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## Surgical Treatment Differences Among Latina and African American Breast Cancer Survivors

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### Abstract

**Purpose/Objectives**—To describe breast cancer treatment choices from the perspectives of Latina and African American breast cancer survivors.

**Design**—An interdisciplinary team conducted a mixed-methods study of women treated for stages I–IV breast cancer.

**Setting**—Participants' homes in metropolitan areas.

**Sample**—39 participants in three groups: monolingual Spanish-speaking Latinas (n = 15), English-speaking Latinas (n = 15), and African American women (n = 9).

**Methods**—Individual participant interviews were conducted by racially and linguistically matched nurse researchers, and sociodemographic data were collected. Content and matrix analysis methods were used.

**Main Research Variables**—Perceptions of breast cancer care.

**Findings**—High rates of mastectomy were noted for early-stage treatment (stage I or II). Among the participants diagnosed with early-stage breast cancer, the majority of English-speaking Latinas (n = 9) and African American women (n = 4) received a mastectomy. However, the majority of the Spanish-speaking Latina group (n = 5) received breast-conserving surgery. Four factors influenced the choice of mastectomy over lumpectomy across the three groups: clinical indicators, fear of recurrence, avoidance of adjuvant side effects, and perceived favorable survival outcomes. Spanish-speaking Latinas were more likely to rely on physician treatment recommendations, and the other two groups used a shared decision-making style.

**Conclusions**—Additional study is needed to understand how women select and integrate treatment information with the recommendations they receive from healthcare providers. Among

the Spanish-speaking Latina group, limited English proficiency, the use of translators in explaining treatment options, and a lack of available educational materials in Spanish are factors that influenced reliance on physician recommendations.

**Implications for Nursing**—Oncology nurses were notably absent in supporting the women's treatment decision making. Advanced practice oncology nurses, coupled with language-appropriate educational resources, may provide essential guidance in clarifying surgical treatment choices for breast cancer among culturally and linguistically diverse populations.

Clinical guidelines for early-stage breast cancer treatment are well established (National Comprehensive Cancer Network [NCCN], 2011). Breast-conserving surgery (BCS) (lumpectomy) alone or combined with radiation often is regarded as the treatment of choice for early-stage breast cancer, provided that resected margins are free of tumor cells. That guideline is based on evidence from longitudinal studies and meta-analyses of randomized clinical trials that have demonstrated no differences in long-term survival rates for early-stage breast cancer treated with total mastectomy versus lumpectomy with or without radiation (Fisher et al., 2002; van Dongen et al., 2000; Yang et al., 2008).

Excessive use of mastectomy has been identified as a concern (Lazovich, White, Thomas, & Moe, 1991). Given the substantial evidence for equivalent survival outcomes in BCS compared to mastectomy in early-stage breast cancer, BCS now is seen as a quality indicator in some institutions (Morrow et al., 2009). However, mastectomy rates in early-stage breast cancer remain a concern. Mastectomy procedures may be recommended by physicians or preferred by patients with early-stage breast cancer because of fear of local recurrence. Although some evidence indicates that long-term recurrence rates are slightly higher with lumpectomy, those findings are not consistent across studies (Fisher et al., 2002; Poggi et al., 2003; van Dongen et al., 2000; Yang et al., 2008). Large-scale trials for BCS and radiotherapy have shown a 7% risk of recurrence in a five-year period (Clarke et al., 2005).

Other studies have identified disparities in breast cancer treatment related to socioeconomic status (SES) and demographic differences in racial and ethnic groups and those with fewer social resources. For example, breast reconstruction after a mastectomy was less frequently brought up in discussion by physicians if patients were older, uninsured, less educated, or spoke a primary language other than English (Greenberg et al., 2008). After controlling for type of insurance coverage and treatment facility characteristics (i.e., hospital type and volume), a large-scale survey (N = 662,117) of breast cancer survivors found that African American women had lower rates of definitive locoregional surgery and hormonal therapy than Caucasian or Latina women (Freedman et al., 2010).

That same study also found that participants who were aged 65 years or older, uninsured, or receiving Medicaid or Medicare all were associated with lower odds of receiving chemotherapy. Racial differences in chemotherapy dosing were found by Griggs, Sorbero, Stark, Heininger, and Dick (2003) in an examination of the oncology records for 489 women treated from 1985–1997 in 10 treatment sites across two geographic regions. Variables of study included patient and tumor characteristics, treatment course, physicians' intentions to give a first cycle dose reduction, and reasons for dose reductions or delays. African American women were significantly more likely to have received a lower chemotherapy dose proportion and relative dose intensities compared to doses received by Caucasian women.

Parviz et al. (2003) found no treatment differences related to race, age, or SES among Caucasian and African American women with early-stage breast cancer; however, living closer to a radiation treatment facility and being diagnosed after 1995 were associated with higher BCS rates. Although reasons for excessive use of mastectomy remain unclear, patient

preference, geographic location, physician characteristics, and medical mistrust are factors that may influence the type of treatment received for breast cancer (Virnig, Baxter, Habermann, Feldman, & Bradley, 2009). The purpose of this article is to describe the factors involved in breast cancer treatment choices from the perspectives of Latina and African American breast cancer survivors.

## Methods

A mixed-methods design was used to explore the women's perceptions of breast cancer care delivery, including treatment choices. The study was conducted by an interdisciplinary team of racially and ethnically diverse researchers from disciplines of nursing, surgical oncology, social psychology, and communication. Participants were recruited from community-based agencies, media outlets (e.g., newspapers, church bulletins), and breast cancer support groups in two cities in the southwestern United States. Inclusion criteria were diagnosis and treatment for any stage of breast cancer from 2002–2008 and the ability to speak English or Spanish. Participants were informed that the purpose of the study was to explore their perceptions of breast cancer care delivery. All study procedures and forms were approved by the institutional review board at Arizona State University for protection of human participants. A single, tape-recorded, semi-structured interview conducted by three racially and linguistically matched nurse researchers took place at a setting the participant selected. A demographic questionnaire was completed by participants at the time of the interview and included information about sociodemographic characteristics and cancer treatment. After completing the interview, each participant received a \$20 gift certificate to a local retailer as compensation for her time.

## Participants

A total of 39 women were recruited to the study: self-identified African Americans ( $n = 9$ ), Spanish-speaking Latinas ( $n = 15$ ), and English-speaking Latinas ( $n = 15$ ). All of the Spanish-speaking Latinas were first-generation immigrants from Mexico. The English-speaking Latinas were predominantly Mexican Americans, ranging from first to fifth generation. Although some ( $n = 6$ ) of the latter group reported being bilingual, they all preferred the interviews to be conducted in English.

The Spanish-speaking Latinas had the lowest mean family income level ( $\bar{X} = \$10,000$ – $\$20,000$  per year) and education ( $\bar{X} = 7.7$  years) compared to African American participants ( $\bar{X}$  income level =  $\$30,000$ – $\$45,000$  per year;  $\bar{X}$  education = 13.9 years) and English-speaking Latinas ( $\bar{X}$  income level =  $\$30,000$ – $\$45,000$  per year;  $\bar{X}$  education = 14.1 years). Only five of the Spanish-speaking Latinas had healthcare insurance, whereas all participants (except for one English-speaking Latina) in the other two groups were insured ( $p < 0.001$ ). The mean age at the time of diagnosis across groups was 50.7 years.

## Data Management and Analysis

Content analytic methods were used to analyze the interview data (Mayring, 2004; Ragin & Hein, 1993). Transcribed interviews were read by each of the three nurse researchers conducting the interviews and discussed in weekly team meetings. Data were fractured into units (i.e., sentences and paragraphs) so that the portions of the text related to treatment options and decision-making were identified. To facilitate consistency in the process, two randomly selected interviews from each group were coded and discussed. Discrepancies in coding resulted in a return to the data until 90% inter-rater reliability was obtained. Each researcher entered the coded data into ATLAS.ti, version 5.1. An oncology nurse researcher and oncology surgeon reviewed the interview guide and a sample of the coded interview transcripts and participated in the data analysis process. Quantitative data from the

demographic questionnaire were analyzed using descriptive statistics, t tests, chi square, and correlation coefficients. In the final step of analysis, qualitative and quantitative data were triangulated using matrix analysis techniques (Averill, 2002) to identify treatment decision-making patterns in and across the three groups. Matrix analysis is an analytic strategy that permits the display of specific aspects of data from multiple sources, similar in concept to a correlation matrix (Miles & Huberman, 1994). The resulting data display facilitated the examination of qualitative findings by racial and ethnic group and relevant sociodemographic variables (e.g., health insurance, income level) to assess for patterns of similarities or differences in treatment experiences.

## Results

### Quantitative Findings

Among the total sample, 24 were diagnosed with breast cancer in stage I or II, and eight were diagnosed in stage III or IV. The remaining seven did not know the tumor stage and were from the two Latina groups (five Spanish-speaking and two English-speaking). The tumor stage for the total sample across all three groups is shown in Table 1.

**Early-stage treatment**—An unexpected finding was that nine of the early-stage cases received BCS, whereas 15 received a mastectomy. The treatment decision for the total sample across all three groups is shown in Table 2. The differences in surgical treatment (BCS versus mastectomy) were significant when comparing the two Latina groups ( $\chi^2 = 5.103$ ,  $df = 1$ ,  $p = 0.02$ ), but not the African American group. In all but five of the early-stage cases, surgery was combined with chemotherapy and radiation. No differences in surgical treatment were identified among participants who had adjuvant treatment versus those who did not. All of the women who did not know or could not recall their tumor stage ( $n = 7$ ) had mastectomies.

**Late-stage treatment**—Eight participants were diagnosed at stage III or IV. Of those, five received a mastectomy combined with chemotherapy and/or radiation. Two participants received chemotherapy and/or radiation without surgery, and one had BCS (combined with chemotherapy and/or radiation). No significant differences were found among racial and ethnic groups in the type of treatment among late-stage cases.

### Qualitative Findings

**Factors influencing treatment choices**—Examination of the interview data revealed six factors that related to participants' choice of treatment: (a) clinical indicators, (b) treatment-related side effects, (c) beliefs regarding recurrence or survival, (d) ascribed role of provider, (e) access to information, and (f) lack of health insurance or inability to pay for treatment. The factors were not mutually exclusive because, for some participants, multiple factors influenced their treatment choices. For clarity of discussion, however, each factor is described separately.

**Clinical indicators**—In all of the late-stage cases (stages III or IV), participants indicated that their treatment choice was based on clinical factors, such as the tumor stage, grade, or size. In nine of the early-stage cases, clinical indicators such as the presence of positive nodes, family history of breast cancer, presence of multiple tumors, or unclear margins were the stated reasons for choosing mastectomy instead of BCS.

**Treatment-related side effects**—A few participants diagnosed with early-stage tumors made surgical treatment choices based on avoidance of side effects. An African American participant (stage I), who refused radiation treatment against her physician's advice, stated,

“I don’t even want to live like that a week. Anybody that I’ve known that’s had radiation ... they always look like their skin never got back to where it was before.” An English-speaking Latina received BCS for her stage 0 tumor; however, because of unclear margins, she chose a mastectomy and tamoxifen instead of the second BCS recommended by her oncologist. She determined from reading books and information on the Internet that chemotherapy and radiation would be too difficult; in fact, she stated, “Scared the living daylight out of me. Surgery seemed the easier way to go.” However, a Spanish-speaking Latina made the treatment decision to opt for a BCS instead of a mastectomy, explaining, “Whatever scared me less, I was going to do.... And I felt like I wasn’t ready for my family and the people around me to take care of me in those circumstances.”

**Beliefs regarding recurrence or survival**—Several participants with an early-stage diagnosis expressed fear of death or recurrence and felt that a mastectomy would improve their survival. One Spanish-speaking Latina stated, “If my life comes first, well then [saving] my breast isn’t that important.” An African American participant (stage I) said, “I will always worry that it’s not gone, so let’s do a clean break here and just remove it.” Also, an English-speaking Latina (stage II) said, “Right away I wanted a mastectomy; I felt it would be more effective.”

One English-speaking Latina participant experienced a tumor recurrence in the same site six years postmastectomy. She described feeling angry when she discovered a lump under her prosthesis because she had initially been told by a provider that her choice of mastectomy for the first tumor was “overkill.”

And then I got upset, really, because I thought, “Okay, how could I be going through this six years out? What was all that bull they told me six years ago about? ‘Oh, if you have a mastectomy, it’s overkill, you know, you don’t need any more treatment.’” So I think for a while there I was angry, but I kept a lot of it to myself because, you know, for every time that you tell yourself, “Why me?” you really also have to say, “Why not me?” I mean, I’ve worked with women that have passed away from breast cancer and so you kind of have to be realistic.

That same participant ultimately chose contralateral prophylactic mastectomy (CPM) as a preventive measure.

**Ascribed role of provider**—All of the participants said they trusted their oncology physicians and nurses, regardless of the race and ethnicity of the provider. The participants’ trust in oncology providers (surgeons and medical oncologists) was based on the perceived knowledge and expertise of the physician, referrals or recommendations received from others, and the quality of the relationship with the provider, such as the amount of time spent explaining options and providing reassurance. For example, two African American participants said, “My cancer doctor, he was really nice, he was knowledgeable, he was like top of the line,” and another stated, “I had to go to my chemo oncologist to get the real answers and to see what was going on.” An English-speaking Latina said, “My God is first. And then I put my prayers and my doctors, and yeah, I did trust them.”

All participants in the English-speaking Latina and African American participant group made treatment choices based on consultations with a surgeon and oncologist. About 50% of the participants in each of those two groups also sought advice and input from family members. Some women described a process of verifying treatment options and recommendations they received from providers with educational resources (e.g., books). One English-speaking Latina and one African American participant explained that the CPM procedure was discussed by their physician as a possible option, but the participants decided against it because they felt it was too radical, although the Latina stated that she believed

“most women talk their doctor into it.” Another English-speaking Latina explained that, although her medical oncologist recommended the protocol of lumpectomy followed by radiation, the radiation oncologist recommended CPM because of the denseness of her unaffected breast. She felt that his advice for removal of both breasts “confirmed what I’d been reading.... I wanted to do everything possible to save my life, so my decision was sealed.”

Reliance solely on recommendations from the physician was most prevalent in the Spanish-speaking Latina group. Six Latinas in this group diagnosed with early-stage tumors relied solely on their physician’s advice, with one saying, “I told the doctor, ‘I’ll do whatever you recommend. You know better than me. Do what you think will be best and more convenient for you.’” Two other participants in that group stated, “I didn’t make any decision. I did what I was supposed to do,” and “I’ll put myself in their hands. I don’t know what all they’re going to do to me, but I’m not going to have a good time, right?” Three women in the Spanish-speaking Latina group stated they made the decision on their own and did not involve family or friends.

**Access to information**—With few exceptions, most women (n = 34) in the total sample claimed to have understood the treatment options that were presented to them by the surgeon or oncologist. In addition to physician recommendations, self-education also was an important component in choosing treatment. Eight English-speaking Latinas and five African American participants read educational materials to assist them in learning about treatment options. They often described “going straight to the Internet” after receiving the cancer diagnosis, as well as to books or educational materials given to them by their providers. One participant, however, was warned by her physician to avoid relying on the Internet because he felt information was unreliable. A few of the women described a lack of understanding of the treatment course. For example, one of the English-speaking Latinas and one African American participant felt confused about what to expect regarding chemotherapy side effects and the possibility of recurrence.

Although women in the Spanish-speaking Latina group reported to have understood their treatment options, 10 stated that they would have preferred a Spanish-speaking physician to improve communication and access to information. A participant explained that if she could communicate with the provider in her own language, then “I would understand him, I could ask him a lot of things, a lot of doubts,” and another stated, “Where I really don’t understand them is in chemotherapy.” Some of the women depended on family members to translate during an office visit because they felt that relying on the translators provided by the physician had limitations, as one participant stated, “It’s not the same as telling him, face to face. You can’t let it all out, because well, she [professional translator] is translating really fast, and I don’t know if she’s telling him what I’m saying.” The Spanish-speaking Latinas also were at a distinct disadvantage in regard to educational materials in their chosen language. Only one participant stated she had read information provided to her by the physician, and one received information about breast cancer from television. None of the participants in the total sample mentioned receiving information, guidance, or support from nursing staff in making their treatment choices.

**Lack of health insurance or inability to pay for treatment**—The lack of healthcare insurance affected the choice of surgical treatment for one uninsured Spanish-speaking Latina (unknown stage) who stated that she choose mastectomy over BCS because she could not afford to pay for chemotherapy or radiation. However, many participants described restricted access to adjuvant treatments because of lack of healthcare insurance or having difficulties meeting insurance copayments. Ten women in the Spanish-speaking Latina group were without any form of healthcare insurance, and they experienced the greatest

restrictions in access to treatment among the total sample. Because women in this group also had low family income ( $\bar{X}$  = \$10,000–\$20,000 per year), some were unable to pay out of pocket for the recommended chemotherapy, radiation, or hormone regimen, so they did not complete treatment. One participant in this group was going to forego radiation treatment because of an inability to pay until she discovered that she qualified for assistance through the Susan G. Komen for the Cure Foundation. Another woman held car washes and took up a collection among her neighbors in an attempt to raise funds for chemotherapy treatments. A participant who had a mastectomy felt distraught because she could not afford to pay for a prosthesis, stating, “I’m going to die like this, without a breast.” All of the women in the other two participant groups had healthcare insurance (except for one English-speaking Latina); however, five described the financial hardship of meeting insurance copayments. One African American participant stated, “The copays are eating me alive, even with Medicare,” and another said she felt “worried the whole time about financial stuff.” Three women (two English-speaking Latinas and one African American participant) reported being turned away from oncology follow-up care because they could not provide the insurance copayment at the time of the office visit. One participant was told that she would need to find a new provider if she could not pay for services. The other two women were required to reschedule their appointment, and they described feeling frustrated that the physician’s office was not willing to bill them for the service.

## Discussion

The article explored treatment differences among a community-based sample of 39 breast cancer survivors in the southwestern United States. Twenty-four women of the total sample had been diagnosed with early-stage cancer; however, stark differences existed in the type of surgical treatment chosen by the racial and ethnic groups. The findings indicate much higher rates of mastectomy when compared to other investigations of breast cancer treatment. A study of 34 Latina and non-Latina Caucasians found that, of the total sample, 20 received BCS, and 13 received a mastectomy for early-stage breast cancer, with no racial or ethnic differences based on type of treatment (Napoles-Springer, Livaudais, Bloom, Hwang, & Kaplan, 2007). However, compared to Caucasian women, Latinas were more likely to view breast cancer as life threatening, experience more emotional distress, and more often allow the physician to make the treatment decision (Napoles-Springer et al., 2007). Many of the Spanish- and English-speaking Latinas in the current sample shared a similar emotional response and treatment decision-making style. A study of 588 women treated at a Detroit cancer center found that 66% of African American women and 51% of Caucasian women received BCS for stage I cancer (Du & Simon, 2005). In Atlanta, a study of 3,314 Caucasian and African American women treated for breast cancer across five teaching hospitals found that 65% received BCS, but African American women were less likely to receive radiation and hormone therapy following surgery (Lund et al., 2008).

Several possible explanations exist for the comparatively high rates of mastectomy among the current sample. Findings noted that clinical indicators (such as family history or tumor characteristics) were factors influencing women’s treatment choice in nine of the early-stage breast cancer cases. However, understanding why women chose mastectomy in the remaining early-stage cases of the current sample, and the reasons for treatment differences among the racial and ethnic groups, is more challenging. Freedman et al. (2010) suggested that factors such as patient preferences, difficulty accessing services even with insurance coverage, medical mistrust, and physician or hospital characteristics may explain treatment differences among racial and ethnic groups found in the large, national study of breast cancer treatment.

In the current study, patient preferences for mastectomy when BCS was an equivalent option were related to fear of recurrence, belief that mastectomy afforded better odds for survival, and the inconvenience, cost, or fear of adjuvant therapies. Many of the same factors were identified in the large, multiracial study of breast cancer treatment choices by Katz et al. (2005). Evidence shows that physicians may share the similar concerns and treatment preferences as the current sample if they had to choose a treatment for themselves. Collins, Kerrigan, and Anglade (1999) asked a group of 40 male and female surgeons which treatment they would choose for stage I breast cancer, given equal survival rates for BCS and mastectomy. Fifty percent chose mastectomy, with no sex differences in type of treatment chosen. The authors concluded that fear of recurrence, inconvenience of prolonged treatment, and concern about radiation exposure may have been factors influencing the surgeons' choices. Concern about recurrence has been identified as one factor in the increased rates of CPM (Tuttle, Habermann, Grund, Morris, & Virnig, 2007).

Mistrust of oncology-care providers did not appear to be an issue with the current sample, as all participants stated they trusted their oncology physicians, and the majority said they understood the treatment options that were presented to them. The Spanish-speaking Latina participants, who had much higher BCS rates, were more likely to depend solely on the physician's treatment recommendation; they may have had more trust in their physicians than participants who chose mastectomy. However, 10 of the Spanish-speaking Latinas said they would have preferred a Spanish-speaking physician. Even when translators were used, this group had unanswered questions and concerns related to their treatment. Because members of the Spanish-speaking group had the lowest education level, they may have fewer experiences in negotiating clinical encounters and be less inclined to question their providers. Therefore, among the Spanish-speaking Latina group, limited English proficiency, the use of translators in explaining treatment options, and the lack of available educational materials in Spanish are more likely the factors that resulted in their reliance on the physician recommendations. However, the issue required further investigation.

In contrast to the Spanish-speaking group, the English-speaking Latina and African American groups had greater access to educational materials offered by their providers. Many participants in the two groups read as much as they could about cancer treatment as soon as they were diagnosed, and some used this information to either verify or clarify their understanding of what was presented to them by their providers. Those participants described a more active role in communicating with providers and were more likely than the Spanish-speaking group to use a shared decision-making style with their physicians. A study by Katz et al. (2005) showed that shared decision-making and increased patient involvement in breast cancer treatment decisions have been associated with increased rates of mastectomies, whereas decisions made by the physician were associated with increased rates of BCS. By contrast, a study of 100 women treated for early-stage breast cancer found that patients who sought information and a second medical opinion were more likely to choose BCS over a mastectomy (Gumas et al., 2010).

Another possible factor that may account for treatment differences among the current sample is physician or hospital characteristics. Because the majority of the Spanish-speaking Latinas either were uninsured or insured through the state-sponsored health insurance programs for indigent families, many spoke of receiving cancer treatment at one large, public teaching hospital that is a major provider for uninsured patients in the area. In contrast, all other participants (except for one) in the English-speaking Latina and African American groups were insured and had access to private, fee-for-service providers. Therefore, one possibility for treatment differences among groups may be related to physicians' treatment preferences or hospital characteristics.



## Limitations

A limitation in exploring hospital characteristics as a factor is that specific identification of treatment sites and information about physician characteristics were not collected. Treatment costs also might be a factor; however, that unlikely influenced provider recommendations because although BCS has slightly higher short-term costs, the cost differences between mastectomy and BCS are not significant (Barlow et al., 2001). Exploring differences in breast cancer treatment as it relates to provider characteristics and geographic region warrants additional study.

Finally, differences among treatment facilities and the lack of certified oncology nurses in the study sites also may have influenced the perceived lack of involvement by oncology nurses in the treatment decision-making process. Only one participant, who received treatment at a comprehensive cancer center, reported receiving emotional support and helpful information in understanding treatment choices from an oncology nurse. The minimal role of oncology nurses in the current study contrasts with Lally's (2009) finding that advanced certified oncology nurses practicing in a large, multispecialty breast center played an integral role in educating and supporting patients with breast cancer regarding diagnosis and treatment options.

Several limitations exist in the current study that prevent generalization of findings to other breast cancer populations. Interpretations of study findings are limited by the lack of medical record data to verify participants' tumor stage and other medical data that may contextualize the type of treatment received. However, other studies with nationally representative samples of African American women have demonstrated that self-reports of breast cancer had high degrees of accuracy (Lauderdale, Wen, Jacobs, & Kandula, 2006). To encourage participants to be as open as possible in sharing their feelings and perceptions, no inquiry was made into specific information about the identity of their providers or treatment sites. Therefore, potential differences in treatment preferences among providers or across study sites cannot be determined. Another limitation is the small sample size, particularly among the African American participants. Given that the majority of the Latinas in the sample were of Mexican origin, the perceptions and experiences described by participants in the current study may not apply to Latinas of other subgroups. Additional research is indicated with larger, more ethnically and socioeconomically diverse samples to explore the contribution of sociodemographic differences. Although the sample size was small, the study contributes to the very sparse body of literature exploring treatment decision-making among African American and Latina breast cancer survivors.

## Conclusions

Findings from the current study indicate several opportunities for additional research. An important next step would be to examine what is communicated to patients about treatment options compared to what is heard by patients, as well as strategies used by providers to address patients' fears. Another important area needing additional study is an exploration of how women select, filter, and integrate treatment information they find from reading books and on the Internet, along with recommendations they receive from providers. The Spanish-speaking Latina women in this sample were not directed to linguistically appropriate educational materials to help guide them in treatment options. Because patients with limited English proficiency are particularly vulnerable and dependent on providers' guidance in understanding treatment choices, increased efforts should be taken to ensure that their information needs are met, beyond using translators in the clinical setting. Finally, potential local and regional differences in treatment preferences and practices across breast cancer providers and healthcare facilities should be identified.

## Implications for Nursing

Although participants in this study were asked specifically about their perceptions of nursing care delivery, oncology nurses were notably absent in supporting women in their decision-making process for breast cancer treatment. That finding may be because of a lack of availability of advanced practice oncology nurses, as well as regional variations in the role of oncology nurses across practice settings. Additional study of the role of oncology nurses in facilitating the communication and decision-making process is indicated. Advanced practice oncology nurses, coupled with language-appropriate educational resources, may provide essential guidance in clarifying surgical treatment choices for breast cancer among culturally and linguistically diverse populations.

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**Table 1**

## Tumor Stage by Ethnic Group

Stage	Latinas		
	Spanish-Speaking (N = 15)	English-Speaking (N = 15)	African American (N = 9)
I <sup>a</sup>	3	3	5
II	4	8	1
III	1	1	1
IV	2	1	2
Unknown	5	2	–

<sup>a</sup>Includes one with stage 0

**Table 2**

## Treatment for Early-Stage Breast Cancer by Ethnic Group

Treatment	Latinas*		African Americans*
	Spanish-Speaking	English-Speaking	
Lumpectomy	5	2	2
Mastectomy	2	9	4

N = 24

\*  
p = 0.024