

Supplementary Table S6. Demographics of the 189 patient PD-L1 IHC cohort

| Variable                  | Statistic                            | Overall<br>n (%)          |
|---------------------------|--------------------------------------|---------------------------|
| Age (yrs)                 | n                                    | 189                       |
|                           | median (IQR)                         | 67 (60-74)                |
| Sex                       | n (%)                                |                           |
|                           | Female<br>Male                       | 84 (44.4%)<br>105 (55.6%) |
| Race                      | n (%)                                |                           |
|                           | Asian                                | 3 (1.6%)                  |
|                           | Black or African American            | 10 (5.3%)                 |
|                           | Other                                | 3 (1.6%)                  |
|                           | Unknown, Missing, or Not Reported    | 50 (26.5%)                |
| Ethnicity                 | n (%)                                |                           |
|                           | Hispanic or Latino                   | 3 (1.6%)                  |
|                           | Not Hispanic or Latino               | 124 (65.6%)               |
|                           | Unknown, Missing, or Not Reported    | 62 (32.8%)                |
| Type of Therapy           | n (%)                                |                           |
|                           | anti-PD-(L)1<br>Chemo + anti-PD-(L)1 | 102 (54.0%)<br>87 (46.0%) |
| Line of Therapy           | n (%)                                |                           |
|                           | 1                                    | 145 (76.7%)               |
|                           | 2<br>3+                              | 35 (18.5%)<br>9 (4.8%)    |
| Primary Tumor Type        | n (%)                                |                           |
|                           | Bladder Cancer                       | 13 (6.9%)                 |
|                           | Breast Cancer                        | 10 (5.3%)                 |
|                           | Cancer of Unknown Primary            | 11 (5.8%)                 |
|                           | Cervical Cancer                      | 2 (1.1%)                  |
|                           | Esophagogastric Cancer               | 17 (9.0%)                 |
|                           | Head and Neck Cancer                 | 9 (4.8%)                  |
|                           | Melanoma                             | 2 (1.1%)                  |
|                           | Non-Small Cell Lung Cancer           | 121 (64.0%)               |
|                           | Other Cancer                         | 2 (1.1%)                  |
|                           | Small Cell Lung Cancer               | 2 (1.1%)                  |
| Cohort                    | n (%)                                |                           |
|                           | Discovery                            | 90 (47.6%)<br>99 (52.4%)  |
| PD-L1 IHC Type            | n (%)                                |                           |
|                           | PD-L1 22C3 CPS                       | 38 (20.1%)                |
|                           | PD-L1 SP142 IC                       | 12 (6.3%)                 |
|                           | PD-L1 22C3 TPS                       | 139 (73.5%)               |
| PD-L1 IHC Positive (>=1%) | n (%)                                |                           |
|                           | Overall                              | 157 (83.1%)               |
|                           | PD-L1 22C3 CPS                       | 37 (97.4%)                |
|                           | PD-L1 SP142 IC                       | 12 (100.0%)               |
|                           | PD-L1 22C3 TPS                       | 108 (77.7%)               |
| PD-L1 IHC Score           | median (IQR)                         |                           |
|                           | Overall                              | 3.5 (1.6-6.2)             |
|                           | PD-L1 22C3 CPS                       | 6 (4-25)                  |
|                           | PD-L1 SP142 IC                       | 2.5 (1-8.75)              |
| PD-L1 22C3 TPS            |                                      | 20 (2-75)                 |
|                           |                                      |                           |
| TMB Status                | n (%)                                |                           |
|                           | Low<br>High                          | 140 (74.1%)<br>49 (25.9%) |
| IRS Status                | n (%)                                |                           |
|                           | Low<br>High                          | 106 (56.1%)<br>83 (43.9%) |

Demographics and tumor types for all 189 patients treated with anti-PD-(L)1 monotherapy or chemotherapy (chemo) + anti-PD-(L)1 with available quantitative clinical PD-L1 IHC reported in accompanying pathology reports, including age (in years), sex, self reported race, self reported ethnicity, type of therapy, the anti-PD-(L)1 +/- chemo line of systemic therapy, tumor type, inclusion in discovery or separate validation cohorts, PD-L1 IHC type (and scoring method), % of overall and IHC type specific PD-L1 positivity (>=1%), overall and IHC type specific IHC score, TMB status (>=10 mutations/megabase as High) and IRS status (High vs. Low). n= sample size, %= percentage, IQR = interquartile range.