Welcome: The Promise of Research

by Sue Friedman

The significance of medical research can’t be underestimated. It saves lives and improves the human condition. Dedicated, persistent scientists provide answers that make significant and lasting changes in our daily lives. Not all studies are successful, but research is a process whose promise is a better future.

Genetics research opened the door to a better understanding of disease. Study results are translating into greater knowledge, and improved detection, prevention and treatment for many health issues, including BRCA-related cancer.

Understanding and broadcasting research isn’t always easy. In this issue, we bring you updates on two very complex but important research projects for our community: how gene changes can affect breast cancer risk in women with BRCA mutations, and efforts to develop reliable early detection for ovarian cancer. We’ve also included an update of a soon-to-be published study that examines the psychosocial effects on young women who share their BRCA status with their dating partners.

You’ll find more in this issue. If preventative surgery or cancer has dashed your hopes of conceiving children, be sure to read Courtney Zinszer’s story in Voices of FORCE. Don’t forget to peek at our What’s New section on the back page to learn about FORCE’s upcoming Fall Campaign, our new blog, and information about our 2009 conference. As always, we hope you find Joining FORCES informative, inspiring and empowering.

Book Review: Apron Strings

by Barbara Pfeiffer

In the preface to Apron Strings, Diane Tropea Greene says: “I would prefer that it (Apron Strings) be looked upon as a symbol of all that can be learned from the past—and all that the future has waiting for us. We only have to look for it.”

Apron Strings delivers this message through the story of the Fraine family. With four siblings—Ms. Greene’s mother, aunt and two uncles—all dealing with a cancer diagnosis (three of them diagnosed with breast cancer), the Fraine family seems to be under a dark cloud. When Diane finds out her breast cancer was caused by the BRCA2 mutation, a light begins to dawn.

As her story evolves, Ms. Greene uses her family memories and her own journal entries to weave together a powerful, sometimes sad, but more often uplifting story of a BRCA family who faces their challenges with a tremendous sense of humor and a lot of love.

In “The Rest of My Life,” the book’s final chapter, Ms. Greene shows the same optimism she and her family applied throughout their journey. While acquaintances who learn her story feel sorry for her and her family, Ms. Greene feels differently. “I have come to appreciate all that it (being BRCA) has taught me.”
Ovarian Cancer Symptom Statement

Last year, the Gynecologic Cancer Foundation, the Society of Gynecologic Oncologists and other cancer organizations formulated this consensus statement:

Recent studies have shown that the following symptoms are much more likely to occur in women with ovarian cancer than women in the general population. These symptoms include:

- Bloating
- Pelvic or abdominal pain
- Difficulty eating or feeling full quickly
- Urinary symptoms (urgency or frequency)

Women with ovarian cancer report that symptoms are persistent and represent a change from normal for their bodies. The frequency and/or number of symptoms are key factors in the diagnosis of ovarian cancer. Several studies show that even early-stage ovarian cancer can produce these symptoms. Women who have these symptoms almost daily for more than a few weeks should see their doctor, preferably a gynecologist.

Testing for Early-Stage Ovarian Cancer

by Margaret Snow, MD and Sue Friedman

Women with a BRCA mutation or a mismatch repair gene mutation that causes hereditary nonpolyposis colorectal cancer (HNPCC) have a high lifetime risk of ovarian cancer. Without reliable early detection, ovarian cancer is usually diagnosed at stage III or IV and has a high mortality rate. If we could detect and treat ovarian cancer at an early stage, as we often do with breast cancer, the long-term survival rate for ovarian cancer would likely improve. But while current technology can identify precancerous changes in breast tissue, we have no reliable way to identify pre-cancer or early cancers in the ovaries or fallopian tubes.

Because the risk of ovarian and fallopian tube cancer is so high in genetically at-risk women, genetics experts recommend that high-risk women consider salpingo-oophorectomy (surgical removal of the ovaries and tubes) at age 35 or after childbearing is completed. Although not without risk or side effects, salpingo-oophorectomy is currently the most effective way to lower the risk of ovarian cancer. Some women are unexpectedly found to have ovarian or fallopian tube cancer at the time of risk-reducing surgery. The procedure can be performed as an outpatient laparoscopic procedure for some women; others may need full abdominal surgery and require a hospital stay.

In premenopausal women, oophorectomy causes immediate menopause. For some, this earlier-than-usual menopause is manageable, with or without hormone replacement therapy. Others experience varying degrees of menopausal symptoms, which are sometimes severe; some women cannot take or prefer not to take hormone replacement. Many women who are not yet close to menopause struggle with their decision regarding prophylactic oophorectomy. High-risk women who wish to have children, or who are not ready for surgery, have no reliable choices for managing their risk for ovarian cancer in the absence of dependable early detection.

If ovarian cancer could be found at an earlier stage, the outcome would likely improve for many women. One promising method of detection involves identifying particular protein markers—which appear in differing amounts between women with ovarian cancer and those without—in a woman's blood or urine. Researchers and commercial laboratories hope these biomarkers can be developed into a reliable test for ovarian cancer that will effectively diagnose the disease at its earliest and most curable stage. One research group from Yale University published promising research: their study identified six biomarkers that may discriminate between women who have ovarian cancer and those who don't. Yale licensed these biomarkers to LabCorp, a commercial laboratory that packaged them into a blood test named OvaSure. Recently, LabCorp announced that it will make OvaSure available as a screening test to women at high risk of ovarian cancer.

Gynecology and cancer experts have raised concerns about the test. In the Yale research study, not all of the research samples were from high-risk women. The test was abnormal in some early-stage (I or II) ovarian cancers; however, it was normal in other early-stage cancers. A number of the stage I cancers detected were ovarian cancer cell types that are not usually seen in hereditary or BRCA-related ovarian cancer.

The Yale study included a very small number (13 out of 156 cancers) of stage I ovarian cancers. The test was not performed for screening; it was studied in women at the time of surgery to see if it could differentiate...
Other Genes Can Modify BRCA Breast Cancer Risk

by Margaret Snow, MD, Lisa Held and Sue Friedman

Since BRCA testing has been available, genetics experts have sought to better understand factors that affect the cancer risk for women who have a mutation. Breast cancer risk assessment has never been an exact science: some studies quote a lifetime risk as low as 40 percent, while others predict the lifetime risk to be as high as 87 percent. Because of these divergent estimates, genetic experts use a “risk range” — often estimated at 40-85 percent — when discussing the risk of developing breast cancer for a woman with a BRCA mutation.

Researchers believe other factors modify breast cancer risk in mutation carriers. Diet, weight, exercise, age at the time of pregnancy, number of pregnancies, use of birth control pills, and exposure to environmental factors may all influence breast cancer risk. But growing evidence suggests that other inherited genetic changes may also influence cancer risk among BRCA mutation carriers.

DNA changes and SNPs

DNA is the building block of genes. Genes tell our bodies what proteins to make. With the exception of identical twins, no two people inherit exactly the same DNA sequence; these DNA differences make each of us unique. Some of these differences are responsible for a person’s unique appearance, such as brown or blue eyes. Other DNA changes lead to disease or increased risk for disease, such as DNA mutations in the BRCA1 or BRCA2 genes that lead to increased cancer risk.

About 10 percent of all breast cancers and about 14 percent of all ovarian cancers are caused by mutations in genes such as BRCA. But most women who develop breast and ovarian cancers have no identifiable BRCA mutation. Although environmental factors play a role in these cancers, research suggests that having specific combinations of genes might influence a person’s risk for developing cancer and other diseases.

Single Nucleotide Polymorphisms (SNPs) are particular changes that genetic researchers consider as single “spelling errors” in DNA. Each SNP represents a change of a single building block in our DNA code. SNPs may occur commonly in the general population, can be found in healthy individuals, and represent normal variations in certain genes. However, some SNP gene changes may increase the risk for certain diseases.

In 2007, two large published studies addressed SNP changes associated with breast cancer. When researchers in one of these studies examined the DNA of non-BRCA women — some had breast cancer and some did not — they associated four SNPs that alone or in combination resulted in a slightly higher lifetime risk for breast cancer. In general, a woman’s lifetime risk is about 13 percent; the risk for women who carried these SNPs was about 20 percent. This may explain why some women may be more susceptible to breast cancer because of their genetics, even if they do not have a BRCA mutation. It may also explain why many BRCA-negative families have a lot of breast cancer.

Following up on this research, a group of breast cancer researchers formed the Consortium of Investigators of Modifiers of BRCA1/2 (CIMBA) to learn more about the factors that affect cancer risk in BRCA carriers. As new information emerged about genes linked to breast cancer risk in the general population, the CIMBA group tested previously obtained blood samples from known BRCA carriers to determine whether these same gene changes affected their breast cancer risk.

The CIMBA Consortium found that two SNPs that increase breast cancer risk in the general population were also associated with breast cancer risk in BRCA carriers. The Consortium also found that some of the SNPs that increase risk for non-BRCA women may have slightly different effects in BRCA carriers. In other words, the same SNPs that increase risk for non-BRCA women may increase risk for BRCA carriers, but the risk is slightly different.

Other Modifiers of Breast Cancer Risk in Mutation Carriers

by Sue Friedman

While studies of risk modifiers in BRCA mutation carriers have great potential to improve our understanding of the causes of BRCA-associated cancer and improve risk prediction, this research is still in its infancy. Most studies have been small, making it difficult to draw definitive conclusions. The following factors may affect breast cancer risk in BRCA mutation carriers:

Diet

Although diet is thought to be a factor in breast cancer risk, there is little research linking specific foods to cancer risk or protection in BRCA carriers.

Weight

Studies show that a healthy weight is beneficial for BRCA mutation carriers. A study of BRCA1 mutation carriers from five countries suggests losing as few as 10 pounds between ages 18 and 30 may reduce the risk for breast cancer. A weight change at age 30 to 40 did not influence the risk of breast cancer.

Menarche

The older a woman with a BRCA1 or BRCA2 mutation is at the onset of menstruation, the lower her risk for breast cancer.

Oral Contraceptives

The effect of oral contraceptives on breast cancer risk is still uncertain. Oral contraceptives may increase breast cancer risk in women who begin taking the pill before age 30, and those who continue on contraceptives for three years or more. However, BRCA mutation carriers who take contraceptives for three or more years have a lower risk for ovarian cancer.

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Adoption after Cancer
by Nina E. Rumbold, Esq., and Denise Seidelman, Esq.

(Prepared in collaboration with Fertile Hope: www.fertilehope.org)

For a cancer survivor, adoption is a wonderful way to create or expand a family. There are many reputable professionals, agencies and organizations available to educate and support you.

Types of Adoption

- **Private Placement Adoption** occurs when birth parent(s) place the child directly with the adoptive parent(s) without an agency as an intermediary. The parties might locate each other through family and friends or even through advertising on the Internet. Confidentiality can be maintained, with last names, addresses, and identifying information disclosed only as desired. Using an attorney with adoption expertise is highly recommended and often required. Private Placement adoption avoids an agency fee. It can happen very quickly and inexpensively. Typical cost: $10,000-$15,000.

- **Private Agency Adoption** involves a state-authorized agency as an intermediary to match adoptive and birth parents. Typically, the agency has waiting couples who have been pre-screened and pre-approved to be adoptive parents. Identifying information can be shared or kept confidential. Typical cost: $15,000-$30,000.

- **Public Agency Adoption** occurs when the state provides adoption services for children who are in its custody—usually because of parental abuse and/or neglect. Most of these children remain in foster care until their parents rights are terminated and an adoptive placement is found. The opportunity to adopt an older child is more likely, and after the adoption, financial assistance is sometimes provided for a special needs or a hard-to-place child. Typical cost: Little or none.

- **International Adoptions** are usually accomplished through agencies with programs in foreign countries. You must satisfy the adoption requirements of both the country of the child’s origin and the U.S. Citizenship and Immigration Services. The age of adoptable children, the quality of medical care provided to them, and the type of care provided varies significantly. Countries also have different requirements regarding issues such as the adoptive parent(s)’ age, marital status and medical history. Some countries may impose a waiting period when there is a history of cancer. Although international adoption may be complex, there is usually more certainty about the type of child and the timeframe necessary. Typical cost: $7,000-$50,000+, excluding travel expenses.

Adoption Requirements

You must be approved as an adoptive parent before a child is placed with you. At a minimum, this involves a home study by a state-approved provider. You should not be precluded from adopting solely because of your cancer history, but your doctor will need to provide an accurate assessment of your health and prognosis.

Financial Assistance

The federal Adoption Tax Credit can be as much as $10,630 (2005). Your state may offer an additional tax credit. Some employers also have adoption assistance programs.

Additional Resources

- Information about the emotional aspects of adoption can be obtained through social workers, psychologists, support organizations, or through bookstores, libraries and the Internet. Some useful resources include:
  - National Adoption Information Clearinghouse (www.adopt.org/adopt/national-adoption-information-clearinghouse.php)
  - American Academy of Adoption Attorneys (www.adoptionattorneys.org)
  - Adoption Tax Credit (www.irs.gov/taxtopics/tc607.html)

Voices of FORCE

Each quarter, we’ll invite a FORCE member to share an insightful perspective, a valuable experience, or a touching story to help others who are dealing with issues of hereditary breast and ovarian cancer

Courtney’s Adoption Story

by Courtney Zinszer

I found my lump at 33. That led to my first mammogram, which was negative. Because the lump was growing, my doctor ordered an ultrasound, which was also negative. I insisted on a biopsy. Much to my shock, I was diagnosed with cancer. I then had a lumpectomy, chemotherapy and radiation.

Not believing my diagnosis, I didn’t cope well. My support group knew me as the balm girl who didn’t really have cancer I wanted to urge Oprah to do a special: “My Doctor has the Wrong Slides and I Don’t Really Have Cancer.” At the time, I was a single mom of Sedona (my three-year-old daughter). I was finishing school for my teaching credentials and I was a newly-hired teacher. I scheduled my surgeries and treatment around work and school.

At the end of my treatment, I celebrated by participating in the Revlon 5K Walk for Women’s Cancers. I had difficulty completing the walk and needed help pushing my daughter in her stroller. Just one year out of treatment I found another lump. It was cancer again. I already knew the ropes: lumpectomy, chemo and radiation. But this time, my surgeon couldn’t get clear margins and I needed a mastectomy. I also discovered through gene testing that I had a BRCA2 mutation. My sister Erin tested positive for the same mutation. Fortunately my youngest sister Melanie tested negative.

Two weeks before my mastectomy, I met a wonderful man. His mom, a 20-year survivor, was re-diagnosed soon after we started dating. He called about a woman who was delivering a boy that day and wanted to choose his adoptive parents. I felt as though I had won the lottery when we were chosen and met our son the following morning.

Since cancer, my life has changed in positive ways. I completed countless breast cancer walks. I married the man who stuck by me through my second diagnosis and we adopted three beautiful children. I started Pink Wings (www.pinkwings.com), a breast health awareness business which allows me to travel, meet other survivors and raise money for and spread the word about young women and breast cancer.

Courtney Zinszer is the FORCE Oregon outreach coordinator and founder/owner of www.Pinkwings.com. Mention FORCE in the shipping comments when you order from Courtney’s website and she will donate 20 percent of your purchase to FORCE.

Share Your Story

Do you have something to say that may inform our readers or ease their experience? We invite you to share your reflections or personal story about dealing with the issues of hereditary breast or ovarian cancer. Tell us how you feel, how you cope, or what you’ve learned. Email stories of 500-550 words to info@facingourrisk.org or mail to FORCE, 16057 Tampa Palms Blvd. W. #373, Tampa, FL 33647. Please include your name and daytime telephone number so we can contact you if we decide to publish your story in a future issue.

Practicing as Rumbold & Seidelman since 1996, attorneys Denise Seidelman and Nina E. Rumbold are licensed in both New York and New Jersey and practice exclusively in the areas of adoption and reproductive law. They are members of the American Academy of Adoption Attorneys and the American Society for Reproductive Medicine.
Other Genes Modify Risk

(continued)

Population may also provide more information about breast cancer risk in BRCA carriers. BRCA2 carriers with the less common form of genes known as FGFR2 and TNRC9 were more likely to develop breast cancer. BRCA1 carriers who had the less common form of the TNRC9 gene were also more likely to have breast cancer.

Among the women who carried normal copies of these genes, the risk for breast cancer appeared to be at the lower end of the risk range. Of the BRCA-positive women who had two abnormal copies of these SNPs, lifetime risk for breast cancer was estimated to be at the high end of the risk range. Women with one abnormal copy of the SNPs were estimated to have a risk in the intermediate range.

Significance of this research

Although this research is promising, more study is needed to learn how SNP tests can improve risk assessment and clinical care for BRCA carriers. SNPs may help explain why cancer runs in families who have no identifiable mutation. The research may also help BRCA carriers clarify their risk for breast cancer. Ultimately, SNP studies may provide the long-awaited breakthrough that helps scientists understand why breast cancer develops. This is one study of many that is trying to identify other genes that effect cancer risk. Similar research is being conducted to identify SNPs associated with ovarian and other cancers.

Dr. Timothy Rebbeck of the University of Pennsylvania is lead investigator of PROSE, a large study on BRCA and risk management. He is also a member of the FORCE Advisory Board, participant in the CIMBA consortium, and one of the authors of the study outlined in this article. Dr. Rebbeck believes the promise of this research is what it may mean for BRCA-positive individuals: testing for these and other as yet unidentified modifier mutations will provide more specific information about their personal risk of developing breast cancer.

References


The Effect of BRCA Results on Young Couples

by Lindsey M. Hoskins MS, LGMFT

Researchers from the Clinical Genetics Branch of the National Cancer Institute are studying various psychosocial and behavioral issues that affect young women with BRCA1/2 mutations. Their first report on this research will appear in the September issue of Family Systems and Health (Lindsey M. Hoskins et al: Disclosure of Positive BRCA1/2-Mutation Status in Young Couples: The Journey from Uncertainty to Bonding through Partner Support).

Women in the study reported that they often felt fear and anxiety prior to sharing their BRCA mutation status with dating partners, yet many participants indicated that sharing their status had positive effects on their relationships. Partner support and empathy were essential to creating a positive mutation disclosure experience. A follow-up study is being developed, and a new series of interviews is expected to begin in early 2009. This will focus on the experiences of young BRCA1/2-positive women in navigating tasks of young adulthood, including couple formation and/or marriage, family creation, and decision-making about risk-reduction strategies, and how those may be impacted by the mutation-positive experience. We hope to enroll approximately 40 BRCA1/2-positive young women in this new study. Stay tuned to FORCE for updates when this new project opens to enrollment.

Lindsey M. Hoskins, MS, is a licensed Couple and Family Therapist in Maryland. She has also trained in Medical Family Therapy in the Department of Psychiatry at the University of Rochester Medical Center. Since 2005, Ms. Hoskins has been part of the Clinical Genetics Branch at the National Cancer Institute, where she works with women in hereditary breast/ovarian cancer families enrolled in the Breast Imaging Study.
“In the Genes” 2008 Gala: Partying with Penguins

by Debbie Sokolov

Our second annual “In the Genes” gala at the beautiful Florida Aquarium was a success. Held on May 17 following the Joining Forces conference sessions, the event was a special evening of food, fun and fundraising.

Guests enjoyed marine exhibits while sampling hors d’oeuvres, entrees and desserts. The Conch Critters, a popular local band, played tunes that were enjoyed by dancers and sedentary toe-tappers alike. The tone was upbeat; the attire was jeans (of course). But a few special guests stole the show in their black ties: the aquarium introduced African Black-footed penguins who patiently posed for pictures.

The evening’s highlight was the auction of 27 pairs of denims signed by celebrities including Paula Abdul, Julie Andrews, Steve Carell and the cast of the popular TV show The Office, Cat Cora, Joey Fatone, Ray Romano, John Stamos and Oprah Winfrey. The winners of Cat Cora’s beaded jeans and Julie Andrews’ Armani jeans wore their newly-acquired purchases to the conference the next day and looked fabulous. When the final bids were tallied, FORCE received $2,500 to help support our nonprofit programs.

Testing for Early-Stage Ovarian Cancer (continued)

between women with cancer and those without. There is no information about how well the test would work for screening or whether it would be better or worse than the recommended screening of CA125 and transvaginal ultrasound in high-risk women.

No one has yet studied how to properly evaluate women with an abnormal OvaSure test. Experts caution that because there is no reliable way to image ovaries, and because cancers that occur in high-risk women may be tiny, the only way to be certain whether a woman with an abnormal test does or does not have ovarian cancer is to remove her ovaries and fallopian tubes and have them carefully examined by a pathologist. Based on the data from the Yale study, it appears that only a small number of women with an abnormal test result will actually have ovarian cancer; there will be many false positive results.

Because OvaSure test results have not been independently validated, the cost of the test may not be covered by insurance.

Based on the preliminary status of the research and the above concerns, the Society of Gynecologic Oncologists, the professional society of experts who treat ovarian cancer, issued the following statement on July 2:

"After reviewing OvaSure’s materials, it is our opinion that additional research is needed to validate the test’s effectiveness before offering it to women outside of the context of a research study conducted with appropriate informed consent under the auspices of an institutional review board."

In the meantime, Dr. Mark Greene of the National Cancer Institute continues to encourage BRCA-positive women to participate in clinical trials of new ovarian cancer screening strategies. Our participation in well-designed prospective studies is imperative if scientists are to progress toward the development of better screening tests as quickly as possible.

Sponsors

FORCE extends our thanks to all attendees who made our 2008 Gala a success. A very special thank you to all those who volunteered at the gala, helped obtain the denims, or bid on our live and online auction items. Our heartfelt gratitude goes to our sponsors who made “In the Genes” a festive, worthwhile evening:

Perseverance Level
DeBartolo Family Foundation

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Genentech
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West Coast Gynecologic Oncology
Women’s Cancer Associates

Every dollar helps FORCE improve the lives of individuals and families affected by hereditary breast and ovarian cancer. We hope to see you next year in Orlando for our 4th annual conference.
Our Sponsors

Your generous donations allow us to provide this newsletter at no charge to people at high-risk. Philanthropic support is critical to FORCE’s survival and ensures our continuing ability to provide publications like our newsletter to our community. Your charitable gift can help save lives—please consider making your gift today! To learn more about helping FORCE, visit www.facingourrisk.org/how_to_help.

We Want to Hear From You

What’s on your mind? What would most help you understand or cope with issues of prevention, diagnosis or treatment? Perhaps you’ve recently tested positive for a BRCA gene mutation and don’t know where to turn. Maybe you’re dealing with breast or ovarian cancer, or care about someone who is. Send your input, ideas and comments to info@facingourrisk.org or mail to FORCE, 16057 Tampa Palms Blvd. W. #373, Tampa, FL 33647.

Help FORCE Go Green

Want to save some trees? Help FORCE save dollars? To receive an electronic version of this newsletter rather than a print copy e-mail us at: newsletter@facingourrisk.org. Include your name and city and state in the e-mail.

What’s New @ FORCE

Fall is for Family, Fun, Fitness and Fundraising for FORCE

Join our Fall Giving campaign and help keep FORCE available for our community. It’s easy and it’s fun! Our new campaign has several components, including fitness. For that segment, we’re partnering with Enell, a manufacturer of popular sports bras, to bring you “Get Fit with Hope.” Enell will donate a portion of their proceeds from the sale of every Hope bra to FORCE. Visit www.facingourrisk.org/campaign for more information.

Save the Date: Our 2009 FORCE Conference

Our 4th annual Joining FORCEs conference will be held May 15-16, 2009 at Buena Vista Palace in Orlando, FL. Check our website at www.facingourrisk.org/conference for more details.

Watch In the Family: The Long-awaited BRAC-umentary

Kartemquin Film’s In the Family documentary about hereditary breast and ovarian cancer will air October 1, 2008 on PBS’ POV. Visit www.facingourrisk.org/inthefamily for more details. Check local listings for times by visiting: http://www.pbs.org/stationfinder/index.html. This local station finder also has TV schedules.

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