

SUPPLEMENTARY INFORMATION

Table S1. Baseline patient and tumor characteristics by treatment.

| | All patients <i>N</i> = 1801 | Patients not treated with adjuvant chemotherapy <i>n</i> = 1451 | Adjuvant chemotherapy- treated patients <i>n</i> = 350 |
|---|---------------------------------|--|--|
| Gender, <i>n</i> (%) | | | |
| Female | 1787 (99) | 1440 (99) | 347 (99) |
| Male | 14 (1) | 11 (1) | 3 (1) |
| Age | | | |
| Median (interquartile range), years | 60 (52-67) | 61 (53-68) | 56 (49-63) |
| Mean (SD), years | 59.4 (10) | 60 (10) | 55.8 (10) |
| Age category, <i>n</i> (%) | | | |
| <40 years | 47 (2.6) | 18 (1) | 29 (8) |
| 40-49 years | 248 (13.8) | 188 (13) | 60 (17) |
| 50-59 years | 580 (31.4) | 456 (31) | 124 (35) |
| 60-69 years | 604 (33.5) | 500 (34) | 104 (30) |
| 70-79 years | 295 (16.4) | 262 (18) | 33 (9) |
| ≥80 years | 27 (1.5) | 27 (2) | 0 (0) |
| Tumor size in the greatest dimension | | | |
| Median (interquartile range), cm | 1.5 (1.2, 2.0) | 1.5 (1.1-2.0) | 1.7 (1.3-2.5) |
| Mean (SD), cm | 1.7 (0.8) | 1.6 (0.8) | 1.9 (1.0) |
| Tumor size category, <i>n</i> (%) | | | |
| ≤1 cm | 400 (22.2) | 357 (25) | 43 (12) |
| >1 - 2 cm | 996 (55.3) | 812 (53) | 184 (53) |
| >2 - 3 cm | 313 (17.4) | 221 (26) | 92 (26) |
| >3 | 80 (4.4) | 51 (3) | 29 (8) |
| Unknown | 12 (0.7) | 10 (<1) | 2 (1) |
| Tumor grade category, <i>n</i> (%) | | | |
| Grade 1 | 258 (14.3) | 245 (17) | 13 (4) |
| Grade 2 | 907 (50.4) | 742 (51) | 165 (47) |
| Grade 3 | 297 (16.5) | 174 (12) | 123 (35) |
| Not applicable/Unknown | 339 (18.8) | 290 (20) | 49 (14) |
| Tumor grade and size, <i>n</i> (%) | | | |
| Grade 1 and tumor size ≤1 cm | 90 (5.0) | 88 (6) | 2 (<1) |
| Histology, <i>n</i> (%) | | | |
| IDC | 1461 (81.1) | 1159 (80) | 302 (86) |
| ILC | 213 (11.8) | 186 (13) | 27 (8) |
| Mucinous/colloid | 53 (2.9) | 46 (3) | 7 (2) |
| Papillary | 21 (1.2) | 19 (1) | 2 (1) |
| Other | 53 (2.9) | 41 (3) | 12 (3) |

Abbreviations: IDC, Invasive ductal carcinoma; ILC, invasive lobular carcinoma.

Table S2. Multivariable regression analysis on the entire cohort (chemotherapy treated and untreated) evaluating the association between RS results and clinicopathological characteristics and the presence of distant recurrence; 383 patients were excluded due to missing data on ≥ 1 covariates.

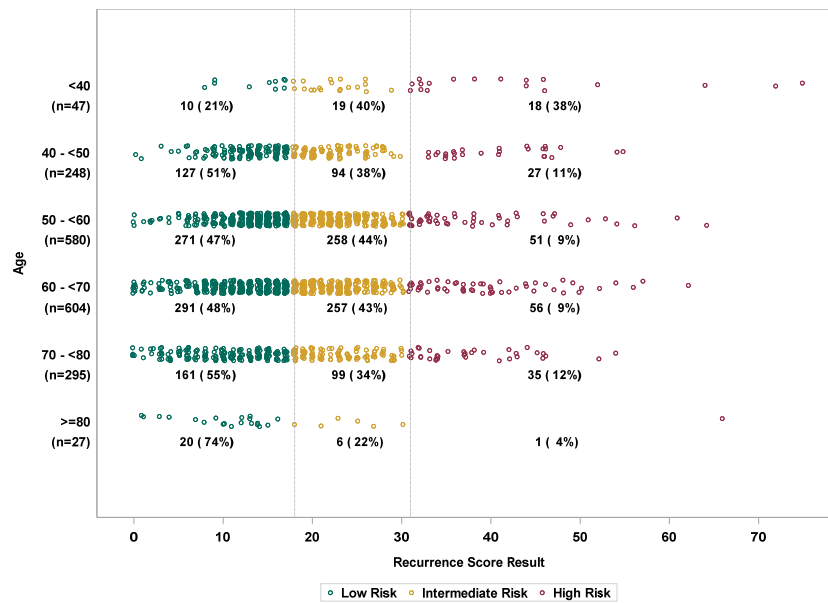
| Variable ^a | Hazard ratio | 95% Hazard ratio confidence limits | <i>P</i> -value |
|-----------------------------|--------------|------------------------------------|-----------------|
| RS (18-30 vs <18) | 2.0 | 0.97-4.3 | < 0.0001 |
| RS (≥ 31 vs <18) | 5.8 | 2.6-12.9 | |
| Age (per year) | 1.0 | 0.98-1.0 | 0.976 |
| Size (>2 cm vs ≤ 2 cm) | 2.3 | 1.3-4.0 | 0.006 |
| Grade 1 vs 3 | 0.2 | 0.02-1.5 | 0.118 |
| Grade 2 vs 3 | 1.3 | 0.7-2.6 | |

Abbreviations: RS, recurrence Score.

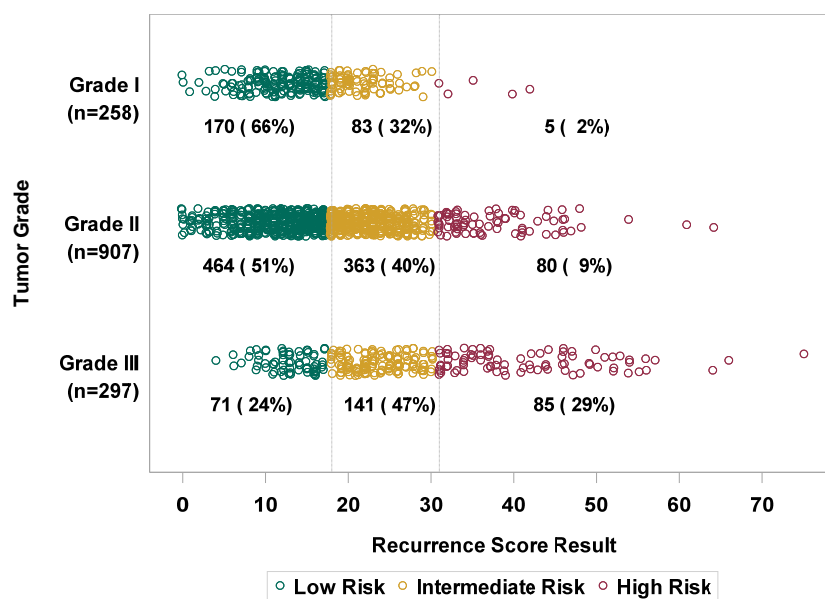
^a Variables considered in univariate analysis included RS risk group, gender, age, tumor size, tumor grade, and histologic subtype. RS risk group, age, tumor size, and tumor grade were significant prognostic factors in the univariate model.

Figure S1. RS Distribution by Clinical and Pathological Characteristics. RS distribution by age group (a), tumor size (b), and tumor grade (c). Tumor size information was missing for 12 patients; tumor grade information was not available for 339 patients (60% of whom had invasive lobular carcinoma). Green, RS<18; yellow, RS: 18-30; red, RS≥31.

a



b



c

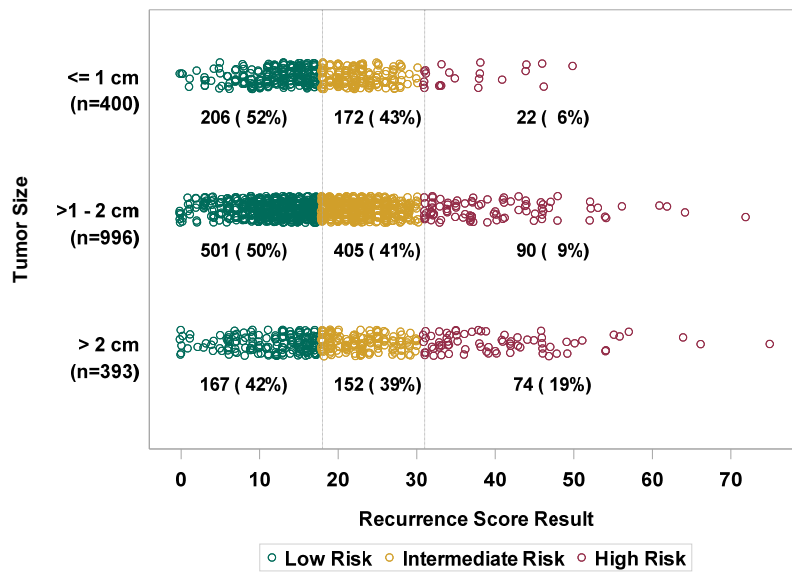
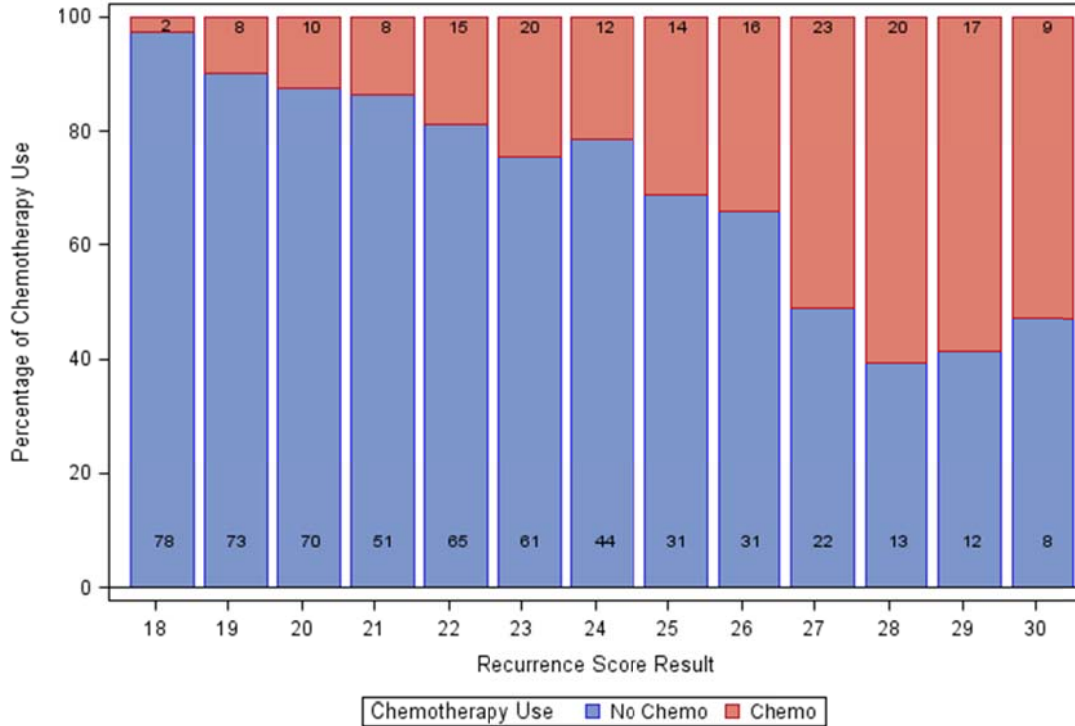


Figure S2. Chemotherapy treatment within patients with RS 18-30 ($n = 733$).

Number of patients per RS result by chemotherapy use is displayed in the bar chart segments.



*Number of patients per Recurrence Score Result by chemotherapy use displayed in bar chart segments