

THE UNIVERSITY OF TEXAS

MD Anderson
Cancer Center[®]

University of Texas MD Anderson Cancer Center

OpenWorks @ MD Anderson

OncoLog MD Anderson's Report to Physicians
(All issues)

OncoLog MD Anderson's Report to Physicians

10-2001

OncoLog Volume 46, Number 10, October 2001

Dawn Chalaire

Kerry L. Wright

Mary K. Hughes MS, RN

Follow this and additional works at: <https://openworks.mdanderson.org/oncolog>



Part of the [History of Science, Technology, and Medicine Commons](#), and the [Oncology Commons](#)

4
Breast Imaging
Screening and diagnosis
are going high tech.

6
Providing Answers
Clinic offers women a
definitive diagnosis.

7
House Call
Tips to help patients look
their best are featured.

REPORT TO PHYSICIANS

OCTOBER 2001 Vol. 46, No. 10

OncoLog

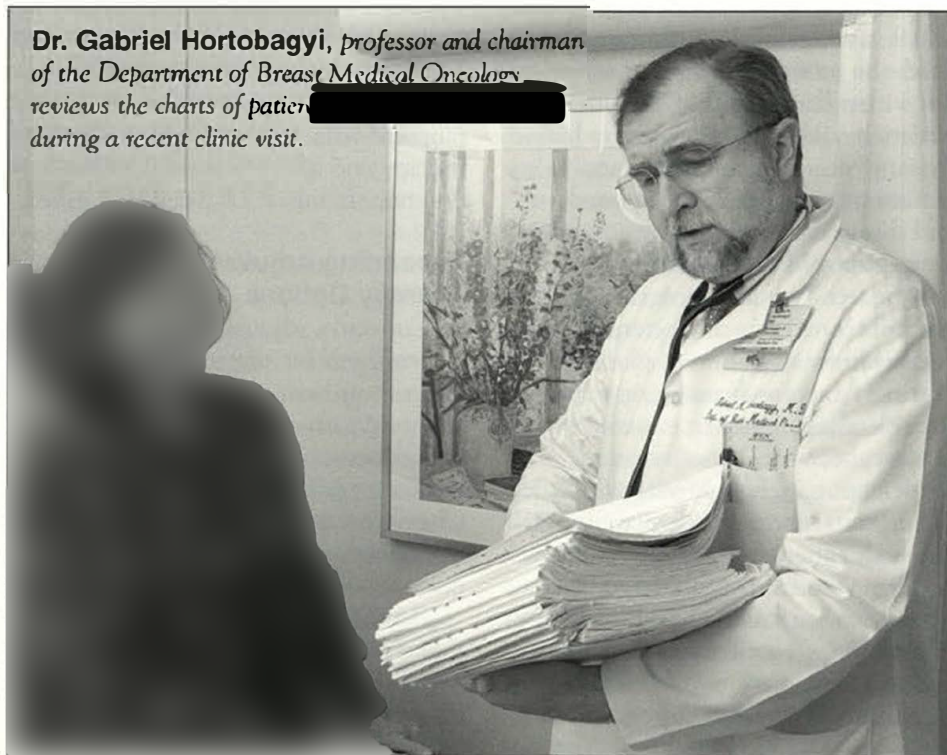
RECENT TRENDS IN BREAST CANCER CARE

Surgical Techniques, New Agents Target Breast Disease with Increasing Accuracy

by Dawn Chalaire

Dozens of studies of breast cancer are being conducted at The University of Texas M. D. Anderson Cancer Center, and most share an emphasis on agents and techniques that reduce morbidity by focusing on more specific targets. Treatments are becoming more effective, and yet, at least for now, early detection and an appropriate biopsy remain the best ways to improve prognosis in patients with breast cancer.

Dr. Gabriel Hortobagyi, professor and chairman of the Department of Breast Medical Oncology, reviews the charts of patient [REDACTED] during a recent clinic visit.



“There is a lot more that we can do for breast cancer than just remove the breast, and early detection is the key,” said Eva Singletary, M.D., a professor in the Department of Surgical Oncology. “I know we say that over and over again, but with early detection the prognosis is excellent.”

According to Dr. Singletary, accurately diagnosing a breast lesion requires approaching every lump found by physical examination or mammography as if it were cancer. “With young women, physicians often don’t consider breast cancer in a differential diagnosis,” she said. “Breast cancer is not all that common in these women, but it does happen.”

Once the decision is made to perform a biopsy on a suspicious breast lesion, a needle biopsy—rather than a more invasive excisional biopsy—should be used whenever possible, Dr. Singletary said. This gives the patient more treatment options, including preoperative chemotherapy to reduce the size of larger tumors and make them operable or a lumpectomy followed by radiation therapy for smaller, resectable tumors.

(Continued on next page)

Targeting Breast Disease

(Continued from page 1)

"The problem with excisional biopsies is that the margins are often positive or a hematoma develops, and then it makes it tougher to go back and do a lumpectomy because more tissue has to be removed than would be if the diagnosis were made with a needle biopsy," Dr. Singletary said.

Less Invasive Alternatives to Breast Cancer Surgery

In large measure, breast conservation surgery is made possible by the use of adjuvant radiation therapy and chemotherapy. In patients whose tumors are amenable to surgery, studies have shown no difference in survival rates between those treated with lumpectomy followed by radiation therapy and those who have a mastectomy. For patients with larger tumors, chemotherapy is administered first to shrink the tumor and make it operable. The chemotherapy regimens used at M. D. Anderson result in at least a 50% decrease in tumor size in 80% of patients, Dr. Singletary said.

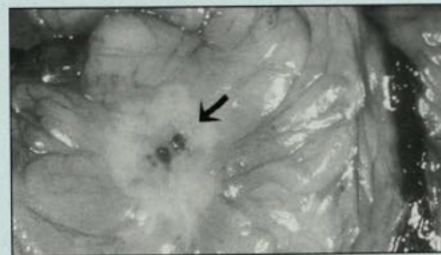
"That really increases our ability to do breast conservation surgery," said Dr. Singletary. "And the local recurrence rate after lumpectomy in larger tumors like that is no higher than our local recurrence rate after lumpectomy for stage I breast cancer."

Patients with tumors smaller than 2 cm in diameter may soon have an even less invasive surgical option than lumpectomy. Bruno Fornage, M.D., a professor in the Department of Diagnostic Radiology, and Dr. Singletary are leading a phase I clinical trial of radiofrequency ablation in patients with breast cancer. With Dr. Fornage providing ultrasound guidance, a small probe is inserted through the skin to the breast lesion, where it delivers an alternating current to which the tumor cells respond by generating frictional heat, essentially cooking the tumor. The entire procedure takes about 30 minutes and is immediately followed by a standard lumpectomy or mastectomy so that the results can be evaluated. The percentage of tumor cells destroyed in the targeted area is calculated, and any toxic effects of the treatment are recorded. So far, 16 patients have been

treated, and the results have been encouraging.

"If this works, if we can do the ablation and prove that the tumor is dead, the patient literally just walks out with a Band-Aid™. Of course, the patient would still need to get radiation therapy because lumpectomy and radiation therapy go hand in hand, and this would be like a nonsurgical lumpectomy," Dr. Singletary said.

The trend toward minimally invasive procedures may one day extend to using bone marrow aspiration in place of sentinel lymph node mapping to predict the risk of recurrence in patients with breast cancer. M. D. Anderson is participating in the American College of Surgeons sentinel node mapping trial in which patients with positive sentinel nodes are randomly assigned to receive no surgery or a standard node dissection. In addition, all patients in the study undergo bone marrow aspiration to determine if the presence of micro-metastatic disease in the bone marrow



Dr. Eva Singletary, a professor in the Department of Surgical Oncology, holds a probe designed to ablate tumors using radiofrequency waves.

An area of coagulation necrosis (arrow) is visible after treatment of stage I breast cancer with radiofrequency ablation.

aspirate is more predictive of recurrence than is mapping the nodes.

"If we could figure out who is going to have a relapse and who is not, we can tailor our chemotherapy to the individual. Wouldn't it be nice if we could pinpoint who will benefit from chemotherapy and who will do fine without systemic therapy?" Dr. Singletary asked.

Expanding Adjuvant Therapy Options

Currently, adjuvant chemotherapy is considered for all patients with tumors larger than 1 cm, all patients with disease-positive nodes, and all patients with other prognostic concerns (high nuclear or histologic tumor grade). Chemotherapy is also used to treat local disease recurrence and metastatic disease not amenable to hormone therapy.

"In the context of surgery, radiation therapy, chemotherapy, and tamoxifen, we have moved chemotherapy to the first place, so most patients with primary breast cancer treated at our institution

receive chemotherapy first," said Gabriel Hortobagyi, M.D., professor and chairman of the Department of Breast Medical Oncology.

The 1990s saw the development of such widely used and effective breast cancer chemotherapy drugs as paclitaxel, vinorelbine, gemcitabine, capecitabine, and liposomal doxorubicin (Doxil). In the new millennium, there are so far three categories of chemotherapeutic agents that, according to Dr. Hortobagyi, appear to show the most promise: (1) the new taxanes, close relatives of paclitaxel that can be administered orally or that are active in tumors that have become resistant to paclitaxel; (2) epothilones, which are active in paclitaxel-resistant tumors; and (3) rapamycin analogues, which target the HER2 and HER1 growth factor pathways.

Because most breast cancers develop as a result of hormonal imbalances or abnormalities, hormonal pathways are important targets in breast cancer treatment. Dr. Hortobagyi said that the past 30 years have seen a "true revolution" in the hormonal therapy of breast cancer.

"We went from some fairly nonspecific and rather unpleasant interventions to very well-tolerated, virtually nontoxic, and very precise and specific hormonal therapies," Dr. Hortobagyi said. "The first of those was probably tamoxifen. Of course, tamoxifen is perhaps the best-selling drug for the treatment of breast cancer."

Tamoxifen, a selective estrogen receptor modulator (SERM), is used as first-line hormonal therapy in patients with estrogen receptor-positive tumors and, more recently, as a chemopreventive agent. In the first successful chemoprevention trial in breast cancer, tamoxifen was shown to reduce the incidence of breast cancer by 40% to 90%, depending on the patient's risk factors. An ongoing trial is comparing tamoxifen with raloxifene, another SERM.

A second group of hormones, called aromatase inhibitors, block aromatase, an enzyme that converts androgen-like precursors into estrogens. In the past, the ovaries, adrenal glands, and hypo-

physis were removed in women with breast cancer to prevent the production of estrogen, leaving women with a lifetime deficit in the production of other hormones, such as cortisone.

"Now, we can reduce the production of estrogens by 90% to 95%, with virtually no side effects," said Dr. Hortobagyi. "So these inhibitors of aromatase have become the treatment of choice for patients with metastatic breast cancer who have hormone-responsive disease as determined by estrogen receptor positivity."

Strictly speaking, hormonal therapy is a type of biological therapy, a heterogeneous group of agents that includes vaccines, antitoxins, and nonspecific proteins. The most important nonhormonal biological agent currently in use to treat breast cancer is trastuzumab (Herceptin), a monoclonal antibody that targets the HER2 oncoprotein. It is effective alone and in combination with chemotherapy and has been shown to prolong survival in patients with metastatic breast cancer. Several large clinical trials are studying Herceptin in the adjuvant setting.

Researchers at M. D. Anderson are working to develop a safe combination of Herceptin and doxorubicin for patients with metastatic breast cancer or high-risk primary breast cancer. A randomized trial is also testing whether continuing Herceptin treatments despite worsening disease in patients with metastatic breast cancer is better than stopping Herceptin treatments and changing to another agent.

"There are reasons to believe that inhibitors of growth factor activity, like Herceptin, might need to be continued, even in the face of progressive disease, because chronic suppression of that growth factor stimulation might slow down the growth of tumors and prevent the evolution of drug resistance," Dr. Hortobagyi said.

Other treatments for breast cancer under study at M. D. Anderson include anti-vascular endothelial growth factor (VEGF) antibody, an antiangiogenic agent that has been shown to shrink breast tumors. Anti-VEGF is now being studied in a clinical trial to determine

whether adding it to chemotherapy improves response and survival rates in patients with metastatic breast cancer. In a different approach against angiogenesis, Dr. Hortobagyi is leading a phase II study of a man-made ribozyme, Angiozyme, which specifically targets the VEGF receptor.

Dr. Hortobagyi is also collaborating with Mien-Chie Hung, Ph.D., professor and chairman of the Department of Molecular and Cellular Oncology, to investigate E1A gene transfer for the treatment of breast tumors that overexpress HER2. In association with a liposome expert from the University of Pittsburgh, Dr. Hortobagyi and Dr. Hung developed a liposomal E1A complex that was demonstrated to be safe and active when administered into the abdominal or chest cavities of patients with advanced breast or ovarian cancer in a phase I study.

On the basis of that study, other clinical trials of E1A were conducted in ovarian and head and neck cancers, and tumor regressions were seen after injection of liposomal E1A. While direct intratumoral injections are not as practical in breast cancer, which spreads through the bloodstream, a similar liposomal E1A complex is being developed that can be administered intravenously.

"That's a very exciting development, and it's sort of the model of translational research that we all try to follow," Dr. Hortobagyi said. ●

FOR MORE INFORMATION, contact Dr. Singletary at (713) 792-6937 or Dr. Hortobagyi at (713) 792-2817.

BREAST CANCER CLINICAL TRIALS

For a complete listing of clinical trials for patients with breast cancer at The University of Texas M. D. Anderson Cancer Center, visit the clinical trials Web site at <http://www.clinicaltrials.org>, or call the M. D. Anderson Information Line at (800) 392-1611 for callers within the United States or (713) 792-6161 for callers in Houston or outside the United States.

New Screening and Diagnostic Techniques Are

by Kerry L. Wright

Mammography Goes Digital

Breast cancer remains the most common cancer in women (excluding skin cancer), but mortality rates have begun to decrease in the past decade, most likely because of better treatments, earlier detection, and improved screening methods. The American Cancer Society predicts that more than 190,000 women will be diagnosed with invasive breast cancer by the end of 2001, but clinicians are optimistic that this number, and the number of deaths in this population, will continue to dwindle as new technological trends in screening and diagnostic mammography gain momentum.

"We like to find lesions that are very small, the so-called early cancers," said Gary Whitman, M.D., an associate professor in the Department of Diagnostic Radiology at The University of Texas M. D. Anderson Cancer Center. Screening mammography can help detect these early cancers, resulting in lower mortality rates. "But we are still looking at ways to

improve that," said Dr. Whitman. One way, he said, is through the use of full-field digital technology.

While conventional screen-film mammography uses standard film and a film processor to image the breast, full-field digital mammography turns x-rays into computer images. The imaging media are different, but the images produced by traditional and digital mammography are essentially the same.

According to Dr. Whitman, clinical trials comparing screen-film and digital mammography in the screening setting have shown no significant differences in sensitivity, specificity, or positive predictive value. One drawback of digital mammography, however, is its cost. Digital mammography machines are extremely expensive, and the cost to patients, or to their insurance companies, is about twice that of traditional mammography.

"Why would radiologists be interested in something that costs more and is as good as what we had before?" asked Carol Stelling, M.D., professor and chief of the Section of Breast Imaging in the Department of Diagnostic Radiology and medical director of the Julie and Ben Rogers Breast Diagnostic Clinic at M. D. Anderson. "Well, there are some technological advantages."

It takes about two minutes to process the film from a conventional mammogram, but the image from a digital mammogram appears almost instantly, and it can be stored directly on the computer, copied, and viewed simultaneously on multiple monitors. Also, some radiologists believe that the contrast resolution is higher with digital mammography and that it may prove to be better suited for examining dense breast tissue, which is com-

mon in young women and often difficult to evaluate using traditional mammography.

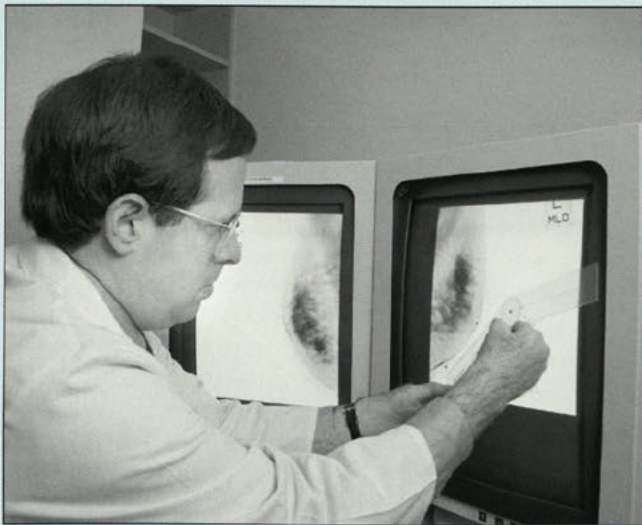
Digital mammography also offers technological advantages, particularly in the diagnostic setting. Said Dr. Whitman, "There is what we call advanced imaging, which gives us a very interesting platform to do some creative imaging, and these techniques may allow us to find more cancers." Because of the fast and filmless acquisition of digital units, he added, most of these techniques can only be performed in the digital environment.

Advanced imaging techniques include dual energy subtraction (which allows radiologists to produce images of lesions alone by removing the background matter), three-dimensional tomography (which allows the breast imager to blur certain tissue planes and focus more on others), angiography (which introduces contrast material to identify tumors and monitor treatment responses), and computer-assisted detection (which uses an algorithm on the computer to pinpoint suspicious areas on an image). While computer-assisted detection is already a trend in traditional screening mammography, all of these techniques could soon be applied to digital mammography, where they may help to identify subtle or obscured lesions.

"The digital landscape is changing rapidly," said Dr. Whitman. So as new digital options become available and studies on the cost-effectiveness of digital mammography are performed, the impact of this trend on the future of breast imaging will become clearer.

Image-Guided Biopsy: Making a Trend the Standard

The diagnostic mammogram has revealed a 4-mm lesion tucked away inside a web of ductal structures. A stereotactic core-needle biopsy device is posi-



Dr. Gary Whitman, an associate professor in the Department of Diagnostic Radiology, examines a mammogram produced using full-field digital mammography, which turns x-rays of the breast into computer images.

e Changing the Practice of Breast Imaging

tioned in front of the breast in which the lesion hides, and Carol Stelling, M.D., professor and chief of the Section of Breast Imaging in the Department of Diagnostic Radiology at The University of Texas M. D. Anderson Cancer Center, and breast imaging fellow Fazal Ali, M.D., quickly examine two x-rays taken just seconds ago from different angles on either side of the lesion. After a moment of intense examination, they spot the small mass on each of the images.

Dr. Ali slightly repositions the biopsy device, guided by more x-ray images, and slowly advances it into the breast until it is only 2 to 5 mm from the suspicious mass. Then, a popping sound, and an 11-gauge needle, about the diameter of a pencil, is advanced into the lesion, returning with a small core sample of breast tissue. Then another sample is removed, and another, until 11 small samples lie in a nearby petri dish, awaiting examination by a pathologist. After less than half an hour and with nothing but a local anesthetic and a recommendation to take Tylenol as needed, the patient's biopsy is complete.

Stereotactic-guided biopsy, as described above, was developed in the mid-1990s as an alternative to surgery for obtaining core biopsies of calcifications and of lesions too small to be detected using ultrasonography. At that time, ultrasound-guided biopsy, another noninvasive alternative to surgical biopsy used to identify suspicious masses rather than calcifications, was already available (having been brought to and developed at M. D. Anderson by Bruno D. Fornage, M.D., a professor in the Department of Diagnostic Radiology).

Ultrasound-guided biopsy, a slightly faster and less invasive procedure than stereotactic-guided biopsy, uses sound and echoes to guide 14-, 16-, or 18-gauge needles (comparable in diameter to a pencil lead). The breast imager, with an ultrasound transducer in one hand and a biopsy needle in the other, makes several small passes with the needle to perform either a core biopsy or a fine-needle aspiration.

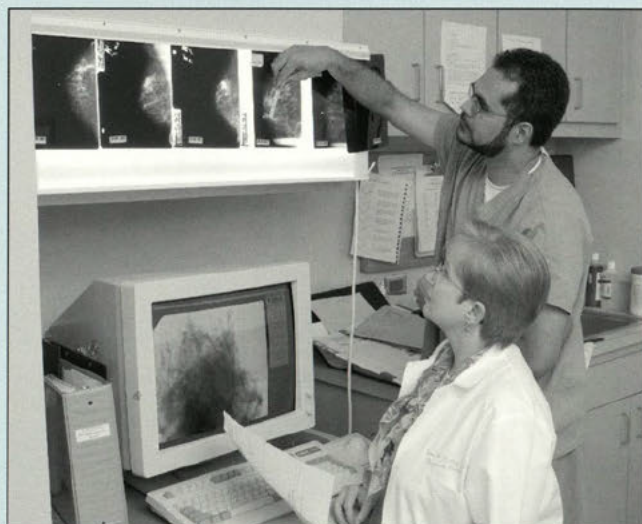
"The ultrasound and stereotactic-guided biopsies have really made fantastic strides in the last 10 years, and they are fairly well accepted in most practice environments," said Gary Whitman, M.D., an associate professor in the Department of Diagnostic Radiology. The quick acceptance of the two procedures, he said, is largely due to the advantages they have over surgery in most cases.

"With image-guided biopsy, the diagnosis is made ahead of time, so the surgeon going in to remove the tumor has a greater likelihood of obtaining negative margins. So it has allowed us to perform fewer excisions," Dr. Whitman said. Fewer surgeries, and thus less tissue damage, means more treatment options, including those that conserve the breast. Image-guided biopsy is also faster, less costly, and less invasive than surgical biopsy, and patients often recover more quickly.

"I think the emphasis now is making sure these new techniques get transferred to the community," said Dr. Stelling. While image-guided biopsies are standard practice at M. D. Anderson and many other university hospitals, it is important to continue training breast imagers to use these techniques so that they will be available in more locations, she said.

Like several other institutions, M. D. Anderson offers a one-year training program for radiologists who have completed a residency in diagnostic radiology and want to focus more specifically on breast imaging.

According to Dr. Stelling, who also holds the Nylene Eckles Professorship for Breast Cancer Research, training for breast imaging is more extensive today than it has ever been, as the role of the



Before performing a stereotactic-guided biopsy procedure, breast imaging fellow **Dr. Fazal Ali** shows a mammographic breast lesion to **Dr. Carol Stelling**, professor and chief of the Section of Breast Imaging in the Department of Diagnostic Radiology.

breast imager is becoming more directive and more involved in patient care.

Breast imaging is really a "high-tech, high-touch" field, said Dr. Ali, one of this year's fellows. "It appeals to people who like to interact with patients and who like to do procedures." Radiologists who specialize in breast imaging not only examine and consult with patients but also counsel them and their families about the diagnostic procedures they perform.

Said Dr. Stelling, "The future trend is for the breast imager to do image-guided biopsy, breast ultrasound, breast magnetic resonance imaging, which is a developing area of research that we are involved in, and of course, mammography." For this reason, it is important to continue training breast specialists to ensure that the latest procedures are available in the community in the coming years and that there are enough specialists who can accurately interpret the thousands of screening mammograms that are performed every year to detect breast cancer. ●

For more information, contact Dr. Whitman at (713) 745-3520 or Dr. Stelling at (713) 745-1207.

Undiagnosed Breast Clinic Provides Answers for Concerned Patients

by Kerry L. Wright

Using information from past screening and diagnostic exams and performing their own extensive clinical and diagnostic evaluation, the staff of the Undiagnosed Breast Clinic at The University of Texas M. D. Anderson Cancer Center work quickly and cohesively to establish a diagnosis so that patients can begin the journey from fear and uncertainty toward treatment, recovery, and peace of mind.

The problems that prompt women to visit the Undiagnosed Breast Clinic include mammographic abnormalities such as masses and calcifications and abnormal clinical findings such as masses, nipple discharge, and skin changes. Some have been referred to M. D. Anderson by their community physicians for a biopsy and a definitive diagnosis; others have ambiguous clinical findings; and still others have been told that they do not have cancer but have come to the clinic anyway because they are still concerned.

"There are a lot of different reasons for seeking this kind of a second opinion," said Therese Bevers, M.D., the director of the Undiagnosed Breast Clinic, which operates under the auspices of the Cancer Prevention Center.

First begun with the goal of bridging the gap between the community and the institution, the clinic offers patients the opportunity to be seen at M. D.

Anderson before the breast cancer treatment stage. Its purpose has always been to evaluate at-risk women, reach a definitive diagnosis for them, and direct them toward the

next appropriate step in prevention or in the treatment of their disease. The clinic is staffed by two physicians, three nurse practitioners, and a registered nurse from the Cancer Prevention Center, as well as a team of breast imagers and radiologic technicians from the Department of Diagnostic Radiology.

Each physician or patient who calls the Undiagnosed Breast Clinic for an appointment is greeted by a registered nurse specialized and trained in issues of breast cancer diagnosis who assesses each case and schedules the patient's clinic visit and appropriate diagnostic tests.

"Our goal is to schedule their clinic appointment and their diagnostic testing all in the same day," said Dr. Bevers. These integrative appointments can often be set up as quickly as three or four days after the initial phone call. If a woman is particularly anxious, her initial examination and consultation can be scheduled sooner and her diagnostic procedures scheduled at a later date.

If mammography or ultrasonography were performed outside M. D. Anderson, the results are reviewed, and recommendations are made that may include repeating the mammogram or ultrasound. If necessary, a biopsy can also be performed at this time.

The diagnosis can be immediate if the diagnostic images are negative or if a fine-needle aspiration has been performed (cytology samples from this type of biopsy can be analyzed the day



Melita Benning, B.S.N., M.B.A. (left), a clinical referral nurse in the Undiagnosed Breast Clinic, discusses a patient's chart with **Dr. Therese Bevers**, the clinic's director.

of the procedure). If a patient has a core-needle biopsy, it may take several days for the results to become available. In the case of a breast abnormality that has a high probability of being benign, the patient may receive follow-up care for a short period of time to monitor any subtle changes in the lesion and to confirm that it is benign, said Dr. Bevers.

"Diagnostic evaluation is a puzzle," she added. "You've got to put the pieces together."

About 85% of the patients who visit the clinic do not have a malignancy. These patients receive counseling about breast cancer screening guidelines and a risk assessment, said Dr. Bevers. (Breast cancer screening and diagnostic guidelines can be found in the Fall and Winter 2001 issues of *Compass*, *OncoLog's* quarterly insert.) Because most women who visit the clinic are already concerned about their risk of cancer, many enter screening and prevention trials, such as the high-profile Study of Tamoxifen and Raloxifene (STAR) trial.

Patients who do discover that they have cancer after being examined at the Undiagnosed Breast Clinic can report for treatment knowing that their diagnostic evaluation is complete and that they are ready to focus on battling their disease. ●

FOR MORE INFORMATION, contact Dr. Bevers at (713) 745-8048.



Tips for Coping with the Cosmetic Effects of Breast Cancer

Most women undergoing treatment for breast cancer will have to face, at least temporarily, some change in their appearance. But the measures outlined below can help them look and feel their best, both during and after cancer treatment.

Breast Prostheses and Reconstruction

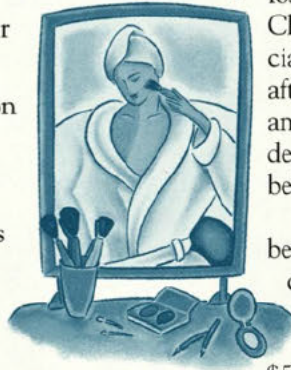
Mastectomy, the complete removal of a breast, is sometimes performed to treat breast cancer. Listed below are some methods of breast reconstruction used after a mastectomy.

- **Breast Prostheses:** Breast prostheses offer a simple cosmetic solution for women who have had a mastectomy. Made of materials such as foam or silicone, these devices can be sewn into the lining of a bra or attached to the chest with adhesive, creating symmetry with the other breast. Many prostheses have the same weight as the remaining breast to eliminate the feeling of "lopsidedness" and to minimize back strain.
- **Breast Implants:** Implants are small pouches filled with saline or silicone that are inserted into the chest to create a new breast. The procedure is often performed on an outpatient basis and is cheaper than reconstruction using one's own tissue. However, because they are synthetic, implants can leak or rupture and may need to be replaced at least once in the woman's lifetime.
- **Breast Flap Reconstruction:**

Another type of breast reconstruction uses a flap of tissue (muscle, fat, and skin) taken from the abdomen or upper back to form a new breast. Surgeons can also reconstruct a nipple and areola, tattooing it to match the color of the original. Because a flap uses the woman's own tissue, it often feels more natural than an implant. However, flap

RESOURCES

- **Look Good...Feel Better** ([800] 395-LOOK or www.lookgoodfeelbetter.org) is a program supported by the American Cancer Society that offers patients with cancer help with improving their appearance.
- **M. D. Anderson patients** can receive head-wrapping demonstrations and free wigs in the Beauty and Barber Shop every Thursday from 9 a.m. to 1 p.m. Videos, books, and pamphlets on scarves, wigs, and make-up are also available for patients.
- **Reach to Recovery** provides free breast prostheses and information on clothing. Volunteers can be found in the Nellie B. Connally Breast Center at M. D. Anderson every Tuesday and Thursday from 1 to 3 p.m. Free prostheses are also available from Cancer Care, Inc. at (800) 813-HOPE.
- For more information about lymphedema, contact the Cancer Information Service at (800) 4-CANCER or visit the National Cancer Institute Web site at www.nci.nih.gov/.



reconstruction is more expensive and can involve more pain and a longer recovery than an implant procedure.

Lymphedema

Sometimes, breast cancer can cause lymphedema—a swelling caused by the buildup of lymph under the skin. Lymphedema usually occurs in the arm on the same side of the body as the cancer. It can be painful and disfiguring, but patients can be helped by individual

or group counseling that offers information about ways to prevent lymphedema, advice for choosing comfortable and flattering clothes, and emotional support.

Hair Loss

Many chemotherapy drugs cause hair loss—from the scalp, face, and body. Chemotherapy-related hair loss (alopecia), which usually begins 7 to 21 days after the start of treatment, is temporary and can be concealed. Some tips for dealing with the loss of hair are outlined below.

- **Wigs:** Wigs should be selected before hair loss begins so that the wig can be matched to the woman's natural hair color. A quality synthetic hairpiece can cost \$250 to \$500 and may be covered by insurance.
- **Hats and Scarves:** Many women opt to wear hats or scarves during chemotherapy treatment. Many choices are available to match any style or outfit.
- **Hair Regrowth:** When the hair begins to grow back, only mild shampoos should be used; styling techniques and products should be avoided, as they will damage new hair.

Beauty and Skin Care

- **Skin Problems:** Dry or sallow skin sometimes results from cancer or its side effects. Moisturizers and cosmetics can be used to treat or conceal such skin problems.
- **Cosmetics:** Cosmetics can also be helpful in recreating eyelashes and eyebrows and improving one's overall appearance. ●

For more information, contact your physician or contact the M. D. Anderson Information Line:

☎ (800) 392-1611 within the United States, or

☎ (713) 792-6161 in Houston and outside the United States.

October 2001

©2001 The University of Texas
M. D. Anderson Cancer Center

DiaLog

Breast Cancer and Body Image

Mary K. Hughes, M.S., R.N.
Department of Psychiatry

Upon receiving a diagnosis of breast cancer, a woman's first concern is her survival. After the initial shock wears off, however, she usually begins to focus on the changes to her body that may occur and how they will affect her life. If she is in a long-term relationship, she may wonder if her partner will stay with her and begin to deal with her fear of abandonment. If she is single, she may wonder if anyone will ever be interested in dating her again.



touch her breasts, which may cause her to feel that her body is unacceptable to her partner.

The side effects of chemotherapy, especially alopecia, may also affect body image. Most women find that losing their hair is very traumatic, and they may feel guilty about it. When well-meaning family members or health-care professionals try to minimize the effect of alopecia, it sometimes adds to the woman's guilt. Acknowledging the impact of hair loss by addressing the woman's feelings can help her with this guilt.

Even with breast reconstruction, the effects of losing a breast should not be minimized. Women say that they find it distressing for someone to tell them that the difference between their breasts is not noticeable. To the woman, the differences and residual scars are obvious, and she feels like a different person. Some women are not bothered by the scarring, but for others it can affect their body image. If a woman is initially dissatisfied with her reconstruction, she usually continues to be dissatisfied, even after other surgeries to improve her appearance.

Finally, the many changes in the body brought about by breast cancer will often ultimately lead to grief. The woman grieves for what she has lost—her breast, her health, her hair, her independence, and most of all, a sense of control in her life. Acknowledging these losses and the grief that accompanies them can help the woman accept the changes she has experienced and work toward improving her self-image.

This is a time of uncertainty in a woman's life. She is unsure not only of her relationships but also of how the cancer will respond to treatments, what the side effects will be, how her body will change, and how long she will live.

The thought of losing a breast can be very threatening to a woman's femininity. Even women who are dissatisfied with some aspect of their breasts' appearance can have difficulty facing a mastectomy, and some will benefit from a psychiatric referral before surgery. For women who have had a cosmetic breast augmentation, breast surgery can be especially difficult. They may feel guilty or fear that the augmentation caused their cancer, and they could experience more severe anxiety about physical changes.

After breast cancer treatment, a woman might find that her partner is reluctant to

OncoLog

The University of Texas
M. D. Anderson Cancer Center

President

John Mendelsohn, M.D.

Executive Vice President and Chief Academic Officer

Margaret L. Kripke, Ph.D.

Vice President for Educational Programs

Stephen P. Tomasovic, Ph.D.

Director, Department of Scientific Publications

Walter J. Pagel

Managing Editor

Dawn Chalaire

Contributing Editors

Julia Starr
Ann Sutton
Kerry L. Wright

Design

Mataya Design

Photography

Jim Lemoine

Editorial Board

Rena Sellin, M.D., Chair
Therese Bevers, M.D.
Thomas Burke, M.D.
David Callender, M.D.
Ka Wah Chan, M.D.
Steven Curley, M.D.
Eduardo Diaz, Jr., M.D.
Larry Driver, M.D.
Frank Fossella, M.D.
Lewis Foxhall, M.D.
Robert Gagel, M.D.
Sergio Giralt, M.D.
Martyn Howgill
Jeffrey Lee, M.D.
Charles Levenback, M.D.
Moshe Maor, M.D.
Shreyaskumar Patel, M.D.
Geoffrey Robb, M.D.
Carol Strelling, M.D.
Eric Strom, M.D.
David Tubergen, M.D.
Christopher Wood, M.D.
Alan Yasko, M.D.

Published by the Department of Scientific
Publications-234, The University of Texas
M. D. Anderson Cancer Center, 1515 Holcombe
Boulevard, Houston, Texas 77030, 713-792-3305.

Made possible in part by a gift from the late
Mrs. Harry C. Wiess. Not printed at state expense.



A Comprehensive Cancer
Center Designated by the
National Cancer Institute