

Table SI. Patient and tumor characteristics.

Patient characteristic (n=497)	Values
Median age, years (range)	77 (41-91)
Sex, male/female	340/157
PS, 0/1/2/3/4	300/170/21/5/1
Diagnosis, n (%)	
Primary lung cancer	408 (82.1)
Lung oligo-metastasis	89 (17.9)
Clinical tumor stage, n (%)	
IA	314 (63.2)
IB	77 (15.5)
IV	89 (17.9)
Unknown	17 (3.42)
Tumor status, n (%)	
T1	417 (83.9)
T2	80 (16.1)
Tumor quantity, n (%)	
1	460 (92.6)
2	32 (6.44)
3	3 (0.604)
Unknown	2 (0.402)
Histology, n (%)	
AD	202 (40.6)
SCC	86 (17.3)
Other	209 (42.1)
Smoking history	
Yes	336
No	156
Unknown	5
Respiratory function	
Normal	232
Abnormal	242
Unknown	23
RP (G0/G1/G2/G3/Unknown)	79/373/14/1/30
Median tumor diameter, mm (range)	20 (6-55)
TCTV, HU (range)	8.605 (-775.40-136.63)
IDV, mg/cm ³ (range)	18.24 (1.18-72.50)
WDV, mg/cm ³ (range)	956.8 (191.9-1,046.1)
KL-6, U/ml (range)	284 (112-3,240)
CRP, mg/dl (range)	0.1 (0-14.29)
SP-D, ng/ml (range)	62.5 (17.2-498)
SPO ₂ , % (range)	83.80 (55.6-173)
SPCO ₂ , mmHg (range)	40.70 (25.50-57.20)
% VC (range)	97.10 (47.6-142.3)
FEV _{1.0} , % (range)	72.6 (22.4-100)
Brinkman index (range)	600 (0-4,500)
SUVmax (range)	3.5 (0-36.0)

PS, performance status; AD, adenocarcinoma; SCC, squamous cell carcinoma; RP, radiation pneumonitis; TCTV, tumor computed tomography value; IDV, iodine density value; WDV, water density value; KL-6, Krebs von den Lungen-6; CRP, C-reactive protein; SP-D, surfactant protein-D; SPO₂, peripheral capillary oxygen saturation; SPCO₂, saturation of percutaneous carbon dioxide; %VC, percentage vital capacity; FEV, forced expiratory volume; SUV, standard uptake value.

Table SII. Factors related to OS univariate analysis.

Patient characteristic	n	5-year OS, %	95% CI	P-value
TCTV, HU				
<34.0	173	68.7	55.6-78.7	0.034
≥34.0	85	57.4	41.8-70.2	
IDV, mg/cm ³				
>14.94	169	72.7	59.9-81.9	0.002
≤14.94	89	50.1	34.8-63.7	
WDV, mg/cm ³				
<970.46	143	73.1	59.5-82.7	0.008
≥970.46	115	55.5	41.3-67.5	
Histology				
AD	202	68.7	59.7-76.1	0.04
SCC	86	45.3	30.0-59.3	
SUV _{max}				
<2.6	102	79.5	62.1-89.5	<0.001
≥2.6	183	56.7	44.9-67.0	
Respiratory function				
Normal	232	72.5	63.9-79.4	0.005
Abnormal	242	60.7	51.3-68.8	

OS, overall survival; CI, confidence interval; TCTV, tumor computed tomography value; IDV, iodine density value; WDV, water density value; AD, adenocarcinoma; SCC, squamous cell carcinoma; SUV, standard uptake value.

Table SIII. Factors related to LC univariate analysis.

Patient characteristic	n	5-year LC, %	95% CI	P-value
TCTV, HU				
<22.59	148	92.3	84.1-96.3	0.014
≥22.59	110	75.7	60.6-85.6	
IDV, mg/cm ³				
>17.84	134	92.7	81.6-97.2	<0.001
≤17.84	124	74.2	59.6-84.1	
WDV, mg/cm ³				
<984.66	159	93.1	85.7-96.7	0.002
≥984.66	99	72.4	56.2-83.4	
Histology				
AD	202	89.8	82.4-94.1	0.015
SCC	86	73.1	55.5-84.6	
SUV _{max}				
<5.2	180	89.8	80.0-95.0	<0.001
≥5.2	105	71.6	48.2-85.8	
Respiratory function				
Normal	232	91.7	86.3-95.0	0.03
Abnormal	242	80.4	70.8-87.2	

LC, local control; CI, confidence interval; TCTV, tumor computed tomography value; IDV, iodine density value; WDV, water density value; AD, adenocarcinoma; SCC, squamous cell carcinoma; SUV, standard uptake value.

Table SIV. Five-year OS univariate analysis.

Patient characteristic	n	5-year OS, %	95% CI	P-value
Sex				
Male	340	61.1	53.5-67.9	0.002
Female	157	77.1	66.1-85.0	
PS				
0	300	71.4	63.9-77.7	[0 vs. 1] 0.043
1	170	61.5	49.5-71.5	[0 vs. 2] <0.001
2	21	33.3	11.6-57.1	[1 vs. 2] 0.017
Diagnosis				
Primary lung cancer	408	69.5	62.8-75.3	0.0328
Lung oligo-metastasis	89	52.3	37.3-65.3	
Histology				
AD	202	68.7	59.7-76.1	0.04
SCC	86	45.3	30.0-59.3	
Stage				
IA	314	72.7	65.3-78.8	[IA vs. IB] 0.042
IB	77	55.6	38.9-69.4	
IV	89	52.3	37.3-65.3	[IA vs. IV] 0.031
Smoking history				
No	156	71.4	59.5-80.4	0.021
Yes	336	63.4	55.9-70.0	
Respiratory function				
Normal	232	72.5	63.9-79.4	0.005
Abnormal	242	60.7	51.3-68.8	
TCTV, HU				
<34.0	173	68.7	55.6-78.7	0.034
≥34.0	85	57.4	41.8-70.2	
IDV, mg/cm ³				
>14.94	169	72.7	59.9-81.9	0.002
≤14.94	89	50.1	34.8-63.7	
WDV, mg/cm ³				
<970.46	143	73.1	59.5-82.7	0.008
≥970.46	115	55.5	41.3-67.5	
SUV _{max}				
<2.6	102	79.5	62.1-89.5	<0.001
≥2.6	183	56.7	44.9-67.0	
SP-D, ng/ml				
≤109	341	69.9	62.4-76.3	<0.001
>109	86	48.0	33.1-61.5	
% VC				
>80	386	70.1	63.2-75.9	<0.001
≤80	90	51.1	36.7-63.8	
Brinkman index				
<525	170	71.6	60.5-80.1	0.0352
≥525	322	63.2	55.5-69.8	
SPCO ₂				
<48.6	425	67.2	60.6-73.0	<0.001
≥48.6	9	NA	NA	
CRP, mg/dl				
≤0.14	295	69.7	61.9-76.2	0.018
>0.14	184	59.6	48.6-69.0	
Total dose, Gy				
45	2	NA	NA	[45 vs. 50] 0.007
50	321	68.7	60.2-75.8	[45 vs. 56] 0.003
56	42	64.7	46.7-78.0	

Table SIV. Continued.

Patient characteristic	n	5-year OS, %	95% CI	P-value
Tumor quantity				
1	460	67.8	61.4-73.4	0.035
2	32	44.1	22.0-64.2	
RP grade				
G2	14	80.0	20.4-96.9	0.049
G3	1	NA	NA	

OS, overall survival; CI, confidence interval; PS, performance status; AD, adenocarcinoma; SCC, squamous cell carcinoma; TCTV, tumor computed tomography value; IDV, iodine density value; WDV, water density value; SUV, standard uptake value; SP-D, surfactant protein-D; %VC, percentage vital capacity; SPCO₂, saturation of percutaneous carbon dioxide; CRP, C-reactive protein; RP, radiation pneumonitis.