



Figure S1 Representative cases of SMPLC with and without LNM. Preoperative chest TS-CT images of a 63-year-old man who had been pathologically manifested with mediastinal and hilar LNM showed (A) one solid nodule with lepidic histological patterns in the left upper lobe and (B) another solid mass with acinar histological patterns in the left lower lobe. Preoperative chest TS-CT images of a 68-year-old man who had neither mediastinal nor hilar LNM according to the pathological criteria showed (C) one solid nodule of SCC in the right upper lobe and (D) another solid nodule of adenocarcinoma in the left lower lobe. LNM, lymph node metastasis; SCC, squamous cell carcinoma; SMPLC, synchronous multiple primary lung cancer; TS-CT, thin-section computed tomography.

Table S1 Imaging characteristics of the lesions of SMPLC on chest TS-CT

Estimated characteristics	Definition	Combination of multiple lesions*
Type of nodule		
Ground-glass nodule	The nodule without any solid component that obscures the underlying lung parenchyma other than blood vessels on lung window setting of chest TS-CT	–
Part solid nodule	The nodule with a part of solid component that obscures the underlying lung parenchyma other than blood vessels on lung window setting of chest TS-CT	GGO-predominant nodule; solid-predominant nodule
Pure solid nodule	The nodule appearing only with consolidation on chest TS-CT	–
Consolidation tumor ratio	The ratio calculated by the maximum size of consolidation to the maximum size of lesion on chest TS-CT scan	All lesions <0.90; 1 lesion ≥0.90; ≥2 lesions ≥0.90
Spiculation	Lines radiating from the margins of the tumor	Absent; 1 lesion present; ≥2 lesions present
Lobulation	The surface of tumor shows a wavy or scalloped configuration	Absent; 1 lesion present; ≥2 lesions present
Pleural indentation	Tumor attaches to the pleura or fissure with one or more stripes, and tumor margin is obscured by the pleura or fissure	Absent; 1 lesion present; ≥2 lesions present
Bubble-like vacuole	The presence of air in the tumor	Absent; 1 lesion present; ≥2 lesions present
Air bronchogram	Normally or pathologically tube-like or branched air structure within the tumor	Absent; normally present; 1 lesion pathologically present; ≥2 lesions pathologically present
Long-axis diameter of the lesion	Longest diameter of the entire lesion on lung window setting of chest TS-CT	≥1 lesion ≥30 mm; All lesions <30 mm
Long-axis diameter of the solid portion	Longest diameter of the solid component inner the lesion on lung window setting of chest TS-CT	≥1 lesion ≥27 mm; All lesions <27 mm

*, the cutoff values assigned to consolidation tumor ratio (0.90), the long-axis diameters of the lesion (30 mm) and the solid portion (27 mm) on chest TS-CT were determined by the maximum Youden indices in terms of the maximal lesion of SMPLC. GGO, ground-glass opacity; SMPLC, synchronous multiple primary lung cancer; TS-CT, thin-section computed tomography.