

Immunotherapeutic approaches for small-cell lung cancer

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Supplementary Table 1. Ongoing clinical trial of immunotherapies in patients with SCLC

	Disease Stage	Biomarker Selection	Phase	Randomized or single arm	Treatment
<i>Upfront</i>					
NCT02402920	LS-SCLC and ES-SCLC	None	I	Single arm	CCR* + pembrolizumab w/maintenance
NRG-LU005 (NCT03811002)	LS-SCLC	None	II/III	Randomized	CCR vs CCR + atezolizumab w/maintenance
EA5161 (NCT03382561)	ES-SCLC	None	II	Randomized	EP** vs EP + nivolumab w/maintenance
REACTION (NCT02580994)	ES-SCLC	None	II	Randomized	EP vs EP + pembrolizumab w/maintenance
KEYNOTE-604 (NCT03066778)	ES-SCLC	None	III	Randomized	EP vs EP + pembrolizumab w/maintenance
NCT02658214	ES-SCLC	None	Ib	Single arm	EP + durvalumab + tremelimumab
CASPIAN (NCT03043872)	ES-SCLC	None	III	Randomized	EP vs EP + durvalumab w/maintenance vs EP + tremelimumab + durvalumab w/durvalumab maintenance
<i>First-line maintenance</i>					
STIMULI (NCT02046733)	LS-SCLC	None	III	Randomized	Nivolumab + ipilimumab w/nivolumab maintenance vs placebo
(ADRIATIC (NCT03703297)	LS-SCLC	None	III	Randomized	Durvalumab + tremelimumab w/durvalumab maintenance vs durvalumab maintenance vs placebo
<i>Second-line or later monotherapies</i>					
AFT17 (NCT02963090)	Relapsed LS-SCLC and ES-SCLC	None	II	Randomized	Pembrolizumab vs topotecan
<i>Second-line or later combination therapy</i>					
NCT02701400	Relapsed LS-SCLC and ES-SCLC	None	II	Randomized	Durvalumab + tremelimumab vs durvalumab + tremelimumab + SBRT
NCT03179436	Relapsed LS-SCLC and ES-SCLC	None	I	Multi-arm	Pembrolizumab + anti-CTLA-4 (MK-1308)
<i>Combinations with novel agents</i>					
NCT02937818	ES-SCLC	None	II	Multi-arm	Durvalumab + tremelimumab w/durvalumab maintenance vs carboplatin + WEE1 inhibitor (AZD1775) vs olaparib + ATR inhibitor (AZD6738)
KEYNOTE-603 (NCT03313778)	Relapsed LS-SCLC and ES-SCLC	None	I	Multi-arm	Pembrolizumab + tumour-based mRNA neoantigen vaccine (mRNA-4157)
NCT02734004	Relapsed LS-SCLC and ES-SCLC	Platinum sensitive	I/II	Multi-arm	Durvalumab + PARP inhibitor (olaparib)
-SUKSES (NCT02688894)	Relapsed LS-SCLC and ES-	AKT1 mutation – AZD5363;	I	Multi-arm	Durvalumab + AKT inhibitor (AZD5363) or PARP inhibitor (olaparib) or WEE1 inhibitor

	SCLC	<i>BRCA1/2</i> , <i>ATM</i> , <i>MRE11A</i> – olaparib; <i>MYC</i> , <i>CDKN2A</i> , <i>TP53</i> – AZD1775; none – AZD6738			(AZD1775) or ATR inhibitor (AZD6738)
<i>CAR T cells</i>					
NCT03392064	Relapsed LS-SCLC and ES- SCLC	None	I	Single arm	DLL3 CAR-T (AMG 119)
<i>BiTE</i>					
NCT03319940	Relapsed LS-SCLC and ES- SCLC	None	I	Single-arm	Anti-CD3 + anti-DLL3 BiTE (AMG757)
<i>Novel Immune-checkpoint Inhibitors</i>					
NCT03708328	Relapsed LS-SCLC and ES- SCLC	None	I	Single-arm	Anti-TIM3 and PD-1 bispecific antibody (RO7121661)
NCT03365791	Relapsed LS-SCLC and ES- SCLC	None	II	Single-arm	Anti-LAG3 antibody (LAG525) + anti-PD-1 antibody (PDR001)

BiTE, Bi-specific T cell engager; CCR, concurrent chemoradiation; CAR, chimeric antigen receptor CTLA-4, cytotoxic T-lymphocyte protein 4; EP, platinum plus etoposide; ES-SCLC, extensive-stage small-cell lung cancer; LAG3, lymphocyte activation gene 3 protein; LS-SCLC, limited-stage small-cell lung cancer; PARP, poly [ADP-ribose] polymerase; PD-1, programmed cell death protein 1; SBRT, stereotactic body radiation therapy.