

Baseline features of included studies

Trial	Year	NCT	Study phase	No. patients	Histological type	PD-1/PD-L1 antibody	Biomarker-driven	Treatment line	Treatment group	Primary endpoint	Follow-up duration
ARCTIC-1 (34)	2020	NCT02352948	III	126	NSCLC	Durvalumab	PD-L1 TC ≥25%	Third or above	Monotherapy	OS and PFS	9.1
ARCTIC-2 (34)	2020	NCT02352948	III	292	NSCLC	Durvalumab	PD-L1 TC <25%	Third or above	Durvalumab plus tremelimumab	OS and PFS	9.1
CAMEL (15)	2019	NCT03134872	III	412	Nonsquamous NSCLC	Camrelizumab	No	First-line	Camrelizumab plus chemotherapy	PFS	11.9
CheckMate 017 (28,35)	2015	NCT01642004	III	272	Squamous NSCLC	Nivolumab	No	Second	Monotherapy	OS	40.3
CheckMate 026 (17)	2016	NCT02041533	III	423	NSCLC	Nivolumab	PD-L1 expression level of 5% or more	First-line	Monotherapy	PFS	13.5
CheckMate 057 (29,35)	2015	NCT01673867	III	582	Nonsquamous NSCLC	Nivolumab	No	Second or above	Monotherapy	OS	40.3
CheckMate 227-1 (36,37)	2018	NCT02477826	III	299	NSCLC	Nivolumab	High TMB	First-line	Nivolumab plus ipilimumab	PFS and OS	Mini 11.2
CheckMate 227-2 (36,37)	2019	NCT02477826	III	793	NSCLC	Nivolumab	PD-L1 expression level of 1% or more	First-line	Nivolumab plus ipilimumab	OS	Mini 29.3
CheckMate 9LA (38)	2020	NCT03215706	III	719	NSCLC	Nivolumab	No	First-line	Nivolumab plus ipilimumab plus chemotherapy	OS	Mini 12.7
EMPOWER-Lung 1-1 (39)	2020	NCT03088540	III	710	NSCLC	Cemiplimab	No	First-line	Monotherapy	OS and PFS	13.1
EMPOWER-Lung 1-2 (39)	2020	NCT03088540	III	563	NSCLC	Cemiplimab	PD-L1 TPS of 50% or greater	First-line	Monotherapy	OS and PFS	10.8
IMpower110 (40,41)	2019	NCT02409342	III	554	NSCLC	Atezolizumab	TC1/2/3 or IC1/2/3	First-line	Monotherapy	OS	NA
IMpower130 (42)	2019	NCT02367781	III	723	Nonsquamous NSCLC	Atezolizumab	No	First-line	Atezolizumab plus chemotherapy	OS and PFS	18.5
IMpower131 (43)	2019	NCT02367794	III	683	Squamous NSCLC	Atezolizumab	No	First-line	Atezolizumab plus chemotherapy	OS	25.5
IMpower132 (44)	2019	NCT02657434	III	578	Nonsquamous NSCLC	Atezolizumab	No	First-line	Atezolizumab plus chemotherapy	OS and PFS	14.8
IMpower150 (45)	2018	NCT02366143	III	800	Nonsquamous NSCLC	Atezolizumab	No	First-line	Atezolizumab plus chemotherapy plus bevacizumab	OS and PFS	15.4
JAVELIN Lung 200 (46)	2018	NCT02395172	III	529	NSCLC	Avelumab	PD-L1 expression in ≥1% of tumour cells	Second or above	Monotherapy	OS	18.3
KEYNOTE-010 (6,47)	2015	NCT01905657	II/III	1033	NSCLC	Pembrolizumab, 2/10 mg/kg	No	Second or above	Monotherapy	OS and PFS	42.6
KEYNOTE-021G (48,49)	2016	NCT02039674	II	123	Nonsquamous NSCLC	Pembrolizumab	No	First-line	Pembrolizumab plus chemotherapy	ORR	18.7
KEYNOTE-024 (16,50)	2016	NCT02142738	III	305	NSCLC	Pembrolizumab	PD-L1 TPS of 50% or greater	First-line	Monotherapy	PFS	43.6
KEYNOTE-033-1 (51,52)	2020	NCT02864394	III	425	NSCLC	Pembrolizumab	PD-L1 TPS of 1% or greater	Second	Monotherapy	OS and PFS	18.8
KEYNOTE-033-2 (51,52)	2020	NCT02864394	III	227	NSCLC	Pembrolizumab	PD-L1 TPS of 50% or greater	Second	Monotherapy	OS and PFS	18.8
KEYNOTE-042 (53,54)	2019	NCT02220894	III	1274	NSCLC	Pembrolizumab	PD-L1 TPS of 1% or greater	First-line	Monotherapy	OS	12.8
KEYNOTE-189 (55,56)	2018	NCT02578680	III	616	Nonsquamous NSCLC	Pembrolizumab	No	First-line	Pembrolizumab plus chemotherapy	OS and PFS	23.1
KEYNOTE-407 (57)	2018	NCT02775435	III	559	Squamous NSCLC	Pembrolizumab	No	First-line	Pembrolizumab plus chemotherapy	OS and PFS	7.8
MYSTIC (58)	2019	NCT02453282	III	744	NSCLC	Durvalumab	PD-L1 TC ≥25%	First-line	Durvalumab plus tremelimumab	OS and PFS	NA
NA2020 (59)	2020	NCT03117049	III	550	Nonsquamous NSCLC	Nivolumab	No	First-line	Nivolumab plus chemotherapy plus bevacizumab	PFS	Mini 7.4
OAK (30)	2017	NCT02008227	III	850	NSCLC	Atezolizumab	No	Second or above	Monotherapy	OS	21.0
ORIENT-11 (60)	2020	NCT03607539	III	397	Nonsquamous NSCLC	Sintilimab	No	First-line	Sintilimab plus chemotherapy	PFS	8.9
ORIENT-12 (61)	2020	NCT03629925	III	357	Squamous NSCLC	Sintilimab	No	First-line	Sintilimab plus chemotherapy	PFS	12.9
POPLAR (62)	2016	NCT01903993	II	287	NSCLC	Atezolizumab	No	Second or above	Monotherapy	OS	14.8

PFS, progression-free survival; OS, overall survival; ORR, objective response rate; TC, tumor cell; IC, immune cell; TPS, tumor proportion score; TMB, tumor mutation burden; NA, not applicable.

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