Supporting HOPE

Rays of Hope
Walk & Run Toward the Cure of Breast Cancer

A Newsletter of Baystate Health Foundation

NUMBER 46 | FALL 2021

Embrace the Power of PINK

The Rodriguez family comes together for a big pink hug.

Last year HOPE was never canceled but we did miss being with everyone at the Rays of Hope Walk & Run Toward the Cure of Breast Cancer. We were truly grateful that, in the midst of the pandemic last year, so many of you came together to support breast cancer patients and care in western Massachusetts. You helped us raise nearly $300,000 to support the Rays of Hope Center for Breast Cancer Research, hospital programs, and services and community programs.

"It was so heartwarming to see people at the drive-through event least year, especially the survivors," said Jackie Rodriguez, Co-Chair, Rays of Hope 2020/2021. "Al and I are so thankful the breast cancer community was cared for through your support."

This year, we will be meeting again in a hybrid format. We invite everyone to join us on October 24 at Temple Beth El in Springfield, MA, for a drive-thru Parade of Hope from 9 am to noon. We also encourage you to join us at noon at BaystateHealth.org/RaysOfHope for the Pink Celebration starting with photos and music by Noah Lis followed by a celebration program at 12:30 pm.

Participants are encouraged to get their steps in in their own neighborhoods, creating your own Rays of Hope walk or run, anywhere, any time. Every dollar raised stays local to support breast cancer research and services in western Massachusetts and we need your support, more than ever. There's still time to register at BaystateHealth.org/RaysofHope.

Drive-thru Parade of Hope

Sunday, October 24
9 am - 12 noon

Temple Beth El
979 Dickinson Street
Springfield, MA

Virtual Pink Celebration

Sunday, October 24
Beginning at 12 noon

BaystateHealth.org/RaysOfHope

For more information and to register to participate, visit **BaystateHealth.org/RaysofHope** *or email* **RaysofHope@BaystateHealth.org**.

For more information visit BaystateHealth.org/RaysOfHope

Chair's Message

Hi, everyone!

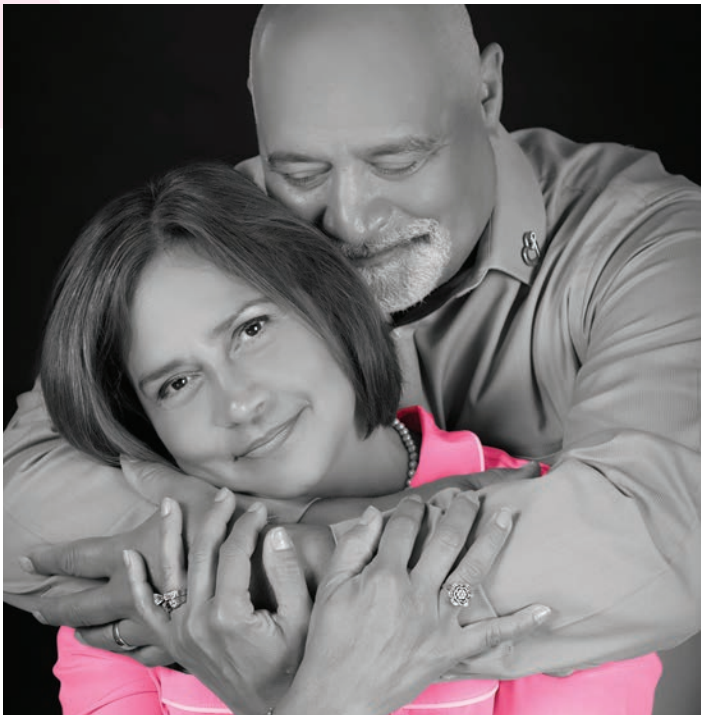
This is our last year as the first Hispanic couple to represent the Rays of Hope family as chairs. Despite the 2020 setback due to COVID, our journey has been an awesome one.

This year we are hoping to go out with a big pink celebration, we are hosting our very first golf tournament, Las Luchadoras Golf Classic, at the Agawam Country Club on October 16. It will be a great time and lots of fun with pink beverages.

However, our journey doesn't end here. Al and I have been committed to the cause for the past 11 years, when I was first diagnosed with breast cancer. We will continue to fundraise in hopes that someday a cure will be found to this horrible disease that has affected so many lives in so many ways.

We can all make a big difference and be a huge part of participating and donating to make a memorable year for every one of us. It's never too late to create your own individual or team to fundraise for Rays of Hope. It's an indescribable feeling to be a part of such an inspirational event that is held right here in our very own community.

Rays of Hope makes it easy to start your own online fundraiser so check out the DIY platform at BaystateHealth.org/RaysofHope. Let's show our talents and be creative!



Al and Jackie Rodriguez

We are looking forward to seeing you all on October 24 and welcome all new teams and individuals to be part of our great pink family.

Think huge pink hugs!

Jackie and Al Rodriguez

BIG THANKS TO OUR MAJOR SPONSORS

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22 News Springfield The CW

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Meet our BIG WIGS:

Kara Bombard

Kara Bombard and her family had been involved in the Rays of Hope Walk & Run Toward the Cure of Breast Cancer for many years, but in 2018 the event took on a whole new meaning when Kara's Mom, Jill, was diagnosed with breast cancer.

"My former cheerleading teams, both Holyoke Catholic High School and the semi-professional Lady Warriors, used to participate in the event on the sidelines cheering on the walkers and providing entertainment along the route," said Kara. "I was happy to continue this tradition as a coach with both the Holyoke High School and Chicopee Cheerleading programs."

The event became closer to her heart in 2018 when they began walking as Golden Strong, a team formed in honor of her Mom.

"We were overwhelmed with the love and support shown by our family and friends joining us in walking for a cure. My mother's strength has always been an inspiration to my sister Allison and I," Kara added. "Her selflessness in working to help others while fighting her own battle is truly a gift. In continuing to participate in the Rays of Hope event, I hope to provide a similar example to my own family – an example of charity, generosity and community."

Jill and Kara

Jill's diagnosis fueled an already existing passion in Kara to support Rays of Hope in its mission toward the cure of breast cancer. Her devotion to the cause kicked her amazing fundraising skills into high gear, which catapulted Kara to Rays of Hope BIG WIG status in both 2019 and 2020.

"I am honored to be a Rays of Hope BIG WIG. To me, this title represents the immense amounts of support our family has," said Kara.

"The generosity of friends and family has been a special experience over the past few years," added Kara. "My family and I are truly lucky to experience such an outpouring of love year after year."

Kara and her family enjoy attending the event each year and plan to continue their dedication toward the cure of breast cancer by participating again this year. She is also committed to setting an example of giving and charity to her two young children.

"I am proud to be a part of such a wonderful experience, and proud to set an example for my children Riley and Maya. I hope they see the impact this community has created and are willing to take up the mantle of charity as they get older and can make their own impact," said Kara.

Thank you, Kara, for your amazing dedication and fundraising skills! You are a humble inspiration to us all.

You too can become a Rays of Hope BIG WIG by fundraising $1,000 or more online. Become a Super BIG WIG by raising $3,000 or more online. For more information on becoming a Rays of Hope BIG WIG, call our office at 413-794-8001 or email us at RaysofHope@BaystateHealth.org.

Raise $1,000 - $2,999 ONLINE:

- **A bag** full of **Sweet Swag**
- **2021 collectors pin**
- **Recognition** in the spring edition of the Supporting Hope newsletter
- **Shout out** on our social media platforms
- **Bragging rights** to call yourself a Rays of Hope BIG WIG

ALL FUNDS MUST BE RAISED ONLINE BY OCTOBER 11, 2021

Rays of Hope BIG WIG

Raise $3,000 or more ONLINE:

- **ALL THE GOODIES ON THE LEFT AND...much more!**
- **Two Free Tickets** to the 2022 Springfield Thunderbird's Pink in the Rink event*
- **Yankee Candle Gift Basket**

Big Wig status is reserved for fundraisers who collect $1,000 or more online.

*pending event scheduling

Medical Update

Grace Makari-Judson, MD
Associate Medical Director, Cancer Services

Dr. Grace Makari-Judson

Despite this past year's focus on COVID-19 related research, oncologists at Baystate Regional Cancer Program have continued to enroll patients into cancer clinical trials. The opening of new studies slowed temporarily as we carefully balanced the extra demands of the past year with the ongoing desire to offer our patients the opportunity to receive cutting edge approaches to treatment.

The 2021 American Society of Clinical Oncology (ASCO) Annual Meeting was held in June and, like 2020, was a virtual meeting. Although disappointing to miss the personal exchange with colleagues from around the world, the meeting did not lack in content.

The blockbuster news from the event was the "**OlympiA**" trial, "Adjuvant Olaparib for Patients with BRCA1-or BRCA2-Mutated Breast Cancer." Before we venture into the details of this study, let's talk first about how far we have come in our knowledge of hereditary breast cancers. In 1994, the year of the first Rays of Hope walk, the BRCA1 gene was cloned, followed shortly thereafter by the cloning of BRCA2. In 1998, we gained better understanding of why a mutation in this gene pre-disposed to cancer. It was due to a defect in DNA repair, making the cells more susceptible to cancer. By 2005, this was further described as "synthetic lethality" meaning that if there is a defect in one gene, the cell doesn't die, but if there is a defect in the second copy, then the cell dies.

This led to the discovery of a new class of drugs to target this susceptibility. The drugs are called poly ADP-ribose polymerase (PARP) inhibitors. When a cancer cell lacking BRCA (i.e., one defect) comes against a medication (PARP inhibitor) causing a second defect, then the cancer cell dies. By 2009, the first clinical trials of this class of medications were started and in 2014, the first FDA approval of a PARP inhibitor was granted due to the survival benefit seen in individuals with BRCA-mutated metastatic ovarian cancer. In 2018, these drugs were approved in treatment of metastatic breast cancer. Other cancers in individuals who have a BRCA1 or BRCA2 mutations also respond to this class of drugs. In 2019 and 2020, approvals came for metastatic pancreatic cancer and metastatic prostate cancer, respectively.

From a testing perspective, we have been counseling individuals and providing testing for hereditary cancer syndromes for over 20 years. We started testing for BRCA1 and 2 but now offer broader, multigene panels to identify more individuals appropriate for risk reducing strategies and increased surveillance.

This 25-year journey brings us to 2021 and the ASCO meeting presentation of the **OlympiA** trial.

This international trial studied those with breast cancer who harbored a BRCA1 or BRCA2 mutation. These individuals represent only 5% of all newly diagnosed patients. The medication, olaparib (LYNPARZA™) is a pill that effects the repair mechanism of cancer cells to stop growth. In this study, high-risk patients with early stage breast cancer took olaparib or a placebo for one year. "High risk" was defined differently based on whether or not the tumor was estrogen receptor positive or negative and whether chemotherapy was given before or after surgery, dividing patients into four groups:

1. Those who had triple negative breast cancer, were treated with chemotherapy before surgery, and were found to have any residual cancer
2. Those who had triple negative cancer, were treated after surgery, and had tumors greater than 2 cm or lymph node involvement
3. Those who had estrogen receptor positive cancers with significant residual disease after surgery
4. Those who had estrogen receptor positive cancers treated after surgery and had more than four involved lymph nodes

The results were impressive. At three years, 86% of patients on olaparib were cancer free compared to 77% who were on placebo. There was an early trend toward improvement in survival, which will be important information with longer follow-up of study results. Side effects of the drug included mild nausea (57%) and anemia (9%). Rare patients required one blood transfusion over the year. The results of the OlympiA trial are practice changing.

We at Baystate Regional Cancer Program had this trial available and we screened patients for eligibility but did not have any patients that met enrollment criteria due to the select nature of the study. It highlights the fact that, although this is a less common occurrence, we don't want to miss anyone who might be eligible for this treatment—emphasizing the importance of germline (hereditary) genetic testing for women and men who meet the criteria.

This breakthrough underscores our focus on a personalized approach to the treatment of cancer. What a journey!

South Hadley Police Department Promotes Pink

Thanks to the generosity of their local community, the South Hadley Police Department has raised an amazing $1,335 for Rays of Hope. In an effort to raise breast cancer awareness and funds toward the cure, Sgt. Barry O'Connor and his dedicated crew sold Pink Patches for $10 each throughout the year.

"We chose Rays of Hope as the charity to benefit from the sales of our Pink Patch Project in an effort to help those locally who are fighting every day and to help fund the work toward finding a cure," Sgt. O'Connor shared. "One of our officers lost her mother to breast cancer six years ago and she has participated in several Rays of Hope events in honor of her mother."

Thank you to Sgt. O'Connor and the entire South Hadley Police Department for joining us in the fight against breast cancer!

South Hadley's pink patch

Host Your Own Fundraiser: Great2bHome

Laurie Walhovd, owner of Great2bHome Polish Pottery and Unique Gifts

Laurie Walhovd, owner of Great2bHome Polish Pottery and Unique Gifts, has been a long-time supporter of Rays of Hope and its mission toward the cure of breast cancer.

"I have three close family members who fought breast and uterine cancer, my mother and two of my aunts," shared Laurie. "It is important to me that research continue for breast cancer along with growing support for the many survivors."

Having breast cancer hit close to home is what motivated Laurie to host a third party fundraising event benefit for Rays of Hope.

Great2bhome launched its Pink Ribbon Polish Pottery for the Cure fundraiser last year. The business donated $5 for each piece of pink ribbon polish pottery sold as well as $5 for each of the 24" x 36" 'Ribbons of Hope' Great2bColorful coloring poster they sell. Thanks to the generosity of her customers, Laurie was able to make an amazing $855 donation toward the cure of breast cancer!

"I have not had to fight breast cancer, however many women around me have," said Laurie. "Their strength is tremendous and I can't help but feel inspired to continue the race for the cure."

Laurie and her staff are pleased to be continuing their campaign for 2021. This year they are offering three pink ribbon shapes, a soup mug, a flower vase and a sphere tea light candleholder. Half of the items will include pink ribbons and half will have the word "Faith" on them. The items with "Faith" painted on them are part of a Faith, Hope and Love collection, which began last year with Hope. Love will be featured on the 2022 design.

In addition to the polish pottery pieces, the store will also offer the Ribbons of Hope Great2bColorful Coloring Poster again with the same $5 donation per order.

"I have nothing but love and respect for breast cancer survivors and for the research and support provided to cancer survivors and their families," said Laurie. "We have come a long way toward a cure, but we can't stop until everyone can be cured and live a full life as a breast cancer survivor!"

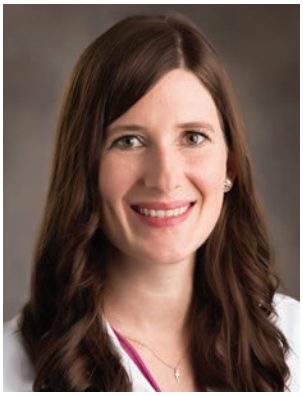
Handcrafted pottery from Great2bHome

If you would like to support Great2bhome's efforts toward the cure, you can visit their retail store located at Coopers Commons on 159 Main Street in Agawam or order online at Great2bHome.com for the Pink Ribbon Polish Pottery and Great2bColorful.com for the Ribbons of Hope Coloring Poster.

Huge thanks to Laurie and her staff for their continued support in the fight toward the cure for breast cancer!

If you are interested in hosting fundraiser for Rays of Hope, please visit our website at BaystateHealth.org/My-Fundraiser or call us at 413-794-8001.

Welcome Dr. Ann Fredrich



Dr. Ann Fredrich

The Baystate Breast Specialists practice is delighted to welcome Dr. Ann Friedrich as a new surgeon on the breast surgery team. Dr. Friedrich was born and raised in Germany and studied medicine at the Albert Ludwig University of Freiburg, Germany and University of Massachusetts Medical School in Worcester, MA. She joins the faculty as a breast surgeon after completing General Surgical Residency at Saint Mary's Hospital in Waterbury, CT, and Breast Surgical Oncology Fellowship at Yale University in New Haven, CT. Dr. Friedrich joined our practice in early June.

Dr. Friedrich brings with her an interest in outcomes research and survivorship challenges as well as an interest in surgical education. She is deeply committed to outstanding and compassionate surgical care in the treatment of breast cancer and breast diseases, and advocates for breast cancer care through a specialized multidisciplinary team approach. She is an active member of the American Society of Breast Surgeons and serves as a member of the Young Surgeon's committee. Life in the Pioneer Valley suits her well given her interest in hiking, swimming and botany.

We are also happy to announce that our first fellow in the University of Massachusetts Medical School-Baystate Breast Oncology Fellowship has arrived. The fellowship program elevates the academic nature of our program, highlighting the high quality of services that we provide and enhancing our opportunities to participate in research and education.

Sponsor Spotlight: Kinsley Power Systems

Corporate sponsorships play a large role in contributing to the overall funds raised each year in the local fight against breast cancer. For more than 20 years, Kinsley Power Systems has supported the Rays of Hope Walk & Run Toward the Cure of Breast Cancer by participating as a Gold Sponsor, supporting a Water Stop and also donating the use of a generator, which powers the October event.

"The event is a celebration of life and, of course, hope," shared Founder of the Kinsley Group, Ken Kinsley. "As a result, it's an incredibly uplifting experience. It's a good feeling to know that we're all lending support to a great organization and working toward a solution to a major health crisis in our community and world."

While the event is something the Kinsley team looks forward to each year, it also has a personal connection for Ken and his wife, Carol, who is a breast cancer survivor.

The Kinsley Power Systems team hits the pavement. From left to right: Linda Butler, Donna Leger, David Kinsley, Ken Kinsley, Seated - Bheema Kinsley

"The Kinsley Group has a company culture of community service. In that spirit, we offer a day of PTO to all Kinsley associates so they can give time to their charity of choice," said Ken. "Rays of Hope is one more way that our company can serve our community."

Many thanks to Ken, Carol, and everyone at Kinsley Power Systems for their continued dedication and support in the fight toward the cure of breast cancer!

Did you know that a Rays of Hope Corporate Sponsorship is 100% tax deductible?

For more information on how to become a Rays of Hope corporate sponsor, visit BaystateHealth.org/RaysofHope or call 413-794-8001.

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Young Hope - Hockey for Hope

Shout out to the Longmeadow Field Hockey Team and Booster Club for its generous donation toward hope! Over the last 10 years, the team has participated in a 'Play for the Cure' program where they've raised funds for cancer research and local breast cancer survivorship programs. Despite being unable to participate in the fundraising program due to COVID-19 restrictions last year, the team still felt strongly about making a $1,000 donation to Rays of Hope from funds they had previously raised.

The Longmeadow Field Hockey team rocking their pink jerseys.

"Traditionally we have a Play for the Pink game to honor or remember somebody from our close knit community," shared Varsity Coach Ann Simons. "The Longmeadow Field Hockey team along with its Booster Club is proud to continue its commitment to Rays of Hope by supporting the fight against breast cancer. We hope our contributions can make a difference."

Thank you to Coach Simons and her team for their continued support!

Looking for Peace of Mind?

Taking Care of Your Will Can Help

"When I completed my estate planning, I enjoyed great peace of mind. It is satisfying to know that my wishes and loved ones are taken care of," shared a new Baystate Health Foundation Legacy Society member.

So many friends of Baystate Health Foundation and Rays of Hope found relief this past year by making time to review their estate plans and think about what matters most.

"I realized I had not updated my will in twenty years. So much has changed since then. Spending the time to update it gave me comfort. I found I could support my family and the charities I care about, like Baystate Health Foundation," said another Baystate Health Foundation Legacy Society member

If you are like 60% of Americans who have put off their estate planning, please contact us for a free Will Guide or Guide to Updating Your Will to get started today.

Whatever the size of your estate, it is important to have a plan that will provide for the needs of your loved ones and honors your philanthropic passions.

We are here to help you enjoy peace of mind and make the impact you wish to make. **Reach out to Kylie Johnson at 413-794-7789 or Kylie.Johnson@BaystateHealth.org.**

Training the Next Generation of Breast Cancer Researchers

Sallie Schneider, MD
Director, Biospecimen Resource and Molecular Analysis Facility

This summer, three Springfield high school students from the Baystate Springfield Educational Partnership (BSEP) program participated in breast cancer research at the Pioneer Valley Life Sciences Institute/Baystate Research Facility. The six-week summer internship program, funded through the Massachusetts Life Sciences Center, provides one-on-one training in biomedical research techniques.

The students are each given a breast cancer related research question to address and taught the scientific techniques to obtain the answer. Examples of scientific topics included understanding how particular chemical exposures might alter tumor growth and testing for communication between different types of cells that might lead to worse prognosis for breast cancer. This program creates an active learning situation, which allows the student to build on the themes they learned in biology and apply them toward discovery.

The program has been evolving over the past 11 years to include a population of college students who are anxious for research experience as well.

"We have found that by incorporating near peer mentors, high school students are less afraid to ask questions," shared Sallie Schneider, PhD, scientist at Pioneer Valley Life Sciences Institute. "It also provides several opportunities for the high school students to hear from the undergraduates how they navigated the college application and financial aid process, as well as the first year of college and choice of majors and careers."

This year undergraduate mentors were chosen from the Elms College STEM internship program, the Baystate Summer Scholars Program, Lafayette College and the University of Massachusetts Environmental Health Summer Internship.

In the past two years, this program has expanded to incorporate science communication. It is often difficult for scientists to communicate to non-scientists about their research and its importance. Part of the problem is that scientific terms sound like a different language to those who haven't had a biology class recently. This frequently leads to confusion. Genesis Medina, a University of Massachusetts undergraduate from the School of Public Health, worked with the high school students to think about communicating their research findings. This summer the students took on the challenging task of animating a video, which can be viewed on Youtube at **https://youtu.be/XPyCJxv5Tuo**.

"The high school students identified by Peter Blain (BSEP director) were outstanding," said Schneider. "Hopefully this experience will help them to think about whether they might be interested in cancer research as an option in the future or whether they want to concentrate on interacting with patients in a more clinical setting."

Dr. Sallie Schneider

Providing novel opportunities during the summer for local students, especially in the field of breast cancer research, is a passion project for Schneider and Kelly Gregory, PhD, who is also a scientist at the Pioneer Valley Life Sciences Institute.

"It can be difficult to get into experiences that can catapult one into new or different opportunities. We strive to make this summer internship one of these valuable experiences," said Schneider.

RESEARCH UPDATE

PVLSI PIONEER VALLEY LIFE SCIENCES INSTITUTE
A Baystate Medical Center ■ UMass Amherst Research Partnership

Kelly Gregory, PhD

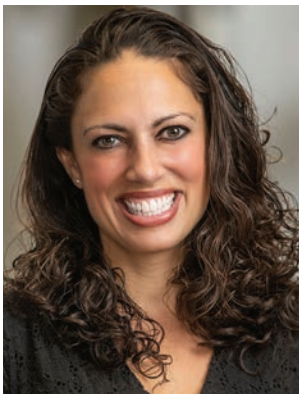
PIONEER VALLEY LIFE SCIENCES INSTITUTE

Of all cancers in women, breast cancer occurs most frequently. Worldwide, 1.7 million people will be diagnosed with breast cancer this year. In the United States alone, over 40,000 people will die from it.

My research interests are identifying and understanding changes required to cause the breast cancer development or the critical and potentially reversible changes that lead to metastatic growth of breast cancer.

Several years ago we used tissues donated by the Rays of Hope Breast Registry to look at the genes that were expressed in the early premalignant lesions and found that a secreted tumor suppressor protein called secreted frizzled-related protein (SFRP) was universally decreased in the tissues of women with these early pre-neoplastic lesions. This observation suggests that the level of this tumor suppressor may be a gate-keeper to control tumor growth. We have continued this research to understand how this tumor suppressor gene might regulate risk for developing cancer. We have also been trying to determine whether adding back this protein might be a potential therapy for preventing breast cancer or improving treatment options.

Our research has suggested that tumor cells themselves, as well as immune-related cells, may respond to this tumor suppressor protein. Macrophages are a type of white blood cell that help heal wounds in your body. If the foreign bacteria or viruses are detected, these cells send out alarms to activate the immune response in your body. The problem arises when these cells are around tumor cells. They can be changed in a way that helps the tumor growth. The macrophages can secrete signals that help the tumor to survive and move away from the primary tumor site to other parts of the body. My research suggests that this tumor suppressor may control the nefarious tumor promoting behaviors of the macrophage. This is important because preventing the macrophage from assisting the tumor to metastasize or become more aggressive would be a great step in improving treatment.



Dr. Kelly Gregory

I received a Research Pilot Award Program grant through Baystate Health last year and this is allowing me to test whether the addition of this protein can control the immune behavior and improve chemotherapeutic treatment.

Breastfeeding moms: Could eating more fruits and vegetables reduce your risk of breast cancer?

Help UMass researchers discover the answer by volunteering for the New Moms Wellness Study. The entire study can be done from the comfort of your home, with no face-to-face contact with researchers.

All participants will complete surveys and provide four samples of breast milk and infant stool. All participants will receive financial compensation for their time and free lactation consultation. Participants randomized to the intervention group will receive free weekly deliveries of fruits and vegetables, as well as telephone nutrition counseling.

If you are breastfeeding a baby fewer than six weeks old, or are pregnant and plan on breastfeeding, and live within 35 miles of Amherst, MA, please contact us for more information about the study at 413 545-1037 or visit our website https://blogs.umass.edu/newmomswellness/.

Diversity in Genes in Mice Provide Clues to Variation in Breast Cancer Risk

D. Joseph Jerry, PhD
Co-Director, Rays of Hope Center for Breast Cancer Research & Science Director, Pioneer Valley Life Sciences Institute

In 1994, the discovery of mutations in BRCA1 and BRCA2 genes provided new hope to understand who is at risk and how to prevent breast cancer. The normal forms of these proteins were shown to be critical for ensuring that breaks in our DNA are repaired faithfully. If we think of our DNA like roads, damage occurs and requires continual repair to maintain the smooth flow of traffic. Defects in BRCA1 and BRCA2 genes cause a failure of normal maintenance of repair and allow damage to DNA to accumulate leading to breast cancer. However, despite the passing of nearly 30 years, inherited mutations in specific genes account for only about 15% of breast cancers. So, what are we missing? How can we better predict who is at risk of breast cancer and how can we prevent it in these individuals?

Like people, rats and mice exhibit striking differences in the incidence of breast cancer. In a recent publication, researchers at UMass Amherst and Baystate Medical Center sought to identify why one strain of mice is highly susceptible to developing breast cancer while another strain is resistant (Majhi et al. 2021). Two strains of mice were mated with one another in a way that allowed the researchers to identify a region of DNA, referred to as the Suprmam1 locus, that predicted which mice would develop breast tumors. The Suprmam1 locus does not contain any of the genes that have been linked to breast cancer in women. However, the Suprmam1 locus was shown to affect the fidelity of DNA repair much like what occurs when there are mutations in BRCA1 or BRCA2 genes. These results expand the number of genes affecting breast cancer risk. It also reveals that faithful maintenance of DNA is an essential feature that contributes to breast cancer in rodents as well as humans.

The research groups at UMass Amherst and Baystate Medical Center are now working to translate these results to understand why there is such diversity in risk of breast cancer among women. They are harnessing the normal breast cell repository provided by donors participating in the Rays of Hope Breast Research Registry. These cells can be used to measure specific aspects of DNA repair and whether these distinguish the individuals who developed breast cancer from those who did not. Among the concerns for genetic tests of breast cancer risk is that the “meaning” of a particular difference in gene sequences can be modified by other genes. The other gene can reinforce or mitigate the effect of a particular alteration in a gene. This is of a special concern because genetic differences among racial and ethnic groups can greatly modify the effect of genetic variation on breast cancer susceptibility.

In contrast, a direct measure of the function of critical pathways, such as DNA repair, has the potential to provide a better test to determine breast cancer risk. It should also be possible to use the breast cells to screen drugs that may help restore proper maintenance of DNA in the cells of individuals who may be at risk.

Majhi PD, Griner NB, Mayfield JA, Compton S, Kane JJ, Baptiste TA, Dunphy KA, Roberts AL, Schneider SS, Savage EM, Patel D, Blackburn AC, Maurus KJ, Wiesmüller L, Jerry DJ (2021) Genetic modifiers regulating DNA replication and double-strand break repair are associated with differences in mammary tumors in mouse models of Li-Fraumeni syndrome. Oncogene (https://pubmed.ncbi.nlm.nih.gov/34183771/

Surviving and Thriving

Diane Lindeland

Diane Lindeland was first diagnosed with breast cancer in 2012 and then again in 2019. Throughout that time, her family, and her daughter's college Rugby team, have supported her by creating a Rays of Hope team in her honor and participating in the walk every year, rain or shine!

Diane courageously shares her breast cancer journey and what Rays of Hope means to her.

How old are you?

58

What town do you live in?

Feeding Hills, MA

Why do you participate in Rays of Hope?

My daughter participated in cancer walks prior to my diagnosis of breast cancer in 2012 and we wanted to give back to the local organization that helped me.

How long have you been a breast cancer survivor?

For nine years. My daughter continues to tell me that I will always be a survivor!

What is your team name? How did you come up with that name?

Our team name is Rugby Fights Cancer. When my daughter, Ashley, went to college, she played on the women's rugby team and the team members decided they wanted to support Ashley and I. After Ashley graduated college, we decided to keep the team name.

How many team members are there?

Over the years the number of members has changed. We have had as few as two members and as many as 20 members.

How do you fundraise as a team?

On social media. We have also had bake sales at Rugby games. We sell $1 and $5 cards for donations to support the team on which the donor writes their name and we hang them at a private club that we belong to.

Diane Lindeland, center, and her family.

How does supporting Rays of Hope and participating in the event make you feel?

We feel that we are making a difference by participating in a local event. It's always a very emotional day because we are all there for the same reason, and realize we are not alone.

Do you do anything special, before, after or during the walk?

We always go out to breakfast before or after the walk and always take our picture where the walk splits into two routes (2 miles or 5 miles). We love the music that we hear during the walk and always dance while walking. Last year after going through the drive-thru parade, we came home and walked our neighborhood with our shirts on with balloons and music playing!

How do you feel you have benefitted from Rays of Hope?

The ongoing research and resources that are offered benefit myself and my fellow survivors. Every person I have come in contact with at the D'Amour Center for Cancer Care has been wonderful caring people.

Is there anything else you would like to say?

Thank you to Rays of Hope for being such an amazing organization and running a well-organized event that I am proud to say that I support year after year.

Congratulations on your survivorship, Diane! Thanks to you and Team Rugby Fights Cancer for your continued support in the local fight toward the cure of breast cancer.

ROH Funds: *Raised LOCAL – Stay LOCAL!*

Rays of Hope
Baystate Health Foundation
280 Chestnut Street
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BaystateHealth.org/RaysOfHope

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Baystate Health Foundation | ADVANCING CARE. ENHANCING LIVES.

Supporting Hope Editors: Grace Makari-Judson, MD, Michelle Graci, Cait Roberts, Michelle Shattuck and Kathy Tobin. Editorial Consultants: Maureen Sullivan

RAYS OF HOPE 2021

Two ways to participate:

>> **1. Join us in your car** on Sunday, Oct. 24, at Temple Beth El for our drive-thru Parade of Hope.
>> **2. Do it your way** and walk or run ANY DAY, ANY TIME & ANY PLACE.

Register Online & Start Fundraising Today at BaystateHealth.org/RaysofHope

Survivor Photo - Send Us Your Photo Now!

Since we won't be able to gather together for the 2021 Survivors' Photo, please send us a photo of yourself and we'll create a collage to show on the pink Jumbotron.

Email your image to **RaysofHope@BaystateHealth.org.**

Tribute Flags - Send Us Names Now!

Send us one or two names you'd like us to write on the 2021 Tribute Flags for you. Email us at **RaysofHope@BaystateHealth.org.**