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Staying Abreast of Surgery

Surgery for breast cancer has entered a kinder and gentler era. Today, women have access to procedures that are far less invasive than before—and much more cosmetically acceptable.

“Eliminating cancer is the overriding objective,” says **Dr. Karen Lane**, a breast surgeon at the Breast Health Center located in the Chao Family Comprehensive Cancer Center. “But aesthetic concerns are also important. A woman’s quality of life after surgery is often influenced by her body image.”

In approximately 80 percent of cases, Lane is able to eradicate the cancer without removing the entire breast. “Oncoplastic techniques—a combination of cancer surgery and plastic surgery—are used with lumpectomies, which involve removal of only the tumor along with a margin of healthy tissue,” says Lane. “In this case, the surgeon remolds the breast to avoid an unsightly indentation where the cancer once was.”

Sparing the breast. Due to advances in breast cancer surgery, even the once-disfiguring mastectomy has evolved into a more cosmetically pleasing procedure. In the past, this operation involved removal of the entire breast, as well as the chest muscles. But today, cancer surgery combined with plastic surgery has resulted in clinical and cosmetic results that were only dreamed about a few years ago.

A new option called the skin-sparing mastectomy, for example, results in a near-normal appearance after surgery. The procedure involves removing the breast cancer and



almost all of the breast tissue, but leaving as much skin as possible. Then the breast is reconstructed using the patient’s own tissue—usually from the abdomen, but sometimes from the back or buttocks. During this

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procedure, the nipple and areola are removed because they have a high probability of harboring cancer cells. But they’re reconstructed at a later time using techniques that result in a realistic look.

Curative chemotherapy. These advances are supported by new chemotherapeutic regimens that shrink tumors before surgery, allowing patients to have less invasive procedures. UCI medical oncologist **Dr. Rita Mehta** recently discovered that a herceptin-based chemotherapy cocktail completely resolved tumors in

87 percent of patients with large tumors when given before surgery. This unprecedented complete remission rate has made it possible for many women to have smaller procedures with better cosmetic results. More importantly, they beat the odds of dying from breast cancer.

To assess the progress of women undergoing presurgical chemotherapy, breast specialists use a handheld optical-laser scanner developed at the UCI Beckman Laser Institute by **Bruce Tromberg, Ph.D.**, and his colleagues. Noninvasive, safe and extremely accurate, the scanner is currently in Phase 2 clinical trials. It employs near-infrared light to measure molecular and functional changes in the breast that are indicators of cancer. The device is also very effective in detecting breast cancer in women with dense breast tissue. For more information about UCI’s Breast Health Center, visit www.ucihealth.com/breast.