

Appendix 1 (as supplied by the authors): Supplemental tables

| Supplemental Table S1: Use of cancer-related medication and mean (95% CI in parentheses) cancer-related medication costs in 1 year after diagnosis among cancer patients diagnosed between January 1, 2010 and December 31, 2015, by cancer subtype and cancer stage at the time of diagnosis | | | | | | | | |
|---|----------------------------|-------------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|------------------------|
| Cancer site | Cancer subtype | Measures | Overall | Stage I | Stage II | Stage III | Stage IV | Unknown Stage |
| Breast † | Hormone Receptor + HER 2 + | No. of patients | 4,010 | 1,219 | 1,708 | 838 | 232 | 13 |
| | | No. (%) used chemotherapy | 3,751 (93.5%) | 1,089 (89.3%) | 1,630 (95.4%) | 813 (97.0%) | 207 (89.2%) | 12 (92.3%) |
| | | Mean (95% CI) of chemotherapy cost* | 30,453 (29,828, 31,077) | 28,075 (27,036, 29,114) | 29,485 (28,677, 30,293) | 32,399 (31,177, 33,620) | 43,801 (38,327, 49,274) | 15,601 (5,305, 25,896) |
| | Hormone Receptor + HER 2 - | No. of patients | 29,241 | 13,920 | 10,876 | 3,441 | 921 | 83 |
| | | No. (%) used chemotherapy | 21,541 (73.7%) | 8,324 (59.8%) | 9,103 (83.7%) | 3,271 (95.1%) | 779 (84.6%) | 64 (77.1%) |
| | | Mean (95% CI) of chemotherapy cost* | 2,971 (2,899, 3,044) | 1,464 (1,381, 1,548) | 3,568 (3,452, 3,683) | 5,267 (5,042, 5,492) | 2,633 (2,151, 3,115) | 928 (655, 1,201) |
| | Hormone Receptor - HER 2 + | No. of patients | 1,954 | 498 | 815 | 483 | 151 | 7 |
| | | No. (%) used chemotherapy | 1,807 (92.5%) | 417 (83.7%) | 779 (95.6%) | 465 (96.3%) | 139 (92.1%) | 7 (100.0%) |
| | | Mean (95% CI) of chemotherapy cost* | 32,383 (31,463, 33,303) | 27,848 (26,276, 29,421) | 31,484 (30,345, 32,624) | 33,476 (31,768, 35,185) | 47,987 (41,800, 54,175) | 19,928 (3,604, 36,251) |
| | Hormone Receptor - HER 2 - | No. of patients | 4,249 | 1,229 | 2,117 | 716 | 180 | 7 |
| | | No. (%) used chemotherapy | 3,872 (91.1%) | 1,045 (85.0%) | 1,979 (93.5%) | 688 (96.1%) | 154 (85.6%) | 6 (85.7%) |
| | | Mean (95% CI) of chemotherapy cost* | 5,329 (5,122, 5,536) | 4,532 (4,174, 4,890) | 5,496 (5,211, 5,781) | 6,550 (5,968, 7,133) | 3,230 (2,456, 4,003) | 2,915 (463, 5,367) |
| Colorectal | Colon | No. of patients | 25,312 | 5,140 | 6,754 | 6,635 | 4,734 | 2,049 |
| | | No. (%) used chemotherapy | 18,367 (72.6%) | 2,970 (57.8%) | 4,619 (68.4%) | 5,838 (88.0%) | 3,854 (81.4%) | 1,086 (53.0%) |

| Supplemental Table S1: Use of cancer-related medication and mean (95% CI in parentheses) cancer-related medication costs in 1 year after diagnosis among cancer patients diagnosed between January 1, 2010 and December 31, 2015, by cancer subtype and cancer stage at the time of diagnosis | | | | | | | | |
|--|-----------------------|-------------------------------------|-------------------------|-------------------------|-------------------------|----------------------------|----------------------------|-------------------------|
| Cancer site | Cancer subtype | Measures | Overall | Stage I | Stage II | Stage III | Stage IV | Unknown Stage |
| | Rectal | Mean (95% CI) of chemotherapy cost* | 6,505 (6,348, 6,662) | 531 (422, 640) | 2,170 (2,000, 2,341) | 10,326 (10,043, 10,609) | 11,342 (10,887, 11,796) | 3,566 (3,037, 4,095) |
| | | No. of patients | 12,796 | 3,129 | 2,370 | 4,120 | 2,114 | 1,063 |
| | | No. (%) used chemotherapy | 9,382 (73.3%) | 1,705 (54.5%) | 1,802 (76.0%) | 3,644 (88.4%) | 1,780 (84.2%) | 451 (42.4%) |
| | | Mean (95% CI) of chemotherapy cost* | 6,693 (6,500, 6,886) | 1,226 (1,021, 1,431) | 4,337 (4,014, 4,660) | 8,534 (8,251, 8,816) | 11,659 (11,040, 12,277) | 2,305 (1,705, 2,906) |
| Lung | Non-small cell | No. of patients | 30,091 | 5,959 | 2,715 | 5,858 | 14,531 | 1,028 |
| | | No. (%) used chemotherapy | 23,831 (79.2%) | 4,346 (72.9%) | 2,340 (86.2%) | 5,061 (86.4%) | 11,392 (78.4%) | 692 (67.3%) |
| | | Mean (95% CI) of chemotherapy cost* | 3,051 (2,955, 3,148) | 579 (512, 647) | 1,364 (1,222, 1,506) | 2,325 (2,165, 2,486) | 4,712 (4,535, 4,889) | 2,241 (1,734, 2,749) |
| | Small cell | No. of patients | 4,718 | 145 | 140 | 1,131 | 3,183 | 119 |
| | | No. (%) used chemotherapy | 3,842 (81.4%) | 124 (85.5%) | 129 (92.1%) | 989 (87.4%) | 2,518 (79.1%) | 82 (68.9%) |
| | | Mean (95% CI) of chemotherapy cost* | 1,965 (1,882, 2,048) | 1,769 (1,404, 2,134) | 2,334 (1,855, 2,813) | 2,117 (1,960, 2,275) | 1,921 (1,816, 2,027) | 1,181 (835, 1,528) |
| Prostate | | No. of patients | 45,258 | 10,154 | 22,103 | 5,664 | 4,058 | 3,279 |
| | | No. (%) used chemotherapy | 22,599 (49.9%) | 3,231 (31.8%) | 11,763 (53.2%) | 2,798 (49.4%) | 3,276 (80.7%) | 1,531 (46.7%) |
| | | Mean (95% CI) of chemotherapy cost* | 1,211 (1,175, 1,247) | 268 (239, 296) | 966 (932, 1,000) | 825 (763, 888) | 3,236 (3,060, 3,413) | 1,461 (1,303, 1,620) |

*: Among those who had a non \$0 chemotherapy medication cost.

†: Results for those with missing Hormone Receptor information or missing HER 2 information were not included.

Supplemental Table S2: Use of radiation treatment and mean (95% CI in parentheses) radiation treatment costs in 1 year after diagnosis among cancer patients diagnosed between January 1, 2010 and December 31, 2015, by cancer subtype and cancer stage at the time of diagnosis

| Cancer site | Cancer subtype | Measures | Overall | Stage I | Stage II | Stage III | Stage IV | Unknown Stage |
|-------------|----------------------------|----------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|------------------------|------------------------|
| Breast† | Hormone Receptor + HER 2 + | No. of patients | 4,010 | 1,219 | 1,708 | 838 | 232 | 13 |
| | | No. (%) used radiation | 3,430 (85.5%) | 1,027 (84.2%) | 1,470 (86.1%) | 780 (93.1%) | 147 (63.4%) | 6 (46.2%) |
| | | Mean (95% CI) of radiation cost* | 19,600 (19,198, 20,002) | 16,618 (15,978, 17,259) | 20,464 (19,856, 21,072) | 23,866 (23,024, 24,708) | 9,303 (7,333, 11,274) | 16,132 (9,049, 23,216) |
| | Hormone Receptor + HER 2 - | No. of patients | 29,241 | 13,920 | 10,876 | 3,441 | 921 | 83 |
| | | No. (%) used radiation | 24,532 (83.9%) | 11,751 (84.4%) | 9,049 (83.2%) | 3,095 (89.9%) | 615 (66.8%) | 22 (26.5%) |
| | | Mean (95% CI) of radiation cost* | 18,343 (18,200, 18,485) | 16,438 (16,262, 16,615) | 19,724 (19,476, 19,972) | 23,744 (23,310, 24,178) | 7,548 (6,702, 8,394) | 9,088 (4,630, 13,546) |
| | Hormone Receptor - HER 2 + | No. of patients | 1,954 | 498 | 815 | 483 | 151 | 7 |
| | | No. (%) used radiation | 1,666 (85.3%) | 397 (79.7%) | 718 (88.1%) | 452 (93.6%) | 96 (63.6%) | 3 (42.9%) |
| | | Mean (95% CI) of radiation cost* | 19,872 (19,272, 20,473) | 15,689 (14,560, 16,818) | 20,697 (19,823, 21,571) | 24,149 (23,007, 25,291) | 11,089 (8,727, 13,451) | 12,751 (284, 25,219) |
| | Hormone Receptor - HER 2 - | No. of patients | 4,249 | 1,229 | 2,117 | 716 | 180 | 7 |
| | | No. (%) used radiation | 3,691 (86.9%) | 1,067 (86.8%) | 1,844 (87.1%) | 649 (90.6%) | 125 (69.4%) | 6 (85.7%) |
| | | Mean (95% CI) of radiation cost* | 19,616 (19,228, 20,004) | 17,375 (16,759, 17,992) | 20,013 (19,463, 20,562) | 23,692 (22,739, 24,646) | 11,771 (9,107, 14,436) | 18,563 (7,004, 30,122) |
| Colorectal | Colon | No. of patients | 25,312 | 5,140 | 6,754 | 6,635 | 4,734 | 2,049 |
| | | No. (%) used radiation | 1,722 (6.8%) | 90 (1.8%) | 343 (5.1%) | 530 (8.0%) | 642 (13.6%) | 117 (5.7%) |
| | | Mean (95% CI) of radiation cost* | 6,508 (6,022, 6,994) | 6,145 (3,825, 8,465) | 8,527 (7,284, 9,770) | 7,799 (6,781, 8,818) | 4,068 (3,554, 4,583) | 8,401 (6,460, 10,343) |
| | Rectal | No. of patients | 12,796 | 3,129 | 2,370 | 4,120 | 2,114 | 1,063 |

| Supplemental Table S2: Use of radiation treatment and mean (95% CI in parentheses) radiation treatment costs in 1 year after diagnosis among cancer patients diagnosed between January 1, 2010 and December 31, 2015, by cancer subtype and cancer stage at the time of diagnosis | | | | | | | | |
|--|-----------------------|---|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Cancer site | Cancer subtype | Measures | Overall | Stage I | Stage II | Stage III | Stage IV | Unknown Stage |
| | | No. (%) used radiation | 7,257 (56.7%) | 962 (30.7%) | 1,636 (69.0%) | 3,273 (79.4%) | 1,235 (58.4%) | 151 (14.2%) |
| | | Mean (95% CI) of radiation cost* | 17,235 (16,929, 17,540) | 11,030 (10,183, 11,878) | 19,260 (18,629, 19,891) | 20,643 (20,222, 21,063) | 10,719 (10,063, 11,375) | 14,236 (11,876, 16,596) |
| Lung | Non-small cell | No. of patients | 30,091 | 5,959 | 2,715 | 5,858 | 14,531 | 1,028 |
| | | No. (%) used radiation | 19,603 (65.1%) | 2,208 (37.1%) | 1,403 (51.7%) | 4,876 (83.2%) | 10,750 (74.0%) | 366 (35.6%) |
| | | Mean (95% CI) of radiation cost* | 10,470 (10,311, 10,629) | 7,602 (7,237, 7,967) | 12,418 (11,715, 13,122) | 17,314 (16,903, 17,724) | 7,812 (7,660, 7,964) | 7,202 (6,258, 8,145) |
| | Small cell | No. of patients | 4,718 | 145 | 140 | 1,131 | 3,183 | 119 |
| | | No. (%) used radiation | 3,555 (75.3%) | 122 (84.1%) | 124 (88.6%) | 988 (87.4%) | 2,255 (70.8%) | 66 (55.5%) |
| | | Mean (95% CI) of radiation cost* | 12,733 (12,329, 13,138) | 14,855 (12,574, 17,135) | 19,603 (17,283, 21,923) | 20,143 (19,244, 21,043) | 9,002 (8,622, 9,381) | 12,485 (9,789, 15,181) |
| Prostate | | No. of patients | 45,258 | 10,154 | 22,103 | 5,664 | 4,058 | 3,279 |
| | | No. (%) used radiation | 23,207 (51.3%) | 3,228 (31.8%) | 13,433 (60.8%) | 3,701 (65.3%) | 2,478 (61.1%) | 367 (11.2%) |
| | | Mean (95% CI) of radiation cost* | 16,887 (16,648, 17,125) | 6,467 (6,006, 6,928) | 20,543 (20,219, 20,867) | 17,765 (17,168, 18,362) | 10,264 (9,717, 10,812) | 10,564 (8,985, 12,142) |

*: Among those who had a non \$0 radiation treatment cost.

†: Results for those with missing Hormone Receptor information or missing HER 2 information were not included.

Supplemental Table S3: Use of cancer-related medication and mean (95% CI in parentheses) cancer-related medication costs in 1 year after diagnosis among cancer patients diagnosed between January 1, 2010 and December 31, 2015 *and who survived for 2 years or more*, by cancer stage at the time of diagnosis. This analysis was performed to exclude possible end-of-life chemotherapy costs.

| Cancer site | Measures | Overall | Stage I | Stage II | Stage III | Stage IV | Unknown Stage |
|-------------|-----------------------------------|-------------------------|-------------------------|-------------------------|----------------------------|----------------------------|-------------------------|
| Breast | No. of patients | 46,584 | 20,373 | 17,765 | 5,979 | 1,328 | 1,139 |
| | No. (%) used medication | 35,560 (76.3%) | 12,793 (62.8%) | 15,316 (86.2%) | 5,700 (95.3%) | 1,149 (86.5%) | 602 (52.9%) |
| | Mean (95% CI) of medication cost* | 8,454 (8,303, 8,606) | 5,505 (5,299, 5,711) | 8,731 (8,519, 8,943) | 12,773 (12,353, 13,194) | 17,557 (15,773, 19,342) | 5,807 (4,706, 6,907) |
| Colorectal | No. of patients | 28,137 | 7,581 | 7,848 | 8,725 | 2,184 | 1,799 |
| | No. (%) used medication | 20,456 (72.7%) | 4,198 (55.4%) | 5,575 (71.0%) | 7,869 (90.2%) | 1,992 (91.2%) | 822 (45.7%) |
| | Mean (95% CI) of medication cost* | 6,917 (6,777, 7,057) | 779 (675, 883) | 2,961 (2,791, 3,131) | 10,557 (10,333, 10,782) | 17,551 (16,940, 18,162) | 4,474 (3,811, 5,137) |
| Lung | No. of patients | 11,303 | 4,905 | 1,733 | 2,453 | 1,889 | 323 |
| | No. (%) used medication | 8,893 (78.7%) | 3,477 (70.9%) | 1,505 (86.8%) | 2,146 (87.5%) | 1,561 (82.6%) | 204 (63.2%) |
| | Mean (95% CI) of medication cost* | 3,117 (2,942, 3,292) | 518 (448, 588) | 1,394 (1,237, 1,552) | 2,740 (2,451, 3,029) | 11,151 (10,398, 11,903) | 2,592 (1,473, 3,712) |
| Prostate | No. of patients | 42,002 | 9,919 | 21,235 | 5,525 | 2,546 | 2,777 |
| | No. (%) used medication | 20,012 (47.6%) | 3,075 (31.0%) | 11,090 (52.2%) | 2,691 (48.7%) | 1,946 (76.4%) | 1,210 (43.6%) |
| | Mean (95% CI) of medication cost* | 1,031 (996, 1,065) | 260 (231, 288) | 926 (892, 960) | 782 (720, 844) | 2,986 (2,750, 3,222) | 1,355 (1,186, 1,524) |

*: Among those who had used chemotherapy medication.

| Supplemental Table S4: Use of radiation treatment and mean (95% CI in parentheses) radiation treatment costs in 1 year after diagnosis among cancer patients diagnosed between January 1, 2010 and December 31, 2015 and who survived for 2 years or more, by cancer stage at the time of diagnosis | | | | | | | |
|--|----------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Cancer site | Measures | Overall | Stage I | Stage II | Stage III | Stage IV | Unknown Stage |
| Breast | No. of patients | 46,584 | 20,373 | 17,765 | 5,979 | 1,328 | 1,139 |
| | No. (%) used radiation | 38,721 (83.1%) | 17,001 (83.4%) | 14,836 (83.5%) | 5,485 (91.7%) | 870 (65.5%) | 529 (46.4%) |
| | Mean (95% CI) of radiation cost* | 18,857 (18,742, 18,973) | 16,504 (16,355, 16,654) | 20,172 (19,978, 20,365) | 24,618 (24,309, 24,927) | 9,155 (8,346, 9,965) | 13,851 (12,856, 14,846) |
| Colorectal | No. of patients | 28,137 | 7,581 | 7,848 | 8,725 | 2,184 | 1,799 |
| | No. (%) used radiation | 6,673 (23.7%) | 947 (12.5%) | 1,672 (21.3%) | 3,199 (36.7%) | 708 (32.4%) | 147 (8.2%) |
| | Mean (95% CI) of radiation cost* | 17,229 (16,904, 17,554) | 10,761 (9,902, 11,620) | 18,227 (17,585, 18,869) | 19,857 (19,415, 20,298) | 11,866 (10,918, 12,814) | 16,204 (13,811, 18,597) |
| Lung | No. of patients | 11,303 | 4,905 | 1,733 | 2,453 | 1,889 | 323 |
| | No. (%) used radiation | 5,866 (51.9%) | 1,554 (31.7%) | 748 (43.2%) | 2,063 (84.1%) | 1,418 (75.1%) | 83 (25.7%) |
| | Mean (95% CI) of radiation cost* | 14,297 (13,947, 14,647) | 7,715 (7,262, 8,167) | 12,983 (11,957, 14,008) | 22,227 (21,609, 22,844) | 10,881 (10,318, 11,444) | 10,662 (8,136, 13,188) |
| Prostate | No. of patients | 42,002 | 9,919 | 21,235 | 5,525 | 2,546 | 2,777 |
| | No. (%) used radiation | 21,768 (51.8%) | 3,184 (32.1%) | 13,056 (61.5%) | 3,625 (65.6%) | 1,613 (63.4%) | 290 (10.4%) |
| | Mean (95% CI) of radiation cost* | 17,397 (17,148, 17,646) | 6,466 (6,001, 6,930) | 20,651 (20,322, 20,979) | 17,836 (17,233, 18,439) | 12,596 (11,822, 13,371) | 12,123 (10,237, 14,008) |

*: Among those who had a non \$0 radiation cost.