

Clinical Investigation: Breast Cancer

Surgeons' Knowledge and Practices Regarding the Role of Radiation Therapy in Breast Cancer Management

Jessica Zhou, MD,* Kent A. Griffith, MS,[†] Sarah T. Hawley, PhD,[‡]
Brian J. Zikmund-Fisher, PhD,[‡] Nancy K. Janz, PhD,^{||} Michael S. Sabel, MD,[§]
Steven J. Katz, MD, MPH,[‡] and Reshma Jagsi, MD, DPhil*

*Department of Radiation Oncology, University of Michigan, Ann Arbor, Michigan; [†]Department of Biostatistics, University of Michigan, Ann Arbor, Michigan; [‡]Department of Internal Medicine, University of Michigan, Ann Arbor, Michigan; [§]Department of Surgery, University of Michigan, Ann Arbor, Michigan; and ^{||}Department of Health Behavior and Health Education, University of Michigan School of Public Health, Ann Arbor, Michigan

Received Jul 17, 2013. Accepted for publication Aug 23, 2013.

Summary

We surveyed 403 surgeons who treat breast cancer patients on their knowledge and attitudes regarding the role of radiation therapy (RT) after lumpectomy and mastectomy. Many respondents had inadequate knowledge regarding the risk of locoregional recurrence without RT and potential survival benefit with RT. Referral to radiation oncology was underutilized in a hypothetical scenario involving a pT1N1 postmastectomy patient. Correlates of knowledge and appropriate referral included more experience,

Purpose: Population-based studies suggest underuse of radiation therapy, especially after mastectomy. Because radiation oncology is a referral-based specialty, knowledge and attitudes of upstream providers, specifically surgeons, may influence patients' decisions regarding radiation, including whether it is even considered. Therefore, we sought to evaluate surgeons' knowledge of pertinent risk information, their patterns of referral, and the correlates of surgeon knowledge and referral in specific breast cancer scenarios.

Methods and Materials: We surveyed a national sample of 750 surgeons, with a 67% response rate. We analyzed responses from those who had seen at least 1 breast cancer patient in the past year (n=403), using logistic regression models to identify correlates of knowledge and appropriate referral.

Results: Overall, 87% of respondents were general surgeons, and 64% saw >10 breast cancer patients in the previous year. In a scenario involving a 45-year-old undergoing lumpectomy, only 45% correctly estimated the risk of locoregional recurrence without radiation therapy, but 97% would refer to radiation oncology. In a patient with 2 of 20 nodes involved after mastectomy, 30% would neither refer to radiation oncology nor provide accurate information to make radiation decisions. In a patient with 4 of 20 nodes involved after mastectomy, 9% would not refer to radiation oncology. Fewer than half knew that the Oxford meta-analysis revealed a survival benefit from radiation therapy after lumpectomy (45%) or mastectomy (32%). Only 16% passed a 7-item knowledge test; female and more-experienced surgeons were more likely to pass. Factors significantly associated with appropriate referral to radiation oncology included breast cancer volume, tumor board participation, and knowledge.

Reprint requests to: Reshma Jagsi, MD, DPhil, University of Michigan Hospital, Department of Radiation Oncology, 1500 E. Medical Center Dr, UHB2C490, Ann Arbor, MI 48109. Tel: (734) 936-4300; E-mail: rjagsi@med.umich.edu

This work was supported by a grant from the National Comprehensive Cancer Network (to R.J.).

Conflict of interest: none.

Supplementary material for this article can be found at www.redjournal.org.

Acknowledgments—The authors thank research associates Ashley Gay and Dana Sambuco for their assistance, and the many surgeons who participated in this survey.

patient volume, and participation in tumor boards.

Conclusions: Many surgeons have inadequate knowledge regarding the role of radiation in breast cancer management, especially after mastectomy. Targeted educational interventions may improve the quality of care. © 2013 Elsevier Inc.

Introduction

Radiation therapy (RT) is a critical component of the multimodal management of breast cancer. Randomized trials have demonstrated that radiation reduces the relative risk of locoregional recurrence by approximately two-thirds after breast-conserving surgery (1-5) and mastectomy (6-8). Furthermore, meta-analysis has shown that interventions that substantially reduce locoregional recurrence improve survival (9). However, not all breast cancer patients have similar absolute risks of locoregional recurrence or absolute benefit from RT, and therefore some controversy remains regarding the appropriate selection of patients for RT (10).

Studies relying on registry and claims data have suggested that RT for breast cancer may be underutilized in certain circumstances (11-13). In a population-based survey of patients, we found current patterns of radiation receipt to be paradoxical. Patients at equivalent risk of locoregional recurrence and with equally strong medical indications for radiation were far more likely to receive radiation after breast-conserving surgery than after mastectomy. Of the patients who did not receive radiation, most reported that their physicians said they did not need it (14). This motivates interest in the knowledge and practices of referring providers as a potentially modifiable source of treatment underutilization.

Surgeons deliver the primary locoregional therapy for breast cancer and are often the first providers to initiate discussions with patients about locoregional recurrence risks and the role of radiation. Because patients do not typically encounter radiation oncologists without referral, surgeons also play a critical gate-keeping role. Currently, little is known about the knowledge of surgeons regarding RT indications or patterns of referral. To address this issue, we conducted a nationwide survey of surgeons who treat breast cancer to answer 3 questions. First, how familiar are referring surgeons with the risks of locoregional recurrence in breast cancer and the risks and benefits of adjuvant RT? Second, what are the patterns of referral to radiation oncology in specific case scenarios with differing risks of locoregional recurrence? Third, what are the correlates of knowledge and referral?

Methods and Materials

This study was approved by the University of Michigan institutional review board.

Sampling and data collection

We obtained a randomly selected sample of physicians specializing in surgery or surgical oncology from the American Medical Association (AMA) Physician Masterfile, a relatively comprehensive list of US physicians (not limited to AMA members), assembled on the basis of medical school and residency enrollment and licensing records (15). No racial, ethnic, or gender groups were excluded. Before survey mailing, we telephoned to

verify addresses and to eliminate subjects whose practices clearly excluded breast cancer.

Between January and June 2012, we mailed 750 surgeons a questionnaire and a \$50 cash incentive. We used a modified Dillman approach, including follow-up with nonresponders, to maximize response rate (16). We asked respondents to indicate whether they had not seen at least 1 new breast cancer patient in the preceding year and to return the survey without completing it further in that case.

Data were anonymously entered into a RedCap database and exported to the SAS system, version 9.2 (SAS Institute, Cary, NC) for analysis.

Measures

The questionnaire (Supplementary Appendix 1, available online) was developed after literature review and guided by behavioral theories. We used an iterative design process and standard techniques of content validation, including systematic review of questions by content experts and experts in survey design, as well as cognitive pretesting with surgeons outside our target sample (17).

We included several clinical vignettes, given evidence of the utility of this approach in evaluating physicians' practices in general (18, 19) and their attitudes regarding breast cancer management more specifically (20). Three scenarios of 45-year-old women with estrogen receptor/progesterone receptor-positive, HER2-negative breast cancer were used to measure the physician knowledge and practices for this analysis. In the first scenario, the patient chose to undergo lumpectomy for a pT1c, N0, grade 2 infiltrating ductal carcinoma, with negative surgical margins. This scenario was included because the postlumpectomy setting is the most common situation in which RT is clearly guideline-indicated for treatment of breast cancer (21). In the second scenario, the patient elected mastectomy and level 1/2 axillary dissection for a pT1c, N1, grade 3 infiltrating ductal carcinoma, which yielded negative margins and 2 of 20 nodes positive. This scenario was included because the role of adjuvant RT in such cases is more controversial, but guidelines advise that radiation be strongly considered, and appropriate counseling or referral is important to ensure appropriate care (21). The third scenario involved a patient identical to the one in scenario 2 but with 4 of 20 axillary nodes involved. This case was included because adjuvant RT is clearly guideline-indicated, but previous work suggests that treatment is particularly underutilized in this context (14, 21).

We measured respondents' knowledge relevant to the use of adjuvant RT in 2 ways. First, after the first 2 vignettes, we asked respondents to estimate the risk of locoregional recurrence without RT, the risks of radiation-induced malignancy and myocardial infarction, and what they believed the National Comprehensive Cancer Network (NCCN) guidelines would recommend in the specific scenario. Second, we asked respondents to recall, without referring to the source, the findings of the Early Breast Cancer Trialists' Collaborative Group (EBCTCG) regarding the 10-year risk of isolated locoregional recurrence in node-positive patients undergoing mastectomy without RT, the 10-year risk of isolated

Download English Version:

<https://daneshyari.com/en/article/8221131>

Download Persian Version:

<https://daneshyari.com/article/8221131>

[Daneshyari.com](https://daneshyari.com)