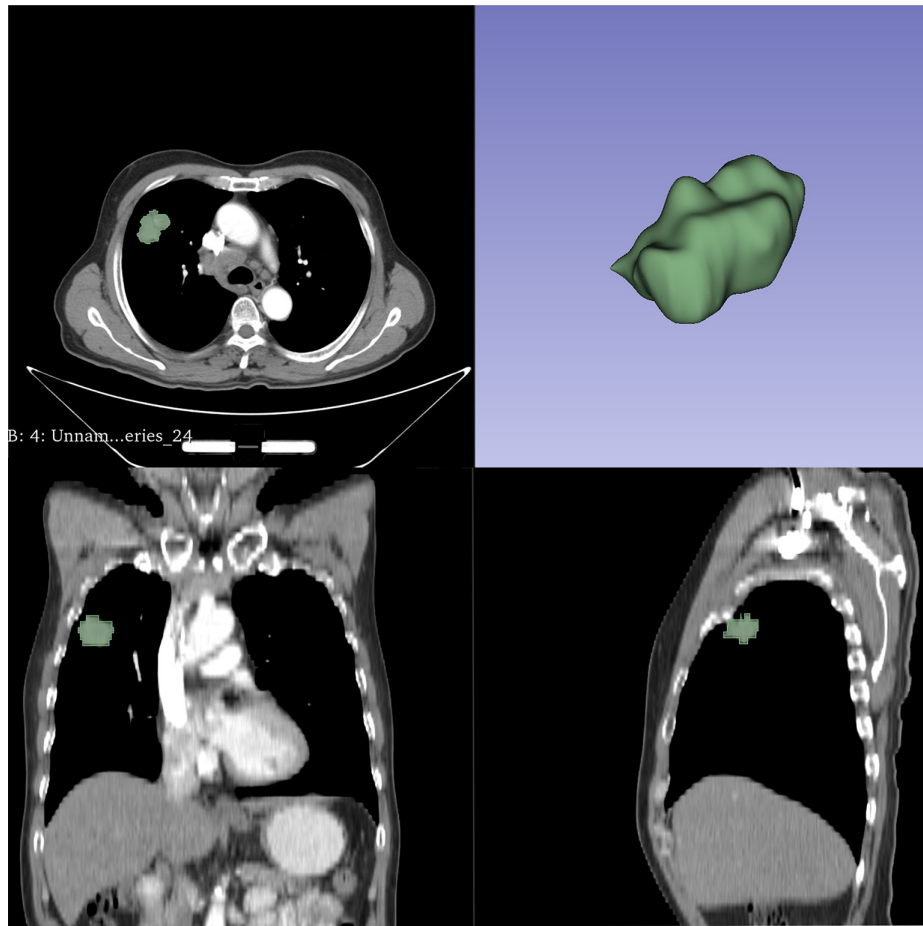
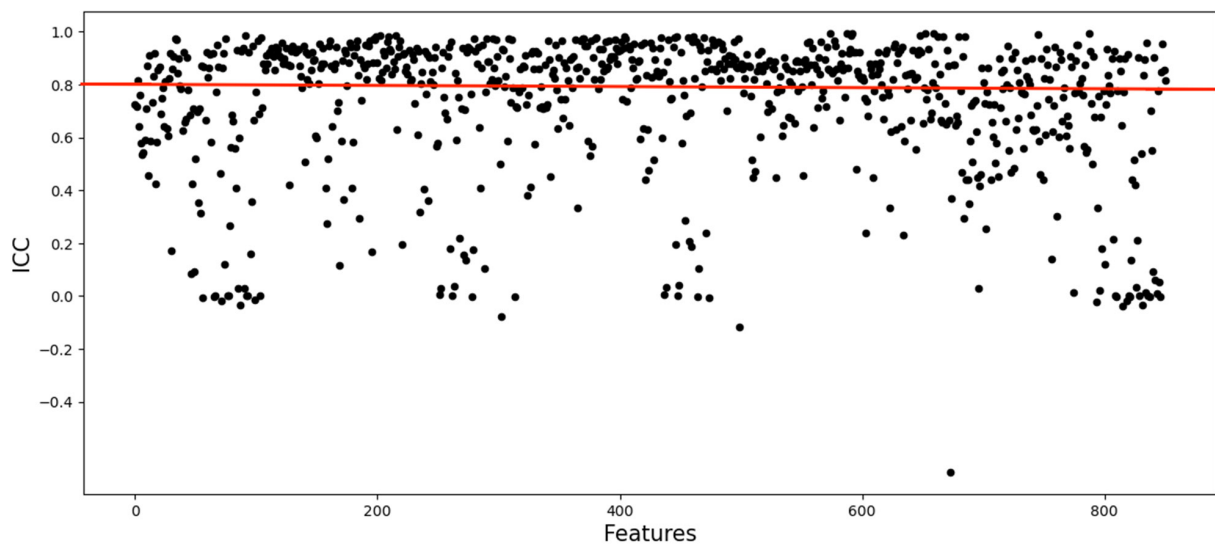


**Table S1** Comparison of patients' characteristics between training and validation groups

Characteristics	Variables	Training group (N=74)	Validation group (N=31)	P
Gender	Male	66 (89.2)	25 (80.6)	0.24
	Female	8 (10.8)	6 (19.4)	
Age	<65 years	43 (58.1)	23 (74.2)	0.12
	≥65 years	31 (41.9)	8 (25.8)	
Smoking status	Never	18 (24.3)	8 (25.8)	0.87
	Former/current	56 (75.7)	23 (74.2)	
Tumor location	Left lung	32 (43.2)	13 (41.9)	0.36
	Right lung	41 (55.4)	16 (51.6)	
	Others	1 (1.4)	2 (6.5)	
Histology	ADC	21 (28.4)	11 (35.5)	0.47
	SCC	53 (71.6)	20 (64.5)	
Clinical stage	IIIA	32 (43.2)	11 (35.5)	0.31
	IIIB	37 (50.0)	15 (48.4)	
	IIIC	5 (6.8)	5 (16.1)	
Radiation dose	<60 Gy	16 (21.6)	4 (12.9)	0.30
	≥60 Gy	58 (78.4)	27 (87.1)	
Chemoradiotherapy	SCRT	34 (45.9)	12 (38.7)	0.50
	CCRT	40 (54.1)	19 (61.3)	
Radiation therapy	3D-CRT	16 (21.6)	6 (19.4)	0.80
	IMRT	58 (78.4)	25 (80.6)	
<i>KEAP1</i>	Wild	65 (87.8)	25 (80.6)	0.34
	Mutation	9 (12.2)	6 (19.4)	
<i>KEAP1-NRF2</i> pathway	Wild	64 (86.5)	24 (77.4)	0.25
	Deletion	10 (13.5)	7 (22.6)	
<i>FGFR</i> family	Wild	56 (75.7)	23 (74.2)	0.87
	Mutation	18 (24.3)	8 (25.8)	
<i>MET</i>	Wild	68 (91.9)	30 (96.8)	0.36
	Mutation	6 (8.1)	1 (3.2)	
<i>NOTCH2</i>	Wild	65 (87.8)	26 (83.9)	0.59
	Mutation	9 (12.2)	5 (16.1)	
<i>PTEN</i>	Wild	66 (89.2)	27 (87.1)	0.76
	Mutation	8 (10.8)	4 (12.9)	
Rad-score	<0.745	29 (39.2)	10 (32.3)	0.50
	≥0.745	45 (60.8)	21 (67.7)	



**Figure S1** The segmentation of region of interest.



**Figure S2** Evaluation of the stability of radiomics features based on ICC. The red line represents the ICC is 0.8. Features with  $ICC \geq 0.8$  were selected, and a total of 365 imaging features were included for further analysis as stable feature parameters.