

**Supplementary Table****Supplementary table 1.** Definition of pneumonitis grades in the NCI-CTCAE version 5.0 (1)

Grade	Description
1	Asymptomatic; clinical or diagnostic observations only; intervention not indicated
2	Symptomatic; medical intervention indicated; limiting instrumental ADL
3	Severe symptoms; limiting self-care ADL; oxygen indicated
4	Life-threatening respiratory compromise; urgent intervention indicated (e.g., tracheotomy or intubation)
5	Death

Abbreviations: NCI-CTCAE, National Cancer Institute Common Terminology Criteria for Adverse Events; ADL, activities of daily living

## Reference.

1. Wolchok JD, Chiarion-Sileni V, Gonzalez R, et al. Overall Survival with Combined Nivolumab and Ipilimumab in Advanced Melanoma. *N Engl J Med* 2017;377:NEJMoa1709684. doi:10.1056/NEJMoa1709684

**Supplementary table 2.** Definitions of radiographic patterns and extent of ICI-pneumonitis (1, 2)

<b>Radiographic pattern</b>	<b>Findings on CT</b>
Cryptogenic organizing pneumonia (COP)	Patchy and often migratory consolidation in a subpleural, peribronchial, or bandlike pattern, commonly associated with ground-glass opacity
Non-specific interstitial pneumonia (NSIP)	Bilateral ground-glass opacity, irregular reticular opacities with traction bronchiectasis and bronchiolectasis
Pneumonia not otherwise specified (NOS)	Findings not satisfying description of other patterns
<b>Radiographic extent</b>	<b>Findings on CT</b>
Mild	Pneumonitis involves less than 25% of lung parenchyma
Moderate	Pneumonitis involves 25-50% of lung parenchyma
Severe	Pneumonitis involves more than 50% of lung parenchyma

Abbreviations: ICI, immune checkpoint inhibitor; CT, computed tomography

#### Reference.

1. Travis WD, Costabel U, Hansell DM, et al. An official American Thoracic Society/European Respiratory Society statement: Update of the international multidisciplinary classification of the idiopathic interstitial pneumonias. *Am J Respir Crit Care Med* 2013;188:733–48. doi:10.1164/rccm.201308-1483ST
2. Society ATSR. American Thoracic Society American Thoracic Society / European Respiratory Society International Multidisciplinary Consensus Classification of the Idiopathic Interstitial Pneumonias. *Am J Respir Crit Care Med* 2002;166:518–626. doi:10.1183/09031936.02.00492002

**Supplementary table 3.** Incidence of ICI-pneumonitis by each cancer type

Cancer	Number of patients included in screening	Number of patients having ICI-pneumonitis	Incidence (%)
Non-small cell lung cancer	219	8	3.65
Head-and-neck squamous cell carcinoma	57	2	3.51
Urothelial cell carcinoma	50	1	2.00
Biliary cancer	27	1	3.70
Colorectal cancer	23	1	4.35
Lymphoma	6	1	16.67
Esophageal cancer	16	1	6.25
Renal cell carcinoma	41	1	2.44
Advanced gastric cancer	100	0	0
Melanoma	51	0	0
Breast cancer	45	0	0
Small cell lung cancer	20	0	0
Thyroid cancer	14	0	0
Others <sup>+</sup>	37	0	0

+: Other cancer types include pancreatic cancer, hepatocellular carcinoma, glioblastoma multiforme, prostate cancer, uterine cancer, ovarian cancer, merkel cell carcinoma, renal squamous cell carcinoma and metastasis of unknown origin.

**Supplementary table 4.** Clinical features of pneumonitis at initial recognition

	<b>No. of patients (%)</b>
<b>Symptoms</b>	
<b>Cough</b>	3 (19)
<b>Sputum</b>	4 (25)
<b>Dyspnea</b>	4 (25)
<b>Fever</b>	0 (0)
<b>Grade according to NCI-CTCAE</b>	
<b>Grade 1</b>	9 (56)
<b>Grade 2</b>	4 (25)
<b>Grade 3</b>	3 (19)
<b>Time to onset from initiation of ICIs</b>	
<b>≤ 3 months</b>	6 (38)
<b>&gt; 3 months</b>	10 (63)
<b>Other accompanying irAE</b>	
<b>None</b>	8 (50)
<b>Thyroiditis</b>	5 (31)
<b>Keratitis</b>	1 (6)
<b>Uveitis</b>	1 (6)
<b>Arthritis</b>	2 (13)
<b>Skin rash</b>	1 (6)

Abbreviations: NCI-CTCAE, National Cancer Institute Common Terminology Criteria for Adverse Events; ICI, immune checkpoint inhibitor; irAE, immune-related adverse event

**Supplementary table 5.** Radiological patterns and grade of pneumonitis

<b>Grade</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>Pattern</b>			
<b>COP</b>	4	3	0
<b>NSIP</b>	2	0	1
<b>NOS</b>	3	1	2
<b>Extent</b>			
<b>Mild</b>	7	2	0
<b>Moderate</b>	2	2	3

Abbreviations: COP, cryptogenic organizing pneumonia; NSIP, non-specific interstitial pneumonia; NOS, pneumonia not otherwise specified