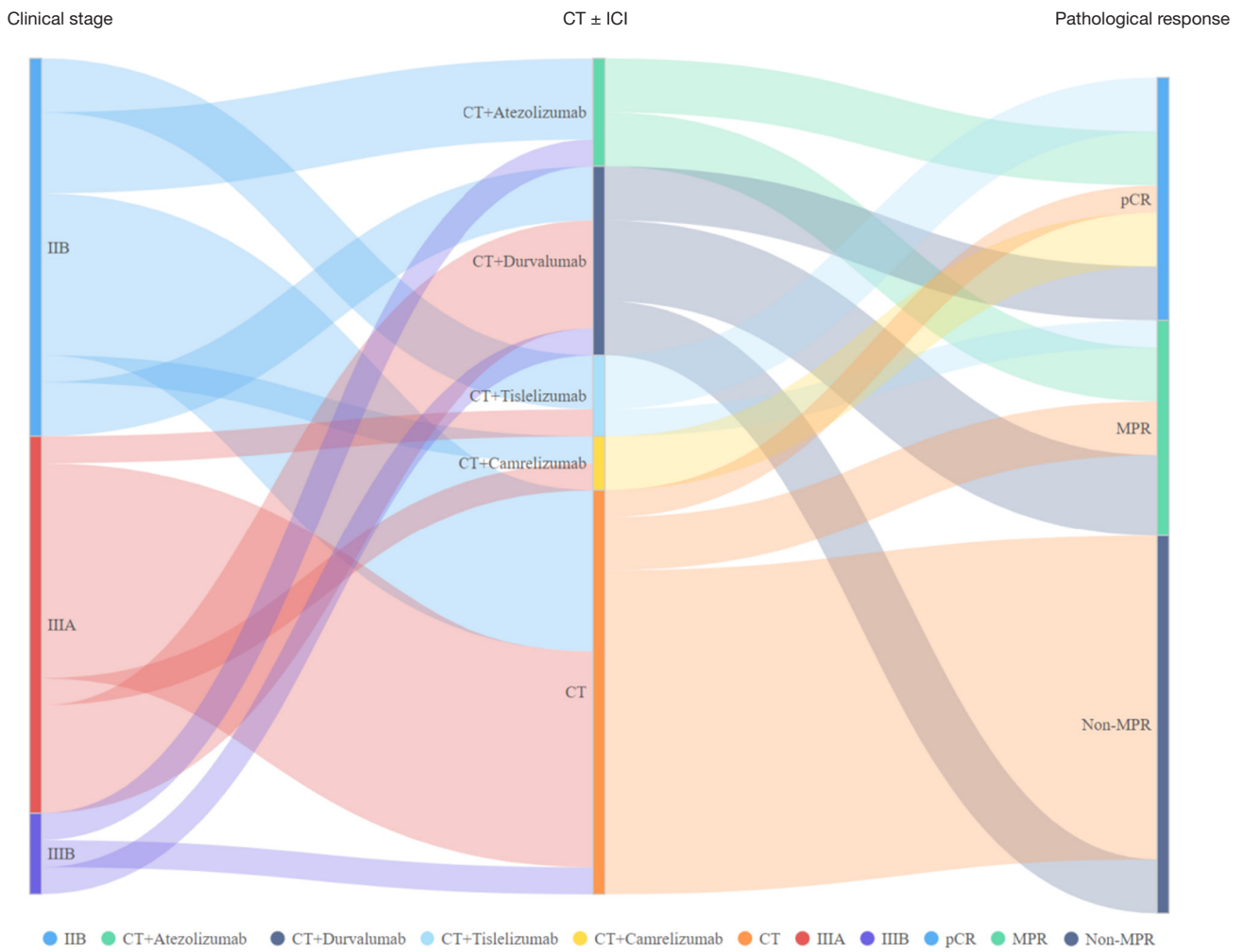


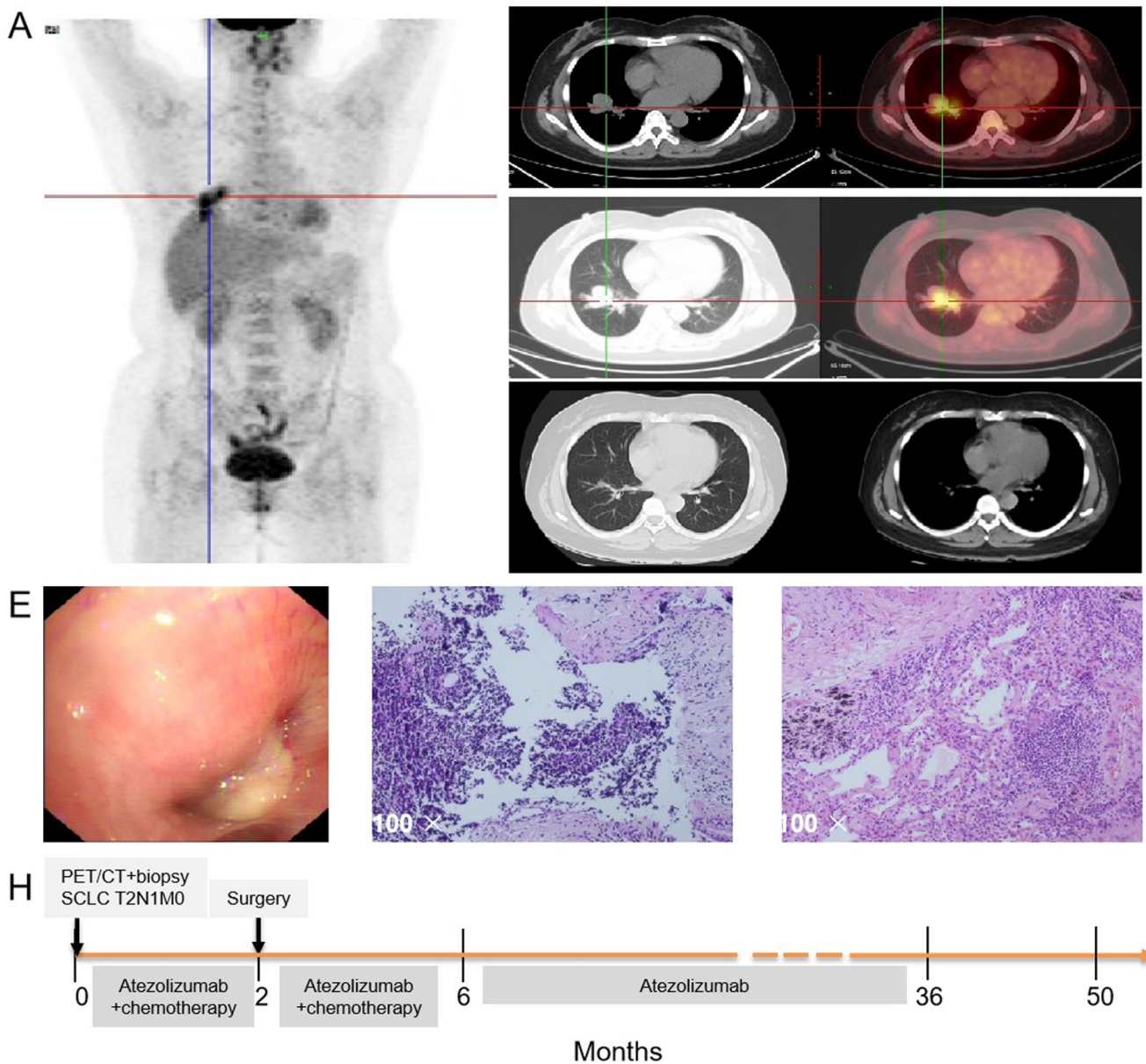
**Table S1** Surgical outcomes summary

Surgical outcomes	Chemoimmunotherapy (n=16)	Chemotherapy alone (n=15)	P value
Surgical methods, n (%)			>0.99 <sup>†</sup>
VATS	8 (50.0)	8 (53.3)	
Thoracotomy	8* (50.0)	7 (46.7)	
Extent of resection, n (%)			0.40 <sup>‡</sup>
Lobectomy	10 (62.5)	12 (80.0)	
Bilobectomy	4 (25.0)	1 (6.7)	
Pneumonectomy	2 (12.5)	2 (13.3)	
Operation time (minutes)			0.71 <sup>‡</sup>
Median	140	135	
Range	75-280	70-240	
Estimated blood loss (mL)			0.22 <sup>‡</sup>
Median	150	100	
Range	20-500	50-600	
Hospitalization after surgery (days)			0.94 <sup>‡</sup>
Median	9.5	9.0	
Range	6-16	6-21	
R0 resection, n (%)			>0.99 <sup>†</sup>
Yes	15 (93.8)	14 (93.3)	
No	1 (6.3)	1 (6.7)	
Perioperative death, n (%)	0	0	NA

\*, one case in the chemoimmunotherapy group underwent a change in surgical procedure from VATS to thoracotomy. †, Fisher's exact test; ‡, Welch Two Sample *t*-test. VATS, video-assisted thoracoscopic surgery; NA, not applicable.



**Figure S1** Sankey diagram of the relationship between pathological response of neoadjuvant therapy in different clinical stages. CT, chemotherapy; ICI, immune checkpoint inhibitor; MPR, major pathological response; pCR, pathological complete response.



**Figure S2** Representative images and timeline of presented case. (A-C) PET/CT and CT scan of primary tumor in right lower lobe. (D) Tumor regression in CT image after 2 cycles of chemoimmunotherapy before surgery. (E) The carcinoma was located in the orifice of the basal segment bronchus of right lower lobe imaged by fiberbronchoscopy before treatment. (F,G) Haematoxylin and eosin stain showing a SCLC tissue pre-treatment (F) and a pathological CR tissue post-surgery (G). (H) Timeline of treatments and examinations is shown. Magnification, 100x. PET, positron emission tomography; CT, computed tomography.