



## Perceptions of Female Medical Students towards Preventative Mastectomy in Malaysia: A Qualitative Approach

## KEYWORDS

Perceptions, Students, Preventative Mastectomy

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**ABSTRACT** *The purpose of this study was to explore the perceptions of Malaysian Medical Students towards Preventative Mastectomy. The study was an in-depth qualitative study conducted among year four medical students. A total of 26 students were invited to participate in this study. Universal sampling was used in this study. Verbal consent was obtained from all participants. The data obtained were classified into various categories, and was analyzed manually. A total of 26 medical students participated in this study, majority of them knew about preventative mastectomy and the main source of information was internet. The majority of the participants will recommend preventative mastectomy to their patients if tested genetically positive. However some of them will not recommend it to their patients even though tested positive for BRCA1/2. The majority will recommend the preventative mastectomy for their relatives if tested genetically positive. Surprisingly, most of the students will never recommend it to their own if tested positive. Further investigation should be carried out among physicians, surgeons, oncologists, women, and general population to come out with guidelines for preventative mastectomy based on culture, values, attitudes and religion.*

**Introduction**

Breast cancer is a major health burden, which is the most common cause of cancer death among women in high and low recourse countries <sup>[1]</sup>. The incidence, mortality and survival rate in different parts of the world vary from 4 to 10 fold. The global cancer statistics indicate that breast cancer incidence is rising at a faster rate in populations of developing countries including Malaysia <sup>[1-2]</sup>.

The first two genes found to be linked to breast cancer were BRCA1/2. If a woman is born with one of these mutated genes, she is more likely to develop breast cancer compared to those with normal genes. It is estimated that 5–10% of breast cancer cases are linked to a breast cancer gene mutation.<sup>[3]</sup> Women with an identified BRCA1/2 mutation have a cumulative lifetime risk for breast cancer of 43-87% up to the age of 70 years, becoming relevant from age 25-30 years onwards <sup>[4]</sup>.

Prophylactic mastectomy (also called a preventive mastectomy) is the preventive removal of all fibroglandular breast tissue, is a radical risk-reducing strategy. It involves a bilateral mastectomy in unaffected high-risk women and breast cancer patients after breast conserving therapy, or a contralateral mastectomy in breast cancer patients after unilateral mastectomy. In unaffected women, bilateral prophylactic mastectomy yields an approximate 95% risk reduction of breast cancer <sup>[5]</sup>. However some complications were reported such as bleeding, capsular formation and poor cosmetic appearance. These may lead to additional surgical interventions, or aesthetically unsatisfactory results. Recent experience showed identical complication rates in unaffected women and women with a history of breast cancer undergoing preventive mastectomy <sup>[6]</sup>.

In developed countries prophylactic mastectomy is still controversial issue with strong proponents and strong opponents, hence we conducted this qualitative study. Therefore investigating this issue in Malaysia context is important. Balanced understanding of benefits and adverse effects associated with this procedure is needed. The main purpose of this study was to determine the perceptions of Malaysian Medical Students towards Prophylactic Mastectomy in order to explore their knowledge about preventive mastectomy.

**Methodology:**

This study is an in-depth qualitative study conducted among fourth year medical students. A total of 26 students were invited to participate in this study. The interview was conducted in May 2013 among Medical Students from UiTM, Selayang, Malaysia. Universal sampling was used to conduct this study. Verbal consent was obtained from all participants. The facilitator asked probe questions to gain in-depth information about preventative mastectomy. The facilitator wrote down the conversation during the discussion. Main issues were discussed: first, knowing the preventative mastectomy, second, the source of the information about preventative mastectomy. Third, if their patient tested positive for BRACA 1/2 will recommend preventative mastectomy. Fourth, if their relative tested positive for BRACA 1/2 will recommend preventative mastectomy. Finally, if your tested positive for BRACA 1/2 will undergo preventative mastectomy. The data obtained were classified into various categories. Due to the small sample size, the data was analyzed manually.

**Results**

A total of 26 medical students participated in this study. The majority were female, and all of them from year four. This study conducted in selayang campus, in May 2013.

**Know the preventative mastectomy**

The majority of the students knew about preventative mastectomy. Their main source of information is from internet. Few of students never heard about it before. One of them said "I never heard about it before"

**If your patient tested positive for BRACA 1 and BRACA 2 will recommend preventative mastectomy**

The majority of the participants will recommend preventative mastectomy to their patients if tested genetically positive. Some of them said "Yes, if the cancer occurred in both breasts, but if only one side just remove one with lymph nodes"

**Other students said** "Yes, it is the best choice"

"Yes, because she have high risk to get breast cancer"

"Yes, if the patient have high risk"

"Yes, I will recommend it for patient tested positive to avoid breast cancer"

"Yes, because it is their choice to make a decision. I will explain about the advantages and disadvantages and the decision up to the patient"

"Yes, to prevent cancer metastasis to another organ"

However some of them answered they will not recommend it to their patients even though tested positive for BRACA 1 & 2. One of them said "No, because it is only 5% they can prevent it by removing both health breasts. Changing lifestyle is more important"

Another student said "No, because genetic just give 5% risk of developing breast cancer. Diet and lifestyle should be considered as preventive measures"

"Yes, because I love them and I don't want to lose them"

**Recommend it to their relatives**

**The majority will recommend the preventative mastectomy for their relatives if tested genetically positive**

"Depends on patients age, social condition of the patients"

"Yes, to save their life"

"No, but I will advice them accordingly because the choice depends on the patients"

**Recommend it to own self**

Most of the students will never recommend it to their own if tested positive

"I would say no, after lifestyle modification, get married early as possible, then after that may be after that do the double mastectomy"

"No, because I should practice good lifestyle and eating habits"

"No, because gene mutation only contributes 5% to the occurrence of the disease, in addition no evidence based that those who did total mastectomy would not get breast cancer, there is still a risk of getting breast cancer even with double mastectomy"

"No, because I am still too young"

"No, I am too young and I believe breast cancer is a multifactorial risk factor, I will try to avoid them and do all the preventive measures and after all it is what ALLAH planed for us"

**However few said yes**

"Yes, because it is for my own good"

"Not at this age but later maybe after having children"

**DISCUSSION**

Bilateral mastectomy and immediate breast reconstruction has increased in advanced centers due to the development of genetic testing<sup>[7]</sup>. The advancement of molecular medicine start to contribute and will contribute to the cancer prevention in the near future. Thus some women in developed countries start to accept the preventative mastectomy as a primary prevention of breast cancer. However, in the developing countries like Malaysia; preventative mastectomy is not introduced yet as a preventative mastectomy. Therefore, we are going to investigate this issue nationally. The first study was completed which carried out among medical students to determine their knowledge.

The majority of the students knew about preventative mastectomy. Their main source of information is from internet. Few of students never heard about it before. More emphasis needed to cover this topic in preventive medicine subject.

The majority of the participants will recommend preventative mastectomy to their patients if tested genetically positive. The students gave several reasons such as to avoid breast cancer in the future and genetically positive women with BRCA 1/2 is in high risk of getting breast cancer, therefore double mastectomy is necessarily. Previous study reported that preventative mastectomy significantly reduced but not eliminated breast cancer risk<sup>[8]</sup>. (Meijers-Heijboer et al., 2001,<sup>[9]</sup> reported that of 139 women with a BRCA1/2 mutation, 55% choose to undergo prophylactic mastectomy of whom none developed breast cancer, whereas 45% opted for an intensive-screening programme of whom 12% developed breast cancer within 2.9 years of follow-up.

Similarly, the majority of students will recommend the preventative mastectomy for their relatives if tested positive. The reasons given was to save their relatives lives. Surprisingly, most of the students will never recommend it to their own if tested BRCA 1/2 positive. The reasons given were, too young, modification of lifestyle is better than double mastectomy; getting married as early as possible and BRCA 1/2 only contribute 5% of breast cancer risk. It has been suggested that women seem to refrain from choosing prophylactic mastectomy if they actually face the decision after a positive BRCA test result<sup>[10]</sup>. Similar findings reported by Oguntola et al., 2012<sup>[11]</sup> which carried out among adults attending surgical outpatient that one out of four respondents would agree to prophylactic removal of their breast. Previous study showed differences among women towards preventative mastectomy, for instance women from France were 3 to 4 times less likely to be in favor of preventative mastectomy as compared to women from the UK<sup>[12]</sup>. These international differences in both women's as well as physicians' and medical students may be attributable to cultural differences.

Further investigation should be carried out among physicians, surgeons, general population to help the decision makers to come out with guidelines based on culture, values, attitudes and religion.

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