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The Structural Landscape of the Health Care System for Breast Cancer Care: Results from The Los Angeles Women's Health Study

Diana M. Tisnado, PhD^{*}, Jennifer L. Malin, MD, PhD[†], May L. Tao, MD[‡], Patricia Ganz, MD^{§,¶}, Danielle Rose-Ash, PhD[¶], Ashlee F. Hu, MD[†], John Adams, PhD^{¶, **}, and Katherine L. Kahn, MD^{*, ¶, **}

^{*} Division of General Internal Medicine and Health Services Research, School of Medicine, University of California, Los Angeles, California

[†] Amgen, Thousand Oaks, California

[‡] Valley Radiotherapy Associates Medical Group, El Segundo, California

[§] School of Public Health and School of Medicine, University of California, Los Angeles, California

[¶] Jonsson Comprehensive Cancer Center at UCLA, Los Angeles, California

^{**} RAND, Santa Monica, California

Abstract

The structure of health care has been rapidly evolving in response to financial pressures and demands to improve quality. Little work has documented the structure of care and its impact in the context of breast cancer care. We conducted a survey to characterize Los Angeles physicians caring for breast cancer patients and the structural landscape of the healthcare system in which they practice. Cross-sectional survey of physicians who treated a population-based cohort of breast cancer patients. We surveyed 477 physicians, targeting all Los Angeles County medical oncologists, radiation oncologists, and surgeons reported by patients participating in the Los Angeles Women's Health Study (77% response rate). Specialty-specific questionnaires were developed. Items were based on the structure and quality of care literature, cognitive interviews with cancer care specialists, and existing physician survey instruments. Breast cancer care providers in Los Angeles are diverse, with one-third non-white and 46% speaking a non-English language. Group practice is most common, (37% single specialty, 16% group-model HMO, 8% multi-specialty group). Minimal teaching involvement predominates. Mean new breast cancer patient volumes are relatively high (8 per month overall; six for surgeons), representing 46% of new cancer patients. Physicians reported high career satisfaction levels (83–92%). Physicians were least satisfied with the amount of time spent with patients (82%). Data from this study represent important building blocks for further analyses to determine the impact of structural characteristics on the quality of care that breast cancer patient's experience.

Keywords

breast cancer; quality of care; structure of care

Quality of health care is generally conceptualized to include three dimensions: the structure of care (e.g., setting, organizational context), the process of care (e.g., diagnosis, treatment), and outcomes of care (e.g., survival, function, quality of life). Structure of care includes the human, physical, and financial resources necessary to provide care that is believed to influence outcomes (1). Increasingly, it appears that many mutable factors influencing the process of care and outcomes lie in the domain of structure (2–6). In the last decade, the structure of health care in the US has been rapidly evolving in response to increasing financial pressures and demands to improve quality. Some of these changes have been shown to negatively impact primary care delivery (7–10), yet little is known about how these new organizational and financial arrangements affect the delivery of care for serious diseases such as cancer.

The American College of Radiology's Patterns of Care studies conceived in the 1970s described the structure of radiation therapy in the US and attempted to identify predictors of the quality of radiation care being delivered (11). Since then, several studies have examined how treatment patterns for cancer vary with the structure of care at a macro-organizational level, including such characteristics as hospital or setting type (12–14), and managed care (15–20). Other studies have examined structural variables including surgeon specialty (21, 22), surgeon case volume (13,21–24), and hospital case volume (22,25,26).

Few studies have systematically evaluated the impact of the “micro-organizational” characteristics of care in hospitals and physician practices on processes and outcomes of cancer care. In a study of clinician beliefs about important structural characteristics, clinicians reported inadequate staffing and other organizational resources to be a barrier to patient enrollment in clinical trials (27). In another, structures believed to facilitate coordination of care included tracking of referrals, regular multidisciplinary meetings, feedback of performance data, use of guidelines, computerized systems, and a single physical location (28). Findings regarding audit and feedback of performance data have been mixed (29,30). The effects of most of these structures on the quality of breast cancer care have not been evaluated, although treatment patterns for breast cancer may vary significantly with the structure of the health care delivery system (15).

We conducted a physician survey to obtain information about the structure of breast cancer care and, ultimately, to evaluate the impact of structure on the quality of breast cancer care. This paper characterizes Los Angeles County physicians providing care to breast cancer patients and describes the system in which these physicians practice.

MATERIALS AND METHODS

We conducted a cross-sectional study of the structure and organization of care associated with physicians who treated a population-based sample of women with incident breast cancer participating in the Los Angeles Women's Health Study (LAW). The LAW study includes a population-based sample of women ages ≥ 50 identified with a new diagnosis of breast cancer in Los Angeles County in 2000 by the Los Angeles County Cancer Surveillance Program Rapid Case Ascertainment system. We surveyed 1224 consenting women. A detailed computer-assisted telephone interview (CATI) queried women about health care providers who fulfilled roles including delivering, recommending, or discussing breast cancer treatments. We targeted all Los Angeles County medical oncologists, radiation oncologists, and surgeons reported by patients in CATI for whom contact information could be verified for our physician survey.

To develop our conceptual framework for survey development and analysis, we conducted (i) a review of clinical and health services literature regarding structural characteristics and quality of care; (ii) cognitive interviews with 14 key informants including surgeons, medical oncologists, and radiation oncologists selected from multiple locations in Los Angeles. In

addition, we conducted interviews with community advisors from advocacy organizations and other groups serving women with breast cancer. Interviews lasted 1 hour and covered topics including practice characteristics (16,26,31,32), barriers to referrals (33), coordination of care (28), patient and provider support (30,34) and financial issues (35–37). Survey items drew upon the literature, with several items adapted from existing instruments such as the Community Tracking Study Physician Survey (<http://www.hschange.com>) and the Young Physicians Survey (38), as well as cognitive interviews and reviews offered by community advisors.

We organized survey topics into the following five conceptual domains: Facilities and Resources, Referrals and Coordination, Physician Support, Patient Support, and Financial Incentives. We developed three specialty-specific versions of the survey (medical oncology, radiation oncology, and surgeon) based on this conceptual framework. Survey items were revised based on a second level of review of the conceptual framework, accompanying hypotheses, and each conceptual domain to ensure that all domains were adequately represented.

Physicians were queried about their personal characteristics (e.g., age, gender, race/ethnicity, language, personal practice ownership interest, how time is spent) and characteristics of their main practice, defined as the one in which they see most of their patients (e.g., practice type, ownership, size). Physicians were also queried about levels of satisfaction with six dimensions of their career: current specialty, current work setting, amount of time spent with patients, extent to which practice has met professional expectations, decision to become a physician, and overall professional career. Response options were on a five-point Likert scale, ranging from very dissatisfied to very satisfied.

A run-in phase of the survey was fielded to 10 physicians of each specialty type, with a 70% response rate. No questions or problems were noted. Final production occurred with no substantive changes to the survey instruments.

We mailed the finalized self-administered survey instrument to 477 physicians between April and October of 2004, including 175 medical oncologists, 75 radiation oncologists, and 227 surgeons. Strategies to maximize response rate included a \$50 incentive check enclosed in the first mailing, an announcement in a local radiation oncologist professional organization newsletter, and follow-up telephone calls to determine receipt and encourage participation. We conducted a second mailing and round of telephone calls to all nonresponders. Additional interventions included notes and telephone calls from clinicians on the research team, and \$5 gift cards to office staff who facilitated physician participation in a practice.

Response weights were calculated as the inverse of the probability of response based on a logistic regression model including physician gender, specialty type, study patient volume, and sharing an office with another surveyed physician.

Descriptive analyses were performed including comparisons of means using “lincom,” for continuous variables and chi-squares for categorical variables, with Stata survey commands to perform analyses weighted for nonresponse.

The study was approved by the UCLA Institutional Review Board.

RESULTS

We determined 19 of the original 477 physicians to be ineligible: 15 who were no longer practicing in Los Angeles County, and four who reported no longer treating breast cancer patients as of the fielding period. We received 348 surveys from physicians associated with

298 unique office addresses (185 physicians practiced out of offices shared by at least one other study participant). Our final response rate was 77% (67% for medical oncologists, 89% for radiation oncologists, and 80% for surgeons). Our final sample includes 111 medical oncologists, 66 radiation oncologists and 171 surgeons.

Significant predictors of response were specialty type (medical oncologist O.R. = 0.24, $p = 0.0004$; surgeon O.R. = 0.44, $p = 0.04$ as compared with radiation oncologists), and sharing an office with another physician targeted for survey fielding (O.R. = 1.7, $p = 0.02$).

Physician and Practice Characteristics

Physician Demographics—Overall, physician mean age was 52.5 (SE = 0.5) and varied slightly among the specialty types, with a mean age of 53.2 for medical oncologists and 53.0 for surgeons as compared with 49.5 for radiation oncologists ($p < 0.05$) (Table 1). Respondents were predominantly male (81.7%) and of non-Hispanic white race/ethnicity (66.4%), followed by Asian (19.8%), Other (5.6%), Hispanic (any race) (5.2%), and African American (3.0%).

Nearly 46% of respondents reported fluency in at least one language other than English. The most frequently reported non-English language was Spanish (42%), followed by Chinese (10%). Over 30 different non-English languages were reported.

Breast Cancer Patient Volume—With all specialties combined, respondents reported treating a mean of 20.0 new cancer patients per month, and 7.8 new breast cancer patients per month (i.e., 45% of respondent's new cancer cases were breast cancer). Radiation oncologists reported the highest cancer and breast cancer volumes. Surgeons reported the lowest cancer patient volumes but they reported the highest proportions of breast cancer patients as a proportion of new cancer cases (54.8%).

Physician Ownership Interest in Practice—Overall, 39.6% reported full practice ownership and 36.4% reported partial ownership. Surgeons were most likely to have ownership interest in their practice, with 52.1% full owners and 30.8% part owners. Respondent ownership varied significantly by specialty type ($p < 0.001$).

Physician's Number of Offices—On average, respondents reported practicing in more than one office (mean = 1.7 offices; SE = 0.1).

Practice Setting Type—Overall, the majority of physicians reported practicing in groups (Table 2). There were variations by specialty type, with 60.9% of radiation oncologists and 43.8% of medical oncologists in single-specialty groups as compared with 23.9% of surgeons, and 43.1% of surgeons reporting solo practice. Nearly 16% of physicians reported practicing in a group-model HMO.

Practice Ownership Type—The vast majority reported working in office-based (70.6%) and physician-owned practices (70.9%).

Practice Size—Overall, respondents most frequently reported working in practice settings with 2–5 full or part-time physicians (35%), but 15.5% reported working in practices with over 100 physicians.

How Physicians Spend Their Time

On average, respondents spent 51.3 hours in direct patient care activities during their last complete week of work (Table 3). Surgeons reported the most patient care hours with a mean of 54.8, and radiation oncologists reported the fewest with a mean of 41.9 hours.

Overall, the majority (56.9%) reported minimal teaching involvement at 0–1 day per month, though 22.9% reported 2–5 teaching days per month.

Visit Duration—Time scheduled for different types of visits varied with specialty type. For visits involving an initial consultation and discussion of treatment options with a new patient, surgeons reported the briefest durations (mean = 39.6 minutes), while radiation oncologists reported the longest (mean = 59.7 minutes) ($p < 0.001$). Medical oncologists reported the longest routine, on-treatment follow-up visits (mean = 18.3 minutes) compared to radiation oncologists or surgeons (11.7 and 14.5 minutes, respectively; $p < 0.0001$), while radiation oncologists reported the longest follow-up visits after treatment completion, with a mean of 20.3 minutes compared to medical oncologists or surgeons (17.3 and 14.7 minutes, respectively; $p < 0.0001$).

Frequency of Follow-up Visits—Physicians were queried about their typical frequency of follow-up visits and whether such visits were scheduled on an as-needed basis with no set routine. Responses varied according to specialty type. No radiation oncologists reported scheduling these visits on an as-needed basis, while 13.2% of medical oncologists reported that they have no set routine. Surgeons were asked about postoperative follow-up visits during the 12 months following definitive breast surgery (as compared with on-treatment follow-up). Among surgeons, 19.0% reported scheduling these visits as needed with no set routine.

Career Satisfaction

Levels of reported satisfaction were high and were dichotomized as very or somewhat satisfied as compared with all other responses (Table 4). For all specialties combined, 91.8% reported being very or somewhat satisfied with their current specialty, 90% reported being very or somewhat satisfied with their decision to become a physician, and 89.0% reported being very or somewhat satisfied with their current work setting, and 88.9% somewhat or very satisfied with their overall professional career. Physicians were least satisfied with the amount of time spent with patients, with 81.5% reporting being very or somewhat satisfied. These rates did not vary significantly by specialty type.

DISCUSSION

These results provide a much-needed framework for understanding the relationships between structural factors and the outcomes of breast cancer care.

Our study found a diverse population of surgeons and oncologists practicing in Los Angeles relative to reports from other regions, with one-third of physicians reporting a race/ethnicity other than white. We found more female (13%) and non-white surgeons (32%) than a recent study in Pennsylvania (36) that reported 6% female and 16% nonwhite (1.9% black, 14% other) surgeons, and another multi-regional study of surgeons (1% black, 9% other) (13). Our surgeon age and gender findings were similar to those of a previous study of surgeons practicing in Detroit and Los Angeles (23). Nearly half of the physicians providing breast cancer care in Los Angeles reported speaking a language in addition to English, most frequently Spanish.

Provider volume has important implications for quality of care. Surgeons with low cancer procedure volumes have been found to have worse patient outcomes (39,40). In the specific context of breast cancer, surgeon volumes of fewer than or equal to five and fewer than 30 breast cancer operations annually have been associated with higher 5-year adjusted mortality (22,24). No work of which we are aware has assessed the impact of oncologist volume on outcomes.

We found a mean new breast cancer patient volume of 7.8 per month for all specialties combined, ranging from nearly six per month for surgeons to 8.9 for medical oncologists and 12.0 for radiation oncologists. In this study, physicians were asked about their number of new patient visits rather than numbers of procedures performed. It is likely that a certain proportion of such visits were for second opinions and would not have led to surgery or treatment. Indeed, previous work has found that over 33% of breast cancer patients consulted with more than one surgeon prior to surgery (41). Although differing measurement methods make comparisons difficult, our results regarding surgeon volumes appear to contrast with lower surgeon breast cancer procedure volumes of noted in the existing literature. Bickell and colleagues found a median surgeon volume of fewer than five breast cancer surgeries *annually* in the New York metropolitan area (26). Other work has found that over 80% of surgeons performed fewer than or equal to five breast surgeries annually (22). In a multi-regional study (21), over three-fourths of surgeons who perform breast surgeries had fewer than or equal to one breast cancer case per month. In contrast, less than 2% of surgeons in our study reported fewer than one new breast cancer patient per month and 16% reported fewer than or equal to one per month—comparable to the findings of a study in Los Angeles and Detroit in which 11.5% of surgeons reported performing fewer than or equal to 10 breast surgeries annually (42).

A number of factors in addition to the count of visits versus procedures may have contributed to the higher volumes reported by surgeons in this study compared with others. Volumes in the literature have been measured among surgeons associated with differing patient samples, with variations in age range (21), inclusion of patients with metastatic disease and/or DCIS (22,26), and geographic region (24,26). Our physicians were identified by a population-based cohort of women ages 50 and over, including those with DCIS and metastatic disease. Physicians were asked to report average monthly volume as opposed to annual volume in order to minimize recall bias. It is possible that survey nonresponse may have biased our volume results. Physicians with higher volumes of breast cancer study patients were more likely to respond to our survey. However, our high response rate may make our findings more robust compared with other cross-sectional physician surveys, and the impact of any nonresponse bias was at least partially addressed by using volume as one factor in weighting for nonresponse.

We found a high degree of group affiliation among cancer care providers in Los Angeles. Overall, the highest proportion of respondents reported practicing in single specialty groups. With multi-specialty groups and group-model HMOs combined, 61% of respondents reported being in group practice. Surgeons stood out as the specialists most likely to be in solo practice (43%), although 50% of surgeons reported being in some form of group practice. This finding is consistent with a study of surgeons in Pennsylvania, where nearly half were in private group practice, and 40% practiced solo (33).

We found a substantial proportion of breast cancer- treating physicians were practicing in group-model HMOs: 17% of surgeons, 15% of medical oncologist, and 12% of radiation oncologists. In contrast, only 2% of ASCO members reported an HMO practice setting in a national survey (43). However, despite the growth of large consolidated medical organizations in California, the majority of breast cancer treating physicians in this study reported at least some personal ownership interest in their practice.

This is the first study of which we are aware to examine career satisfaction specifically among physicians caring for breast cancer patients, and is one of the few to make comparisons among medical oncologists, radiation oncologists, and surgeons.

Levels of satisfaction with various aspects of respondents' careers were generally very high at the time of this survey. In comparison, previous studies have found rates of career satisfaction of 79–80% among medical and surgical oncologists (43,44), and 80% among primary care

physicians (45). These results may be viewed as reassuring given the high levels of stress associated with cancer patient care, as well as administrative, reimbursement, and management duties and growing regulatory and administrative burdens imposed by private and public payers (46). It is possible that physicians specializing in breast cancer face somewhat lower levels of stress associated with end-of-life issues, given the better prognosis for breast cancer overall as compared with many other cancers. It is also possible that physicians in large West Coast cities such as Los Angeles, with a high degree of managed care penetration in earlier years, may have adapted to many of these challenges earlier than physicians in other regions. However, changes in Medicare reimbursement for chemotherapy infusions implemented subsequent to the study period may have challenged satisfaction levels among medical oncologists.

CONCLUSION

To date, little has been documented in the literature about the distributions of cancer care provider characteristics. These data show that the settings in which Los Angeles medical oncologists practice, the services available in those settings, and the ways in which these cancer care providers are reimbursed are quite varied. Although many medical oncologists are in solo or single-specialty practice, many now work in integrated settings with other provider types. High proportions of patients with managed care coverage highlight the importance of learning what is inside the largely black box of managed care, and how the associated structural features and reimbursement systems impact processes of care and patient outcomes. These data represent essential building blocks for further analyses to determine the impact of the structural characteristics of care on the processes and outcomes of care that women with breast cancer ultimately experience. This work will have important implications for learning which structural arrangements support the best quality of cancer care and are therefore most worthy of the time and financial investments necessary to sustain and replicate them. Understanding the structure of care and the ways it influences the delivery of care and patient outcomes will allow us to isolate areas of excellent care that should be modeled, and to identify other areas where specific components of care can be improved or that need further well-focused research.

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Table 1

Demographics: Physician Characteristics, Mean or % (SE)

	Medical oncologist (<i>n</i> = 111)	Radiation oncologist (<i>n</i> = 66)	Surgeon (<i>n</i> = 171)	All (<i>n</i> = 348)
Mean Age *	53.2 (0.8)	49.5 (1.2)	53.0 (0.7)	52.5 (0.5)
Gender				
% Male	76.3 (3.9)	79.4 (4.9)	86.8 (2.5)	81.7 (2.1)
% Female	23.7 (3.9)	20.6 (4.9)	13.2 (2.5)	18.3 (2.1)
Race/ethnicity				
% NH White	64.0 (4.8)	65.1 (5.9)	68.7 (3.6)	66.4 (2.6)
% Asian	23.0 (4.0)	24.2 (5.3)	15.8 (2.8)	19.8 (2.2)
% Other	7.1 (3.1)	4.5 (2.6)	4.7 (1.6)	5.6 (1.5)
% Hispanic (any race)	2.8 (1.6)	3.2 (2.2)	7.8 (2.1)	5.2 (1.2)
% Black	3.1 (1.7)	3.1 (2.1)	2.9 (1.3)	3.0 (1.2)
% with additional languages	46.7 (4.8)	34.8 (5.9)	49.0 (3.8)	45.8 (2.7)
Mean cancer volume (new patients/month)***	28.3 (2.7)	30.7 (2.0)	9.8 (0.6)	20.0 (1.2)
Mean breast cancer volume (new patients/month)***	8.9 (0.8)	12.0 (1.2)	5.6 (0.5)	7.8 (0.5)
Mean % of cancer patients with breast cancer*	37.0 (1.9)	37.7 (2.5)	54.8 (1.8)	45.5 (1.3)
Mean number of offices for seeing patients***	1.7 (0.1)	2.5 (0.3)	1.4 (0.1)	1.7 (0.1)
Respondent ownership interest in practice [†]				
Full owner	32.4 (4.6)	20.0 (5.0)	52.1 (3.8)	39.6 (2.7)
Part owner	42.9 (4.8)	37.9 (6.0)	30.8 (3.5)	36.4 (2.6)
No ownership interest	24.7 (4.1)	42.1 (6.1)	17.2 (2.9)	24.0 (2.3)

* Lincom comparison of means: $p < 0.05$;***
 $p < 0.001$.[†] Chi-squared test: $p < 0.001$.

Table 2

Demographics: Practice Characteristics, % (SE)

	Medical oncologist (<i>n</i> = 111)	Radiation oncologist (<i>n</i> = 66)	Surgeon (<i>n</i> = 171)	All (<i>n</i> = 348)
Practice type ***				
Single-specialty group	43.8 (4.8)	60.9 (6.0)	23.9 (3.2)	37.2 (2.6)
Solo	25.5 (4.3)	7.7 (3.3)	43.1 (3.8)	30.9 (2.5)
Group model HMO	15.0 (3.7)	11.9 (4.0)	17.2 (2.8)	15.5 (2.0)
Multi-specialty group	4.5 (2.0)	10.5 (3.8)	9.5 (2.3)	7.8 (1.4)
University-based	9.6 (2.8)	9.1 (3.5)	5.2 (1.7)	7.5 (1.4)
Other	1.6 (1.2)	0 (0.0)	1.1 (0.8)	1.1 (0.6)
Practice best described as ***				
Office-based	91.5 (2.6)	61.9 (6.0)	57.2 (3.8)	70.6 (2.4)
Hospital-based	6.7 (2.3)	33.7 (5.8)	31.9 (3.6)	22.9 (2.2)
Both	1.8 (1.3)	3.0 (2.1)	7.9 (2.0)	4.9 (1.1)
Other	0 (0.0)	1.5 (1.5)	3.0 (1.3)	1.7 (0.7)
Practice ownership ***				
One or more physicians, or a physician-owned corporation	74.5 (4.4)	56.2 (6.1)	73.1 (3.4)	70.9 (2.5)
HMO, health plan, or insurance company	14.3 (3.7)	13.4 (4.2)	18.0 (2.9)	15.9 (2.0)
Hospital	0.9 (0.9)	16.7 (4.6)	4.0 (1.5)	4.9 (1.1)
Medical school/university	6.2 (2.3)	6.0 (2.9)	1.8 (1.0)	4.1 (1.1)
County government	3.4 (1.7)	1.6 (1.6)	1.2 (0.8)	2.1 (0.8)
Some other type of owner	0.9 (0.9)	4.7 (2.7)	1.9 (1.1)	2.0 (0.7)
Don't know	0 (0.0)	1.5 (1.4)	0 (0.0)	0.2 (0.2)
Practice size				
1	22.4 (4.1)	7.8 (3.3)	37.6 (3.7)	27.2 (2.5)
2–5	43.3 (4.8)	47.2 (6.2)	24.4 (3.3)	35.0 (2.6)
6–15	18.7 (3.6)	19.8 (4.9)	10.1 (2.3)	14.8 (1.9)
16–49	0.9 (0.9)	20.8 (5.0)	4.1 (1.5)	5.6 (1.2)
50–99	1.6 (1.1)	0 (0.0)	2.9 (1.3)	2.0 (0.7)
100+	13.2 (3.6)	4.5 (2.5)	21.0 (3.1)	15.5 (2.0)

Chi-squared test: $p < 0.001$.

Table 3

How Physicians Spend Their Time, Mean or % (SE)

	Medical oncologist (n = 111)	Radiation oncologist (n = 66)	Surgeon (n = 171)	All (n = 348)
Mean hours worked in direct patient care ***	51.0 (1.6)	41.9 (1.2)	54.8 (1.6)	51.3 (1.0)
Teaching involvement *				
0–1 day/month	56.7 (4.8)	68.3 (5.7)	53.9 (3.8)	56.9 (2.7)
2–5 days/month	28.0 (4.3)	18.3 (4.8)	20.4 (3.1)	22.9 (2.3)
6–15 days/month	8.7 (2.6)	5.9 (2.9)	7.4 (2.0)	7.6 (1.4)
>15 days/month	7.6 (2.5)	7.5 (3.3)	18.4 (3.0)	12.7 (1.8)
Average number of minutes scheduled for				
Discussion of treatment options ***	56.0 (1.9)	59.7 (1.8)	39.6 (1.2)	48.9 (1.1)
Routine follow-up for patient on chemotherapy ***	18.3 (0.6)	11.7 (0.6)	14.5 (0.5)	15.4 (0.3)
Routine check-up with a patient after completion of chemotherapy and radiation therapy ***	17.3 (0.6)	20.3 (0.8)	14.7 (0.4)	16.5 (0.3)
Medical oncologists only: On average, how frequently per cycle do you schedule routine follow-up visits with breast cancer patients receiving chemotherapy?				
1	59.1 (4.8)	n/a	n/a	n/a
2	22.3 (4.0)	n/a	n/a	n/a
>2	5.4 (2.2)	n/a	n/a	n/a
As needed: No set routine	13.2 (3.3)	n/a	n/a	n/a
Radiation oncologists only: On average, how frequently do you schedule routine, on-treatment check-ups with breast cancer patients during the course of radiation treatment?				
Less than once per week	n/a	13.5 (4.2)	n/a	n/a
Once per week	n/a	85.0 (4.4)	n/a	n/a
More than once per week	n/a	1.6 (1.6)	n/a	n/a
As needed: no set routine	n/a	0	n/a	n/a
Surgeons only: During the 12 months following definitive breast surgery, on average, how frequently do you schedule routine follow-up visits with breast cancer patients for post-operative care?				
0	n/a	n/a	0.6 (0.6)	n/a
1	n/a	n/a	10.1 (2.3)	n/a
2	n/a	n/a	16.8 (2.9)	n/a
>2	n/a	n/a	53.5 (3.8)	n/a
As needed: no set routine	n/a	n/a	19.0 (0.3)	n/a

* Chi-squared test: $p < 0.05$.*** Lincom comparison of means, $p < 0.001$.

Table 4

Physician Satisfaction: % Reporting Very or Somewhat Satisfied (SE)

	Medical oncologist (n = 111)	Radiation oncologist (n = 66)	Surgeon (n = 171)	All (n = 348)
Satisfaction with the following areas of medical practice				
Your current practice specialty	91.8 (2.6)	93.8 (3.0)	91.2 (2.2)	91.8 (1.5)
Your decision to become a physician	91.5 (2.6)	92.3 (3.3)	88.2 (2.5)	90.1 (1.6)
Your current work setting	90.3 (2.8)	86.1 (4.3)	88.9 (2.4)	89.0 (1.7)
Your overall professional career	89.6 (2.9)	92.4 (3.3)	87.1 (2.6)	88.9 (1.7)
Extent to which this practice has met your professional expectations	88.5 (3.0)	89.1 (3.9)	85.4 (2.7)	87.1 (1.8)
The amount of time you can spend with a patient	79.6 (3.8)	89.4 (3.8)	80.3 (3.0)	81.5 (2.1)