

Makalah **AKADEMIA**

BREAST CANCER AND BREAST SELF-EXAMINATION 101

Ts Faikah Binti Awang @ Ismail

Pusat Pengajian Biologi, UiTM Cawangan Negeri Sembilan, Kampus Kuala Pilah, Pekan Parit Tinggi, 72000 Kuala Pilah, Negeri Sembilan

faikah7450@uitm.edu.my

Breast Cancer is an abnormal growth of cells in the breast. This cancer can occur in both men and women, but women tend to have a higher prevalence of developing breast cancer compared to men due to several factors like women having more awareness about cancer, thus this leads them to be more prone to seek medical attention when needed. In Malaysia, breast cancer is the most common form of cancer affecting women which about 1 of 19 are at risk of developing this cancer in their lifetime (National Cancer Registry,2003). These statistics show that Malaysian women have a lower risk of developing cancer as compared to women in Europe and the United States where 1 of 8 are at risk of developing this cancer (National Cancer Registry,2003).

This might be due to dietary habits, lifestyle, and access to health services for breast screening. Despite the Malaysian government has introduced the subsidy for women in the B40 group to have free mammography screening, yet many women especially in rural areas did not come forward for the screening due to lack of information and the distance of the house to the health facilities. Meanwhile, for men, the issues arise when most of the men only come and seek medical attention when it was too late as they only think that breast cancer only affects women. Currently, the average risk of breast cancer in men is 1 in 1000 (American Cancer Society,2021). The risk in men seems lower as compared to women due to lack of research on the subject as men tend to not come forward for the screening and do not aware that they are also at risk of developing breast cancer when their first-degree family member like mother or sister develops this cancer. Besides family history, there are other factors that can contribute to women and men developing breast cancer.

“Not all lump are cancerous. Like any other cancer, breast cancer can be divided into two types: benign and malignant.”

The researcher often divides the factors into 2 categories which the factors that are within your control such as weight (obese people tend to have larger breast which causes more difficult for early detection of breast cancer), dietary habits (eating more carcinogenic substances can increase the risk of breast cancer), alcohol consumption (alcohol can cause an imbalance in hormone thus increase the risk), and history of taking hormone replacement therapy or birth control (Centres for Disease Control and Prevention, 2020). Meanwhile, the second category is the risk factors that are beyond your control which is age, family history for breast cancer, pregnancy, and breastfeeding (some study showed that women who never had a full-term pregnancy after the age of 30 have a higher risk of developing breast cancer and women who had to continue breastfeeding for 2 years have a slightly lower risk of breast cancer compared to women who did not breastfeed their child) (Breast Cancer.org, 2021).

Benign Breast Cancer is usually caused by breast cysts or breast lumps which are fluid-filled and can go away without treatment. Fibroadenomas or most commonly known as fibroid are the most common noncancerous solid breast cancer (no treatment needed). Fibrocystic breast which changes according to your hormonal level where it feels dense and tender (no treatment needed), hyperplasia or overgrowth of breast glands (only will be removed by surgery when needed), intraductal papilloma or growth form inside the breast duct near the nipple (require surgical removal when needed) and last but not least mammary duct ectasia or inverted nipple with or without discharge (only antibiotics needed) (American Cancer Society, 2021).

For malignant breast cancer, it can be divided into the type of tissues involved and the location of cancer. Infiltrating Lobular Carcinoma (ILC) can begin in milk glands and spread out to other regions of the body. Infiltrating Ductal Carcinoma (IDC) begin in the milk duct before spreading out to other regions and the most common malignant breast cancer. Mucinous carcinoma formed by the mucus-producing cancer cells. Inflammatory breast cancer is the appearance of inflamed breast as the cancer cells blocking the lymph vessel and last but not least, Paget's Disease begin in the milk ducts and spread to the skin of the nipple and areola (Susan, G. 2021). The appearance of mammography images for normal, breasts with benign and malignant cancer can be seen in Figure 1.

The survival rate of the person who develops breast cancer depends on the stage of cancer. The American Cancer Society had used the SEER (Surveillance, Epidemiology and End Result) database on predicting the 5- year relative survival rates for breast cancer (National Cancer Institute, 2021). The SEER stage and 5- year relative Survival Rate can be seen in Figure 2. Localized means cancer do not spread from its origin. Regional means the cancer cells only spread out in the breast area and Distant means cancer already spread out to other organs.

Benign breast tumor/Mammography

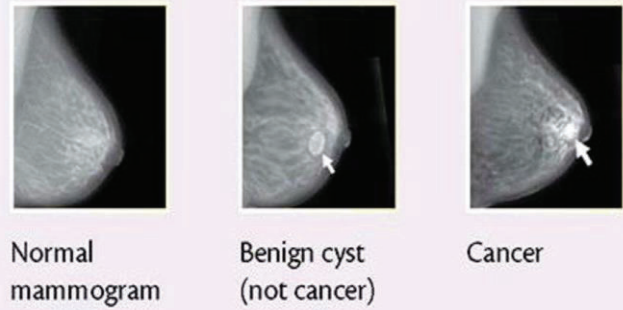


Figure 1: The Appearance of mammograph from Normal breast, Breast with Benign Cancer and Breast with Malignant Cancer.

Source: <https://slideplayer.com/slide/13470413/>

SEER Stage	5-year Relative Survival Rate
Localized	99%
Regional	86%
Distant	28%
All SEER stages combined	90%

Figure 2: 5-year Relative Survival Rate for Cancer patient according to SEER Stage.

Source: <https://www.cancer.org/cancer/breast-cancer/understanding-a-breast-cancer-diagnosis/breast-cancer-survival-rates.html>

Early detection of breast cancer is vital as this cancer progress according to time. 99% of women can have better survival rate when cancer was detected in the localized stage. One also needs to bear in mind that the estimation cost for breast cancer treatment is not cheap. The cost can range from RM18,000 to RM395,000 and the cost will be increased up to RM1,353,000 in 10 years (The Ringgit Plus, 2021).

Fortunately for all of us, there is one solution that can help us to reduce the risk and cost of breast cancer. One of the easiest and cheapest approaches to help women and not to forget men is by practicing breast self-examination. A study done in the United Kingdom has found that about 27% of breast cancer is detected by breast self-examination alone and cancer detected is at an early stage where better prognosis happens in women (Micah et al, 2021). Women and men are advised to begin practicing breast self-examination at the age of 20 (Marie. A, et al, 2009). Thus, let have a look at how to do this examination. The examination required 5 simple steps as shown in Figure 3 and you may fix the same date every month, try to avoid the date near to your menstrual cycle as your breast might be slightly tender at this time (Breast Cancer.org,2020). The best time to do the examination is on 3 to 5 days after your menstrual since the breast is not as tender or lumpy. For men or women who menopause, you can fix any date of the month. Fixing the date will help you keep track of any change that occurs from one breast examination to the next examination.

Breast Self-Exam for Him!
Check yourself the same day every month.

1. Check your breasts in front of a mirror for any symptoms or abnormalities.
2. Examine the nipple, most men find their lumps under the nipple.
3. In a sitting or standing position, use the pads of the three middle fingers - examine using light, medium, and deep pressure. (See step 4, for area to be examined)
4. Examining starts at the collarbone and continues down and up the entire breast in a vertical pattern.
5. Position yourself in bed which leads to a more even distribution of your breast tissue. Repeat step 3 and 4.

Signs and Symptoms

- ✓ A painless lump or thickening in your breast tissue.
- ✓ Changes to the skin covering your breast, such as dimpling, wrinkling, redness, or scaling.
- ✓ Changes to your nipple, such as redness or scaling, or a nipple that begins to turn inward.
- ✓ Discharge from your nipple.

Logos at the bottom: BREAST CANCER HUB (breastcancerhub.org), SARAH CANNON Cancer Institute (hcamidwest.com), HCA (HUGO) HEALTH, The Male Breast Cancer Coalition (malebreastcancercoalition.org), Kurlbaum Illustration (kurlbaumillustration.com).

Figure 3 : Steps for Breast Self-Examination which is suitable for both women and men.

Source: <https://malebreastcancercoalition.org/breast-self-exam-cards/>

STEP 1

Standing in front of the mirror with your shoulders straight and your arms on your hips, begin looking at your breast. You should pay attention to your breast size, shape, and color (especially at the nipple area). Your breast should have even shaped without visible distortion or swelling. You must take note if you find there is/are any change to your breast like change in the structure of the skin (dimpling, puckering, or bulging of the skin), the nipple changes its position, or an inverted nipple (pushed inward instead of sticking out), and last but not least redness, soreness, rash or swelling.

STEP 2

Next, raise your arms and look for the same change if any.

STEP 3

While you're at the mirror, look for any signs of fluid coming out of one or both nipples (it could be watery, milky, or yellow fluid or blood).

STEP 4

Next, feel your breast while lying down, using your right hand, feel your left breast, and vice versa. Use a firm, smooth touch with the first few finger pads of your hands, keeping the fingers flat and together. Use a circular motion, examine your breast according to their quarters. The quarters will help you to describe the location of any abnormality of your breast to your health care provider. The location of the breast quadrant can be seen in Figure 4.

One breast can be divided into 4 quadrants which are UOQ (Upper Outer Quadrant), LOQ (Lower Outer Quadrant), UIQ (Upper Inner Quadrant), and LIQ (Lower Inner Quadrant). The examination must cover the entire breast from your collarbone to the tops of your abdomen (top to bottom) and from your armpit to your cleavage (side to side). Follow a pattern to ensure that you cover the whole breast. You can begin at the nipple, moving in larger and larger circles until you reach the outer edge of the breast. You can also move your fingers up and down vertically in rows as if you were mowing a lawn. This up and down approach seems to work best for most women.

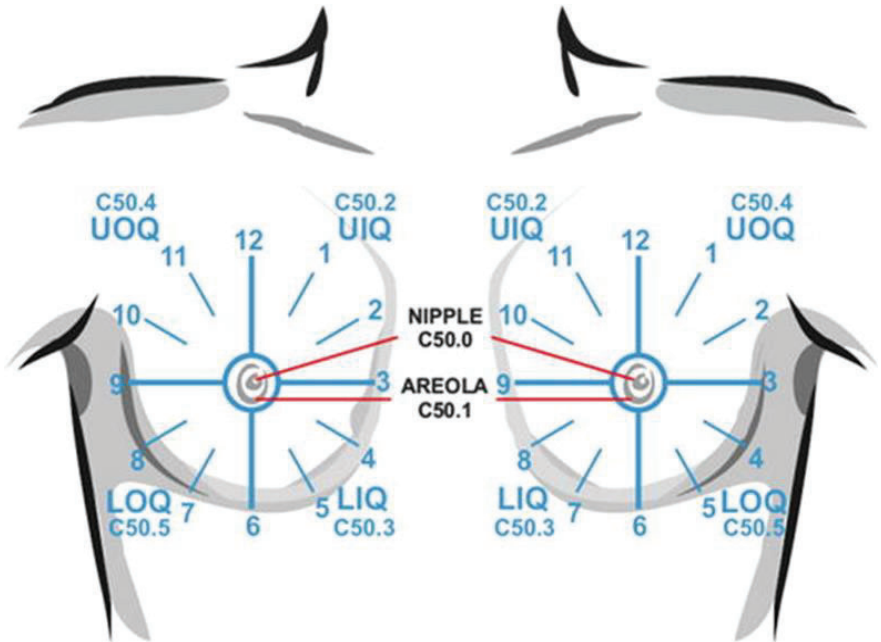


Figure 4: Location of breast structure according to quadrants.

Source: <https://radiologykey.com/healthy-breast-with-ultrasound/>

Be sure to feel all the tissue from the front to the back of your breast: from the skin and tissue just beneath, use light pressure especially if you have a larger breast or are obese; use medium pressure for tissue in the middle of your breast, meanwhile use firm pressure for the deep tissue in the back. When you reached the deep tissue, you should be able to feel down your ribcage.

STEP 5

Finally, feel your breast while you are standing or sitting. Many women find that the easiest way to feel their breast is when their skin is wet and slippery, so they like to do this step in the shower. If you have a disability that makes it difficult for you to examine your breast using these techniques, you still can conduct this examination by consulting with your health care provider. While examining the breast, some tips can be kept in mind which are;

- (1) Use the pads of your fingers not the very tips of your three middle fingers. If you have difficulty in feeling it with your finger pads, you might also use your palm or the back of your fingers.
- (2) Use different pressure levels as your goal is to feel the breast structure at different depth.
- (3) Take your time and do not rush as several minutes is required for you to carefully examine your breasts.

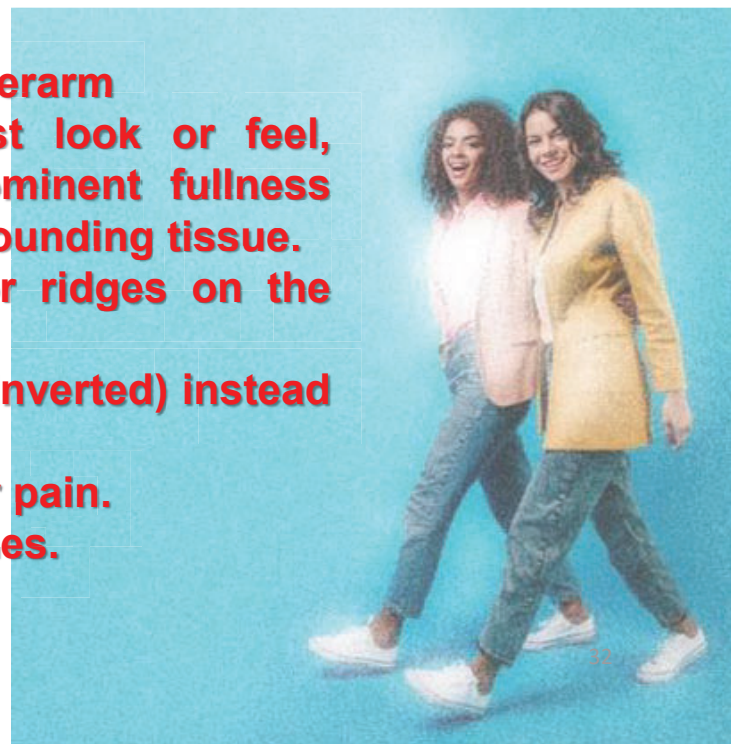
Regular breast self-examination will help women and men to detect any irregular changes in their breasts. Many women might find lumps at various point of their menstrual cycles and the firmness also change with women's age. If ones detected an abnormality in their breast, do not panic, all they need to do are identifying the location of the abnormality and how it feels under their finger before they could consult their nearest health care provider. Women or men must pay attention when they notice such change in their breast which is (as shown in Figure 5):



Figure 5: Appearance and feel of breast cancer

Source: <https://www.northern surgical oncology.com.au/presenting-problems>

- * **A hard lump or knot near underarm**
- * **Change in how their breast look or feel, including thickening or prominent fullness that is different from the surrounding tissue.**
- * **Dimples, puckers, bulges, or ridges on the skit of their breast.**
- * **A recent change in a nipple (inverted) instead of sticking out.**
- * **Redness, warmth, swelling or pain.**
- * **Itching, scales, sores, or rashes.**
- * **Bloody nipple discharge.**



In Malaysia, many government agencies like Lembaga Penduduk dan Pembangunan Keluarga Negara (LPPKN) and Non-government Organisation (NGOs) such as Majlis Kanser Nasional (MAKNA) and the National Cancer Society conduct free consultations for breast self-examination. Those agencies will help their patient to get proper support in terms of financial, medical attention, and advice as well as a support group. Breast cancer is not a death sentence. It can be cured and the survival rate will increase with early detection. Most women and men are emotionally impacted once they are being diagnosed with this disease. There is an established support group for those in need. This group is known as the **PINK UNITY** group under the National Cancer Society which established by the cancer survivor and their family to give emotional support and guide the newly diagnosed individual.

Figure 6 shows the poster from the National Cancer Society about how to approach the support group. **PINK UNITY** also has their Facebook page for those who are interested in their program. Remember, get the information and support that you need since it can save your life and your loved one.

BREAST CANCER AND MENTAL HEALTH

Mindfulness involves paying attention to the present moment just as it is¹. Breast cancer survivors who experience fatigue, anxiety and stress can practise mindfulness to improve their state of mind according to a meta-analysis involving 14 studies^{2,3}.

Practice mindfulness by⁴:

- ✓ **Observing the present moment without judgement**
Your mind doesn't have to be eternally calm. Instead, pay attention to the current moment just as it is. Listen to the sounds around you and the pattern of your breath.
- ✓ **Returning to the present moment again and again**
Our minds will wander and think of many things so practice to bring it back to the present. For example, we may be thinking about groceries to buy, or what to eat for lunch, or that appointment to arrange so, bring it back to your current position and location.

Call our cancer information helpline at 1-800-88-1000 for complimentary psychosocial services (for cancer survivors and caregivers)

Source: ¹ Schell, L. K., Monsef, I., Wöckel, A., & Skoetz, N. (2019). Mindfulness-based stress reduction for women diagnosed with breast cancer. The Cochrane database of systematic reviews, 3(3), CD011518. <https://doi.org/10.1002/14651858.CD011518.pub2> ² Zhang, Q., Zhao, H., & Zheng, Y. (2019). Effectiveness of mindfulness-based stress reduction (MBSR) on symptom variables and health-related quality of life in breast cancer patients: a systematic review and meta-analysis. *Supportive care in cancer: official journal of the Multinational Association of Supportive Care in Cancer*, 27(3), 771–781. <https://doi.org/10.1007/s00520-018-4570-x> ³ Getting Started with Mindfulness. [Internet] Mindfulness [cited 2021Sep15]. Available from: <https://www.mindful.org/meditation/mindfulness-getting-started/>


Contact us at
☎ **1-800-88-1000** ✉ help@cancer.org.my

Figure 6: Poster from the National Cancer Society about the important of mental health for cancer patient.

Source: <https://www.facebook.com/nationalcancersocietymalaysia>

