

Supplementary Table S1. Demographic and clinical characteristics of patients enrolled in the final cohort

| Parameters | Number of patients | Percentage (%) |
|--------------------|--------------------|----------------|
| Sex | | |
| Male | 92 | 70.3 |
| Female | 24 | 20.7 |
| Age, years | | |
| ≥ 65 | 58 | 50.0 |
| < 65 | 58 | 50.0 |
| Smoking | | |
| Yes | 105 | 90.5 |
| No | 11 | 9.5 |
| Pathology | | |
| Squamous | 55 | 47.4 |
| Adenocarcinoma | 57 | 49.1 |
| Others | 4 | 3.4 |
| Therapy | | |
| ICI+chemotherapy | 104 | 89.7 |
| ICI | 12 | 10.3 |
| Regimen type | | |
| First-line | 95 | 81.9 |
| Second-line | 21 | 18.1 |
| PD-L1 expression | | |
| Negative | 31 | 26.7 |
| Positive | 68 | 58.6 |
| Past history of TB | | |
| Yes | 40 | 34.5 |
| No | 76 | 65.5 |

Note. ICI, immune checkpoint inhibitor; TB, tuberculosis.

Supplementary Table S2. Clinical efficacy of ICI therapy in lung cancer patients with or without previous tuberculosis episode

| Response | Number of cases evaluated (n = 99) | With previous TB episode (n = 31) | Without previous TB episode (n = 68) |
|----------|------------------------------------|-----------------------------------|--------------------------------------|
| CR/PR | 35 | 11 | 24 |
| SD | 52 | 18 | 34 |
| PD | 12 | 2 | 10 |
| ORR | 35.4% (35/99) | 35.5% (11/31) | 35.3% (24/68) |
| DCR | 87.9% (87/99) | 93.5% (29/31) | 85.3% (58/68) |

Note. ICI, immune checkpoint inhibitor; TB, tuberculosis; CR, complete response; PR, partial response; SD, stable disease; PD, progressive disease; ORR, objective response rate; DCR, disease control rate; n, number.

Supplementary Table S3. Risk factors for AEs of lung cancer patients with previous TB episode after ICI therapy

| Parameters | | Patients without severe AE (n = 25, %) | Patients with severe AE (n = 15, %) | Odds ratio | P value |
|--|------------------|---|--|----------------------|---------|
| Sex | Male | 23 (91.2) | 14 (93.3) | 0.821 (0.068–0.914) | > 0.999 |
| | Female | 2 (8.0) | 1 (6.7) | | |
| Age, years | ≥ 65 | 8 (32.0) | 10 (66.7) | 4.250 (1.087–16.614) | 0.033 |
| | < 65 | 17 (68.0) | 5 (33.3) | | |
| Smoking | Yes | 21 (84.0) | 12 (80.0) | 1.313 (0.250–6.879) | > 0.999 |
| | No | 4 (16.0) | 3 (20.0) | | |
| Pathology | Squamous | 14 (56.0) | 7 (46.7) | 1.455 (0.402–5.260) | 0.567 |
| | Adenocarcinoma | 11 (44.0) | 8 (53.3) | | |
| Treatment | ICI+chemotherapy | 20 (80.0) | 13 (86.7) | 0.615 (0.104–3.658) | 0.691 |
| | ICI | 5 (20.0) | 2 (13.3) | | |
| Line of treatment | First | 17 (68.0) | 11 (73.3) | 0.773 (0.187–3.196) | > 0.999 |
| | Second or later | 8 (32.0) | 4 (26.7) | | |
| PD-L1 expression | Negative | 8 (40.0) | 5 (41.7) | 0.933 (0.218–3.999) | > 0.999 |
| | Positive | 12 (60.0) | 7 (58.3) | | |
| Period between anti-TB treatment and ICI | ≥ 5 years | 12 (48.0) | 7 (46.7) | 1.055 (0.293–3.803) | > 0.999 |
| | < 5 years | 13 (52.0) | 8 (53.3) | | |

Note. AE, adverse events; ICI, immune checkpoint inhibitor; TB, tuberculosis; *n*, number.

Supplementary Table S4. Severe adverse events of lung cancer patients with previous TB episode

| ID | Cycles of treatment | Organs involved | | | | | | | | | | | | No. of organs |
|----|---------------------|--------------------|-------------|--------|---------------------------|--------|-------|-----------------------|------|---------|-------|--------|--------|---------------|
| | | Reoccurrence of TB | Pneumonitis | Marrow | Intestinal gastric organs | Kidney | Fever | Liver and gallbladder | Skin | Thyroid | Heart | Muscle | Ureter | |
| 1 | 3 | • | | | | | | | | | | | | 1 |
| 2 | 1 | | | • | • | • | • | | | | • | | | 5 |
| 3 | 1 | | | | | | | • | • | | | | | 2 |
| 4 | 4 | | • | • | | | | • | • | • | • | • | | 7 |
| 5 | 1 | | | • | | | | | | | | | | 1 |
| 6 | 2 | | | | | | | | | | | | • | 1 |
| 7 | 6 | • | | | | | | | | | | | | 1 |
| 8 | 5 | | • | • | | | | | | | | | | 2 |
| 9 | 5 | • | | | | | | | | | | | | 1 |
| 10 | 6 | | | • | | • | | | | | | | | 2 |
| 11 | 1 | | | • | | • | • | | | | | | | 3 |
| 12 | 4 | | • | | | | | | | | | | | 1 |
| 13 | 1 | | • | • | | • | • | | | | | | | 4 |
| 14 | 4 | | | • | | | | | • | | | | | 2 |
| 15 | 1 | | | • | • | | • | | • | | | | | 4 |