

# Management of Breast Cancer in Older Women: Factors which Influence Patients' Decision<sup>§</sup>

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**Abstract:** *Background:* Most studies on cancer patient preferences and information needs have not focused specifically on elderly breast cancer patients.

*Objective:* To determine factors which are taken into account by elderly breast cancer patients (>70 years of age) when deciding between primary endocrine therapy or surgery and between mastectomy or wide local excision.

*Methods:* Cross-sectional study of 34 female breast cancer patients who were at least 70 years of age at the time of diagnosis. Structured interviews were conducted either after a follow-up clinic appointment or at home *via* a telephone interview.

*Results:* Seventy-six per cent of patients were given a choice of treatment and the patients who felt that they were not given a choice did not prefer to choose. Forty-two per cent of patients chose primary endocrine therapy based on the surgeon's recommendation. The same proportion reported that they were afraid of surgery. A quarter wanted to try tablets first and were prepared to undergo surgery if unresponsive. All patients who chose a modified radical mastectomy +/- axillary node clearance or sampling felt that it was safer and wanted to avoid the possibility of further surgery. All patients were satisfied with the amount of information provided and emphasized that the service provided by breast care nurses was invaluable.

*Conclusion:* Not all patients based their decision on the surgeon's recommendation. Some patients were not given any recommendation. Individual preferences of patients should be determined and the management plan should be tailored accordingly.

**Keywords:** Breast cancer, older women, decision making.

## INTRODUCTION

Currently, about 40% of breast cancer cases occur in women over the age of 70 [1,2]. With the continuing expansion of the older population, the number of older women with breast cancer may increase by 30% over the next decade [2]. Older women have more co-morbidities which may hinder the administration of chemotherapy, radiation and general anesthesia for surgery [3,4]. Primary tamoxifen therapy was therefore investigated in the 1970s and 1980s as an alternative to surgery in older women whose tumors were estrogen receptor positive [5-8]. The use of aromatase inhibitors such as anastrozole and letrozole as sole therapy is currently being investigated and initial results have shown that they are superior to tamoxifen in terms of tumor control, overall survival and tolerability [9,10].

The importance of involving patients in making decisions about their management is well recognized [11,12]. Most women do not achieve their preferred degree of participation

in treatment decision-making [13]. Patients who reported that treatment decisions were made by their doctor alone were least satisfied [13]. Most studies on cancer patient preferences and information needs have not focused specifically on elderly breast cancer patients. We aimed to determine factors which are taken into account by elderly breast cancer patients ( $\geq 70$  years of age) when deciding between primary endocrine therapy or surgery and between mastectomy or wide local excision. We evaluated patients' satisfaction with the amount of information they were given and with the treatment they received

## MATERIALS AND METHODOLOGY

Thirty-four consecutive female patients diagnosed with breast cancer who were aged above 70 were included in this study. This was a pilot study undertaken in a 6-month period in 2007 in a small district general hospital in Wales. Initially, 40 consecutive patients who met the inclusion were contacted; 6 of them were either unable to be contacted by telephone ( $n = 3$ ) or declined to be interviewed ( $n = 3$ ). The response rate was 34/40 (85%).

The inclusion criteria were:

1. Female patients over the age of 70 when diagnosed with non-metastatic breast cancer suitable for breast-conserving surgery

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2. Patients who were deemed to be fit for surgery

The exclusion criteria were:

1. Patients with metastatic breast cancer or breast cancer not suitable for breast-conserving surgery
2. Patients who had other co-morbidities (ASA ≥ 3) and deemed unfit for surgery

Structured interviews which lasted between 4 – 8 minutes were conducted either after a follow-up clinic appointment (n = 14) or at home *via* a telephone interview (n= 20) by DSYC. Initially, a closed question about whether they felt if they had a choice of treatment was asked. Those who felt they had a choice were then asked if each of the listed factors below influenced their decisions about their treatment. The listed factors were obtained following an open question on what factors influenced their decision on their respective treatment option. Patients’ satisfaction with the amount of information provided and treatment received was evaluated by asking them to score on a scale of 1-5 where 1 is very dissatisfied and 5 is very satisfied. At the end of the interview, patients were asked if they had any further comments regarding the management of their care.

The purpose of the interview was clarified and verbal consent was obtained at the start of the interview. Patients were assured that the information would remain anonymous, confidential and that no information provided would be used other than the purpose of the clinical audit project and its dissemination. They were reminded that they could opt out of the interview at any time.

Following diagnosis (triple assessment involving history and examination, mammography and histology) and staging (computed tomography of the thorax, abdomen and pelvis), patients would then be counseled on the various treatment options and their relative merits. Patients who chose medical therapy were given either tamoxifen or an aromatase inhibitor. Those patients who opted for breast conserving surgery went on to have further radiotherapy.

Patients were grouped according to the treatment they received; primary endocrine therapy (primary ET), modified radical mastectomy ± axillary node clearance or sampling (MRM± ANC/S) and wide local excision ± ANC/S (WLE ± ANC/S). Results were analyzed using SPSS version 15.0 (SPSS, Chicago, Illinois, USA). Relationships between groups were assessed using the  $\chi^2$  test for categorical data, and continuous variables were compared with the Mann–Whitney U test. Statistical significance was accepted at the 0.05 level.

Factors applicable to patients who had:

Any of the 3 treatment options:

- Surgeon’s recommendation
- Past experiences with breast cancer (in family/friends/media)
- Convenience (eg. travelling for radiotherapy)

Primary ET Only:

- Fear of surgery/anesthetics
- Try tablets first

Primary ET or WLE ± ANC/S:

- Preserve breast
- Avoid external prosthesis

MRM ± ANC/S:

- Avoid more surgery (further surgery is needed if clear margins are not achieved with WLE).
- Feel safer (patients worry more about local recurrence after WLE)
- Avoid radiotherapy (all patients who undergo WLE for invasive cancer require radiotherapy)

**RESULTS**

The median age of this cohort of patients was 78 years. Patients who opted for primary endocrine treatment alone were significantly older than patients who had surgery (83 years *vs* 73 years; P = 0.006) (Table 1). The median time between diagnosis and interview was 4 months and there was no significant difference between groups (P = 0.116).

**Table 1. Demographics and Number of Patients who Felt that they were (N Choice) Given a Choice According to Treatment Option**

	Primary ET	MRM ± ANC/S	WLE ± ANC/S
<b>Number</b>	16	14	4
<b>Median age (years)</b>	83**	73**	71
<b>Median time interval (months)*</b>	7	4	3
<b>N choice (%)^</b>	12 (75)	10 (71)	4 (100)

\*Time interval between diagnosis and interview.

\*\*P = 0.006.

^Number of patients who felt that they were given a choice of treatment.

Primary endocrine therapy (primary ET), modified radical mastectomy ± axillary node clearance or sampling (MRM± ANC/S), wide local excision ± ANC/S (WLE ± ANC/S).

68.7% of patients (n=11) who had primary ET were above the age of 80. 78.6% of patients (n=11) who underwent MRM ± ANC/S were below the age of 80. All patients who underwent WLE ± ANC/S were below the age of 80.

**Choice**

76.5% (26/34) of patients felt that they were given a choice of treatment. The rest of the patients who felt that they were not given a choice did not prefer to have a choice. All patients who underwent WLE ± ANC/S were given a choice and almost three-quarters of patients who underwent primary ET and MRM ± ANC/S felt that they were given a choice ( $\chi^2 = 1.25$ , P = 0.264)

**Factors which Influenced Patients’ Decision**

Most patients reported more than one factor that influenced their decision. 66.7% (8/12) of patients who chose primary ET decided partly because of the surgeon’s recommendation and only 41.6% (5/12) based their decision

solely on that. The same proportion reported that they were afraid of surgery. No recommendation was given to 33.3% (4/12). 25% (3/12) wanted to try the tablets first and were prepared to undergo surgery if unresponsive. 91.6% (11/12) had at least one relative contraindication to surgery such as a past history of myocardial infarction, cerebrovascular accident and hypertension.

None of the patients who chose primary ET were recommended to have surgery. All patients who chose MRM ± ANC/S felt that it was safer and wanted to avoid the possibility of further surgery. 40% (4/10) had some contraindication to surgery. Seventy-five per cent of patients who opted for WLE± ANC/S were concerned about their physical appearance and wanted to preserve their breast. Only two patients decided against WLE± ANC/S because they wanted to avoid radiotherapy. All patients were satisfied with the amount of information provided and with the treatment received and all emphasized that the service provided by breast care nurses was invaluable.

## DISCUSSION

Most patients in this study were given a choice of treatment and those who felt that they were not given a choice would not have preferred to choose. Patients who opted for primary endocrine therapy were older than patients who opted for surgery. They did so not only because of the recommendation given by the surgeon but also because they were afraid of surgery. A quarter of these patients were prepared to undergo surgery if medical treatment had failed. Patients who opted for surgery felt that it was the safer option. Cosmesis appeared to influence patients who opted for breast-conserving surgery at the expense of the morbidity of undergoing radiotherapy. Although patients undergoing surgery were older than patients who had primary endocrine therapy, there was no significant difference in age between patients who opted for mastectomy and breast-conserving surgery. All were satisfied with the amount of information provided by their consultants and emphasized the importance of the provision of information by breast care nurses.

The availability of information on the internet and the increasing prevalence of patient advocacy groups emphasize the need to incorporate patient preferences into decision making [12]. Studies have shown that patients diagnosed with cancer are often dissatisfied with the amount of information they receive and are unable to participate to the extent that they wish in the management of their own care [14]. This may lead to increased uncertainty, anxiety, distress and depression [14].

Most studies on cancer patient preferences and information needs have not focused specifically on elderly breast cancer patients. This study explored this specific subgroup of patients which forms a substantial proportion of the total number of breast cancer cases. Degner *et al.* found that most patients do not achieve their preferred degree of involvement in decision making and were found to be least satisfied when their doctors made the decisions for them [13]. However, patients in this study who felt that their decision was made by their doctors preferred it that way.

Elderly breast cancer patients may have different priorities and therefore differ in their decision-making compared to younger patients (<70). Women below the age

of 50 years valued information about physical attractiveness as more important than older women [13]. However, doctors should not assume that a 70-year-old will care less about losing her breast than a 40-year-old [16].

The sampling method used was not a probability technique (where each individual has an equal chance of appearing in the database) and generalization is not permitted [17]. Therefore the sample in this study is not representative of all elderly breast cancer patients. A multi-centre study may decrease the probability of bias due to confounding factors such as educational level and social class which may be different in different areas.

Two different methods of data collection were employed and the data obtained were analyzed together. This could have an effect on the results as patients may interact differently in a telephone interview than they would face to face. However, there is currently no available data about whether people reveal more on the phone [17]. The interviews were conducted by DSYC who was a student at the time of the study and therefore patients were encouraged to be honest about their satisfaction with the care that they have received. This was done to reduce any potential measurement bias if the surgeons themselves had conducted the interview. Patients were not interviewed immediately following their initial consultation and were only interviewed after undergoing their respective treatments. The interval between the time of diagnosis and the time of interview could have an effect on the accuracy of the patients' reports.

## Suggestions for Further Research

The needs and preferences of non-English speaking patients from other societies and cultures could be explored [14]. All the subjects in this study were native English speakers. Most published data are from developed countries where subjects are English-speaking. The relative effectiveness of different members of the multidisciplinary team in providing information could be determined [14].

A number of decision-making aids have been developed which have shown to increase patient understanding and satisfaction with their treatment choice [12, 15, 18]. Knowing the different factors which influences the decision-making in elderly breast cancer patients may allow design of a decision-making aid for this group of patients. Awareness of these factors may help the surgeon to address specific issues which concerns the patients and therefore individualize consultation style.

## CONCLUSION

Not all patients base their decision on the surgeon's recommendation. Individual preferences of patients should be determined and the management plan should be tailored accordingly. Breast care nurses play a very important role by providing the information and support needed by these elderly breast cancer patients.

## REFERENCES

- [1] Dixon JM, Sainsbury JRC, Rodger A. Breast cancer: treatment of elderly patients and uncommon conditions. In: Dixon JM, Ed. *ABC of Breast Diseases* 2<sup>nd</sup> ed. London, BMJ Books 2000; pp. 50-4.
- [2] Balducci L, Extermann M, Carreca I. Management of breast cancer in the older woman. *Cancer Control* 2001; 8: 431-41.

- [3] Ellis MJ. Preoperative endocrine therapy for older women with breast cancer: renewed interest in an old idea. *Cancer Control* 2000; 7: 557-62.
- [4] Satariano WA, Ragland DR. The effect of comorbidity on 3 year survival of women with primary breast cancer. *Ann Intern Med* 1994; 120: 104-10.
- [5] Bradbeer JW, Kyngdon J. Primary treatment of breast cancer in elderly women with tamoxifen. *Clin Oncol* 1983; 9: 31-4.
- [6] Preece PE, Wood RA, Mackie CR, *et al.* Tamoxifen as initial sole treatment of localised breast cancer in elderly women: a pilot study. *Br Med J (Clin Res Ed)* 1982; 284: 869-70.
- [7] Helleberg A, Lundgren B, Norin T, *et al.* Treatment of early localized breast cancer in elderly patients by tamoxifen. *Br J Radiol* 1982; 55: 511-55.
- [8] Allan SG, Rodger A, Smyth JF, *et al.* Tamoxifen as primary treatment of breast cancer in elderly or frail patients: a practical management. *Br Med J (Clin Res Ed)* 1985; 290: 358.
- [9] Nabholz JM, Buzdar A, Pollak M, *et al.* Anastrozole is superior to tamoxifen as first-line therapy for advanced breast cancer in postmenopausal women: results of a North American Multicenter Randomized Trial. *J Clin Oncol* 2000; 18: 3758-67.
- [10] Mouridsen H, Gershanovich M, Sun Y, *et al.* Superior efficacy of letrozole versus tamoxifen as first-line therapy for postmenopausal women with advanced breast cancer: results of a phase III study of the International Letrozole Breast Cancer Group. *Clin Oncol* 2001; 19: 2596-06.
- [11] Goldhirsch A, Wood WC, Gelber RD *et al.* Meeting Highlights: Updated international expert consensus on the primary therapy of early breast cancer. *J Clin Oncol* 2003; 21: 3357-65.
- [12] Jefford M, Tattersall MHN. Informing and involving cancer patients in their own care. *Lancet Oncol* 2002; 3: 629-37.
- [13] Degner LF, Kristjanson LJ, Bowman D *et al.* Information needs and decisional preferences in women with breast cancer. *JAMA* 1997; 277: 1485-92.
- [14] Fallowfield LJ, Hall A, Maguire GP *et al.* Psychological outcomes of different treatment policies in women with early breast cancer outside a clinical trial. *BMJ* 1990; 301: 575-80.
- [15] Molenaar S, Sprangers MA, Rutgers EJ, *et al.* Decision support for patients with early-stage breast cancer: Effects of an interactive breast cancer CDROM on treatment decision, satisfaction, and quality of life. *J Clin Oncol* 2001; 19: 1676-87.
- [16] National Breast Cancer Coalition. Available from: <http://www.natlbcc.org>. Accessed November 1, 2009.
- [17] Grbich C. *Qualitative Research in Health*. London: Sage Publications 1999.
- [18] Whelan T, Levine M, Willan A, *et al.* Effect of a decision aid on knowledge and treatment decision making for breast cancer surgery: a randomized trial. *JAMA* 2004; 292: 435-41.

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