
Different Treatment Approaches for Breast Cancer: Past, Present, and Future Challenges

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Abstract: Breast cancer the most common cancer among women across the globe and places a considerable burden on the healthcare system globally. Despite the advancement in treatment, the 5-year rate of survival for the breast cancer still needs to be improved. The modest improvements in prognosis have been observed with the advent of modern systematic treatment approaches. Despite significant improvements in the treatment procedures, there are increased risks of relapse of this disease. The oncologists face challenges for recommending the most suitable treatment technique for breast cancer. These challenges include difficulty in sorting out the right combination of the treatment approaches, the sequences of chemotherapy and radiotherapy and surgical procedures. This research aimed to identify different treatment approaches for breast cancer. This research also aimed to analyze past, present, and future challenges to the breast cancer treatment. This research was performed by using mixed methodological approach. The sample population consisted of consisting of 740 patients and 8 oncologist. The research outcomes declared that there is a significant impact of treatment approaches on the overall survival statistics of breast cancer patients.

1. Introduction

Breast cancer is referred to as the most common cancer among women across the globe. This disease placed a considerable burden on patients and the healthcare system [1]. The progress has been made in the treatment for breast cancer in the Western world over the past three decades. The survival rate of the breast cancer patients has been improving with respect to time, such that the survival rate in European countries had increased from 73 % to 83 % between the years 1992 and 2008 [2]. In the region of Saudi Arabia, breast cancer is the most common malignancy and is second leading cause of cancer deaths. Approximately more than one million new cases of this cancer are diagnosed annually in Saudi Arabia. The modest improvements in prognosis have been observed with the advent of modern systematic treatment approaches and more progress could be made with respect to the new treatment approaches [2]. The survival rate of breast cancer in the Saudi Arabia is considerably behind the survival rate in the United States (U.S) [3]. Improved screening techniques and advanced adjuvant had increased the survival rate, such that the current survival rate after

diagnosis of breast cancer in the early stage is approximately 90 % [4]. In the year 2012, the number of breast cancer survivors in the U.S was approximately 3 million, and approximately two hundred thousand women were at an increased risk of suffering from breast cancer in the same year [5].

Despite significant improvements in the treatment procedures, there are increased risks of relapse of this disease [4]. There are several good options for treating the local recurrence of cancer; however, the metastatic is still considered as an incurable disease in most cases. The survival rates for women suffering from the metastatic disease are less than 2 years [4]. The oncologists face a range of challenges for recommending the most suitable treatment technique for breast cancer. Some of the challenges which are experienced in the initiation of treatment for breast cancer include difficulty in sorting out the right combination of the treatment approaches along with the sequences of chemotherapy and radiotherapy [3]. The utilization of the circumventing multidrug resistance and the intra-tumor heterogeneity can also be considered as most significant challenges associated with the breast cancer treatment. The treatment for breast cancer is entirely dependent on location, and the stage of cancer. At the initial stage, oncologists prefer to prescribe surgical treatment. On the contrary, during some cases, breast cancer is treated by using a combination of chemotherapy, radiotherapy, and the surgical procedures. The diagnosis of breast cancer during the initial stages, the aggressive monitoring and the prescription of the accurate combination of treatment strategies are anticipated to result in improved survival of breast cancer patients.

The study's purpose is to identify different treatment approaches for breast cancer. This research also aims to analyze past, present, and future challenges to the breast cancer treatment. A further purpose of this study is to explore and identify the effective combination of treatment approaches for breast cancer treatment.

2. Literature Review

Surgical Treatments for Best Cancer

The surgical treatment of breast cancer can be categorized into different subtypes. These surgical approaches have been continuously advancing with respect to the advancement in technology and treatment. For instance, the lymphatic

mappings, as well as the sentinel lymph node biopsy, are referred to as important advancement in breast cancer treatment [6]. These surgical procedures have challenged the dominance of the axillary lymph node dissection for the axillary staging [7]. This technique is specifically beneficial for patients having limited sentinel lymph node involvement (the involvement of one to two lymph nodes by the micrometastases [7].

The treatment procedures for invasive breast cancer included the sentinel lymph node biopsy, which was performed along with the surgical procedure for the removal of a tumour [7]. However, with the advancement in the surgical procedures, the adequacy of surgical procedures is analyzed with respect to the marginal status, and the requirement of additional procedures ensuring the optimization of surgical therapy. The initial treatment of the early stage breast cancer includes the surgical procedure for the removal of a tumour [7]. In the past, the breast cancer patients were treated by either mastectomy with or without reconstruction or by Breast Conserving Surgery (BCS) i.e. lumpectomy. In the past, the BCS consisted of the lumpectomy which was followed by radiations. However, the rates of success of the conventional treatment procedures were entirely dependent on the condition of the patient [7]. The nodal status, the characteristics of a tumor, the size of a tumor, and the choice of surgical procedures indicate further adjuvant therapies, such as radiation and chemotherapy.

Chemotherapy

Chemotherapy is also used as a routine systematic treatment for patients suffering from a specific type of breast cancer, referred to as Triple-negative Breast Cancer (TNBC) [8]. The treatment of TNBC varies from one region to another. In some of the countries, bevacizumab is added to chemotherapy for curing patients suffering from advanced stages of breast cancer [8]. The addition of bevacizumab demonstrates overall survival benefit; however, the identification of actionable targets is still challenging for oncologists.

Chemotherapy can be further categorized into the subtypes. These subtypes include cyclophosphamide, methotrexate, and fluorouracil (CMF), the taxanes and anthracyclines. The specific adjuvant regimens are the most effective for the TNBC. The research performed by Wahba, Hanan and El-Hadaad [9] stated that the outcomes of the randomized controlled trials had highlighted the benefits of anthracyclines and taxanes in breast cancer. This study also supported the benefit of the anthracycline-based regimens [9]. The research outcomes mentioned that the CMF demonstrated a significant improvement in the 5-year overall survival rate of the considered breast cancer patients [9].

The neoadjuvant chemotherapy is referred to as the preoperative chemotherapy [10]. This technique is recommended for locally advanced but operable breast cancer; however, this technique can be considered as the major development and important implication for the loco regional management. The outcomes of several randomized and non-randomized controlled trials stated that neoadjuvant chemotherapy has become the standard care for individuals suffering even from the advanced stages of breast cancer [9]. This treatment is considered an alternative to the combination of adjuvant chemotherapy and large operable disease.

Initially, this treatment was introduced to convert patients suffering from inoperable tumours into patients who could be considered as candidates for operable mastectomy candidates[9]. Despite various advantages of this technique, the accurate assessment of the extent and location of primary breast tumour prior to chemotherapy is still a challenge for oncologists. Furthermore, the accurate estimation of location and the extent of a tumor during chemotherapy and after the completion of chemotherapy are also challenging [9].

The development of advanced neoadjuvant chemotherapy regimens is anticipated to further improve the loco regional management [9]. This technique is also perceived to limit formal surgical incision of primary tumors among patients who can achieve the complete pathological response. The challenges associated with the neoadjuvant setting include early response towards the therapy and failure to discover non-invasive mean for predicting response to the chemotherapy [9].

Radiotherapy

Whole breast radiation is considered as an appropriate approach for reducing the risk of reoccurrence of a tumor. Radiotherapy is also referred to improve breast cancer survival rate [10]. The adjuvant radiations are especially beneficial for treating young women because the rate of reoccurrence of breast cancer is higher among women of this age group. The treatment of breast cancer patients is carried out by considering the treatment volume, which varies with respect to the age group of the patient [10]. For instance, the Accelerated Partial Breast Irradiation (APBI) is most often not prescribed for 45 to 60 years old women. Similarly, young breast cancers are also not recommended to receive whole breast radiation. In this regard, prescribing the accurate technique of radiotherapy has been considered as a significant challenge by the oncologists.

The randomized controlled trials demonstrated that the post-mastectomy radiation demonstrates survival benefits for patients with large primary tumors (size >5 cm) [11]. Furthermore, the retrospective analysis of patients (≤35 years) diagnosed with stage II or stage III of breast cancer demonstrated better 5-year overall survival rates. The outcomes of previously conducted studies highlighted another challenge related to the radiotherapy treatment [11]. Patients with premenopausal status are at risk for the locoregional recurrence after mastectomy; however, the young patients suffering from node-negative disease benefit from post mastectomy radiation.

Effectiveness of Combination of Treatment

The treatment for breast cancer most often consists of a combination of treatment approaches. The combination of treatment approaches might vary from one patient to another depending on the stage and location of a tumor [12]. In the US, the oncologists have been preferring the mastectomy technique (unilateral as well as bilateral) [12]. This trend causes a significant improvement in common mastectomy techniques, the utilization of genetic testing and the trend of Magnetic Resonance Imaging (MRI) prior to the surgical procedures. Unlike other treatment techniques, oncologists specifically prefer the analysis of ethnic, cultural, and social factors of patients prior to mastectomy [12]. Increasing trend of mastectomy resulted in the decrement in the trend of the

breast-conserving surgical procedure. Improvement in the trend of mastectomy also resulted in improving the combination of surgeries and the radiation therapy. It also resulted in the advancement of the adjuvant systemic therapy [12].

After the recognition of the biological significance of the loco regional recurrence as the indicator is perceived as challenging by the oncologists. Initially loco regional recurrence was considered as an instigator of distant disease; however, this advancement can be used for the development of better understanding of the biology of breast cancer. Aebi et al. [13] formally evaluated the impact of systematic chemotherapy in loco regional recurrence and demonstrated improved disease-free survival and overall survival of the poor prognosis group.

Radiation Therapy following Neoadjuvant Chemotherapy and Modified Radical Mastectomy (MRM)

The indications for the radiation therapy similar for patients receiving the neoadjuvant chemotherapy [14]. The initial stage of cancer is used for planning for the cancer treatment. The irradiation techniques are similar to the radiotherapy followed by the modified radical operations prior to the neoadjuvant chemotherapy [14]. The research performed by Zhang et al.[14] indicated that the combination of adjuvant chemotherapy, surgery, and radiation therapy might provide successful outcomes depending on the stage and location of a tumor. However, there is the requirement to specifically consider the time interval between the therapeutic procedures. For instance, if adjuvant chemotherapy is prescribed for treatment, it needs to be assured that the postoperative radiation therapy must be carried out after the completion of the adjuvant chemotherapy. The radiation therapy is required to be performed after the accurate time interval to avoid recurrence of a tumor [14].

After the procedures of radical mastectomy or modified radical mastectomy, recurrence is most commonly observed in the chest wall and the supraclavicular lymph drainage area [14]. The combination of surgical resection and radiation therapy is successful for a single recurrence, such that the radiation therapy is performed after the surgical resection [14]. On the contrary, in case of the unresectable lesions, the radiation therapy is carried out initially and the surgical procedure will be carried out afterwards.

Adjuvant Chemotherapy for Operable Breast Cancer

The adjuvant chemotherapy is most often prescribed for patients after considering the general conditions of patients [14]. The general conditions of patients include the menopausal status, the functioning of vital organs, and the presence of other diseases [14]. Furthermore, the prescription of adjuvant chemotherapy is also made on the basis of the characteristics of a tumor, the lymph node status, the differentiation degree, and the presence of vascular invasion [14]. After considering the following aspects, the treatment is initiated after weighing potential benefits and risks associated with this treatment procedure.

The adjuvant chemotherapy for the operable breast cancer consists of approximately four stages to eight stages; however, these stages can vary with respect to the chemotherapy regimens. The number of cycles of

chemotherapy to the dose of chemotherapy is not recommended to reduce without having intense requirements. The individualized addition of adjuvant chemotherapy is suitable for patients over 70 years of age. The recommendations provided by Zhang et al. [14] stated that the adjuvant chemotherapy should not be administrated concurrent with the with the postoperative radiation therapy or with tamoxifen [14].

3. Ethical Clearance

This research was performed after acquiring ethical approval from the institutional review board. This research was conducted by taking the clinical data of patients; therefore, there was no direct involvement of the breast cancer patients. The ethical considerations were taken to assure the confidentiality of the research participants and for saving them from intended harm. Moreover, measures were also taken to preserve reciprocity of research. The ethical considerations about the use of collected data lawfully were also assured by the researcher. The researcher also performed necessary measures for keeping anonymity of the collected data. The data collected from research participants was preserved till the completion of research and it was discarded later.

4. Methodology

This research was performed by using the mixed methodology for incorporating the advantages of qualitative and quantitative methodologies. The collaboration of the qualitative and quantitative analysis blends the advantages and disadvantages of both types of research methodologies for the provision of abundant and robust data reliability. The research performed by Cresswell [15] stated that the combination of qualitative and quantitative methodologies increase the reliability of the research outcomes. The quantitative data was used by the research for analyzing the most effective treatment for breast cancer with respect to the statistics acquired from hospital setting [15]. The quantitative methodology has been recognized as the most reliable mode of inquiry as compared to other methods [16]. The researcher utilized the qualitative methodology for the identification of past, present, and future challenges for treatment of prostate cancer. The qualitative research assists researchers in the analysis of views, and perceptions of a group of individuals about a particular phenomenon. In the quantitative research, it is easier to maintain privacy, anonymity, privacy, and confidentiality of the research participants.

Research Hypotheses

This research aimed to test the following hypothesis.

H₀: There is no significant impact of Treatment approaches on the overall survival stats of breast cancer Patients

H_A: There is a significant impact of Treatment approaches on the overall survival stats of breast cancer Patients

Data Collection Tool

In this research, the data collection was performed by using the patient-related data acquired from the considered healthcare organization. The data provided from a particular platform provides the data of a large cohort of the population, which can be sued for determining the effectiveness of any approach particularly used for that population.

This research was also performed by using the data collection tool of the interview session, which can be considered as the most comprehensive tool for the collection for the collection of descriptive data [15]. The interview sessions are particularly useful for analyzing experiences, perceptions, and the responses of research participants in detail. A wide majority of interviews are in verbal or in the contextual form; therefore, these interviews are subjective to errors and inadequacies and assist in performing descriptive detailing process [15]. The semi-structured interview session was used for data collection. This data collection tool summarizes qualitative methodology and assists in analyzing individual experiences of the research participants. The use of open-ended questions assist the researchers in exploring concepts and knowledge related to a particular phenomenon [15]. On the basis of aims and objectives of this research, the semi-structured interviews conducted from the oncologists will be used to analyze the past, present, and current challenges to the breast cancer treatment [17].

Research Settings and Population Sample

This research was performed in a hospital of Saudi Arabia, which provides the treatment facilities for cancer patients. This hospital was selected as research setting because it offers almost all techniques for treating breast cancer. The sample population for this research included individuals suffering from breast cancer and the oncologists.

The sample size for this research consisted of approximately 740 cancer patients. The stratified sampling was performed for the selection of 740 patients for the quantitative phase of this research. On the other hand, approximately 8 oncologists were included in this research. The research performed by Anita [18] stated that the stratified sampling assists in the identification of sub-groups within the sample. For this reason, the stratified sampling was used for the quantitative phase of this research. Moreover, the purposive sampling was used for qualitative phase. The research performed by Bonett and Wright [19] stated that the purposive sampling is useful for conducting exploratory qualitative research. The theoretical purposive sampling also assists in the joint collection of theory and data analysis; therefore, this sampling technique was considered because of its efficacy.

5. Results and Findings

Quantitative Phase

The data of approximately 740 patients were included in this research. The statistical analysis was performed by using the SPSS software. The frequency distribution was used for analyzing treatment approaches used for the considered patients. Moreover, one-way ANOVA was performed to examine the relationship between the treatment approaches and overall survival rates.

Demographic Characteristics. The demographic characteristics of the breast cancer patients are mentioned in tables 1,2, and 3.

Table 1: Gender of Patients

Gender				
	Frequency	Percent	Valid Percent	Cumulative Percent

Female	721	97.4	97.4	97.4
Male	19	2.6	2.6	100.0
Total	740	100.0	100.0	

Approximately 97.4 % (n=721) patients were females, whereas, about 2.6 % (n=19) patients were male.

Table 2: Age of patients

Age				
	Frequency	Percent	Valid Percent	Cumulative Percent
<50	391	52.8	52.8	52.8
>50	349	47.2	47.2	100.0
Total	740	100.0	100.0	

Approximately 52.8 % (n=391) patients were less than 50 years old. However, about 47.2% (n=349) patients were older than 50 years.

Table 3: Paired Histo-pathological type of Cancer

Histo-pathological type				
	Frequency	Percent	Valid Percent	Cumulative Percent
Invasive Ductal	634	85.7	85.7	85.7
Others	106	14.3	14.3	100.0
Total	740	100.0	100.0	

Table 3 represented that about 85.7% (n=634) patients were suffering from invasive ductal type tumour. However, whereas, about 14.3% (n=106) patients were suffering from other types of breast cancer.

Treatment Approaches. The treatment approaches which were used for treating the considered patients are demonstrated below.

Table 4: Surgical Treatment

Surgical Treatment				
	Frequency	Percent	Valid Percent	Cumulative Percent
MRM+A C	379	51.2	51.2	51.2
MRM and AC + neoadjuvant	135	18.2	18.2	69.5
lumpectomy	226	30.5	30.5	100.0
Total	740	100.0	100.0	

The statistical outcomes stated the about 51.2% (n=379) patients received MRM + (adriamycin + cyclophosphamide). Moreover, about 18.2 (n=135) patients received MRM and AC + neoadjuvant treatment. Moreover, approximately 30.5 (n=226) patients were treated by lumpectomy.

Table 5: Primary Chemotherapy Treatment

Primary Chemotherapy Treatment

	Frequency	Percent	Valid Percent	Cumulative Percent
AR	550	74.3	74.3	74.3
Anth+Taxn	179	24.2	24.2	98.5
no treatment	11	1.5	1.5	100.0
Total	740	100.0	100.0	

Table 5 represented that approximately 74.3 % (n=550) patients received Anthracyclin regims (AR), about 24.2 % (n=179) patients received Combination of Anth+Taxnm whereas 1.5 % (n=11) patients did not receive chemotherapy treatment.

Table 6: Radiotherapy Treatment

Radiotherapy Treatment				
	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	436	58.9	58.9	58.9
No	304	41.1	41.1	100.0
Total	740	100.0	100.0	

Table 6 represented that approximately 58.9% (n=436) patients received radiotherapy, whereas,, about 41.1% (n=304) patients did not receive radiotherapy treatment.

Table 7: Recurrence of Cancer

Recurrence of Cancer				
	Frequency	Percent	Valid Percent	Cumulative Percent
No	284	38.4	38.4	38.4
Yes	456	61.6	61.6	100.0
Total	740	100.0	100.0	

Table 7 presented that after the completion of treatment of breast cancer, approximately 61.6 % (n=456) patients were reported to experience recurrence of cancer. On the other hand, approximately 38.4 % (n=284) patients did not experience recurrence.

Table 8: Overall Survival

Overall Survival				
	Frequency	Percent	Valid Percent	Cumulative Percent
Disease Specific Survival +Recurrence	616	83.2	83.2	83.2
Disease Free Survival	124	16.8	16.8	100.0
Total	740	100.0	100.0	

Table 8 revealed that the DSS+ recurrence rate was observed in approximately 83.2 (n=616) patients, whereas, DFS survival was observed in 16.8 (n=124) patients.

Hypothesis Testing

H_0 : There is no significant impact of Treatment approaches on the overall survival stats of breast cancer patients.

H_A : There is a significant impact of Treatment approaches on the overall survival stats of breast cancer patients.

Table 9: ANOVA

ANOVA ^a					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	5.950	3	1.983	15.006	.000 ^b
Residual	97.272	736	.132		
Total	103.222	739			

a. Dependent Variable: OVERALL SURVIVAL

b. Predictors: (Constant), Primary Chemotherapy Treatment, Surgical Treatment, Radiotherapy Treatment

The above table shows that the model is a good-fit. The significance value of 0.00 has rejected the null hypothesis. This shows that there is a significant impact of Treatment approaches on the overall survival statistics of breast cancer patients.

Table 10: Coefficients

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.41	0.053		7.76	0.000
Surgical Treatment	-0.04	0.013	-.014	-3.93	0.000
Radiotherapy Treatment	-0.20	0.033	-.027	-6.20	0.000
Primary Chemotherapy Treatment	0.01	0.023	0.14	3.37	0.001

a. Dependent Variable: Overall Survival

From the above coefficients table, the regression equation for overall survival status of the breast cancer patients after different treatment approaches is given by:

$$Y = \alpha + \beta(x)$$

Overall Survival = 0.419- (0.042)*Surgical Treatment – (0.206)* Radiotherapy Treatment + (0.099)* Primary Chemotherapy Treatment

Qualitative Phase

The qualitative phase of this research was analyzed by thematic analysis. Thematic analysis is considered as one of the most appropriate methods for the identification, the evaluation, and the reporting of the patterns of the collected information. When the thematic analysis is used in the qualitative study, it assures clear links between research objectives and research findings [7]. The sample population for this research was oncologists, who were practicing in the selected hospital. The outcomes of research participants declared that no particular treatment for breast cancer can be declared the most or least effective. Similar to other treatments, the technological advancement had entirely changed the trend of treatment for breast cancer. In response to the question about the challenges related to breast cancer treatment, one of the respondents declared:

“ The foremost challenge related to the treatment of breast cancer is the prescription of treatment technique. Every patient possess unique characteristics; therefore, the

oncologists recommend the treatment technique on the basis of the patient characteristics and on the basis of the stage of cancer.”

Another oncologist responded:

“ Every treatment technique is beneficial for treating cancer; however, the effectiveness of treatment technique is dependent on the extent and location of the tumor. The challenge is to prescribe most effective treatment to the patients on the basis of their age and clinical conditions. For instance, post mastectomy might be suitable for young breast cancer patients; the similar technique might not provide successful outcomes for the postmenopausal patients. For this reason, no technique can be considered as the all-time effective treatment technique for breast cancer.... ”.

In response to the question related to past, present and future challenges associated with the breast cancer treatment, one of the oncologists exemplifies;

“.... In the past, breast cancer was preferred to be treated by using surgical procedure and chemotherapy; however, these treatment options were not suitable in some cases because of extent and location of tumor... This ambiguity was resolved up to the certain extent due to the advent of techniques for radiotherapy... However, the challenge related to the selection of most suitable treatment option has not been still resolved...”

Another oncologist declared:

“ The breast cancer has been treated by using the combination of treatment techniques. For instance, in some of the cases, breast cancer is treated by using the combination of treatment techniques. This combination includes the surgical procedures, chemotherapy, and radiotherapy. However, the order of techniques is dependent on the stage of cancer and the location of tumor...”

One more respondent declared;

“ ... The treatment techniques for cancer treatment are further categorized into other techniques. For this reason, the oncologists can now select between different treatments techniques. The availability of more number of treatment techniques is beneficial for patients; however, at the same time, it is challenging for the oncologist to select the most suitable treatment technique. Every patient and each tumor is unique; therefore, we can just try our best to prescribe the most effective treatment technique to patients.... ”

6. Discussion

Considering the high rate of prevalence of breast cancer across the globe, this research aimed to analyze common challenges faced by the oncologists in treating cancer patients. There are various techniques which are used for the treatment of breast cancer; however, the efficacy of treatment techniques might vary from one individual to another. This research provided detailed explanation of the past, present, and future challenges experienced by the oncologists in treating breast cancer. The research outcomes demonstrated that the detection of breast cancer in the initial stage is a challenge. Early detection of breast cancer increase survival rate of patients. The statistical data presented that the sample population consisted of more number of patients less than 50

years old. Furthermore, a considerable majority of patients received primary chemotherapy treatment, which was followed by surgical treatment and the radiation therapy. For this reason, it can be stated that chemotherapy is the most common treatment procedure for breast cancer [6]. The responses of oncologists declared that no treatment technique can be considered as more reliable and the success of treatment technique is entirely dependent on the patient specific characteristics [4][8]. For this reason, the selection of most suitable treatment technique can be considered as potential challenge experienced by the oncologists.

When survival rate of the considered sample population was analyzed, it was found that despite of being treated with the combination of treatment procedures, the rate of recurrence in patients was considerably high. The research outcomes also stated that the percentage of disease specific survival and recurrence was more than the disease free survival.

7. Conclusion

Breast cancer has been progressing across the globe and the rate of prevalence of this carcinogenic condition has increased over the past three decades. The survival rate of the breast cancer patients has been improving with respect to time across the globe. Despite the advancement in treatment, the 5-year rate of survival for the breast cancer remains poor. With the advancement in technology, the number of treatment techniques for breast cancer has increased; however, the oncologists still face challenges in recommending most appropriate treatment technique. The oncologists emphasize on recommending combination of treatments for treating breast cancer; however, the recurrence rate of breast cancer is considerably high. The research outcomes demonstrated that there is a significant impact of Treatment approaches on the overall survival statistics of breast cancer patients. Further research is required for improving the survival rate of breast cancer patients.

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9. Conflict of Interest

The authors declare that no conflict of interest exists.

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