What are you the most proud of?
What I am most proud of is having created a department in which everyone involved, at every level, is committed to advancing our knowledge of cancer genetics in order to serve our patients and to prevent cancer. I am certain that because of our work, there are people alive and well who would otherwise have died from cancer.

Continued on page 2
How do you see our program in another 27 years?
In 27 years, I see the Department of Clinical Genetics as the first stop for all of our FCCC patients to determine their genetic profiles, their family’s genetic risk, the genetics of their cancer, and their tailored prevention and/or treatment options. I also see our presence in the broader community to educate the public, to share genetic risk information and to provide genetic services.

Although Dr. Daly is stepping down from her position as chair, she remains at Fox Chase to continue seeing patients and to provide leadership for the department’s numerous research projects.

Dr. Michael Hall came to Fox Chase in 2008 to direct the GI Tumor Risk Assessment Program. Recently named one of America’s Top Doctors by Castle Connolly, he focuses his research and clinical work on cancers of the gastrointestinal tract as well as risk assessment for gastrointestinal, endocrine, and genitourinary cancers. His high energy personality and caring, compassionate nature are appreciated by the GI patients under his care. He strives to understand the personal needs of his patients as he works to provide the best cutting edge treatment for their cancer. The RAP staff enjoys his great sense of humor and fun as we work to help our patients learn more about their genetic risk for cancer.

• Dr. Hall was responsible for implementing universal tumor screening of colon and endometrial cancer patients for Lynch syndrome at Fox Chase over seven years ago, long before it became the standard of care.
• Dr. Hall is highly respected for his mentorship of pre- and post-doctoral students, many of whom have gone on to publish scientific papers and to seek academic careers.
• Dr. Hall is a president elect of the Collaborative Group of the Americas on Inherited Colorectal Cancer [CGA]. CGA was established to improve understanding of the basic science of inherited colorectal cancer and the clinical management of affected families by rare syndromes.

What are you excited about as a chair of Clinical Genetics?
I am very excited to see our program continue to grow its clinical and research impact at FCCC and nationally. We have just recruited a new genetic counselor, taking our team to four counselors and one nurse counselor. As of January 1, we also have welcomed Kathryn Tumelty, nurse practitioner into our department as our third NP seeing high risk breast and ovary patients. Finally, we are actively recruiting a new physician this spring and hopefully a primarily research-based investigator in the next 1-2 years. On the research side, we continue to grow our collaborations and research portfolio in breast-ovary [Dr. Daly], prostate and breast [Dr. Obeid], and GI [Dr. Hall]. It is a period of rapid growth. I’d like to see us grow our academic and industry collaborations and to see other Fox Chase physicians and investigators use the data from the RAP program to maximize the novel ideas and research we can generate as a group.

How do you see our program in another 27 years?
In 27 years I strongly suspect that almost everyone at some point in young adulthood (25-30 years old) will get a hereditary genomic profile that will help guide their doctors in managing cancer and other disease risks. I see our role as helping interpret these multi-gene tests results and also in helping to guide people who have strong family history but without a clearly positive test.

We congratulate Dr. Hall on his new appointment as an interim chair and look forward to him leading the department into the future.

WELCOME ABOARD!

Alison Conn has joined our department as Administrative Operations Manager. She will work closely with the Department Chair, Dr. Michael Hall to help plan and develop strategies to promote financial growth of the Department of Clinical Genetics. Alison has been at Fox Chase for 10 years. Previously, she worked with Dr. Wafik El-Deiry, supporting his Translational Research practice and also worked with other physicians from the Department of Hematology/Oncology. The Risk Assessment Program welcomes Alison to our staff.
Prevalence of Germline Mutations among Patients Younger than 50 years old with Colorectal Cancer

- Colorectal cancer (CRC) is the third most common cancer diagnosed in the United States
- 10% of patients with CRC are diagnosed when they are younger than 50 years old
- Early-onset (younger than 50 years old) colorectal cancer may suggest inherited cancer predisposition
- Lynch syndrome, caused by germline mutations in the mismatch repair (MMR) genes MLH1, MSH2, MSH6 and PMS2, or EPCAM, is the most common known cause of hereditary CRC
- Patients with abnormal tumor test results are more likely to have Lynch syndrome
- Professional guidelines recommend all patients with CRC (regardless of age) have their tumor screened for Lynch syndrome, with a referral to genetic counseling for those with abnormal test results. Abnormal tumor test results do not always indicate hereditary risk
- All patients with CRC diagnosed younger than 50 years old should consider genetic testing for Lynch syndrome and other genetic risks

A group of investigators from Ohio (Ohio Colorectal Cancer Prevention Initiative) has published results from their recent study in JAMA Oncology.

450 patients from 51 hospitals diagnosed with colorectal cancer younger than 50 years old underwent tumor testing and genetic testing for 25 cancer susceptibility genes. Overall, 74 gene mutations were found in 72 patients (16% or in 1 of every 6 patients).

36 patients (8%) had Lynch syndrome only; 2 patients (0.4%) had Lynch syndrome and another hereditary cancer syndrome; 34 patients (7.6%) had different hereditary cancer syndromes.

Most of the detected mutations were in genes associated with increased risk of colorectal cancer. However, 13 of 72 patients (18.1%) had mutations in genes that affect their cancer risk for breast, ovarian, prostate and other cancers but are not traditionally associated with colorectal cancer: ATM (3); ATM/CHEK2 (1); BRCA1(2); BRCA2 (4); CDKN2A (1); and PALB2 (2). Notably, 6 patients had mutations in BRCA1/2 known to cause hereditary breast–ovarian cancer syndrome (HBOC).

Genetic testing with a 25-gene panel found mutations in patients that may have otherwise been missed, as 24 of 72 positive tested patients did not meet testing criteria for the gene in which they had a mutation.

While it is important to continue tumor screening for Lynch syndrome for all patients with CRC for treatment purposes, genetic counseling and testing with a multigene panel should be considered for all patients with early-onset CRC due to their high prevalence of hereditary cancer syndromes.

Read the original article at: https://jamanetwork.com/journals/jamaoncology/article-abstract/2593042
Why it is important to address sexual concerns in cancer patients?
Many people live with some type of chronic issue after surviving cancer, ranging from pain to fatigue to issues with sexual function. Cancer patients have unique needs when it comes to sex, as treatments can leave a lasting impact on a person’s ability to resume a healthy sex life, even after treatment is behind them.

Approximately half of women treated for cancer report cancer-related sexual concerns. Common problems include vaginal dryness, discomfort during intercourse, decreased sexual interest, body image distress, loss of femininity, and concerns such as losing intimacy and sexual activity. Women who are single may feel reluctant to start dating again if they have had changes to their bodies they do not feel good about.

Sexual problems are not limited to women with breast or gynecologic cancer diagnoses. They are common and distressing for women diagnosed with a range of different cancers. The kinds of sexual concerns depend on the type of treatments women receive for their cancer.

Women who have had surgeries that alter their bodies or the way their bodies function may have negative feelings about their bodies. This may make them less likely to want to engage in sex. Women may experience sexual problems if they have lost certain body parts or lost sensation or feeling in certain body parts that are important for sexual arousal, such as in the breasts or genitals. Loss of interest for sex is one of the most common types of sexual problems that women experience after cancer.

Unfortunately, for many women, sexual problems after cancer may not get better on their own. If they are not addressed, this could lead to long-term sexual and psychological distress and negatively affect a woman’s relationship with a partner or her likelihood of seeking out a relationship.

How should I start a conversation about sexual concerns with a physician?
If you are dealing with some of these concerns, it is important to get help. One way to do this is to bring this up with your cancer team.

Your cancer physician wants to help not only cure or treat your cancer, but also support you as a person. Cancer doctors should know about the sexual side effects of the treatments they are giving their patients, because if concerns are not addressed, patients can potentially compromise cancer treatment or prevention efforts.

For example, women who are using hormonal therapies (estrogen-reducing medications) to treat their breast cancers or reduce their risk of recurrence sometimes report that they do not take these medications as they are supposed to because of the side effects they experience. Similarly, women who carry hereditary cancer mutation in BRCA1/2 genes that increase risk for breast and ovarian cancer, may delay or ignore recommendations for preventive surgeries because of concerns about sexual side effects.

Raising the topic of sexual health with your physician might be uncomfortable, but very important. Think of your sexual concern as just another type of physical or emotional problem you want information on or help with.

For instance, do you need information on whether sexual activity is safe while you’re undergoing a medical procedure or treatment? Do you want information on what to use to treat a sexual side effect you’ve noticed from a treatment, such as vaginal dryness or discomfort? Are you hoping to receive a referral to a specialist because you’ve tried several options to deal with a problem and they haven’t worked?

In our research, we find that both clinicians and patients seem to do well when sex is discussed directly, rather than indirectly. This means that if you are experiencing vaginal dryness, it is better to say something like, “I have been having vaginal dryness since I started this medication. What can I do about it?” rather than, “Things are just not the same ‘down there.’” If you are clear and direct, this will help your clinician know how to help you.
**What kind of help is available today to women with sexual concerns?**

There has been incredible progress in research on the kinds of treatments that can be used to help women who have sexual problems after cancer. For instance, cognitive behavioral therapy has been shown to be helpful at improving sexual function for partnered breast cancer survivors who have sexual dysfunction.

If you are looking for help on the internet, a good place to start is the American Cancer Society website; particularly the section called Sex and the Woman With Cancer: [https://www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/fertility-and-sexual-side-effects/sexuality-for-women-with-cancer.html](https://www.cancer.org/treatment/treatments-and-side-effects/physical-side-effects/fertility-and-sexual-side-effects/sexuality-for-women-with-cancer.html).

At Fox Chase, there is the Menopausal and Sexual Health Clinic, which includes expert clinicians. These clinicians maintain lists of outside therapists who can help too. [https://www.foxchase.org/womens-menopausal-and-sexual-health-program](https://www.foxchase.org/womens-menopausal-and-sexual-health-program)

It may be important to have a multi-disciplinary team to fully address some women’s sexual problems and help them regain sexual quality of life. That means that this may involve clinicians with expertise in different areas, such as gynecology, oncology, psychology or social work, marital/couple therapy, or sex therapy.

Cancer is a major life-changing event. It is natural that it will affect your sexual health or relationship. Try to be patient with yourself as you find your “new normal.”

You can enjoy sex and intimacy again – just maybe in different ways than before. Keeping an open mind and communicating with your partner, if you have one, can help in this journey.

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**MELANOMA IS A RISK IN ANY SEASON**

Melanoma is a cancer that begins in the melanocyte cells that make a brown pigment called melanin, which gives the skin its tan or brown color. Melanin protects the deeper layers of the skin from some of the harmful effects of the sun. Melanomas can develop anywhere on the skin, but they are more likely to start on the trunk (chest and back) in men and on the legs in women. The neck and face are other common sites.

**RISK FACTORS**

- Exposure to ultraviolet (UV) rays is a major risk factor for most melanomas. Sunlight is the main source of UV rays. Tanning beds and sun lamps are also sources of UV rays.
- A mole (also known as a nevus) is a benign (non-cancerous) pigmented tumor. Most moles will never cause any problems, but someone who has many moles is more likely to develop melanoma.
- The risk of melanoma is much higher for Caucasians than for African Americans. Caucasians with red or blond hair, blue or green eyes, or fair skin that freckles or burns easily are at increased risk.
- Family history. Your risk of melanoma is higher if one or more of your first-degree relatives (parents, brothers, sisters, or children) has had melanoma.

**PREVENTION**

- Limit your sun exposure
- Avoid using tanning beds
- Use sunscreen at least 30 SPF (sun protection factor), as recommended by Dr. Jeffrey M. Farma, surgical oncologist at Fox Chase Cancer Center. “When outdoors in any season—UV rays reflect off snow, sand and water—cover all exposed skin with sunscreen, and reapply every two to three hours”.
- Watch for abnormal moles to spot a melanoma.

Dr. Farma suggests using the first five letters of the alphabet when looking at any of your moles:

A – Asymmetrical. Does one side not match the other?
B – Borders. Does it have irregular or blurred borders?
C – Color. Is the color of the mole not the same all over?
D – Diameter. Is it larger than 1/4 inch across?
E – Evolving. Is a mole changing or growing? Is it itching or bleeding?

“Any of these changes would be concerning,” Dr. Farma says.

- Get a skin checkup by a physician every year or two.
  “The earlier we identify a problem, the easier it is to treat. That’s why screening is so crucial”, says Dr. Farma.
FOCUS ON  Sue Montgomery, Genetic Nurse Navigator

What is your role as Genetic Nurse Navigator in the Risk Assessment Program (RAP)?

As Nurse Navigator, I work in our breast/ovary and prostate high risk clinics with Dr. Daly and Dr. Obeid. I see patients that have a family history of cancer and/or have a genetic mutation that makes them at a higher risk to develop cancer. Our team follows these patients closely with a physical exam, imaging, and bloodwork if appropriate, either every 6 months or yearly. Also, we offer them an opportunity to participate in clinical trials and research studies looking at new approaches for early detection and risk reduction. Many of our families have been in our program for over 20 years.

In addition, as a genetic nurse navigator, I assist our genetic team in providing genetic counseling and testing to our patients. I often see patients who have recently been diagnosed with cancer and help them make decisions about genetic testing.

Have you worked with our research participants?

I have worked on several research studies over the years in RAP. One study helped to develop ways for families to communicate genetic test results. Another study joined with multiple cancer research centers to look at markers that might help detect ovarian cancer. Recently, I worked on a study to identify genes related to prostate cancer.

We have been very fortunate to have Sue Montgomery in our Risk Assessment Program. She joined our staff over 20 years ago and continues to be an important part of the Clinical Genetics team. Sue’s compassion, knowledge, and kindness help our patients navigate the world of genetics and cancer risk.

“I have worked at Fox Chase for my entire nursing career,” Sue says. “My passion is patient care.”

PROSTATE CANCER NCCN GUIDELINES UPDATE

The National Comprehensive Cancer Network (NCCN) recently updated the guidelines for personalized risk assessment, genetic counseling and genetic testing for men with prostate cancer.

- Personal history of high-grade prostate cancer (Gleason score 7 or higher) at any age with 1 close blood relative with ovarian carcinoma at any age or breast cancer younger than 50 or two relatives with breast, pancreatic, or prostate cancer (Gleason score 7 or higher or metastatic) at any age.
- Personal history of metastatic prostate cancer (radiographic evidence or biopsy-proven)

The Risk Assessment Program at Fox Chase is available to speak with you about genetic testing and/or counseling.

AMERICAN CANCER SOCIETY AWARD

African American men have the highest rates of Prostate Cancer (PCa) diagnosis compared to men from other races. They also experience the highest rates of aggressive PCas and poor outcomes from their disease. It is possible that genomic changes contribute to these results.

Dr. Elias Obeid received an American Cancer Society Institutional Research Special Interest Award for his project titled: “Utilizing innovative information technology to portray the genomic alterations of prostate cancers in African American men and assess their perceptions of test results”. This new study will recruit men with prostate cancer both localized and metastatic from our clinics at Fox Chase Cancer Center and at Temple University. The research team will use the participant’s prostate cancer tumor to look for genomic alterations (changes) that could help with medical management of their disease. Participants will complete several surveys at different time points assessing their perception and knowledge of genomic testing, so that we can better address their needs and concerns.

Elias Obeid, MD, MPH
Director, Prostate Cancer Risk

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Lauren Peters, RD, CSO, LDN, a registered Dietitian at Fox Chase Cancer Center and a Certified Specialist in Oncology Nutrition answers common questions she gets asked about how your diet might affect your ability to beat the disease.

Do I need to avoid soy foods if I have an estrogen-related cancer?

No. You may be concerned about soy’s safety because you’ve heard it contains phytoestrogens—or plant estrogens. “But phytoestrogens and the female hormone estrogen in your body are not the same thing,” Peters said. “So don’t let the word ‘estrogen’ confuse or worry you.”

Soy foods are a safe, healthy option even if you have a hormonally sensitive cancer that grows in response to estrogen, such as estrogen-receptor-positive breast cancer, uterine (endometrial) cancer, or ovarian cancer, Peters emphasized.

For women with breast cancer, some studies suggest that soy foods are more than safe—they may actually help prevent breast cancer from coming back.

Most of the research on soy’s safety is focused on foods, not supplements. So it’s best to enjoy up to two servings a day of whole soy foods, such as tofu, soy nuts, edamame, and soy milk.

Read the full article “5 Common Questions About Nutrition During Cancer Treatment” at www.FoxChase.org

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Zucchini and Onion Frittata

Protein-rich eggs and fresh, seasonal vegetables are the secret to this healthy frittata. Well-known in the Mediterranean diet, the frittata can be enriched with any seasonal vegetables and cheeses to create your own personal recipe. This one features fresh zucchini, a good source of vitamin A and C along with some fiber and potassium.

Ingredients:

- Cooking spray, preferably olive oil
- 1/2 cup finely chopped onion
- 1 tsp. finely chopped garlic
- 8 oz. zucchini (1 medium), cut into 1/8-inch rounds
- 4 large eggs
- 2 large egg whites
- 2 Tbsp. grated Parmesan cheese
- 1/2 tsp. salt
- Ground black pepper
- 1/4 cup fresh basil, cut cross-wise into thin slices
- 1 Tbsp. extra virgin olive oil

Coat large skillet with cooking spray and set over medium-high heat. Sauté onion until golden, 3-4 minutes. Mix in garlic and cook 1-2 minutes, until onion is lightly browned. Transfer contents of skillet to plate to cool.

Coat skillet again with cooking spray and return to heat. Using tongs, spread and turn zucchini to brown slices on both sides, 8-10 minutes. Add to onion mixture. Wipe out skillet.

In mixing bowl, whisk eggs and whites until well combined. Mix in cheese, salt and pepper. Add vegetables and basil, and mix with fork to combine with eggs.

Add oil to skillet and tilt to swirl oil around sides. Set over medium-high heat. Pour in egg mixture, spreading zucchini and onion in an even layer. As eggs start to set, use wide spatula to lift frittata around edges while tilting skillet slightly so liquid egg flows out and under the edges. Cook until frittata is brown on bottom and set except in center, about 8 minutes. Off heat, invert large plate over skillet. Pressing it firmly in place against the skillet, invert the two so frittata falls from pan onto plate. Slide frittata back into skillet and cook to lightly brown bottom, 1-2 minutes longer. Slide frittata onto serving plate. Serve immediately, or cool frittata to room temperature before serving. This frittata also can be covered and refrigerated overnight. Cut into wedges, and serve.

Makes 4 Servings

Per serving: 138 calories, 9 g fat (2 g sat fat), 5 g carbohydrate, 9 g protein, 1 g fiber, 419 mg sodium.

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The Department of Clinical Genetics offers one of the most comprehensive risk assessment programs in the Philadelphia region. It encompasses all of Fox Chase Cancer Center’s clinical services for people at risk for cancer, as well as innovative research in the areas of cancer prevention and genetics.

SHARE YOUR STORY- 2018 CODE TALKER AWARD
CALL FOR ENTRIES

Genome magazine wants you to share your story! It is now accepting essays for the 2018 Code Talker Award.

Tell how your genetic counselor impacted your healthcare decision — or those of a loved one — and your genetic counselor might just win the Code Talker Award!

The genetic counselors who are named as finalists, the essayists who nominated them, plus one guest each, will receive round-trip airfare and a two-night stay in Atlanta, Georgia, where they will be honored at a reception during the NSGC’s Annual Education Conference in November 2018. One of the three finalists will receive the 2018 Code Talker Award.

Read more about contest at: 
http://genomemaq.com/codetalker/

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