

**Health Journal – Breast Cancer Special Report 2006: Part I**

**Your Breast-Cancer SURVIVAL Guide**

By Linda Marsa

This special section may save your life. Here, a guide to breakthrough treatments, ways to lower our risk and how best to manage your care.

This has been a banner year in the fight against breast cancer. Scientists have identified more accurate tools for screening younger women – who often get the most dangerous types – developed strategies to treat newly diagnosed pregnant women and created better, less-toxic drugs to guard against cancer's return.

Breast-cancer deaths plummeted 24 percent between 1990 and 2000, and survival rates are soaring. The estimated 213,000 women who will be diagnosed with breast cancer in the United States this year will have a relative survival rate of 71 percent after 15 years. In fact, research has made more headway combating breast cancer than it has against any other kind of cancer. Here's what's been fueling stunning advances:

- **All those pink ribbons** and fund-raising walkathons have prompted more women to get mammograms, catching cancer at earlier, more treatable stages. A group study published in the *New England Journal of Medicine* in October 2005 found that screening accounted for 28 to 65 percent of the total reduction in the breast-cancer mortality rate from 1990 to 2000.
- **Fewer women are getting breast cancer** – following decades of steadily rising numbers. The reason: After a landmark 2002 study revealed that hormone therapy increased the risk of developing breast cancer, millions of postmenopausal women stopped taking it. “We noticed the difference almost immediately,” says Donald A. Berry, Ph.D., chairman of biostatistics and applied mathematics at the University of Texas M.D. Anderson Cancer Center, in Houston. “If you have an undetected cancer that is being fed by estrogen and you cut off the food supply, its growth may slow drastically or it may stop growing and never develop into anything serious.”
- **But the really big advance is targeted therapy**, the use of drugs such as tamoxifen, Herceptin and others to treat the specific biology of different tumors. “Twenty years ago it was one size fits all,” says Gabriel N. Hortobagyi, M.D., chairman of breast medical oncology at the M.D. Anderson Cancer Center. “Now it's changed dramatically.”

## THE BREAKTHROUGH THAT SAVED HER LIFE: HERCEPTIN

Tammy Padgett was in perfect health. The trim, athletic now-44-year-old mother of two had a baseline mammogram in 2000 that found nothing amiss, so when she discovered a lump in her breast the following summer, her gynecologist assured her that she didn't need to worry.

When the lump got bigger, Padgett insisted on getting another mammogram before Thanksgiving 2001. A biopsy the following week found she had a mass so large that she needed a mastectomy. "I decided to have a double mastectomy so I didn't have to worry about a recurrence," says Padgett, who underwent the surgery in December. "My kids were 3 and 5."

On Christmas Eve she got her pathology report and it was devastating: The tumor was estrogen and HER2 positive, the cancer was extremely aggressive, and it had invaded three of her lymph nodes. "All I could think about was that I was going to die," she recalls, "and no one would love my babies the way I do."

That January she flew to the M.D. Anderson Cancer Center, in Houston, to get a second opinion. The trip may have saved her life. At Anderson she learned about the clinical trials of Herceptin for women with earlier-stage cancers. "My oncologist thought it was my best shot," says Padgett, who discovered that one of the test sites was her alma mater, the University of Oklahoma, not far from her home in a suburb of Oklahoma City.

Her treatment was harrowing. Chemotherapy threw her into early menopause, her hair fell out and she was so weak she could barely brush her teeth. In May she started on Taxol infusions once a week for 12 weeks. Then in July she began the weekly infusions of Herceptin. She also received 36 rounds of radiation that fall. A year later, on her 41<sup>st</sup> birthday, she had her last Herceptin treatment.

"This December I'll celebrate my five-year anniversary," says Padgett, who still takes Arimidex every day to block production of estrogen. "Herceptin saved my life. If I hadn't found that trial, I'd probably be dead."

### NEW HELP FOR PREGNANT WOMEN

In the past, expectant mothers who discovered they had breast cancer faced a wrenching choice: Save their own life or save their unborn child. No longer. New guidelines issued last December by the National Comprehensive Cancer Network advise that women can safely have either a mastectomy or a breast-conserving lumpectomy and begin chemotherapy as early as their second trimester. "In our studies we haven't seen any adverse effects on the babies that could be attributed to treatment. The kids are doing fine. The moms are doing fine," says Richard Theriault, D.O., a breast-cancer expert and oncologist at the M.D. Anderson Cancer Center. His work showed that the survival rate for pregnant women who follow the new treatment guidelines is 75 percent, about the same as for other women. Other research has shown that chemotherapy may affect a developing fetus in the second or third trimester, so women should discuss these new guidelines with their oncologist. Because radiation and estrogen therapy can injure the fetus, these treatments should be delayed until after the child is born.

## **THE BREAKTHROUGH THAT SAVED HER LIFE: BREAST MRI**

In May 2003 Stephanie Sharp noticed that her left arm was swollen and she figured it was just an infection. But when the swelling persisted, Sharp decided to see a doctor, who ordered Sharp's first mammogram, which she needed anyway because she had just turned 40.

A chest CT scan showed that the lymph nodes under her left arm were enlarged, but her physician still didn't know what was causing the trouble. Nothing showed up on an ultrasound test and a diagnostic mammogram. So in August 2003 she underwent surgery to remove five of her lymph nodes.

The pathology report results were a bombshell, recalls Sharp, a 44-year-old graphic designer who lives with her husband in Hamilton Township, New Jersey. "I had cancer, but they didn't know whether it was lung or breast cancer. Because I had such dense breast tissue, they couldn't find the primary tumor site."

When a chest X-ray ruled out lung cancer, Sharp went to Memorial Sloan-Kettering Cancer Center, in New York City, to get a second opinion. An MRI of her breast revealed three potential tumors, so surgeons there did an ultrasound-guided core-needle biopsy.

"Two of the places that lit up were nothing at all, but at the third one they finally hit pay dirt," she recalls. She had stage-3 hormone-negative cancer and it had spread to all 21 of her lymph nodes. "I was devastated," says Sharp. "But before I went in for my mastectomy, I told everyone I met that I had cancer. I figured the more people praying for me, the better."

After surgery, followed by five months of grueling chemotherapy, 28 radiation treatments and the loss of all her hair, Sharp is now cancer free. She gets yearly mammograms and sees her medical and radiation oncologist every six months.

## THE DIFFERENT TYPES OF BREAST CANCER

About 60 percent of breast-cancer patients have hormone-sensitive tumors fueled by estrogen and/or progesterone. Around 25 percent have a deadlier type with too much of the protein HER2. (Some cancers are hormone sensitive *and* HER2 positive.) Younger women are likelier to have a particularly difficult to treat cancer called a triple negative – it's neither estrogen sensitive, progesterone sensitive nor HER2 positive. There have been important developments to help all three:

**Hormone-responsive cancer.** More than half the drop in breast-cancer deaths is due to tamoxifen, a postsurgery drug that squelches hormones that can drive tumor growth.

“Tamoxifen is probably the biggest home run we've hit in breast cancer,” says Dr. Berry. Tamoxifen has serious side effects, however: increased risk of uterine cancer, hot flashes, vaginal bleeding and blood clots – and it can lose effectiveness after five years. In tests, three newer estrogen-blocking aromatase inhibitors – Femara, Arimidex and Aromasin – offer the same or better protection.

**HER2 cancer.** The HER2 protein triggers the unchecked growth of cancer cells, creating a particularly aggressive form of breast cancer. Herceptin, a drug that stops the action of the protein, plus chemotherapy more than halved the risk of recurrence in early, and operable, breast cancer and reduced death by about 30 percent. That should save 250,000 women annually diagnosed worldwide.

“What's even better is that there are newer experimental drugs that are every bit as effective as Herceptin,” says Dr. Hortobagyi. In June a study showed that when a new drug called Tykerb was taken in combination with the chemo drug Xeloda by women who had previously taken Herceptin, it nearly doubled the time it took for breast cancer to grow or advance, compared with taking Xeloda alone. If it is approved by the FDA, Tykerb could be available by 2007. What's more, Tykerb is a pill, while Herceptin is taken intravenously.

**Triple-negative cancer.** There's hope from a traditional cancer medication that is now being studied for breast-cancer treatment: Avastin, a colon-cancer drug that, combined with standard chemotherapy, nearly doubled the time patients with advanced breast cancer lived without a progression compared with those who had chemotherapy without it.

## Health Journal – Breast Cancer Special Report 2006: Part II

### How to CUT Your RISK and Control Your Care

The new breast-cancer watchword is *targeted* – and that applies whether you’re taking steps to prevent cancer, choosing the best screening technology or ensuring that medical treatments are tailored to your individual biology. The strongest message from the dozens of experts we consulted: Take the time to find out where you fit in and don’t be afraid to push for the answers you need.

The first question every woman needs to answer is “Am I at high risk?” If you are (see “What’s Your Breast-Cancer Risk?”) you should be screened earlier and more often and ask about taking tamoxifen or raloxifene (Evista), a newer estrogen-suppressing drug with fewer side effects. Both can reduce your chances of getting breast cancer.

More than 70 percent of women with breast cancer, however, have no known risk factors. The likelihood you’ll be diagnosed with breast cancer and the type you get also depend on your stage of life – how old you are and whether you’re before or after menopause when the cancer hits. Breast cancer in younger women tends to be the more aggressive HER2 or triple-negative malignancies. Older women are more susceptible to hormone-sensitive tumors; they’re also more likely overall to get breast cancer.

Although you can’t alter your genes or stop your biological clock, you can make lifestyle changes that will reduce your risk:

- **Minimize estrogen exposure.** Estrogen plays a huge role in the development of most types of breast cancer because it stimulates the rapid growth of cells in breast tissue. Over the years, cells that grow faster can mutate and become cancerous.

The cumulative effect of estrogen may be the reason that some 77 percent of breast cancer occurs in women 50 and over, and about 60 percent of primary breast cancers are hormone dependent, which means they grow in response to estrogen and/or progesterone.

Any factor that prolongs your exposure to estrogen ups your risk of breast cancer: hitting puberty early (before age 12) or starting menopause late (after 55), having children after age 30 or not at all, and obesity.

- **Get regular exercise.** This can cut your breast-cancer risk in half. Brisk walking just three to five hours a week will do it; so will jogging or cycling. Exercise boosts immune function, bolstering the body’s ability to fight off cancer, and reduces the overall amount of tumor-fueling estrogen the body produces over a lifetime.

- **Watch your weight.** An estimated 10 to 24 percent of all postmenopausal breast cancers are thought to be due to obesity or weight gain. Estrogen is stored in fat and therefore obesity increases levels of estrogen. The greater the weight gain, the worse the odds: Women who put on more than 60 pounds are up to three times as likely to get advanced metastatic cancers as are women who are not overweight.

- **Check your breasts.** While no scientific evidence proves that monthly breast self-exams are necessary, experts still encourage women to become familiar with the appearance and feel of their breasts and report any changes. Cancers in younger women – one in five hits women under 50 – tend to be more aggressive, making early detection even more crucial. Make sure, too, to get a clinical breast exam from your doctor every three years if you’re under 40 and every year if you’re 40 or older.

- **Get regular screening mammograms.** These find tumors at earlier stages than other detection methods, says the M.D. Anderson Cancer Center’s Donald A. Berry, Ph.D. Nearly 70 percent of women over age 40 now get regular mammograms, up from 29 percent in 1987. If you have no family history of breast cancer, get one every year starting from age 40. Getting yearly mammograms helps pick up small tumors not caught by previous exams. Some doctors recommend that women with very dense breast tissue get additional breast tests, such as an ultrasound or an MRI. If you’re under age 50 or have dense breast tissue, you may want to ask about digital mammograms, which are up to 15 percent more sensitive than traditional film mammograms in picking up cancers in these groups, the American Cancer Society says.

**WHAT’S YOUR BREAST-CANCER RISK?**

More than 75 percent of breast cancers occur in women over age 50.  
But other risk factors include:

<ul style="list-style-type: none"> <li>• Previously had breast cancer.</li> <li>• First-degree relative – daughter, mother, sister – who had breast or ovarian cancer.</li> <li>• Prolonged exposure to estrogen: hitting puberty before age 12, starting menopause after age 55, or having children after age 30 or not at all.</li> </ul>	<ul style="list-style-type: none"> <li>• An abnormal biopsy even if it later turns out to be benign.</li> <li>• A mutation in the BRCA1 or BRCA2 gene (learning this requires genetic testing; discuss this option with your doctor).</li> <li>• Currently taking hormone therapy for menopause.</li> <li>• Postmenopausal obesity.</li> </ul>
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For detailed calculation of your individual breast-cancer risk, take the questionnaire at [www.lhj.com/breastcancerquiz](http://www.lhj.com/breastcancerquiz).

## If You Find a **LUMP**...

If something abnormal shows up on your mammogram – or you or your doctor find a lump – don’t be immobilized by fear. Most of the time lumps turn out to be cysts or benign fibroid tumors. But contact your primary care physician immediately. If you are premenopausal, she may ask you to come back a week after you finish your next menstrual cycle to make sure the lump is not just a cyst.

Getting the right diagnosis is normally a three-step process:

## STEP 1: THE RIGHT TESTS

**If you're young or have very dense breasts,** you'll get a diagnostic ultrasound. This identifies benign fibrous tumors or fluid-filled cysts and doesn't involve extra radiation.

**If you're over 35 or do not have dense breast,** doctors may do a diagnostic mammogram of both breasts to see if the lump or suspicious abnormality warrant further testing.

If these tests turn out to be negative, your physician may recommend another breast check in three to six months and repeat the diagnostic mammogram and other tests. If you get an all clear then, you can resume regular screenings.

About 80 percent of suspicious abnormalities turn out to be benign. But mammograms can miss some breast cancers or even palpable lumps, especially in younger premenopausal women with dense breasts. Your doctor may suggest further confirmatory tests, such as an MRI or ultrasound.

## STEP 2: WHAT A BIOPSY REALLY DOES

“If something suspicious is found, the type of biopsy performed will depend on the size and location of the suspicious finding and whether the doctor can feel it,” says Elisa R. Port, M.D., a breast-cancer surgeon at Memorial Sloan-Kettering Cancer Center. “You'll be referred to a radiologist or a breast-cancer surgeon.”

**Needle biopsy.** If the lump can be easily felt, the radiologist or surgeon may do a needle biopsy in the office, doing either a fine-needle aspiration or a core-needle biopsy. The first type removes breast tissue through a tiny needle; the second uses a larger needle and may require local anesthetic.

If the breast lesions can't be felt, the radiologist or surgeon may use imaging tools, such as mammography, ultrasound or an MRI, to guide the needle. These can also be done using local anesthetic in a specially equipped radiology suite.

**Surgical biopsy.** This requires an operating room and usually involves local or general anesthesia. If the tumor is small enough, the surgeon will remove it all, along with a surrounding margin of normal breast tissue.

In both cases, the tissue is then analyzed by a pathologist. Within two to five days, you should know whether it's cancerous.

## STEP 3: UNDERSTANDING YOUR TEST RESULTS

When you get the test results, don't go alone. If your surgeon says, “You have cancer,” you probably won't hear anything else afterward. Make sure your doctor explains everything in your pathology report. You may also be recommended for MRIs of the noncancerous breast, a precaution many radiologists recommend. Unless your cancer is extremely aggressive, there is time – several weeks to a month – to educate yourself and find your best treatment plan.

Two key questions to ask:

**What kind of cancer is it?** Most breast cancers start either in the lobules that produce milk (lobular) or the ducts that carry the milk to the nipple (ductal). Either can be just within the location where it started (in situ) or have spread into surrounding breast tissue (invasive).

Ductal cancers tend to be in one breast only; lobular may affect both breasts. There are also several very rare types: One looks like an infection (inflammatory); another looks like a skin disorder (Paget's disease of the breast). Or you could have more than one type of cancer.

**How aggressive is it?** The higher its grade, the more likely it is to spread to the lymph nodes and other parts of the body. One factor to look for: the tumor cell proliferation index, which gauges how fast the cancer cells are growing – faster means the cancer is more aggressive. Slower-growing tumors give you a better chance for a full recovery.