Managing Risk on Multiple Fronts

When a woman has a significantly increased risk for breast cancer, we often recommend specific risk management. Each patient receives personalized recommendations based on her risk factor(s), age, health, and heredity. A team of specialists, including a medical oncologist, surgeon, radiologist, and other experts, collaborates on every plan. Recommendations may include some or all of the following measures:

- Surveillance
  - Further testing may be prescribed in addition to yearly digital mammography, including breast MRI, detailed mammography, more frequent clinical exams, and—because the risk of ovarian cancer is greater for women with certain genetic mutations—transvaginal ultrasound and CA-125, a blood test for ovarian cancer.

- Chemoprevention
  - Also known as chemoprophylaxis, chemoprevention is the use of medication to decrease the chances of developing breast cancer. Our specialists prescribe a variety of different medications, which are typically used to reduce the effect of estrogen on the body.

- Surgical Intervention
  - A challenging and highly personal decision, prophylactic (preventative) surgery to reduce the risk of breast cancer involves the surgical removal of both breasts. We offer these surgical options:
    - Preventive mastectomy (removal of all breast tissue)
    - Preventive salpingo-oophorectomy (removal of the ovaries and fallopian tubes). This surgery reduces the risk of breast cancer in high-risk premenopausal women by 50 percent and the risk of ovarian cancer by more than 90 percent.

  - If a woman chooses to have surgery, our breast and plastic surgeons offer a number of reconstructive surgery options for immediate reconstruction. We are one of the first hospitals in the Bay Area to offer oncoplastic breast surgery. This type of cancer surgery utilizes plastic surgery techniques for better cosmetic results.

Lifestyle Changes

- Losing weight, exercising regularly, giving up smoking, and reducing alcohol consumption can all help lower breast cancer risk. The High-Risk Breast Program has a dietitian on staff to provide advice about diet and nutrition. We can also give women age- and illness-appropriate exercise recommendations.

- Worrying about breast cancer does nothing to reduce the risk of getting the disease, but it can add to the stress of daily life. At Marin General Hospital, we believe integrative therapies help reduce stress and empower patients to better manage their own health and wellness. Our Center for Integrative Health & Wellness services focus on prevention and wellness, activation of the body’s innate healing powers, augmentation of conventional medicine during illness and injury, and development of self-care skills. We offer a variety of services, from acupuncture to guided imagery to therapeutic massage.

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The High-Risk Breast Program at Marin General Hospital

For most American women over 40, mammography is a standard component of the annual checkup. And many women have experienced the feeling of relief that comes from hearing the news that their mammogram was free of ‘suspicious areas.’ Unfortunately, not all women have the same degree of cancer risk. Routine surveil-

lance is not enough for a woman with hereditary risk factors for breast cancer. While just 5–10 percent of breast and ovarian cancers are caused by genetic predisposition, the risks are significant.

At Marin General Hospital, we created our High-Risk Breast Program to help screen, detect, diagnose, and treat breast cancer in high-risk women. Our comprehensive program offers personalized, attentive care from a collaborative team of experts. Trained at some of the nation’s finest medical programs, our physicians have chosen Marin General Hospital for its quality care, community feeling, and renowned cancer program. At the heart of our team is a specially trained nurse practitioner who serves as a caring guide for our patients, steering them through risk analysis, prevention options, and, if necessary, treatment. We offer the leading-edge risk assessment, diagnosis, and treatment one might expect from a university medical center, delivered with the warmth and caring touch of a community hospital.

Early Identification Saves Lives

At Marin General Hospital, we are committed to screening all women for elevated breast cancer risk. When a woman is identified as ‘at-risk,’ we counsel her and enroll her in our ongoing, personalized surveillance plan. The key to managing breast cancer risk is early identification. Once a woman knows she has an increased risk of developing cancer, she can consult with her physicians to choose preventative and therapeutic measures to prevent cancer or make sure it gets detected as early as possible. Women at increased risk can benefit from additional testing, screening, or lifestyle changes. Women who have already been diagnosed with breast cancer may be at increased risk for recurrence due to environmental factors or an inherited susceptibility.

Our Breast Health Center has outstanding early detection rates and is one of a few local facilities to be accredited by the National Accreditation Program for Breast Centers (NAPBC). This is a consortium of national, professional organizations focused on breast health and dedicated to the improvement of quality care and outcomes. Marin General Hospital has been designated a Breast Imaging Center of Excellence by the American College of Radiology (ACR). The ACR award recognizes breast imaging centers that have earned accreditation in all of the College’s voluntary breast-imaging accreditation programs and modules.
Known Risk Factors for Breast Cancer

Gender – Although men can develop breast cancer, the disease is 100 times more common in women.

Age – A woman’s breast cancer risk increases with age. One out of eight invasive breast cancers occurs in women younger than 45; two out of three invasive breast cancers occur in women age 55 and older.

Genetic Risk Factors – Five to 10 percent of breast cancer cases are thought to result directly from gene defects (mutations). These are inherited from a parent and can be passed on to one’s children. The most common cause of hereditary breast cancer is an inherited mutation in the BRCA1 and BRCA2 genes. These mutations are more common in Jewish women of Ashkenazi descent, but they can and do occur in any racial or ethnic group. While several other genetic mutations can lead to hereditary breast cancer, they are much rarer and do not increase the risk as much as BRCA1 and BRCA2.

Family History of Breast Cancer – A woman does not need to carry a genetic mutation to have a family history of breast cancer. Having one first-degree blood relative (mother, sister, or daughter) with breast cancer approximately doubles a woman’s risk, while two first-degree blood relatives with breast cancer triples her risk. It’s important to understand that less than 15 percent of all women with breast cancer have a family member with breast cancer. The remaining 85 percent do not have a family history of breast cancer.

Personal History of Breast Cancer – A woman with cancer in one breast has a three or four times increased risk of developing a new cancer in the same or other breast.

Dense Breast Tissue – Breasts are made up three kinds of tissue: fatty tissue, fibrous tissue, and glandular tissue. ‘Dense breasts’ have more glandular and fibrous tissue, and less fatty tissue, making a woman’s mammogram look dense. Women with dense breasts may have a higher risk of breast cancer.

Previous Atypical Biopsies – Certain non-cancerous breast conditions involving overgrowth of cells can elevate a woman’s breast cancer risk.

Previous Chest Radiation – The risk of developing breast cancer from chest radiation is highest if a woman was exposed to radiation in her teens, when her breasts were developing.

Increased Exposure to Female Hormones – Women who started menstruating before age 12 and/or went through menopause after age 55 have a slightly elevated risk of breast cancer. Other factors affecting a woman’s exposure to estrogen and progesterone include oral contraceptive use, having a first child after age 30, and hormone therapy after menopause.

Lifestyle Issues – Being overweight or obese after age 30, and hormone therapy after menopause.

BRCA Mutations Mean Higher Risk

Most breast cancers are not related to detectable genetic mutations. Indeed, only 5–10 percent of families with a history of breast cancer carry a BRCA mutation. However, the genes known as BRCA1 and BRCA2 are clearly associated with a significantly increased risk for breast cancer. Only genetic testing can determine whether a woman has a BRCA mutation. Testing positive for BRCA1 or BRCA2 means a woman has up to an 87 percent lifetime chance of developing breast cancer. These cancers tend to occur in younger women and are more likely to affect both breasts than cancers in women who are not born with a BRCA mutation. Approximately 20 percent of women who carry a BRCA1 or BRCA2 mutation will develop breast cancer before the age of 40. Women with one of these mutations also have a 44 percent lifetime chance of developing ovarian cancer. Additionally, both men and women who carry a BRCA mutation may be at increased risk for other cancers.

Genetic Counseling and Testing

If a woman is identified as being at increased risk for breast cancer due to personal or family history, she may want to consider genetic testing options. Choosing to have genetic testing is a personal decision with medical and psychological implications, and it is a good idea to discuss this option with a physician, nurse practitioner, or genetic counselor before getting tested. Genetic testing may be indicated if a woman fits one or more of the following criteria:

• Having a close relative who tested positive for BRCA1 or BRCA2
• Having a close relative who has had breast and/or ovarian cancer
• Having one or more close relatives who diagnosed with breast cancer and/or ovarian cancer, especially before age 50
• Being of Ashkenazi (Central or Eastern European) Jewish heritage
• Previous breast cancer in both breasts
• Previous breast or ovarian cancer
• Having been diagnosed with breast cancer before age 45

Genetic testing requires a DNA sample, usually obtained through a simple cheek swab. Results typically take a few weeks.

The Initial Screening and Risk Assessment Process

We are committed to reducing the incidence of breast cancer in our community by offering our women and their families a comprehensive risk assessment. The Breast Health Center at Marin General performs more than 19,000 studies a year. Our detection rates with digital mammography are excellent, on a par with those of top university hospitals.

We offer all screening mammogram patients a chance to learn if they are at increased risk for breast or other cancers. Since our program began in April 2013, we have provided risk assessment data for over 15,000 women. Of these women, 1,914 were contacted and offered additional services.

Every woman who comes to our center for a mammogram is given a questionnaire to assess their risk. The assessment is easy to do and only takes around 10 minutes. In preparation for this assessment, we encourage women to gather family history before coming in for their mammogram. Results of the risk assessment are delivered to both the patient and her referring physician. Any mammography patient assessed as being at increased risk for breast cancer and/or carrying a genetic mutation associated with increased cancer risk can be referred to our High-Risk Breast Program for further evaluation.

When a woman’s questionnaire indicates an elevated degree of risk for breast cancer, our patients are offered an opportunity to make an appointment to review and understand these risks.

Our Nurse Practitioner is experienced in working with women throughout the spectrum of breast care. She can explain the assessment results, answers questions and helps the patient develop an individualized plan for early detection and prevention of breast cancer.

The goal of our program is to empower women with the tools to understand and reduce their risk of breast cancer.


Our specially trained Nurse Practitioner provides our patients with a comprehensive risk analysis based on a review of personal and family history. She helps the patient understand her level of risk and helps to develop a plan of action for early detection and cancer prevention. She is a supportive presence for the patient, serving as an educator, coordinator, and patient advocate.

The Breast Health Nurse Practitioner is experienced in working with women throughout the spectrum of breast care. She can provide a personalized risk assessment, answer questions, and help patients develop an individualized plan for early detection and prevention of breast cancer. The goal of our program is to empower women with the tools to understand and reduce their risk of breast cancer.

Monday - Friday 8:00 am - 4:30 pm. Expanded Hours Available. See www.maringeneral.org/bhc for current hours.