nature reviews clinical oncology

https://doi.org/10.1038/s41571-023-00794-7

Review article

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Immune-checkpoint inhibition for resectable non-small-cell lung cancer — opportunities and challenges

In the format provided by the authors and unedited

Supplement TABLE 1 | Clinical trials evaluating neoadjuvant ICIs in resectable NSCLC

Trial	Schedule	Cycles	Patients (*n*)	Stage	% stage III	% surgery	ORR (%)	MPR (%)	pCR (%)
CheckMate 159	Nivolumab	2	21	I–IIIA	33	95	10	45	10
LCMC3	Atezolizumab	2	181	IB–IIIB[a]	48	88	0	21	7
PRINCEPS	Atezolizumab	1	30	I–IIIA	30	93	7	14	0
IONESCO	Durvalumab	3	50	IB–IIIA	4	93	9	19	7
Gao et al.	Sintilimab	2	40	IA–IIIB	45	93	20	41	11
NEOSTAR	Nivolumab	3	23	I–IIIA	22	96	22	22	9
	Nivolumab (N) + ipilimumab (I)	3N + 1I	21		19	81	19	38	29
Neo COAST	Durvalumab (D)	1D	26	I–IIIA[a]	7	86	7	11	4
	Durvalumab + oleclumab (O)	1D + 2O	21		24	86	5	19	10
	Durvalumab + monalizumab (M)	1D + 2M	20		15	90	15	30	31
	Durvalumab + danvatirsen (d)	1D + 4d	16		31	100	6	31	13
NEOpredict-Lung	Nivolumab	2	30	IB–IIIA	10	95	10	27	13
	Nivolumab + relatlimab	2	30		13		27	30	17
EAST ENERGY	Pembrolizumab + ramucirumab	2	24	IB–IIIA	42	92	NR	50	25
NADIM	Nivolumab + chemotherapy	3	46	IIIA	100	89	76	83	63
NADIM II	Nivolumab + chemotherapy	3	87	IIIA	100	91	74	52	36

CheckMate 816	Nivolumab + chemotherapy	3	179	IB–IIIA	63	83	54	37	24
AEGEAN	Durvalumab + chemotherapy	4	366	IIA–IIB[a]	71	81	NR	33.3	17.2
Neotorch	Toripalimab + chemotherapy	3[b]	202	II–IIIA	100	82	NR	48.5	24.8
KEYNOTE-671	Pembrolizumab + chemotherapy	4	397	II–IIIB[a]	16	82	NR	30	18
Shu et al.	Atezolizumab + chemotherapy	4	30	IB–IIIA	77	87	63	57	33
Zhang et al.	Sintilimab + chemotherapy	2–4	55	IIIA	100	54	46	43	20
SAKK 16/14	Chemotherapy (C) → durvalumab (D)	3C, 2D	68	IIIA	100	82	58	62	18

[a]8th TNM. NR: not reported. [b]3 cycles neoadjuvant + 1 cycle adjuvant. MPR, major pathological response; NR, not reported; ORR, objcective response rate; pCR, pathological complete response.

Supplementary TABLE 2 | Main clinical trials evaluating adjuvant treatment with ICIs in resectable NSCLC

Trial	Phase	Patients (*n*)[a]	Treatment[b]	End points and outcomes
PEARLS/KEYNOTE -091	III	1,080	Pembrolizumab 200 mg q3w (1 year) versus placebo	median DFS: 53.6 months versus 42.0 months; HR 0.76, 95% CI 0.63–0.91; *P* = 0.0014
IMpower 010	III	1,280	Atezolizumab 1,200 mg q3w (1 year) versus best supportive care	DFS in PD-L1$^+$, stage II–IIIA populations and ITT populations; in PD-L1$^+$: NR versus 35.3 months; HR 0.66, 95% CI 0.5–0.88; *P* = 0.004
CANOPY-A	III	1,500	Canakimumab 200 mg q3w sc (54 weeks) versus placebo	median DFS 35.0 months versus 29.7 months; HR 0.94, 95% CI 0.78–1.14; *P* = 0.258
BR31 (NCT02273375)	III	1,360	Durvalumab 10 mg/kg q2w (1 year) versus placebo	DFS in PD-L1$^+$ and ITT populations (ongoing)
ANVIL (NCT02595944)	III	903	Nivolumab 240 mg q2w (1 year) versus observation	DFS and OS (ongoing)

[a]All patients had stage IB–IIIA NSCLC with an R0 status after surgery. [b]In all trials, patients received these treatments following adjuvant platinum-based chemotherapy. [c]In ANVIL, the nivolumab dosing was amended to 480 mg every 4 weeks. DFS, disease-free survival; ICI, immune-checkpoint inhibitor; ITT, intention-to-treat population; NSCLC, non-small-cell lung cancer; OS, overall survival; q2/3 w, every 2/3 weeks; sc, subcutaneous.