WHAT DOES

Mammography Follow Up

INVOLVE?

Iowa Radiology

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Introduction

While most abnormal mammography results are ultimately found not to be breast cancer, it's important to promptly schedule any recommended follow-up tests to ensure that if cancer is present, it's identified as early as possible. Even in the modern age of advanced breast cancer treatment, patients whose invasive breast cancers are identified when they are smaller and involve fewer lymph nodes enjoy a more favorable prognosis, including increased survival rates and less invasive treatments.[1]

First and foremost, if you're called back for follow-up testing after your mammogram, don't panic. While around 10% of women are called back after a mammogram, only 8–10% them will need a biopsy, and 80% of those biopsies come back benign.[2] That means that even if you're called back a second time, the odds are good, on average, that you don't have breast cancer. It's important to keep this in mind as you go through your follow-up procedures to keep your stress level under control. Needless stress will only drain your energy, making it more difficult for your body to fight off disease of all kinds—including cancer.[3]

Imaging

MAMMOGRAPHY AND ULTRASOUND

Follow up typically begins with **additional mammography** images to get a closer look at the suspicious area. If the radiologist is not able to get sufficient information from these images, then **ultrasound** is often used to determine whether the lesion is a fluid-filled cyst or a solid mass. Much like in an obstetric ultrasound, during a breast ultrasound, the technologist passes a lubricated transducer over the breast. As the sound waves bounce off internal breast features, a computer translates them into images, which appear on a monitor. The procedure is simple and most often painless, although you may experience discomfort if your breasts are already very tender or inflamed. If you have a breast ultrasound at Iowa Radiology, we will send a report of the results to your doctor within one business day.

If imaging shows only completely fluid-filled cysts, which are benign, no further follow up is required; if a cyst contains solid material, it will be evaluated more closely. If a solid mass is detected, then the radiologist will look at its borders and composition; masses with blurry or spiky borders and masses that are dense (containing less fatty tissue) are considered more suspicious.[4]

MRI

MRI can provide enhanced imaging clarity and is often used to assess known or suspected breast cancer that isn't clearly visible with other imaging methods. If an MRI is ordered for you, then prior to the exam, you'll need to undergo a creatinine test. This is a blood test that evaluates your kidney function; impaired function will counterindicate the use of gadolinium contrast, which is used to obtain the heightened image clarity that the radiologist will need to effectively assess your condition.

During a breast MRI, you will lie on your stomach on the exam table with your breasts hanging down into cushioned openings. The table will slide into the MRI machine, and you will hear clicking sounds as it operates. It's important that you lie completely still during the exam in order to obtain useful images. After initial images are taken, you'll receive an injection of contrast dye into a vein in your arm, and more images will be taken. The scan itself takes 30–60 minutes, so plan around 60–90 minutes for the entire visit. At Iowa Radiology, we send a report of breast MRI results to referring physicians within one business day.

Biopsy

If the imaging tests that you undergo suggest the presence of breast cancer, then a biopsy will be ordered. The most common form of breast biopsy is a needle biopsy; in rare cases, surgical biopsies are needed.

NEEDLE BIOPSIES

Two different types of needle biopsies are used: fine needle aspiration and core needle biopsy.

Fine Needle Aspiration

Because fine needle biopsy takes a smaller sample, it can be less accurate and provide less information about the area of concern than core needle biopsy. Although it's used less often, fine needle aspiration can be performed in a provider's office with a local anesthetic to sample a lump found during clinical breast examination and is less invasive than core needle biopsy. As a result, it is sometimes used to get information quickly about a newly discovered palpable mass.[5] If an area of concern is found via imaging, however, a core needle biopsy will most likely be ordered.

Core Needle Biopsy

Core needle biopsy is an accurate way to diagnose breast cancer when performed by an experienced radiologist. For nonpalpable masses, the procedure has an average false negative rate (percentage of tests that don't detect cancer that is present) of 4%, and the rate is lower for masses that can be felt. To biopsy nonpalpable masses, a core needle procedure is done in a radiologist's office so imaging can be used to pinpoint the area of concern. You'll be given a local anesthetic, and imaging can be performed using mammogram (stereotactic biopsy), ultrasound, or MRI.

- During stereotactic biopsy, you will sit in a chair, positioned similarly to how you would be for a mammogram. Your breast will be compressed as several images are taken to guide the radiologist to the area of concern.
- During an ultrasound-guided biopsy, you will lie on your back, and the transducer will be pressed against your breast in order to locate the suspicious area.
- With MRI-guided biopsy, you'll receive a contrast injection before images are taken. You'll lie on your back, and your breast will be compressed as with stereotactic biopsy.[6]

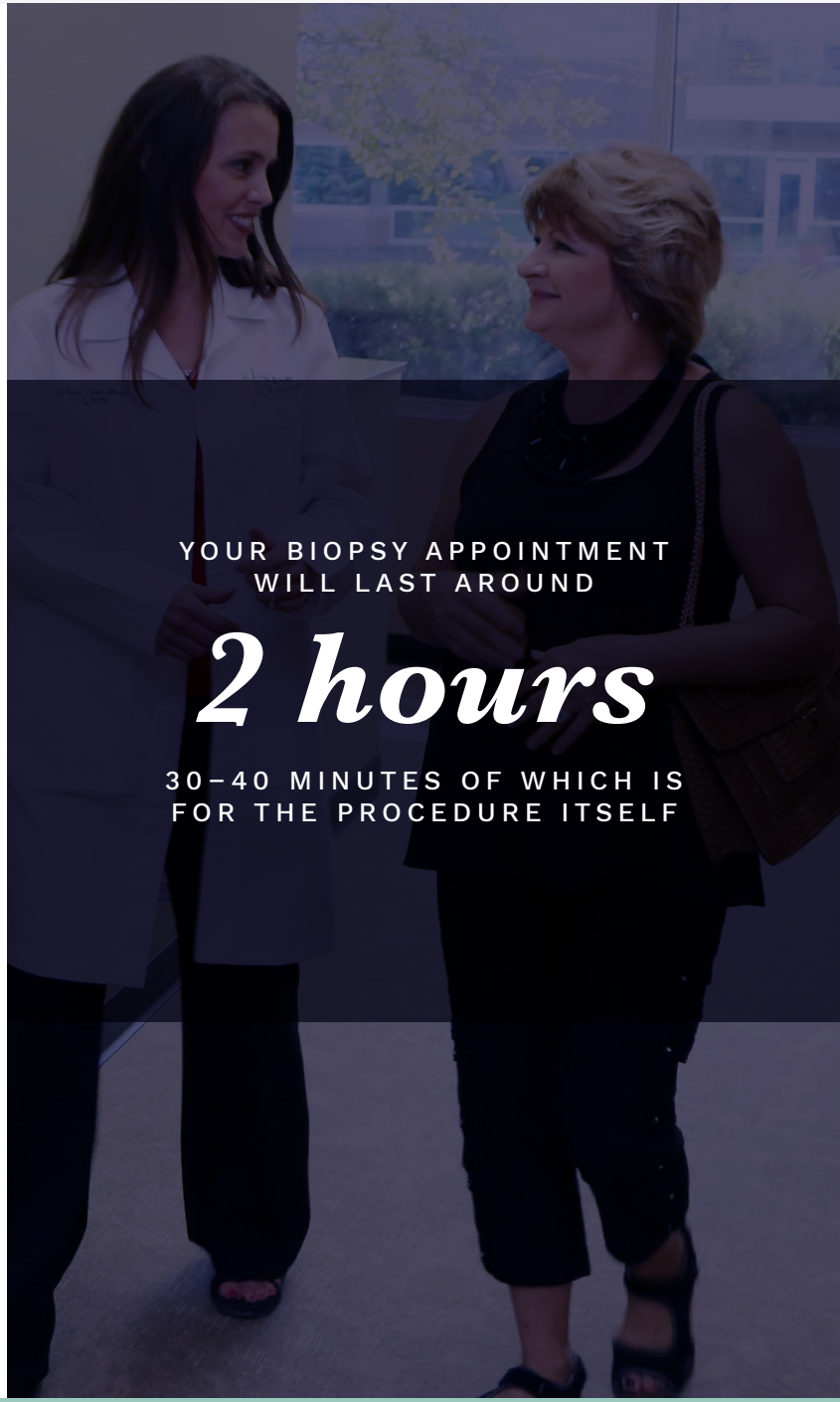
In all types of core needle biopsy, the needle is quickly inserted and withdrawn to take a sample of tissue. While the local anesthetic should prevent pain, you will feel a pushing and pulling sensation on your breast, which may cause discomfort. After the sample is removed, a small surgical marking clip will be placed so the area can be easily identified for future reference. These clips are harmless, painless, and are not visible on the surface of the breast.

Your biopsy appointment will last around two hours, 30–40 minutes of which is for the procedure itself. Following the procedure, the site will be closed with either tissue adhesive or butterfly closures to promote healing, and a follow-up mammogram will be obtained.

You'll go home with an ice pack, butterfly closures, and aftercare instructions. Expect the site to be tender for a few days and possibly bruise. Many women experience moderate achiness during this time that can be effectively controlled with ice packs and acetaminophen. Plan to get plenty of rest over the following few days, and avoid strenuous activity. You'll be able to bathe the morning after the biopsy, as long as you're careful not to soak or scrub the biopsy site. Iowa Radiology reports biopsy results to both the patient and the referring provider within two business days.

SURGICAL BIOPSY

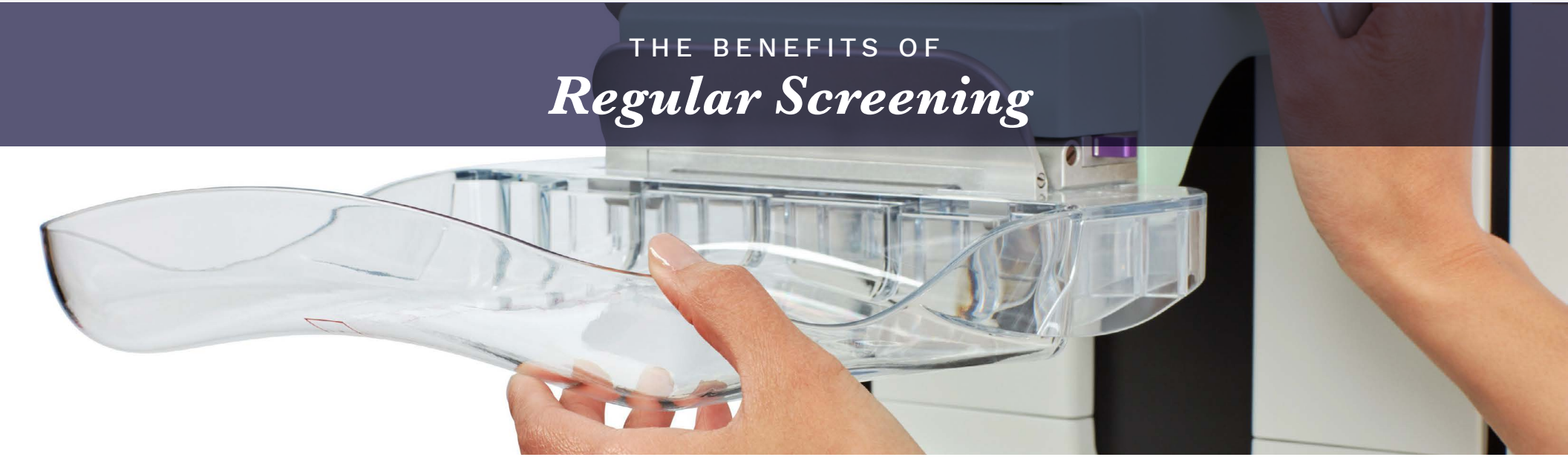
Surgical biopsy may be recommended in cases where the suspicious area cannot be clearly visualized using imaging technology. Surgical biopsy is typically performed in a hospital outpatient department using a local anesthetic in addition to IV sedation, but general anesthesia may be used in some cases. The surgeon usually removes the entire tumor and some surrounding tissue. Although more invasive than needle biopsy with greater risk of complications, surgery is also the most accurate way to diagnose breast cancer and get complete information about the tumor.[7]



BIOPSY RESULTS

Your pathology report will describe the sample of tissue that was taken for biopsy, including the location it was taken from and the presence or absence of noncancerous, precancerous, and cancerous changes. If only noncancerous conditions are found, and your doctor and radiologist are comfortable with the result, then you'll be able to go back to your normal mammography screening schedule. If, on the other hand, your doctor and radiologist suspect (based on highly suspicious imaging results, for example) that the biopsy may have produced a false negative result, then a surgical biopsy may be recommended to be sure that cancer isn't missed.[8]

If the pathology report indicates cancer, then it will contain valuable information about the type of cancer, such as hormone receptor status and other data that influence prognosis and will help to guide your treatment plan. A needle biopsy will not yield information about tumor size, lymph node status, or metastasis, however. Other tests may be ordered to obtain this information.[9]



THE BENEFITS OF *Regular Screening*

Regular breast cancer screening with mammography gives you the best odds of beating breast cancer and having a broader range of treatment options. The American Cancer Society reports that women who are exposed to mammography screening experience a 20–40% lower risk of dying of breast cancer.[10] The American College of Radiology and the Society for Breast Imaging recommend annual mammography beginning at age 40 for women at average risk of developing breast cancer.[11] If you are at increased risk, due to a family or personal history of breast cancer, for example, consult with your doctor to determine the appropriate screening regimen for you.

MAMMOGRAPHY SCREENING WITH HOLOGIC GENIUS 3D

Iowa Radiology is proud to provide Hologic Genius low-dose 3D mammograms with SmartCurve compression. Modern 3D mammography (breast tomosynthesis) has been found to reduce the need for callbacks after screening while increasing detection of invasive breast cancers.[12] Low-dose technology means that the more detailed 3D images can be created without the need for additional radiation, and the SmartCurve compression plate mirrors the shape of the breast to apply even pressure and provide a more comfortable exam than standard flat imaging plates.

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