

**2012 Report on Johns Hopkins University
School of Medicine Faculty Salary Analysis, Fiscal Year 2011**

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1 Executive Summary

The analyses in this report were done on the salaries as of July 1, 2011 for the full time faculty ranks Assistant Professor through Professor. Excluded from the study were all deans, department and institute directors and faculty who were previously in these leadership positions. The salary and other data are obtained from the SAP system and the rank, years at rank, and gender were validated by the Registrar's Office. The faculty salary data in the SAP system are the full-time equivalent (FTE) salary, which are comprised of the base salary (part A) plus any supplemental salary for administrative, educational or clinical roles assumed by the faculty (part B) ($FTE=A+B$). The SAP system does not contain only part A salary data. Total salary is the FTE salary plus bonus (part C) that is defined in the individual departmental compensation plans or that have been agreed upon by the faculty and department ($Total\ salary=A+B+C$). Not all departments in the SOM utilize the A+B+C system, so it is imperative that faculty be aware of the individual compensation plans of their department and how they are individually compensated for their work. The 2012 Report on the Johns Hopkins School of Medicine faculty Salary Analysis found that in terms of the FTE salary, the salaries of women faculty were 4.6% less than the salaries of male faculty in FY 2011, and 8.0% less for Total salary.

It is important for two points to be appreciated about the report and the faculty salary data. First, the potential for salary differences due to individual faculty choice is high. Faculty may choose to engage in activities that have the potential to impact their part B and Part C salary. For example, faculty may choose to take incremental call, see additional patients, or take on administrative duties to increase their salary. Depending on the individual departmental compensation plan this could translate into additional part B or part C income. Thus, some component of the differences in FTE and Total salary by gender may represent differences due to choice and may not reflect differences in baseline or part A, salary.

Second, the individual departmental data generated through the annual faculty salary survey are provided to each of the department directors for review on an annual basis. The department directors are expected to address any significant potential salary inequities identified in their department

by this analysis. They are expected to explain them to the Vice Dean for Faculty and the School of Medicine Chief Financial Officer. Further, the department directors must identify strategies to correct the salary disparities as appropriate. It is anticipated that the information obtained from the annual salary analysis will help to inform and refine the individual departmental compensation plans. Further, we strongly recommend that department directors review this report and their departmental plan annually with their faculty.

2 Background

The results in this report represent an annual faculty salary analyses at the School of Medicine since 2004 as part of efforts to assess gender equity in salary, and constitute the eighth year in which salary data have been analyzed. As directed by the Dean, department directors' efforts are focused on achieving faculty salary equity for all faculty. In terms of Full-Time Equivalent (FTE) salary, this new report revealed that the salaries of women faculty were 4.6% less than men in FY 2011. In FY 2010, the salaries of women faculty were 2.2% less than men, and the salary difference between genders has varied from -4% to -2.2% over the last five years.

The structure of faculty salary compensation in the SOM is not uniform and varies in the 32 departments. Despite the lack of uniformity, in general the faculty is compensated by an A+B+C system. The part A salary reflects the base salary of the faculty, while the B component is usually related to leadership, educational or administrative roles, as well as clinical productivity. The B component is up to the discretion of the division chief and department chair. The components of the B part of the salary and how they are compensated is not uniform across the SOM. The A+B components of the salary are combined and become the full time equivalent salary or FTE salary of the individual faculty member. The part C salary is generally a bonus and is most typically received once yearly by faculty members after the fiscal year ends. The part C salary is defined by the individual departments and reasons for receiving a C component are variable. In fact, many departments do not have a C component contributing to the salary of their faculty. The C part of the salary is added to the A+B component for purposes of this report and this is labeled as total salary in the faculty salary analysis. Again it is important to note that the A+B+C system is not uniformly used in the SOM. There are departments that place a great significance on using all 3 components to faculty salary levels, where others predominantly only have an A component to faculty salary.

3 Methods

For 1747 faculty, statistics were gathered on gender and rank distributions, both school-wide and within departments, and mean years in rank by degree and gender were tabulated. FTE and Total Salary (including bonuses) were tabulated by degree, rank and gender. These results are shown in Tables 1-7.

There were 9 large groups of departments analyzed.¹ In addition, Basic Science was considered a group consisting of Art as Applied to Medicine, History of Medicine, Biological Chemistry, Biomedical Engineering, Biophysics, Cell Biology, Functional Anatomy, Molecular & Comparative Pathobiology, Molecular Biology and Genetics, Neuroscience, Pharmacology, and Physiology. The departments of Surgery, Otolaryngology (including Dentistry and Oral Surgery), Orthopaedic surgery, Neurosurgery, Plastic Surgery, and Urology were combined to form the Surgery group. Lastly Dermatology, Emergency Medicine, Genetic Medicine, OB/GYN, Radiation Oncology, and Physical Medicine/Rehabilitation were collected into an “Other” category. This resulted in the formation of 12 groups for the analysis. In results reported for years prior to 2009, note that Art as Applied to Medicine and History of Medicine were included in the “Other” category, however, since then these departments have been included within the Basic Science group. Also note that in results reported for years prior to 2011 Radiation Oncology was included in the “Oncology” category, however, since then it has been included in the “Other” group. Several additional figures have been added for clarity (Figures 1, 2 and 5) as well as Table 2.

This year’s analysis of salary differences between genders used the same models that were developed in the FY 2004 - 2010 analyses (see Appendix: Model Specifications). We calculated the percent difference for women relative to men (with negative differences indicating that the salaries of women were lower) for the School of Medicine overall, as well as within ranks, within degrees (MD and non-MD²), within rank by years-in-rank³, and within departments. Our models adjusted for the administrative data available: department, department-specific rank, degree, and years-in-rank. Modeling the log salary allowed us to calculate the percentage difference between genders, and also protects against a few large or a few small salaries having inordinate influence on the regression results. Of the 1748 faculty members, 1 were removed as potentially influential outliers.

4 Results

The distribution of faculty gender, school-wide, was 1131 men (65%) and 616 women (35%). Of the 19 departments, there are 4 in which women made up more than half the faculty, these being OB/Gyn (83%), Pediatrics (53%), Dermatology (54%), and Rehabilitation (53%); there was also a relatively high percentage representation of women in History of Medicine (50%).

Of the remaining large departments (the 10 having more than 70 faculty), women comprised 19 - 47% of the faculty: in descending order of representation, Psychiatry (47%), Anesthesiology (39%), Medicine (37%), Pathology (37%), Ophthalmology (31%), Basic science (30%), Neurology (28%),

¹We calculated differences for Medicine and Surgery after excluding their higher earning specialties (cardiology and GI for medicine and Neurosurgery for Surgery). For Pediatrics, we included an adjustment for the rank-specific effect of the percentile for AAAP survey of Pediatric Salaries.

²An MD is defined to be someone who has at least one of the following degrees: MD, DMD, MBBCH, MBBS, MBChB

³New: Professors (≤ 4 years), Assoc. Prof. (≤ 3), Assist. Prof. (≤ 2); Mid: Professors (4-10), Assoc. Prof. (3-7), Assist. Prof. (2-5); Long: Professors (> 10), Assoc. Prof. (> 7), Assist. Prof. (> 5)

Oncology (26%), and Radiology (23%). The lowest representation of women was in the Surgery Group (19%).

After adjustment for the available administrative descriptors (such as rank, and years at rank), women's FTE salaries on average were 4.6% less than men's FTE salaries school-wide in FY 2011.

A further analysis, which excluded all faculty in Cardiology and Gastroenterology (Department of Medicine) and Neurosurgery (Surgery Group), showed that women's FTE salaries were 4.0% less than men's FTE salaries school-wide in FY 2011. This further analysis was done because there are few women in these relatively highly paid specialties.

The population of SOM faculty fluctuates from year to year as individual members enter and leave Johns Hopkins. In addition, salaries are set partly by systematic assessments, consistently applied over people and time, and partly by accomplishments, skills, and attitudes that cannot be captured by measurements and therefore introduce uncertainty to our understanding of the systematic parts. The variations due to changing membership and to unmeasured influences are represented by the stochastic part of the regression model.

The confidence intervals given in this report represent the influence of this inherent uncertainty on our estimates of the parameters of the systematic part. From a frequentist perspective, they are a range of plausible estimates of gender differences in salary that might be expected in many hypothetical repetitions of this year's experience. Equivalently, from a Bayesian perspective, they represent our uncertainty about the systematic parts of the underlying salary process after we have quantified the systematic patterns in the data in any given year.

These confidence intervals should not be interpreted as a measure of the statistical significance in salary differences by gender as would be the case for an analysis based on a representative sample of SOM faculty. The estimated differences in SOM faculty salary by gender reported here represent this year's faculty experience given our understanding of the systematic assessments (our model for salary).

5 Summary

The JHSOM has been analyzing faculty salary data since 2004 as part of an effort to assess gender equity in salary. This report demonstrates that the salaries of women faculty were 4.6% less than men in FY 2011.

There are several limitations identified which could explain the findings noted in this salary survey. First, although we control for department, there may exist sub-specialties within departments that are compensated differently and are comprised of men and women in different proportions. For example, if women are more highly represented in lower-paying sub-specialties within departments, this could result in a downward bias in the estimate of gender difference in compensation. Some divisions that are procedurally oriented and have higher financial incomes and male representation are excluded from some analyses (GI and Cardiology from Medicine and Neurosurgery from

Surgery), however, there may be other subspecialties that could be excluded or otherwise controlled for as well.

In addition, although all deans, department and institute directors and faculty who were previously in these leadership positions were excluded from the data provided for analysis, the data may still include faculty with other levels or forms of leadership that are not recorded in the data. Differences between genders in representation in such positions could also account for some of the estimated difference in compensation between men and women.

Another limitation of this report is that the data on years at current rank, which is controlled for in this analysis, encompass only time at Hopkins, and not time from previous employment at other universities. If time at current rank including time spent with previous employers is the relevant consideration in salary determinations rather than time at current rank at Hopkins, this could lead to some inaccuracies in the analysis results, depending on how well time at current rank at Hopkins serves as a surrogate for time at current rank anywhere.

Despite the limitations of the data available for this study and the diversity of faculty throughout the SOM, women faculty across the entire SOM receive lower salaries (4.6%) than their male counterparts in FY2011. Note that this figure represents an overall average across the SOM. Department-specific reports accompany this executive summary with department-specific results.

In conclusion, it is critical that the SOM continue to analyze this faculty salary data in a transparent fashion which is readily made available to the faculty. Faculty awareness of how they are compensated is critical to salary equity and fairness. We would encourage all faculty members to familiarize themselves with their departmental compensation plans and to discuss their individual compensation at their mandatory annual faculty review (for assistant and associate professors). As noted above, these data will continue to be shared with individual departmental directors for review on an annual basis. Department directors are expected to address any significant salary disparities identified in their department, and are expected to explain them to provide a justification for the difference or a plan to remedy salary inequities to the Vice Dean for Faculty and the School of Medicine Chief Financial Officer.

6 Future Directions

The SOM will continue to analyze the faculty salary data on an annual basis. In this present report, data for Cardiology and GI faculty were excluded from tables 8-13. This has been done historically because higher paying specialty groups were predominantly male. However, over the years there has been an increasing number of women faculty in these areas. We will look at the gender composition of both GI and Cardiology next year to determine the number of women in these areas and whether we will consider the inclusion of GI and cardiology in all of the analyses. Neurosurgery continues to be male dominated, and they will continue to be excluded in these particular analyses

The Vice Dean of Faculty has previously asked that all department directors develop a clear plan

for salary compensation for their individual departments and that this compensation plan be made readily available to faculty members, and be utilized in the annual faculty review. The Faculty Senate has also requested copies of these compensation plans be made available to the departmental faculty senate representatives. Many department directors have already provided their compensation plans to the Vice Dean's office. The available compensation plans are attached to this report to demonstrate the various compensation models that exist across the School of Medicine. We urge faculty to be aware of their department compensation plans and use them to discuss their individual salary compensation at their annual review.

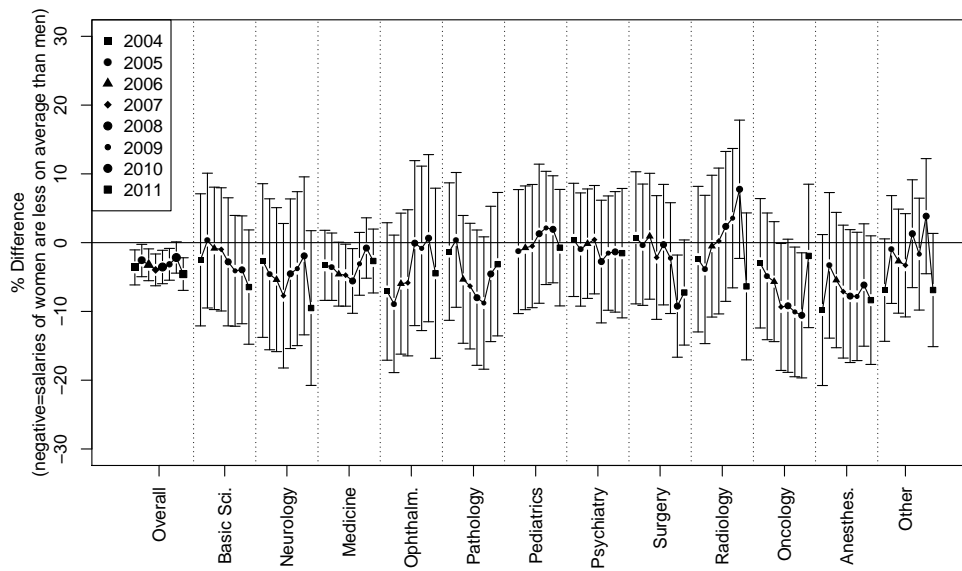


Figure 1: % Differences in FTE Salary (+/- 95% CI) 2004-2011 (n=1747)

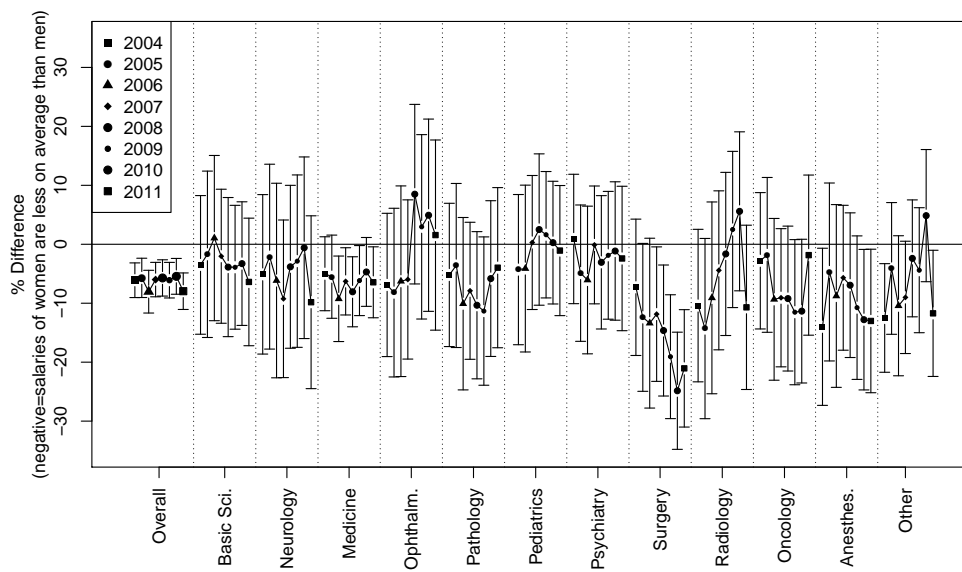


Figure 2: % Differences in Total Salary (+/- 95% CI) 2004-2011 (n=1747)

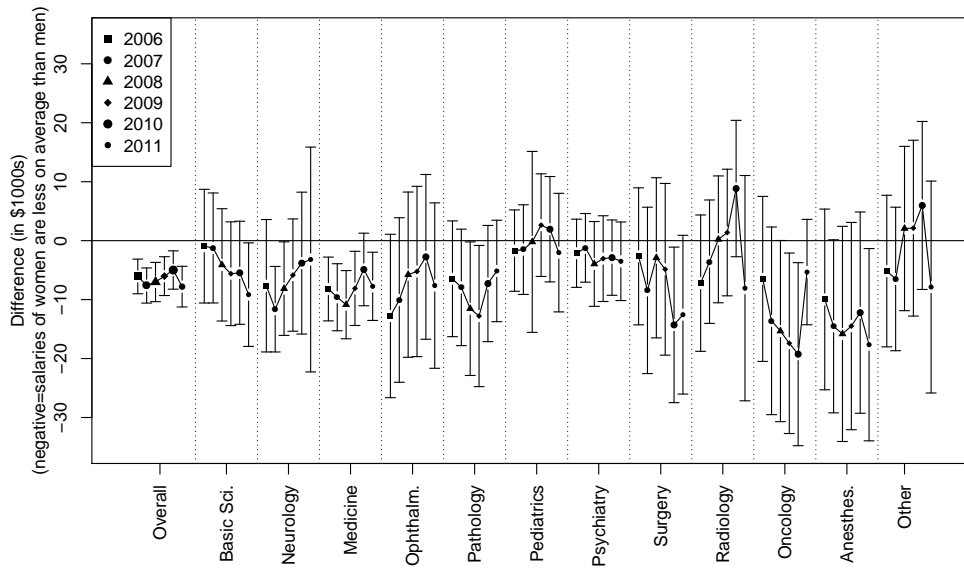


Figure 3: % Differences in FTE Salary (+/- 95% CI) 2006-2011 (n=1747)

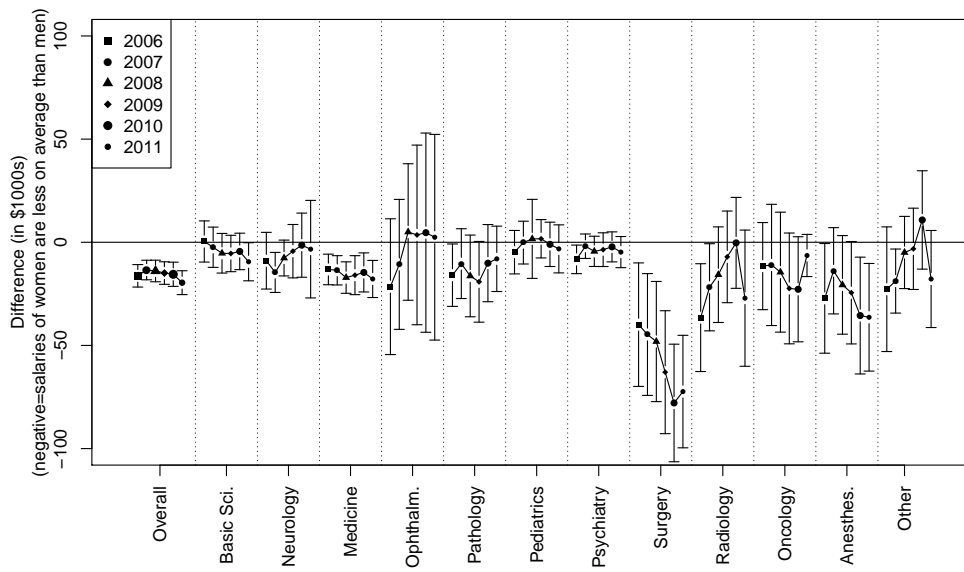


Figure 4: % Differences in Total Salary (+/- 95% CI) 2006-2011 (n=1747)

7 Tables of Descriptive Statistics

Table 1: Department By Gender, Counts (%)

| Department | Male | Female | Total |
|-------------------------|-----------|----------|-------|
| Basic Science | 90 (70) | 38 (30) | 128 |
| OB/GYN | 8 (17) | 39 (83) | 47 |
| Neurology | 64 (72) | 25 (28) | 89 |
| Medicine | 266 (63) | 159 (37) | 425 |
| Ophthalmology | 52 (69) | 23 (31) | 75 |
| Pathology | 56 (63) | 33 (37) | 89 |
| Pediatrics | 59 (47) | 67 (53) | 126 |
| Psychiatry | 63 (53) | 55 (47) | 118 |
| Surgery | 183 (81) | 44 (19) | 227 |
| Radiology | 80 (77) | 24 (23) | 104 |
| Oncology | 76 (74) | 27 (26) | 103 |
| Anesthesiology | 71 (61) | 46 (39) | 117 |
| Art Applied to Medicine | 3 (60) | 2 (40) | 5 |
| History of Medicine | 3 (50) | 3 (50) | 6 |
| Dermatology | 6 (46) | 7 (54) | 13 |
| Physical Medicine/Rehab | 7 (47) | 8 (53) | 15 |
| Emergency Medicine | 20 (80) | 5 (20) | 25 |
| Genetic Medicine | 12 (71) | 5 (29) | 17 |
| Radiation Oncology | 12 (67) | 6 (33) | 18 |
| Total | 1131 (65) | 616 (35) | 1747 |

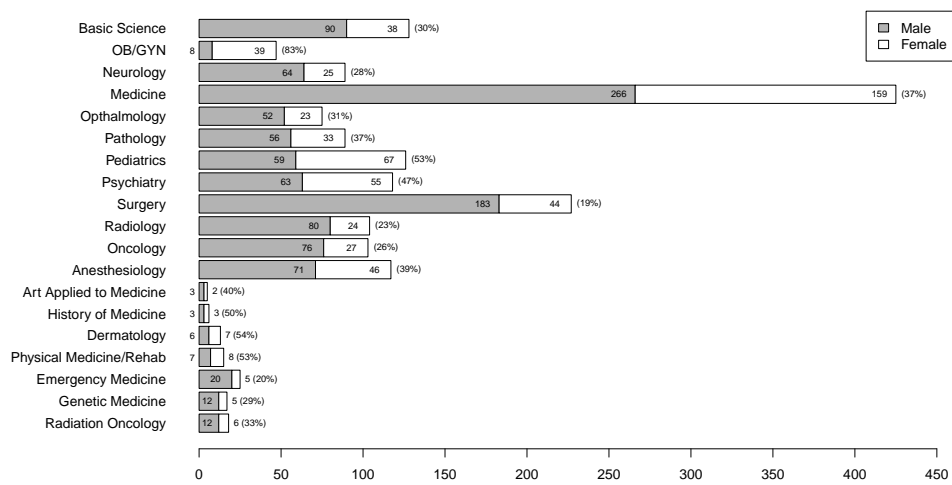


Figure 5: Number of faculty members by Department and Gender

Table 2: Department By Rank and Sex, Counts (%)

| Department | Prof M | Prof F | Assoc Prof M | Assoc Prof F | Assist Prof M | Assist Prof F | Total |
|-------------------------|----------|---------|--------------|--------------|---------------|---------------|-------|
| Basic Science | 49 (38) | 15 (12) | 18 (14) | 7 (5) | 23 (18) | 16 (12) | 128 |
| OB/GYN | 3 (6) | 4 (9) | 2 (4) | 5 (11) | 3 (6) | 30 (64) | 47 |
| Neurology | 22 (25) | 5 (6) | 16 (18) | 3 (3) | 26 (29) | 17 (19) | 89 |
| Medicine | 79 (19) | 20 (5) | 74 (17) | 38 (9) | 113 (27) | 101 (24) | 425 |
| Ophthalmology | 21 (28) | 3 (4) | 13 (17) | 9 (12) | 18 (24) | 11 (15) | 75 |
| Pathology | 28 (31) | 8 (9) | 15 (17) | 10 (11) | 13 (15) | 15 (17) | 89 |
| Pediatrics | 13 (10) | 15 (12) | 17 (13) | 12 (10) | 29 (23) | 40 (32) | 126 |
| Psychiatry | 15 (13) | 10 (8) | 26 (22) | 9 (8) | 22 (19) | 36 (31) | 118 |
| Surgery | 47 (21) | 4 (2) | 59 (26) | 13 (6) | 77 (34) | 27 (12) | 227 |
| Radiology | 21 (20) | 5 (5) | 20 (19) | 8 (8) | 39 (38) | 11 (11) | 104 |
| Oncology | 32 (31) | 5 (5) | 22 (21) | 10 (10) | 22 (21) | 12 (12) | 103 |
| Anesthesiology | 13 (11) | 0 (0) | 21 (18) | 7 (6) | 37 (32) | 39 (33) | 117 |
| Art Applied to Medicine | 0 (0) | 0 (0) | 2 (40) | 1 (20) | 1 (20) | 1 (20) | 5 |
| History of Medicine | 1 (17) | 2 (33) | 1 (17) | 1 (17) | 1 (17) | 0 (0) | 6 |
| Dermatology | 2 (15) | 0 (0) | 2 (15) | 0 (0) | 2 (15) | 7 (54) | 13 |
| Physical Medicine/Rehab | 0 (0) | 1 (7) | 3 (20) | 0 (0) | 4 (27) | 7 (47) | 15 |
| Emergency Medicine | 1 (4) | 0 (0) | 7 (28) | 0 (0) | 12 (48) | 5 (20) | 25 |
| Genetic Medicine | 6 (35) | 1 (6) | 3 (18) | 4 (24) | 3 (18) | 0 (0) | 17 |
| Radiation Oncology | 1 (6) | 1 (6) | 6 (33) | 1 (6) | 5 (28) | 4 (22) | 18 |
| Total | 354 (20) | 99 (6) | 327 (19) | 138 (8) | 450 (26) | 379 (22) | 1747 |

Table 3: Rank by Sex, Counts (Col %)

| | Male | Female | Total |
|-------------|----------|----------|----------|
| Prof | 354 (31) | 99 (16) | 453 (26) |
| Assoc Prof | 327 (29) | 138 (22) | 465 (27) |
| Assist Prof | 450 (40) | 379 (62) | 829 (47) |
| Total | 1131 | 616 | 1747 |

Table 4: Years in Rank, Degree by Rank by Gender

| | Non-MD | | | MD | | |
|-------------|------------------|------------------|-----|------------------|------------------|-----|
| | Mean \pm SD | Median \pm MAD | n | Mean \pm SD | Median \pm MAD | n |
| Prof M | 10.62 \pm 7.33 | 9.04 \pm 7.23 | 94 | 10.17 \pm 7.47 | 9.25 \pm 7.66 | 260 |
| Prof F | 9.27 \pm 6.4 | 8.08 \pm 4.94 | 47 | 6.36 \pm 4.12 | 5.71 \pm 4.51 | 52 |
| Asso Prof M | 7.11 \pm 6.45 | 5.75 \pm 5.44 | 75 | 6.06 \pm 6.29 | 4.04 \pm 3.89 | 252 |
| Asso Prof F | 6.31 \pm 5.44 | 4.33 \pm 3.95 | 41 | 4.57 \pm 4.5 | 3.25 \pm 2.97 | 97 |
| Asst Prof M | 4.54 \pm 3.67 | 3.5 \pm 3.21 | 110 | 5.03 \pm 5.05 | 3.71 \pm 3.34 | 340 |
| Asst Prof F | 4.49 \pm 3.69 | 3.54 \pm 2.97 | 102 | 5.15 \pm 4.52 | 4 \pm 3.34 | 277 |

Table 5: FTE Salary in \$1000s (unadjusted), Degree by Rank by Gender

| | Non-MD | | | MD | | |
|-------------|------------------|------------------|-----|------------------|------------------|-----|
| | Mean \pm SD | Median \pm MAD | n | Mean \pm SD | Median \pm MAD | n |
| Prof M | 176 \pm 39.5 | 170.4 \pm 34.9 | 94 | 236.8 \pm 58 | 232.6 \pm 48.8 | 260 |
| Prof F | 162.9 \pm 27.5 | 160.3 \pm 27 | 47 | 222.2 \pm 36.8 | 213.4 \pm 31 | 52 |
| Asso Prof M | 121.9 \pm 25.2 | 119.8 \pm 20.6 | 75 | 200.1 \pm 49 | 194.3 \pm 48.3 | 252 |
| Asso Prof F | 115.5 \pm 31.5 | 108.2 \pm 19.1 | 41 | 182 \pm 44.4 | 173.6 \pm 37.2 | 97 |
| Asst Prof M | 92.4 \pm 24.9 | 86.5 \pm 10.7 | 110 | 163.1 \pm 48.5 | 151.9 \pm 49 | 340 |
| Asst Prof F | 89 \pm 21.1 | 87.5 \pm 10.6 | 102 | 153.6 \pm 44.7 | 148.5 \pm 39.4 | 277 |

Table 6: Total Salary in \$1000s (unadjusted), Degree by Rank by Gender

| | Non-MD | | | MD | | |
|-------------|------------------|------------------|-----|-------------------|------------------|-----|
| | Mean \pm SD | Median \pm MAD | n | Mean \pm SD | Median \pm MAD | n |
| Prof M | 180.3 \pm 41.8 | 176.9 \pm 31.8 | 94 | 290 \pm 138.3 | 251.7 \pm 72 | 260 |
| Prof F | 165.5 \pm 29.5 | 163 \pm 29.5 | 47 | 244.3 \pm 61.5 | 230.1 \pm 51.7 | 52 |
| Asso Prof M | 124.3 \pm 25.9 | 120 \pm 20.3 | 75 | 251.8 \pm 110.6 | 221.4 \pm 83 | 252 |
| Asso Prof F | 120.2 \pm 38.9 | 111.4 \pm 21.9 | 41 | 207.5 \pm 75.3 | 189.8 \pm 57 | 97 |
| Asst Prof M | 94.6 \pm 28.2 | 86.7 \pm 11.7 | 110 | 201.7 \pm 96.9 | 166.8 \pm 72.3 | 340 |
| Asst Prof F | 91.2 \pm 26.2 | 88.4 \pm 12.5 | 102 | 169.5 \pm 59.4 | 157.5 \pm 47.6 | 277 |

Table 7: Faculty Receiving Bonuses, by Gender and Rank

| | Count (%) | Total |
|---------------|------------|-------|
| Prof M | 233 (65.8) | 354 |
| Prof F | 43 (43.4) | 99 |
| Assoc Prof M | 225 (68.8) | 327 |
| Assoc Prof F | 79 (57.2) | 138 |
| Assist Prof M | 274 (60.9) | 450 |
| Assist Prof F | 219 (57.8) | 379 |

8 Tables of Analysis Results

Table 8: Overall Percent Differences (95% CI) in FTE Salary (FY2011), negative=women earn less than men. *Estimated gender differences after removing the Cardiology and GI specialties from Medicine, and removing Neurosurgery specialty from Surgery.

| | FTE Salary | FTE Salary* |
|---------------------|--------------------|--------------------|
| Overall | -4.6 (-6.8, -2.3) | -4.0 (-6.3, -1.7) |
| Professor | -2.5 (-7.4, 2.7) | -3.1 (-8.0, 2.2) |
| Associate Professor | -4.8 (-9.1, -0.4) | -3.4 (-7.8, 1.2) |
| Assistant Professor | -4.3 (-7.3, -1.2) | -3.6 (-6.7, -0.5) |
| MD degree | -3.9 (-6.7, -1.1) | -3.0 (-5.9, -0.1) |
| Non-MD degree | -2.4 (-6.7, 2.0) | -2.0 (-6.3, 2.5) |
| Professor (New) | 1.0 (-8.9, 12.0) | -0.4 (-10.2, 10.4) |
| Professor (Mid) | -3.4 (-10.7, 4.6) | -2.8 (-10.3, 5.3) |
| Professor (Long) | -0.6 (-9.8, 9.5) | -1.7 (-10.9, 8.4) |
| Assoc Prof (New) | -5.0 (-11.4, 1.8) | -4.0 (-10.5, 3.0) |
| Assoc Prof (Mid) | -3.5 (-11.1, 4.9) | -2.3 (-10.1, 6.2) |
| Assoc Prof (Long) | -6.5 (-14.6, 2.4) | -4.0 (-12.6, 5.4) |
| Assist Prof (New) | -8.8 (-13.8, -3.5) | -8.9 (-14.0, -3.5) |
| Assist Prof (Mid) | -2.1 (-7.3, 3.5) | 0.2 (-5.4, 6.1) |
| Assist Prof (Long) | -2.4 (-7.5, 2.9) | -2.3 (-7.4, 3.2) |

Table 9: Overall Percent Differences (95% CI) in TOTAL Salary (FY2011), negative=women earn less than men. *Estimated gender differences after removing the Cardiology and GI specialties from Medicine, and removing Neurosurgery specialty from Surgery.

| | TOTAL Salary | TOTAL Salary* |
|---------------------|---------------------|---------------------|
| Overall | -8.0 (-10.7, -5.1) | -6.9 (-9.8, -4.0) |
| Professor | -5.3 (-11.5, 1.3) | -5.6 (-11.7, 0.9) |
| Associate Professor | -8.9 (-14.1, -3.3) | -7.2 (-12.5, -1.6) |
| Assistant Professor | -7.3 (-11.0, -3.4) | -6.0 (-9.8, -2.0) |
| MD degree | -9.2 (-12.5, -5.6) | -7.6 (-11.1, -4.0) |
| Non-MD degree | -0.1 (-5.7, 5.9) | 0.5 (-5.1, 6.4) |
| Professor (New) | -2.5 (-14.6, 11.2) | -4.5 (-16.2, 8.8) |
| Professor (Mid) | -4.9 (-14.1, 5.3) | -3.6 (-12.9, 6.7) |
| Professor (Long) | -3.2 (-14.6, 9.7) | -4.0 (-15.2, 8.6) |
| Assoc Prof (New) | -11.4 (-19.0, -3.1) | -10.1 (-17.7, -1.8) |
| Assoc Prof (Mid) | -7.0 (-16.4, 3.5) | -5.5 (-14.9, 5.0) |
| Assoc Prof (Long) | -6.9 (-17.1, 4.6) | -3.7 (-14.5, 8.4) |
| Assist Prof (New) | -9.5 (-15.9, -2.6) | -9.4 (-15.8, -2.6) |
| Assist Prof (Mid) | -7.6 (-13.9, -0.9) | -3.7 (-10.4, 3.5) |
| Assist Prof (Long) | -6.2 (-12.4, 0.5) | -5.9 (-12.2, 0.8) |

Table 10: Overall Departmental Percent Differences (95% CI) in FTE Salary (FY2011), negative=women earn less than men. *Estimated gender differences after removing the Cardiology and GI specialties from Medicine, and removing Neurosurgery specialty from Surgery.

| Department | FTE Salary | TOTAL Salary |
|----------------|-------------------|----------------------|
| Overall | -4.6 (-6.8, -2.3) | -8.0 (-10.7, -5.1) |
| Overall* | -4.0 (-6.3, -1.7) | -6.9 (-9.8, -4.0) |
| Basic Science | -6.5 (-13.8, 1.5) | -6.4 (-15.7, 4.0) |
| Neurology | -9.5 (-18.9, 1.0) | -9.8 (-21.7, 3.9) |
| Medicine | -2.7 (-7.0, 1.9) | -6.5 (-11.8, -0.7) |
| Medicine* | -0.1 (-5.1, 5.3) | -2.4 (-8.7, 4.2) |
| Ophthalmology | -4.4 (-15.2, 7.7) | 1.6 (-13.0, 18.6) |
| Pathology | -3.1 (-12.5, 7.2) | -4.0 (-15.8, 9.5) |
| Pediatrics | -0.7 (-8.6, 7.8) | -1.1 (-11.1, 10.1) |
| Psychiatry | -1.5 (-10.2, 7.9) | -2.4 (-13.3, 9.9) |
| Surgery | -7.3 (-14.0, 0.0) | -21.1 (-28.4, -13.0) |
| Surgery* | -6.0 (-12.9, 1.4) | -19.2 (-26.6, -11.0) |
| Radiology | -6.4 (-15.6, 3.9) | -10.7 (-21.9, 2.2) |
| Oncology | -1.9 (-11.4, 8.6) | -1.8 (-13.9, 11.9) |
| Anesthesiology | -8.4 (-16.4, 0.4) | -13.0 (-22.7, -2.1) |
| Other | -6.9 (-14.1, 0.9) | -11.7 (-20.5, -2.0) |

Table 11: Overall Departmental Differences (95% CI) in FTE Salary (FY2011) in \$1000s, negative=women earn less than men. *Estimated gender differences after removing the Cardiology and GI specialties from Medicine, and removing Neurosurgery specialty from Surgery.

| Department | FTE Salary | TOTAL Salary |
|----------------|---------------------|----------------------|
| Overall | -7.8 (-11.2, -4.4) | -19.6 (-25.4, -13.8) |
| Overall* | -6.5 (-10.0, -3.1) | -16.8 (-22.4, -11.2) |
| Basic Science | -9.2 (-17.9, -0.4) | -9.4 (-18.7, -0.2) |
| Neurology | -3.2 (-22.3, 15.9) | -3.3 (-27.0, 20.3) |
| Medicine | -7.8 (-13.5, -2.0) | -17.8 (-26.8, -8.8) |
| Medicine* | -3.0 (-7.8, 1.9) | -9.5 (-16.9, -2.1) |
| Ophthalmology | -7.6 (-21.7, 6.4) | 2.4 (-47.4, 52.3) |
| Pathology | -5.1 (-13.7, 3.5) | -8.0 (-23.9, 7.8) |
| Pediatrics | -2.0 (-12.1, 8.0) | -3.2 (-14.8, 8.4) |
| Psychiatry | -3.5 (-10.2, 3.2) | -4.8 (-12.3, 2.8) |
| Surgery | -12.6 (-26.0, 0.9) | -72.4 (-99.6, -45.1) |
| Surgery* | -10.4 (-24.1, 3.2) | -64.4 (-88.5, -40.3) |
| Radiology | -8.1 (-27.2, 11.0) | -27.1 (-60.1, 5.9) |
| Oncology | -5.3 (-14.3, 3.6) | -6.4 (-16.6, 3.8) |
| Anesthesiology | -17.6 (-34.0, -1.3) | -36.4 (-62.4, -10.3) |
| Other | -7.9 (-25.8, 10.1) | -17.8 (-41.3, 5.7) |

Table 12: Percent Differences (95% CI) FTE Salary for FY 2006-2011. *Estimated gender differences after removing the Cardiology and GI specialties from Medicine.

| Department | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|----------------|--------------------|--------------------|--------------------|---------------------|---------------------|-------------------|
| Overall | -3.2 (-5.4, -1.0) | -4.0 (-6.1, -1.7) | -3.5 (-5.8, -1.2) | -3.1 (-5.4, -0.9) | -2.2 (-4.3, 0.1) | -4.6 (-6.8, -2.3) |
| Basic Science | -0.8 (-9.1, 8.2) | -1.0 (-9.3, 8.1) | -2.8 (-11.2, 6.5) | -4.1 (-11.4, 3.8) | -3.9 (-11.1, 3.7) | -6.5 (-13.8, 1.5) |
| Neurology | -5.4 (-14.6, 4.8) | -7.7 (-16.7, 2.2) | -4.5 (-14.1, 6.1) | -3.8 (-13.7, 7.3) | -1.9 (-12.3, 9.7) | -9.5 (-18.9, 1.0) |
| Medicine | -4.6 (-8.9, -0.1) | -4.7 (-8.9, -0.4) | -5.6 (-9.9, -1.1) | -3.1 (-7.4, 1.4) | -0.8 (-5.0, 3.6) | -2.7 (-7.0, 1.9) |
| Medicine* | -1.5 (-6.3, 3.4) | -1.6 (-6.2, 3.1) | -2.6 (-7.4, 2.4) | 0.0 (-5.0, 5.1) | 1.7 (-3.1, 6.7) | -0.1 (-5.1, 5.3) |
| Ophthalmology | -6.0 (-14.9, 3.9) | -5.8 (-15.1, 4.4) | -0.1 (-11.1, 12.3) | -0.8 (-11.7, 11.4) | 0.6 (-10.5, 13.2) | -4.4 (-15.2, 7.7) |
| Pathology | -5.3 (-13.6, 3.7) | -6.3 (-14.3, 2.4) | -8.0 (-16.4, 1.3) | -8.8 (-17.0, 0.2) | -4.5 (-13.3, 5.1) | -3.1 (-12.5, 7.2) |
| Pediatrics | -0.7 (-9.1, 8.4) | -0.5 (-8.8, 8.6) | 1.3 (-8.2, 11.8) | 2.1 (-5.8, 10.7) | 1.9 (-5.5, 10.0) | -0.7 (-8.6, 7.8) |
| Psychiatry | -0.1 (-7.6, 8.0) | 0.4 (-7.0, 8.5) | -2.7 (-10.9, 6.1) | -1.5 (-9.2, 6.8) | -1.3 (-9.4, 7.5) | -1.5 (-10.2, 7.9) |
| Surgery | 0.9 (-7.7, 10.4) | -2.2 (-10.4, 6.8) | -0.3 (-8.5, 8.6) | -2.2 (-9.7, 5.8) | -9.2 (-15.6, -2.4) | -7.3 (-14.0, 0.0) |
| Radiology | -0.5 (-10.0, 10.0) | 0.2 (-9.6, 11.1) | 2.4 (-7.9, 13.8) | 3.6 (-6.2, 14.3) | 7.8 (-2.3, 18.9) | -6.4 (-15.6, 3.9) |
| Oncology | -5.7 (-13.4, 2.7) | -9.4 (-17.2, -0.8) | -9.2 (-17.4, -0.2) | -10.1 (-18.0, -1.4) | -10.6 (-18.2, -2.3) | -1.9 (-11.4, 8.6) |
| Anesthesiology | -5.4 (-14.1, 4.1) | -7.1 (-15.5, 2.1) | -7.8 (-16.1, 1.4) | -7.8 (-15.8, 1.0) | -6.2 (-14.0, 2.4) | -8.4 (-16.4, 0.4) |
| Other | -2.7 (-9.7, 4.8) | -3.3 (-10.2, 4.1) | 1.3 (-6.2, 9.4) | -1.7 (-9.2, 6.5) | 3.8 (-4.3, 12.7) | -6.9 (-14.1, 0.9) |

Table 13: Percent Differences (95% CI) TOTAL Salary for FY 2006-2011. *Estimated gender differences after removing the Cardiology and GI specialties from Medicine.

| Department | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|----------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|
| Overall | -8.0 (-11.3, -4.7) | -6.0 (-8.7, -3.2) | -5.7 (-8.5, -2.8) | -6.1 (-8.9, -3.2) | -5.4 (-8.2, -2.5) | -8.0 (-10.7, -5.1) |
| Basic Science | 1.0 (-11.7, 15.7) | -2.0 (-12.3, 9.4) | -3.9 (-14.3, 7.8) | -3.9 (-13.2, 6.5) | -3.3 (-12.7, 7.1) | -6.4 (-15.7, 4.0) |
| Neurology | -6.2 (-19.9, 10.0) | -9.3 (-20.3, 3.3) | -3.8 (-15.8, 9.9) | -2.9 (-15.6, 11.9) | -0.6 (-14.3, 15.3) | -9.8 (-21.7, 3.9) |
| Medicine | -9.3 (-15.5, -2.6) | -6.3 (-11.4, -0.9) | -8.1 (-13.3, -2.5) | -6.2 (-11.5, -0.5) | -4.7 (-10.0, 1.0) | -6.5 (-11.8, -0.7) |
| Medicine* | -6.7 (-13.7, 0.9) | -2.1 (-7.8, 4.0) | -3.6 (-9.5, 2.6) | -0.8 (-7.0, 5.7) | -0.3 (-6.4, 6.1) | -2.4 (-8.7, 4.2) |
| Ophthalmology | -6.3 (-19.8, 9.5) | -6.0 (-17.5, 7.1) | 8.5 (-6.3, 25.6) | 3.0 (-11.4, 19.7) | 4.9 (-10.3, 22.7) | 1.6 (-13.0, 18.6) |
| Pathology | -10.1 (-21.9, 3.5) | -7.9 (-17.7, 3.1) | -10.3 (-20.6, 1.2) | -11.3 (-21.5, 0.2) | -5.8 (-17.1, 7.0) | -4.0 (-15.8, 9.5) |
| Pediatrics | -4.1 (-16.4, 9.9) | 0.3 (-10.2, 12.0) | 2.5 (-9.5, 16.1) | 1.6 (-8.5, 12.8) | 0.3 (-9.4, 11.0) | -1.1 (-11.1, 10.1) |
| Psychiatry | -6.1 (-16.8, 6.1) | -0.1 (-9.4, 10.1) | -3.1 (-13.2, 8.2) | -1.9 (-11.7, 9.0) | -1.1 (-11.8, 10.8) | -2.4 (-13.3, 9.9) |
| Surgery | -13.4 (-24.6, -0.5) | -11.9 (-21.1, -1.5) | -14.6 (-23.4, -4.9) | -19.1 (-26.9, -10.3) | -24.9 (-31.8, -17.2) | -21.1 (-28.4, -13.0) |
| Radiology | -9.1 (-22.2, 6.3) | -4.4 (-16.1, 8.9) | -1.6 (-14.0, 12.4) | 2.5 (-9.8, 16.5) | 5.6 (-7.3, 20.3) | -10.7 (-21.9, 2.2) |
| Oncology | -9.3 (-20.6, 3.5) | -9.1 (-18.9, 1.9) | -9.2 (-19.4, 2.3) | -11.5 (-21.5, -0.3) | -11.3 (-21.2, -0.2) | -1.8 (-13.9, 11.9) |
| Anesthesiology | -8.8 (-21.4, 5.9) | -5.7 (-16.3, 6.3) | -6.9 (-17.4, 4.8) | -10.8 (-20.7, 0.4) | -12.8 (-22.3, -2.1) | -13.0 (-22.7, -2.1) |
| Other | -10.4 (-20.2, 0.5) | -9.0 (-17.1, -0.1) | -2.4 (-11.4, 7.5) | -4.4 (-13.8, 6.0) | 4.9 (-6.0, 16.9) | -11.7 (-20.5, -2.0) |

9 Appendix

Model Specifications

For Tables 8, 9, 10, 12 and 13 log salary was modeled, as detailed below. For Table 11 and appendix Table 18 and 19, actual salary was modeled with robust variance estimates.

The models for Tables 8-9 and appendix Tables 18-19 adjust for department, rank separately within each department, degree, and year-in-rank, and estimate:

- 1) an overall gender difference,
- 2) gender differences separately for each rank,
- 3) gender differences separately for each degree type,
- 4) gender differences separately for each rank/year-in-rank combination.

The models for Table 10, 11, 12 and 13 estimate a separate gender difference for each department, adjusting for department-specific rank, degree, and years-in-rank.

Table 14: Department By Degree, Counts (%)

| Department | Non-MD | MD | Total |
|-------------------------|----------|-----------|-------|
| Basic Science | 115 (90) | 13 (10) | 128 |
| OB/GYN | 7 (15) | 40 (85) | 47 |
| Neurology | 22 (25) | 67 (75) | 89 |
| Medicine | 61 (14) | 364 (86) | 425 |
| Ophthalmology | 22 (29) | 53 (71) | 75 |
| Pathology | 23 (26) | 66 (74) | 89 |
| Pediatrics | 15 (12) | 111 (88) | 126 |
| Psychiatry | 52 (44) | 66 (56) | 118 |
| Surgery | 42 (19) | 185 (81) | 227 |
| Radiology | 35 (34) | 69 (66) | 104 |
| Oncology | 27 (26) | 76 (74) | 103 |
| Anesthesiology | 10 (9) | 107 (91) | 117 |
| Art Applied to Medicine | 5 (100) | 0 (0) | 5 |
| History of Medicine | 6 (100) | 0 (0) | 6 |
| Dermatology | 2 (15) | 11 (85) | 13 |
| Physical Medicine/Rehab | 10 (67) | 5 (33) | 15 |
| Emergency Medicine | 2 (8) | 23 (92) | 25 |
| Genetic Medicine | 7 (41) | 10 (59) | 17 |
| Radiation Oncology | 6 (33) | 12 (67) | 18 |
| Total | 469 (27) | 1278 (73) | 1747 |

Table 15: Degree By Rank, Counts (Row %) (Col %)

| Degree | Prof | Assoc Prof | Assist Prof | Total |
|--------|---------------|---------------|---------------|-----------|
| Non-MD | 141 (30) (31) | 116 (25) (25) | 212 (45) (26) | 469 (27) |
| MD | 312 (24) (69) | 349 (27) (75) | 617 (48) (74) | 1278 (73) |
| Total | 453 (26) | 465 (27) | 829 (47) | 1747 |

Table 16: Faculty Receiving Bonuses By Department and Rank, showing numbers [%] of faculty members receiving bonuses, and of those the number (%) who are women.

| Department | Prof-All | Prof-F | Assoc-All | Assoc-F | Assist-All | Assist-F |
|-------------------------|----------|---------------|-----------|--------------|------------|---------------|
| Basic Science | 2 [3] | 1 [7] (50) | 0 | 0 | 2 [5] | 1 [6] (50) |
| OB/GYN | 5 [71] | 3 [75] (60) | 2 [29] | 0 | 18 [55] | 15 [50] (83) |
| Neurology | 26 [96] | 5 [100] (19) | 16 [84] | 3 [100] (19) | 28 [65] | 10 [59] (36) |
| Medicine | 64 [65] | 8 [40] (12) | 70 [62] | 19 [50] (27) | 124 [58] | 61 [60] (49) |
| Ophthalmology | 17 [71] | 1 [33] (6) | 16 [73] | 7 [78] (44) | 12 [41] | 3 [27] (25) |
| Pathology | 36 [100] | 8 [100] (22) | 24 [96] | 9 [90] (38) | 24 [86] | 14 [93] (58) |
| Pediatrics | 8 [29] | 4 [27] (50) | 8 [28] | 4 [33] (50) | 21 [30] | 13 [32] (62) |
| Psychiatry | 4 [16] | 1 [10] (25) | 17 [49] | 3 [33] (18) | 31 [53] | 16 [44] (52) |
| Surgery | 41 [80] | 3 [75] (7) | 58 [81] | 10 [77] (17) | 68 [65] | 19 [70] (28) |
| Radiology | 25 [96] | 5 [100] (20) | 23 [82] | 8 [100] (35) | 32 [64] | 7 [64] (22) |
| Oncology | 33 [89] | 3 [60] (9) | 28 [88] | 8 [80] (29) | 29 [85] | 11 [92] (38) |
| Anesthesiology | 12 [92] | 0 | 27 [96] | 7 [100] (26) | 67 [88] | 33 [85] (49) |
| Art Applied to Medicine | 0 | 0 | 0 | 0 | 0 | 0 |
| History of Medicine | 0 | 0 | 0 | 0 | 0 | 0 |
| Dermatology | 1 [50] | 0 | 0 | 0 | 7 [78] | 5 [71] (71) |
| Physical Medicine/Rehab | 1 [100] | 1 [100] (100) | 3 [100] | 0 | 9 [82] | 5 [71] (56) |
| Emergency Medicine | 0 | 0 | 7 [100] | 0 | 17 [100] | 5 [100] (29) |
| Genetic Medicine | 1 [14] | 0 | 0 | 0 | 1 [33] | 0 |
| Radiation Oncology | 0 | 0 | 5 [71] | 1 [100] (20) | 3 [33] | 1 [25] (33) |
| Total | 276 [61] | 43 [43] (16) | 304 [65] | 79 [57] (26) | 493 [59] | 219 [58] (44) |

Table 17: Value of Bonuses in \$1000s, Degree by Rank by Gender—0,25,50,75,100th percentiles (mean, SD)

| Degree | Rank | Male |
|--------|-------------|--|
| Non-MD | Prof | 0.8, 5.0, 8.2, 19.8, 30.0 (12.0, 9.4) |
| | Assoc Prof | 0.7, 2.0, 4.0, 8.0, 38.6 (7.3, 8.5) |
| | Assist Prof | 1.3, 3.0, 4.0, 7.0, 50.0 (8.4, 12.1) |
| MD | Prof | 0.0, 10.1, 30.0, 86.9, 795.7 (69.5, 109.5) |
| | Assoc Prof | 0.1, 13.2, 30.0, 94.9, 555.5 (65.3, 84.1) |
| | Assist Prof | 0.3, 10.1, 30.0, 73.4, 432.4 (53.3, 64.6) |
| Degree | Rank | Female |
| Non-MD | Prof | 0.5, 4.6, 9.0, 11.5, 25.0 (9.4, 8.0) |
| | Assoc Prof | 2.7, 4.0, 7.8, 17.0, 76.9 (19.0, 24.7) |
| | Assist Prof | 0.2, 2.1, 5.0, 6.0, 75.4 (7.1, 13.1) |
| MD | Prof | 0.5, 8.0, 17.0, 58.1, 153.7 (38.3, 44.0) |
| | Assoc Prof | 0.1, 7.5, 15.0, 41.2, 276.9 (35.9, 51.1) |
| | Assist Prof | 0.0, 6.1, 11.7, 32.9, 181.8 (23.4, 26.2) |

Table 18: Overall Differences (95% CI) in FTE Salary (FY2011) in \$1000s, negative=women earn less than men. *Estimated gender differences after removing the Cardiology and GI specialties from Medicine, and removing Neurosurgery specialty from Surgery.

| | FTE Salary | FTE Salary* |
|---------------------|---------------------|---------------------|
| Overall | -7.8 (-11.2, -4.4) | -6.5 (-10.0, -3.1) |
| Professor | -11.8 (-19.5, -4.0) | -12.2 (-19.9, -4.4) |
| Associate Professor | -8.7 (-15.4, -2.0) | -6.2 (-12.9, 0.5) |
| Assistant Professor | -5.0 (-9.6, -0.4) | -3.5 (-8.2, 1.1) |
| MD degree | -8.7 (-13.0, -4.4) | -6.8 (-11.2, -2.5) |
| Non-MD degree | 1.2 (-5.2, 7.6) | 2.1 (-4.5, 8.7) |
| Professor (New) | 0.1 (-14.0, 14.3) | -2.2 (-16.9, 12.5) |
| Professor (Mid) | -13.1 (-24.6, -1.7) | -10.8 (-22.5, 1.0) |
| Professor (Long) | -13.0 (-27.6, 1.6) | -15.1 (-29.1, -1.1) |
| Assoc Prof (New) | -9.7 (-20.8, 1.4) | -7.7 (-18.6, 3.2) |
| Assoc Prof (Mid) | -5.7 (-15.8, 4.4) | -3.9 (-13.7, 5.9) |
| Assoc Prof (Long) | -12.4 (-25.2, 0.4) | -7.6 (-20.8, 5.6) |
| Assist Prof (New) | -7.6 (-16.3, 1.0) | -6.9 (-15.9, 2.1) |
| Assist Prof (Mid) | -3.9 (-10.6, 2.7) | -0.1 (-6.6, 6.3) |
| Assist Prof (Long) | -3.6 (-11.9, 4.6) | -3.2 (-11.3, 4.9) |

Table 19: Overall Differences (95% CI) in Total Salary (FY2011) in \$1000s, negative=women earn less than men. *Estimated gender differences after removing the Cardiology and GI specialties from Medicine, and removing Neurosurgery specialty from Surgery.

| | Total Salary | Total Salary* |
|---------------------|----------------------|----------------------|
| Overall | -19.6 (-25.4, -13.8) | -16.8 (-22.4, -11.2) |
| Professor | -26.9 (-40.1, -13.7) | -25.4 (-37.8, -12.9) |
| Associate Professor | -22.9 (-35.2, -10.6) | -19.9 (-32.0, -7.8) |
| Assistant Professor | -13.3 (-21.1, -5.5) | -9.9 (-17.6, -2.3) |
| MD degree | -27.1 (-34.6, -19.6) | -23.0 (-30.4, -15.6) |
| Non-MD degree | 10.8 (1.4, 20.3) | 11.6 (2.0, 21.1) |
| Professor (New) | -15.3 (-40.0, 9.3) | -16.9 (-38.9, 5.2) |
| Professor (Mid) | -23.5 (-43.3, -3.7) | -16.1 (-33.7, 1.4) |
| Professor (Long) | -29.8 (-53.6, -6.0) | -32.2 (-55.7, -8.7) |
| Assoc Prof (New) | -32.7 (-52.4, -12.9) | -30.1 (-49.5, -10.7) |
| Assoc Prof (Mid) | -18.6 (-39.9, 2.6) | -16.7 (-35.8, 2.4) |
| Assoc Prof (Long) | -14.2 (-36.5, 8.2) | -7.8 (-31.4, 15.9) |
| Assist Prof (New) | -7.4 (-21.0, 6.2) | -6.7 (-20.3, 6.9) |
| Assist Prof (Mid) | -19.6 (-31.6, -7.7) | -9.7 (-20.0, 0.5) |
| Assist Prof (Long) | -16.1 (-30.3, -1.8) | -15.8 (-30.1, -1.4) |