INTRODUCTION

• Breast cancer continues to be an important problem in the United States. The American Cancer Society has estimated that, in 2009, 194,280 individuals (1910 men and 192,370 women) in the United States will be newly diagnosed with breast cancer and 40,610 persons (440 men and 40,170 women) will die of this disease.¹

• To ensure that they are adequately trained to screen, diagnose, treat, and monitor their patients, clinicians must be educated to have adequate competence in the management of breast cancer.

• Projects In Knowledge (PIK) is a continuing medical education (CME) provider certified by the Accreditation Council for CME (ACCME) and an approved provider of continuing nursing education by the American Nurses Credentialing Center’s Commission on Accreditation and the California Board of Registered Nursing.

• To assess the competence of clinicians involved in diagnosing and treating breast cancer patients, and to guide future educational programs, PIK conducted an online survey of clinicians who diagnose and care for these patients.

METHODS

• To assess gaps in clinician knowledge of breast cancer, PIK designed an online survey to determine knowledge/competence on topics related to this disease.

• Beginning on May 21, 2008, the survey was emailed to proprietary databases of 6455 clinicians involved in the care of patients with breast cancer.

• Responders chose the responses that best represented their level of competence (ability to perform tasks based on knowledge and skills).

• All responses were submitted anonymously.

• Survey results were filtered to include nurses/nurse practitioners and physician assistants, and physicians only.
RESULTS

Through June 4, 2008, we received 336 responses. Of these, 166 (49.40%) were from nurses/nurse practitioners, 9 (2.68%) were from physician assistants, and 116 (34.52%) were from physicians. Breakdown of respondents is shown below.

When we pooled nurses/nurse practitioners with physician assistants, we found that >81% reported some lack of knowledge/competence (ie, they were not “Highly Competent”) on topics related to breast cancer, with 20% to 68% rating themselves as “Not at All Competent”.

Similarly, when we pooled physicians, we found that >74% reported some lack of knowledge/competence, with 13% to 61% rating themselves as “Not at All Competent”.

Can specify demographic factors (eg, race, socioeconomic levels, access to health insurance) affecting treatment of breast cancer patients

Can appraise the rationale for using endocrine/hormone therapies, differentiate among their mechanisms of action, and demonstrate the role of these therapies in the treatment of breast cancer

Can contrast the efficacy, safety, risks and benefits, dosing and administration, and clinical considerations of current chemotherapies and targeted therapies in the treatment of breast cancer

Can differentiate the efficacy, safety, risks and benefits, dosing and administration, and clinical considerations of current endocrine/hormone therapies in pre-, peri-, and post-menopausal women with breast cancer in relation to hormone receptor status of their tumors

Can distinguish among the side effects associated with chemotherapeutic agents and targeted therapies used to treat women with breast cancer and can discuss the management of these side effects

Can assess the epidemiology, new data on genetic factors affecting treatment choices, and pathophysiology associated with breast cancer in different demographic groups (eg, race, socioeconomic levels)

Can analyze the rationale for using targeted biologic therapies, differentiate the targets (eg, EGFR, VEGF, HER2) in different tumor types and demonstrate the role of specific targeted therapies (eg, anti-EGFR, anti-VEGF, anti-HER2) in the treatment of breast cancer

KEY FOR FOLLOWING CHARTS
- Not at All Competent
- Somewhat Competent
- Highly Competent
Can assess the survival rates of women with breast cancer receiving chemotherapy, hormone/endocrine therapies, and/or targeted therapies according to patient and tumor characteristics (e.g., age, menopausal status, genotype of significant mutations, tumor size, hormone receptor status, biomolecular phenotype, and lymph node status).

Can analyze the utility of chemotherapeutic regimens, hormone/endocrine therapies, and targeted biologic therapies in the setting of neoadjuvant, adjuvant (dose-dense and non-dose-dense), first-line, second-line, and salvage therapies in women with early and late-stage breast cancer.

Can assess the false positive and false negative rates of various diagnostic methods in breast cancer.

Can evaluate the impact that the introduction of targeted therapies has had on their own practices in treating women with breast cancer.

Can determine the impact that digital mammography has had on the number of women tested and treated for breast cancer, especially regarding their own practices.

CONCLUSIONS

- Both groups—nurses/nurse practitioners/physician assistants and physicians—reported gaps in clinical competence and practice performance.
- Many respondents described themselves as less than highly competent.
- Our findings are supported by several recent surveys among nurses and nurse practitioners on knowledge of cancer risk assessment and need for breast cancer screening. Non-specialist breast care nurses and nursing college students also showed significant lack of knowledge about breast cancer.
- Moreover, many doctors/nurses are aware of the side effects and reduced quality of life associated with adjuvant chemotherapy in breast cancer patients.
- Educational interventions, including training programs, have been found to increase nurses’ knowledge and competence of breast cancer screening, and to increase screening itself.
- The results of our survey point to practice improvement opportunities that educational interventions can provide to increase nurses’ knowledge and competence of breast cancer management. This may lead to improved patient outcomes.

REFERENCES


STUDY LIMITATIONS

- Respondents self-selected and self-assessed
- Responses to questions (“Highly Competent”, “Somewhat Competent”, “Not at All Competent”) subjective