One out of every 15 women in the United States will develop breast cancer. It is the number one cancer killer of women. Yet, if detected early and treated promptly, breast cancer is highly curable.

Although modern technological advances such as mammography and thermography contribute to earlier detection of breast cancer, they supplement but never replace the standard, systematic and thorough clinical breast examination. A hasty and superficial examination, however, will miss small cancers and even large ones, as well.

The technique of breast examination may vary in sequence according to the preference of the examiner, but three anatomic sites must be investigated: (1) the supraclavicular areas; (2) the breasts, including the nipples and areolae; (3) the axillae.

Since more than 90 percent of breast cancers are discovered by women themselves, it is essential that the physician personally teach breast self-examination, preferably at the time of his clinical examination. Individualized instruction instills the confidence required for continued monthly self-examination.

On the following pages, Dr. Benjamin F. Byrd, Professor of Clinical Surgery, Vanderbilt University School of Medicine, Nashville, Tennessee, describes a technique of systematic and thorough breast examination and offers guidelines on teaching breast self-examination.

Examine the Supraclavicular Areas:
Have the patient sit on the examining table facing you. Adequate lighting is essential. Gently and methodically palpate for enlarged upper, middle and lower cervical lymph nodes. (Fig. 1.) Pay special attention to the area immediately above the clavicle, a frequent site of metastases from primary breast cancer.
Inspect the Breasts: First examine the patient with her arms at her sides. (Fig. 2.) Inspect the contours of the breasts from the axillary fold to the midline for bulges, skin dimpling or areas of surface flattening.

Next, ask the patient to raise her arms high over her head, chest forward, to expose the extreme lateral portions and undersurface of the breasts. (Fig. 3.) This technique emphasizes any surface flattening or skin dimpling. Look for redness, ulceration, edema (orange peel appearance), surface erosion or dilated veins. Also note unilateral elevation of the nipple line or change in the direction of the axis. The nipple is often pulled toward an adjacent malignant tumor. A "pointing" nipple may be a preliminary clue to the specific location of a breast cancer.

Palpate the Breasts—Patient Seated:
Remember that it is not advisable to perform a breast examination when the patient is immediately premenstrual since tenderness or engorgement may preclude adequate evaluation.

With the patient still seated, have her put her hands behind her head. (Fig. 4.) Gently palpate the breast with four fingers of your slightly extended hand. Using a rotary or transversely linear motion, examine the breast either quadrant by quadrant or in decreasing concentric circles concluding at the nipple.
Compress the Nipple: Next place the nipple between your index finger and thumb; gently apply pressure to elicit discharge, evaluate elasticity of the nipple and possible fixation at its base.

Note the general characteristics of the breast. Is it smooth, granular or nodular? If you encounter a mass, record its size and consistency, and determine whether it is fixed to the skin or pectoralis fascia. Gently press together the skin on either side of the mass to elicit skin flattening or dimpling. (Fig. 5.) Skin dimpling may also become apparent by elevating the breast with your hand or by asking the patient to press her hands against her hips, thereby contracting the pectoral muscles.

Examine the Axillae: Facing the patient, support her arm with yours. Then abduct her arm and place your hand flat against the chest wall and high in the axilla. (Fig. 6.) Press gently against the chest wall and gradually rotate your hand inferiorly. A careful examination is essential, since nodes high in the axillae or behind the pectoralis major muscle may be easily missed. Note the number, consistency, movability and size of the axillary lymph nodes.
Palpate the Breasts—Patient Supine:
Instruct the patient to lie supine with her right hand under her head and elbow flat on the examining table. (Fig. 7.) Put a small pillow beneath the right shoulder to distribute the breast tissue more evenly over the chest wall. Examine the breast using the technique described earlier. Now reverse the process and examine the left breast.

Teach BSE: Following the physical examination, explain to the patient the importance and technique of breast self-examination. Advise her to examine herself once a month, at a time in her menstrual cycle when the breasts are neither engorged nor tender. If the patient is postmenopausal, the birthdate can be selected as the appropriate day of the month for BSE.

First instruct the patient to examine herself while bathing since a mass is more easily felt when both the hand and the breast are wet. Next, have her sit before a mirror and inspect her breasts with her arms at her sides and then with her arms raised. Advise her to look for a change in contour, dimpling or nipple abnormalities.

Now tell the patient to lie supine with a small pillow under her shoulder on the side to be examined. (Fig. 8.) Instruct her to palpate the entire right breast with the flat of the fingers of the left hand. Then guide her through palpation of the entire left breast in the same manner but using the right hand.

Point out areas of clinically unimportant thickening (e.g., the inframammary ridge), so that such findings do not worry the patient. Also, carefully describe the suspicious signs of breast cancer.

If the patient discovers a mass or other findings, advise her not to become alarmed, but do emphasize the need to see a physician immediately.