2019 ANNUAL REPORT

HSHS St. John's Cancer Center

Commission on Cancer

DIRECTORY

For more information about cancer services and programs at HSHS St. John's Hospital, call **(217) 544-6464**. Extensions are below.

St. John's Cancer Center can also be reached by calling (217) 525-5640 or by visiting www.st-johns.org.

Extension numbers

Interim Director of Oncology Services 44787
Megan Strohm

Medical Oncology 55640

Radiation Therapy 55666

Infusion Unit 45395

Oncology Unit Nurse Manager 47501
Shauna Campo, RN

Chief Nursing Officer 44572
Allison Paul, DNP, RN, NEA-RC

Nurse Navigator 45591
Diana Weyhenmeyer, RN, MA, OCN, MSN

Cancer Registry
Renea Oller 45362

The Mammography Center 535-3795

Social Work Services 45095

Spiritual Care 55675

CANCER COMMITTEE

HSHS St. John's Cancer Committee monitors the cancer program and recommends changes on various aspects of the expanding program. Representatives from all medical specialties are involved in the treatment and care of St. John's cancer patients.

2019 Cancer Committee Members

Michael Payne, MD - Cancer Liaison Physician

Hui Zhang, MD - Committee Chair

Rajesh Bande, MD - Medical Oncologist

Michael Payne, MD - Radiation Oncologist

Onsi Kamel, MD - Pathologist

Shawn Mayer, MD - Radiologists

Tamra Davidson, R.Ph - Pharmacist

Megan Strohm, RN - Interim Director of Oncology Services

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- Community Outreach Coordinator/Nurse Navigator

Shauna Campo, RN - Oncology Nurse Manager

Matt Yarnell - Quality and Risk Management

Johnna Hall, RN and Dr. Fareed Mardani
- Palliative Care Nurse Coordinators

Renea Oller, CTR, RT (R)(T) - Cancer Registrar

Faith Grab - Social Work/Case Management

Cindy Sturgis, RN - Nurse Educator

Patricia Fank (SIU) and Michelle Gates (SIU)
- Psycho-Oncology

Natalie Kocks - Dietitian

Linda Schultz - American Cancer Society

Dan Groepper, CGC (SIU) - Genetic Counselor

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Gina Thomas, MS, CCC-SLP - Rehabilitation Services

JoEllen Eldridge - Research/Clinical Research

WELCOME TO HSHS ST. JOHN'S HOSPITAL

Megan Strohm, RN

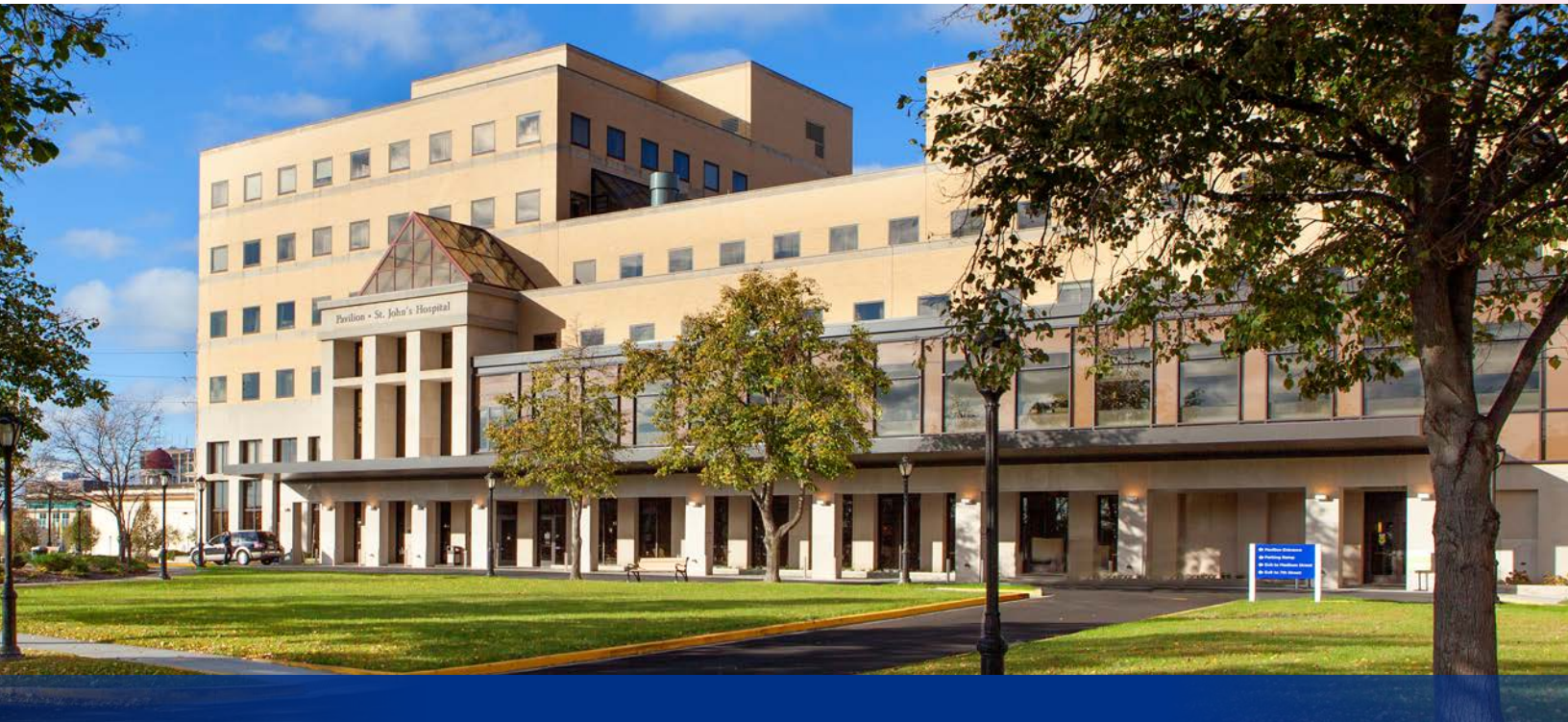
Interim Director,
Oncology Services
HSHS St. John's Hospital
Cancer Center

Many people get diagnosed with cancer every year and HSHS St. John's Hospital has powerful oncology resources in place to prevent and fight cancer. St. John's Hospital is a recognized cancer center accredited by the American College of Surgeons Commission on Cancer. The cancer center continues to grow to better serve the people of central Illinois.

The cancer center was part of St. John's Hospital's new clinical collaboration with Springfield Clinic which began in October 2019. Oncologists from Springfield Clinic now practice at our hospital. Also new this year was the addition of a linear accelerator in radiation oncology to expand treatment options.

The center increased access to low dose CT screening for lung cancer and along with other community groups, offered numerous prevention and screening programs to the community. St. John's also continues to participate in the Relay for Life, Komen Foundation's Race for the Cure and Making Strides for Breast Cancer Walk.

We would like to thank the physicians, nurses and support staff who provide high quality, patient-centered care in a safe environment. Thank you to the physician partners and leaders for their continued support of the oncology program, and most importantly, thank you to our patients and their families for allowing us the honor and privilege of caring for you and your family members.



Diana Weyhenmeyer
RN, MSN, MA, OCN
Oncology Nurse Navigator
HSHS St. John's Hospital

2019 COMMUNITY OUTREACH AND PREVENTION PROGRAMS FOR HSHS ST. JOHN'S HOSPITAL

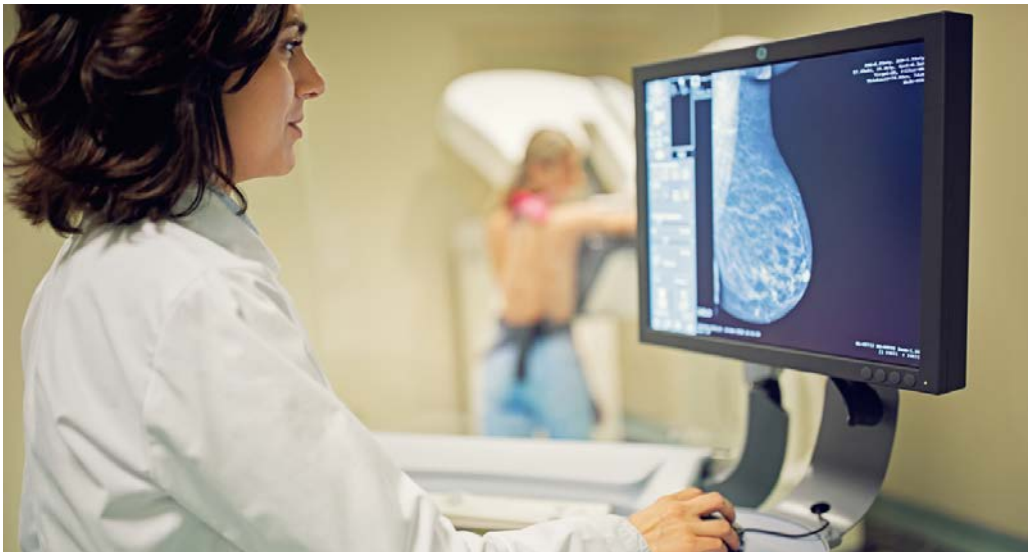
This has been an exciting year at HSHS St. John's Hospital for community outreach and prevention programs. The hospital partnered with the Regional Cancer Partnership (RCP) to perform many screenings this year. The RCP has been in existence for more than thirteen years and includes regional hospitals, health departments, Illinois Department of Public Health, Komen, American Cancer Society and other non-profit organizations involved in cancer care. Its 38 members represent more than 15 organizations in central Illinois. The mission of this group is cancer control, prevention and education. This very active group has been led by St. John's Hospital for the past two years. At the beginning of every year, goals are set for screening activities after a group discussion assessment of community needs. For 2020, the focus will be on reaching the underserved and uninsured during all screening activities.

The RCP started screenings by handing out FIT kits in March for colorectal cancer screenings. Nearly 310 kits were handed out in Springfield. Jacksonville distributed 400 kits and processed them separately. Springfield had 204 returned for a 66% return rate. Jacksonville had 315 returned for a 79% return rate. There were 11 positive results in Springfield and Jacksonville had 69 positive results. Patients were contacted for follow up. Fortunately, no colon cancers were found. RCP targeted the underserved at St. John's Breadline and Kumler United Methodist Church.

A skin cancer screening was held in May. Of the 89 individuals screened, 11 biopsies were recommended and 12 referrals were made. Everyone received a call to remind them to follow up. Calls were also made six months later by three people. The public was very pleased with how quickly the screenings went. Four basal cell cancers were found and one squamous cell cancer.

Prostate screenings were held in September. Among the 50 screened, six biopsies were recommended and five had an elevated PSA. Screening result letters were mailed to everyone and follow-up phone calls were also made. The 31 volunteers helped make the process run very smoothly. Men were in and out within 15 minutes and evaluations were very positive. No prostate cancers were found.

A breast cancer screening was held at five sites in October – an increase of two over previous years. Free mammograms were performed every Monday in October for the uninsured and underinsured thanks to a Komen Grant. Of the 102 screened



this year, five diagnostic mammograms were performed and one biopsy. We are awaiting results.

Low dose CT scans continue every Thursday at St. John's Hospital using Medicare and American Radiology Society guidelines as screening criteria. A new Tru Beam scanner with the latest technology is used. Three lung cancers were found this year out of 323 screened. Last year 269 screenings were performed.

A prostate screening was held in December for African American Ansar Shriners at St. John's Hospital. Eleven men were screened and all were normal. This was the first year for this event and organizers want to expand upon it next year. All evaluations were positive.

An obesity and breast cancer program was also held in October. Seventy-five people attended the event which included information about lymphedema. A pre- and post-test was given on the importance of nutrition and exercise in preventing breast cancer and lymphedema in those with breast cancer. On the pre-test, 66% answered correctly and 99% answered correctly on a post-test with the same questions. Evaluations were very positive.

St. John's Hospital also collaborated with Bristol Myers Squibb to present an immunotherapy event for the medical community. Melanoma treatment was discussed, along with staging and immunotherapy as treatment. Twelve RNs and physicians attended this event.

Two talks were given to LPN students on cancer treatment, side effect management and prevention and screening activities. I also participated in a senior health fair in May and handed out sun protection information. In June, the RCP partnered with the American Cancer Society to present a tea for 55 cancer survivors and their families. It was well received by the community.

Deepa Ann Cyriac, MD
Radiologist
Central Illinois Radiological Associates

REVIEW AND UPDATES OF THE AMERICAN COLLEGE OF RADIOLOGY BREAST CANCER SCREENING PRACTICE GUIDELINES AND RECOMMENDATIONS

In this article we will review the American College of Radiology (ACR) current and updated guidelines on breast cancer screening recommendations.

Risk Assessment

Although most breast cancer occurs in women with no known risk factors (other than being female and aging) there are some other risk factors known to increase the chance of developing breast cancer. In 2018, the ACR recommended that all women be evaluated for breast cancer risk no later than age 30. This is to assess whether an individual is considered average risk or belongs in the high-risk category. The goal is to identify those at a higher risk so they may benefit from earlier and/or more intensive supplemental screening surveillance.

Average Risk Women

For decades, the ACR has and continues to recommend annual mammography screening starting at age 40 for women of average risk. Average risk is considered less than 20% of developing breast cancer over a lifetime.

The ACR notes it is unclear at what age, if any, a woman ceases to benefit from screening mammography. Since this age is likely to vary depending on each woman's overall health, the ACR recommends the decision to stop routine screening mammography should be made on an individual basis, jointly by each woman and her health care provider. In general, the ACR recommends that a woman continues screening mammography as long as she remains in good health with an average life expectancy of 10 years or longer.

High Risk Women

As mentioned, there are several known factors that increase a woman's risk for breast cancer. Women with calculated risk of greater than 20% of developing breast cancer over a lifetime fits the high-risk category according to the ACR.

High risk populations of black women and women of Ashkenazi Jewish descent

While overall incidence rates of breast cancer in black and white women are about the same, black women are 20% to 40% more likely to die from breast cancer. In 2018 the ACR has assigned high risk designation, which is the first time black women have been classified as a high-risk group for breast cancer development. Similarly, women of Ashkenazi Jewish descent are known to be at high risk for

the BRCA mutation, in addition to other genetic mutations predisposing this population to not only breast cancer but other types of cancer as well.

Recommendation: The ACR especially recommends risk assessment before the age of 30 for known higher risk populations such as African-American women and those of Ashkenazi Jewish descent so those with significant risk can be identified and can benefit from early screening.

Dense breast tissue: As an independent risk factor, there is an increased risk for developing breast cancer among women who have "dense" breast tissue. Dense tissue increases breast cancer risk for two main reasons. First, women with dense tissue quantitatively have more parenchyma where cancers may grow. Second, the greater amount of glandular tissue can obscure signs of breast cancer on a mammogram and thereby decreases its sensitivity.

Recommendations: For women with elevated risk limited only to increased breast density, the ACR recommends annual screening mammography starting at age 40. In addition, ACR recommends considering supplemental screening with whole breast ultrasound for incremental cancer detection in dense breasts, if after weighing benefits and risks the patient is willing to accept the increased potential for false positive results.

Personal history of breast cancer or atypia: Women with personal histories of breast cancer are at risk for recurrence or a second breast cancer. The age at diagnosis matters. Also, women with a history of biopsy proven atypical lobular hyperplasia (ALH), lobular carcinoma in situ (LCIS), and ADH have increased risk of future breast cancer development.

Recommendations: For these reasons, for any woman diagnosed with breast cancer, LCIS, ADH, and/or ALH before the age of 40, the ACR recommends initiating annual screening mammography shortly after diagnosis. For women diagnosed with breast cancer before age 50, of all breast tissue types (both dense and non-dense categories), the ACR in addition to annual screening mammography, now recommends annual surveillance with breast MRI.

For women with personal histories of breast cancer diagnosed after age 50 and dense breast tissue, the ACR in addition to annual screening mammography, now also recommends annual surveillance with breast MRI. For women with elevated risk who would qualify for but cannot undergo breast MRI, the ACR instead recommends consideration for adjunct screening breast ultrasound.

Genetic predispositions for breast cancer: Certain women are at higher risk for breast cancer development due to inherited genes-traits. Of these the BRCA1 or BRCA2 mutations are the most widely recognized. Other less common gene mutations increasing breast cancer risk include: TP53 and CHEK2 (Li-Fraumeni syndrome), PTEN (Cowden and Bannayan-Riley-Ruvalcaba syndromes), CDH1 (hereditary diffuse gastric cancer), STK11 (Peutz-Jeghers syndrome), PALB2 (interacts with BRCA2), and ATM (ataxia-telangiectasia) genes.
Recommendations: For women with genetics-based increased risk (and their untested first-degree relatives), ACR recommends annual screening mammography starting at age 30. For women with genetics-based increased risk (and their untested first-degree relatives), the ACR recommends annual surveillance with breast MRI beginning at age 25. For women with elevated risk who would qualify for but cannot undergo breast MRI, the ACR instead recommends consideration for adjunct screening breast ultrasound.

Strong family history of breast cancer: Women with strong family histories are at higher risk, even in the absence of known genetic mutations. The number of family members with breast cancer, especially first-degree relatives, male gender and premenopausal age at diagnosis of the family member(s) are important considerations that add complexity to risk assessment and outside the scope of this article.
Recommendations: For women with a strong family history, the ACR recommends annual screening mammography starting 10 years earlier than the affected relative at the time of diagnosis, but not before age 30.

Chest radiation treatment in young women: Young women treated with chest or mantle radiation therapy (such as Hodgkin lymphoma) have increased breast cancer risk.
Recommendations: For women at high risk due to prior mantle radiation (treatment between the ages of 10 to 30), the ACR recommends annual screening mammography starting at age 25 or eight years after radiation therapy, whichever is later. For women at high risk due to prior mantle radiation (treatment between the ages of 10 to 30), the ACR also recommends annual surveillance with breast MRI beginning between age 25 to 30. For women with elevated risk who would qualify for but cannot undergo breast MRI, the ACR instead recommends consideration for adjunct screening breast ultrasound.
Conclusions: After reviewing extensive literature the experts from the American College of Radiology Commission on Breast Imaging remain dedicated to providing up to date evidence-based breast cancer screening recommendations as a guide for health care professionals and all women.

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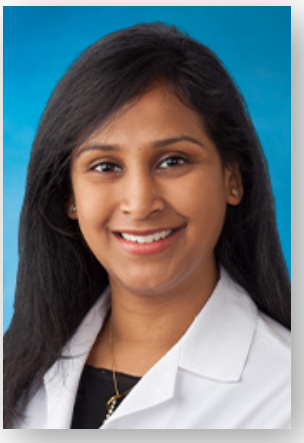
1. *Monticciolo DL, Newell MS, Hendrick RE, Helvie MA, Moy L, Monsees B, Kopans, DL, Eby, PR. Breast Cancer Screening for Average-Risk Women: Recommendations From the ACR Commission on Breast Imaging. J Am Coll Radiol. 2017; 14(9):1137-43.*
2. *Monticciolo DL, Newell MS, Moy L, Niell, B., Monsees B, Sickles, EA. Breast Cancer Screening in Women at Higher-Than-Average-Risk Average: Recommendations From the ACR Commission on Breast Imaging. J Am Coll Radiol. 2018; 15(3):408-414.*



Archana Nayani, MD
Medical Hematologist and Oncologist
Springfield Clinic

PHYSICIAN REVIEW FOR TRIPLE NEGATIVE BREAST CANCER TREATMENT COMPLIANCE

Triple negative breast cancers (TNBC) are aggressive, high-grade tumors which lack expression of the commonly evaluated biomarkers, estrogen receptors, progesterone receptors and HER-2 receptors. The best outcome in early stage TNBC is surgery with either upfront neoadjuvant chemotherapy, if possible, or adjuvant chemotherapy and radiation therapy. A review of early stage triple negative breast cancers was completed by Archana Nayani, MD, hematologist-oncologist at HSHS St. John's Hospital to see if NCCN guidelines were used appropriately for treatment planning.

The cancer registrar utilized the cancer registry software to create a report listing the patients that were diagnosed in 2018. The report consisted of patient first and last name, date of birth, medical record number, diagnosis date, class of case, topography code, morphology code, stage treatment options, surgeon and surgery text. The physician reviewer then accessed all cases and reviewed various electronic medical record systems to find additional information.

From this population a second report was created to generate the list of patients and required information.

Dr. Nayani reviewed the medical record of each patient in the report. From this list, she noted if patients were treated according to the NCCN guidelines.

Audit summary

In terms of total treatment provided, the review of cases found all patients were offered the correct treatment in terms of surgery, chemotherapy and radiation. Specifically, of interest to the reviewer, was the neoadjuvant therapy options provided to patients.

Neoadjuvant therapy - 3 patients	1 patient - Non anthracycline-Docetaxel, Cyclophosphamide
	2 patients - Anthracycline ddAC → Taxol
Adjuvant - 1 patient	1 patient - TC

The reviewer found all NCCN guidelines were met, no corrective action is needed. If follow-up is needed, registrars will notify the physicians involved if they are missing information that would correspond to the NCCN treatment guidelines.

Hui Zhang, MD
Medical Oncologist
Springfield Clinic

MOLECULAR TESTS AND THEIR ROLE IN THE MANAGEMENT OF PATIENTS WITH BREAST CANCER

Breast cancer remains the most common cancer in American women. In the United States, an estimated 234,190 new cases of invasive breast cancer were diagnosed in 2015, including 2,350 men and 231,840 women (American Cancer Society. Breast Cancer Facts & Figures, accessed January 20, 2016; ASCO –SEP, 5th edition, Chapter 6, 114-116). With the development of screening tests, molecular studies, systemic and individual therapies, the mortality from breast cancer has been consistently declining since 1990. However, breast cancer is still the second leading cause of death among the most common cancers in the U.S. 2012 (Siegel RL, Miller KD. Cancer Statistics, 2016, Ca Cancer J Clin 2016;66:7-30).

There are many risk factors for breast cancer development. They include gender, age, endocrine factors, benign breast disease, family history, ethnicity, radiation exposure, exogenous hormone exposure and behavioral factors. The incidence of breast cancer is higher among white women than in black women. However, black women are more likely than white women to develop breast cancer before the age of 40.

Only a small percentage of patients with breast cancer are inheritors. For those patients with inherited breast and/or ovarian cancers, the majority of them carry BRCA1 or BRCA2, but some of them are due to other rare hereditary syndromes, such as Li-Fraumeni with p53 or TP53 mutation), Peutz-Jeghers associated with STK11 mutation, Cowden syndrome with PTEN mutation, hereditary diffuse gastric cancer associated with germline pathogenic variants in the cadherin 1 gene (CDH1) and Lynch syndrome with pathogenic variants in mismatch repair (MMR) genes MSH2, MLH1, MSH6, and PMS2. BRCA1 and BRCA2 mutations are associated with a 50% to 75% lifetime risk of developing breast cancer and a 30% to 40% risk (BRCA1) or 10% to 20% (BRCA2) of developing ovarian or fallopian tube type cancers. For those patients who have a high-risk factor, a bilateral risk reducing salpingo-oophorectomy performed before age 50 reduces the risk of ovarian cancer by 85% for women with BRCA mutation. A bilateral preventive mastectomy reduces the risk of developing breast cancer by more than 90% among women with BRCA mutation. In addition, hormonal therapy with tamoxifen reduces the risk of developing ER positive invasive breast cancer by 40%.

There are many factors associated with prognosis. The development of molecular techniques has shown individual molecular subtypes are not only associated with prognosis, but also

provide predictive information about the efficacy of targeted therapy. There are several molecular studies underway to assess the risk of local and systemic disease recurrences in patients with breast cancer.

The Oncotype Dx test, known as the 21-gene recurrent score, was developed through the analysis of tumor biospecimens from patients with ER positive disease. This assay helps to predict the benefit of chemotherapy. The TAILORx clinical trial enrolled 1,626 patients and reported the distant recurrence at 5 years is <1% in patients without lymph node involvement and a disease recurrent score (RS) <11 who were treated with hormonal therapy only. The WSG-PlanB trial reported a 5-year disease free survival rate of 98% in 348 patients with N0 and N1 diseases and RS<12 who were treated with hormonal therapy only. (Petkov, et al. SABCS 2016). Dr. Sparqno et al reported in the New England Journal of Medicine in 2015 that patients who are ER positive, Her2 negative, have a RS <11 and all of patients including T1, T2 or T3 grade 3 (the latter is traditional stage III of disease) are classified as stage IA disease.

National comprehensive cancer network (NCCN) guideline, a widely used guideline by U.S. and international oncologists, recommends patients who are ER or PR positive with a tumor size of >0.5 cm and lymph node negative will be candidates for hormonal therapy if RS <26. NCCN guidelines suggest using a multigene assay, such as MammaPrint, to determine the prognosis and benefits of chemotherapy for patients who are ER or PR positive, have Her2 negative invasive breast cancer with pN1mi or N1 disease. (NCCN guideline version 3.2018).

A 70-gene signature MammaPrint assay is another way to predict the prognosis and risk of systemic recurrence at 10 years among women younger than age 55 with lymph node negative or positive and tumor size smaller than 5 cm. (Van de Vijver et al N Eng J Med 2002;347:1999-2009; Buyse M, Loi et al, J Natl Cancer Inst, 2006; 98: 1183-1192). It is also used to predict whether patients with positive lymph node involvement would benefit from chemotherapy. The DNA microarray assay is also used nationally to determine gene expressing profiling for patients with either ER and/or PR positive or Her2 positive. These gene expression subtypes are associated with deferring relapse-free survival and overall survival (OS) (Perou CM, van de Rijn et al. Proc Natl Acd Sci USA 1999;96:9212-9217).

In summary, individualized recommendations should take into account the patient's personal risk factors and family history. We encourage patients to talk with their oncologist in detail about the possible screening studies, molecular tests, genetic counseling and individual management plans before finalizing their treatments.

CANCER SUPPORT GROUPS

Women undergoing breast cancer treatment require much support. This is one thing I've noticed over the years that is very important. The more support they have, the better outcome they seem to have during treatment. There are many different forms of support, such as friends, families, church friends, neighbors, women's group members, cancer support groups, prayer, yoga, walking outside and nature activities.

The American Cancer Society offers two different kinds of support groups. One is the Reach to Recovery program where a volunteer is matched with a woman undergoing treatment. This woman is close in age and has undergone treatment. She can offer support over the phone and in person.

In the second program, HSHS St. John's Hospital partners with the American Cancer Society to offer the Look Good Feel Better program. This program is a free make-up session and the make-up is provided free of charge to the participants. It is offered monthly in our community. I have been participating in the program for 15 years and it is such a valuable program. You know it is going to be a good night when shortly after the session starts the ladies are comfortable enough to take off their wigs. The hospital provides snacks and drinks, along with a place to meet. Over the years, I've seen people become friends after attending the group. It is a great support for patients that I really enjoy helping with.

The cancer journey can feel lonely. Let people in to help you. I want to close with some ideas taken from the American Cancer Society's Listen with Your Heart booklet.

- Let them take the lead. If they want to talk, be a good listener.
- Try to maintain eye contact. This gives a sense you are really present and listening.
- Touching, smiling and warm looks can get past the barriers of the illness to the person you know and love.
- Most of all be yourself. Try not to worry about whether you are doing things the right way. Let your words and your actions come from your heart. Your compassion and genuine caring are the most important things you can express right now.

Diana Weyhenmeyer
RN, MSN, MA, OCN
Oncology Nurse Navigator
HSHS St. John's Hospital

HSHS St. John's Cancer Center

800 E. Carpenter Street | Springfield, IL 62769
st-johns.org | (217) 544-6464