

**Table S1.** Differences in demographic variables between participants who participated or did not participate at T1.

|   | Participated at T1   |                | Did not participate at T1 |                | <i>t</i> or $\chi^2$ |
|---|----------------------|----------------|---------------------------|----------------|----------------------|
|   | <i>M</i> or <i>n</i> | <i>SD</i> or % | <i>M</i> or <i>n</i>      | <i>SD</i> or % |                      |
| Age (years, <i>M</i> , <i>SD</i> )        | 67.79                | 14.20          | 72.17                     | 11.88          | 1.26                 |
| Sex ( <i>n</i> , %)                       |                      |                |                           |                | 0.13                 |
| Female                                    | 11                   | 33.3           | 11                        | 29.9           |                      |
| Male                                      | 16                   | 66.7           | 17                        | 71.1           |                      |
| Education (years, <i>M</i> , <i>SD</i> )  | 12.32                | 2.94           | 13.00                     | 3.05           | 0.81                 |
| Marital status ( <i>n</i> , %)            |                      |                |                           |                | 0.88                 |
| Married or partnered                      | 25                   | 65.8           | 17                        | 70.8           |                      |
| Divorced                                  | 8                    | 21.1           | 4                         | 16.7           |                      |
| Widowed                                   | 4                    | 10.5           | 3                         | 12.5           |                      |
| Single                                    | 1                    | 2.6            | 0                         | 0.0            |                      |
| Income level <sup>a</sup> ( <i>n</i> , %) |                      |                |                           |                | 0.84                 |
| High                                      | 2                    | 5.7            | 2                         | 8.7            |                      |
| Average                                   | 20                   | 57.1           | 15                        | 65.2           |                      |
| Low                                       | 13                   | 37.2           | 6                         | 26.1           |                      |
| Religion ( <i>n</i> , %)                  |                      |                |                           |                | 0.64                 |
| Jewish                                    | 31                   | 81.6           | 20                        | 83.3           |                      |
| Arab (Muslim or Christian)                | 6                    | 15.8           | 4                         | 16.7           |                      |
| Other                                     | 1                    | 2.6            | 0                         | 0.0            |                      |
| Tumor type ( <i>n</i> , %)                |                      |                |                           |                |                      |
| Lung                                      | 13                   | 34.2           | 5                         | 20.8           |                      |
| Melanoma                                  | 8                    | 21.1           | 6                         | 25.0           |                      |
| Renal                                     | 5                    | 13.2           | 3                         | 12.5           |                      |
| Breast                                    | 4                    | 10.5           | 2                         | 8.3            |                      |
| Skin small-cell carcinoma                 | 2                    | 5.3            | 4                         | 16.7           |                      |
| Urinary bladder                           | 2                    | 5.3            | 2                         | 8.3            |                      |
| Colon                                     | 2                    | 5.3            | 1                         | 4.2            |                      |
| Gastric                                   | 2                    | 5.3            | 0                         | 0.0            |                      |
| Sarcoma                                   | 0                    | 0.0            | 1                         | 4.2            |                      |
| ECOG PS at T0 ( <i>n</i> , %)             |                      |                |                           |                | 3.47                 |
| 0   | 14                   | 36.8           | 14                        | 58.3           |                      |

|                                       |    |      |    |      |      |
|---------------------------------------|----|------|----|------|------|
| 1                                     | 16 | 42.1 | 5  | 20.8 |      |
| 2                                     | 8  | 21.1 | 5  | 20.8 |      |
| Type of ICI treatment ( <i>n</i> , %) |    |      |    |      | 0.65 |
| CTL4+PD1 <sup>b</sup>                 | 12 | 31.6 | 10 | 41.7 |      |
| PD1/PDL1 <sup>c</sup>                 | 26 | 68.4 | 14 | 58.3 |      |
| Line of IT ( <i>n</i> , %)            |    |      |    |      | 4.89 |
| 1                                     | 24 | 63.2 | 15 | 62.5 |      |
| 2                                     | 6  | 15.8 | 8  | 33.3 |      |
| 3                                     | 8  | 21.1 | 1  | 4.2  |      |

<sup>a</sup> Calculated from actual responses.

<sup>b</sup> Ipilimumab and Nivolumab.

<sup>c</sup> Pembrolizumab, Nivolumab, Cimiplitab, Atezolizumab, Durvalumab.

**Table S2.** Associations among psychosocial variables.

|                            | 1       | 2       | 3       | 4       | 5      | 6      | 7      |
|----------------------------|---------|---------|---------|---------|--------|--------|--------|
| 1. HRQoL (T0)              |         |         |         |         |        |        |        |
| 2. HRQoL (T1)              | .69***  |         |         |         |        |        |        |
| 3. Perceived health (T0)   | -.75*** | -.53*** |         |         |        |        |        |
| 4. Perceived health (T1)   | -.73*** | -.68*** | .73***  |         |        |        |        |
| 5. Emotional distress (T0) | .68***  | .64***  | -.65*** | -.70*** |        |        |        |
| 6. Emotional distress (T1) | .52***  | .64***  | -.41*   | -.46**  | .60*** |        |        |
| 7. Sleep quality (T0)      | .60***  | .59***  | -.56*** | -.57*** | .70*** | .52*** |        |
| 8. Sleep quality (T1)      | .43**   | .53***  | -.52*** | -.51*** | .59*** | .48**  | .66*** |

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**Table S3.** Associations among blood measures.

|                 | 1           | 2   | 3   | 4    | 5           |
|-----------------|-------------|-----|-----|------|-------------|
| 1. TNF $\alpha$ |             |     |     |      |             |
| 2. IL-2         | .19         |     |     |      |             |
| 3.IL-6          | <b>.47*</b> | .28 |     |      |             |
| 4. IL-10        | -.08        | .09 | .07 |      |             |
| 5. PD-1         | -.11        | .03 | .09 | .04  |             |
| 6. CTLA-4       | -.01        | .27 | .10 | -.03 | <b>.50*</b> |

\* $p < .001$ .