Supplemental Table 1. Summary of select tumor/disease characteristics. Analysis based on a cohort of men and women with invasive breast cancer from the National Cancer Data Base (2004-2015). Data presented as N (%). ER: estrogen receptor. PR: progesterone receptor. HER2: human epidermal growth factor receptor 2.

| | All Patients N=1,664,746 100.0% | Female N=1,648,070 99.0% | Male N=16,676 1.0% | P-Value |
|----------------------|---------------------------------------|--------------------------------|--------------------------|----------|
| ER Status | | | | < 0.0001 |
| ER+ | 1292947 (80%) | 1278261 (79.9%) | 14,686 (92.1%) | |
| ER- | 322,299 (20%) | 321,042 (20.1%) | 1,257 (7.9%) | |
| PR Status | • | | | < 0.0001 |
| PR+ | 1118217 (69.6%) | 1105028 (69.5%) | 13,189 (83.3%) | |
| PR- | 488,520 (30.4%) | 485,883 (30.5%) | 2,637 (16.7%) | |
| HER2 Status | | | | < 0.0001 |
| HER2+ | 130,223 (14.8%) | 129,119 (14.8%) | 1,104 (12.5%) | |
| HER2- | 750,161 (85.2%) | 742,419 (85.2%) | 7,742 (87.5%) | |
| Clinical T Stage | | | | |
| T1 | 774,712 (61.8%) | 768,621 (61.9%) | 6,091 (50.1%) | < 0.0001 |
| T2 | 344,836 (27.5%) | 340,274 (27.4%) | 4,562 (37.5%) | |
| Т3 | 70,249 (5.6%) | 69,749 (5.6%) | 500 (4.1%) | |
| T4 | 63,638 (5.1%) | 62,623 (5%) | 1,015 (8.3%) | |
| Clinical N Stage | | | | |
| N0 | 1010729 (80.3%) | 1001489 (80.4%) | 9,240 (76%) | < 0.0001 |
| N1 | 185,275 (14.7%) | 183,111 (14.7%) | 2,164 (17.8%) | |
| N2 | 38,893 (3.1%) | 38,392 (3.1%) | 501 (4.1%) | |
| N3 | 23,505 (1.9%) | 23,252 (1.9%) | 253 (2.1%) | |
| Pathological T Stage | • | | | |
| T1 | 832,512 (64.5%) | 825,938 (64.7%) | 6,574 (50.5%) | < 0.0001 |
| T2 | 349,091 (27.1%) | 343,981 (26.9%) | 5,110 (39.3%) | |
| Т3 | 55,850 (4.3%) | 55,453 (4.3%) | 397 (3.1%) | |
| T4 | 27,790 (2.2%) | 26,949 (2.1%) | 841 (6.5%) | |
| Т0 | 24,548 (1.9%) | 24,461 (1.9%) | 87 (0.7%) | |
| Pathological N Stage | | | | |
| N0 | 862,553 (69.4%) | 855,531 (69.6%) | 7,022 (56.3%) | < 0.0001 |
| N1 | 261,563 (21.1%) | 257,981 (21%) | 3,582 (28.7%) | |
| N2 | 78,373 (6.3%) | 77,119 (6.3%) | 1,254 (10.1%) | |
| N3 | 39,592 (3.2%) | 38,978 (3.2%) | 614 (4.9%) | |

^{*}Frequency may not add up to total because of missing values. Percentages are of the total reported and are based on the non-missing cohort of each variable.

Supplemental Table 2. Summary of select patient demographics, tumor/disease characteristics, and treatments for NSABP-B06 eligible patients. Analysis based on a cohort of men and women with invasive breast cancer from the National Cancer Data Base (2004-2015). Data presented as N (%) or Median (IQR). IQR: interquartile range. ER: estrogen receptor. PR: progesterone receptor. HER2: human epidermal growth factor receptor 2. HR: hormone receptor. TNBC: triple negative breast cancer.

| | All Patients | Female | Male | |
|---------------------------------|---------------------|----------------------|------------------|---------|
| | N=716,928 (100%) | N=709,818 (99.0%) | N=7,110 (1.0%) | P-Value |
| Follow-up (months) | | | | < 0.001 |
| Median (IQR) | 58.9 (36.6-83.9) | 58.9 (36.6-83.9) | 56.5 (34.8-81.4) | |
| Age | | | | < 0.001 |
| Median (IQR) | 61 (52 - 70) | 61 (52 - 70) | 66 (57 - 74) | |
| Race/Ethnicity | | | | < 0.001 |
| Hispanic | 31,412 (4.6%) | 31,199 (4.6%) | 213 (3.2%) | |
| Non-Hispanic Black | 64,151 (9.4%) | 63,446 (9.4%) | 705 (10.5%) | |
| Non-Hispanic Other | 26,548 (3.9%) | 26,384 (3.9%) | 164 (2.4%) | |
| Non-Hispanic White | 556,815 (82%) | 551,197 (82%) | 5,618 (83.9%) | |
| Charlson/Deyo Comorbidity Score | е | | | < 0.001 |
| 0 | 601,125 (84.3%) | 595,649 (84.4%) | 5,476 (77.9%) | |
| 1 | 95,246 (13.4%) | 93,989 (13.3%) | 1,257 (17.9%) | |
| ≥2 | 16,389 (2.3%) | 16,094 (2.3%) | 295 (4.2%) | |
| Histology | | | | < 0.001 |
| Ductal | 639,584 (89.2%) | 632,716 (89.1%) | 6,868 (96.6%) | |
| Lobular | 71,001 (9.9%) | 70,797 (10%) | 204 (2.9%) | |
| Other | 6,343 (0.9%) | 6,305 (0.9%) | 38 (0.5%) | |
| Tumor Size (mm) | | | | < 0.001 |
| Median (IQR) | 15 (9 - 21) | 15 (9 - 21) | 19 (13 - 25) | |
| Positive LNs | | | | < 0.001 |
| Median (IQR) | 1 (1 - 3) | 1 (1 - 3) | 2 (1 - 3) | |
| Oncotype Dx | | | | 0.11 |
| Median (IQR) | 16 (11-22) | 16 (11-22) | 16 (8.5 -23.5) | |
| Grade | | | | < 0.001 |
| 1 | 175,308 (25.6%) | 174,233 (25.7%) | 1,075 (15.7%) | |
| 2 | 308,967 (45.1%) | 305,418 (45%) | 3,549 (51.8%) | |
| 3 | 201,465 (29.4%) | 199,235 (29.3%) | 2,230 (32.5%) | |
| Molecular Subtypes by Receptors | | | | < 0.001 |

| | All Patients | Female | Male | |
|------------------------------|---------------------|----------------------|----------------|---------|
| | N=716,928 (100%) | N=709,818 (99.0%) | N=7,110 (1.0%) | P-Value |
| HER2+ | 53,359 (11.2%) | 52,853 (11.2%) | 506 (10.4%) | |
| HR+/HER2- | 373,215 (78.5%) | 369,022 (78.4%) | 4,193 (86.4%) | |
| TNBC | 48,789 (10.3%) | 48,635 (10.3%) | 154 (3.2%) | |
| Clinical T Stage | , | | | < 0.001 |
| T1 | 546,417 (76.2%) | 542,040 (76.4%) | 4,377 (61.6%) | |
| T2 | 170,511 (23.8%) | 167,778 (23.6%) | 2,733 (38.4%) | |
| Clinical N Stage | , | | | < 0.001 |
| N0 | 659,460 (92%) | 653,319 (92%) | 6,141 (86.4%) | |
| N1 | 57,468 (8%) | 56,499 (8%) | 969 (13.6%) | |
| Pathological T Stage | , | | | < 0.001 |
| T1 | 454,448 (72.1%) | 450,818 (72.3%) | 3,630 (57%) | |
| T2 | 174,289 (27.7%) | 171,651 (27.5%) | 2,638 (41.4%) | |
| T3 | 435 (0.1%) | 430 (0.1%) | 5 (0.1%) | |
| T4 | 1,043 (0.2%) | 951 (0.2%) | 92 (1.4%) | |
| Pathological N Stage | | | | < 0.001 |
| N0 | 480,208 (76.4%) | 476,208 (76.5%) | 4,000 (63.1%) | |
| N1 | 122,534 (19.5%) | 120,714 (19.4%) | 1,820 (28.7%) | |
| N2 | 19,108 (3%) | 18,755 (3%) | 353 (5.6%) | |
| N3 | 7,065 (1.1%) | 6,897 (1.1%) | 168 (2.6%) | |
| Pathological M Stage | | | | 0.9015 |
| M0 | 716,708 (100%) | 709,600 (100%) | 7,108 (100%) | |
| M1 | 220 (0%) | 218 (0%) | 2 (0%) | |
| Anatomic Stage Groups | , | | | < 0.001 |
| I | 519,547 (72.5%) | 515,588 (72.6%) | 3,959 (55.7%) | |
| II | 197,381 (27.5%) | 194,230 (27.4%) | 3,151 (44.3%) | |
| Prognostic Stage Group | , | | | < 0.001 |
| I | 577,239 (90%) | 572,197 (90.1%) | 5,042 (83.8%) | |
| II | 60,276 (9.4%) | 59,321 (9.3%) | 955 (15.9%) | |
| III | 3,584 (0.6%) | 3,563 (0.6%) | 21 (0.3%) | |
| Breast Surgery Type | | | | < 0.001 |
| Lumpectomy | 431,112 (60.1%) | 429,794 (60.5%) | 1,318 (18.5%) | |
| Mastectomy | 285,816 (39.9%) | 280,024 (39.5%) | 5,792 (81.5%) | |
| Received Any Radiation Thera | ру | | | < 0.001 |

| | All Patients | Female | Male | |
|----------------------------|---------------------|----------------------|----------------|---------|
| | N=716,928 (100%) | N=709,818 (99.0%) | N=7,110 (1.0%) | P-Value |
| No | 237,340 (33.2%) | 232,807 (32.9%) | 4,533 (64.3%) | |
| Yes | 476,889 (66.8%) | 474,369 (67.1%) | 2,520 (35.7%) | |
| Local-Regional Therapy | | | | < 0.001 |
| Mastectomy | 237,340 (33.2%) | 232,807 (32.9%) | 4,533 (64.3%) | |
| Lumpectomy+Radiation | 431,112 (60.4%) | 429,794 (60.8%) | 1,318 (18.7%) | |
| Mastectomy+Radiation | 45,777 (6.4%) | 44,575 (6.3%) | 1,202 (17%) | |
| Received Any Chemotherapy | ' | | , | 0.9839 |
| No | 427,897 (61%) | 423,698 (61%) | 4,199 (61%) | |
| Yes | 273,172 (39%) | 270,490 (39%) | 2,682 (39%) | |
| Timing of Chemotherapy | | | | 0.9462 |
| Adjuvant Chemo Only | 260,193 (37.8%) | 257,644 (37.8%) | 2,549 (37.8%) | |
| No Chemo | 427,897 (62.2%) | 423,698 (62.2%) | 4,199 (62.2%) | |
| Received Endocrine Therapy | pased on HR status | | | < 0.001 |
| Endocrine if HR+ | 473,206 (66.8%) | 468,845 (66.9%) | 4,361 (62.5%) | |
| No Endocrine if HR+ | 131,316 (18.5%) | 129,023 (18.4%) | 2,293 (32.9%) | |
| Endocrine if HR- | 3,492 (0.5%) | 3,479 (0.5%) | 13 (0.2%) | |
| No Endocrine if HR- | 100,091 (14.1%) | 99,779 (14.2%) | 312 (4.5%) | |
| Year | | | | 0.0016 |
| 2004 | 21,218 (3%) | 21,030 (3%) | 188 (2.6%) | |
| 2005 | 23,347 (3.3%) | 23,136 (3.3%) | 211 (3%) | |
| 2006 | 25,968 (3.6%) | 25,709 (3.6%) | 259 (3.6%) | |
| 2007 | 33,524 (4.7%) | 33,210 (4.7%) | 314 (4.4%) | |
| 2008 | 57,826 (8.1%) | 57,297 (8.1%) | 529 (7.4%) | |
| 2009 | 68,598 (9.6%) | 67,975 (9.6%) | 623 (8.8%) | |
| 2010 | 75,363 (10.5%) | 74,629 (10.5%) | 734 (10.3%) | |
| 2011 | 79,082 (11%) | 78,321 (11%) | 761 (10.7%) | |
| 2012 | 81,270 (11.3%) | 80,445 (11.3%) | 825 (11.6%) | |
| 2013 | 84,865 (11.8%) | 83,970 (11.8%) | 895 (12.6%) | |
| 2014 | 84,151 (11.7%) | 83,279 (11.7%) | 872 (12.3%) | |
| 2015 | 81,716 (11.4%) | 80,817 (11.4%) | 899 (12.6%) | |

^{*}Frequency may not add up to total because of missing values. Percentages are of the total reported and are based on the non-missing cohort of each variable.

Supplemental Table 3. Summary of select patient demographics, tumor/disease characteristics, and treatments for CALGB 9343 eligible patients. Analysis based on a cohort of men and women with invasive breast cancer from the National Cancer Data Base (2004-2015). Data presented as N (%) or Median (IQR) unless otherwise specified. IQR: interquartile range. LN: lymph node. PR: progesterone receptor. HER2: human epidermal growth factor receptor 2.

| | All Patients | Female N=86,127 | Male N=264 | |
|--------------------------------|------------------|--------------------|------------------|---------|
| | N=86,391 | | | |
| | (100%) | (99.7%) | (0.3%) | P-Value |
| Follow-up (months) | | | | |
| Median (IQR) | 54.1 (33.8-79.1) | 54.1 (33.8-79.1) | 51.9 (33.2-73.8) | |
| Age | | | | 0.79 |
| Median (IQR) | 75 (72 - 80) | 75 (72 - 80) | 75 (72 - 80) | |
| Race/Ethnicity | | | | 0.77 |
| Hispanic | 2,049 (2.5%) | 2,043 (2.5%) | 6 (2.4%) | |
| Non-Hispanic Black | 5,000 (6.1%) | 4,983 (6.1%) | 17 (6.9%) | |
| Non-Hispanic Other | 1,687 (2.1%) | 1,684 (2.1%) | 3 (1.2%) | |
| Non-Hispanic White | 73,412 (89.4%) | 73,193 (89.4%) | 219 (89.4%) | |
| Charlson/Deyo Comorbidity Scor | e | | | 0.29 |
| 0 | 68,260 (79.7%) | 68,048 (79.7%) | 212 (81.2%) | |
| 1 | 14,614 (17.1%) | 14,569 (17.1%) | 45 (17.2%) | |
| ≥ 2 | 2,777 (3.2%) | 2,773 (3.2%) | 4 (1.5%) | |
| Histology | | | | 0.25 |
| Ductal | 76,095 (88.1%) | 75,854 (88.1%) | 241 (91.3%) | |
| Lobular | 10,182 (11.8%) | 10,159 (11.8%) | 23 (8.7%) | |
| Other | 114 (0.1%) | 114 (0.1%) | 0 (0%) | |
| Tumor Size (mm) | | | | 0.57 |
| Median (IQR) | 12 (8 - 15) | 12 (8 - 15) | 12 (8 - 16) | |
| Positive LNs | | | | 0.23 |
| Median (IQR) | 1 (1 - 2) | 1 (1 - 2) | 1 (1 - 1) | |
| Oncotype Dx Score | | | | 0.78 |
| Median (IQR) | 15 (10-21) | 15 (10-21) | 16 (9-22) | |
| Grade | | | | 0.28 |
| 1 | 76,095 (88.1%) | 75,854 (88.1%) | 241 (91.3%) | |
| 2 | 10,182 (11.8%) | 10,159 (11.8%) | 23 (8.7%) | |
| 3 | 114 (0.1%) | 114 (0.1%) | 0 (0%) | |
| PR Status | | | | 0.18 |
| PR+ | 76,000 (88.3%) | 75,760 (88.3%) | 240 (90.9%) | |

| | All Patients | Female | Male | |
|--------------------------------|--------------------|---------------------|-----------------|---------|
| | N=86,391 (100%) | N=86,127 (99.7%) | N=264 (0.3%) | P-Value |
| PR- | 10,065 (11.7%) | 10,041 (11.7%) | 24 (9.1%) | |
| HER2 Status | | | | 0.36 |
| HER2+ | 3,728 (5.9%) | 3,713 (5.9%) | 15 (7.5%) | |
| HER2- | 59,140 (94.1%) | 58,954 (94.1%) | 186 (92.5%) | |
| Pathological T Stage | | | | 0.67 |
| T1 | 72,033 (92.9%) | 71,812 (92.9%) | 221 (94.8%) | |
| T2 | 5,341 (6.9%) | 5,329 (6.9%) | 12 (5.2%) | |
| T3 | 106 (0.1%) | 106 (0.1%) | 0 (0%) | |
| T4 | 41 (0.1%) | 41 (0.1%) | 0 (0%) | |
| Pathological N Stage | <u>'</u> | | | 0.09 |
| N0 | 63,643 (89.7%) | 63,460 (89.8%) | 183 (85.1%) | |
| N1 | 6,736 (9.5%) | 6,705 (9.5%) | 31 (14.4%) | |
| N2 | 424 (0.6%) | 423 (0.6%) | 1 (0.5%) | |
| N3 | 113 (0.2%) | 113 (0.2%) | 0 (0%) | |
| N0 | 63,643 (89.7%) | 63,460 (89.8%) | 183 (85.1%) | |
| Pathological M Stage | | | | 0.84 |
| M0 | 86,377 (100%) | 86,113 (100%) | 264 (100%) | |
| M1 | 14 (0%) | 14 (0%) | 0 (0%) | |
| Had LNs Examined | | | | 0.81 |
| Yes | 75,617 (87.6%) | 75,387 (87.6%) | 230 (87.1%) | |
| No or unknown | 10,694 (12.4%) | 10,660 (12.4%) | 34 (12.9%) | |
| Extent of Axillary Surgery | | | | 0.94 |
| [1-5] LNs | 65,644 (87.5%) | 65,447 (87.5%) | 197 (87.2%) | |
| [6-9] LNs | 5,236 (7%) | 5,219 (7%) | 17 (7.5%) | |
| ≥ 10 LNs | 4,149 (5.5%) | 4,137 (5.5%) | 12 (5.3%) | |
| Received Any Radiation Therapy | | | | 0.94 |
| No | 23,717 (27.5%) | 23,644 (27.5%) | 73 (27.7%) | |
| Yes | 62,674 (72.5%) | 62,483 (72.5%) | 191 (72.3%) | |
| Local-Regional Therapy | | | | 0.94 |
| Lumpectomy | 23,717 (27.5%) | 23,644 (27.5%) | 73 (27.7%) | |
| Lumpectomy+Radiation | 62,674 (72.5%) | 62,483 (72.5%) | 191 (72.3%) | |
| Received Any Chemotherapy | | , | | 0.006 |
| No | 79,104 (93.3%) | 78,876 (93.3%) | 228 (89.1%) | |

| | All Patients | Female | Male | |
|------------------------|----------------|----------------|-------------|---------|
| | N=86,391 | N=86,127 | N=264 | |
| | (100%) | (99.7%) | (0.3%) | P-Value |
| Yes | 5,651 (6.7%) | 5,623 (6.7%) | 28 (10.9%) | |
| Timing of Chemotherapy | , | | | 0.005 |
| Adjuvant Chemo Only | 5,563 (6.6%) | 5,535 (6.6%) | 28 (10.9%) | |
| No Chemo | 79,104 (93.4%) | 78,876 (93.4%) | 228 (89.1%) | |
| Year | , | | | 0.37 |
| 2004 | 1,833 (2.1%) | 1,831 (2.1%) | 2 (0.8%) | |
| 2005 | 2,075 (2.4%) | 2,068 (2.4%) | 7 (2.7%) | |
| 2006 | 2,424 (2.8%) | 2,413 (2.8%) | 11 (4.2%) | |
| 2007 | 3,155 (3.7%) | 3,150 (3.7%) | 5 (1.9%) | |
| 2008 | 5,801 (6.7%) | 5,785 (6.7%) | 16 (6.1%) | |
| 2009 | 7,150 (8.3%) | 7,130 (8.3%) | 20 (7.6%) | |
| 2010 | 8,196 (9.5%) | 8,168 (9.5%) | 28 (10.6%) | |
| 2011 | 9,225 (10.7%) | 9,193 (10.7%) | 32 (12.1%) | |
| 2012 | 10,023 (11.6%) | 9,991 (11.6%) | 32 (12.1%) | |
| 2013 | 11,429 (13.2%) | 11,403 (13.2%) | 26 (9.8%) | |
| 2014 | 12,236 (14.2%) | 12,199 (14.2%) | 37 (14%) | |
| 2015 | 12,844 (14.9%) | 12,796 (14.9%) | 48 (18.2%) | |

^{*}Frequency may not add up to total because of missing values. Percentages are of the total reported and are based on the non-missing cohort of each variable.

Supplemental Table 4. Summary of select patient demographics, tumor/disease characteristics, and treatments for ACOSOG Z011 eligible patients. Analysis based on a cohort of men and women with invasive breast cancer from the National Cancer Data Base (2004-2015). Data presented as N (%) or Median (IQR). IQR: interquartile range. HER2: human epidermal growth factor receptor 2. HR: hormone receptor. TNBC: triple negative breast cancer. LN: lymph node.

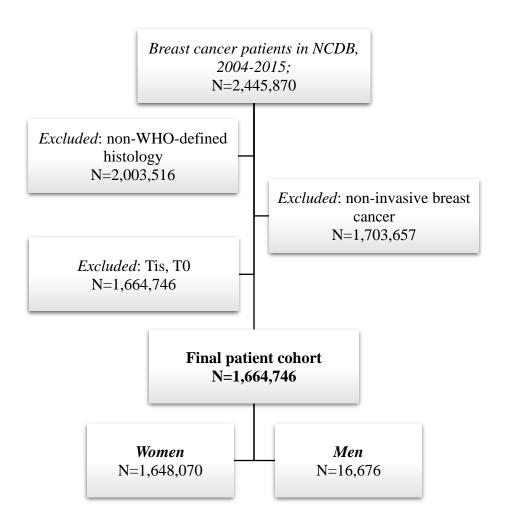
| | All Patients | Female | Male | |
|---------------------------------|------------------|------------------|------------------|---------|
| | N=46,769 (100%) | N=46,596 (99.6%) | N=173 (0.4%) | P-Value |
| Follow-up (months) | | | | |
| Median (IQR) | 56.1 (35.1-81.6) | 56.0 (35.1-81.6) | 54.0 (34.5-75.9) | |
| Age | | | | 0.82 |
| Median (IQR) | 61 (52 - 69) | 61 (52 - 69) | 61 (52 - 70) | |
| Race/Ethnicity | | | | 0.22 |
| Hispanic | 2,243 (5%) | 2,239 (5%) | 4 (2.5%) | |
| Non-Hispanic Black | 4,563 (10.3%) | 4,552 (10.3%) | 11 (6.9%) | |
| Non-Hispanic Other | 1,634 (3.7%) | 1,628 (3.7%) | 6 (3.8%) | |
| Non-Hispanic White | 36,063 (81%) | 35,925 (81%) | 138 (86.8%) | |
| Charlson/Deyo Comorbidity Score | | | | 0.08 |
| 0 | 39,272 (84.4%) | 39,137 (84.5%) | 135 (78.5%) | |
| 1 | 6,093 (13.1%) | 6,063 (13.1%) | 30 (17.4%) | |
| ≥2 | 1,145 (2.5%) | 1,138 (2.5%) | 7 (4.1%) | |
| Histology | | | | 0.32 |
| Ductal | 42,701 (91.3%) | 42,538 (91.3%) | 163 (94.2%) | |
| Lobular | 3,876 (8.3%) | 3,867 (8.3%) | 9 (5.2%) | |
| Other | 192 (0.4%) | 191 (0.4%) | 1 (0.6%) | |
| Tumor Size (mm) | | | | 0.77 |
| Median (IQR) | 17 (12 - 23) | 17 (12 - 23) | 17 (13 - 22) | |
| Oncotype Dx Recurrence Score | | | | 0.09 |
| Median (IQR) | 15 (11-20) | 15 (11-20) | 17 (12-24) | |
| Grade | | | | 0.15 |
| 1 | 9,887 (21.9%) | 9,861 (21.9%) | 26 (15.9%) | |
| 2 | 22,231 (49.3%) | 22,141 (49.3%) | 90 (54.9%) | |
| 3 | 12,978 (28.8%) | 12,930 (28.8%) | 48 (29.3%) | |
| Molecular Subtypes by Receptors | | | | 0.40 |
| HER2+ | 3,266 (9.9%) | 3,255 (9.9%) | 11 (8.3%) | |
| HR+/HER2- | 27,311 (83.1%) | 27,195 (83%) | 116 (87.2%) | |
| TNBC | 2,305 (7%) | 2,299 (7%) | 6 (4.5%) | |

| | All Patients | Female | Male | |
|--|-----------------|------------------|--------------|---------|
| | N=46,769 (100%) | N=46,596 (99.6%) | N=173 (0.4%) | P-Value |
| Clinical T Stage | | | | 0.24 |
| T1 | 34,794 (74.4%) | 34,672 (74.4%) | 122 (70.5%) | |
| T2 | 11,975 (25.6%) | 11,924 (25.6%) | 51 (29.5%) | |
| Pathological T Stage | | | | 0.45 |
| T1 | 27,707 (66.1%) | 27,604 (66.1%) | 103 (62.8%) | |
| T2 | 13,838 (33%) | 13,777 (33%) | 61 (37.2%) | |
| T3 | 329 (0.8%) | 329 (0.8%) | 0 (0%) | |
| T4 | 57 (0.1%) | 57 (0.1%) | 0 (0%) | |
| Pathological N Stage | | | | 0.25 |
| N0 | 836 (2%) | 831 (2%) | 5 (3%) | |
| N1 | 40,957 (97.8%) | 40,799 (97.8%) | 158 (96.3%) | |
| N2 | 52 (0.1%) | 51 (0.1%) | 1 (0.6%) | |
| N3 | 18 (0%) | 18 (0%) | 0 (0%) | |
| Anatomic Stage Groups | | | | 0.55 |
| I | 34,664 (74.1%) | 34,542 (74.1%) | 122 (70.5%) | |
| II | 11,845 (25.3%) | 11,795 (25.3%) | 50 (28.9%) | |
| IV | 260 (0.6%) | 259 (0.6%) | 1 (0.6%) | |
| Extent of Axillary Surgery | | | | 0.18 |
| [1-5] LNs | 30,456 (65.1%) | 30,335 (65.1%) | 121 (69.9%) | |
| ≥ 10 LNs | 16,313 (34.9%) | 16,261 (34.9%) | 52 (30.1%) | |
| Received Radiation Therapy | | | | < 0.001 |
| No | 5,170 (11.1%) | 5,135 (11.1%) | 35 (20.5%) | |
| Yes | 41,417 (88.9%) | 41,281 (88.9%) | 136 (79.5%) | |
| Local-Regional Therapy | | | | < 0.001 |
| Lumpectomy | 5,170 (11.1%) | 5,135 (11.1%) | 35 (20.5%) | |
| Lumpectomy+Radiation | 41,417 (88.9%) | 41,281 (88.9%) | 136 (79.5%) | |
| Received Any Chemotherapy | | | | 0.97 |
| No | 19,074 (41.5%) | 19,004 (41.5%) | 70 (41.7%) | |
| Yes | 26,844 (58.5%) | 26,746 (58.5%) | 98 (58.3%) | |
| Timing of Chemotherapy | | | | 0.96 |
| Adjuvant Chemo Only | 25,547 (57.3%) | 25,454 (57.3%) | 93 (57.1%) | |
| No Chemo | 19,074 (42.7%) | 19,004 (42.7%) | 70 (42.9%) | |
| Received Endocrine Therapy base on HR status | ed | , | | 0.001 |

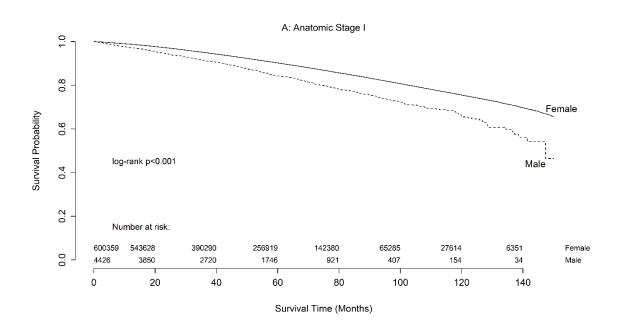
| | All Patients | Female | Male | |
|---------------------|-----------------|------------------|--------------|---------|
| | N=46,769 (100%) | N=46,596 (99.6%) | N=173 (0.4%) | P-Value |
| Endocrine if HR+ | 34,264 (73.8%) | 34,149 (73.8%) | 115 (67.3%) | |
| No Endocrine if HR+ | 7,152 (15.4%) | 7,108 (15.4%) | 44 (25.7%) | |
| Endocrine if HR- | 160 (0.3%) | 160 (0.3%) | 0 (0%) | |
| No Endocrine HR- | 4,845 (10.4%) | 4,833 (10.4%) | 12 (7%) | |
| Year | | | | 0.40 |
| 2004 | 1,335 (2.9%) | 1,330 (2.9%) | 5 (2.9%) | |
| 2005 | 1,421 (3%) | 1,419 (3%) | 2 (1.2%) | |
| 2006 | 1,534 (3.3%) | 1,530 (3.3%) | 4 (2.3%) | |
| 2007 | 1,832 (3.9%) | 1,826 (3.9%) | 6 (3.5%) | |
| 2008 | 3,301 (7.1%) | 3,289 (7.1%) | 12 (6.9%) | |
| 2009 | 4,008 (8.6%) | 3,999 (8.6%) | 9 (5.2%) | |
| 2010 | 4,427 (9.5%) | 4,410 (9.5%) | 17 (9.8%) | |
| 2011 | 5,080 (10.9%) | 5,056 (10.9%) | 24 (13.9%) | |
| 2012 | 5,382 (11.5%) | 5,358 (11.5%) | 24 (13.9%) | |
| 2013 | 5,607 (12%) | 5,588 (12%) | 19 (11%) | |
| 2014 | 6,241 (13.3%) | 6,223 (13.4%) | 18 (10.4%) | |
| 2015 | 6,601 (14.1%) | 6,568 (14.1%) | 33 (19.1%) | |

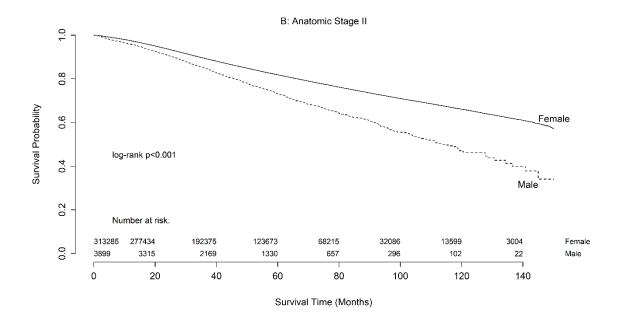
^{*}Frequency may not add up to total because of missing values. Percentages are of the total reported and are based on the non-missing cohort of each variable.

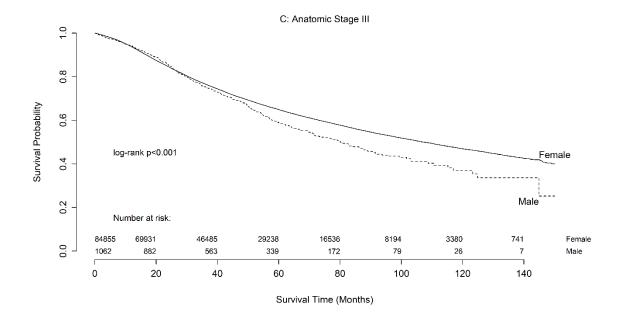
Supplemental Figure 1. Patient selection diagram based on data from the National Cancer Database (NCDB) 2004-2015 dataset, applying the defined inclusion and exclusion criteria. WHO: World Health Organization.

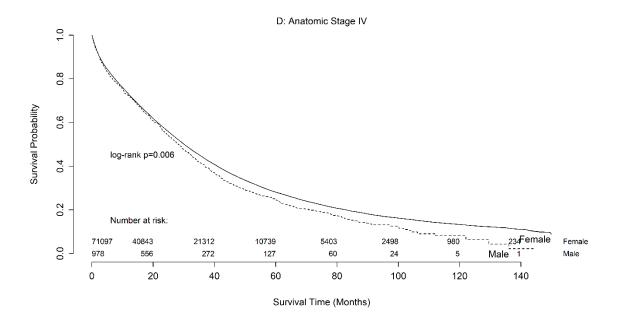


Supplemental Figure 2. Unadjusted overall survival stratified by clinical anatomic stage and gender; (2A) Stage I, (2B) Stage II, (2C) Stage III, (2D) Stage IV. Analysis based on a cohort of men and women with invasive breast cancer from the National Cancer Data Base (2004-2015).









Supplemental Figure 3. Unadjusted overall survival stratified by clinical prognostic stage and gender; (3A) Stage I, (3B) Stage II, (3C) Stage III, (3D) Stage IV. Analysis based on a cohort of men and women with invasive breast cancer from the National Cancer Data Base (2004-2015).

