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Towards an optimal multidisciplinary approach to breast cancer treatment for older women

by Nemica Thavarajah, Ines Menjak, Maureen Trudeau, Rajin Mehta, Frances Wright, Angela Leahey, Janet Ellis, Damian Gallagher, Jennifer Moore, Bonnie Bristow, Noreen Kay, and Ewa Szumacher

ABOUT THE AUTHORS



Nemica Thavarajah, BSc, Odette Cancer Centre, Sunnybrook Health Sciences Centre, 2075 Bayview Avenue, Toronto, ON M4N 3M5
nemica.thavarajah@sunnybrook.ca



Ines Menjak, MD, Department of Medical Oncology, Faculty of Medicine, University of Toronto, 1 King's College Circle, Medical Sciences Building, Room 2109, Toronto, ON M5S 1A8
Ines.menjak@sunnybrook.ca



Maureen Trudeau, MD, Department of Medical Oncology, Sunnybrook Health Sciences Centre, 2075 Bayview Avenue, Suite T2-023, Toronto, ON M4N 3M5
Maureen.trudeau@sunnybrook.ca

Rajin Mehta, MD, Department of Geriatric Medicine, Sunnybrook Health Sciences Centre, 2075 Bayview Avenue, Suite L1-01D, Toronto, ON M4N 3M5
Rajin.metha@sunnybrook.ca



Frances Wright, MD, MEd, FRCSC, Sunnybrook Health Sciences Centre, 2075 Bayview Ave., Room T2 057, Toronto, ON M4N 3M5
Frances.wright@sunnybrook.ca



Angela Leahey, RN, MN, Sunnybrook Health Sciences Centre, 2075 Bayview Ave., Toronto, ON M4N 3M5
angela.leahey@sunnybrook.ca

Janet Ellis, MD, Department of Psychiatry, Sunnybrook Health Sciences Centre, 2075 Bayview Ave., Toronto, ON M4N 3M5
Janet.ellis@sunnybrook.ca



Damian Gallagher, MD, Department of Psychiatry, Sunnybrook Health Sciences Centre, 2075 Bayview Ave., Toronto ON M4N 3M5
Damian.gallagher@sunnybrook.ca



Jennifer Moore, MD, Sunnybrook Health Sciences Centre, 2075 Bayview Avenue, Toronto, ON M4N 3M5
Jennifer.moore@sunnybrook.ca



Bonnie Bristow, MRT(T), Bsc, Odette Cancer Centre, Sunnybrook Health Sciences Centre, 2075 Bayview Avenue, Toronto, ON M4N 3M5
Bonnie.bristow@sunnybrook.ca

Noreen Kay, MSW, Sunnybrook Health Sciences Centre, 2075 Bayview Avenue, Toronto, ON M4N 3M5
Noreen.kay@sunnybrook.ca



*Ewa Szumacher, MD, FRCPC, MEd, Department of Radiation Oncology, Odette Cancer Centre, Sunnybrook Health Sciences Centre, 2075 Bayview Avenue, Toronto, ON M4N 3M5
Telephone: 1-416-480-4834; Fax: 1-416-480-6002
ewa.szumacher@sunnybrook.ca

*Address for correspondence

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ABSTRACT

The treatment of breast cancer presents specific concerns that are unique to the needs of older female patients. While treatment of early breast cancer does not vary greatly with age, the optimal management of older women with breast cancer often requires complex interdisciplinary supportive care due to multiple comorbidities. This article reviews optimal approaches to breast cancer in women 65 years and older from an interdisciplinary perspective. A literature review was conducted using MEDLINE and EMBASE, choosing articles concentrated on the management of older breast cancer patients from the point of view of several disciplines, including geriatrics, radiation oncology, medical oncology, surgical oncology, psycho-oncology, palliative care, nursing, and social work. This patient population requires interprofessional collaboration from the time of diagnosis, throughout treatment and into the recovery period. Thus, we recommend an interdisciplinary program dedicated to the treatment of older women with breast cancer to optimize their cancer care.

Key words: breast cancer, older women, multidisciplinary, breast cancer treatment

INTRODUCTION

Approximately one in eight women will be diagnosed with breast cancer within their lifetime (Patnaik et al., 2011). Furthermore, approximately 43% of cases for invasive breast cancer were diagnosed in women aged 65 or older in 2011 (American Cancer Society, 2012) and these numbers are expected to rise to 70% by the year 2030 (Smith et al., 2009). The increasing incidence of breast cancer cases in women 65 years and older compels oncology practitioners to identify ways to address the complex needs of this particular patient population (American Cancer Society, 2011). These complex needs include varying comorbidities, smaller support networks, and cognitive impairments. Oncology practitioners must work together to address the unique needs of older women with breast cancer and provide them with more optimal care.

Evidence for treating older women with breast cancer is rather sparse, as many clinical trials exclude patients older than 65 based on comorbidities and other factors (Lewis et al., 2003). Furthermore, making general treatment recommendations is challenging due to the variability in overall health and life expectancy of these patients. Older women may experience functional decline, as a result of their diagnosis and treatment, particularly those with preexisting cognitive impairments, which can lead to loss of autonomy (Smith et al., 2009). There also remains the risk of over- and under-treatment of older breast cancer patients (Malik et al., 2013). Elderly patients have historically been undertreated for fear of possible side effects of treatment (Du et al., 2003).

While breast cancer literature is limited in its representation of older women, studies have shown that this group also differs from younger breast cancer patients with respect to perceptions of control, motivation, informational needs, and the value of experiential versus medical sources of knowledge (Pinquart & Duberstein, 2004). A study conducted by Landmark et al. (2008) found that older women with early-stage breast cancer prefer to be provided with both knowledge and psychosocial support. Wong et al. (2012) examined the informational needs of older women with breast cancer and found that these women have additional needs pertaining to their diagnosis, such as the need to actively participate in decisions regarding their treatments, and they require other necessary supports related to the onset of treatments and unexpected life changes. The limited description of older women with breast cancer in the literature points to the necessity to examine this group with its unique needs separately and to identify cancer care strategies specifically suited to this patient population.

This article reviews the current state of knowledge regarding optimal approaches to treatment of breast cancer in women ages ≥ 65 from an interdisciplinary perspective. We include literature from geriatrics, radiation oncology, medical oncology, surgical oncology, psycho-oncology, palliative care, oncology nursing and social work to capture a comprehensive picture of the current treatment and needs of these women. The aim of this review is to help inform a potential interdisciplinary program dedicated to the treatment of older women with breast cancer that will optimally address the unique needs of this patient population.

METHODS

We conducted a literature review using MEDLINE (1996 to August 2014) and EMBASE (1996 to August 2014) databases to identify studies pertaining to female breast cancer patients over the age of 65. We coupled search terms “breast neoplasms” or “breast cancer” with treatment keywords including “radiotherapy,” “drug therapy,” “hormonal treatment,” “antineoplastic agents,” or “surgical procedures,” and patients’ needs keywords including “program development,” “health services needs and demand,” “needs assessment,” “interprofessional relations” or “interdisciplinary communication.”

We retrieved a total of 127 articles, which we screened for accordance with the eligibility criteria. Only peer-reviewed articles involving female breast cancer patients ages ≥ 65 were included and all non-English studies were excluded. The articles were further narrowed down by their descriptions of the specific needs of breast cancer patients ages ≥ 65 from the perspectives of the aforementioned disciplines. We selected 78 articles based on their considerations of treatment options within each discipline by health care professionals from that discipline.

RESULTS

The literature review presents the current approaches to the treatment of breast cancer in women ages ≥ 65 from multiple disciplines. By assessing approaches from geriatrics, surgical oncology, medical oncology, radiation oncology, nursing,

supportive care, and psycho-oncology, we can begin to identify treatment strategies for older women with breast cancer that bridge the disciplinary gaps and provide more comprehensive methods that address the unique, varied, and complex needs of this patient population.

To begin with, when shaping the course of treatment, we found that the fundamental questions to consider are: will the patient die from the cancer, suffer from the complications of cancer, or will the patient die of other causes (Balducci et al., 2010). If the individual is likely to die from other morbidities, then the role of the oncology team is to observe the patient and provide supportive care as needed. However, if the cancer is likely to be the cause of death, then the oncology team must determine whether the patient can tolerate curative treatment (Hamaker et al., 2012).

Geriatrics

A geriatric assessment (GA) can be the first step in delineating a tailored treatment plan for older women with breast cancer. A GA can help guide treatment decisions (Hamaker et al., 2012), with one study concluding that a GA may influence treatment decisions in up to 23% of older patients (Puts et al., 2014). There are four key principles when considering GAs, including: heterogeneity, function, frailty, and homeostatic reserve (Bergman et al., 2007).

Currently, the Comprehensive Geriatric Assessment (CGA) tool is considered the standard for assessing function, mood, nutrition, comorbidity, medications, falls, mobility, special senses, social support, activities of daily living, and instrumental activities of daily living (Puts et al., 2014). However, a CGA is extensive, often time consuming and, given the heterogeneity of older patients, unlikely to benefit all of them. As such, finding an appropriate screening tool to determine who might benefit from a CGA may be useful in older oncology patients.

A recent systematic review by Puts et al. (2014) identified 35 manuscripts regarding geriatric assessment in oncology. The authors found that several domains of GA were associated with adverse outcomes. Eleven studies examined GA with mortality predictions, which revealed that poor performance status, instrumental activities of daily living, and several other GA deficits were associated with an increased risk of mortality. Although screening tools are useful in GA, there are still some controversies that arise. For instance, screening tools often show high sensitivity and poor specificity or vice versa (Puts et al., 2014).

In the general geriatric population, several screening tools have been identified that relate to function and frailty, such as gait speed. A study conducted by Studenski et al. (2011) examined survival among older adults based on their performance in a gait test, which involved timing a walk for four metres. In general, gait speeds of greater than one meter per second suggested healthier aging and survival. However, gait speeds of 0.6 metres per second or less were associated with poorer health status and survival (Studenski et al., 2011). Measuring gait speeds among older women with breast cancer might help to better identify who would benefit from a CGA. Those with reduced gait speeds, who are deemed to be functionally

impaired, may benefit from interventions that target potential modifiable risk factors such as pain, osteoarthritis, and medications that may ultimately improve function and treatment options. Furthermore, monitoring gait speeds over time could help identify emerging health problems and identify those at risk of mortality.

Another key factor of geriatric assessment is frailty, which refers to a state of decreased physiological reserve arising from cumulative deficits in several physiological systems, thus resulting in a diminished resistance to stressors (i.e., homeostatic reserve) (Rockwood et al., 2005). The Clinical Frailty Scale is a GA tool that can be used to measure frailty and facilitate clinical judgment regarding function and expected survival (Rockwood et al., 2005).

Predicting toxicity from chemotherapy in the elderly is also of great importance, and several groups have used various measures to predict toxicity and prognosis (Extermann et al., 2004; Extermann et al., 2012; Hurria et al., 2011). Hurria et al. (2011) were able to predict risk of chemotherapy toxicity in a heterogeneous elderly cancer population, using a comprehensive screening tool that included GA factors. The Chemotherapy Risk Assessment Scale for High-Age Patients (CRASH) score developed by Extermann and colleagues (2012) was able to distinguish risk levels for severe toxicity in a mixed elderly cohort. Despite having an important prognostic value in oncology, a CGA is time consuming, poorly financially compensated in most health care systems, and not required for every patient (Extermann et al., 2004). For these reasons, there is increasing interest in the use of simpler geriatric screening tools. These tools are short and easy to administer (Deschodt et al., 2011) and avoid the efforts of doing GA in fit older patients who do not require extensive assessment. Several screening tools are used in oncology, such as the G8 (Bellera et al., 2012; Soubeyran et al., 2008), the Flemish version of the Triage Risk Screening Tool (fTRST) (Braes et al., 2009; Kenis et al., 2006; Meldon et al., 2003; Moons et al., 2007), the Groningen Frailty

Indicator (Slaets, 2006), the Vulnerable Elders Survey-13 (VES-13) (Mohile et al., 2007), and the abbreviated Comprehensive Geriatric Assessment (Overcash et al., 2005). However, adequate validation of these tools in an oncologic population with respect to prognostic capacity for functional decline and overall survival (OS) is still lacking.

There are currently no standards for the use of geriatric assessment tools in the care of older women with breast cancer. Thus, it is important to find a simple geriatric assessment screening tool that would predict who may benefit from a CGA, which may ultimately help to guide treatment decisions.

Surgical oncology

Few surgical trials include older patients and, consequently, there is little evidence about surgical treatment in the elderly. There have been a number of recent prospective cohort studies that have addressed the incidence and decision making for older patients with breast cancer. Indeed, surgical treatment for breast cancer generally decreases after the age of 80, with one study demonstrating that only 33% of these patients underwent surgery (Tang et al., 2011). Nevertheless, there is still a lack of standard treatment among breast cancer patients. A UK study by Tang et al. (2011) involving 268 patients with breast cancer over the age of 70 from 2004 to 2006 found that, when women were given the choice between surgery and no surgery, 56% of patients opted for non-surgical treatments, instead preferring primary endocrine therapy. Furthermore, the majority of estrogen receptor (ER) negative tumours were treated with surgery. Patients who did not have surgery were on average seven years older and had significantly more comorbidities. The authors suggested that wider measures of health are required for older women with breast cancer in order to optimize the selected treatment (Tang et al., 2011).

Another prospective study by Lavelle et al. (2014) involved 800 patients over the age of 70 from 2010 to 2013. The study examined whether the lack of surgery among older breast cancer patients can be explained by poor health and/or patient



Figure 1: Barriers to treatment

preference. The authors found that the strongest predictor of reduced odds of surgery was worsening functional status and lower independence (activities of daily living [ADL] scores). Poorer health status explained the difference in surgical treatment between 75–84 year olds and younger patients (Lavelle et al., 2014).

Medical oncology

Systemic therapy

Elderly women are under-treated by all modalities, including systemic therapy (Bouchardy et al., 2007; Sostelly et al., 2013; Townsley et al., 2005). This may be due to their perceived and actual susceptibility to toxicities and comorbidities, as well as physicians' beliefs or patient preference regarding quality of life and absolute benefits (Bouchardy et al., 2007; Elkin et al., 2006; Ring et al., 2013). Figure 1 presents the many complications associated with the treatment of older women with breast cancer.

Nonetheless, under-treatment or use of regimens that differ from the standard of care for any reason result in poorer outcomes in these patients (Bouchardy et al., 2007; Muss et al., 2009). Physicians face many challenges in assessing the patient's ability to tolerate systemic therapies and accurately predict benefits. A common predictive tool used to assist in systemic therapy decision making, "Adjuvant! Online," has recently been shown to inaccurately predict outcomes in elderly patients, and predictions should be used with caution in this group (de Glas et al., 2014). The inaccuracy of the tool likely stems from the relatively low proportion of elderly patients in trials on which the program is based, as well as the comorbidity scores entered by physicians (de Glas et al., 2014).

Chemotherapy

Adjuvant setting. The Early Breast Cancer Trialists' Collaborative Group (EBCTCG) analyses demonstrating

survival benefit with adjuvant chemotherapy for early-stage breast cancer did not include a sufficient proportion of patients older than 70 to be able to measure the effect in this group accurately (Darby et al., 2011; Peto et al., 2012). The first randomized controlled trial (RCT) of patients ages ≥ 65 with early-stage breast cancer showed that patients treated with capecitabine had twice the likelihood of relapse (HR 2.09, 95% CI, 1.38–3.17; $p < 0.001$), and were almost twice as likely to die (HR 1.85, 95% CI, 1.11–3.08; $P = 0.02$) compared to those treated with standard chemotherapy (either cyclophosphamide, methotrexate and fluorouracil [CMF] or cyclophosphamide plus doxorubicin [AC]) in the adjuvant setting (Muss et al., 2009). Two recent RCTs examining various chemotherapy regimens in the elderly closed early due to insufficient accrual (Crivellari et al., 2013; Leonard et al., 2011). There are ongoing trials (described in Table 1) addressing adjuvant chemotherapy in this population.

The current recommendations for adjuvant chemotherapy from the International Society of Geriatric Oncology (SIOG) do not support differential use of specific chemotherapy drugs or dose reductions simply based on age (Biganzoli et al., 2012). Regarding the specific choice of a chemotherapy regimen, they identify that four cycles of anthracycline is generally preferred to CMF. Taxane-based regimens may replace anthracyclines due to cardiac risk, or may be added to anthracyclines in otherwise healthy, but prognostically high-risk elderly patients.

Metastatic setting. Two studies were analyzed for efficacy and toxicity of various doses of paclitaxel in elderly women with metastatic breast cancer, and found that patients aged ≥ 65 had similar benefits in overall survival (OS) and progression-free survival (PFS) to younger patients (Lichtman et al., 2012). Other studies have shown good response rates and PFS benefit with capecitabine, weekly paclitaxel, epirubicin, and pegylated doxorubicin (PLD), with acceptable rates of toxicity (Bajetta et al., 2005; Del Mastro et al., 2005; Feher et al., 2005; Smorenburg et al., 2014). According to the SIOG guidelines, chemotherapy in the metastatic setting is indicated in older patients whose disease is ER-negative, hormone-refractory or rapidly progressing (Biganzoli et al., 2012). In general, single-agent regimens are preferred to combination regimens, owing to the toxicity and limited survival benefit. Agents such as weekly taxanes, PLD, capecitabine and vinorelbine are preferred, as they have been studied in this population.

Adjuvant Trastuzumab

Trastuzumab remains the standard therapy for HER2 positive breast cancer. A recent systematic review of randomized trials studying trastuzumab use in HER2 positive patients over age 60 showed a 47% relative risk reduction (pooled HR: 0.53; 95% CI, 0.36–0.77) in those receiving trastuzumab compared with chemotherapy alone. The pooled proportion of cardiac events was 5% (95% CI, 4–7%) (Brollo et al., 2013). Naumann and colleagues (2013) identified that cardiotoxicity with trastuzumab was not predicted by age. However, in a subgroup analysis, the time to first cardiotoxicity was associated with age in patients undergoing concurrent anthracycline treatment ($p = 0.001$). The combination of pertuzumab, trastuzumab,

Trial Name	Age	Comparison	Primary outcome
ELDA 11cancertrials.gov ID: NCT00331097 (NCT00331097)	65-80	Weekly docetaxel vs. CMF	DFS
ICE II (NCT01204437)	≥ 65	EC or CMF vs. capecitabine + nab-Paclitaxel	Compliance and safety
ASTER 70s12 (NCT01564056)	≥ 70	Hormone therapy* vs. Chemotherapy** followed by hormone therapy	OS
NB: EC – epirubicin-cyclophosphamide. *Hormone therapy = tamoxifen, aromatase inhibitor or sequential. **Chemotherapy (docetaxel-C, AC, or liposomal nonpegylated doxorubicin-C). DFS: disease free survival. OS: overall survival			

and docetaxel was studied in a subgroup of patients aged ≥ 65 in the CLEOPATRA trial. It was shown that elderly patients derive similar progression-free survival benefit (HR 0.52; 95% CI 0.31-0.86) to their younger counterparts, and age was not associated with development of asymptomatic or symptomatic left ventricular systolic dysfunction (LVSD) (Miles et al., 2013). In general, all patients should be screened for cardiac disease prior to starting trastuzumab, with regular monitoring for symptoms and signs of LVSD. According to the SIOG guidelines, healthy elderly patients without cardiac disease are recommended to receive trastuzumab in combination with chemotherapy. When chemotherapy cannot be given, the St. Gallen 2011 Consensus indicated it may be acceptable for trastuzumab to be given alone. However, evidence is lacking in this instance (Goldhirsch et al., 2013).

Hormone therapy

Hormone therapy is often a mainstay of treatment for older women, since 80% of this group is likely to be endocrine responsive (Crivellari et al., 2007). Primary endocrine therapy has shown benefit for disease control in patients who are unable or unwilling to proceed with adjuvant surgery. A Cochrane review showed no difference in OS with this strategy compared to surgery plus tamoxifen. However, PFS was worse with endocrine therapy alone (Hind et al., 2007). A more recent review by Morgan et al. (2014) set out to address this issue in a modern era of treatment, but due to selection bias in many of the non-randomized trials, the Cochrane review remains the highest-level evidence to guide decisions on this practice. The SIOG recommends considering this approach in conjunction with a geriatric assessment to identify individuals with a short life expectancy (i.e., <two years), who may be too frail or ill for surgery despite optimization, or who are refusing surgery.

Several trials have confirmed benefits in DFS and OS from aromatase inhibitors and tamoxifen with varying regimens and durations, although only 5–20% of these patients were elderly (Biganzoli et al., 2007). The MA.17 trial included a subgroup analysis of elderly patients, and indicated the benefit from extended letrozole after tamoxifen for five years did not include patients older than 60 (Muss et al., 2008). The authors commented that extended letrozole could nonetheless be considered for these patients due to the lack of significant association between age and treatment for DFS, distant disease-free survival (DDFS) and OS. Similarly, the BIG-1-98 trial demonstrated that letrozole was superior to tamoxifen independent of patient age (Crivellari et al., 2008). Newer agents, such as the mTOR inhibitor everolimus, have been shown to improve PFS in women regardless of age, and the frequency of adverse events was similar to young patients, but older patients had more on-treatment deaths (Pritchard et al., 2013). As such, the investigators cautioned for close monitoring, with dose or schedule changes as needed in this population.

Adjuvant hormonal treatment must be weighed against the side effects that may lead to poor adherence. A recent large multicentre trial of patients aged ≥ 65 years showed the probability of discontinuing therapy by five years was 48.5%

(Sheppard et al., 2014). The BIG-1-98 investigators identified more fractures, as well as non-fracture adverse events for letrozole compared to tamoxifen in the group 75 and older, but there was no significant difference for thromboembolic or cardiac events (Crivellari et al., 2008). The rates of musculoskeletal side effects were not found to be significantly associated with age. The SIOG guidelines support the use of tamoxifen or aromatase inhibitors, and suggest that patients initiated on tamoxifen should be considered to switch to an aromatase inhibitor after two to three years. Healthy patients can be considered for extended AI treatment after completing five years of tamoxifen. Lastly, SIOG acknowledges that omission of endocrine therapy can be considered for patients with very low risk disease (pT1aN0) or life-threatening comorbidities (Christiansen et al., 2011).

Radiation oncology

Radiation treatments play an important role in the multidisciplinary management of most patients with breast cancer. Data from prospective phase III trials indicate that, for patients treated with a breast-conserving surgery, radiation reduces the risk of local recurrence, provides a clinically significant reduction in distant metastases, and improves overall survival (Darby et al., 2011; Clarke et al., 2005).

Radiation treatment is well tolerated and, with the use of new technologies, the side effects of radiotherapy (RT) are minimal, allowing patients to maintain an excellent quality of life during and after treatment. Unfortunately, radiation treatment is delivered in three to six weeks of daily sessions, which may be inconvenient and expensive for patients (Whelan et al., 2010).

Adjuvant RT post-breast conserving surgery

Breast conserving therapy (BCT) is a combination of breast conserving surgery (BCS) followed by breast RT for eradication of the residual microscopic disease of the breast. Several randomized trials examining the role of irradiation after BCS are shown in Table 2. These trials used different prognostic factors such as older age, smaller tumors and tumours with favourable prognostic factors in combination with Tamoxifen (Hughes et al., 2013; Fisher et al., 2002; Forrest et al., 1996; Fyles et al., 2004; Potter et al., 2007; Tinterri et al., 2009; Winzer et al., 2010).

More recently, CALG B9343 demonstrated at 12.6 years follow-up 98% of patients aged ≥ 70 who were treated with Tamoxifen and RT post lumpectomy compared with 90% of those who received only Tamoxifen were free from local and regional recurrences. There were no significant differences in time to mastectomy, time to distant metastases, breast-specific survival, or OS. This study showed that, with long-term follow-up, the previously observed small improvement in locoregional recurrence with the addition of radiation therapy remains. However, these findings did not translate into an OS, distant DFS or breast preservation benefit. Tamoxifen alone can be a reasonable option for women aged >70 with ER-positive early-stage breast cancer after breast surgery (Hughes et al., 2013; Fisher et al., 2002; Forrest et al., 1996; Fyles et al., 2004; Potter et al., 2007; Tinterri et al., 2009; Winzer et al., 2010).

Table 2: Studies examining the role of irradiation after breast conserving surgery

Study	No. of patients	Follow up years	Age (years)	Tumour size (cm)	Treatment	Local Recurrence	Statistical Significance	Ref.
CALGB9343 (2013)	636	10.5	>70	<2.0	Tam TamRT	9 2	<.001	(Hughes et al., 2013)
NSABP B21 (2002)	1009	8	Any age	<1	Tam TamRT RT placebo	17 3 9	<.001	(Fisher et al., 2002)
Winzer et al. (2010)	361	10	45-75	<2	Surgery alone SurgeryRT SurgeryTam SurgeryRT/Tam	34 10 8 9	<.001	(Winzer et al., 2010)
Potter et al. (2007)	869	4.5	Post-menopausal (mean 66)	<3	Tam or AI Tam or AI+RT	6 2	<.001	(Potter et al., 2007)
Fyles et al. (2004)	769	5.6	>50	<5	Tam TamRT	8 1	.001	(Fyles et al., 2004)
Tinterri et al. (2009)	749	5	55-75	<2.5	Surgery alone Surgery +RT	3 1	0.7	(Tinterri et al., 2009)
Forrest et al. (1996)	585	6	<70	<4	Tam TamRT	25 6	NS	(Forrest et al., 1996)

Adjuvant radiotherapy post-mastectomy

Clinical trials indicate that post-mastectomy radiotherapy (PMRT) is associated with improved survival and decreased locoregional recurrence in women with high-risk breast cancer (Clarke et al., 2005). However, women aged ≥ 70 are under-represented in these clinical trials, yet PMRT decisions in these individuals are extrapolated from the trials conducted in primarily younger women.

Omission of RT post-BCT

Omission of radiation treatment seems to be a reasonable option for some subgroups of older women with breast cancer who have a very low risk of cancer recurrence. PRIME II trial results suggest that radiation can be safely omitted in women ≥ 65 with tumours up to 3 cm, clear resection margins, node negative and who were treated with adjuvant endocrine therapy. The difference in five-year ipsilateral breast cancer recurrence in the radiotherapy arm was 1.3% and 4.1% in the no radiotherapy arm. There were no overall survival differences between patients who were treated with radiotherapy post-BCT versus those who received RT (Kunkler et al., 2013).

Radiation treatment post-BCT is indicated for most older women with breast cancer. In the absence of overall survival benefit, the fact that local relapses can be successfully managed surgically should be balanced with individual patient decisions and the logistics of the daily travel that is necessary for radiation treatments.

Nursing and supportive care

Underpinning any cancer treatment plan are the basic needs of the patient. Whether a person is able to meet his/her own needs during their cancer experience is influenced by a variety of factors (Fitch, 2008). This is especially true for older women with breast cancer. Functional status, frailty, decreased mobility, social isolation, and financial concerns are just a few of the factors that may influence the older woman's experience of breast cancer.

Supportive care is the provision of the necessary services for those living with or affected by cancer to meet the full range of their needs (Fitch, 2000). Nursing plays a key role in supporting older women with breast cancer at the time of diagnosis, throughout treatment to recovery and/or end of life.

The Supportive Care Framework (Fitch, 2008) can be used to assess the needs of these women throughout their cancer journey by focusing on seven key areas of needs assessment: physical, informational, emotional, social, psychological, spiritual, and practical (see Figure 2). The assessment must address the full range of issues that may emerge as these women try to deal with the impact of a cancer diagnosis and treatment, as well as the post-treatment effects.

The assessment of one's physical needs is imperative in older woman with breast cancer. Understanding the extent of functional status, frailty, pain, and motor deficits will help determine the ability of that woman to cope during and after the treatment phase. For example, if frailty increases, it becomes more likely that older women might prefer to be treated closer to home or

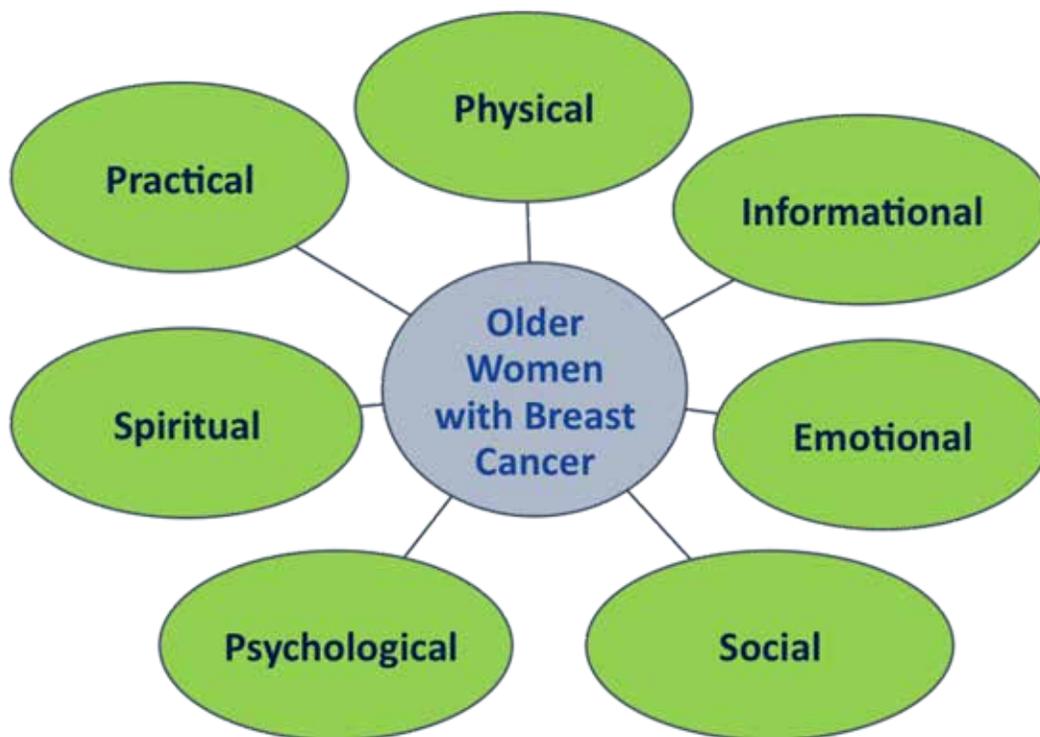


Figure 2: Needs of older women with breast cancer

not at all if independence may be compromised (Kenis et al., 2013). Health care providers may look to more convenient and equally effective options for treatment, so that transportation needs do not become a barrier to treatment.

Failure to recognize and address psychosocial needs throughout the cancer experience may lead to increased levels of distress in older women (Fitch, 2000; Fitch, 2008). Assessment of the social environment, familial support, and preferred coping mechanisms can be time consuming, but such inquiry is important to inform the other approaches to the care of these women. Equally important is determining the woman's degree of cognitive impairment prior to and throughout treatment, as this may influence her ability to cope. Psychosocial needs vary by individual, and in the same individual they can change over time. Nurses and allied health care professionals play a key role in assessing and responding to distress in older women with breast cancer and their families throughout diagnosis and treatment (Kunkler et al., 2013; Fitch, 2008).

Another identified need of patients in this group is informational needs. Informational needs include the need for education about the cancer diagnosis, tests and procedures, symptom management, coping skills, and community-based services. Patients require lots of information early on in the course of a cancer illness and this influx of information can prove to be overwhelming for older women (Fitch, 2000; Fitch, 2008). Additional factors, such as literacy level, language barriers, and capacity to learn, may also be a challenge to the meeting of the informational needs of these patients. It

is important that nurses take the time to determine how information is best communicated with individuals to ensure that they have a clear understanding of their plan of care. This will enhance their ability to make informed decisions and to adequately manage expectations.

Optimizing care for older women with breast cancer means tailoring interventions. The intervention must be aligned with the patient's individual needs, personal goals, and ways of coping (Fitch, 2008). Nurses must recognize the myriad of psychosocial, physical, informational, and practical factors that come into play when determining the best intervention for an individual.

Psychosocial needs

Both the risk of developing cancer and the risk of developing a cognitive impairment increase with age. Older adults with cancer who have a prior cognitive impairment also tend to be at an increased risk of worsening cognitive dysfunction during cancer treatments (Mandilaras et al., 2013). Older breast cancer patients undergoing chemotherapy may experience chemotherapy-induced cognitive impairments, or "chemobrain." These can include difficulty with memory, attention, and concentration. Furthermore, hormone therapies for breast cancer are also often associated with an increased risk for cognitive dysfunction (Lange et al., 2014).

Breast cancer treatment in older women can be influenced by their increased risk of depression, dementia, and/or anxiety. Depression has been estimated to be as high as 50% among the elderly. Common risk factors include the loss of a spouse, functional disability, uncontrolled pain, and previous

or family history. Medical causes of depression include low B12, hypomagnesaemia, hypocalcaemia, steroids, adrenal dysfunction, and anemia. Practitioners should address depression risk among older breast cancer patients because it can lead to an increased risk of other cognition impairments such as subjective memory complaints and dementia (Lange et al., 2014).

Dementia is often based on several cognitive deficits resulting in a significant decline in social and occupational functioning. A higher comorbidity score before the diagnosis of breast cancer in older women has been shown to be associated with an increased risk of dementia (Lange et al., 2014). Furthermore, women with breast cancer who have received prior adjuvant chemotherapy tend to have a higher likelihood of developing dementia (Lange et al., 2014).

Anxiety is another important aspect to consider among older breast cancer patients. Anxiety tends to occur alongside pain, depression, and/or delirium and can often arise as a result of medications (i.e., steroids or anti-emetics), metabolic disturbances, or respiratory distress. Anxiety can often be addressed with supportive therapy or medications such as clonazepam to assist with sleeping (Wang et al., 2014).

Distressed older adults are significantly less likely to receive specialized psychosocial care (Ellis et al., 2010). Barriers to care may include communication difficulties, clinician bias, and increased perceived stigma of psychiatric referral in the elderly compared to younger patients. Nevertheless, psychosocial considerations are important when considering older breast cancer patients' unique situations and when crafting these women's tailored treatment plans.

DISCUSSION

Optimal management of older women with breast cancer requires complex interdisciplinary supportive care. The SIOG fosters the development of health professionals in geriatric oncology and optimizes the treatment of older adults with cancer (Biganzoli et al., 2012). Its priority is to develop multidisciplinary geriatric oncology clinics in comprehensive cancer centres and academic institutions (Extermann et al., 2012). These clinics would integrate geriatric evaluation into oncology decision making and guidelines, address issues of access to care, and develop, test, and disseminate screening tools to enable proper referrals to multidisciplinary clinics. Additional mandates include: encouraging an integrated approach between oncologists and geriatricians, creating clear and operational definitions of vulnerability/frailty applicable to oncology, increasing the relevance of clinical trials for older patients, and designing specific trials for older cancer patients (Biganzoli et al., 2012). This literature review supports the mandate of the SIOG and recommends the creation of such interdisciplinary geriatric oncology clinics.

Recommendations

Interprofessional collaboration is a necessary precursor to providing the supportive care required from the time of diagnosis, throughout treatment and recovery for this patient population. This can be possible through establishing multidisciplinary specialized geriatric oncology clinics. In the

process of achieving this goal, it is important that current clinics, centres and medical professionals take small steps towards accomplishing this objective. These steps include education, implementation of screening tools and ongoing research related to older patients with cancer.

Education

In order to build specialized geriatric oncology care, it is pertinent that the needs of elderly patients are better understood. This process requires educating health care providers from different health disciplines about the unique needs of this patient population. Interdisciplinary input can help guide and create better educational and communication strategies.

It is known that high-quality communication helps health care professionals establish a relationship of trust (Bettevy et al., 2006), educate patients and develop a better treatment plan (Radziewick & Baile, 2001; Swanson & Kock, 2010). It also influences the patients' psychosocial adjustment (Randall and Wearn, 2005) and treatment decision-making process (Rassin et al., 2006; Djulbegovic et al., 2009). Nurses are often the main point of contact for patients; they are most able to elucidate specific needs, counsel patients on their care and, when necessary, refer them for more comprehensive geriatric care. Therefore, education of oncology nurses with respect to particular geriatric issues would be a strategic first step in this process.

Implementation of screening tools

Implementation of a practical, geriatric screening assessment to better help identify whether a patient would benefit from a more comprehensive assessment would help direct a more individualized treatment plan. For example, screening tools such as "gait speed" and VES-13 are simple and effective, and can be feasibly incorporated and administered in clinics. Nurses could lead administration of these screening tools to gain information regarding patient health status. The "gait speed" tool would show that patients with reduced gait speeds who are deemed to be functionally impaired, may benefit from interventions that target potentially modifiable risk factors such as pain, osteoarthritis, and medications that may ultimately improve function and consequently increase treatment options (Chaudhry et al., 2012). Furthermore, monitoring gait speeds over time could help identify emerging health problems and identify those at risk of mortality (Lo et al., 2015; Weidung et al., 2015). VES-13 is a 13-item function-based self-reported questionnaire that may also serve in the clinic as a rapid prescreening tool to uncover vulnerability/frailty compared with full CGA. When administered properly, VES-13 has significantly reduced the time of geriatric assessment, while providing important screening of older patients (Luciani et al., 2010). These tools can be implemented in clinics to help guide proper treatment decisions and to ensure that patients' comorbidities have been reviewed and managed. Functional status, frailty, pain, and motor deficits should be identified, as they affect patient ability to cope with their diagnosis and treatment decisions. Systemic treatments should be considered carefully on a case-by-case basis, and information from geriatric assessments should be central to the decision-making process.

Research

More clinical trials are required in this population of patients to generate a foundation for evidence-based treatment decisions. Study investigators should be more aware of possible barriers in order to promote the safe participation of elderly patients in clinical trials (Hempenius et al., 2013). Endpoints that would help to better inform future practices in this group of patients include patient-reported outcomes, quality of patient care, as well as patient and caregiver satisfaction. The proposed interdisciplinary partnership approach is ideal because the multiple perspectives help broaden the research mapping process (Wilkes & Jackson, 2013), and develop a more comprehensive knowledge base (Anderson et al., 2008).

While rigorous evidence is especially pertinent to improving the treatment for older women with breast cancer, it is also essential to consider the patient's own experiences of their care, in order to individualize treatment. From a nursing perspective, this aspect is vital in addressing the specific, unique needs of patients to ensure the highest quality of life for them and their families. This type of practice is in accordance with CANO/ACIO Practice Standards and Competencies for the Specialized Oncology Nurse (CANO/ACIO, 2006).

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Limitations

Our literature review is limited to information from two databases, EMBASE and MEDLINE. However, they are two of the largest, most prominent medical research databases, which together provide a comprehensive review of the existing literature (Woods & Trewheellar, 1998). Another limitation of our study is that we only reviewed articles published in English. However, retrospective analysis has found that this has little effect on summary estimates (Jüni et al., 2002).

CONCLUSION

We recommend that elderly breast cancer patients receive interdisciplinary care. Input from different healthcare providers such as geriatricians, surgical oncologists, medical oncologists, radiation oncologists, nurses, supportive care, psychologists and others would allow the unique needs of elderly patients to be addressed, thereby optimizing their cancer care.

DISCLOSURES

No conflict of interests.

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