Dear Readers,

I recently attended the annual meeting of the American Association for Cancer Research (AACR) in Washington DC. Over eighteen thousand scientists attended. Many were PhD’s rather than clinicians. It was an impressive display of international brain power. I am happy to report that the rate of new knowledge being generated is impressive and, at times overwhelming. But, the future is bright. I believe that we are at the beginning of a scientific revolution. I anticipate that medicine will look very different ten years from now.

Best regards,
Dr. Silvana Martino

BIOLOGY BASICS

Breast Cancer in Men

I will continue the theme that we started in the last issue, that of breast cancer in men. As a brief summary, breast cancer in men shares many of the same features as breast cancer in women. It is clearly less common and often diagnosed at a later stage. As in women, a definitive diagnosis requires a biopsy. The tissue must also be analyzed for hormonal receptors (estrogen and progesterone) and HER2 status. One must determine whether there is evidence of distant metastases or the cancer appears to be localized before appropriate treatment decisions can be made. A family history must be obtained and genetic testing should be considered.

I have decided to alter the order of this series. I will not deal with the treatment of male breast cancer in this issue as I stated in the last issue; but rather, I will focus on the risk factors for male breast cancer.

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I will deal with treatment in the next several issues. A number of factors are known to increase the risk of developing breast cancer in men.

- **Getting older** increases risk.
- **Radiation** to the chest area as occurs with treatment of Hodgkin’s disease. The risk is highest for those treated as adolescents when sexual development is occurring.
- **Klinefelter syndrome**, an inherited syndrome where males have more than one X chromosome has long been recognized to increase breast cancer risk. These men have higher levels of estrogen and lower levels of androgens. Additionally, they tend to develop gynecomastia (benign breast enlargement), longer legs, a higher voice, a thinner than average beard, small testicles, and infertility.
- **Conditions that produce high estrogen levels** such as obesity, taking certain hormonal medicines as used for prostate hyperplasia, prostate cancer, and as are used in sex change operations. Data suggest that there may be an increased risk from being exposed to estrogens in the environment such as eating products from animals that are given hormones or from exposure to the breakdown products of the pesticide DDT, which can mimic estrogen.
- **Liver disease** such as cirrhosis, schistosomiasis or heavy alcohol use. These are states that result in relatively higher estrogen levels and lower androgen levels.

- **A strong family history** of breast cancer in either men or women, with or without genetic abnormalities. This is particularly so if there are other men in a family with breast cancer. The risk is also dependent on whether there is a known breast cancer gene in the family. Both the BRCA1 and BRCA2 genes increase risk for male breast cancer. The probability of developing breast cancer by age 70 is about 1% in a man with the BRCA1 gene and 5-10% when a man has inherited the BRCA2 gene. In a family with a male with breast cancer, it is much more likely that it is the BRCA2 gene that is present. The BRCA2 gene also increases the risk of several other malignancies such as prostate, pancreatic cancer, malignant melanoma and others. There are occasions when it is these other malignancies that occur first in a family and become the basis for genetic testing. If genetic testing is positive, one then must consider this information relative to other family members as they also may have inherited the gene.

- **Gynecomastia** is a benign enlargement of the male breast. It is often seen in newborns, adolescents, older men and with obesity. Many conditions, some of which are outlined above, as well as many drugs can cause it. It can occur unilaterally or be noted in both breasts. It is generally a result of conditions that increase the level of estrogen relative to androgens in males. It does not appear to be a pre-cancerous condition, nor by itself does it appear to increase the risk of breast cancer; however, it is often seen with conditions of hormonal imbalance that do increase risk of breast cancer, so its persistence should be brought to the attention of a medical professional so that the underlying cause can be identified.

In summary, it must be kept in mind that as is true in women, most men who develop breast cancer have neither a family history of breast cancer nor do they have an inherited gene. They generally lack any specific risk factor. Consequently, all must be vigilant, particularly as they get older.
prove to be even more accurate. Using certain laboratory techniques, these investigators measured circulating cell-free or circulating tumor DNA. The basic principle of this test is that as tumor cells circulating in blood become damaged or die, they will release the DNA that they contain. This DNA can be found floating in blood. It is then available for identification, separation from other sources of free-floating DNA and can be quantified at different time points. Their work is based on 30 women with metastatic breast cancer who were receiving systemic therapy. They compared radiographic images of their tumors with measurements of circulating tumor DNA, CA 15-3 blood level measurements and number of circulating tumor cells. They found that circulating tumor DNA provided a more accurate correlation to x-ray measurements than the other two blood tests. Further, in about half of the women, it also provided the earliest measure of treatment response.

They are not the first to try to measure free floating (tumor) DNA. The concept has been around for a while and is quite logical. There are considerable issues with this idea. Is one really measuring free floating DNA from the tumor? Could it be from other cells in the body? Do the levels vary from day to day? Is finding free floating tumor DNA always a bad thing? How well does it correlate with the volume of tumor in the body? When should it be measured? How much of a difference should one see to predict that a therapy is going to work or not? These are but a few issues to resolve. Nevertheless, it is an interesting idea. We are all looking for a simple and reliable blood test to guide us in determining treatment response. It could provide a way to avoid repeat scans and X-rays. Perhaps, we could also use this DNA to help us identify which drugs might be most effective against the tumor and avoid the need for tissue biopsy. Though this line of work is still preliminary, I believe it holds considerable promise.

The medical profession is continuing to evolve. New services are created to suit the growing needs of our population. I was recently introduced to a new concept and a new branch of medicine—that of a Health Coach, that may be of particular value to the expanding population of cancer survivors. Ms. Janet Solie who is an Integrative Health Coach trained at Duke University and who has a practice in the greater Los Angeles area was kind enough to educate me and answer my questions.

**Dr. Martino:** What is an “integrative health coach?”

**Ms. Solie:** That’s a good question, as this is a new profession that is evolving and many people have never heard the term integrative health coach. An integrative health coach is usually a health care provider, a psychologist or other medical professional who has gone back to school for additional training as an integrative health coach. An integrative health coach is trained to be a specialist in the psychology of behavior change and to view global health as a combination of conventional and complementary healing systems.

**Dr. Martino:** So, is changing behavior a major aspect of health coaching?

Health coaches have the necessary time and skills to provide direction, motivation and support in partnering with patients to make health behavior changes.

**Dr. Martino:** Who should consider using a health coach?

**Ms. Solie:** Anyone who is contemplating lifestyle or health related behavior changes might benefit from an integrative health coach. We know that certain lifestyle factors improve breast cancer prognosis. Often, clients come with specific health behavior changes in mind and they want a coach to work with them one on one. I find once someone decides to hire me as their coach, some improvement follows because at that point they have committed to a course of action to make health changes and create a plan for better health.

**Dr. Martino:** When should a person with breast cancer consider using a health coach?

**Ms. Solie:** From a practical standpoint, a good time to add a health coach is after traditional treatment. Patients who have finished surgery, radiation and or chemotherapy are often ready to begin a global recovery plan that takes into account rest, exercise, nutrition, mind-body connection, physical environment, and stress reduction. For most survivors, taking action to improve breast cancer outcome results in some feelings of control that were lost with the diagnosis of breast cancer. Studies have shown that breast cancer survival improves with lifestyle modifications that address exercise, weight management, and stress reduction.

Sometimes after a cancer recurrence, a client will use a coach to help them put together a global roadmap that adds some forms of complimentary healing to the traditional treatment plan recommended by their oncologist.

**Dr. Martino:** After 25 years in family practice as a physician assistant, what made you decide to leave clinical medicine to work as an integrative health coach?

**Ms. Solie:** I was intrigued with the idea of planning for optimal health. We spend all of our lives planning on how to make our money last, yet there is little focus in primary care on planning for optimal health. Intuitively I felt I could do a better job helping clients with chronic illness and health recovery through health coaching. It gave me the opportunity to spend up to an hour each session with a client focusing on specific lifestyle areas the client chooses for an upgrade.

What I didn’t expect a year after finishing my training as a health coach was the diagnosis of early invasive breast cancer. Experiencing breast cancer firsthand...
I quickly found myself overwhelmed by my treatment choices, disabling side effects and fears that the cancer would return. I knew firsthand what my cancer clients had experienced. But I also realized the Duke health coaching model offered a “voice of reason” organized approach for healing strategies in addition to conventional treatment.

**Dr. Martino:** What is special about Duke University’s Integrative Health Coaching model?

**Ms. Solie:** Duke University has a unique vision of the future of health care. Duke believes that the client and the health care providers should be in a partnership that is health oriented rather than disease oriented. In 2006, Duke took their own health care providers and trained them to be health coaches for their own Duke University employees. Initially the coaches were used to collaborate with employees who had chronic illness and were interested in upgrading to a healthier lifestyle to improve their illness through a one on one relationship with a coach once every two weeks by telephone for three months. The majority of clients using a Duke trained coach were able to make lifestyle changes that were personally significant and lasting.

Using health coaches, Duke has transformed the journey to health as a comprehensive view of healing that includes 7 domains of health. The Duke Wheel of Health encourages the client to explore healing modalities in addition to conventional care. The seven domains are mind-body connection, movement exercise and rest, nutrition, professional and personal development, physical environment, relationships and communication, and spirituality.

**Dr. Martino:** So how does the Duke model of Integrative Health Coaching translate into helping breast cancer survivors?

**Ms. Solie:** Lifestyle changes that promote healing can be a wonderful celebration of life. Most women enjoy the experience of intentionally eating healthier for themselves and providing better food for their families. Often we look at resources for better meal planning and implementing an anti-inflammatory diet. Some clients want to explore new kinds of exercise and movement including Tai Chi, Yoga, Qi Gong. As their coach, I help the client identify an area to change. We talk about how important this new goal is and how confident they are to make changes. All agreed goals for health changes are framed in a way that sets the client up to be successful especially in areas of stress management, diet and exercise.

**Dr. Martino:** Can integrative health coaching help when there is a breast cancer recurrence?

**Ms. Solie:** A recurrence of breast cancer is frightening and overwhelming. When bad news comes, we have to plan for another round of treatment. Most women looking...
Health Coach continued

at a second course of chemo already have some insight into better self-care for the anticipated side effects. What I find helpful is to do a health recovery mind map planning session incorporating the oncologist recommendations with some complimentary approaches to help with fatigue and mood changes. The mind map is a big picture view that includes both conventional treatment and self-care. Often this includes acupuncture, massage, additional help at home especially for a young mom, mind-body meditation, Tai Chi, Qi Gong or yoga. It could include planning visits to a special place that offers great comfort and some healing potential. Sometimes we will put a fair amount of detail into a mind map that can be shared with other family members and health care providers so everyone knows the big picture strategy for treatment and recovery.

**Dr. Martino:** Can you describe how long the coaching relationship lasts? Is it meant to be a lifelong relationship with a client or does it end when the goals you have set have been achieved?

**Ms. Solie:** My preference is to start with an introductory commitment of six 45 minute sessions. We usually talk once every two weeks as we work through the client’s health planning and goal setting. Six sessions give us a three month coaching period. Within the initial three months, a health recovery plan is formulated and new health habits are tried and tweaked. About half of my clients opt to continue with coaching longer but it is by no means necessary. Between sessions, my clients check in with me with via email. Health coaching doesn’t have to be life long but clients often stay in touch with me via email. Sometimes we will schedule additional sessions for a tune up as needed.

**Dr. Martino:** Thank you.