “free flap”—in which the tissue is completely disconnected and reattached—has or autologous blood banking with this technique, and hospital stays are shorter because patients have less pain.”

At UCLA, one of the highest-volume microsurgical breast-reconstruction centers, the techniques for obtaining the free flaps are constantly being refined. “Before, when we were moving tissue around, we sometimes had to take a small piece of muscle,” says Andrew Da Lio, M.D., UCLA plastic surgeon. “Now it’s almost solely fat and skin, so the functional downside has been reduced dramatically, to the point where patients rarely notice any difference. And every year, we’re getting better at it.”

The latest evolution in microsurgery incorporates the use of perforator flaps to minimize morbidity by sparing flap. “It’s a less morbid procedure that will be particularly important for the increasing number of women who require bilateral reconstructions,” Dr. Crisera says. “Taking rectus muscle from both sides of the abdomen would lead to a lot of weakness in these women if done in the traditional fashion.”

Brian Boyd, M.D., chief of plastic surgery at Harbor-UCLA Medical Center, feels strongly that every woman with breast cancer must be offered all the latest techniques of breast reconstruction—including perforator flaps—so that she can make fully informed decisions about her own care.

“We hope that as more surgeons become proficient with this technique, other centers might also be able to offer such cutting-edge technology to give their patients the opportunity for the best possible long-term results” says Jay Granzow, M.D., M.P.H., associate chief of plastic surgery at Harbor-UCLA Medical Center.

Microsurgical breast reconstruction requires special expertise and subspecialty training. At high-volume centers such as UCLA, which performs 200-250 of the procedures per year, there is a growing demand. “As the patient population becomes more educated about what’s available, people are looking for centers that will offer breast microsurgery,” says Jaco Festekjian, M.D., UCLA plastic surgeon. “In the future, more surgeons will need to be trained in this subspecialty.”

**Recommended Reading**


More than a million new cases of skin cancer are reported each year, making it the most prevalent form of cancer in the United States. Although a potentially fatal condition, even the most dangerous form of skin cancer can, if detected early enough, be treated and cured.

A variety of techniques for removing a skin cancer exist—surgical excision, cryosurgery, topical chemotherapy, Mohs surgery, curettage and electrodessication. Depending on the location and severity of the cancer, the consequences of treatment may range from a small scar to permanent changes in facial structures such as the nose, ear or lip.

Thus, reconstructive plastic surgery can play an important role in helping patients who have been treated for skin cancer. “Restoring form and function is our primary goal,” says UCLA plastic and reconstructive surgeon George H. Rudkin, M.D. “In some areas of the face it may be more of an issue of form—appearance—but certainly it can be functional also.”

As an example, Dr. Rudkin cites a patient who requires reconstruction of the nose following removal of a cancerous lesion. “In a case like that we want to make sure that the nostril is open for breathing,” he says. “If, in another case, we are reconstructing the eyelid, we want to provide adequate mobility so the eyelid can close and lubricate the eye. In reconstruction of the lip area, we have to consider the aperture of the mouth; if a lot of the lip is taken away, we can’t just simply close the incision because that will leave the person with microstomia, small mouth, which will not function well.”

The most common and least dangerous skin cancer, basal cell carcinoma, grows slowly and rarely spreads beyond its original site, but can, if untreated, grow deep beneath the skin and into underlying tissue and bone. Squamous cell carcinoma frequently appears on the lips, face or ears, and can spread to distant sites such as lymph nodes and internal organs and become life threatening if not treated. Malignant melanoma is the least common but deadliest skin cancer. It can be completely cured if discovered early, but if untreated can spread through the body.

Once discovered, a lesion must be removed. Some simple reconstruction techniques can be performed once the cancer has been excised. In the case of a small cancer, for example, the post-operative defect often can be repaired with a layered closure and fine suture technique. But larger skin cancers, as well as skin cancers in visually critical areas of the face, can require more extensive reconstructive surgery involving techniques such as skin grafting and complex facial flaps.

“We often work closely with the plastic surgeons when more extensive reconstruction is required,” says UCLA dermatologist and Mohs specialist Teresa Soriano, M.D. “We have an ocular plastic specialist for eyelid tumors, and head and neck and plastic surgeons for tumors on the nose and ears. Through this collaboration, we are able to provide our patients with the best possible cosmetic outcome.”

In some cases, it may be the plastic surgeon who performs both the tumor excision and the subsequent reconstruction.

“If the dermatologist feels that the tumor is inappropriate for a procedure like Mohs (in which the cancer is removed one skin layer at a time) or is too large, or the patient is too ill to have the procedure done under a local anesthetic, then we will do both the extirpation and the reconstruction,” explains Dr. Rudkin.

Reconstructive plastic surgery can be invaluable to a patient with a large tumor excision. “In certain cases, and when dealing with tumors of a certain size, the reconstructive plastic surgeon can be very aggressive in making sure that the tumor is completely removed, while also giving the patient a better cosmetic result,” says Timothy A. Miller, M.D., chief of the Division of Plastic and Reconstructive Surgery at UCLA. “Take, for example, a tumor on the side of the nose that is about the size of a dime. Chances are in a case like that it is better to take off a good part, if not all, of one side of the nose, and then reconstruct it.”

CONTINUED ON PAGE 6
Managing Expectations for Cosmetic Surgery Critical for Both Patients and Physicians

If you ever want confirmation that Los Angeles indeed is a Mecca for body makeover, just open the L.A. Weekly newspaper. In one recent issue, 19 advertisements for cosmetic-surgery centers offered lifts, implants, tummy tucks, liposuction, Botox injections, facial fillers and a variety of laser rejuvenation procedures.

Los Angeles is a microcosm of what is happening nationwide. According to the American Society for Aesthetic Plastic Surgery (ASAPS), nearly 11.5 million surgical and non-surgical cosmetic procedures were performed in the United States in 2005, with patients spending approximately $12.4 billion. Since the Society began collecting statistics in 1997, the overall number of cosmetic procedures has increased 444 percent.

In such a competition-charged milieu, patients must become critical and informed consumers when selecting a cosmetic surgeon. A patient should never be intimidated about asking questions, and should not hesitate to verify a potential surgeon’s credentials and board certification, says Timothy A. Miller, M.D., chief of the Division of Plastic and Reconstructive Surgery at UCLA. “Ask about the surgeon’s training. Ask how many times they have done the procedure, and about any complications. Ask for referrals. Discuss the risks of the procedure.”

Patients often don’t understand that cosmetic surgery—as opposed to plastic surgery—is not a specialty recognized by the American Board of Medical Specialties (ABMS). Just because a physician claims to be “board certified” doesn’t mean he or she has had sufficient training in cosmetic surgery; certification could come from an unrecognized, self-designated board that requires little more than an application fee.

On the other hand, “any plastic surgeon certified by the American Board of Plastic Surgeons who does a fair amount of reconstructive surgery is going to be very much at ease doing cosmetic surgery,” Dr. Miller says.

“A tremendous amount of overlap exists between plastic reconstructive surgery and cosmetic surgery,” notes UCLA plastic and reconstructive surgeon George H. Rudkin, M.D. “Reconstructive surgery is very complimentary to cosmetic surgery.”

In fact, the American Board of Plastic Surgeons states that “cosmetic surgery is an essential component of plastic surgery. The plastic surgeon uses cosmetic surgical principles both to improve overall appearance and to optimize the outcome of reconstructive procedures.”

The trend over the past several years has been toward less-invasive cosmetic procedures such as Botox® injections, laser rejuvenation, chemical peels and fillers. According to the ASAPS, 9.3 million non-surgical procedures were performed in 2005. Botox injection was the most sought-after procedure, followed by laser hair removal, fillers, microdermabrasion and chemical peel. Among the 2.1 million cosmetic surgical procedures last year, liposuction was performed most often, followed by breast augmentation, eyelid surgery, rhinoplasty and abdominalplasty. UCLA’s cosmetics practice cites similar patterns.

Some newer procedures offer alternatives to such traditional surgeries as the facelift. One is the thread lift, which may be an option for patients who want lifting and tightening of their cheeks, mid-face, jowls or eyebrows without undergoing major surgery. The thread lift, performed under local anesthesia as
an outpatient, takes about one hour. The procedure is done percutaneously, requiring no large incisions, and often is used in conjunction with Botox for fine wrinkles, dermal fillers for deeper wrinkles, and skin treatments such as peels or thermage.

The cosmetic-surgery market has expanded beyond women. “Less of a stigma exists now for men to come in for a cosmetic procedure,” says Dr. Rudkin. Some techniques have been adapted for men. For example, the platysma plication procedure with Z-plasty closure to remove excess skin from the neck was designed specifically for men. The operation is designed to hide scarring, can be performed under local anesthesia, and patients may return home the same day.

While some patients view cosmetic surgery as something less than surgery, it is surgery and carries attendant surgical risks. “Some people, I think, look on it as a step above going to a beautician or getting their nails done,” says Andrew Da Lio, M.D., UCLA plastic and reconstructive surgeon.

Most cosmetic procedures currently are performed in office-based facilities — 48.3 percent in 2005, according to the ASAPS — or in freestanding surgical centers (27.9 percent). Hospital-based procedures accounted for 23.8 percent of the procedures. But unlike office settings or surgical centers, a hospital setting can provide the broadest umbrella of quality care, with board-certified surgeons and anesthesiologists, high-quality nurses and excellent recovery facilities. And unlike surgeries performed in an office or surgical center, patients who receive cosmetic surgery in a hospital such as UCLA Medical Center are able to stay overnight for recovery and observation, adding an extra measure of safety.

Clarifying why someone elects to have cosmetic surgery is as important for the physician as it is for the patient. “The best motivation for cosmetic surgery is a healthy sense of vanity — emphasis on the word healthy,” says Dr. Miller. “There is nothing wrong with vanity, but when it becomes obsessive or the patient sees it as an avenue to changing the direction of his or her life, it can be a problem.”

Patient expectations can stretch beyond reason. “If you expect cosmetic surgery to turn you into a movie star, you’re bound to be disappointed,” Dr. Miller says. “Also don’t count on surgery to save a rocky relationship, gain a promotion or improve your social life.”

Just as the patient must be realistic about his or her desires, the surgeon must be upfront with patients about what is achievable. “It is important to be very honest about the kind of outcome a patient can expect, and not to promise something that is not achievable,” says Dr. Da Lio.

Once trust has been established between the surgeon and patient, the complementary task of working together toward achieving the most flattering results can begin.

“There’s nothing wrong with trying to look good,” Dr. Da Lio notes, “as long as it is within reason.”

Overall, UCLA cosmetic surgeons strive to create a natural aesthetic balance. “We don’t want to pull a face as tight as we can so you could bounce a coin off the patient’s cheek,” Dr. Miller says. “That is not good cosmetic surgery.”

Rather, the most successful surgeries can be the ones that are the least obvious. “Good cosmetic surgery should make the patient look refreshed without being obvious,” says Dr. Rudkin. And Dr. Da Lio adds that the ultimate compliment a cosmetic surgeon can receive is for patients to report that people have commented they look better and restored, but can’t quite identify why.

Recommended reading


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- Off-pump surgical option and minimally invasive vein and radial artery harvesting offer innovations in coronary artery bypass surgery.

Digestive Diseases/Gastroenterology
- Recent research indicates that viral load is the best predictor of whether a hepatitis B patient will progress to cirrhosis or liver cancer.
- A new study at UCLA will examine the effects of lifestyle modification on Nonalcoholic Fatty Liver Disease. Researchers will test whether a lowfat, high-antioxidant diet and exercise contribute to metabolic and histological changes.

Endovascular Surgery
- About 50 percent of patients with aortic aneurysm may be candidates for endovascular aneurysm repair and can enjoy the relative safety and comfort of a minimally invasive procedure.

Head and Neck Surgery
- The UCLA Swallowing Disorders Clinic offers an array of sophisticated diagnostic tools and treatment modalities, many of which can be administered in the Clinic suite using topical anesthesia.

Hematology/Oncology
- The UCLA Clinical AIDS Research and Education Center, which has moved to a new state-of-the-art facility, is at the forefront of patient care, research, and education.

Neurosurgery
- UCLA Neurosurgery offers diagnostic, consultative and therapeutic services to address all neurosurgical problems. Programs include brain tumors, childhood and adult epilepsy, functional neurosurgery, hydrocephalus, neurovascular surgery, pediatric neurosurgery, spinal disorders and stereotactic radiosurgery.

Plastic and Reconstructive Surgery
- Plastic surgeons work with the Revlon/ UCLA Breast Center team to provide consultation on breast reconstruction alternatives for patients with breast cancer and other breast-related problems.

Radiology
- A new dual-source, 64-detector CT scanner at UCLA is among the first of its type in the country and offers advantages in diagnosing coronary artery disease.
- Uterine Fibroid Embolization provides an alternative to hysterectomy for many patients experiencing increased uterine bleeding and anemia or bulk symptoms such as pelvic fullness, increased urination and/or painful intercourse.

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Newsletters
- Clark Urological Center Newsletter Volume 18, Number 1 Summer 2006
- Jules Stein Eye Institute Clinical Update, Volume 15, Number 3 September 2006
- UCLA Pediatric Update Volume 13, Number 2 Fall 2006

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Plastic surgeons in the UCLA Breast Reconstructive Center work as part of a multidisciplinary team alongside breast oncologists, breast surgical oncologists, radiation therapists and oncology physicians and nurses to provide reconstructive consultations and care for patients with breast cancer and other breast-related problems.

Recommendations for treatment take into consideration patient preference, timing of the procedure, the need for adjuvant cancer therapy, and the medical history and health of the patient.

Options available for women include:

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- Prosthetic implants

UCLA performs the largest volume of microsurgical breast reconstruction in the western United States, with a success rate of 99 percent.

For more information, contact the UCLA Division of Plastic and Reconstructive Surgery at (310) 825-5510, or visit www.uclaplasticsurgery.com.