Dear Readers,

In this issue, I have dedicated several pages to the story of a patient who I believe speaks for many who have been personally touched by a diagnosis of invasive breast cancer. Often, it is the patient who is the teacher. Many of life’s lessons and wisdom are acquired by physicians in this way.

Best regards,
Dr. Silvana Martino

BIOLOGY BASICS

BREAST CANCER AFTER PREGNANCY

When I was initially trained in the field of oncology, I was educated with the concept that once a woman had a diagnosis of breast cancer, irrespective of its stage, she was to be seriously discouraged from ever becoming pregnant. The presumed biology was that the increased hormonal production that is inherent in pregnancy was dangerous and likely to cause a recurrence of her breast cancer. Slowly, this view changed; in part, due to observations of women who in spite of medical advice became pregnant, and appeared to do well. Some observational studies even suggested that women who became pregnant after breast cancer treatment actually seemed to do better than breast cancer patients who did not become pregnant. This was clearly contradictory to our expectations. An explanation offered was that for women to become pregnant and bear a child, they had to

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BIOLOGY BASICS

BREAST CANCER AFTER PREGNANCY

When I was initially trained in the field of oncology, I was educated with the concept that once a woman had a diagnosis of breast cancer, irrespective of its stage, she was to be seriously discouraged from ever becoming pregnant. The presumed biology was that the increased hormonal production that is inherent in pregnancy was dangerous and likely to cause a recurrence of her breast cancer. Slowly, this view changed; in part, due to observations of women who in spite of medical advice became pregnant, and appeared to do well. Some observational studies even suggested that women who became pregnant after breast cancer treatment actually seemed to do better than breast cancer patients who did not become pregnant. This was clearly contradictory to our expectations. An explanation offered was that for women to become pregnant and bear a child, they had to

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be well enough to undergo the experience. A woman who was ill and debilitated would not likely choose to become pregnant. This explanation seemed reasonable. By selecting women who became pregnant, we were selecting women who were healthier, rather than that pregnancy itself reduced recurrence rates and led to a better survival. More recent observational studies have concluded that following a diagnosis and treatment of breast cancer, whether a woman becomes pregnant or not, does not affect the recurrence rate, and that survival is neither compromised nor improved by pregnancy but in fact, the same.

In spite of these more recent observations, some physicians remain opposed to pregnancy in young woman after a diagnosis of any type of breast cancer. Some chose to advise that, for at least a period of several years after the diagnosis, women refrain from become pregnant. This idea is based on the fact that more aggressive breast cancers tend to recur sooner after a diagnosis. By letting two to three years go by, perhaps one can, to some degree, screen out women who will have such an aggressive pattern. This concern is a reflection of the fact that if a woman should be pregnant and have a recurrence of an aggressive cancer, her treatment would be compromised and further, therapy would also be dangerous to the fetus. Sadly, at such times one has to remind women that a recurrence could lead to a reduced survival and that they would not have the opportunity to raise their child. These are difficult conversations between a doctor and a patient, but these possibilities need to be considered beforehand so that a well informed decision can be made.

On a personal note, seeing my own patients, who have chosen to become pregnant bring a beautiful and healthy child to my office, has been truly a joy.

**BIOLOGY BASICS continued**

**WHAT'S NEW**

**CLEOPATRA STUDY RESULTS**

The survival results from the Cleopatra study using two anti-HER2 drugs together in HER2 positive metastatic breast cancer were presented by Dr. Sandra Swain of the Medstar Washington Hospital Center, Washington Cancer Institute, Washington D.C. at the recent ESMO Congress 2014 in Madrid, Spain. The results were both statistically and clinically significant. In patients with HER2 positive breast cancer who were receiving their first chemotherapy for metastatic disease, an improvement in survival of 15.7 months was noted for those treated with the combination of pertuzumab/trastuzumab/docetaxel (Perjeta/Herceptin/Taxotere) versus those receiving placebo/trastuzumab/docetaxel.

This multicenter, double-blind, randomized, placebo controlled, phase III trial was conducted in 25 countries. A total of 808 patients were randomized to the two treatments. The drugs were given intravenously every three weeks. About half had hormone positive breast cancer and about 10% had received prior trastuzumab in the adjuvant or neoadjuvant setting. Both groups did well. The placebo containing therapy resulted in an overall survival of 40.8 months, while the group treated with the combination containing both anti-HER2 drugs had a survival of 56.5 months. This combination continues to demonstrate that, when given together, these two anti-HER2 drugs perform well.

The side effects noted were those expected with these drugs. The combination of pertuzumab and trastuzumab resulted in more diarrhea, rash, mucosal inflammation, itchiness, dry skin and muscle spasms. No added cardiac toxicity was noted.

This triple drug combination is clearly superior to anything we...
WHAT’S NEW continued

have seen before in HER2 positive, metastatic breast cancer. It represents the best that we have to offer as first line therapy. Whether other chemotherapy drugs can be substituted for docetaxel or, whether similar results will be seen when this combination is used other than first line, remains to be seen. Whether the addition of hormonal therapy in patients who also have hormone positive disease will further improve these results, is also a question at this point.

It should be noted that only about 10% of patients had prior therapy with trastuzumab. This is unusual in the U.S. where a much larger proportion of patients would have received both trastuzumab and a taxane in the adjuvant or neoadjuvant setting. Nevertheless, these are exciting results and this combination will become a new standard.

CIRCULATING TUMOR CELLS TO JUDGE CHEMOTHERAPY RESPONSE

Finding a blood test that would identify which patients with metastatic breast cancer will do best has been a long term goal. Quantifying circulating tumor cells (CTCs) in a blood sample is such a test. The commercially available CellSearch system provides the number of CTCs found in 7.5 mL of blood. It is a simple blood test that can be done repeatedly. Several studies have shown that patients with metastatic breast cancer who have five or more CTCs prior to starting chemotherapy have a less favorable prognosis than those who have less than five. Studies have also demonstrated that in patients who initially have a value of five or greater, if once chemotherapy is given the value drops below five, their prognosis is better than if the value remains high. These observations served as the basis for a study conducted by the SWOG research organization designed to answer the question of whether in patients who, after one dose of chemotherapy, the CTC level remained elevated, quickly changing their chemotherapy would improve outcome versus continuing their therapy until progression was apparent by more conventional methods such as various X-rays and scans.

A total of 595 patients with metastatic breast cancer who were about to start their first chemotherapy were enrolled. Of these, 276 did not have increased CTCs. They were treated as planned by their doctor and served as a baseline for comparison (group A). Another group of 165 had elevated levels at baseline but had reduced levels when retested at about day 21 from start of therapy. This group was continued on their initial chemotherapy (group B). A third group of 123 had elevated levels both at baseline and when retested at about day 21. This group was randomly assigned to either continue initial therapy (group C1) or change to an alternative chemotherapy (group C2). The objective of the protocol was primarily to ascertain whether, in patients who had a persistently elevated CTC level, changing chemotherapy would result in a better survival versus continuing their therapy.

This study demonstrated several important results: (1) patients in group A who had less than five CTCs at baseline had the best outcome, (2) patients with an elevated level at baseline but a reduced level after start of chemotherapy, group B, also did well but less so than group A, and, (3) group C where the level of CTCs was elevated at both baseline and at second measurement did the least well overall.

The most important result from this study was a comparison of groups C1 and C2 where it had been presumed that if the levels of CTCs remained elevated, quickly changing their chemotherapy would be better that not changing their therapy. There was no difference in survival outcome between these two groups. This suggests that their cancer is resistant and that perhaps further traditional chemotherapy agents are unlikely to be successful. Perhaps this is the group where either entering a research program

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or further study of their tumor to identify molecular targets for the purpose of choosing targeted therapy may be best.

I believe that a larger study randomizing patients with persistently elevated CTCs would be reasonable to either confirm or refute the results of this trial. This question is too important to rely completely on the results from one trial. This trial does, however, confirm the value of CTC measurements to at least provide prognostic information.

QUESTIONS & ANSWERS

(Q) Dr. Martino, About ten years ago I was diagnosed with DCIS. It was very small, so I just did a lumpectomy. I did not have radiation and I did not take any hormonal therapy. Now I have again been diagnosed with DCIS is the same breast. I have had a lumpectomy again, but this time I am being advised to have radiation and to take tamoxifen. Do I have to do that? Why can’t I just be treated in the same way I was ten years ago since I think it worked pretty well for me?

(A) Whether you again have only a lumpectomy to treat your second episode of DCIS or you choose to have additional therapy with radiation and/or tamoxifen is a personal decision based on the details of your present DCIS, your overall health and your own personal preference. The addition of radiation and hormonal therapy have each been demonstrated to reduce local recurrence. Together, they are even more effective. Remember, that if there is another recurrence, it will not necessarily be another DCIS. It may be an invasive breast cancer, which is really what you are trying to prevent. Tamoxifen also provides the added benefit of reducing both DCIS and invasive disease in the other breast as well. If you are fairly young and healthy and, therefore, your life expectancy extends many years, I would favor more extensive therapy. This would be especially true if the recent DCIS was of a larger size and of higher grade.

(Q) Dr. Martino, what is a tumor avatar? Is it the same as a PDX model? How can I have one done?

(A) Yes, an AVATAR is the same as a PDX. It is tumor tissue which is removed from a patient and placed in a special type of mouse for the purpose of having the tumor grow in the mouse. Once the tumor is grown in this manner, it can then be used for several purposes. Most commonly, It is removed from the initial mouse and grown in other mice for the purpose of doing drug testing to help select a patient’s treatment. It can also be removed from a mouse and frozen, thus preserving it for subsequent testing. This process does require “fresh tissue,” so if you are not anticipating a biopsy or surgery, you will need to have a biopsy for this process. If your own medical facility does not provide this service, it is available commercially (Champions Oncology). Discuss this with your own doctor. The arrangements are not difficult to make. The key is being sure that you are a good candidate for this procedure.

GUEST WRITER

During the 35 years that I have practiced medical oncology, I have observed and learned many things about how people react and handle the experience of cancer. It is never an easy experience; it is traumatic for all. In spite of this, I have observed considerable variation in how individuals ultimately summarize and conceptualize their experience. For some, all aspects of the cancer experience remain forever negative. For others, it ultimately becomes a positive experience; an experience that expands who they are and adds new meaning to their lives. Many, in my personal view, are made better by their experience of cancer. They gain new insights and acquire a new purpose. The story that follows is such an experience. I was introduced to...
Finding Purpose in My Diagnosis

By Nicole Robinson

Prior to my diagnosis, the words breast cancer were foreign to me; knowing of its existence but never considering myself a likely candidate. After all, I was healthy, moving through life with the normal stressors of work, school, and family life. But suddenly my life came to a screeching halt. I was scheduled for my annual mammogram, ironically, it was Valentine’s Day. I actually scheduled my appointment a few weeks ahead of time due to some swelling that I’d noticed in my breast. I gave it little concern because of my own self-diagnosis of early menopause. Like many of today’s self-proclaimed google doctors, I even searched the internet on swollen breast to give myself reassurance that all was normal. I had, however, noticed some changes in my breast a few months prior. Being at the ripe age 46, I simply thought time was just catching up with me. But out of nowhere, a small knot in my left breast appeared which now gave me cause to wonder. That knot quickly became very pronounced, causing a little pain. But my upcoming mammogram would surely clear things up.

My morning started off great, I was feeling pretty good. As usual, I mentally mapped out my day, thinking I’d head to work shortly after hitting my mammogram appointment. After all, it was just another day. My routine mammogram went as expected; all clear from what I could tell. So I quickly returned to my normal hustle and bustle of the day. The following day I received a call to return for more images and an ultrasound of my breast. I still had no real thoughts or concerns of what was taking place. But a change of events began to occur; the technician conducting my ultrasound noticed something. There was clearly something on the screen that caused her to begin measuring the images. She’d have to call in a doctor to further examine me and the images. The doctor then entered the room to review what the technician had discovered during the ultrasound. She asked if I’d noticed a changes in my breast. They could see a small mass on the screen that was also detected by my mammogram. She immediately asked if I could return the following day for a biopsy. Now, I was on full alert. Biopsy I thought… I started wondering, surely this was just a precaution. I left the office not overly concerned, but just enough for my mind to start drifting during traffic. I thought about how I had dismissed all of the recent changes in my breast and how my self-diagnosis put me at risk. Interesting enough, the year prior, my annual mammogram had been fine, so what could this possibly be?

The biopsy in itself was an experience, implanting that small metal clip came with…well, I’ll just say it caused great discomfort. I was proud of myself. I was a trooper through it all, but once I made it to my car, things began to start settling in. It was nearing the weekend, and I’d be forced to wait for my results. I must admit, waiting for news that determines your fate can mentally cripple even the strongest person. But I considered myself different, after all, I’m a woman of faith. So why should I worry now! But even as a woman of faith, I still found it challenging to keep my mind from wondering what the results would be. All too familiar with how one small negative thought can spread like wildfire; I struggled to keep my mind straight and off of the inevitable. I fought continually, fighting thoughts of “what if.” Questions rushed to mind about my family. Something like this would crush them and leave them empty. God please save me I thought, as I said a silent prayer. Like many, I’ve had my fair share of issues and life challenges, but this was surely a game changer. My thoughts led

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to prayers of healing. To ease and calm my nerves, I called my sister who’s always been my voice of reason when I’m ready to jump off a mental cliff. Her words calmed me, and I relaxed a little and tried not to get myself worked up. It’s only a test; it’s only a test; is what charged my thoughts the entire weekend.

When I received a call regarding my diagnosis, life for a moment stood still. I listened to the words— invasive mammary carcinoma, “breast cancer” as we know it. I can recall the flood of thoughts and emotions that overtook me as I heard the doctor say, “I’m sorry, but your biopsy results came back positive.” And so it began, in March of 2014, I was diagnosed with stage two breast cancer. I was speechless, in shock from the words I was hearing. Questions swirl in my mind like why me, why now? I fought back the tears wondering if this was really happening to me. I thought I was a fairly healthy person. Accepting the fact that my body had been experiencing changes but nothing to this magnitude. I’m only 46 years old, how could this be? I began thinking about my family and how something like this would crush them. My family and I were all too familiar with losing love ones to cancer. But what seems to be the ending for many, was my beginning. It started out as a battle, which many great warriors must face, and here I was, standing in the line of fire. My living beyond my diagnosis began with a thought of bringing family together for a gathering where we could laugh despite the situation. With all of the horror stories swirling around me about chemotherapy and losing my hair, this gathering would be an opportunity for my family to bring me hats in supporting my journey into hair loss. Losing your hair is so traumatic, it’s like the very essence of who you are as an individual is stripped from you. So why not celebrate the occasion with a cake of a bald head, red velvet on the inside, and hats. I was surely tapping into my dark humor with the red velvet, bald headed cake, and my family quickly dismissed my ideas. They were sure cancer was causing some brief insanity on my part. I even had a Brittny Spears moment, just “cut it off.” I feared losing my hair because I thought it was linked to my losing my identity as a woman. But I only wanted to laugh during it all.

It was all about my attitude; I was determined not to lose myself in the process. I was so focused on winning and nothing more. I can’t explain the shift that took place, but it was something so sweet and endearing that took the focus off what I considered a tragedy. I wanted to start a foundation in order to give back to those who were struggling with hair loss just as I was. Suddenly, it was no longer about me. I would collect hats for chemo patients who were losing their hair. It still amazes me to think how tragedy can easily be transformed into something beautiful. Hatz 4 Hearts was a concept that became a reality on April 17, 2014, which was my first chemo treatment. No, let me rephrase that; Hatz 4 Hearts is my gift that I gratefully cherish. I was blessed with the idea of giving hats to cancer patients undergoing chemotherapy who were losing their hair. But little did I know, it would not only be a gift to others, but my therapy toward healing and my quest to fight for survival. Giving hats is a simple gesture that infuses hope while touching the soul of another. So befitting to the cause, I created the motto, “Give a Hat and Warm a Heart.”

Today, we’ve collected over 547 hats and donated more than half to major cancer hospitals. Patients in St. Louis, Los Angeles, and The Angeles Clinic and Research Institute in Santa Monica where I received my chemotherapy treatment from the amazing Dr. Cathie Chung and staff. Admittedly, it hasn’t been easy, but victory is greater than any prognosis. It’s funny how you can experience loss and gain all in a moment’s time. I’m most grateful for this amazing journey that’s been my greatest strength for not succumbing to thoughts of defeat. The beauty behind my healing, not only comes from above but lied deep within. If I can provide hope in sharing my story and giving hats to cancer patients, then surely I have tapped into something much greater. I’m happy to call myself a survivor and to continue to fight the good fight!

VISIT OUR WEBSITE AT
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