

Dear Readers,

I want to thank you for allowing me to be part of your life and for being an important part of mine. I look forward to our continued interaction as we approach a new year.



The board members of the Angeles Clinic Foundation, its staff and I extend to each of you our best wishes for the Holidays and the New Year.

Dr. Silvana Martino

Breast Cancer Advisor

BY DR. SILVANA MARTINO • DECEMBER 2011

BIOLOGY BASICS

In this issue I will discuss the order in which treatment decisions are made once there is a diagnosis of breast cancer. A diagnosis requires that a biopsy has been done, and that it demonstrates breast cancer. The cancer will either be invasive or non-invasive. For this discussion I will assume it is invasive (ductal or lobular). I will discuss the management of non-invasive ductal cancer (DCIS) in a subsequent issue.

The next step is generally to see a surgeon. The surgeon will want to examine the individual, and review the x-rays and scans that have been done. An important part of this meeting is for the surgeon to determine not only what type of surgery is most appropriate, but also if there are reasons to think the tumor has already spread beyond the breast and nearby lymph nodes. If that is suspected, the person will need additional scans and may need to see medical oncology before surgery is planned. In most cases, the surgeon will not be suspicious of distant spread and will begin to plan surgery. If there is a reason to suspect that this individual may carry the BRCA1 or 2 genes, genetic testing may be done prior to surgery.

There are two surgical options for management of

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Biology Basics continued

the tumor within the breast: a complete mastectomy or a partial mastectomy (also called a lumpectomy, quadrantectomy or breast sparing procedure). Whatever surgery is chosen, one must also evaluate the lymph nodes. The preferred way to do this is by the sentinel node procedure (discussed in the [September 2011 issue](#)). This allows the removal of at most a few nodes. Only if they contain tumor does one then decide whether to remove additional nodes. The sentinel node procedure is not needed if one can feel that the nodes are enlarged. In that case, they can be biopsied directly.

If a mastectomy is the final surgery, a plastic surgeon may be consulted prior to the mastectomy to plan reconstruction. If a breast sparing procedure is planned, one needs to anticipate that radiation therapy will be done after surgery.

Once the surgery is completed and a final pathology report is available including estrogen receptor, progesterone receptor, and HER2/neu information about the tumor, one then is ready to discuss whether there is need for drug therapy (hormones, chemotherapy, and Herceptin). These decisions are made with a medical oncologist.

There are occasions when drug therapy is started before surgery. That is called neo-adjuvant or pre-operative therapy. This approach is often used if the breast cancer is somewhat larger as a way to

shrink the tumor thus allowing a better chance to do a breast sparing surgical procedure. Even if one is planning a mastectomy, pre-operative use of drugs (most often chemotherapy) can at times be used to improve the chances of obtaining clear margins. The surgeon's judgment is most important in making this decision. The pre-operative approach is most effective with ductal cancers and less successful with lobular cancers.

If radiation is needed, it is generally done after surgery and after chemotherapy.

The usual order is:

DIAGNOSIS—SURGERY—CHEMOTHERAPY—
RADIATION—COMPLETION OF HORMONES
AND/OR HERCEPTIN

In the next issue, I will discuss how we choose which drugs to use following surgery.



WHAT'S NEW

1. The new drug everolimus improves results in hormone resistant breast cancers.

Most breast cancers are hormone positive. In spite of this, not all of them will respond to hormonal treatments. Some are resistant to hormones from the beginning (similar to a bacteria being resistant to a specific antibiotic), and some that are sensitive at first will become resistant over time. Overcoming a tumor's resistance is an important goal. The new drug everolimus (Afinitor) appears to have this ability. Results of the BOLERO-2 study were recently presented at the 2011 European Multidisciplinary Cancer Congress held in September in Stockholm, Sweden. I am proud that The Angeles Clinic and Research Institute was part of this study.

The BOLERO-2 trial included 724 patients with hormone receptor positive, metastatic breast cancer whose disease was no longer sensitive to two aromatase inhibitor hormones anastrozole (Arimidex) or letrozole (Femara). The patients were randomly divided into two groups, one received the hormone exemestane (a somewhat different aromatase inhibitor) and the other group received exemestane plus the experimental drug everolimus. The study

continued next page

What's New continued

was actually stopped early when it became apparent that everolimus provided a benefit. Improvement was seen in both tumor shrinkage and time to further tumor growth.

The drug everolimus belongs to a class of drugs known as mTOR inhibitors. The mTOR protein found in cancer cells acts as a regulator of many cell functions including cell division, blood vessel growth and cell metabolism.

Other studies are ongoing to further define the role of this drug.

Reference: Baselga J, et al: Everolimus in combination with exemestane for postmenopausal women with advanced breast cancer who are refractory to letrozole or anastrozole: Results of the BOLERO-2 phase III trial. 2011 European Multidisciplinary Cancer Congress. Abstract 9LBA. Presented September 26, 2011.

2. The drug T-DM1 appears better than Herceptin plus docetaxel (Taxotere) in metastatic HER2/neu positive breast cancer

Approximately 25% of breast cancers are positive for the HER2/neu protein. These tumors respond well to the drugs Herceptin and Tykerb. There are now additional drugs being investigated that also target the HER2/neu protein and which we hope will be better and have fewer side effects. One of these is the drug T-DM1 which is a combination of Herceptin and a chemotherapy drug (a derivative of maytansine) chemically bound together. The idea to this formulation is that Herceptin will go to the HER2/neu protein on the cancer cell and begin to attack it. As this happens, the entire T-DM1 molecule is taken up into the cell where the chemotherapy is then released. This is a much more specific way to get chemotherapy into certain cells only, sparing normal cells. The study recently reported included 137 women with HER2/neu positive, locally advanced or metastatic breast cancers. They were randomized to receive either standard therapy with Herceptin and Taxotere or T-DM1. The results demonstrated that the group on T-DM1 did better, with a longer period of tumor control. Additionally, fewer side effects were noted with T-DM1, including less hair loss. Several additional studies using this agent are in progress.

What is most exciting about this drug is the idea of binding two drugs together as a way to target certain cells only. This holds the promise of attacking cancer cells and hopefully sparing normal cells.

Reference: Hurvitz S, et al: Trastuzumab emtansine (T-DM1) vs trastuzumab plus docetaxel in previously untreated HER 2-positive metastatic breast cancer; Primary results of a randomized, multicenter, open-label, phase II study (TDM4450g/B021976). 2011 European Multidisciplinary Cancer Congress. Abstract 5001. Presented September 25, 2011.

This is a much more specific

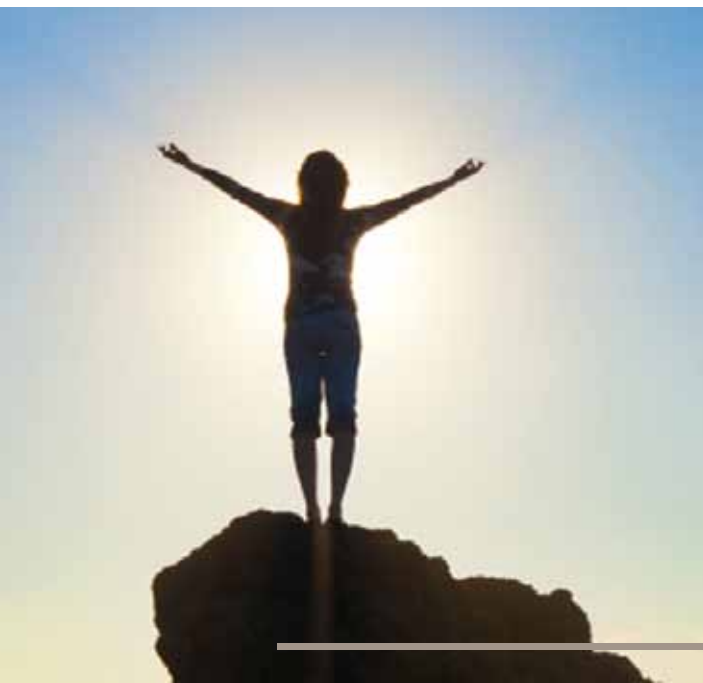
way to get

chemotherapy

into certain cells

only, sparing the

normal cells.



REVIEW OF A CONVERSATION

Dear Readers, since it is the end of the year and a time when we become a bit more pensive, please allow me a philosophical vignette?

It was about twenty years ago, and I was much younger then. My husband and I were flying from Detroit, Michigan, where we lived at the time, to the west coast. Our row had three seats and I was in the middle between my husband on the aisle and an older woman occupying the window seat. She appeared to be in her 80's and traveling alone. She was well dressed. In particular, I noticed she had a matching purse and shoes that were made of a clear plastic material within which were fruit and flower decorations. I had seen this pattern before and recognized that it was elegant yet a bit dated. Since the trip was going to be a long one, I decided to engage her in a conversation. I asked why she was going to the west coast. She informed me that her husband had recently died and she was moving to live with two older remaining siblings; a sister and a brother. Her son had made her arrangements. Though I expected her to be grieving and depressed, I sensed her to be at peace. She told me that her husband had been injured and disabled when she was a young woman. Consequently; she had always worked to support her family. She spoke lovingly of her husband who played the violin and taught children to play. One of her proudest memories of her husband was when he

had encountered an Asian family who could not afford a violin for their son and her husband had generously given them his violin for the child. As this was such a proud memory for her, I realized her own honorable character.

Selfishly, I decided this was a golden opportunity for me to question this older and apparently wise woman with the hope that she might know the secret to true happiness. Might she have the answer to the meaning of life? What's



Though I enjoyed our conversation, I found myself feeling sad as we parted. I felt I had missed a rare opportunity.

it all about? So I spent several hours taking to her on various topics. Each time that I approached the question of the meaning of life she would reply; "When I was young we had very little money. There were seven children, so we never went on vacation. What

we did is we invited people over, we rolled up the rug, put on some music and we danced". I tried to ask the question in various ways, yet each time I got the same answer.

Though I enjoyed our conversation, I found myself feeling sad as we parted. I felt I had missed a rare opportunity. I had conversed with an older person who was healthy, happy, hopeful, wise and clear in her thinking. Yet I had failed in getting an answer to my very important question. Would I ever have such an opportunity again? I concluded, probably not. I was clearly disturbed

by this. My sadness lasted for several weeks.

After about six weeks, it hit me. She had answered my question. I simply had not recognized it. I was hoping for some magical answer, but the answer was simple. "We invited people over, rolled up the carpet, put on some music and danced." I had refused to recognize it, but there it was.

Dear Readers, thank you for indulging me.

GUEST WRITER

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DOCTOR OF ORIENTAL MEDICINE

Relief from Painful Chemotherapy

Side Effects: Repairing Damaged Nerves

Nerve damage and nerve pain (neuropathy) are common side effects of some chemotherapy treatments. Neuropathy is caused when chemotherapy drugs damage healthy nerves causing symptoms such as nerve pain, tingling, burning and numbness. While in some patients neuropathy will resolve over time; in some, nerve pain can persist for years and lead to poor quality of life due to chronic pain and the need to limit many activities.

The following are 7 tips for managing pain and supporting the healing and repair of nerves damaged by chemotherapy

1 Whey Protein is one of the best concentrated sources of easy to digest protein. Whey Protein increases our own super antioxidant, glutathione. Adequate levels of glutathione protect nerves from damage caused by chemotherapy and radiation therapy and also support the repair of damaged nerves. Use a high quality chemical free Whey Protein powder daily to make a nourishing shake.

2 N-Acetylcysteine is one of the building blocks of glutathione. Giving the body a steady source of N-Acetylcysteine allows for greater production of this cell protecting antioxidant.

3 R-Lipoic Acid: Research shows that the biologically active form of Lipoic acid is particularly protective to nerve cells. When possible, use the active “R” form.

4 L-Carnitine: Nerves that have been damaged by chemotherapy drugs have been poisoned by toxic exposure reducing their capacity for self-repair. Carnitine primarily found in red meat can assist in the repair process. However, we want to limit the amount of red meat intake. It is easy to take L Carnitine in capsule, powder or liquid form. It can be added to your Whey Protein shake!

5 Omega 3 Oils (EPA-DHA): These “healthy fats” are required to rebuild and sustain healthy nerves. The modern diet is typically very low in these oils. Omega 3 oils can be found in cold water fish such as salmon, cod, mackerel and sardines and in walnuts and almonds in small amounts. It is hard to ingest a dose that will restore nerve repair from food alone. Therefore I recommend a high quality Omega 3 supplement. Cheap brands of Omega 3 oils often contain contaminants and therefore should be avoided.

6 Colorful Fruits and Vegetables Rich in Anti-Oxidants: The deep rich colors present in plant foods signals the presence of anti-oxidants. By including 8-12 servings of a rainbow of richly colored fruits and vegetables in your diet daily you will be increasing anti-oxidant protection for your cells.

7 Acupuncture: Acupuncture can be used both during and after treatment to manage this and other chemotherapy side effects.

As with all changes in diet and lifestyle, and the use of nutritional and botanical supplements, always consult your health care provider. For an expanded version of this article and more information on Dr. Chilkov go to <http://www.nalinichilkov.com>



QUESTIONS & ANSWERS

(Q) Dr. Martino, my tumor was hormone positive and HER2/neu positive. I have finished my chemotherapy and also received Herceptin. My doctor wants me to do one full year of Herceptin and five years of hormone therapy. Do I need to do both or can I just do one?

(A) To achieve the maximum benefit from a therapy program it is best to do the program completely. Think of it like a cooking recipe. If it calls for four eggs and you choose to use just one, it is not likely to taste the same. It may still be edible, but it won't be the same as if you followed the recipe exactly. The largest studies that have been done using Herceptin have used it for one year. The largest studies that have been done using hormonal therapy have been done using these drugs for five years. Other time spans both longer and shorter for each of these therapies have been and continue to be investigated, but at present we do not know that they are as good or superior to the established time periods. In summary, my advice is that you follow your doctor's instructions and do both therapies for their full course to get the best results.

E-mail your questions to:

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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
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Home for the Holidays A Concert Benefiting The Angeles Clinic Foundation

Montage Hotel
December 18, 2011
Beverly Hills, CA

To purchase tickets, please click on event title above

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