Dear Readers,

My gratitude to all who sent comments about the last issue. Special thanks to two of my own patients who have volunteered to serve as editors. Your help is invaluable to me.

Some of you have requested that I expand the question and answer section; if I receive more requests along those lines, I will do so. We have started to receive requests for the newsletter from Canada. We extend our greetings to our Canadian neighbors.

As a reminder, October is Breast Cancer Awareness month. Please use this month's newsletter as an opportunity to educate others.

My best wishes to each of you,
Dr. Silvana Martino

Breast Cancer Advisor

BY DR. SILVANA MARTINO • OCTOBER 2011

BIOLOGY BASICS

In this issue, I want to give you a historical perspective on how our understanding of the spread of breast cancer has changed and the impact that this has had on how we treat it. It was originally believed that breast cancer started in the breast. Once the breast was filled by it, it then would move into the neighboring lymph nodes. After they were occupied, the cancer would then spill into the blood system and from there to other parts of the body. This concept of a specific sequence of events led to increasingly larger surgeries as a way to try and remove all of the perceived cancer.

In the 1960's to early 1970's, a new idea emerged. From observations in animals, it was realized that breast cancer (and most other cancers) did not spread in this simple, orderly fashion. Rather, cancers acquired the ability to spread to the lymph nodes and to the blood stream simultaneously and often early

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What's Inside

in their course. This new understanding had a major impact in both surgical thinking and how we use anti cancer drugs.

For surgeons, it meant that doing increasingly larger resections (which had been the previous goal) was not going to improve cure. Rather, smaller surgeries of both the breast and lymph nodes would be as successful. The wisdom of this concept was shown with studies which demonstrated that lumpectomy procedures resulted in the same cure rate as more extensive mastectomy procedures.

For medical oncologists, it meant that drugs should not be confined to use in advanced metastatic disease, but rather we should use drugs early in the course of diagnosis as a way to eradicate cancer cells that were probably circulating in the body but were not of sufficient quantity to be apparent by various lab tests or scans. This formed the basis for what is known as adjuvant therapy, which is defined as therapy that is added to surgery as a method of increasing the cure rate. Many studies using various types of drugs such as hormones, chemotherapy and Herceptin have clearly demonstrated that this approach is biologically correct.

In the next issue, I will discuss variations in the process of tumor spread based on lymph node involvement, hormone receptors and the HER2/neu status of a tumor.

WHAT'S NEW

1. Improved results when chemotherapy and Herceptin are combined

Approximately 15 to 20 percent of breast cancers are HER2/neu positive. These cancers tend to be a bit more aggressive. The recognition of the HER2/neu receptor resulted in a major advance. Once it was identified, we were able to search for drugs that specifically targeted this receptor. The drug Herceptin was the first of these therapies. Its first use was in advanced disease where Herceptin was found to be of benefit both when given alone and also when combined with other therapies. The next step was to see if this drug was also of benefit in early breast cancer.

Four large studies were planned. Three were coordinated from the US and one from Europe. All four of these studies have been previously published and each has shown improved results with the addition of Herceptin. Two of the US studies have recently been updated (I am proud to be one of the authors of this report). The two studies included patients who either had lymph nodes involved with tumor or tumor that did not involve nodes but had other high risk characteristics. All tumors were HER2/neu positive by some type of testing. This testing was not uniform when the studies began and subsequently was standardized. All patients received four cycles of chemotherapy with Adriamycin and Cytoxan followed by 12 weeks of Taxol. One half of them also received one year of Herceptin and one half did not. Herceptin was started at the same time as the Taxol chemotherapy. It was not given concurrently with the Adriamycin and Cytoxan due to concerns that this overlap could cause more heart damage. Those with hormone receptor positive tumors also received hormonal therapy. The first

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report was at about two years of observation. The patients in these two studies have now been observed for an average of four years. The updated results demonstrate that, as was seen at the two year point, the addition of Herceptin continues to demonstrate that there are less recurrences of tumor and a better survival rate.

Reference: Perez E, et al, Four-year follow-up of Trastuzumab plus adjuvant chemotherapy for operable human epidermal growth factor receptor2-positive breast cancer: joint analysis of data from NCCTG N9831 and NSABP B-31, Journal of Clinical Oncology, September 1, 2001,vol29(25),3366-3373.

2. Long term results with tamoxifen use

Approximately 75% of breast cancers are hormone receptor positive. Hormonal therapy is a key part of the treatment of these cancers. The hormone that has been most extensively studied is tamoxifen. In early breast cancers (patients without distant spread of disease), five years of tamoxifen treatment has been the standard. Many assume that the benefits of tamoxifen and of other therapies end when one stops taking the therapy. This is not correct.

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A recent publication by the Early Breast Cancer Trialists' Collaborative Group, an international collective of researchers, reported results in 21,457 women; half were given five years of tamoxifen and half were not. These women have been followed for 15 years. The results demonstrate that the group given tamoxifen had less recurrences and a better survival which was evident up to 15 years of observation. They also reported that those on tamoxifen continued to have less development of breast cancer in the opposite breast.

Another important observation made was that in contrast to the long term benefits seen in those with hormone positive cancers, there was no benefit of tomoxifen use in those whose cancers were hormone negative.

The patients included in these studies will continue to be watched. The next report is expected in five years.

Reference: Davies C, Lancet, 2011:doi:10.1016/S0140-6736(11)60993-8

MEETING REVIEW

I was recently invited to a meeting organized by The National Breast Cancer Coalition (NBCC). Though I was somewhat familiar with this organization of breast cancer advocates, its president Ms. Fran Visco, and a few of its board members, I had not had any direct dealings with the organization before. The topic of the meeting was finding a cure for metastatic breast cancer. My expectation was that I would probably be hearing a series of lectures on this topic. As the meeting began, I realized that this was not the case. I was struck by the small number of clinicians in the group. Most of the invited guests were non clinical scientists and women with breast cancer. Included were an evolutionary biologist and a scientist with a variety of skills including physics and problem solving.

In lieu of lectures we were divided in three groups and given the charge of coming up with ideas on how to cure metastatic breast cancer. This forced us to talk to each other in a practical way as opposed to lecturing each other, which is what we usually do. It was an impressive and interesting experience for me. I realized how rarely clinicians and laboratory scientists sit together to solve a problem. We are all very earnest, but focused on our own part of the puzzle. We each try to solve problems in the same way we have been doing for years. Having participants who were outside of the cancer field was particularly valuable as they tended to see things very differently than the rest of us. Also, having advocates, each of whom had their own experience with breast cancer, was very useful. Not only were they a constant reminder of why this question is so important, but these women were remarkably knowledgeable and astute in their thinking.

The NBCC has set a goal to end the disease of breast cancer by 2020. This meeting was part of that goal. Do I think that goal can be achieved? Will it be like the New Year resolutions that many of us set only to realize by February of each year that we weren't really serious? I think a cure is possible. I believe that it can happen as long as The National Breast Cancer Coalition and advocates everywhere demand it and settle for nothing else.

National Breast Cancer Coalition

The Breast Cancer Deadline 2020

GUEST WRITER

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Imaging to Screen Women for Breast Cancer

Although the controversy as to the appropriate interval and age for screening women with mammography continues in the press, the longstanding position of the American Cancer Society, the American College of Surgeons and the Society for Breast Imaging is that women of average risk begin annual screening mammography at age 40. The use of other screening tests, such as breast thermography and ultrasound, is more controversial primarily due to the excessive number of false positive results (a finding that suggests an abnormality is present but is benign on further testing).

Until the last few years, mammography was performed using x-ray film (analog) technology. More recently, digital mammography has proved to be superior to the older systems, providing clearer images, especially in younger women and those with dense breasts. If a finding suggests that a significant abnormality may be present on the initial screening study, additional imaging is usually required for clarification (diagnostic mammography). The need for additional studies after screening ranges from as high as 10% for women having their first mammogram to 5-7% for those with prior studies available for comparison. In the majority of instances, the additional study proves the finding on screening was benign. It is important to keep that in mind when being recalled for additional study.

In the last few years, breast MRI has assumed an important role in screening for breast cancer under certain conditions. Current recommendations for using MRI are primarily in women at a 20% or greater lifetime risk for developing breast cancer, primarily women with a strong family history or genetic risk for breast cancer. Although MRI is more sensitive than mammography for detecting invasive breast cancer (approximately 98% vs. 80-85%), mammography is superior in detecting very early noninvasive cancer (in situ) and needs to be used in addition to MRI for screening high risk patients.

Ultrasound is also a valuable tool for detecting breast cancer in the case of an abnormality than can be felt but may not be seen on a mammogram or to tell if a lump present on a mammogram is solid or cystic.

Although uncommon, some breast cancer is detected only by noticing a change in the texture of the breast tissue or by feeling a lump, so both self examination and routine examination by your physician remains an important part of your health care routine.

QUESTIONS & ANSWERS

(Q) Dr. Martino, I am receiving adjuvant chemotherapy and I noticed that my tongue is turning black. My doctor said he has never seen this before. Is it from my chemo and will it goes away?

(A) Chemotherapy can cause the tongue to turn partially or completely black. It is uncommon. I personally have seen it only four or five times. I have observed it typically in dark skinned patients, and when they have been receiving Adriamycin and Cytoxan. I have observed that it increases with each dose. Each time that I have seen it, it has resolved on its own once the chemotherapy was completed. Other drugs and occasionally fungal infection can also turn the tongue a black color, so please have your doctor consider other possibilities as well.

E-mail your questions to:
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The Angeles Clinic FOUNDATION

The Angeles Clinic Foundation is a nonprofit organization whose purpose is to sponsor and support programs, services, education, advocacy, and research related to cancer. Our goal is to make a difference in all aspects of the lives of people touched by cancer. Your support is important in the fight against cancer and the journey towards a cure.

Upcoming Foundation Events

For more information, please call us at (310) 582-7909

Breast Cancer Education Seminar
October 24, 2011 • 7:30 PM
Temple Beth Am
Los Angeles, CA

The Wellness Community Breast Cancer Awareness Seminar
October 24, 2011 • 6:00 PM
Westlake Village, CA

Breast Cancer Education Seminar
November 16, 2011 • 11:30 AM
Temple Adat Ari El
Valley Village, CA

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