

Supplementary

Table S1 Individual pretreatment clinical stage and nodal assessment, perioperative treatment, pathological response, and follow-up outcomes of the study cohort (data cutoff: March 31, 2026)

No.	Pretreatment nodal assessment	Pretreatment clinical TNM stage	Neoadjuvant regimen	Neoadjuvant duration	Pathological response	Postoperative pathological stage	Initial postoperative treatment	Duration/status of initial postoperative treatment	Follow-up (months)	Recurrence status	Post-recurrence treatment/outcome
Neoadjuvant ALK-TKI group (n=13)											
1	EBUS-TBNA	cT3N1M0 (stage IIIA)	Iruplinalkib	2 mo	Non-MPR	ypT1N1M0 (stage IIB)	Iruplinalkib	25 mo; ongoing at data cutoff	26	No recurrence	–
2	PET-CT	cT1N2M0 (stage IIIA)	Iruplinalkib	3 mo	Non-MPR	ypT1N2M0 (stage IIIA)	Iruplinalkib	16 mo; ongoing at data cutoff	17	No recurrence	–
3	EBUS-TBNA	cT1N2M0 (stage IIIA)	Alectinib	3 mo	Non-MPR	ypT1N0M0 (stage IA)	Alectinib	16 mo; ongoing at data cutoff	17	No recurrence	–
4	EBUS-TBNA	cT3N3M0 (stage IIIC)	Brigatinib	3 mo	pCR	ypT0N0M0 (stage 0)	Brigatinib	15 mo; ongoing at data cutoff	16	No recurrence	–
5	Contrast-enhanced chest CT	cT3N1M0 (stage IIIA)	Brigatinib	3 mo	MPR (5% RVT)	ypT1N0M0 (stage IA)	Brigatinib	24 mo; completed	33	Pleural metastasis 7 mo after treatment completion (Jan 2026)	Brigatinib restarted; ongoing for 2 mo at data cutoff
6	PET-CT	cT4N3M1a (stage IVA)	Alectinib	4 mo	pCR	ypT0N0M0 (stage 0)	Alectinib	31 mo; ongoing at data cutoff	32	No recurrence	–
7	PET-CT	cT4N2M0 (stage IIIB)	Alectinib	4 mo	Non-MPR	ypT4N0M0 (stage IIIA)	None	Patient declined postoperative ALK-TKI	31	No recurrence	–
8	PET-CT	cT2N3M0 (stage IIIB)	Alectinib	1 mo	Non-MPR	ypT1N0M0 (stage IA)	Alectinib	24 mo; completed	43	No recurrence	–
9	Contrast-enhanced chest CT	cT1N2M0 (stage IIIA)	Crizotinib	8 mo	pCR	ypT0N0M0 (stage 0)	Crizotinib	24 mo; completed	71	No recurrence	–
10	Contrast-enhanced chest CT	cT1N1M0 (stage IIA)	Crizotinib	6 mo	Non-MPR	ypT1N0M0 (stage IA)	Crizotinib	6 mo; discontinued at recurrence	30	Brain metastasis during treatment (Dec 2020)	Switched to alectinib for 23 mo; died Nov 2022
11	Contrast-enhanced chest CT	cT4N1M0 (stage IIIA)	Crizotinib	1 mo	Non-MPR	ypT3N0M0 (stage IIB)	Crizotinib	36 mo; completed	79	Brain metastasis 2 mo after treatment completion (Nov 2022)	Switched to alectinib; ongoing at data cutoff
12	EBUS-TBNA	cT1N2M0 (stage IIIA)	Iruplinalkib	2 mo	pCR	ypT0N0M0 (stage 0)	Iruplinalkib	7 mo; ongoing at data cutoff	8	No recurrence	–

No.	Pretreatment nodal assessment	Pretreatment clinical TNM stage	Neoadjuvant regimen	Neoadjuvant duration	Pathological response	Postoperative pathological stage	Initial postoperative treatment	Duration/status of initial postoperative treatment	Follow-up (months)	Recurrence status	Post-recurrence treatment/outcome
Neoadjuvant ALK-TKI group (n=13)											
13	Contrast-enhanced chest CT	cT2N3M1a (stage IVA)	Alectinib	1 mo	MPR (<10% RVT)	ypT2N0M1a (stage IVA)	Alectinib	24 mo; completed	34	No recurrence	–
Chemotherapy-based neoadjuvant group (n=7)											
14	Contrast-enhanced chest CT	cT2N1M0 (stage IIB)	Pemetrexed + carboplatin 2 cycles		Non-MPR	ypT2N0M0 (stage IIA)	Pemetrexed + carboplatin 3 cycles; completed		15	No recurrence	–
15	Contrast-enhanced chest CT	cT3N1M0 (stage IIIA)	Paclitaxel + carboplatin 3 cycles		pCR	ypT0N0M0 (stage 0)	Paclitaxel + carboplatin 4 cycles; completed		30	No recurrence	–
16	Contrast-enhanced chest CT	cT4N1M0 (stage IIIA)	Pemetrexed + cisplatin + tislelizumab 2 cycles		Non-MPR	ypT2N2M0 (stage IIIA)	None	Patient declined postoperative adjuvant treatment	40	No recurrence	–
17	PET-CT	cT1N2M0 (stage IIIA)	Pemetrexed + carboplatin 2 cycles		Non-MPR	ypT1N2M0 (stage IIIA)	Pemetrexed + carboplatin 3 cycles; completed		51	Bone metastasis (Nov 2022)	Brigatinib initiated Feb 2023; ongoing at data cutoff
18	PET-CT	cT1N2M0 (stage IIIA)	Pemetrexed + cisplatin 2 cycles		Non-MPR	ypT1N2M0 (stage IIIA)	Pemetrexed + cisplatin 3 cycles; completed		71	Brain metastasis (Apr 2020)	Alectinib initiated Aug 2020; died Jun 2025
19	Contrast-enhanced chest CT	cT2N1M0 (stage IIB)	Pemetrexed + cisplatin 2 cycles		Non-MPR	ypT1N0M0 (stage IA)	Crizotinib	11 mo; discontinued at recurrence	51	Bone metastasis (Apr 2020)	Switched to iruplinalkib in May 2020; died Jan 2023
20	PET-CT	cT2bN1M0 (stage IIB)	Pemetrexed + carboplatin + toripalimab 3 cycles		Non-MPR	ypT1N2M0 (stage IIIA)	Ensartinib	9 mo; ongoing at data cutoff	10	No recurrence	–

The duration of initial postoperative ALK-TKI treatment was calculated from treatment initiation to completion of the planned 24-month/36-month course, recurrence/progression, treatment discontinuation, death, or the last follow-up, whichever occurred first. ALK-TKI therapy initiated, resumed, or switched after recurrence was classified as post-recurrence treatment and was not included in the initial postoperative treatment duration. MPR was defined as $\leq 10\%$ RVT, and pCR as no residual viable tumor. Pretreatment clinical TNM and overall stages were derived from the pretreatment clinical staging data and are presented using the harmonized 9th-edition staging framework. Patients diagnosed before 2025 were originally staged according to the 8th edition of the TNM classification, whereas those diagnosed in 2025 were staged according to the 9th edition. All stages presented in this table were retrospectively harmonized according to the 9th edition. ALK, anaplastic lymphoma kinase; EBUS-TBNA, endobronchial ultrasound-guided transbronchial needle aspiration; mo, months; MPR, major pathological response; pCR, pathological complete response; PET-CT, positron emission tomography-computed tomography; RVT, residual viable tumor; TKI, tyrosine kinase inhibitor; TNM, tumor-node-metastasis.