

## Supplemental Data

### Associations between use of the 21-gene Recurrence Score Assay and Chemotherapy Regimen

#### Selection in a Statewide Registry

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#### Supplemental Table

#### Supplemental Figures

**Supplemental Figure 1.** Percentage of patients with HR+, HER2- breast cancer who were treated with chemotherapy, over time. Rates are given for node-negative disease (circles), micrometastatic nodal disease (triangles), macrometastatic nodal disease (diamonds), and all cohorts combined (solid line, squares).

**Supplemental Figure 2.** Percentage of patients with HR+, HER2-, lymph node-negative breast cancer with low recurrence scores who were treated with chemotherapy, over time.

**Supplemental Figure 3A.** Bubble plot demonstrating receipt of anthracycline-containing chemotherapy (chemo) regimens by recurrence score for chemotherapy-treated patients with HR+, HER2- breast cancer. Each circle represents average percentage of patients treated with an anthracycline-based regimen for each RS, and size of each circle represents the number of patients with each RS. (A) Node-negative cohort. (B) Node-positive cohort.

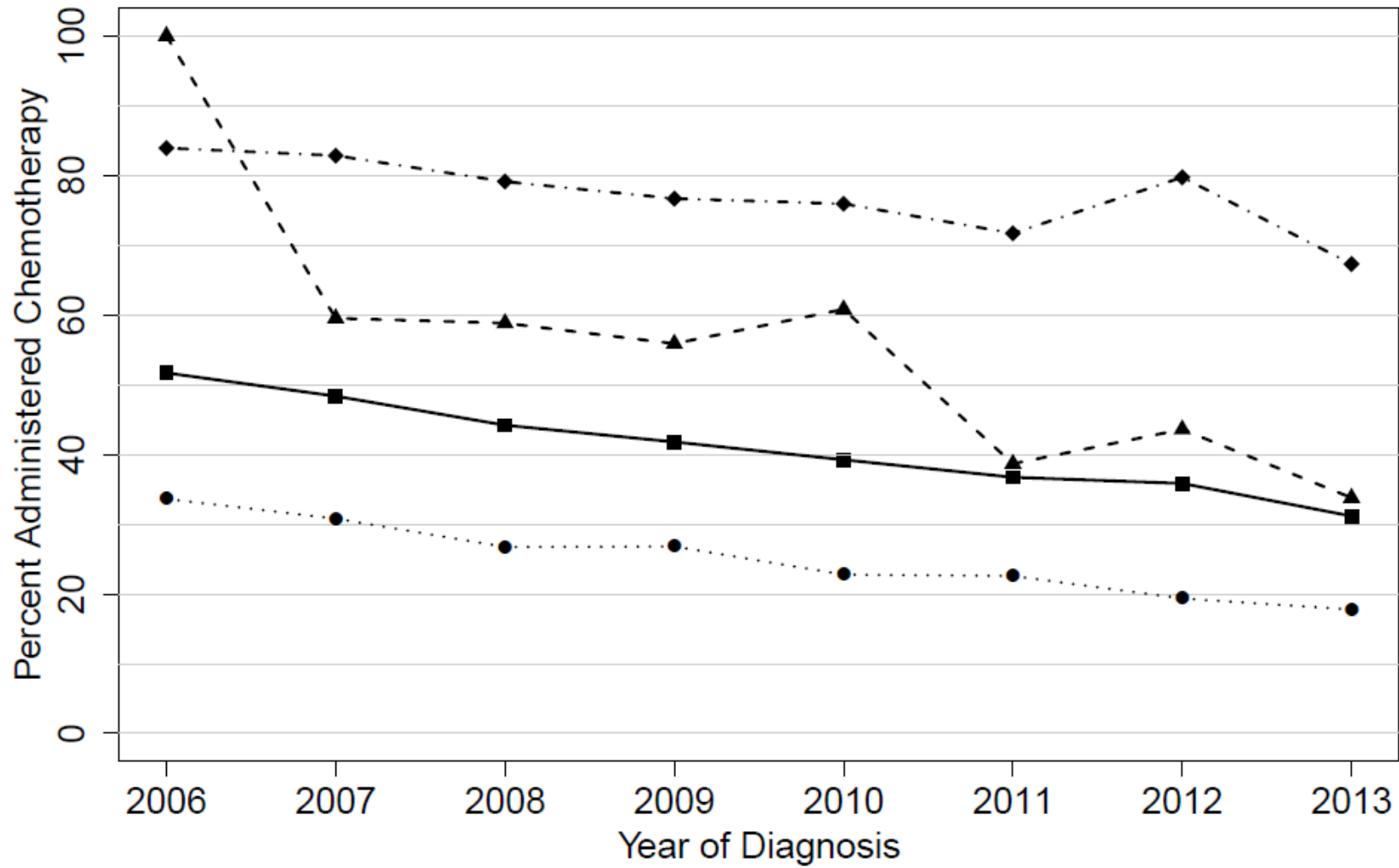
**Supplemental Figure 4.** Percentage of node-positive patients with HR+, HER2- breast cancer treated with anthracycline-based (blue), non-anthracycline based (red), and no chemotherapy (green) regimens, by recurrence score (<17, 18-30, >30, not tested).

**Supplemental Figure 5.** Percentage of patients with HR+, HER2- breast cancer tested with the 21-gene RS assay by participating site (designated by letters on the x axis). Rates are given for patients in the NCCN concordant cohort (blue) and in the node-positive cohort (red).

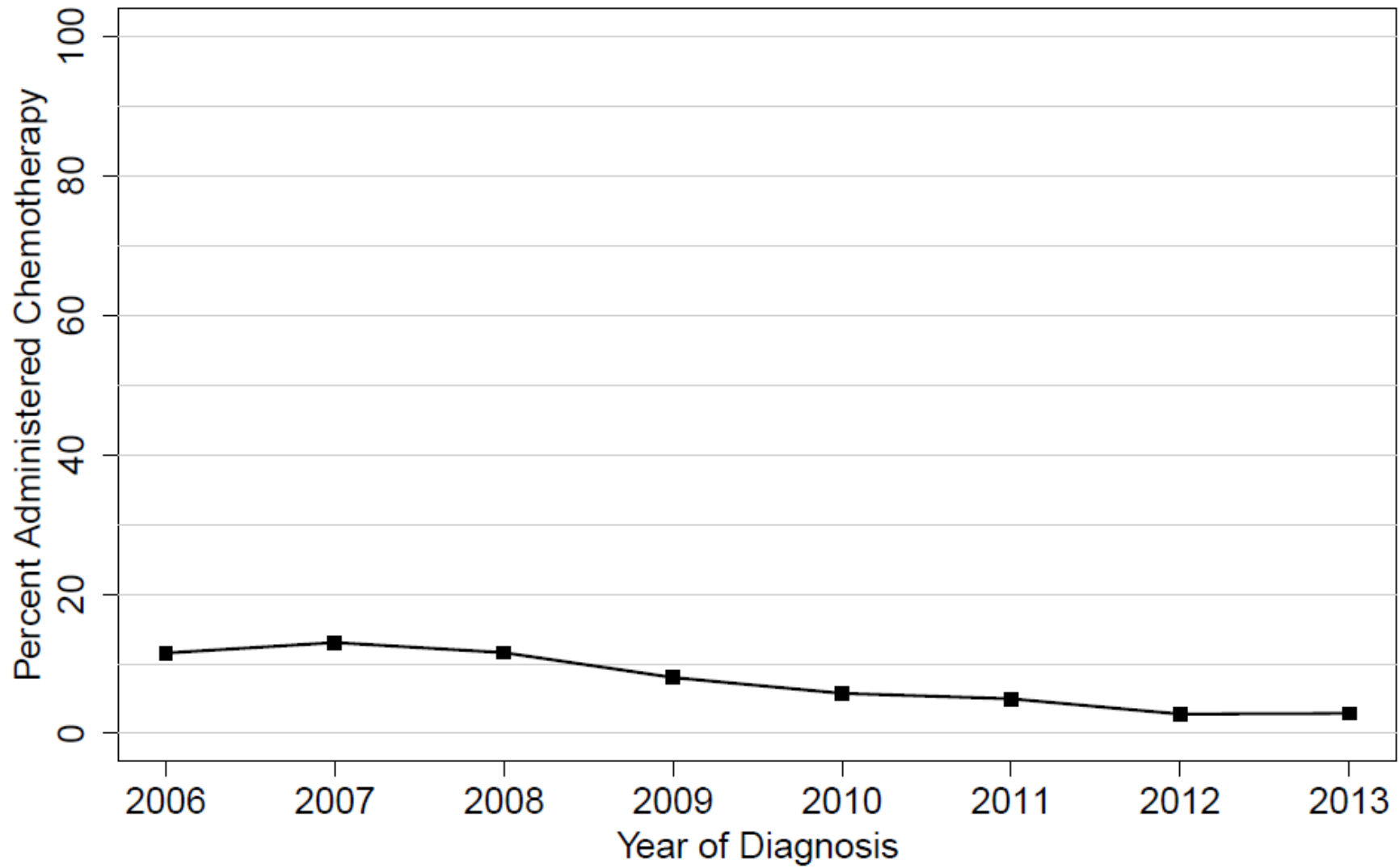


<b>Year of Diagnosis</b>			<0.0001	<0.0001			<0.0001	<0.0001
2006-2007	233 (6%)	513 (16%)			5 (1%)	333 (15%)		
2008-2011	1401 (36%)	1398 (44%)			107 (27%)	968 (42%)		
2012-2014	2277 (58%)	1302 (41%)			280 (71%)	978 (43%)		
<b>Tumor</b>								
<b>Tumor Size</b>			<0.0001	<0.0001			<0.0001	0.0003
pT1	2949 (75%)	2317 (72%)			228 (58%)	923 (41%)		
pT2	931 (24%)	810 (25%)			153 (39%)	1063 (47%)		
pT3	31 (1%)	86 (3%)			9 (2%)	239 (10%)		
Other	0	0			2 (1%)	54 (2%)		
<b>Nodal Involvement</b>			<0.0001	<0.0001			<0.0001	<0.0001
pN0	3711 (95%)	2912 (91%)			0	0		
pN1mi	200 (5%)	301 (9%)			0	0		
pN1	0	0			369 (94%)	1499 (66%)		
pN2	0	0			18 (5%)	534 (23%)		
pN3	0	0			3 (1%)	244 (11%)		
Missing	0	0			2 (1%)	2 (0%)		
<b>Tumor Grade</b>			0.0001	0.012			<0.0001	0.055
1	934 (24%)	673 (21%)			113 (29%)	397 (17%)		
2	2303 (59%)	1874 (58%)			218 (56%)	1247 (55%)		
3	625 (16%)	619 (19%)			55 (14%)	589 (26%)		
Missing	49 (1%)	47 (1%)			6 (2%)	46 (2%)		
<b>Receipt of Chemotherapy</b>			0.172	<0.0001			<0.0001	<0.0001
No	2835 (72%)	2239 (70%)			210 (54%)	402 (18%)		
Yes	923 (24%)	787 (24%)			165 (42%)	1772 (78%)		
Missing	153 (4%)	187 (6%)			17 (4%)	105 (5%)		

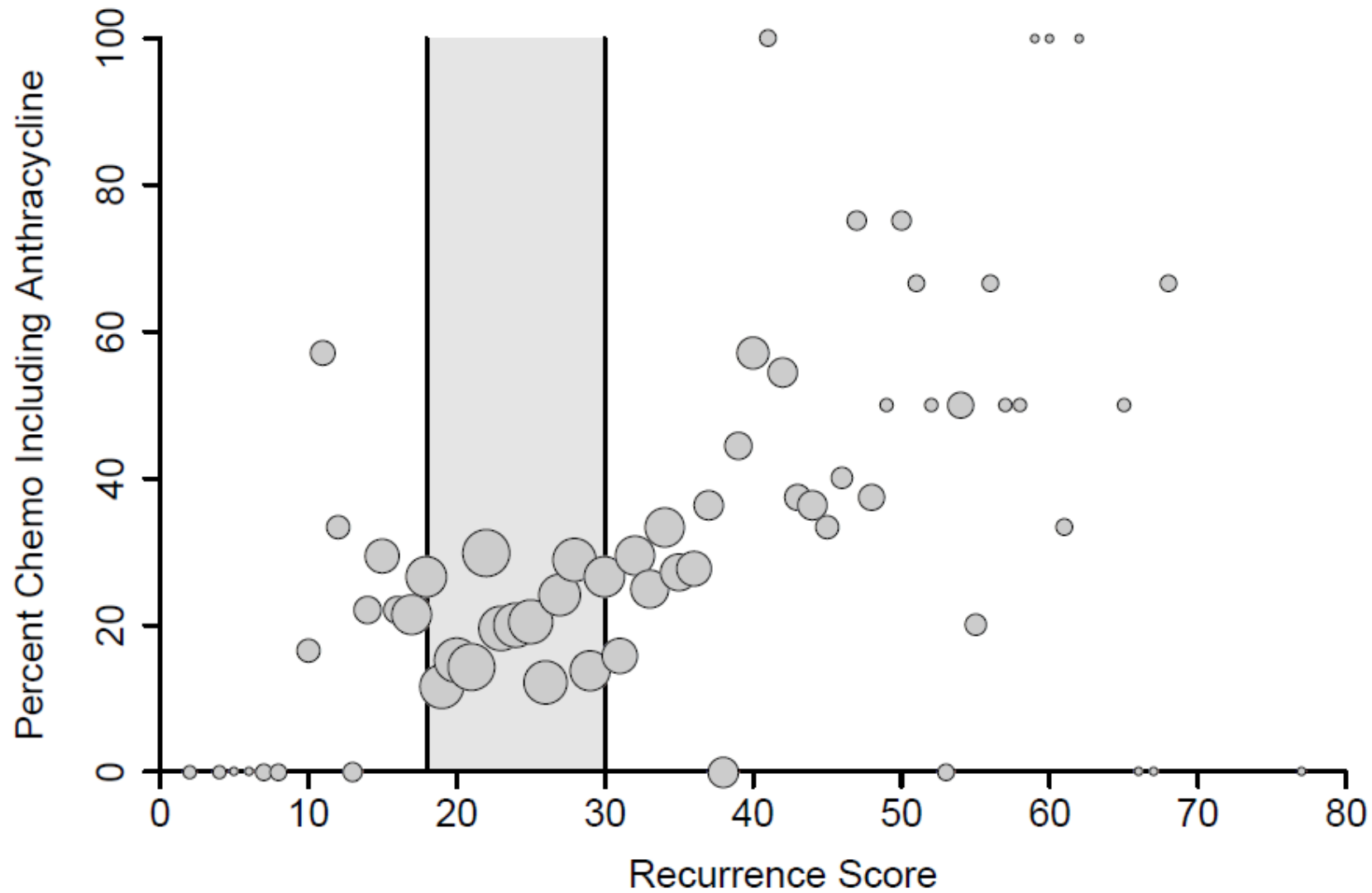
**Supplemental Figure 1.** Percentage of patients with HR+, HER2- breast cancer who were treated with chemotherapy, over time. Rates are given for node-negative disease (circles), micrometastatic nodal disease (triangles), macrometastatic nodal disease (diamonds), and all cohorts combined (solid line, squares).



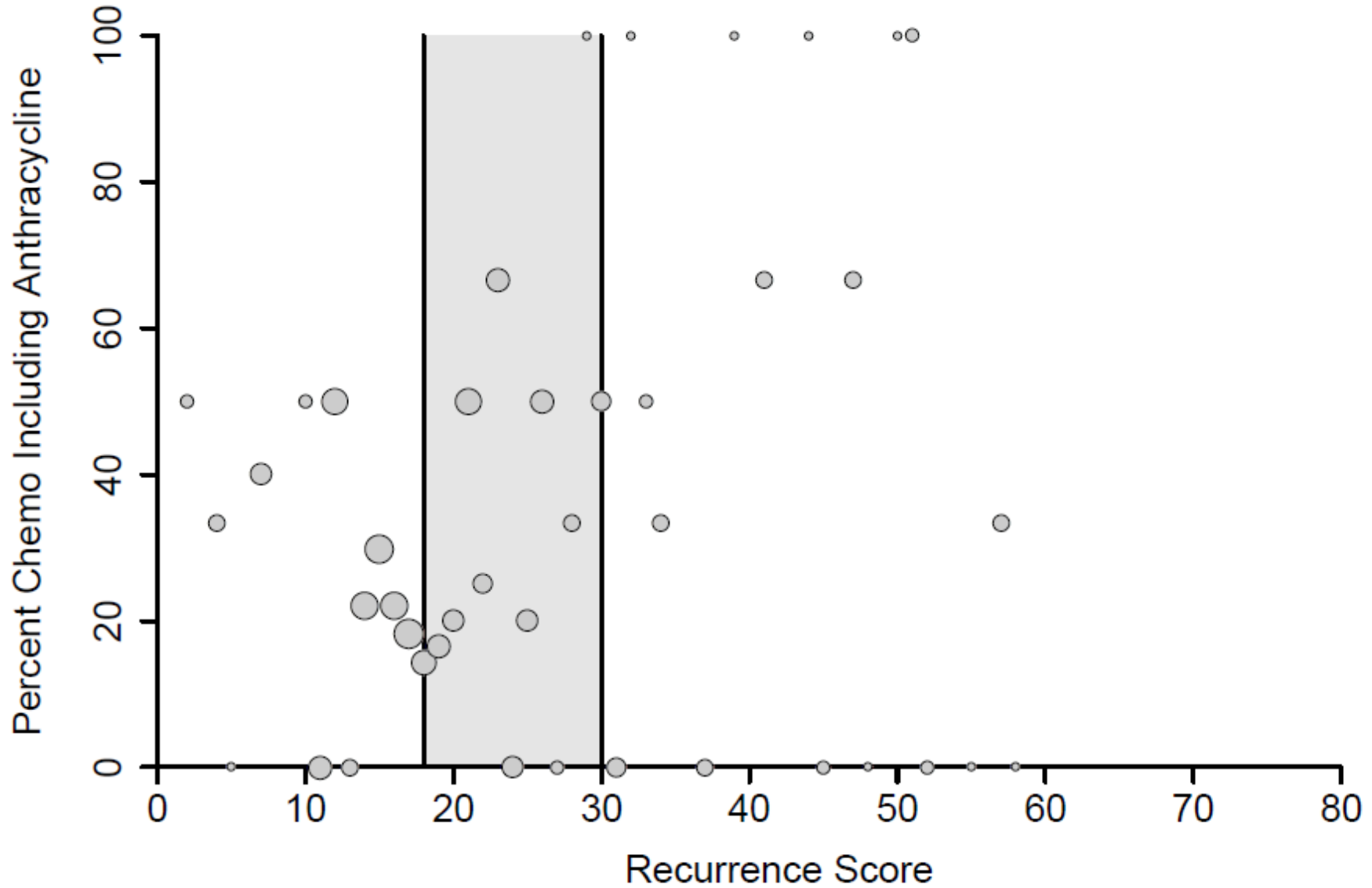
**Supplemental Figure 2.** Percentage of patients with HR+, HER2-, lymph node-negative breast cancer with low recurrence scores who were treated with chemotherapy, over time.



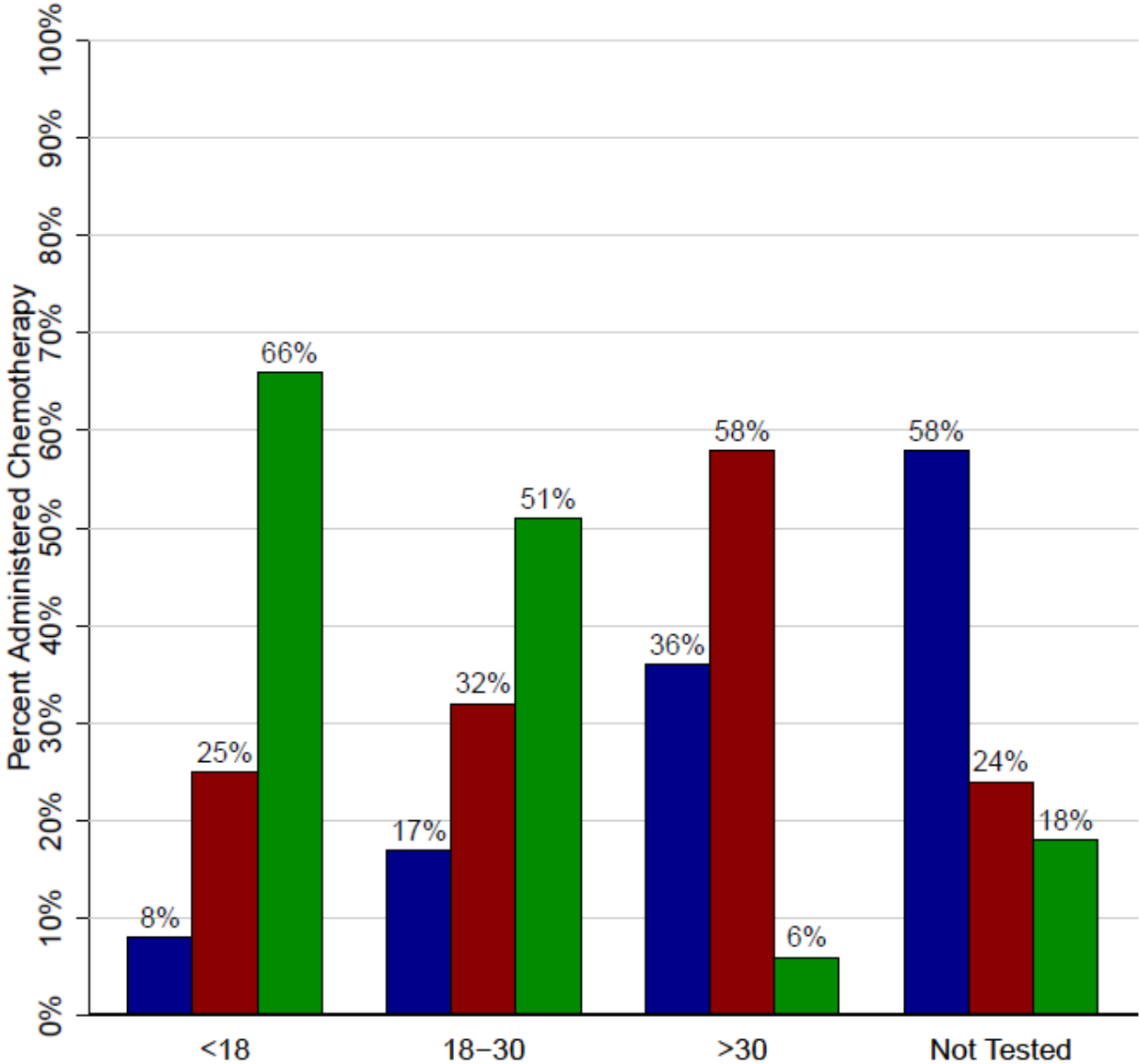
**Supplemental Figure 3A.** Bubble plot demonstrating receipt of anthracycline-containing chemotherapy (chemo) regimens by recurrence score for chemotherapy-treated patients with HR+, HER2- breast cancer. Each circle represents average percentage of patients treated with an anthracycline-based regimen for each RS, and size of each circle represents the number of patients with each RS. (A) Node-negative cohort.



**Supplemental Figure 3B.** Bubble plot demonstrating receipt of anthracycline-containing chemotherapy (chemo) regimens by recurrence score for chemotherapy-treated patients with HR+, HER2- breast cancer. Each circle represents average percentage of patients treated with an anthracycline-based regimen for each RS, and size of each circle represents the number of patients with each RS. (B) Node-positive cohort



**Supplemental Figure 4.** Percentage of node-positive patients with HR+, HER2- breast cancer treated with anthracycline-based (blue), non-anthracycline based (red), and no chemotherapy (green) regimens, by recurrence score (<17, 18-30, >30, not tested).





**Supplemental Figure 5.** Percentage of patients with HR+, HER2- breast cancer tested with the 21-gene RS assay by participating site (designated by letters on the x axis). Rates are given for patients in the NCCN concordant cohort (blue) and in the node-positive cohort (red).

