

Title:

The 2018 Compensation Survey of the American Society of Breast Surgeons

Running Title:

ASBrS 2018 Compensation Survey

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Synopsis

The society conducted its second compensation survey and obtained information on practice type and setting. Differences in compensation among breast surgeons were identified by practice type, academic position, ownership, years of practice, percent breast practice, workload, and gender.

Abstract

Background:

There is limited compensation data for breast surgery benchmarking. In 2018, the American Society of Breast Surgeons (ASBrS) conducted its second membership survey to obtain updated compensation data as well as information on practice type and setting.

Methods: In October 2018, a survey was emailed to 2,676 active members. Detailed information on compensation was collected, as well as data on gender, training, years in and type of practice, percent devoted to breast surgery, workload, and location. Descriptive statistics and multivariate analyses were performed to analyze the impact of various factors on compensation.

Results: The response rate was 38.2% (n= 1,022, of which 73% were female). Among the respondents, 61% practiced breast surgery exclusively and 54% were fellowship trained. The majority of fellowship trained surgeons within 5 years of completion of training (n=126) were female (91%). Overall, mean annual compensation was \$370,555. On univariate analysis, gender, years of practice, practice type, academic position, ownership, percent breast practice, and clinical productivity were associated with compensation, while fellowship training, region, and practice setting were not. On multivariate analysis, higher compensation was significantly associated with male gender, years in practice, number of cancers treated per year, and wRVUs. Compensation was lower among surgeons who practiced 100% breast compared with those who did a combination of breast and other surgery.

Conclusion: Differences in compensation among breast surgeons were identified by practice type, academic position, ownership, years of practice, percent breast practice, workload, and gender. Overall, mean annual compensation increased by \$40,000 since 2014.

Introduction

In 2014 the American Society of Breast Surgeons (ASBrS) conducted its first compensation survey, comprised of 843 surgeons in the US. This survey included surgeons who perform breast surgery exclusively and as part of a general surgery practice. (1) Data was collected on practice type, annual volumes, work relative value units (wRVUs), and benefits. Since that time, this information has helped breast surgeons and employers benchmark both volumes and salaries. Limitations of the 2014 survey included lack of adjustment for part-time employment, little information on the structure of compensation plans and productivity measures, no data on compensation outside of clinical work, and lack of information about spousal employment, among others. In addition, both compensation data and years of experience were obtained in ranges, which limited the ability to detect statistically significant differences between groups.

The ASBrS conducted a second compensation survey in 2018, with added questions about hours worked, income related to non-clinical work, income related to image-guided and office-based procedures, and household structure. Additionally, the current survey collected compensation as a discrete value.

Methods

In October 2018, the ASBrS sent an online survey to 2,676 active members. The survey included individual demographics (e.g., age, gender, race, ethnicity), household composition (e.g., marital status, presence of children, spousal employment), and medical training (e.g., fellowship trained, educational debt, years in practice). Other sections included questions about current practice (e.g., type, ownership, academic rank, years worked, location, setting, percent breast surgery), clinical activities (e.g., percent of time spent in patient care, number of breast cancers treated,

number of image guided percutaneous biopsies performed), non-clinical activities (e.g., percent of time spent on research, management, medical education), and number of days of continuing medication education (CME). Productivity including full-time versus part-time work and number of wRVUs generated was also queried.

The main focus of the survey was to capture accurate data on compensation values and structure. Respondents were asked to report the actual numerical value of their total compensation as a breast surgeon for 2017. They were also asked whether their salary was based on a national survey on physician compensation, whether they received a productivity bonus and if yes which activities were taken into consideration, whether their income was based on any measures of quality, and whether they worked outside of surgery to supplement their income.

Both descriptive and multivariate methods were used to examine the importance of various factors affecting the compensation of breast surgeons. Descriptive comparisons between males and females were performed using 2-sided t tests for or chi-squared comparisons where appropriate. A one-way analysis of variance (ANOVA) was used to test for differences in the unadjusted mean income by each categorical variable. Multivariate analysis was conducted using a linear regression with income as the dependent variable. The adjusted mean income at a given covariate value was derived by holding other covariates at their mean levels and using the estimated model to predict the corresponding mean income.

Results

Among those surveyed, 1,022 completed a portion of the survey yielding a 38.2% response rate. Respondents with non US-based practice (41 observations), reporting incomes < \$10,000 (11 observations), and with missing values for variables used in the multivariate analysis (188

observations) were excluded. These sample restrictions yielded 782 observations used for analysis, similar to the number of responses obtained from the 2014 survey.

Demographics

The mean age of respondents was 49.7 years, and the majority identified as white (79.8%). (Table 1.) Nearly three-quarters of respondents were female (73.3%). Most respondents were married/remarried (81.5%) and of these, most had spouses who were employed (66.9%). Female surgeons were less likely than males to be married (77.2% versus 92.6%, $p < 0.001$), but were more likely than men to have spouses who worked outside the household (75.7% versus 47.8%, $p < 0.001$). A majority (76.1%) of respondents reported they earned the majority of the household income, including 69.0% of women and 91.5% of men ($p < 0.001$). Over half of respondents (59.1%) had children living in the home with a higher share of females living with children (62.8%) than males (49.3%), ($p = 0.001$).

Medical Training

The mean time spent in practice was just over 17 years, with men reporting an average of 23.5 years compared to 15.0 years for women ($p < 0.001$). (Table 2.) Just over half of respondents completed a fellowship, however women were more likely to have done so (59.8%) compared to men (38.2%) ($p < .001$). Among those completing a fellowship, women were four times more likely to have completed a fellowship in breast surgery compared to men ($p < 0.001$). Women were also more likely than men to report educational debt at the end of medical school (74.3% vs. 58.1%, $p < .001$), and their educational debt was roughly double that of men (\$139,472 vs. \$79,056, $p < 0.001$).

Practice Description

The highest proportion of respondents worked in a hospital-based practice (42.7%), followed by 21.5% in academic medicine. (Table 3.) Among those in private practice, 16.3% had an ownership stake, with men (19.8%) being twice as likely as women (10.1%) to be owners ($p=0.007$). Among those with academic rank only 22.6% were full professors. Men were three times more likely to have achieved that rank (51.5%) compared to women (15.6%) ($p=0.001$). The majority of respondents (62.0%) practiced in urban areas with populations > 150,000 and most respondents practiced in the South (30.9%) compared to the West (18.3%), which is largely representative of ASBrS membership. (Appendix Table 1.) Although the majority of respondents (60.9%) practiced breast surgery exclusively, women were more likely to do so than men (71.2% versus 34.1%), ($p<0.001$).

Workload

The number of breast cancers treated per year varied significantly, ranging from 36.7% of surgeons having 100 or fewer cases to 17.9% of surgeons having more than 200 cases. (Table 4.) Men were more likely to be on the lower end of the distribution with a greater share (53.0%) having treated 100 breast cancer cases or fewer compared to women (30.4%), ($p<0.001$). Nearly half (45.5%) of the respondents did not perform image-guided biopsies. A small percentage (14.1%) performed over 100 biopsies, and this clinical activity was twice as likely among men (21.7%) compared to women (11.2%) ($p=0.003$).

About half (52.3%) of respondents reported that their incomes were based on wRVUs, yet only 32.1% (N=251) reported the actual numerical value for the previous year, and only 21.9% (N=171) reported their conversion factor. Although women worked slightly fewer hours per week (56.1) than men (58.9) ($p=0.014$), they took fewer weeks of vacation (4.6 versus 5.0)

($p=0.015$). Surgeons engaged in 6.6 days of CME per year with no significant differences between men and women.

Income:

The average reported total annual compensation was \$370,555. (Table 5.) Unadjusted income was significantly higher for men versus women, \$407,933 vs. \$356,200, ($p<0.001$). Women were more likely to report higher earnings compared to the previous year and men were more likely to report a decrease ($p=0.002$). Income for women was skewed toward lower salaries; among those earning over \$400,000, men outnumbered women at every \$100,000 increment examined.

(Figure 1).

Less than half of respondents (44.6%) reported that their income was based on a national database of physician compensation with Medical Group Management Association (MGMA most) frequently cited. (Table 5). Women were more likely than men (47.1% versus 38.2%) to have their salaries benchmarked to a national survey ($p=0.001$). One-third of respondents (35.5%) reported their incomes were based in some way on quality indicators of practice.

About half of respondents received a productivity bonus with a mean amount of \$49,156.

Although men and women were equally likely to receive a productivity bonus, men on average received \$23,976 more than women ($p=0.026$). Less than 1 in 5 breast surgeons (17.6%) received a productivity bonus for non-revenue generation work and nearly the same percentage supplemented their salary outside of breast surgery (19.7%).

New Contracts

Among respondents, 126 (9 male) were within 5 years of completion of training. Average compensation was \$326,180, and nearly all (91.3%) received a signing bonus (average \$23,236),

80.2% received loan forgiveness (average \$6,782.) and 92.9% received relocation expenses (average \$7,368.)

Multivariate Analysis

Although a number of factors had a significant impact on compensation on univariate analysis, in the multivariate model, only gender, years of practice, practice type, percent of practice of breast surgery, number of breast cancers treated, and number of wRVUs were significant. (Table 6.)

After controlling for demographic, practice, pay and professional characteristics, there remained a persistent gender gap of \$32,907 or 8.3%.

Discussion

With a response rate of nearly 40%, the average compensation for a surgeon practicing some or all breast surgery in the United States in 2017 was \$370,555. This represents a mean unadjusted increase of approximately \$40,000 (11%) since this survey was last performed in 2014. Surgeons with a practice limited only to breast surgery had an increase of \$31,000 (8.7%), while compensation for those who also practice general surgery increased by \$48,000 (12%). Academic surgeons reported the largest increase (20%) in compensation between the two time periods, a difference of \$80,000.

Several noteworthy differences in physician practice characteristics were observed between 2014 and 2018 including a decrease in the percentage of physicians in solo private practice from 12.3% to 6.8%, and a corresponding increase in the percentage in hospital-based practice from, 35.0% to 42.7%. This finding reflects national trends with regard to physician acquisition (4). At the same time, the percentage of respondents whose practice was dedicated

entirely to breast surgery rose from 54% to 61%. The reasons for these observations are likely multifactorial but may reflect both physician preferences and greater hospital demand for subspecialty care in breast surgery as comprehensive breast centers become more numerous across the country (5).

Over half of the respondents reported supplementing their salary outside of surgery with various activities such as expert witness testimony, various speaking engagements, and real estate investments. The rationale for these initiatives was not queried, but highlights the opportunities that physicians commonly take advantage of to increase their total income, develop outside business interests, and/or diversify their revenue generating activities.

Workload may vary by practice type and setting, administrative and teaching responsibilities, and research funding. Previous studies have demonstrated that higher salaries for male physicians can be partly explained by increased clinical productivity. Yet based on our data, we cannot conclude that workload differences completely explain the gender gap as only 52% of respondents in our study reported that their salary was based on wRVU targets and only 32% reported their wRVU totals. When considering other measures of workload, such as the number of breast cancer cases treated, men were more likely to be in the lowest (<100 cases/year) or the highest (>300 cases/year) categories.

Among those who reported wRVUs, women generated significantly less RVUs (approximately fewer) compared to men, although this may reflect several constraints that are more likely to affect women than men. First, women are still more likely than men to work part time, possibly to take time away from work to care for children or other family members and manage household responsibilities.(6) However, it is notable that the majority (76%) of

respondents were the primary breadwinners for their household, revealing that traditional gender norms may be shifting at least for this sub-population of surgeons. Moreover, controlling for hours of work does not eliminate the significant difference in wRVUs between men and women.

Second, recent studies have noted women tend to spend more time with patients than men, and do not see as many patients during a given workday on average. This may be due to women being more likely to either be assigned or take on additional, non-revenue generating roles such as mentoring, teaching, and committee work (6). This type of work is less likely to be compensated. In our study, only 17.6% of respondents reported receiving a bonus for non-revenue generating work.

Third, although there was no significant gender difference in the likelihood of receiving a productivity bonus, the amount was significantly lower for women (\$66K vs. \$42K $p=0.026$). This might reflect differences in compensation for different types of surgery. For example, in our current survey, women were less likely to practice general surgery, which typically generates higher billing than breast surgery alone. Accordingly, we observed those who practiced 100% breast surgery had slightly lower workloads compared to those who also practice general surgery.

Gender differences in compensation have been well documented in medicine. (2, 3) A recent survey by Doximity of all medical specialties reported a 27.7% wage gap (\$105,000) between men and women for 2017. (7) Much of this overall gap between male and female physicians is due to gender differences in specialty which is reduced in our survey given our focus on a narrow sub-specialty within surgery. In the current survey we report a gender wage gap among breast surgeons that is approximately half that reported among all physicians. It has also been observed that this gap tends to increase at higher salary brackets, and our survey captured fewer

respondents at this level. In addition, one aspect that our survey is unable to assess is whether the higher starting salaries of new graduates persist as they mature in their practice. Yet controlling for a rich set of practice, productivity, and pay characteristics, we find that an 8.3% gender gap persists after multivariate analysis.

In the 2014 survey, it was speculated that percutaneous needle biopsies were a source of greater income. This did not have any statistical significance in the current study. It was noted that among the survey participants 45% did not perform any percutaneous biopsies and of those doing these procedures 67% performed <25 percutaneous biopsies during the previous year.

The percentage of women represented in the survey in 2018 was 73.3%, up from 64.3% previously. There are several reasons why this may be. Approximately 95% of breast surgery fellows in the United States are women, and our survey was well represented by those in the first few years out of training. Recent data highlighting the gender wage gap has also brought this issue to the attention of many young female physicians, who may be more eager to participate in such surveys compared to older men. (3)

Our study is limited by the fact that compensation data is self-reported. Other limitations include the fact that male members of the society were not as likely to participate compared with female members; the percentage of women who responded to the survey (73%) was higher than the overall percentage of women who are active members of the Society (58.5%). Our mean compensation value of \$370,555 is therefore likely less than the actual value of mean compensation, given the gender gap that we observed. There are likely additional variables which we were not able to control for in the multivariable model. Finally, there were several independent factors associated with income differences, as seen reported in Table 6. It is

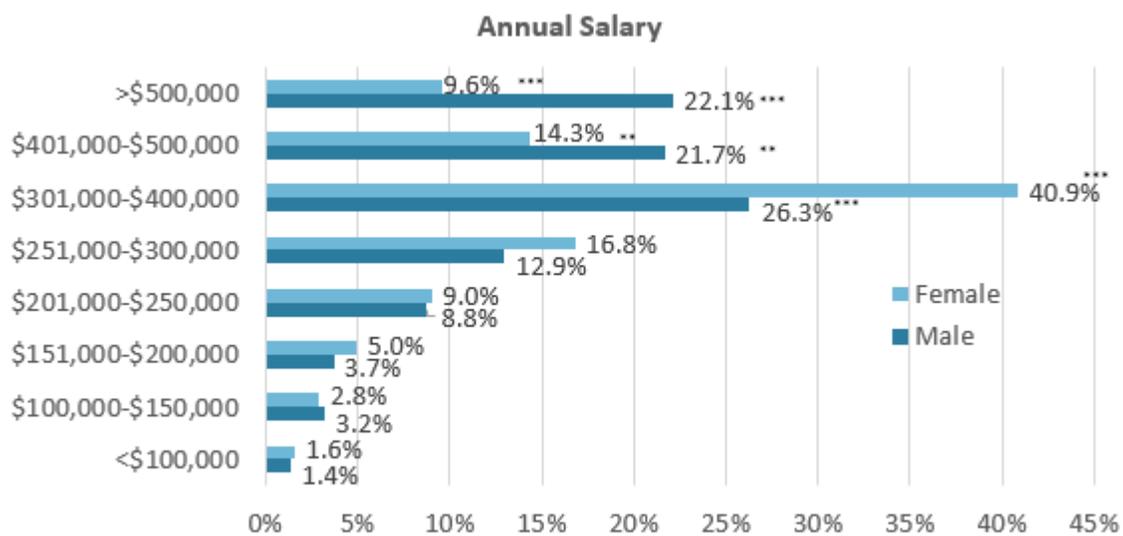
important to recognize that although gender is clearly an independent factor in compensation, there were many other independent associations related to these income differences.

Data on compensation for breast surgeons is limited, and commonly referenced sources such as the AAMC and MGMA lack significant granularity with regard to variation in practice type and setting. The ASBRS recognizes this shortcoming and sought to address this knowledge gap with expanded questions in the current survey. Additional work is needed to refine this survey further and establish benchmarks that are appropriate for those practicing breast surgery, and where possible continue to eliminate unexplained disparities.

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Figure 1. Distribution of Annual Salary for Male vs. Female Breast Surgeons



Note: *** indicates difference between female and male is statistically significant at $p < .001$.

** indicates difference between female and male is statistically significant at $p < .05$.

Table 1. Demographic Characteristics of Survey Respondents

Characteristic	Full Sample		Male		Female		Difference: Female-Male	
	(N=782)		(N=217)		(N=565)		Difference	p-value
Age, mean (SD), years	49.7	(9.7)	55.4	(9.3)	47.5	(9.0)	-7.9	<0.001
Race, # (%)								
African American or Black	26	(3.3%)	1	(0.5%)	25	(4.4%)	4.0	<0.001
Asian or Pacific Islander	86	(11.0%)	9	(4.1%)	77	(13.6%)	9.5	
Native American/Alaskan	1	(0.1%)	0	(0.0%)	1	(0.2%)	0.2	
White	624	(79.8%)	198	(91.2%)	426	(75.4%)	-15.8	
More than one race	22	(2.8%)	4	(1.8%)	18	(3.2%)	1.3	
Declined to report race	23	(2.9%)	5	(2.3%)	18	(3.2%)	0.9	
Hispanic, # (%)								
Yes	47	(6.0%)	12	(5.5%)	35	(6.2%)	0.7	0.302
No	723	(92.5%)	199	(91.7%)	524	(92.7%)	1.0	
Don't know	12	(1.5%)	6	(2.8%)	6	(1.1%)	-1.7	
Marital status, # (%)								
Married/remarried	637	(81.5%)	201	(92.6%)	436	(77.2%)	-15.5	<0.001
Separated/divorced/widowed	53	(6.8%)	7	(3.2%)	46	(8.1%)	4.9	
Single, cohabitating	28	(3.6%)	7	(3.2%)	21	(3.7%)	0.5	
Single, living alone	64	(8.2%)	2	(0.9%)	62	(11.0%)	10.1	
If married/remarried, spouse employed, # (%)								
Yes	426	(66.9%)	96	(47.8%)	330	(75.7%)	27.9	<0.001
No	211	(33.1%)	105	(52.2%)	106	(24.3%)	-27.9	
If married/remarried, percentage who earn majority of income in household, # (%)								
I do	485	(76.1%)	184	(91.5%)	301	(69.0%)	-22.5	<0.001
It's about equal	72	(11.3%)	12	(6.0%)	60	(13.8%)	7.8	
My partner does	78	(12.2%)	5	(2.5%)	73	(16.7%)	14.3	
I don't know	2	(0.3%)	0	(0.0%)	2	(0.5%)	0.5	
Children living in household, # (%)								
Yes	462	(59.1%)	107	(49.3%)	355	(62.8%)	13.5	0.001
No	320	(40.9%)	110	(50.7%)	210	(37.2%)	-13.5	
If children living in household, number, mean (SD)	1.95	(0.8)	2.02	(0.9)	1.93	(0.8)	-0.1	0.329
If children living in household, number under age 6, mean (SD)	0.60	(0.9)	0.25	(0.6)	0.71	(0.9)	0.5	<0.001

Note: Difference between males and females is percentage point difference for variables measured as a percentage. p-values reflect comparison between men and women using 2-sided t tests and chi-squared comparisons where appropriate.

Table 2. Medical Training of Survey Respondents

Characteristic	Full Sample (N=782)		Male (N=217)		Female (N=565)		Difference: Female-Male	
	(N=782)		(N=217)		(N=565)		Difference	p-value
Number of years in practice, mean (SD)	17.3	(10.3)	23.5	(10.1)	15.0	(9.4)	-8.5	<0.001
Fellowship trained, # (%)								
Yes, in breast surgery	292	(37.3%)	26	(12.0%)	266	(47.1%)	35.1	<0.001
Yes, in surgical oncology	89	(11.4%)	44	(20.3%)	45	(8.0%)	-12.3	
Yes, other	40	(5.1%)	13	(6.0%)	27	(4.8%)	-1.2	
No	361	(46.2%)	134	(61.8%)	227	(40.2%)	-21.6	
Educational debt when completed medical school, # (%)								
Yes	548	(70.1%)	127	(58.5%)	421	(74.5%)	16.0	<0.001
No	187	(23.9%)	74	(34.1%)	113	(20.0%)	-14.1	
Don't know	47	(6.0%)	16	(7.4%)	31	(5.5%)	-1.9	
Total educational debt when completed medical school, mean (SD)	\$125,556	(\$97,676)	\$79,056	(\$73,295)	\$139,472	(\$99,805)	\$60,416	<0.001
Educational debt currently, # (%)								
Yes	218	(27.9%)	30	(13.8%)	188	(33.3%)	19.4	<0.001
No	530	(67.8%)	184	(84.8%)	346	(61.2%)	-23.6	
Don't know	34	(4.3%)	3	(1.4%)	31	(5.5%)	4.1	
Total educational debt currently, mean (SD)	\$147,008	(\$195,858)	\$79,702	(\$75,811)	\$157,749	(\$206,834)	\$78,046	0.042

Note: Difference between males and females is percentage point difference for variables measured as a percentage. p-values reflect comparison between men and women using 2-sided t tests and chi-squared comparisons where appropriate.

Table 3. Practice Characteristics of Survey Respondents

Characteristic	Full Sample		Male		Female		Difference: Female-Male	
	(N=782)		(N=217)		(N=565)		Difference	p-value
Practice type, # (%)								
Academic practice	168	(21.5%)	33	(15.2%)	135	(23.9%)	8.7	0.001
Government practice	6	(0.8%)	3	(1.4%)	3	(0.5%)	-0.9	
HMO-employed practice	18	(2.3%)	3	(1.4%)	15	(2.7%)	1.3	
Hospital-employed practice	334	(42.7%)	90	(41.5%)	244	(43.2%)	1.7	
Multispecialty group private practice	121	(15.5%)	32	(14.7%)	89	(15.8%)	1.0	
Single specialty private practice	68	(8.7%)	27	(12.4%)	41	(7.3%)	-5.2	
Solo private practice	53	(6.8%)	26	(12.0%)	27	(4.8%)	-7.2	
Other practice type	14	(1.8%)	3	(1.4%)	11	(1.9%)	0.6	
Ownership if in private practice, # (%)								
Owner	100	(16.3%)	43	(23.4%)	57	(13.3%)	-10.1	0.007
Partial owner	59	(9.6%)	22	(12.0%)	37	(8.6%)	-3.4	
Employee	455	(74.1%)	119	(64.7%)	336	(78.1%)	13.5	
Academic rank if in academic practice, # (%)								
Assistant professor	75	(44.6%)	8	(24.2%)	67	(49.6%)	25.4	0.001
Associate professor	49	(29.2%)	8	(24.2%)	40	(29.6%)	5.4	
Full professor	38	(22.6%)	17	(51.5%)	21	(15.6%)	-36.0	
Other academic rank	6	(3.6%)	0	(0.0%)	7	(5.2%)	5.2	
Region, # (%)								
Northeast	184	(23.5%)	43	(19.8%)	141	(25.0%)	5.1	0.001
Midwest	190	(24.3%)	48	(22.1%)	142	(25.1%)	3.0	
South	242	(30.9%)	86	(39.6%)	156	(27.6%)	-12.0	
West	143	(18.3%)	28	(12.9%)	115	(20.4%)	7.5	
Noncontiguous U.S.	23	(2.9%)	12	(5.5%)	11	(1.9%)	-3.6	
Setting, # (%)								
Large urban city population (>1,000,000)	223	(28.5%)	61	(28.1%)	162	(28.7%)	0.6	0.348
Urban city (> 150,000 and <1,000,000)	262	(33.5%)	64	(29.5%)	198	(35.0%)	5.6	
Small city (>= 50,000 and <=150,000)	221	(28.3%)	65	(30.0%)	156	(27.6%)	-2.3	
Rural (< 50,000)	67	(8.6%)	25	(11.5%)	42	(7.4%)	-4.1	
Other urban	9	(1.2%)	2	(0.9%)	7	(1.2%)	0.3	

Percentage of practice that is breast surgery, # (%)								
Less than 25%	69	(8.8%)	45	(20.7%)	24	(4.2%)	-16.5	<0.001
Between 25% and 49%	53	(6.8%)	30	(13.8%)	23	(4.1%)	-9.8	
About half	49	(6.3%)	17	(7.8%)	32	(5.7%)	-2.2	
Between 51% and 75%	57	(7.3%)	17	(7.8%)	40	(7.1%)	-0.8	
Between 75% and 99%	77	(9.8%)	34	(15.7%)	43	(7.6%)	-8.1	
Exactly 100%	476	(60.9%)	74	(34.1%)	402	(71.2%)	37.0	

Note: Difference between males and females is percentage point difference for variables measured as a percentage. p-values reflect comparison between men and women using 2-sided t tests and chi-squared comparisons where appropriate.

Table 4. Workload Characteristics of Survey Respondents

Characteristic	Full Sample		Male		Female		Difference: Female-Male	
	(N=782)		(N=217)		(N=565)		Difference	P-value
Number of breast cancers treated per year, # (%)								
1-24	61	(7.8%)	33	(15.2%)	28	(5.0%)	-10.3	<0.001
25-50	69	(8.8%)	36	(16.6%)	33	(5.8%)	-10.7	
50-100	157	(20.1%)	46	(21.2%)	111	(19.6%)	-1.6	
100-150	191	(24.4%)	35	(16.1%)	156	(27.6%)	11.5	
150-200	146	(18.7%)	32	(14.7%)	114	(20.2%)	5.4	
200-300	112	(14.3%)	24	(11.1%)	88	(15.6%)	4.5	
>300	28	(3.6%)	9	(4.1%)	19	(3.4%)	-0.8	
Don't know/not applicable	18	(2.3%)	2	(0.9%)	16	(2.8%)	1.9	
Number of image guided percutaneous biopsies, # (%)								
Zero	352	(45.0%)	85	(39.2%)	267	(47.3%)	8.1	0.003
1-24	176	(22.5%)	42	(19.4%)	134	(23.7%)	4.4	
25-100	144	(18.4%)	43	(19.8%)	101	(17.9%)	-1.9	
>100	110	(14.1%)	47	(21.7%)	63	(11.2%)	-10.5	
Salary based on wRVUs, # (%)	515	(65.9%)	138	(63.6%)	377	(66.7%)	3.1	0.936
Number of hours worked per week, mean (SD)	56.9	(13.7)	58.9	(13.8)	56.1	(13.6)	-2.7	0.014
Number of weeks of vacation taken per year, mean (SD)	4.7	(1.7)	5.0	(1.9)	4.6	(1.6)	-0.4	0.015
Number of CME days used per year, mean (SD)	6.6	(4.7)	7.1	(4.9)	6.4	(4.6)	-0.7	0.083

Note: Difference between males and females is percentage point difference for variables measured as a percentage. p-values reflect comparison between men and women using 2-sided t tests and chi-squared comparisons where appropriate.

Table 5. Annual Income and Factors Affecting Compensation of Respondents

Characteristic	Full Sample		Male		Female		Difference: Female-Male	
	(N=782)		(N=217)		N=565		Difference	p-value
Total income (salary plus bonus), mean (SD)	\$370,555	(\$177,086)	\$407,933	(\$170,719)	\$356,200	(\$177,537)	-\$51,733	<0.001
Guaranteed income, mean (SD)	\$313,338	(\$224,332)	\$332,644	(\$398,434)	\$307,375	(\$130,237)	-\$25,269	0.246
Compared to last year, total income, # (%)								
Increased	275	(35.2%)	62	(28.6%)	213	(37.7%)	9.1	0.002
Decreased	145	(18.5%)	51	(23.5%)	94	(16.6%)	-6.9	
Stayed the same	333	(42.6%)	100	(46.1%)	233	(41.2%)	-4.8	
Don't know	29	(3.7%)	4	(1.8%)	25	(4.4%)	2.6	
Income based on national survey of physician compensation, # (%)								
Yes, AAMC	47	(6.0%)	7	(3.2%)	40	(7.1%)	3.9	0.001
Yes, MGMA	255	(32.6%)	63	(29.0%)	192	(34.0%)	5.0	
Yes, other	47	(6.0%)	13	(6.0%)	34	(6.0%)	0.0	
No	282	(36.1%)	102	(47.0%)	180	(31.9%)	-15.1	
Don't know	151	(19.3%)	32	(14.7%)	119	(21.1%)	6.3	
Income based on quality measures or quality performance, # (%)								
Yes	278	(35.5%)	80	(36.9%)	198	(35.0%)	-1.8	0.006
No	444	(56.8%)	129	(59.4%)	315	(55.8%)	-3.7	
Don't know	60	(7.7%)	8	(3.7%)	52	(9.2%)	5.5	
Received a productivity bonus last year, # (%)	386	(49.4%)	98	(45.2%)	288	(51.0%)	5.8	0.339

Productivity bonus amount last year, mean (SD)	\$49,156	(\$76,728)	\$66,392	(\$80,942)	\$42,416	(\$74,163)	-\$23,976	0.026
Received a productivity bonus for non-revenue generating work, # (%)	138	(17.6%)	34	(15.7%)	104	(18.4%)	2.7	0.034
Productivity bonus for non-revenue generating work, mean (SD)	\$27,856	(\$28,667)	\$35,578	(\$30,702)	\$24,944	(\$27,563)	-\$10,634	0.130
Supplements salary outside of surgery, # (\$)	154	(19.7%)	51	(23.5%)	103	(18.2%)	-5.3	0.178

Note: Difference between males and females is percentage point difference for variables measured as a percentage. p-values reflect comparison between men and women using 2-sided t tests and chi-squared comparisons where appropriate.

Table 6. Multivariate Analysis of Actual and Predicted Income by Surgeon Characteristics

		Full Sample		Unadjusted Income			Adjusted Income			
Characteristic		N	(%)	Mean	(SD)	p value	Mean	(95% CI)		p value
Sex										
	Male	217	(27.7%)	407,933	(170,719)	<0.001	394,331	(368,459)	(420,202)	
	Female	565	(72.3%)	356,200	(177,537)		361,424	(346,767)	(376,080)	0.040
Years of practice										
	Less than or equal to 5	123	(15.7%)	324,989	(68,301)	0.007	335,411	(300,784)	(370,038)	
	6 to 10	125	(16.0%)	367,264	(128,301)		368,842	(336,308)	(401,375)	0.137
	11 to 20	229	(29.3%)	373,964	(147,977)		363,080	(340,181)	(385,979)	0.195
	21 to 30	209	(26.7%)	399,675	(258,400)		399,391	(374,335)	(424,448)	0.007
	Greater than 30	96	(12.3%)	361,693	(164,040)		372,868	(332,797)	(412,939)	0.204
Fellowship trained										
	No	361	(46.2%)	370,163	(213,380)	0.954	362,972	(342,878)	(383,066)	
	Yes	421	(53.8%)	370,892	(138,877)		377,058	(358,812)	(395,304)	0.363
Practice type										
	Hospital-employed practice	333	(42.6%)	380,424	(123,036)	<0.001	392,905	(359,502)	(426,308)	
	Multispecialty group private practice	119	(15.2%)	388,008	(162,429)		393,704	(352,751)	(434,657)	0.970
	Single specialty private practice	68	(8.7%)	331,279	(174,144)		357,167	(296,795)	(417,539)	0.287
	Solo private practice	53	(6.8%)	273,078	(158,581)		304,213	(229,566)	(378,860)	0.032
	Academic practice	168	(21.5%)	388,757	(264,855)		336,947	(240,618)	(433,276)	0.367
	Other practice	41	(5.2%)	356,305	(118,036)		363,950	(297,034)	(430,866)	0.389
Academic position										
	Other	6	(0.8%)	278,417	(101,154)	0.010	356,340	(328,595)	(384,085)	
	Assistant professor	75	(9.6%)	367,703	(358,025)		419,191	(316,099)	(522,283)	0.330

	Associate professor	49	(6.3%)	376,163	(125,336)		407,810	(304,725)	(510,895)	0.422
	Professor	38	(4.9%)	464,132	(171,875)		458,452	(349,125)	(567,779)	0.128
Ownership										
	Employee	623	(79.7%)	380,524	(177,732)	0.003	374,549	(358,296)	(390,802)	
	Partial owner	59	(7.5%)	356,288	(144,477)		354,555	(300,344)	(408,767)	0.522
	Owner	100	(12.8%)	316,867	(181,762)		355,113	(299,942)	(410,285)	0.553
Practice location										
	Noncontiguous U.S.	23	(2.9%)	354,167	(245,325)	0.937	336,554	(265,510)	(407,599)	
	Midwest	190	(24.3%)	373,016	(124,727)		372,714	(348,002)	(397,425)	0.351
	Northeast	184	(23.5%)	364,110	(137,973)		368,211	(342,379)	(394,042)	0.413
	South	242	(30.9%)	369,803	(150,172)		361,623	(339,322)	(383,924)	0.508
	West	143	(18.3%)	379,334	(289,165)		391,289	(361,430)	(421,149)	0.162
Practice setting										
	Rural	67	(8.6%)	352,105	(119,275)	0.686	366,508	(345,926)	(387,091)	
	Small city	221	(28.3%)	371,615	(243,905)		354,642	(311,009)	(398,275)	0.633
	Urban	262	(33.5%)	364,751	(130,939)		371,698	(348,665)	(394,731)	0.744
	Large urban	223	(28.5%)	382,720	(161,104)		352,956	(224,565)	(481,347)	0.839
	Other urban	9	(1.2%)	349,444	(141,144)		379,547	(355,842)	(403,253)	0.417
Percent of practice breast surgery										
	Less than 100%	306	(39.1%)	391,017	(224,694)	0.010	396,133	(373,537)	(418,729)	
	100%	476	(60.9%)	357,401	(136,749)		354,112	(337,057)	(371,168)	0.010
Percent of patients with Medicaid										
	Less than 25%	563	(72.0%)	377,526	(186,823)	0.313	375,795	(362,448)	(389,142)	
	25% to 75%	36	(4.6%)	340,939	(186,209)		350,840	(323,102)	(378,579)	0.120
	Greater than 75%	142	(18.2%)	355,704	(115,194)		350,299	(237,002)	(463,597)	0.662
Number of breast cancers treated										
	Less than 100	400	(51.2%)	372,790	(200,659)	<0.001	362,183	(341,044)	(383,321)	
	100 to 200	181	(23.1%)	390,061	(150,649)		361,256	(342,686)	(379,826)	0.951
	Greater than 200	158	(20.2%)	347,234	(150,873)		411,180	(380,667)	(441,693)	0.016
Number of biopsies										

	Zero	352	(45.0%)	375,976	(127,478)	0.173	368,970	(350,659)	(387,281)	
	1 to 24	176	(22.5%)	349,320	(120,442)		355,586	(330,057)	(381,115)	0.406
	25 to 100	144	(18.4%)	365,098	(166,022)		368,109	(339,550)	(396,668)	0.961
	Greater than 100	110	(14.1%)	394,329	(163,164)		402,781	(369,006)	(436,555)	0.096
Percent effort										
	Full-time	663	(84.8%)	377,593	(175,428)	0.009	374,917	(362,142)	(387,692)	
	Part-time	119	(15.2%)	331,348	(181,869)		346,253	(315,018)	(377,488)	0.100
Income based on quality										
	No	504	(64.5%)	359,071	(196,416)	0.015	364,848	(349,809)	(379,888)	
	Yes	278	(35.5%)	391,375	(132,995)		380,902	(360,116)	(401,688)	0.238
Receives a productivity bonus										
	No	396	(50.6%)	359,262	(208,071)	0.071	374,119	(356,392)	(391,847)	
	Yes	386	(49.4%)	382,141	(137,590)		366,899	(348,909)	(384,888)	0.600
Receives a productivity bonus for non-revenue generating work										
	No	644	(82.4%)	365,555	(185,617)	0.088	369,209	(356,152)	(382,266)	
	Yes	138	(17.6%)	393,888	(128,065)		376,838	(347,113)	(406,562)	0.652
Race										
	White/Caucasian	624	(79.8%)	371,572	(184,640)	0.912	366,410	(353,049)	(379,771)	
	African American/Black	26	(3.3%)	341,769	(150,969)		383,066	(316,492)	(449,640)	0.631
	Asian or Pacific Islander	86	(11.0%)	377,516	(140,367)		388,098	(350,334)	(425,862)	0.298
	Native American/Alaskan	1	(0.1%)	372,000	-----		409,814	(72,756)	(746,873)	0.801
	More than one race	22	(2.8%)	378,955	(149,050)		413,738	(340,777)	(486,698)	0.214
	Declined to report race	23	(2.9%)	341,391	(149,824)		360,265	(289,068)	(431,463)	0.869
Marital status										
	Married/Remarried	637	(81.5%)	376,614	(185,281)	0.181	372,548	(359,320)	(385,776)	
	Separated/Divorced/Widowed	53	(6.8%)	360,000	(142,192)		361,488	(314,784)	(408,193)	0.656
	Single, cohabitating	28	(3.6%)	322,989	(107,689)		363,587	(298,764)	(428,410)	0.792
	Single, living alone	64	(8.2%)	339,802	(134,568)		361,279	(315,132)	(407,426)	0.653
Presence of children										

No	320	(40.9%)	360,578	(137,038)	0.190	359,446	(338,453)	(380,439)	
Yes	462	(59.1%)	377,466	(200,039)		378,250	(361,449)	(395,051)	0.212
Total number of observations	782		782		782				

Note: Unadjusted incomes are actual incomes by surgeon characteristic and the p-value is that from an analysis of variance for ANOVA for differences in the means of income broken down by the levels of the categorical independent variable. Adjusted incomes are estimates from a multivariable linear regression of income as a function of gender, years of practice, fellowship training, practice type, academic rank, ownership, practice location, practice setting, percent of practice that is breast surgery, percent of practice Medicaid patients, number of breast cancers treated, number of biopsies performed, number of wRVUs, hours of work, whether income is based on quality, productivity bonus for revenue-producing work, productivity bonus for non-revenue producing work, race, marital status, and presence of children.

Appendix Table 1. Demographic Comparison of Survey Respondents and Society Membership

	Total			Male			Female		
	Members	Survey	Diff	Members	Survey	Diff	Members	Survey	Diff
Percent of total	100.0%	100.0%		41.5%	28.6%	-13.0%	58.5%	71.3%	12.9%
Percent by Region									
Midwest	22.3%	24.9%	2.7%	23.4%	22.4%	-1.1%	21.4%	26.0%	4.6%
Northeast	21.2%	23.4%	2.2%	17.4%	21.2%	3.8%	23.8%	24.3%	0.5%
South	35.3%	32.9%	-2.4%	43.1%	42.1%	-1.0%	29.7%	29.1%	-0.7%
West	20.2%	18.0%	-2.2%	14.5%	13.1%	-1.4%	24.2%	19.9%	-4.3%