## **Supplementary Materials**

## **Supplementary Table 1**

We conducted a sensitivity analysis including only the subset of studies with a high degree of compliance. To determine compliance, for each trial, we first calculated the percentage of its sample size included in our original analysis (see the CONSORT Diagram in Figure 1 of our manuscript). The average percentage across all studies was 23%. We then defined a trial as "compliant" if its percentage was at least 30%. Six trials were identified as compliant based on this threshold. The predictive ability measures – specifically the c-indices and H-L statistics – are similar to those we obtained in the original analysis using all 13 trials, summarized in the tables below.

| All Trials |                  |                     |                  |                     |                  |                     |  |  |  |
|------------|------------------|---------------------|------------------|---------------------|------------------|---------------------|--|--|--|
|            | Breast           |                     | NSCLC            |                     | Colon            |                     |  |  |  |
|            | Slope<br>(N=189) | % Change<br>(N=182) | Slope<br>(N=746) | % Change<br>(N=734) | Slope<br>(N=322) | % Change<br>(N=320) |  |  |  |
| c-index    | 0.58             | 0.55                | 0.58             | 0.57                | 0.62             | 0.64                |  |  |  |
| (95% CI)*  | (0.53-0.65)      | (0.52-0.63)         | (0.55-0.61)      | (0.55-0.61)         | (0.58-0.68)      | (0.59-0.69)         |  |  |  |
| RECIST     | 0.52             |                     | 0.57             |                     | 0.60             |                     |  |  |  |
| H-L        | 0.05             | 0.04                | 0.03             | 0.01                | 0.12             | 0.05                |  |  |  |
| RECIST     | 0.05             |                     | 0.01             |                     | 0.04             |                     |  |  |  |

| Compliant Trials |                  |                     |                  |                     |                  |                     |  |  |  |
|------------------|------------------|---------------------|------------------|---------------------|------------------|---------------------|--|--|--|
|                  | Breast           |                     | NSCLC            |                     | Colon            |                     |  |  |  |
|                  | Slope<br>(N=107) | % Change<br>(N=101) | Slope<br>(N=715) | % Change<br>(N=703) | Slope<br>(N=296) | % Change<br>(N=294) |  |  |  |
| c-index          | 0.61             | 0.57                | 0.57             | 0.57                | 0.63             | 0.64                |  |  |  |
| (95% CI)*        | (0.53-0.69)      | (0.49-0.65)         | (0.54-0.60)      | (0.54-0.60)         | (0.57-0.69)      | (0.58-0.70)         |  |  |  |
| RECIST           | 0.54             |                     | 0.59             |                     | 0.60             |                     |  |  |  |
| H-L              | 0.04             | 0.03                | 0.03             | 0.02                | 0.13             | 0.04                |  |  |  |
| RECIST           | 0.12             |                     | 0.01             |                     | 0.06             |                     |  |  |  |

\* 95% CI for c-indices are bootstrap confidence intervals.

**Supplementary Figure 1.** Scatterplots of 6-12 week vs. 0-6 week slope and % changes. Size of plotting symbol proportional to the average baseline sum.

