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Breast Cancer is the second most diagnosed cancer in the United States, affecting more than 200 thousand women a year. In addition, it is the second leading cause of cancer deaths in women, killing more than forty thousand wives, sisters, daughters and mothers. The program Breast Cancer, New Reasons for Hope documents success in the fight against breast cancer.

Narrator

It's the most common cancer in women. According to breastcancer.org, every two minutes a woman in the United States will learn she has breast cancer. But while more cases are being diagnosed, more women are surviving. Despite that, breast cancer continues to be the disease that many women fear the most.

Nancy Benjamin, Patient

"It was terrifying. It was something I didn't expect."

Louise Cooper, Patient

"I was healthy. I was athletic, I had a good diet. I did everything I was supposed to do and here I was diagnosed with this very aggressive form of cancer."

Narrator

In the past, breast cancer was shrouded in secrecy and fear. Treatments were often limited to disfiguring surgery and harsh chemotherapy. And even then, nearly two thirds of women died within a few years of their diagnosis. Today while the breast cancer experience is certainly not easy, treatments are less harsh and more effective. But, before we examine treatment take a look at how breast cancer starts.

Dr. Gabriel Hortobagyi, is the professor and chairman of the Department of Breast Medical Oncology at The University of Texas MD Anderson Cancer Center in Houston Texas.

Gabriel Hortobagyi, MD

MD Anderson Cancer Center

"Every breast cancer starts with the development of a genetic abnormality. A gene or several genes are altered by either hereditary or environmental influences."

Narrator

As with any part of the body, the cells in the breasts usually grow and then rest in cycles. But breast tissue cells can develop a genetic change that results in an uncontrolled and abnormal growth of cells. This is breast cancer: an uncontrolled growth of cells that can stay within the breasts or spread to the lymph nodes or distant sites throughout the body.

When a woman hears she has breast cancer, she may wonder if she did something wrong, something that caused her to have cancer. But in fact, the exact cause of breast cancer is unknown.

Narrator

Women at highest risk include those who:

- are older age, over 60
- have already had cancer in one breast
- have the BRCA1 or BRCA2 gene mutation or another gene that increases the risk of developing breast cancer
- have a strong family history: a mother, sister or aunt with breast cancer or two or more close relatives with breast cancer or ovarian cancer.
- have a pre-malignant change in the breast

The female hormone estrogen has a powerful influence on breast tissue. In fact, the more breast tissue experiences menstrual cycles the greater the likelihood of developing cancer. Women with a few cycles, late onset of menstruation, multiple pregnancies with a 9-month hiatus of menstrual cycles, are at lesser risk.

Whereas women who never had a full term pregnancy, or were 30 years old or older when their first child was born, plus women who began their menstrual cycles before age 12 or started menopause after age fifty-five are at higher risk.

More than a decade ago, 62 year old, Houston attorney and federal law clerk Nancy Berg Benjamin, noticed a lump in her breast. She wasn't prepared for the answers that her doctors would eventually give her.

Nancy Berg Benjamin, Patient

"I think anybody when you receive a diagnosis of breast cancer, or cancer any kind of cancer is devastated. It's a very frightening experience."

Narrator

After she recovered from the shock, she went on to re-order her priorities.

Nancy Berg Benjamin, Patient

"I found that I wanted to spend more time with my family and my friends doing things for my community, making a difference in the world because you may not be here tomorrow."

Narrator

It's not that Nancy was unfamiliar with cancer. Her physician husband, Robert, is a cancer specialist.

Robert Benjamin, MD, Husband

"I too, was stunned by the diagnosis, but having dealt with cancer in my mother, and dealing with cancer in my patients all the time, I have tried to help support her in every way I could during the treatment."

Narrator

Finding breast cancer early offers the best chance for a successful outcome.

Nat sound: "Just stand right in front of the machine for me."

There are three ways breast cancer is usually detected: mammography, breast self-exam and the physical examination of the breasts by a health professional.

Mammography is a type of x-ray that assists in finding a lump or a mass. Mammograms show nodules, calcifications, thickenings and distortions. In the vast majority of cases, these findings are not cancer. They are benign growths, cysts or something else harmless.

The American Cancer Society recommendations for early breast cancer detection include:

- Breast self examination is an option for women beginning in their 20s.
- Women in their 20s and 30s should have a clinical breast exam as part of a regular health exam by a healthcare professional at least every 3 years and throughout life.
- Women age 40 and older should have a screening mammogram annually and should continue for as long as they are in good health.

Doctors say that all women between the ages of 40 to 69 should have a mammogram every year and some women in high-risk categories should discuss possible early mammography with their doctors.

Breast self exams and the physical examination of the breast by a health professional can help locate a mass, but mammograms and other imaging techniques are generally necessary to find the smallest tumors.

The diagnosis must be confirmed by a biopsy and if the specimen is malignantthe breast cancer journey begins.

Coming up, we'll meet a woman who traveled the world competing in racing events. The only thing that slowed her down was breast cancer.

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Narrator

Many breast cancer patients often find themselves in the middle of an emotional firestorm. They struggle with questions about the disease, about their loved ones, about their mortality.

Louise Cooper, Patient

"Being a sort of bottom line person I just wanted to know: so what's the bottom line here: am I going to live? I'm going to die?"

Narrator

52-year-old adventure racer and devoted animal lover Louise Cooper found a lump in her breast while training for an event in South America. She eventually had a biopsy done and, to her amazement, it was cancer.

Louise Cooper, Patient

"I was so surprised when it came back positive that it was malignant and you know your first reaction when somebody tells you, is I think you're kind of numb. It takes a while to process it."

Narrator

After the diagnosis a woman and her team of healthcare experts must decide what the best treatment is for her individual case. It's called personalized therapy.

There are literally dozens of options for women today that include some combination of surgery, radiation therapy, chemotherapy, hormone therapy and in some cases, targeted therapy.

Dr. Marisa Weiss, a Philadelphia oncologist who specializes in breast cancer, is the founder and president of breastcancer.org, a global nonprofit organization. She's counseled thousands of patients about breast cancer.

Marisa Weiss

Founder & President, breastcancer.org

"Breast cancer is not an emergency, it certainly a huge crisis in their lives but they do need to take the time that they need to sort through the information and make the best decisions possible."

Narrator

Dr. Dennis Slamon is the chief of Medical Research at the Jonsson Comprehensive Cancer Center at UCLA Medical Center in California.

Dennis Slamon, MD

UCLA Medical Center

"You don't have to make a decision for the kind of therapy you're going to have within a week. You have time to gather the information, get the opinions of at least a couple

of physicians that have some expertise in the field and make a rational decision based on that information.”

Narrator

Since breast cancer is an uncontrolled growth of cells that can stay within the breasts or spread to the lymph nodes or distant sites throughout the body knowing the stage of the disease is extremely important.

Narrator

When breast cancer is largely localized to the breast, it is classified as early stage, 0,1 or 2. Stage 2 breast cancer may also involve some lymph nodes. Intermediate stage, stage 3 is when there’s a large cancer in the breast or there is extensive lymph node involvement. Advanced stage cancer is stage 4, where the cancer has spread beyond the breast and the lymph nodes to distant sites like the bones or the liver.

The majority of breast cancer patients will be treated by surgery and some combination of radiation therapy, chemotherapy, hormone therapy, and biologic therapy. Breast conserving surgery removes the tumor and lymph nodes but leaves most of the normal breast tissue intact.

Gabriel Hortobagyi, MD
MD Anderson Cancer Center

“We remove a smaller and smaller amount of breast tissue in the curative operations for breast cancer, and most women today are treated with what we call a lumpectomy, which removes only the tumor itself and a thin layer of normal tissue around it.”

Narrator

Chemotherapy and targeted therapies are intended to kill any circulating cancer cells that could not be removed through surgery. Radiation to the breast and lymph node areas can eradicate any cancer cells that may have been missed by the other treatments.

Hormone therapy is given to suppress any further growth of tumors.

Gabriel Hortobagyi, MD
MD Anderson Cancer Center

“The major idea behind hormonal therapy is that female hormones, in this case, estrogens are the fuel that helps breast cancer cells to grow and spread and hormonal therapy is interfering with that fuel.”

Narrator

Hormone medications—like tamoxifen, have been used as an additional therapy following primary treatment that is surgery, chemotherapy and radiation in breast cancer patients for many years. Newer drugs such as anastrozole, letrozole, and

exemestane are also used following primary cancer treatment for early stage breast cancer patients and also in more advanced disease.

As a treatment for breast cancer they slow or stop the growth of cancer cells that are present in the body. They can prevent the original breast cancer from returning and can also help prevent the development of cancer in the other breast.

Still ahead, we'll take a look at therapies designed to help patients better tolerate breast cancer treatments.

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Narrator

Oncology nurse Marilyn Becker was leaning against a wall at home, saying goodnight to her son, when she felt something in her breast.

Marilyn Becker, Patient

"Not only did I find a huge mass, but there was some dimpling of my skin and as a professional, I knew exactly what I had. I didn't need somebody to tell me."

Narrator

When doctors confirmed her breast cancer and also found a malignant tumor on her liver, Marilyn braced herself for the worst.

Marilyn Becker, Patient

"That was one of the most horrible days of my life. I knew what needed to be done and it was very, very difficult. And I really thought I was going to die."

Narrator

Her treatment regimen consisted of surgery, a stem cell transplant and hormone therapy.

Marilyn Becker, Patient

"It's kind of a situation that you just close your eyes and just plough through it and that's really what it amounts to. It's not a choice because I knew I had a teenager at home that needed me and a husband who loved me and a home that I loved, and family: a mother and father and sisters who were still very much involved with my life and my care and nobody was ready to let me go, and I certainly wasn't ready to let me go."

Narrator

One important improvement in helping women cope with treatment is easing side effects like fatigue and nausea.

Marisa Weiss

Founder & President, breastcancer.org

"You can weather the storm of chemotherapy much better today than we used to. Medicines that can eliminate their nausea, to take the pain away, better wigs to conceal the hair loss and giving you treatments that will help build your strength and immune system up."

Narrator

Supportive therapies can also include plastic surgery to reconstruct breasts after a mastectomy. Marilyn Becker said she never realized how "breast obsessed" our society was until after her treatment.

Marilyn Becker, Patient

"After I had my mastectomy, my bilateral mastectomy, and you go to the grocery store and you just see the magazines that are sitting in front of you and all you see in front of you are boobs. And it's amazing. So it's no wonder that so many women when they're faced with losing a breast or losing both breasts that they're absolutely horrified."

Narrator

Sometimes reconstructive surgeries can be performed at the same time as mastectomy, but in other cases, patients have to wait a few weeks, to several months before the reconstruction can begin.

Over the years, scientists have become better at understanding the disease and this understanding helps improve treatment outcomes.

Dennis Slamon MD

UCLA Medical Center

"The only thing all breast cancers share in common is the area they arise, which is the breast. But they can be very different one from another. We now know there are between six and eight major subcategories of breast cancer that have different pathways that have been activated that resulted in converting a normal cell into a malignant cell."

Narrator

Knowing what makes the cancer cell develop can help researchers zero in on specific targets.

Gabriel Hortobagyi, MD

MD Anderson Cancer Center

"Molecularly targeted therapies, instead of using the hammer technique of trying to squash the entire tumor and normal tissue that surrounds it are based on very precise interventions that try to either eliminate or compensate for the genetic abnormality and its consequences."

Narrator

So, these “targeted therapies” attack only the cancer cell, and leave non cancer cells alone. This means the treatments are not only directed right at what’s causing the trouble, but also in most cases there are fewer debilitating side effects.

Louise Cooper underwent a lumpectomy and was having some other operations before beginning chemo, when she got another surprise.

Louise Cooper, Patient

“I think it was only after my third surgery when they told me, that I was HER 2 positive and I had no idea what that meant.”

Dennis Slamon, MD

UCLA Medical Center

“From our research we found that there’s one particular subtype of breast cancer that has an alteration in a gene called H-E-R 2 HER 2. If the breast cancer has this alteration, it behaves much more aggressively. It recurs more rapidly and earlier, it forms metastasis much more readily and more widespread.”

Narrator

About 25 percent of breast cancers worldwide have an abnormal HER 2 gene, an especially invasive form of the disease.

Louise Cooper signed on to receive a new targeted treatment specifically for HER 2 positive tumors along with the traditional chemotherapy.

Louise Cooper, Patient

“The visual that I had was this drug being injected into my body and it was blanketing the cancer cells and blanketing those receptors and it was thereby going to prevent any further production of the cancer cells. Just that vision was helpful to me.”

Narrator

Nancy Berg Benjamin also had an easier than expected time with cancer treatment.

Nancy Berg Benjamin, Patient

“What you fear is always worse than the reality and I can tell you that’s true. Anybody that’s diagnosed is scared to death to go through the chemotherapy, the radiation but when you actually go through it, it’s far less demanding.”

Narrator

Up next, we’ll see how support from family and friends and on-line resources can offer help to those dealing with breast cancer.

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Narrator

Experts believe that as women understand the progress that's been made in breast cancer over the past 30 years, the pervasive fear of this disease will begin to diminish.

Marisa Weiss, President, breastcancer.org

"The diagnosis of breast cancer and the treatment of breast cancer involves a huge amount of fears it's like a whale in your living room. Our goal is to take care of her and hopefully get rid of the cancer or manage the cancer so that she can never see it again or at least push it aside and keep living her life in a way she wants to."

Narrator

One resource for many women with breast cancer is the Internet. But women have to be careful about what's available on the web.

Hope Wohl, Chief Executive Officer, breastcancer.org

"Every organization approaches things slightly differently. Every one has different styles of communication so there are many, many good sources of information. What is important is when a woman is choosing the information that she be sure that it is really a credible source."

Narrator

Support from family and loved ones, is what most patients with breast cancer say helped them get through this difficult time. Louise Cooper who is an elementary school teacher when she's not racing around the world says her students helped her survive the experience.

Louise Cooper, Patient

"Of course my students at school were a gift which it was why it was so important to me to work while I was going through the treatment. Even those days when I would drag myself out of bed knowing that I was going to see my students every day was so therapeutic for me. And of course it gave me a sense of normalcy."

Marilyn Becker, Patient

"You just put up with it and do what needs to be done. I have a wonderfully supportive family and we got through it."

Nancy Berg Benjamin, Patient

"My husband was a tremendous support in so many ways through this. Emotionally and psychologically he was a constant support and I don't think I could've gotten through it without him. I am here fifteen years later feeling wonderful."

Narrator

Breast cancer treatment has come a long way, and the increase in long-term survival free of disease is due to dramatic improvements in therapy. And as those therapies become better tolerated the breast cancer experience will become much more manageable.

And as more women live many years past a breast cancer diagnosis, they can help other women navigate through the experience and look forward to the future.

This program was reviewed by:

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National Cancer Institute

For more information on breast cancer visit the National Cancer Institute website @ www.cancer.gov or call 1-800-4CANCER.

For more information contact the American Cancer Society @ www.cancer.org
Or call
1-800-ACS-2345

Special Thanks to:

breastcancer.org

www.breastcancer.org

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