**Figure S1** Six-week landmark analysis for overall survival in patients with or without systemic cancer therapy after the 1st episode of ICI-related ILD. ILD, interstitial lung disease; OS, overall survival; CI, confidence interval; NE, not evaluable.
Table S1 Baseline characteristics of patients with and without the recurrent ICI-related ILD

| Characteristic                                      | Recurrent ICI-related ILD | No recurrent ILD | p Value |
|-----------------------------------------------------|---------------------------|------------------|---------|
| Median age (range), years                           | 65 (62–73)                | 65 (45–74)       | 0.33    |
| Sex, n (%)                                          |                           |                  |         |
| Male                                                | 7 (88)                    | 5 (63)           | 0.25    |
| Female                                              | 1 (12)                    | 3 (37)           |         |
| Smoking status, n (%)                               |                           |                  |         |
| Current or former                                   | 7 (88)                    | 6 (75)           | 0.52    |
| Never                                               | 1 (12)                    | 2 (25)           |         |
| ECOG-PS, n (%)                                      |                           |                  |         |
| 0                                                   | 1 (12)                    | 3 (37)           | 0.39    |
| 1                                                   | 5 (63)                    | 5 (63)           |         |
| ≥2                                                  | 1 (12)                    | 0                |         |
| Unknown                                             | 1 (12)                    | 0                |         |
| Disease stage, n (%)                                |                           |                  |         |
| IIIIB                                               | 0                         | 0                | 0.05    |
| IV                                                  | 2 (25)                    | 6 (75)           |         |
| Relapse after local therapy                         | 6 (75)                    | 2 (25)           |         |
| Histology, n (%)                                    |                           |                  |         |
| Adenocarcinoma                                      | 2 (25)                    | 2 (25)           |         |
| Squamous carcinoma                                  | 5 (63)                    | 5 (63)           |         |
| Others                                              | 1 (12)                    | 1 (12)           |         |
| Line of anti-PD-1 therapy, n (%)                    |                           |                  |         |
| 1                                                   | 2 (25)                    | 0                | 0.31    |
| 2                                                   | 4 (50)                    | 5 (63)           |         |
| 3                                                   | 2 (25)                    | 3 (37)           |         |
| PD-L1 expression, n (%)                             |                           |                  |         |
| < 1                                                 | 1 (12)                    | 0                | 0.16    |
| 1-49%                                               | 0                         | 0                |         |
| > 50%                                               | 2 (25)                    | 0                |         |
| Unknown                                             | 5 (63)                    | 8 (100)          |         |
| Anti-PD-1 therapy, n (%)                            |                           |                  | 0.13    |
| Nivolumab                                           | 6 (75)                    | 8 (100)          |         |
| Pembrolizumab                                        | 2 (25)                    | 0                |         |
| Response to anti-PD-1 therapy                       |                           |                  | 0.86    |
| CR                                                  | 1 (12)                    | 1 (12)           |         |
| PR                                                  | 2 (25)                    | 2 (25)           |         |
| SD                                                  | 3 (37)                    | 3 (37)           |         |
| PD                                                  | 1 (12)                    | 2 (25)           |         |
| NE                                                  | 1 (12)                    | 0                |         |
| Baseline interstitial lung abnormality, n (%)       |                           |                  | 0.55    |
| 1-2                                                 | 2 (25)                    | 1 (12)           |         |
| 3-4                                                 | 4 (50)                    | 7 (88)           | 0.11    |
| Radiologic features, n (%)                          |                           |                  |         |
| COP-like                                            | 4 (50)                    | 5 (63)           | 0.61    |
| GGO                                                 | 4 (50)                    | 3 (37)           |         |
| Not otherwise specified                             | 0                         | 0                |         |
| Systemic steroid use, n (%)                         | 7 (88)                    | 6 (75)           | 0.55    |
| Time to the ILD, days (range)                       | 24 (5–523)                | 50.5 (1-295)     | 0.56    |

Differences between groups were identified using *student’s t test or †Chi-Square test. ICI, immune checkpoint inhibitor; ILD, interstitial lung disease; ECOG, Eastern Cooperative Oncology Group; PS, performance status; PD-1, programmed cell death-1; PD-L1, PD-ligand 1; CR, complete response; PR, partial response; SD, stable disease; PD, progressive disease; NE, not evaluable; COP, cryptogenic organizing pneumonia; GGO, ground glass opacity.