Supplementary Online Content

Pfister DG, Rubin DM, Elkin EB, et al. Risk adjusting survival outcomes in hospitals that treat patients with cancer without information on cancer stage. *JAMA Oncology*. Published online October 1, 2015. doi:10.1001/jamaoncol.2015.3151.

eFigure 1. Distribution of hospital average 3-year and 5-year survival among cancer patients with no risk adjustment, Medicare risk adjustment, and SEER-Medicare risk adjustment
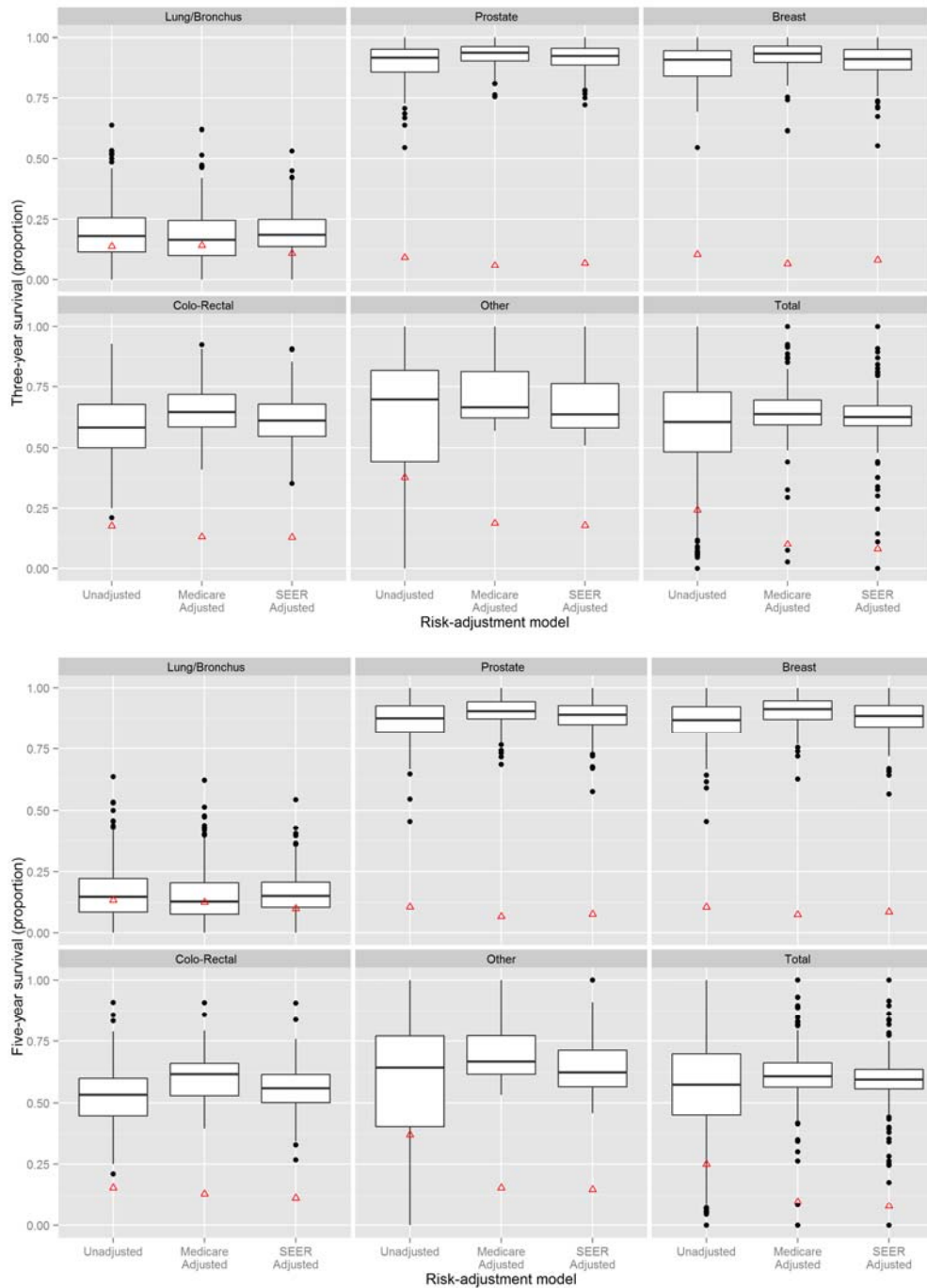
eFigure 2. Correlation of hospital level 3-year survival rates comparing Medicare risk-adjusted outcomes and SEER-Medicare risk-adjusted outcomes

eTable 1. Correlation of Medicare and SEER assignment of cancer type

eTable 2. Assignment algorithm for linking patients to hospitals

This supplementary material has been provided by the authors to give readers additional information about their work.

eFigure 1: Distribution of hospital average 3-year and 5-year survival among cancer patients with no risk adjustment, Medicare risk adjustment and SEER-Medicare risk adjustment. The red triangles denote the absolute difference in percent surviving between the 25th and 75th per centile hospitals.

eFigure 2: Correlation of hospital level three year survival rates comparing Medicare risk-adjusted outcomes and SEER-Medicare risk-adjusted outcomes. Vertical and horizontal lines identify the 25th and 75th percentile values on each scale.
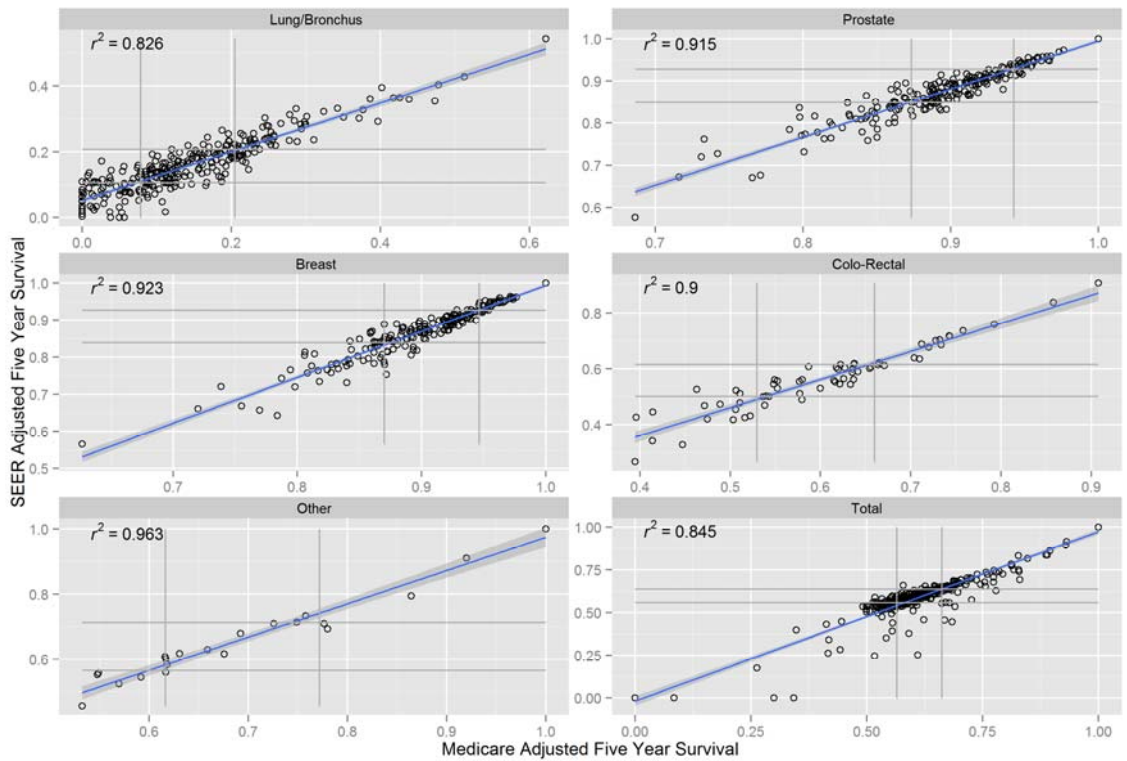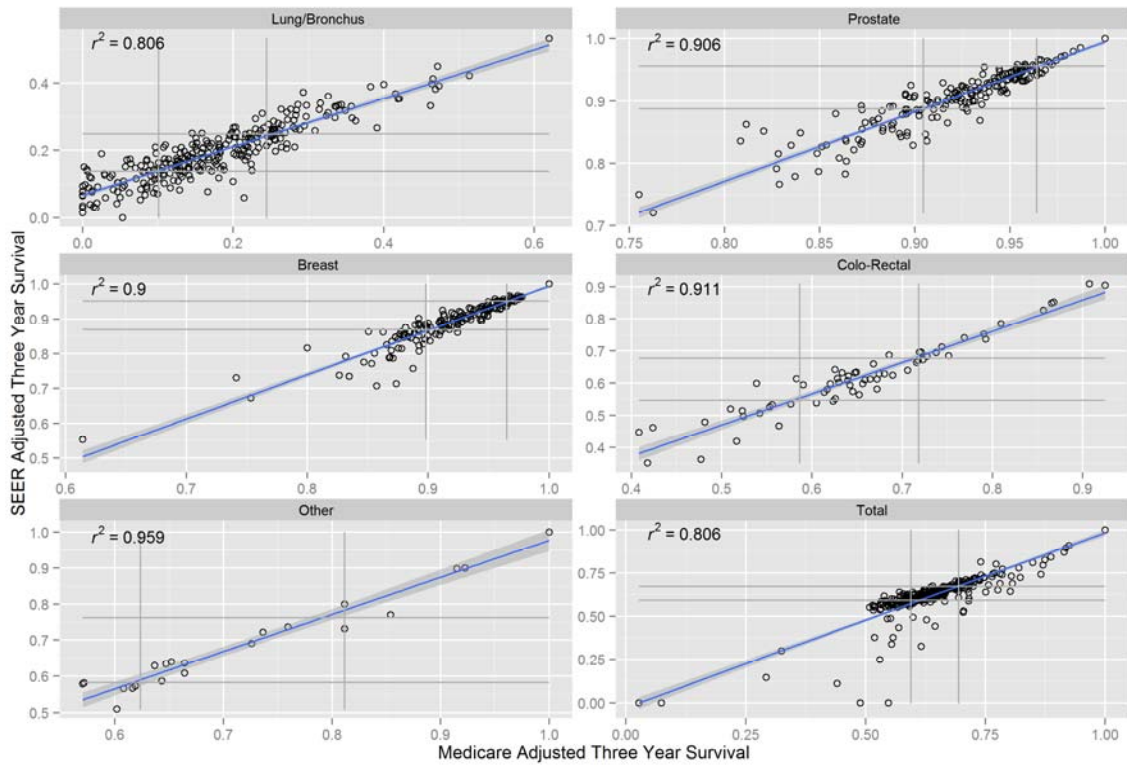
eTable 1: Correlation of Medicare and SEER assignment of cancer type.
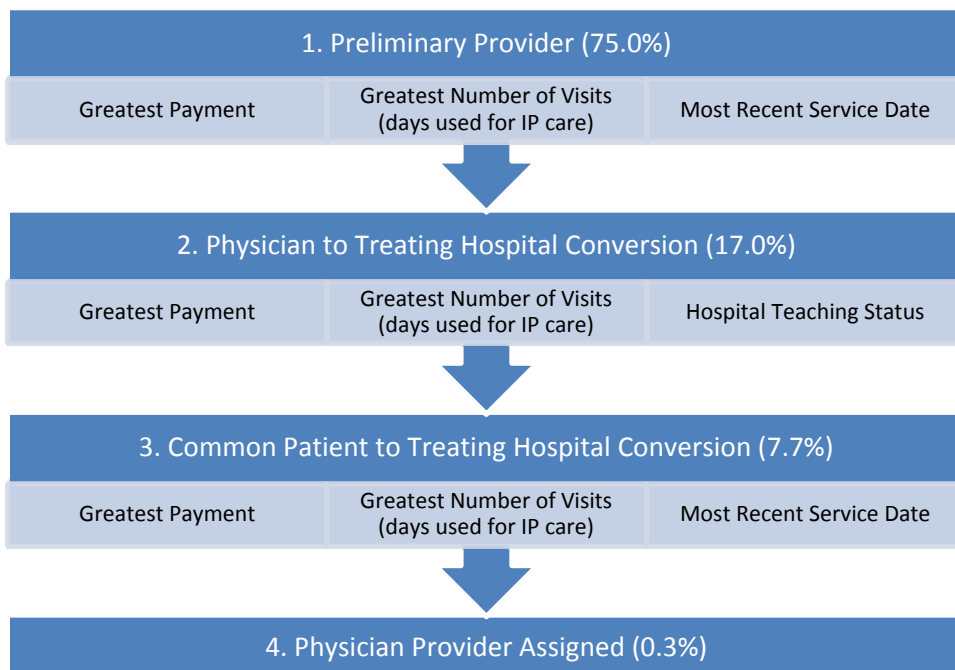
Medicare assigned disease	Matches SEER	Does not match SEER	Total	% Matched with SEER
Lung/Bronchus	6,659	152	6,811	97.77%
Prostate	6,078	13	6,091	99.79%
Breast	4,320	7	4,327	99.84%
Colo-rectal	1,022	27	1,049	97.43%
Other	394	5	399	98.75%
Total	18,473	204	18,677	98.91%

eTable 2: Assignment algorithm for linking patients to hospitals. In the case where multiple providers meet the row criterion, ties are broken from left to right on the diagram. The percentages indicate the number of patients assigned in each step. In the SEER-Medicare analysis all patients were assigned by completion of the third step, in the Medicare analysis, 0.3% of patients were assigned in the fourth step.

SEER-Medicare

1. Preliminary Provider (86%)		
Greatest Payment	Greatest Number of Visits (days used for IP care)	Most Recent Service Date

2. Physician to Treating Hospital Conversion (8%)		
Greatest Payment	Greatest Number of Visits (days used for IP care)	Most Recent Service Date

3. Common Patient to Treating Hospital Conversion (6%)		
Greatest Payment	Greatest Number of Visits (days used for IP care)	Most Recent Service Date

4. Physician Provider Assigned (0%)

Medicare

1. Preliminary Provider (75.0%)		
Greatest Payment	Greatest Number of Visits (days used for IP care)	Most Recent Service Date

2. Physician to Treating Hospital Conversion (17.0%)		
Greatest Payment	Greatest Number of Visits (days used for IP care)	Hospital Teaching Status

3. Common Patient to Treating Hospital Conversion (7.7%)		
Greatest Payment	Greatest Number of Visits (days used for IP care)	Most Recent Service Date

4. Physician Provider Assigned (0.3%)