Dear Friends,
Breast cancer continues to be a devastating occurrence for 1 out of every 9 women in the United States. For most women, the oncologic aspects of dealing with cancer is more emotionally overwhelming than the potential for reconstruction if a mastectomy or lumpectomy is required. However, once the oncologic aspects are understood, it is important to understand the many options that now exist for breast reconstruction. The purpose of this article is to review the newest advances in breast reconstruction, and to highlight advances in “oncologic” reconstruction for patients who are undergoing a lumpectomy but may face aesthetic differences in their breasts despite breast conservation therapy.

Most plastic surgeons in the United States prefer to perform breast reconstruction immediately following a skin sparing mastectomy. The advantages of this approach include better preservation of the skin envelope providing the surgeon a better chance to match the shape and droop (ptosis) of the opposite breast. Immediate reconstruction also saves the patient another anesthetic and is more cost efficient than delayed reconstruction. Most importantly, many studies have highlighted the positive psychological advantages of immediate reconstruction. There are a few factors that may prevent immediate reconstruction. These include tumor size, nodal involvement, need for post-operative radiation therapy and co-existing medical conditions.

There are now at least 5 different types of breast reconstruction available at the IUSCC. These include expander reconstruction with or without ALLODERM, IMMEDIATE ONE STAGE IMPLANT RECONSTRUCTION WITH ALLODERM, Latissimus flap reconstruction, Tram flap reconstruction, and finally, PERFORATOR FLAP reconstruction. The types in bold print represent the newest advances in breast reconstruction.

Expander reconstruction involves the use of a saline breast tissue expander placed under the pectoralis muscle at the time of mastectomy and then inflated serially in clinic for 4-6 weeks. A second outpatient procedure is then required for removal of the expander and placement of a permanent saline or silicone implant. The newest generation of silicone implants are felt to be safe, and participation in the FDA outcome study is now on a voluntary basis. Silicone implants are felt to be softer than saline implants and provide a more natural feel of the breast; however, they lack the projection that is possible with saline implants. Some surgeons have started using Alloderm (Processed cadaver dermis) at the time of placement of the expander to reduce the time required to completely fill the expander, and to reduce the pain that may be associated with expansion. A third and final outpatient procedure under local anesthesia is required for nipple reconstruction. The majority of breast reconstruction done in the United States is done using expanders and implants. (Fig. 1)  

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Immediate one-stage implant reconstruction is now possible for selected patients. The IUSCC breast cancer reconstruction team is one of the few centers in the United States offering this type of reconstruction. A permanent implant (preferably silicone) is placed under the pectoralis muscle and a piece of AlloDerm sewn to the pectoralis to provide complete coverage of the implant. This type of reconstruction is better for non-smoking patients who are medium to large breasted prior to mastectomy and prefer to end up with a slightly smaller breast post-operatively. As our experience has grown with this technique, our results have improved; however, it is sometimes difficult to obtain a perfect appearing result with one operation. A second outpatient procedure is also required for nipple reconstruction and to revise the shape of the breast if needed.

Latissimus muscle flap breast reconstruction has been available since the 1970’s. The latissimus dorsi muscle is the muscle that lies in your back— if you stand against a wall and push with your hands, you can contract this muscle. An expander or sometimes a permanent implant is almost always required with this type of reconstruction. This is an excellent type of reconstruction for patients who continue to smoke or who are overweight and have a droopy opposite breast. (Fig. 2)

The TRAM (transverse rectus abdominis flap) has been the mainstay of breast reconstruction since the 1980’s. It involves use of abdominal tissue (skin and fat—same as removed in a tummy tuck) based on the rectus abdominus muscle (pedicled TRAM). Variations of the tram flap including the “Free” tram which involves use of only a small part of the rectus muscle—“muscle sparing”—provides the same tissue but minimizes the impact on the abdomen. In general, the pedicled tram flap may leave the abdomen weaker, with a potential for hernia formation post-operatively. Some surgeons repair the abdominal wall with AlloDerm and mesh to provide strength. Since we have started using this technique, we have had a significant reduction in these complications following TRAM surgery. The advantages of the tram flap are that it allows the surgeon to create a more natural appearing breast which is made of skin and fat (much the same as a natural breast) and prevents the need for an implant. (Fig. 3)

Perforator flaps represent the newest advance in breast reconstruction. These flaps are based on a single blood vessel and do not require removal of a muscle to supply the skin and fat. Microsurgical techniques are required to connect the very small blood vessels of the flap to blood vessels in the axilla or usually ribs. This technique usually takes longer than other techniques. Any woman who is a candidate for tissue reconstruction is a candidate for perforator flap reconstruction. Absolute contraindications for perforator flap reconstruction include a history of a tummy tuck, previous abdominal surgery, or active smoking within the last 6 weeks. In general, any woman who will require radiation should probably wait at least 6 months following radiation to optimize the cosmetic results. The biggest drawback of this type of reconstruction is that the results are an all or none phenomenon. The breast reconstruction may fail in 2-5% of all patients due to a variety of reasons including the fragility of the anastomoses which may need to be redone in 20% if all cases. Total loss of the reconstruction may occur in up to 5% of all reconstructions. Potential donor sites for perforator flap breast reconstruction include the abdomen (DIEP), the lower abdomen (SIEA), the superior buttock (SGAP), the inferior buttock (IGAP), and the lateral thigh (ALT.)

The breast reconstruction team at the IUSCC consists of 3 plastic surgeons that are available for consultation. We also offer the full range of cosmetic breast services including augmentation and reduction and breast lifts to match the opposite breast. Almost all of these services are covered by insurance companies. Our overall goal is to help a woman with breast cancer optimize their experience.

-Rajiv Sood, MD
What if plastic surgery is not an option for you? What if you need more time to consider all of your reconstructive choices? What if you need to delay your surgery?

Clarian Women’s Services, Expressions: A Store for Women and IU Simon Cancer Center Breast Oncology Surgical Service provides an experienced nurse prosthetician and fitting team to all patients. The fitting team provides each post surgical breast cancer patient with the proper post surgical garments (camisoles and front closure compression bras), and addresses body image issues immediately post-surgery and thereafter. The goal is to achieve symmetry and balance so women are comfortable and confident wearing their clothes while regaining a positive body image. Breast cancer survivors are also offered a full range of services as well. Today’s newest and most innovative breast forms allow women to be as active as they were prior to surgery.

“Technology, research, and talented design teams have produced a wide range of bras, breast forms, nipples, and balance pieces to compliment the patient’s figure.”

Breast forms (prostheses) are made from a range of material such as silicone, foam, and fiberfill. The fitting team in coordination with the patient’s surgeon will assist each woman in selecting the form which is most appropriate for the type of surgery that was performed and where she is in the healing process. The woman’s lifestyle is also an important factor in which type of breast form is selected.

Technology, research, and talented design teams have produced a wide range of bras, breast forms, nipples, and balance pieces to compliment the patient’s figure. Some forms are worn inside a pocket of a bra, some forms known as adhesive forms are able to be attached directly to the chest wall. Some women prefer that the form be placed inside the bra cup and worn next to their skin. Artificial nipples can be worn on most breast forms. Balance or symmetry pieces are also available for women who have had part of their breast removed during a lumpectomy. A properly fitting bra with the correct breast form helps a woman regain confidence and feel self assured in her appearance. Equally important is to maintaining the body’s equilibrium and proper alignment to minimize the possibility of sloping shoulders and osteoporosis.

Most insurance policies provide coverage for post mastectomy undergarments and breast forms. It is recommended that patients contact their insurance company to confirm benefits and coverage details. There is an insurance liaison that is also a member of the fitting team and is available to assist all patients in confirming their insurance benefits. A prescription from the patient’s physician is needed for insurance reimbursement. Consequently, the insurance companies are billed directly for all post mastectomy undergarments and products. All undergarments and breast products are available for patients to purchase if they want additional items that are not covered under their insurance plan.

If you would like to make an appointment with a member of the Clarian Women’s Service Fit Team please call 317.688.2821. The program currently provides services at Clarian North Hospital, IU Simon Cancer Center, and by appointment at Clarian West Hospital and Methodist Hospital.

-Karen Kreutzinger, RNC
If you have had the experience of reflexology, you know what the ‘ahhh’ is. If you haven’t felt the relaxing and energizing effect of this massage technique, then visit Ann Maier at the IU Simon Cancer Center. Ann is a massage therapist and part of the Center’s Complete-Life program which provides comprehensive, complementary care for people with cancer and their families. Reflexology and massage/touch therapy are two of the programs offered by CompleteLife.

Reflexology is the thousands-of-years-old practice of massaging acupressure points in the feet or hands to relieve stress, pain and illness, and to stimulate mental, emotional and physical healing and well-being throughout the body. The benefits of reflexology have to do with the reduction of stress. Because the feet and hands help set the tension level for the rest of the body they are an easy way to interrupt the stress signal and reset homeostasis, the body’s equilibrium.

The benefits of reflexology relating to specific conditions and diseases are still under investigation. Further scientific study needs to be done in order to determine the specific benefits of reflexology in regard to illness and disease. Reflexology is considered a complement to standard medical care.

With reduction of stress the body has the ability to rebalance, which means it can better deal with the stress, depression, anxiety and insomnia that can happen as a result of chemotherapy or radiation. This rebalancing better enables cancer patients to regain control of their lives. As Ann says, “Mind and body working together allows the warrior to emerge.”

At the IU Simon Cancer Center, reflexology is just one of the many complementary services available to our patients through CompleteLife with support from the Debbie’s Make You Smile Fund.

“Debbie’s Make You Smile” Fund was established in 2004 by the family of Debbie Lynn Davis, an IUSCC patient who fought breast cancer for twenty-four years with laughter and an amazing positive attitude. The Davis Family’s wish is to honor Debbie’s memory by providing services that give hope, inspiration and smiles to those experiencing cancer. For more information or to donate to the fund contact IUSCC Complete Life Program at 317-278-6663.

Featured Web site

www.plasticsurgery.org

The American Society of Plastic Surgeons web site is great for anyone who is interested in knowing more about breast reconstruction. The site offers full explanations of procedures, a photo gallery with before and after photos, and a whole section on planning surgery. The resources provided in the “Planning Your Surgery” section cover everything from insurance coverage to psychological aspects of plastic surgery. There are also many patient stories, to learn more about the experiences of other women. The site is easy to navigate and has helpful information for anyone interested in plastic or reconstructive surgery.
The Breast Cancer and Research program at IUSCC is proud to be participating in a trial that we hope will provide a new model for global cancer research. The ALTTO (Adjuvant Lapatinib and/or Trastuzumab Treatment Optimization Study) trial will involve 8,000 patients across six continents.

ALTTO is designed to answer the most pressing questions regarding use of two widely used cancer agents: whether one agent is more effective, which agent is safer for patients, and what benefit will be derived by taking the drugs separately, in sequential order, or together?

The two agents tested in ALTTO are drugs designed to treat HER2-positive tumors, which is a form of cancer that affects approximately 20 percent to 25 percent of breast cancer patients. Both agents, trastuzumab (Herceptin) and lapatinib (Tykerb), have already been approved by the U.S. Food and Drug Administration for use for treatment of HER2-positive breast cancer. ALTTO will provide the first head-to-head comparison of trastuzumab and lapatinib in the earliest, most treatable stages of cancer. It will also be one of the first large-scale studies to evaluate lapatinib’s effectiveness in treating early breast cancer.

Breast Cancer Q & A

How do you decide when to schedule reconstruction at the same time as the lumpectomy/mastectomy vs reconstruction at a later date?

Reconstruction should be considered for any woman who is undergoing a mastectomy. The first consideration is the patient’s general state of health. To minimize your risk of complications after reconstruction YOU MUST STOP SMOKING. Most reconstructions can be at the time of the mastectomy. Exceptions include patients who will require post-operative radiation therapy. This is necessary in patients with multiple positive lymph nodes, chest wall involvement, skin involvement, and after surgery for inflammatory cancer. Partial breast reconstruction is an option to augment a breast after lumpectomy. We do not do this as an immediate procedure because there are no reliable ways to assess the lumpectomy surgical margins intraoperatively. Once the margins are confirmed negative by the pathologist then partial reconstruction is an excellent means of achieving symmetry.

If your implants are not comfortable are there possible replacement procedures? Would Medicare cover the charge?

If you have problems with implant discomfort or malposition this can often be repaired with a minor surgical procedure. Medicare coverage is considered on a case by case basis in this circumstance.

Is it advisable to have your unaffected breast removed and have both sides with reconstruction after 5 years? If there is a reoccurrence would it be easily detected?

The risk of recurrence after breast reconstruction is the same as the risk without reconstruction. Most of these recurrences are of the skin and soft tissue (72%) but about 1/3 of them can be deep. The superficial recurrences are detectable by clinical examination alone. The deep recurrences are more difficult to detect. As a rule we do not image the reconstructed breast. If there is a question on clinical exam then there may be a role for breast MRI to evaluate the area. Many patients worry about the risk of developing a cancer in the opposite breast. Overall the risk of developing a contralateral cancer is about .7% per year and the chance of death from that cancer is even smaller at 0.2% per year. There are special circumstances such as BRCA 1/2 abnormalities where the risk of a contralateral cancer with in 5 years can be as high as 20% however. Contralateral malignancy is a great concern for younger women who have the potential of prolonged survival and subsequent contralateral cancer. Having said this, we believe that the accuracy of emerging imaging modalities like digital mammography and contrast enhanced breast MRI will provide us with excellent means of detecting breast cancers when they are treatable.
Despite the cold and rainy weather, the Susan G. Komen for the Cure Tissue Bank at IU Simon Cancer Center had a successful blood collection event at the Komen Indianapolis Race for the Cure. This year's event was the first time we were permitted to collect at the Race venue; this provided many opportunities and challenges! For those of us who spent the past four months planning the April 19th event, it was wonderful to gaze at the sea of volunteers in matching green shirts ready to help. It was even more exciting to see the donors with umbrellas and ponchos showing up to donate their blood sample to breast cancer research. Be sure to visit us again next year, April 18, 2009, during the Komen Indianapolis Race for the Cure® at the Komen Tissue Bank Tent in Military Park.

If you did not get the chance to visit us during Race for the Cure, here are some of our upcoming events.

**Blood Collections**
- IU Simon Cancer Center: June 21st, 9am-1pm
- INShape Indiana Black & Minority Health Fair: July 18-19th, 10am-8pm
- Indiana State Fair-Clarian Healthy Lifestyles Pavilion: Aug. 8-9th, 9am-6pm

**Tissue Collections-Appointment needed**
Check our website at www.komentissuebank.iu.edu for upcoming tissue collection information.

We are always in need of volunteers (phlebotomists, consenters, and general volunteers) to help at events. If you are interested in helping please let us know by emailing Casey Allen at calallen@iupui.edu.

**Fun Facts**
- Blood draw kits made: 4000
- Blood samples collected: 923
- Volunteers: 275+
- Chairs: 1036
- Doughnuts eaten: 144
- New Tissue Donors: 56
- Umbrellas in Lost & Found: 6
- Woozy donors: 4

**Celebrating Life 2008**

Last spring we enjoyed an evening with our patients. It was such a wonderful event that we decided to bring it back. Mark your calendar for a celebration for our breast cancer survivors and their families hosted by the Indiana University Breast Care and Research Center.

Celebrating Life will provide up-to-date information on breast cancer diagnosis, treatment, and survivor issues. The interactive program will feature Indiana University’s Breast Care and Research Center faculty and women who have experienced breast cancer.

Mark your calendars now!
September 22, 2008 7:00-9:00 PM

**Invitations will be mailed out in August!**

To volunteer to help with this event contact
Casey Allen
Breast Cancer Clinical Research Coordinator
(317) 274-0594 or calallen@iupui.edu
**Shrimp and Wild Rice Salad**

1 (6 oz) box long-grain and wild rice
1 cup cooked rice
4 cups broccoli florets
1 pound cooked and peeled medium shrimp
1 cup sliced carrots
½ pound mushrooms sliced
1 cup thinly sliced zucchini
1 cup thinly sliced yellow squash
½ cup chopped red bell pepper
1 bunch green onion (scallions), sliced
3 large hard boiled eggs, use whites only, finely chopped
2/3 cup nonfat plain yogurt
3 tablespoons light mayonnaise
Salt and pepper to taste

Cook the wild rice according to package directions; set aside. In a large bowl, combine the rice, vegetables, and egg whites. In a small bowl, stir together the yogurt and mayonnaise. Pour the yogurt mixture over the shrimp mixture; toss lightly. Season with salt and pepper. Cover and refrigerate.

This salad makes a great summer meal or snack, it is high in fiber and vitamins. This recipe is great for anyone suffering from constipation due to chemotherapy. Remember that foods high in fiber will ease constipation. If you are having difficulty getting enough fiber in your diet try mixing shredded veggies into other recipes and add wheat bran to baked goods or casseroles, no one will taste the difference!
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Name: ______________________________ *E-mail: _______________________________

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*Newsletters will be sent by e-mail when applicable.

Return to Casey Allen at:
IU Simon Cancer Center
535 Barnhill Drive, RT 473
Indianapolis, IN 46202

Or send an e-mail to calallen@iupui.edu with the above information.

Do you have a story idea or just something to say about a story you’ve read in *IUSCC Pink*? Tell us about it! Would you like to share a personal experience? Contact us via e-mail calallen@iupui.edu, call 317-274-0594 or send mail to the address above.

Past editions of *IUSCC Pink* can be viewed at the IU Simon Cancer Center Web site, cancer.iu.edu, by selecting breast cancer in the cancer type section (http://cancer.iu.edu/programs/breast/iuccpink/).