

# Effect of Breast Cancer on Psychological Status among Breast Cancer Patients

<sup>1</sup>Gehan Ahmed Abed, <sup>2</sup>Safaa Diab Abdel Wahab, <sup>3</sup>Sabah Hassan Elamrosy, <sup>4</sup>Manal Mohamed Abdel Hamied

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**Abstract:** Breast cancer is one of disease that most affects the corporal identities of its suffers, and it implies an adaptation to changes with their body image and feelings. It is one of the most common cancers in women that have more severe mental and emotional effects than other types of cancers . purpose of this study was to assess effect of breast cancer on psychological status among breast cancer patients.. Design: descriptive co relational design was used to achieve the aim of the study. Setting: The study was conducted at new cancer institute at Menoufia University . Sample: systematic random sample consisted of 50 patients from the above mention setting who fulfilling the inclusion criteria of the study .Instruments: Data were collected using three tools: Social Characteristics Structured interview questionnaire ,Hospital Anxiety and Depression Scale, Rosenberg Self-Esteem Scale likert scale . Results: The present study revealed that nearly three quarter of studied sample have moderate anxiety level (76%). more than three quarter of studied sample have moderate depression level (78%). the majority of studied sample have mild self-esteem level (86%). It was concluded that there is an effect of breast cancer on psychological status of patients.. Recommendation: Monitoring the patient's mood, encourage the patients to participate in pleasant activities, developing route and structure in daily life. Guidance and counseling unit should be part of the treatment system so that patients can come there to discuss issues affecting them.

**Keywords:** Breast cancer, psychological status.

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## 1. INTRODUCTION

Cancer is still a major disease and the second cause of mortality after cardiovascular diseases. It is in fact estimated to cause 13% of all deaths by 2015( Moeini , Taleghani, Mehrabi and Musarezaie,2014). Awareness of having a life-threatening disease such as cancer, changes people's perception of life .Breast cancer is the most frequent neoplasm in women and it has a negative impact on self concept and the emotional well-being of the patients who suffer it ( Pintado, 2017).

In Egypt, as in many other parts of the world, breast cancer is the most common type of cancer: it accounts for approximately 38% of reported malignancies among Egyptian women. It is considered as the most common female cancer comprising almost one third of all malignancies afflicting females. It is ranked as the second cause of death after lung cancer in women, worldwide( Darwish , Helal ,Aly El-din , Solaiman and. Amin , 2017)

The breast is the epitome of femininity, and anything that affects it leads women to question their roles as attractive, feminine individuals and breast feeding mothers. The loss of an eroticized organ that is capable of provoking desire in others may damage awoman's physical structure, leading her to feel that she has lost her physical attractiveness, her femininity, possibly leading to diminished self-esteem( Prates1, Freitas-Junior, Prates2, Veloso and Barros, 2017). The loss of breast is equivalent to the loss of femininity and lead to the installation of depression, Anxieties, low self esteem, inability to readjust to the social and professional life ( Koçan and Gürsoy ,2016) .

Depression and anxiety are the two most common psychiatric co-morbidity encountered in breast cancer patient. They may experience depression and/or anxiety at any stage of their illness from pre-diagnosis to the terminal phase of the illness (Srivastava, Ansari, Kumar, Shah and Meena et al.,2016). anxiety is a response to a threat and cancer is a threatening factor. Therefore, many patients with cancer have anxiety ( Torabi, Sajjadi , Nourian , Borumandnia and Farahani, 2017).

Nurses play a vital role in the delivery of comprehensive care to people with cancer. As a cancer care team member, the nurse must be able to assess side effects, develop appropriate interventions, and provide effective management of any chemotherapy related symptoms. In addition the nurse must give information to the patient, educating him about these side effects and showing how best to manage them and how to recognize that he needs to seek medical intervention, for the attainment of desirable level of physical and psychological health(Murphy and Mollica,2016) .

## 2. SIGNIFICANCE OF THE STUDY

Breast cancer remains the most commonly diagnosed cancer among women worldwide (WHO, 2017). In the Arab world, breast cancer represents 14% to 42% of all female cancers (Rahou, El Rhazi and Ouasmani et al., 2016) .Breast cancer is the most prevalent cancer among Egyptian women .According to Egyptian National Cancer Institute; breast cancer incidence increased from 18.9% to reach 38.8% in 2014(Ibrahim , Khaled , Mikhail , Baraka and Kamel ,2014) .The prevalence of depression, anxiety, or both (including borderline cases) is 46.87%, 49.96%, and 32.29%, respectively among breast cancer patient in sohag university hospitals( Aly, Abd El Lateef and Mohamed,2017).Also, they are expected to have low self esteem( Prates1, Freitas-Junior, Prates2, Veloso and Barros, 2017).

Nurses see patients at their worst and at their best; from diagnosis, through treatment, through to cure or palliative and end of life care, it is a long journey which is shared between patient and health care practitioner(Faria,2014).Nurses play an important role in improving self esteem and psychological state to help the women retain control by encouraging independence, participation in self care, and decision making. Psychological support of the patient is an important aspect of cancer care, many women with cancer are cured or their diseases are controlled for long period of time. In light of this trend in cancer treatment, emphasis must be placed on maintaining psychological well-being (Gamal and Abd El-Gaffar,2015).

## 3. OPERATIONAL DEFINITION

**psychological status:** the obtained patient depression symptoms and anxiety feeling score measured by Hospital Anxiety and Depression Scale (HADS) developed by( Zigmond and Snaith, 1983).and evaluation of patient to himself either negative or positive according to mean score of Rosenberg Self-Esteem Scale developed by (Rosenberg, 1965)

### 3.1 The Aim of the Study

The present study was carried out to assess effect of breast cancer on psychological status among breast cancer patients.

### Research questions:-

1. What are the effect of breast cancer on psychological status among breast cancer patients?
2. Is there a relationship between the breast cancer and psychological status?

### 3.2 Research Design

Descriptive co-relational design was utilized to achieve the aim of the study.

### 3.3 Research Setting

This study was conducted at new cancer institute Menofia University

### 3.4 Subjects

A convenience sample of 50 patients of the above mentioned settings who fulfilling the following inclusion criteria was recruited in the study.

**Inclusion Criteria**

- Patient who agree to participate on the study
- pre and post mastectomy

**Exclusion Criteria**

patient who has any history of psychiatric illness e.g. depression. Because these illnesses may lead to high stress and low psychological wellbeing and interfere with results.

**. Instruments of the Study**
**Three tools were used in this study:-**
**Instrument one:-Social Characteristics Structured interview questionnaire:**

This questionnaire will be developed by the researcher based on pertinent literature and guidance of supervisors to assesses socio demographic characteristics of the patients as age, education, marital status and income ..... etc.

**Instrument two: Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983).**

The Hospital Anxiety and Depression Scale (HADS) was used to measure levels of anxiety and depression (psychological reaction). This instrument was developed by Zigmond and Snaith(1983).It was translated into Arabic by El-Rufaie and Absood (1987) The scale consists of 14 items and two subscales (anxiety and depression) with seven items in each subscale. Each item is scored on a 4-point Likert-type scale (0–3), each statement has four optional responses which are scored, as follows: 3 most of time, 2 a lot of time, 1 from time to time, and 0 not at all, The sum of scores for each scale was between 0 and 21and . Total scores for each subscale are calculated by simple summation of individual items, a higher score indicating more distress.

Total scoring system for anxiety and depression

- Normal :0-7
- Mild :8-10
- Moderate :11-14
- Sever:15-21

**Instrument three : Rosenberg Self-Esteem Scale likert scale .**

The scale was developed by Rosenberg (1965). It was translated into Arabic and tested by Garas, Ahmed and Bader (1991) It was used to measure self-esteem . It consisted of 10 statements (5 statements are phrased positively and 5 statements are phrased negatively). These statements were rated on a 4-point Likert scale, as follow: (4) strongly agree, (3) agree, (2) disagree, (1) strongly disagree.

Scoring system

Scoring ranged from 10 to 40, with 40 indicating the highest possible score. Scoring for negative answers was reversed, i.e., 1 for strongly agree and 4 for strongly disagree, and so on. Total scores were graded as follows:

Total scoring system for self-esteem

- Low :10-16
- Mild :17-26
- Moderate :27-36
- High :37-40

**Tools validity**

The study tools were tested for content validity by a jury of five experts in the field specialty of psychiatric mental health nursing, psychiatric medicine, obstetric and gynecological nursing, and psychologist to ascertain the relevance, coverage of the content and clarity of the questions. The tools were approved to be valid following the judgment of the experts.

**Tools reliability**

The internal consistency of the questionnaire was calculated using Cronbach's alpha coefficients. The reliability of the tools were done using test - retest reliability and proved to be strongly reliable , instrument 2 was reliabled at 0.81 and instrument 3 was reliabled at 0.84

**3.5 Procedure**

An official letters were issued from the dean of Faculty of Nursing Menoufia University, then send to the head of the department of new cancer institute menoufia university after explanation of the aim of the study to get the permission. Informed consent from patients was obtained after complete description about the purpose, nature and confidentiality of the study. Ethical consideration: the patients were informed about the purpose of the study and encouraged and give full informed consent was obtained from all subjects after providing an appropriate explanation about the purpose of the study and nature of the research. The confidentiality and anonymity of the individual responses, volunteer participation and right to refuse participating in the study were emphasized. A Pilot study A pilot study was conducted on 5 patients to test the clarity, applicability of the instruments and to estimate the time needed for data collection. On the basis of the pilot results the necessary modifications were done accordingly. The sample of pilot study was excluded from the total sample to assure the stability of the results. Data collection the study was carried out in the period from September 2019 to October 2019 over a period of two months. Oral informed consent was obtained from each participant. Then brief description of the purpose of the study was given to each participant. An individual interview was conducted for every patients to collect the necessary data using the tool for data collection. Each interview lasted 25 to 30 minutes, depending on the response of the patients.

**3.6 Statistical Analysis**

The collected data were organized, tabulated and statistically analyzed using SPSS software (Statistical Package for the Social Sciences, version 20, SPSS Inc. Chicago, IL, USA). Descriptive statistics: in which quantitative data were presented in the form of mean ( $\bar{X}$ ), standard deviation (SD) and qualitative data were presented in the form numbers (No) and percentages (%) Analytical statistics: The used tests of significance included: Chi-square test ( $\chi^2$ ): was used to study relationship between two qualitative variables. Spearman correlation (r): is a test used to measure the association between two qualitative variables. Significance was adopted at  $p < 0.05$  for interpretation of results of tests of significance. P value of  $< 0.001$  was considered statistically highly significant. P value of  $> 0.05$  was considered statistically non-significant

**4. RESULTS**

**Table 1:** This table shows that, the mean age of the studied subjects is ( $50.3 \pm 9.77$ ), the majority of studied subjects (88%) are married and the same percentage for not working subjects. more than half of them (60%, 60% and 64 %,) from rural area, have not enough income and illiterate respectively. Nearly half of them have the same percentage (52%) have good partner relationship and have a duration of disease from 1-3years, more than three quarters(86%,80%) of them not have family history of the disease or chronic illness

**Figure (1):** This figure reveals that nearly three have moderate anxiety level (76%).while only(24%) have mild anxiety level.

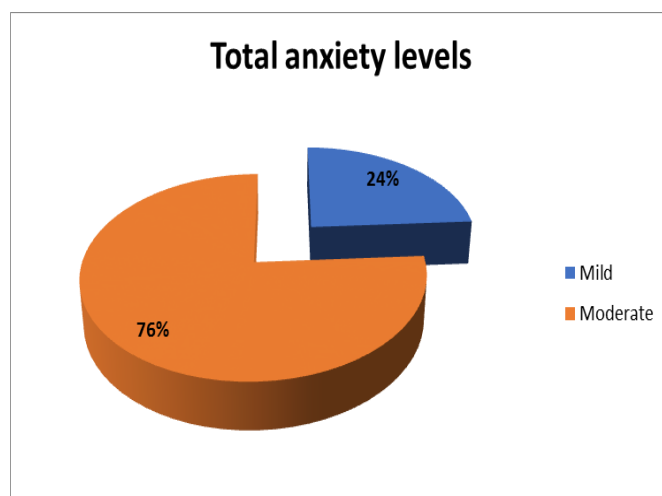
**Figure (2)** This figure shows level of depression among studied sample. more than three quarter of studied sample have moderate depression level (78%).while only(14%) have sever depression level.

**Figure (3)** This figure reveals the majority of studied sample have mild self-esteem level (86%).while only(14%) have moderate self -esteem level.

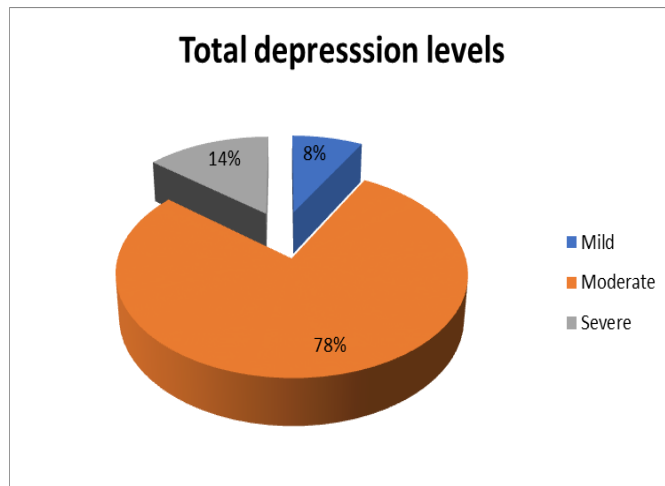
**Table (2)** shows that there is a highly statistically significant positive correlation between total anxiety and depression where p value ( $p = 0.001$ ), I.e. when anxiety decrease depression decrease. While there is highly significant negative correlation between self- esteem and depression at p value ( $0.001$ ), i.e. when self- esteem decrease depression increase

**Table (1): Distribution of Socio demographic characteristics of studied sample (N=50):**

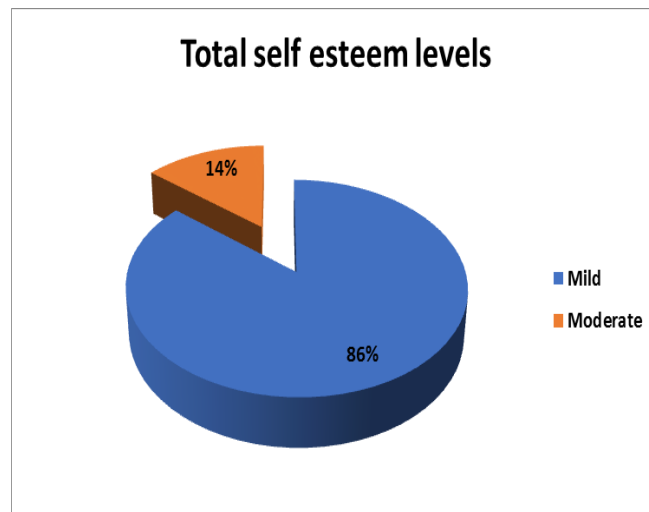
Socio demographic characters		Study group (N=50)	
		No.	%
<b>Age / years</b>	Mean $\pm$ SD Range	50.3 $\pm$ 9.77 35 - 74	
<b>Marital status</b>	Married Widow	44 6	88.0 12.0
<b>Residence</b>	Urban Rural	20 30	40.0 60.0
<b>Educational level</b>	Illiterate Read& write Secondary University	32 5 12 1	64.0 10.0 24.0 2.00
<b>Occupation</b>	Work Not work	6 44	12.0 88.0
<b>Income</b>	Enough Not enough	20 30	40.0 60.0
<b>Disease duration</b>	<1year 1 -3 years 4 – 6 years > 6 years	14 26 9 1	28.0 52.0 18.0 2.00
<b>Family history</b>	Yes No	7 43	14.0 86.0
<b>Chronic illness</b>	Yes No	10 40	20.0 80.0
<b>Partner relationship</b>	Good Bad	26 24	52.0 48.0



Total anxiety levels among study group



Total depression levels among study group



Total self esteem levels among study group

Table (2): Correlation between total anxiety, depression and self esteem score among study group

Studied variable	Anxiety		Depression	
	R	P value	r	P value
Anxiety	--	--	--	<b>0.001 (HS)</b>
Depression	0.779	<b>0.001 (HS)</b>	0.779	-
Self esteem	-0.225	0.074 (NS)	-0.445	<b>0.001 (HS)</b>

### 5. DISCUSSION

The present study reveals that the mean age of the studied subjects is (50.3±9.77), the majority of studied subjects (88%) are married. This was consistent with Sharma and Zhang (2015) who conducted a research about "Depression and its predictors among breast cancer patients in nepal" who reflected the majority of patients are married (85%) and with mean age of 51.92. this could be due to stressful life experiences they faced and hormonal changes that occure during this period.

Also, consistent with Mojgana, Karimollahb and Moslemic (2020) who conducted a research about "Analysis of quality of life in breast cancer survivors using structural equation modelling: the role of spirituality, social support and psychological well-being" reported that (80,6%) were married. In addition to Celik, Tuna, Samancioglu and Korkmaz (2016), who conducted a research about "The fatigue, anxiety and depression levels of patients with breast cancer during radiotherapy" their finding revealed that most study subjects 88.2% were married.

As regarding to occupation the majority of studied subjects (88%) aren't working. This could be due to the impact of breast cancer and they often confronted with fatigue when performing routine activities. This was consistent with Srivastava, Ansari, Kumar, Shah and Meena et al., (2016) who conducted a research about "Study of Anxiety and Depression among Breast Cancer from North India" who reflected the majority of patients (79,5) aren't working. In other hand Shafae, Mirghafourvand, Harischi, Esfahani and Amirzehni (2018) who conducted research about "Self-Confidence and Quality of Life in Women Undergoing Treatment for Breast Cancer." who found that more than three quarters of the participants (72.2%) were housewife.

According to educational level more than half of them (64%) are illiterate. This was consistent with Rey-Villar, Pita-Fernández, Cereijo-Garea, Seoane-Pillado and Balboa-Barreiro et al., (2017) who conducted a research about "Quality of life and anxiety in women with breast cancer before and after treatment" who reflected that more than half of them (62%) are illiterate this might be due to most of studied subjects from rural area and they don't prefer education for the women and poor socioeconomic status.

Concerning residence more than half of them (60%) from rural area. This was consistent with Chaubey and Walvekar (2018) who conducted a research about "Risk factors of breast cancer among women admitted to a tertiary care hospital: a case-control study" who reflected more than half of patients (57,1%) from rural area this could be due to less of awareness, education, early detection, and screening of breast cancer in rural areas.

As regarding to income more than half of them (60%) have not enough income. This was consistent with Boing, Pereira, Araújo, Sperandio and Loch et al., (2019) who conducted a research about "Factors associated with depression symptoms in women after breast cancer" who reflected the majority of patients (84%) with low income level this could be due to that most of patients are not working and in addition to high costs of treatment.

As regard to family history more than three quarters (86%) not have family history. This was consistent with zakaria, el-kinaal, loay, nassar and darwish et al., (2018) who conducted a research about "Triple Negative Breast Cancer, Clinicopathologic Study of Egyptian Patients, NCI Experience" who reflected the more than three quarters (88,1%) not have family history this could be due to the exact cause of breast cancer is not clear; it is believed that genetic, environmental factors (smoking, obesity, gender, hormonal factors) have a role in triggering the development and progression of breast cancer. Also, Ha and Cho (2014) who studied "The Mediating Effects of Self-Esteem and Optimism on the Relationship between Quality of Life and Depressive Symptoms of Breast Cancer Patients." and found (88.7%) not have family history.

The present study revealed that nearly half of them have the same percentage (52%) have good partner relationship. This was consistent with Geyikci, Cakmak, Demirkol and Uguz (2018) who conducted a research about "Correlation of anxiety and depression levels with attitudes towards coping with illness and socio demographic characteristics in patients with a diagnosis of breast cancer" who reflected that nearly half of them have (49,0%) behavior of their spouse was unchanged after the illness this could be due to awareness of partner about the effect of this disease on the psychological status of patients and ability to discrete between their relation with her wife and her illness.

The present study revealed that nearly half of them (52%) have a duration of disease from 1-3 years. This was consistent with Lee, Baek, Jeon and Im (2019) who conducted a research about "Illness perception and sense of well-being in breast cancer patients" who reflected that nearly half of them (50,2%) had a duration of disease less than 3 years. Also, Charalambous, Kaite, Charalambous, Tistsi and Kouta (2017) who studied "The effects on anxiety and quality of life of breast cancer patients following completion of the first cycle of chemotherapy." found that more than half of study sample (73,8) have a duration of disease from 1-3 years, this could be due to lack of medical services and cultural role.

Regarding with history of disease or chronic illness more than three quarters (80%) of the studied subject not have history of the disease or chronic illness. This was consistent with Bardaweel , Akour, Al-Muhaissen , AlSalamat and Ammar(2019) who conducted a research about " Oral contraceptive and breast cancer: do benefits outweigh the risks? A case – control study from Jordan " who reflected that more than three quarter of them (76,8%) of them not have history of the disease or chronic illness. this could be due to the absence of clear cause of breast cancer.

This study showed that nearly three quarter of studied sample had moderate anxiety level (76%).while only (24%) had mild anxiety level. This could be due to fear of loss of her breast and affect on her relation with her partner. this stud in the same line with Baqutayan (2019)who conduct research " How can anxiety be better managed? Depression ,anxiety ,and coping mechanism among cancer patients. "reported that 61%had moderate depression. and contradicted with Nurasyikin, Zakariahazli, Zulkifli ,Azmi and Fuad et al., (2018) who conduct research "Depression, Anxiety, Stress and Perceived Social Support Among Breast Cancer Survivors in Tertiary Hospital in Malaysia" found that 22.1% only had mild to moderate level of anxiety.

The present study revealed that more than three quarter of studied sample have moderate depression level (78%).while only(14%) have sever depression level . This study supported by Wondimagegnehu, Abebe, Abraha and Teferra (2019) who conduct research about" Depression and social support among breast cancer patients in Addis Ababa, Ethiopia" found that (65.4%) and (6.5%) had moderate and severe depression respectively. this could be due to they have families to take care, they afraid of losing their partner , friends and to their lost of femininity attraction. This contradicted with Aly , Abd ELateef and Mohamed (2017) who conduct study " Depression and Anxiety among Females with Breast Cancer in Sohag University: Results of an Interview Study." reported that (15%) and(22%) had moderate and severe depression respectively

This stud revealed the majority of studied sample have mild self-esteem level (86%).while only(14%) have moderate self -esteem level. this could be due to lose of one breast has adverse effect on femininity and self confidence of the woman. This supported by Ghali, Fendri , Ayedi , Bougmiza and Ammar (2017) who conduct research "Perception of Self-esteem and Body Image among Women with Breast Cancer of a University Hospital in Tunisia " found that 78.4% of the women had low self-esteem .but contradicted with Gomes & Riul (2013) who conduct study "Evaluation of the self esteem of women who had undergone breast cancer surgery. " reported that only one woman (2.7%) presented low self-esteem, 16 women (43.2%) had average self-esteem and 20 women (54.1%) high self-esteem.

The present study showed that there is a highly statistically significant positive correlation between total anxiety and depression . this could be due to the increase in life stressors and disease it self lead to increase in depression symptoms that increase level of anxiety else. this study in the same line with Geyikci , Cakmak , Demirkol and Uguz (2018)who studied "Correlation of Anxiety and Depression Levels with Attitudes Towards Coping with Illness and Sociodemographic Characteristics in Patients with a Diagnosis of Breast Cancer." reported that Pearson correlation analysis revealed a significant and highly positive association between depression and anxiety ( $p < 0,05$ ).

The present study revealed that there is statistically significant negative correlation between self- esteem and depression . This could be due to increase of patient self esteem help them to express there negative feeling and decrease depression .this study in the same line with study done by Sivaperumal, Sidik, Rampal, Ismail and Periasamy (2019) who conduct study" Self-esteem among cancer patients receiving chemotherapy in selected government state hospitals, Peninsular Malaysia." reported that there is statistically significant negative correlation between self- esteem and depression among subject. Also, supported by Pintado (2017) who conduct " Self-concept and emotional well-being in patients with breast cancer " found that depression had negative correlation with Self-esteem ( $r = -.640$ ;  $p < .001$ ).

## 6. CONCLUSION

**It was concluded that** there is an effect of breast cancer on psychological status of patients.

## 7. RECOMMENDATIONS

Monitoring the patient's mood, encourage the patients to participate in pleasant activities, developing route and structure in daily life. Guidance and counseling unit should be part of the treatment system so that patients can come there to discuss issues affecting them. Screening for high-risk patients should be done and referral when necessary



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