



Figure S1 Kaplan-Meier curves of OS according to baseline (A) NLR (≥ 3 vs. < 3), (B) NLR ≥ 5 vs. < 5 , and (C) PLR (≥ 180 vs. < 180). OS, overall survival; NLR, neutrophil-to-lymphocyte ratio; PLR, platelet-to-lymphocyte ratio; CI, confidence interval; NR, not reached.

Table S1 Logistic regression of irAE development within 6 months of pembrolizumab initiation

| Variables | Univariable | | Multivariable | |
|---------------------------------------------|-------------------|-------|------------------|------|
| | OR (95% CI) | P | OR (95% CI) | P |
| Age (≥ 75 vs. < 75) | 0.52 (0.25–1.05) | 0.07 | 0.57 (0.26–1.22) | 0.15 |
| Gender (male vs. female) | 1.30 (0.68–2.51) | 0.43 | 1.20 (0.59–2.43) | 0.62 |
| ECOG PS (2/3 vs. 0/1) | 1.98 (1.00–3.95) | 0.051 | 1.88 (0.92–3.92) | 0.09 |
| Liver metastases (present vs. none) | 3.08 (0.82–14.78) | 0.11 | 1.89 (0.45–9.86) | 0.40 |
| Brain metastases (present vs. none) | 0.64 (0.21–1.78) | 0.40 | 0.52 (0.15–1.64) | 0.28 |
| Histology (squamous vs. non-squamous) | 1.30 (0.59–2.87) | 0.51 | 0.90 (0.38–2.12) | 0.82 |
| Baseline NLR (≥ 6.4 vs. < 6.4) | 1.29 (0.65–2.56) | 0.46 | 0.85 (0.36–1.94) | 0.70 |
| Baseline PLR (≥ 441.8 vs. < 441.8) | 2.09 (0.88–5.16) | 0.10 | 2.14 (0.75–6.40) | 0.16 |

irAE, immune-related adverse events; OR, odds ratio; CI, confidence interval; ECOG PS, Eastern Cooperative Oncology Group performance status; NLR, neutrophil-to-lymphocyte ratio; PLR, platelet-to-lymphocyte ratio.

Table S2 Logistic regression of irAE development within 8 months of pembrolizumab initiation

| Variables | Univariable | | Multivariable | |
|---------------------------------------------|-------------------|-------|-------------------|-------|
| | OR (95% CI) | P | OR (95% CI) | P |
| Age (≥ 75 vs. < 75) | 0.62 (0.30–1.27) | 0.19 | 0.66 (0.29–1.47) | 0.31 |
| Gender (male vs. female) | 1.12 (0.57–2.21) | 0.74 | 1.02 (0.48–2.18) | 0.95 |
| ECOG PS (2/3 vs. 0/1) | 3.46 (1.62–7.75) | 0.002 | 3.76 (1.69–8.88) | 0.002 |
| Liver metastases (present vs. none) | 3.09 (0.71–21.27) | 0.17 | 1.90 (0.36–14.77) | 0.48 |
| Brain metastases (present vs. none) | 0.70 (0.25–1.96) | 0.50 | 0.44 (0.12–1.44) | 0.18 |
| Histology (squamous vs. non-squamous) | 1.02 (0.45–2.36) | 0.96 | 0.59 (0.22–1.53) | 0.28 |
| Baseline NLR (≥ 6.4 vs. < 6.4) | 1.27 (0.62–2.63) | 0.51 | 0.79 (0.32–1.94) | 0.62 |
| Baseline PLR (≥ 441.8 vs. < 441.8) | 2.13 (0.84–5.90) | 0.12 | 2.68 (0.85–9.29) | 0.10 |

irAE, immune-related adverse events; OR, odds ratio; CI, confidence interval; ECOG PS, Eastern Cooperative Oncology Group performance status; NLR, neutrophil-to-lymphocyte ratio; PLR, platelet-to-lymphocyte ratio.