



Genetic Mutations *in* Ovarian Cancer

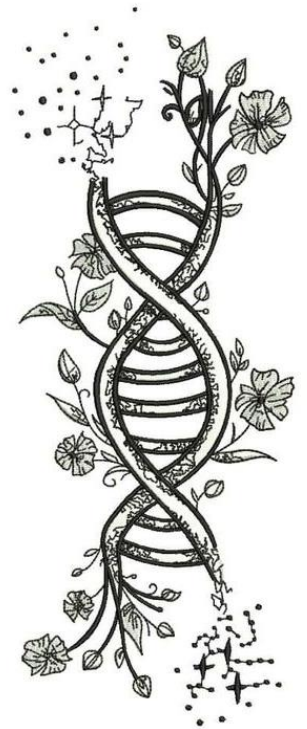
The following is taken, with permission, from the Ovarian Cancer Research Alliance Website

Ovarian cancer is a classification of several different types and subtypes of cancer that are found in the ovaries, some of which are considered hereditary. Though anyone with ovaries can develop ovarian cancer, there are certain risk factors that can make getting the disease more likely. One of the biggest known risk factors for ovarian cancer is the presence of specific genetic mutations that can be passed down from a mother or father.

While only about 5 – 10% of all cancers are linked to known inherited gene mutations, it is estimated that up to 25% of ovarian cancers are hereditary. Researchers are continuing to uncover additional genetic variations that may increase a person's risk of developing the disease. Knowing if you have ovarian cancer genetic markers is important, because there are preventative options, such as a risk-reducing salpingoophorectomy, available for those whose genetic mutations put them at high risk for ovarian cancer.

How do gene mutations cause cancer?

Genetic mutations can cause cancer by issuing faulty instructions for cells, resulting in abnormal, malignant cells that can grow, multiply and spread.



One to One is devoted to the on-going support of those newly diagnosed, those in remission and those in recurrence.

100% of contributions directly benefit our group by providing activities and paying for expenses.

*Donations are gratefully accepted and can be made by check payable to **One to One Ovarian Cancer Support Group***

*c/o Marilyn Brozovic
4793 Alton Dr.
Troy, MI 48085*

A receipt will be provided for tax purposes.

In order to understand how genetic mutations (also called genetic alterations) sometimes lead to cancer, it's helpful to have a basic understanding of the relationship between chromosomes, genes and DNA, and how they control the function of cells.

Every person is made up of trillions of cells. Each type of cell works to create and maintain specific parts of the body, but they all contain, at their core, the same basic set of instructions. The instructions live inside every cell's nucleus, on 23 pairs of chromosomes — one chromosome from each pair is inherited from the biological mother, and the other is from the biological father. Chromosomes are made up of DNA — long double-helix strands of chemical bases that serve as “code” making proteins in cells of the body. Individual sections of DNA strands associated with instructions for a particular protein are called genes.

Cells rely on proteins to transmit signals that regulate cell growth, division, and function. Sometimes genetic mutations can result in protein structure that impair a cell's ability to grow or divide or function normally. Uncontrolled growth of abnormal cells may develop into a cancer. Genetic mutations may be inherited (germline), and present in all cells of the body, or acquired (somatic), specifically in tumor cells. Both inherited and acquired gene mutations have been associated with cancer.

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BRCA1 and BRCA2 Genes

Mutations in BRCA1 or BRCA2 genes account for the majority of hereditary ovarian cancers, as well as 10% – 15% of all ovarian cancer diagnoses. An inherited BRCA mutation is sometimes referred to as hereditary breast and ovarian cancer syndrome (HBOC). A BRCA mutation can be inherited from a person's mother or father.

BRCA1 (BRCA1 Breast Cancer gene 1) and BRCA2 (BRCA2 Breast Cancer gene 2) are responsible for producing proteins that are meant to repair damaged DNA. These types of genes are sometimes referred to as "tumor suppressor" genes, because when they function well, they can repair damaged DNA and keep abnormal cell growth in check. When they are damaged, as with BRCA1 and BRCA2 mutations, they are unable to repair damaged DNA, which can lead to errors in proteins and possibly cancer.

In the general population, about 1.3% of women will develop ovarian cancer, but the risk is much higher for those with a harmful BRCA mutation. The lifetime risk for women with a BRCA1 mutation to develop ovarian cancer is an estimated 35% to 70%. The lifetime risk for women with a BRCA2 mutation to develop ovarian cancer by age 70 is an estimated 10% to 30%. Those with BRCA mutations are also significantly more likely to develop breast cancer, and are more likely to develop breast or ovarian cancer at a younger age than those without BRCA mutations.

Though BRCA mutations are most often associated with women's increased risk for breast and ovarian cancer, men are also at an elevated risk for developing male breast cancer, and transgender men are at risk as well. People with BRCA mutations are also more likely to develop some other cancers, such as prostate cancer, pancreatic cancer, and melanoma.

Women who carry a change in one of these genes have up to a 60% lifetime risk of developing ovarian cancer and up to an 85% lifetime risk of developing breast cancer. These cancers can also occur at ages much earlier than seen in the general population with some breast cancers being seen as early as the mid-20's.

OCRA offers free genetic test kits to those who qualify. For more information, visit the OCRA website: ocrahope.org



NewsFlash!

We're happy to announce that our *One to One* support group will be meeting back on the **Royal Oak Beaumont/Corewell Campus** beginning with our May 9th meeting. The meetings will be held at 4pm in the Cancer Center (3577 W. Thirteen Mile Rd., Royal Oak) on the second Thursday of the month.

Parking is available at the Neuroscience/Cancer Center parking lot.

Enter the Cancer Center building.

The classroom meeting space is down the hall on the left. We look forward to seeing you there!

Integrative Medicine Offers Support



Free live, virtual yoga therapy sessions focused on breathing, gentle movement, meditation, and comfort are being offered through the Corewell Health Integrative Medicine Department. Go to cheintegrativemedicine@corewellhealth.org or call **248-551-9888** to register for:

- Yoga therapy for pain management and mental health;
- Yoga therapy for posture and balance;
- or Yoga therapy for cardiovascular and neurological health.

Supportive care art series for oncology patients are also being offered at the Wilson Cancer Resource Center. Classes are held monthly in a small group setting. For project details and to register, please call Lorna at **248-964-5892**.



Our annual Girls' Get-Away Weekend will be held **November 22-24** this year.

Please put the date on your calendar and plan for a wonderful weekend of laughter, fun and camaraderie as we once again spend a weekend together at the beautiful **Capuchin Retreat Center** in Washington, Michigan. This weekend will give you the time needed to relax and unwind before gearing up for the coming holidays. Hope to see you there!



PROFILE IN

Courage



By Marcia Gurche

Janet Crain joined our *One to One* group via the back door so to speak. Janet began attending our annual retreats and our holiday luncheons and fundraisers as a guest of **Genny Beaudrie**, who she had been close friends with for many years. We already considered her a member of our group, but then in 2014 the unspeakable happened when Janet was diagnosed with uterine cancer. Even though Janet had been surrounded for years by women from the support group who had been through cancer diagnoses and numerous treatments, her own diagnosis was still daunting. Fortunately, Janet had a close group of friends, including Genny, who rallied around her to offer support and care as she recuperated from surgery. Janet feels blessed to be cancer free to this day and to be a legitimate *One to One* member, even though we felt she was one from the moment we met her.



Janet was born and raised in River Rouge by a single mother, **Rosalie**. She and her mom had a very close relationship since it was just the two of them for much of Janet's life. Rosalie worked hard as a bookkeeper at a local bank to provide for Janet, and she prioritized sending her to parochial school for her entire elementary and high school years. Upon graduating from Our Lady of Lourdes High School, Janet got a job at Blue Cross Blue Shield where she worked for her entire career. She started there as a "Detacher" – preparing the claims forms so that they could go through the microfilm machines cleanly, making \$1.83 an hour. She worked a variety of jobs over the forty-one years that she was employed with BCBS, and she was a unit leader in Corporate Recovery when she was offered a buyout in 2007.

After living most of her life in River Rouge, Janet got the urge to own her own home, so she purchased a house in Taylor and asked her mom to move in with her. They enjoyed their times together and shared many fun trips to places like California and Hawaii. They especially loved going to Disney World, where they became very proficient at navigating the parks and entire Disney system with Rosalie in a wheelchair. Rosalie passed away in 2007 at the age of 87.



Janet likes to be busy and she has been bowling on a league at a small bowling alley in Wyandotte called Biddle Bowl for over 50 years. She has met many good friends through the league and has enjoyed a lot of great times with them over the years. While she says her average is not quite as high as it used to be due to her bad knees, she still manages to hold her own.




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Janet's faith is extremely important to her, and she has always been involved in her church. When her parish, Our Lady of Lourdes closed, she was devastated. While searching for a new home parish she was invited to an event at St. Joe's in Wyandotte. She was assured by the friend who invited her that she would like the people there. As if by divine intervention, the lady at the door selling tickets was named Rosalie – like Janet's mom. She and Janet became fast friends and have remained close ever since.

Janet immersed herself in St. Joe's, just as she did at her previous parish, and she is a Eucharistic Minister and helps with the altar servers. She feels so fortunate to have met wonderful friends there and many of them have become traveling companions. Their former pastor, Father Mike, who unfortunately has passed away, loved to travel, and would organize trips for those who were interested. They traveled to the British Isles, Germany, and Austria and took a cruise up the Danube. One trip was especially memorable – they traveled to Ireland, arranged by Fr. Mike, who handpicked those he wanted to accompany him. It was filled with wonderful memories for all of them.

Janet and Genny's friendship goes back more years than they can count. It was Genny who got Janet started teaching catechism at Our Lady of Lourdes. They both sang in the choir and have worked on numerous church activities together. Genny was there for Janet during her surgery and they have traveled together on occasion. They have a friendship that is special and enduring.

Some things are just meant to be, and we feel that Janet was just meant to be one of our Teal Sisters. She fits our group like a glove. We regret she had to experience a cancer diagnosis; however, we are grateful that she felt comfortable enough to stay with us and let us get to know her. Janet has a lot to give and to share.


It would not be a *One to One* activity without Janet! 



HAPPY SURVIVORSary

May

Genny Beaudrie	29 yrs!
Letha Williams	24
Gail Bidinger	11
Barbara Blakemore	7
Paula Smith	4
Shani Lewins	2



HAPPY SURVIVORSary

June

Peggy Moroney	21 yrs!
Marcie Paul	15
Leana Lee	14
Lori Doggett	13
Stephanie Brown	7
Elise Kapelanski	7
Nina Hamilton	2

NOTE!

meeting change!



I wish I could drop my body off at the gym and pick it up when it's ready.

Group meetings will now be held at
4 pm on the 2nd Thursday of the month
 in the **Cancer Center**
 (3577 W. Thirteen Mile Rd., Royal Oak).
 Parking is available at the
Neuroscience/Cancer Center parking lot
 Enter the Cancer Center building.
 The classroom meeting space is
 down the hall on the left.
*You are welcome to join us for dinner
 following the meeting
 at The Avenue Restaurant, located on
 Woodward just north of 13 Mile.*

May 9
June 13
July 11

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Newsletter information is presented in summary form, is general in nature and provided for informational purposes only. It is not intended in any way to be a substitute for professional medical advice, diagnosis or treatment.

- Objectives of support group:**
- ✦ *Provide a forum for ovarian cancer patients to address concerns;*
 - ✦ *Support each other through initial treatment phase, during potential recurrence, and with issues related to long term survival;*
 - ✦ *Establish core group of survivors willing to visit newly diagnosed patients;*
 - ✦ *Increase awareness of ovarian cancer, including its symptoms and risk factors, in the hope of achieving earlier detection and treatment.*

