General Information
Mammography and Breast Cancer Screening
You’ve made an appointment with your doctor for a mammogram. If this is your first mammogram, you probably have a few questions about the examination procedure. We’d like to answer some of your questions to help ease your mind about your appointment.

Regular screening examinations enable early detection of breast cancer, which leads to a significant increase in the chance of recovery. Mammography is considered the best way to detect breast cancer in its earliest, most treatable stage.

Breast cancer is the most common cancer among women, except for skin cancer, and it is the second leading cause of cancer death in women, after lung cancer.

One out of eight women will develop breast cancer some time during her life – this means one new diagnosis every 2 minutes. Every 13 minutes, a woman will die of breast cancer, according to the National Breast Cancer Coalition (NBCC). The death rates from breast cancer have declined significantly and medical experts attribute the decline to earlier detection and more effective treatments.
What is a Mammogram?
A mammogram is a special X-ray examination of the breast. The examination is performed by compressing the patient’s breast between two plates to capture the image of the breast tissue. While there may be some discomfort, it is important that the breast is compressed to increase the image quality and lower the exposure to radiation. At least two images are taken of each breast. Each breast is X-rayed once from top to bottom and once at a slight angle. The mammography images are then reviewed by the physician and discussed with the patient.

Who should have a Mammogram?
There are two types of mammograms – a screening mammogram and a diagnostic mammogram.

A screening mammogram is an X-ray examination of the breasts in a woman who has no complaints or symptoms of breast cancer. The goal is to detect cancer when it is still too small to be felt by a woman or her physician. Screening mammograms are recommended every year for women once they reach 40 years of age. In some instances, physicians may recommend beginning screening mammography before age 40 (i.e., if the woman has a strong family history of breast cancer).

A diagnostic mammogram is advisable for anyone who notices any change in their breast like a lump or hardening when palpating the breast or armpits, has a family history of breast cancer, or has had an abnormality found during a screening mammogram. A diagnostic mammogram is usually more time-consuming because additional images need to be taken of the areas of concern and a biopsy may need to be performed.
Analog Mammography

Analog mammography records images using film processing (as compared to digital, discussed below). The examination is performed by placing the patient’s breast between the mammography unit’s X-ray tube and an X-ray film and then carefully pressing it against a compression plate. The X-rays passing through the breast tissue blacken the X-ray film. However, the X-ray film remains white at locations where the X-rays were not able to pass through the tissue. The result is a black-gray-and-white image of the breast.

Digital Mammography

Another type of mammography is digital mammography. The examination procedure is exactly the same as for analog mammography. However, instead of exposing film, the X-rays hit an advanced detector, which senses the image data digitally and electronically. The resulting images are evaluated by the physician with a special computer. Several software tools are also at the doctor’s disposal to simplify diagnosis.

Radiation Exposure During Digital and Analog Mammography

Both analog and digital mammography involve the use of X-rays. However, the radiation dose generated lies in the low dose range.
Benefit of Digital Mammography

- Up to 40% less radiation dose over standard film mammography
- Fewer callbacks or retakes for additional images because images can be enhanced with the computer
- Less time may be needed because the results are seen more quickly – so that means less anxiety and discomfort for you
- The doctor can electronically manipulate images with digital mammograms for a more accurate diagnosis
- The potential for more efficient access to mammograms is possible because digital mammograms can be electronically transmitted to another physician for viewing or printing

Digital Mammography at its Very Best

MAMMOMAT Novation®

- Siemens proprietary Tungsten tube technology delivers the lowest possible dose
- Patient comfort features such as flexible paddles and a patented technique called OpComp® that senses breast thickness for a more comfortable compression
- Helps increase cancer detection rates with Computer Assisted Diagnosis (CAD) markers
- Largest detector allows imaging of almost all breast sizes
- Excellent image quality
- Latest full-field detector technology based on amorphous selenium (a-SE)
- Increased detection of small and low contrast objects
As one of the world’s largest healthcare solution providers, Siemens Medical Solutions stands for innovative products, services, and complete solutions. Siemens has been manufacturing mammography systems since 1971. Several thousand systems are installed worldwide and decades of dedication and experience have shown Siemens to be a trustworthy partner in the field of gynecology and the early detection of breast cancer. The Siemens mammography product line includes both analog and digital mammography systems.
To date, the research conducted on cancer and, more specifically, breast cancer has not been sufficient to reveal its exact causes. However, regular screening improves the chances that a growing tumor will be detected early enough to be treated before the disease spreads and becomes a potential threat to the patient’s life. Siemens Medical is dedicated to the early detection and treatment of breast cancer through education on the importance of early screening as well as through the development of innovative, new mammography systems.
On account of certain regional limitations of sales rights and service availability, we cannot guarantee that all products and features included in this brochure are available through the Siemens sales organization worldwide. Siemens reserves the right to modify the design, packaging, specifications, and options described herein without prior notice. Please contact your local Siemens sales representative for the most current information. Note: Any technical data contained in this document may vary within defined tolerances. Original images always lose a certain amount of detail when reproduced.

The information in this document contains general technical descriptions of specifications and options as well as standard and optional features which may not always be present in individual cases.

Siemens Medical Solutions USA
51 Valley Stream Parkway
Malvern, PA 19355-1406 USA
Telephone: 1-888-826-9702
www.usa.siemens.com/medical

© 2005 Siemens Medical Solutions USA, Inc.
All rights reserved.
Printed in USA
05-16-PC-143 03-2005