Hollywood on Board: New Feature Film Gets the BRCA Story Right  
by Sue Friedman

FORCE collaborated with producers and directors to bring *Decoding Annie Parker*, a major Hollywood motion picture, to five cities across the United States. In July, we kicked off the tour with a screening to a sold-out crowd in Chicago. Then in September we hosted another sold-out show at the Directors Guild of America Theatre in Los Angeles. The following month we celebrated HBOC week with a preview in the Washington, D.C. area and publicized National Previvor Day with an event in Philadelphia, concluding in Palm Beach. From theatre to theatre, audiences responded with tears but also laughter as the film brought comic relief and realistically touched on every aspect of life and HBOC. After the screenings, a panel of genetics and cancer experts accompanied by Steven Bernstein, the film’s writer/director, and Annie Parker, the film’s inspiration, addressed questions about HBOC, hereditary cancer, and the history and future of genetics in medicine.

With solid performances by acting luminaries Helen Hunt, Samantha Morton, Aaron Paul, Rashida Jones and Bradley Whitford, the film continued on page 2
Hollywood on Board continued

is based on the true story of Annie Parker and Dr. Mary Claire King, individuals who have both been touched by hereditary breast and ovarian cancer. Annie Parker battles the disease that took the lives of her mother and her sister, and Dr. King is the geneticist whose research led to the discovery of the BRCA1 breast cancer gene.

Decoding Annie Parker is an educational, inspiring, and entertaining film that hits close to home for our community, as so many of us are just like Annie Parker and can draw strength from her story.

Decision Tool Helps High-Risk Women Sort Through Difficult Choices

by Liz Schackmann, MS

When Allison W. Kurian, MD, MSc, and Sylvia K. Plevritis, PhD, created a mathematical model to analyze options for BRCA1/2 cancer risk reduction, they were eager to share the results with previvors and their physicians. Kurian, who is Assistant Professor and Associate Director of the Clinical Cancer Genetics Program at Stanford University, and Plevritis, Associate Professor and Co-Director of Information Sciences in Radiology at Stanford, decided to build an online tool to help guide shared decision making about cancer risk reduction between women and their health care teams.

Drs. Plevritis and Kurian consulted with expert physicians, and drew on their clinical experience about what women with BRCA1/2 mutations might want from a decision tool. The result is an interactive website (http://brcatool.stanford.edu) that allows previvors to view estimates of their chances of developing breast or ovarian cancer based on their age and mutation status (BRCA1 or BRCA2), and based on choices they might make about screening and preventive surgeries.

After the user selects options, the tool provides a bar graph for each option, displaying probabilities of the following estimated outcomes by age 70: never being diagnosed with cancer, surviving breast or ovarian cancer, dying of breast or ovarian cancer, or dying from other causes. It is important to note that the estimates are derived from the combined results of multiple scientific studies, not from a dedicated clinical trial. Of course, no computer model can accurately predict the future for any individual woman. Rather, the tool’s results should be used as a general framework to guide choices.

Since the tool became publicly available in January 2012, it has received an average of 1,400 visits per month from the United States and internationally. The authors have since published the results of pilot testing the tool at the 2011 Joining Forces conference. Women who reviewed the tool provided many insightful comments and recommendations, which were used to revise and improve it.

References


Liz Schackmann was a Research Assistant with the Clinical Cancer Genetics Program at Stanford University from 2010-2012, during which time she helped to develop and pilot test the Stanford BRCA Decision Support Tool. She is currently a second-year medical student at the University of Utah School of Medicine in Salt Lake City, Utah.
Fertility, Reproduction, and Menopause in BRCA Carriers
by Lauren N. C. Johnson, MD and Clarisa R. Gracia, MD, MSCE

Preliminary research suggests that BRCA mutations may affect women’s fertility. One study showed that women with BRCA1 mutations had fewer eggs retrieved when undergoing in vitro fertilization (IVF) compared to women without BRCA mutations. Researchers at the University of California at San Francisco studied women with BRCA1/2 mutations who had not had prophylactic surgery, chemotherapy, or radiation, to determine when they went through natural menopause. Compared to women without known mutations, mutation carriers experienced menopause three years sooner than women who had not been tested for the mutation. A separate study performed by a large hereditary cancer research consortium observed that on average, BRCA carriers underwent natural menopause about a year sooner than non-carriers.

A woman’s fertile window and time to menopause depends on the number of eggs she carries in her ovaries. Earlier onset of menopause in women with BRCA mutations suggests that they may have fewer eggs than women without a mutation, and may therefore be at higher risk for infertility. While these findings warrant further investigation, current evidence is inconclusive.

BRCA carriers face unique reproductive challenges. The recommendation for risk-reducing oophorectomy by age 35 to 40 narrows women’s timespan to complete their families. Some women with BRCA mutations choose to pursue fertility treatments such as IVF to expedite pregnancy and then undergo recommended prophylactic surgery. Women with mutations who are not in a position to become pregnant before ovary removal is recommended may decide to freeze their eggs and/or embryos for future use. Some pursue preimplantation genetic diagnosis of embryos to reduce the chance of passing their mutation to their children. All these options can be affected by the number of eggs available.

If women with BRCA mutations are truly at higher risk of infertility…this may influence their decisions about family planning.

BRCA Mutation Carriers) study. Supported by a grant from the Basser Research Center for BRCA of Penn Medicine’s Abramson Cancer Center, this study will collect information regarding fertility, pregnancy history, and timing of menopause among women with and without BRCA mutations. Results will help researchers better understand fertility and reproduction in the BRCA population, which will help women make informed decisions about their reproductive options. Ultimately, we hope that all women with BRCA mutations can fulfill their reproductive goals. Visit the FORCE website for more information or to participate in this important study.

References


Dr. Lauren Johnson is a fellow in Reproductive Endocrinology and Infertility at the University of Pennsylvania.

Dr. Clarisa Gracia is an associate professor and director of the fertility preservation program at the University of Pennsylvania in the division of reproductive endocrinology and infertility.

“If women with BRCA mutations are truly at higher risk of infertility…this may influence their decisions about family planning.”

The Basser Research Center for BRCA of Penn Medicine’s Abramson Cancer Center was founded in 2012 with the mission of using cutting edge research to advance care for individuals with BRCA1/2 mutations. Here’s what’s new at the Basser Center (find more details at www.pennmedicine.org/basser):

- Our updated website provides information on BRCA-related cancer risks and risk management, resources, news, and support.

- This summer we released over $2 million in grant funding. Research projects range from potential vaccine therapies to prevent BRCA1/2-related cancers, to optimal nutrition and exercise for BRCA-positive cancer survivors, to managing side effects associated with prophylactic removal of the ovaries. Thank you to the 600 FORCE members who have enrolled in our studies. Visit the Research tab on our website to learn more about open studies.

- The inaugural Basser Global Prize was awarded to Professor Alan Ashworth from the Institute for Cancer Research for his work using genetic principles to understand cancer biology and improve treatment.

- We are increasing awareness of BRCA1/2 in the Jewish community via a national poster campaign and outreach events. If you see a Basser Center Star of David-Pink Ribbon Poster in your synagogue or community organization, e-mail a photo to us, along with the location, to basserinfo@uphs.upenn.edu. Visit our website to learn about local events and download fact sheets and posters.
You don’t need to run a marathon to benefit from exercise. A study by Mary Claire King demonstrated that previvors who are more physically active and maintain a healthy weight have reduced risk of breast cancer. If you are a previvor, exercise can help you to attain and maintain your best level of fitness so that if a cancer diagnosis occurs, you are in the best shape of your life for the fight of your life.

For cancer survivors, regular exercise helps to regain physical function; prevent, attenuate, or treat symptoms resulting from cancer treatments (such as pain and fatigue); reduce fatigue, anxiety, and depression; improve sleep; and enjoy an overall improved quality of life. The benefits of regular exercise are well documented for those who have and those who have not had a diagnosis of cancer. The evidence is so compelling that the U.S. Department of Health and Human Services, the American College of Sports Medicine, the American Cancer Society, and the National Comprehensive Cancer Network have all issued clinical guidelines for regular exercise. Regardless of cancer history, the specific recommendations include:

- 150 minutes per week of aerobic activity (such as walking, swimming, biking, or group aerobic fitness classes). If you need to start with walking laps around the dining room table, that’s fine. Just increase your effort as you can.
- Resistance training two to three times weekly. Simply put, gradually increase your ability to lift heavy things.
- Flexibility activities on the days you do other exercise. Yoga is a terrific way to become more flexible and supple, but if that’s not your thing, just stretch after exercise to keep yourself mobile. If you have had surgery on your chest, avoid poses and movements that put weight on the hands, elbows, shoulders, or head until you are cleared by a rehabilitation professional.

Some cancer survivors seem to think that because the symptoms and fatigue that happen after treatment are “expected,” there is nothing that can be done to fix these problems, but that’s not true! If you feel that you need some help to get going on an exercise program or you are unsure of what is safe, ask your doctor for help. A referral to a well-trained physical therapist or fitness professional could help you get back to your best level of fitness.

If you are a breast cancer survivor who has also undergone surgical removal of your ovaries, the Project HOPE exercise and diet research study funded by the Bassar Research Center for BRCA of Penn Medicine’s Abramson Cancer Center at the University of Pennsylvania might be of particular interest to you.

To learn more, please visit www.penncancer.org/project-hope or contact projhope@mail.med.upenn.edu.

ENELL Supports Team FORCE

ENELL, manufacturer of high quality sports bras for well-endowed women, is a proud sponsor of Facing Our Risk of Cancer Empowered (FORCE) and Team FORCE for the 2013 Marine Corps Marathon. Enell’s blog (www.enell.com/blog) tracks the training progress of Corea and Julie.

Proceeds from ENELL’s Hope Bra benefit FORCE.

Exercise for Previvors and Survivors: How Much, What Kind, and When?

by Kathryn Schmitz, PhD

You don’t need to run a marathon to benefit from exercise.

Sisters: Survivors for the Long Run

by Corea Bengenser Smith

At age 38, I was diagnosed with breast cancer after returning from Operation Enduring Freedom. I did everything I was supposed to do—I ate well, exercised and breast-fed my kids—why did I have breast cancer? When my genetic test came back positive for BRCA2, it was a shock, since our large family had no history of breast cancer. Dad and my younger sister Julie also tested positive for a BRCA2 mutation.

Julie and I are two years apart and very close, even though we live on separate coasts. She and her husband were working on starting a family, but she developed cervical cancer and had a radical hysterectomy, so I was planning to be their surrogate. Breast cancer put a halt to that plan, as I had to focus on getting well, and Julies had to focus on staying well. After my double mastectomy, chemotherapy, radiation, numerous reconstructions, and hysterectomy/ophoroscopy, I now take an aromatase inhibitor—I want to be sure that cancer does not stand a chance. Within months, Julie had a prophylactic double mastectomy and reconstruction. She’s planning an oophoroscopy when she and Jay complete their family (they are expecting a baby boy in January).

“...I ate well, exercised and breast-fed all my kids—so why did I have breast cancer?”

Julie and I have always been runners. In high school, no one wanted to spend the night at our house once they learned that Dad woke everyone for morning weekend runs, guests included (we had shoes and clothes to fit all). Running has always been a great way for us to stay healthy and sane. On the morning of my mastectomy in 2011, I went for a 4:00 a.m. run in the cold rain because I knew that it would be my last great run for awhile. During chemotherapy, I was out running (more like shuffling) to get that runner’s high. We even celebrated my last chemotherapy by entering a half marathon as my comeback run.

We were looking for another run to celebrate life when we saw that FORCE was sponsoring a Marine Corps Marathon (MCM) team. We joined immediately, but training has not been easy. Treatment has taken a toll on my body; I am slower, 20 pounds heavier, and I feel 20 years older than before my diagnosis. But I am thankful to be running and training for a cause with friends. My fellow FORCE MCM teammates are my inspiration. On mornings when my treatment-induced arthritis makes me stiff and sore, I am thankful just knowing that my teammates around the country are out there training too, supporting FORCE and giving back. FORCE was such a help to Julie and me when we faced so many unknowns, and we are doing our part in raising awareness about the HBOC community. This past weekend, I ran the first of my two really long runs: 18 miles! That would not have been big deal three years ago, but this year it’s huge, and I feel great. This marathon may take me two hours longer to cross the finish line than before I was diagnosed with cancer, but I feel empowered and strong.

Thanks, FORCE!

Corea is a wife and mother of three young girls. She and her husband are active duty Air Force officers, and currently live in Alexandria VA.

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. E-mail stories of 500-550 words to info@facingourrisk.org or mail to FORCE, 16057 Tampa Palms Blvd. W., 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.
Research Studies of Interest for the HBOC Community

The following studies may help us find better ways to prevent or treat cancers in people with a BRCA mutation or hereditary cancer.

Learn more about specific studies by searching for a study’s unique identifier at clinicaltrials.gov or visiting a study’s website. Visit the FORCE website to learn more about HBOC research.

Prevention

Prophylactic Salpingectomy with Delayed Oophorectomy

Study Identifier Number: NCT01907789

This study compares ovarian cancer risk management options: screening, risk-reducing salpingo-oophorectomy (removal of both ovaries and fallopian tubes), and prophylactic salpingectomy (removal of fallopian tubes only) with delayed oophorectomy, which does not cause surgical menopause; the ovaries are removed at a later date. The study’s goal is to learn how many patients have their ovaries removed at a later date, and whether removal of fallopian tubes decreases the risk of ovarian cancer.

Comparing Metformin to Placebo in Decreasing Atypical Cells in High-risk Patients

Study Identifier Number: NCT01905046

This study will be open to pre-menopausal women at increased risk for breast cancer, based on a prior biopsy with atypical hyperplasia, lobular carcinoma in situ (LCIS), ductal carcinoma in situ (DCIS), a strong family history of breast and/or ovarian cancer, a high Gail Model score, or a known BRCA mutation. The study will assess if the diabetes drug metformin decreases atypia and breast density in high-risk women.

Breast Cancer Treatment

BROCADE Study

Study Identifier Number: NCT01506609

Men and women aged 18 years or older who have advanced (metastatic) breast cancer due to a BRCA1 or BRCA2 gene mutation are invited to participate. The goal is to learn how many patients have their ovaries removed at a later date, and whether removal of fallopian tubes decreases the risk of ovarian cancer.

Challenges to Hereditary Cancer Research

by Sue Friedman

Much progress has been made in cancer research in the 15 years since I learned about my mutation and founded FORCE. Most exciting are advances in “personalized medicine” that focus on the unique traits of a subset of the general population, such as people with HBOC. HBOC cancers behave differently than other cancers: they are younger-onset, more aggressive, bestow greater lifetime risk for diagnosis and multiple cancers, and HBOC risk can be passed to our children. The biology that makes HBOC cancers different also offers researchers an opportunity to develop strategies to better prevent or treat hereditary cancers.

After years of advocacy, HBOC research is getting well-deserved attention, with studies moving towards personalized medicine as the best ways to prevent, detect, and treat hereditary cancers and improve quality of life. PARP inhibitors, new drugs designed to target cancers caused by BRCA mutations, are a significant example. These drugs will not be widely available until these studies are completed, yet open clinical trials of PARP inhibitors desperately need participants. Our community understands that research is the key to better options, and is willing to participate in the research to benefit them and future generations. So what is delaying progress? Here are some of the barriers we have identified.

- **Limited patient population.** With one million Americans affected by HBOC, plenty of study participants should be available, but only about 10% of people with BRCA mutations are aware of their status. Among people diagnosed with cancer who meet expert guidelines, only about one-third receive genetic counseling and testing for mutations.

- **Competition from less-specific clinical trials.** Up to 10% of cancers are hereditary, a small subset of a larger disease state. HBOC-specific clinical trials compete for participants with more numerous, larger studies that are not limited to people with mutations. For example, a recent search of clinicaltrials.gov—a National Institutes of Health database that lists research studies with human participants—for U.S. treatment trials enrolling people with metastatic breast cancer returned 220 open studies, yet only eight studies that will treat people with BRCA mutations.

Of 60 advanced ovarian cancer treatment studies listed, just eight are specifically for patients with BRCA mutations. Therefore, a mutation carrier with advanced breast or ovarian cancer has a higher likelihood of finding and enrolling in a less-specific clinical trial than one of the few studies open to someone with their specific cancer and mutation type.

“After years of advocacy, HBOC research is getting well-deserved attention…”

- **Doctor referral of patients to clinical trials.** Doctors may be unaware of clinical trials beyond their own facility. Sometimes institutional barriers or personal biases keep physicians from informing patients with BRCA mutations about HBOC clinical trials elsewhere if research or treatment options are available at their own institution, even if those options are not HBOC-specific and may not be as good a “fit” for the patient. Some patients are not referred until their doctors have exhausted all other treatments, when patients may no longer qualify for a clinical trial.

- **Clinical trial eligibility.** Clinical trials are carefully designed to determine whether new medications or interventions work better than standard care. All research must outline eligibility requirements or limitations regarding who can or cannot participate. Sometimes certain treatment affects a patient’s eligibility. Neoadjuvant breast cancer studies, for example, determine whether a specific treatment causes breast tumors to shrink, grow, disappear, or has no effect. However, only people who have their original breast tumor are eligible: once the tumor is removed by lumpectomy or mastectomy, patients are ineligible. Receiving certain chemotherapies may also lead to ineligibility. For these reasons, patients should be aware of clinical trial options before starting treatment or resuming treatment after a recurrence.
• Consumer knowledge about clinical trials. Many people have concerns about safety, medical care, use of placebos, cost, and the ability to withdraw from clinical trial participation. Efforts to educate people about clinical trial design, safety, and oversight are ongoing, but more awareness is needed. Navigating sites like clinicaltrials.gov and enrolling in a study can be confusing, even for patients who are motivated to participate.

• Time, effort, or cost required to participate. Some participation requires travel to a different hospital, city or state, and requires that patients consult with a new team of doctors at a time when they are already under considerable stress. Transportation, lodging, time off from work, and childcare costs can add to the financial burden that keeps some patients from participating in trials.

FORCE is focusing on the following actions to overcome these barriers.

Raise awareness and educate consumers
• Increase public awareness about national expert guidelines that identify qualifications for and potential benefits of genetic counseling and genetic testing.
• Educate the community about the importance of participating in HBOC-specific research.
• Empower patients to proactively seek out or ask their oncologist about clinical trials.

Engage stakeholders
• Unite and educate HBOC stakeholders to advocate for community involvement in every aspect of HBOC research development.
• Motivate and train the HBOC community to participate in panels, research review, and on advisory boards to represent community perspective in setting research priorities and developing and conducting studies.

Help patients find clinical trials
• Inform people about promising new, targeted agents and HBOC-specific research opportunities.
• Develop a user-friendly tool to help people find and filter clinical trial opportunities based on their specific information and situation.
• Train volunteers to help people navigate the search for clinical trials.
• Work with researchers and industry partners to develop and distribute patient-friendly websites and materials that can be shared with the HBOC community.

Inform health care policy
• Educate policymakers and regulatory agencies about challenges facing the HBOC community, and the need for expedited drug development, research, and approval.
• Activate the community to speak out on key policy issues that affect HBOC research.

Visit the FORCE website and follow our blog to learn more about how you can help advance HBOC research.

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To learn more about helping FORCE, visit www.facingourrisk.org/how_to_help.

This Joining FORCE newsletter was made possible by a generous grant from Genentech.

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., 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

FORCE Submits a Patient-Powered Research Network Grant

FORCE partnered with University of South Florida researchers to apply for a Patient-Powered Research Network Grant, funded by the Patient-Centered Outcomes Research Institute (PCORI). Authorized by Congress, PCORI's research is intended to give patients a better understanding of the prevention, treatment and care options available, and the science that supports those options.

Our proposal builds on FORCE's existing partnership as part of the American BRCA Outcomes and Utilization of Testing (ABOUT) Network, which has enrolled nearly 4,000 participants in long-term follow-up and uses patient-reported outcomes and information from medical records to provide a "real-world" view of care and outcomes in people who are pursuing BRCA testing. Looking forward, the goal is to ensure that the HBOC community participates at every level of the research process, from research design, identifying studies for our participation, and assessing the unmet research needs of our community. We will begin looking for survivors and previvors who wish to help us shape our research goals, participate in training, and volunteer for leadership roles in developing a hereditary cancer research agenda and plan.

If our grant request is funded (we should know in December), we will have additional resources to expand our network in the following ways: build a secure patient portal for online enrollment of anyone who is interested in participating, include a dedicated ABOUT Network Forum at the annual Joining Forces Conference, grow the FORCE Research Advocate Training Program, and create a biospecimen repository. Grant funds would also allow us to enhance our collaboration with other institutions, advocacy groups, and networks that are interested in patient empowerment.

Stay tuned for upcoming information on the ABOUT Network and how you can become more involved.

New Clinical Trials Search Tool Available Early 2014

Our new search tool will allow members to easily access and filter clinical trials that are specific to BRCA mutations and hereditary cancers. Users will be able to search for studies by phase of research, stage of cancer, intervention, or type of study—prevention, detection, risk, treatment and quality-of-life.