



Supplementary Figure 1. PRISMA flow diagram of the search strategy.

Supplementary Table 1 Summary of comparative studies

Clinical trial	Study	Study design	LE	Study quality	Included patients	Cases, n			
						Total	Primary endpoint events	IMM/TAR arm	Control arm
IMM vs. CHE	Ribas 2013	RCT/Phase 3	1b	4	treatment-naive, unresectable stage IIIc or IV melanoma	655	534	328	327
	Hamid 2017	RCT/Phase 2	1b	5	untreated stage III (unresectable) or stage IV melanoma	540	466	180	179
	Larkin 2018	RCT/Phase 3	1b	5	unresectable,untreated stage III or IV melanoma without a BRAF mutation	405	244	272	133
	Ascierto 2019	RCT/Phase 3	1b	5	unresectable,untreated stage III or IV melanoma without a BRAF mutation	418	306	210	208
TAR vs. CHE	Hauschild 2012	RCT/Phase 3	1b	5	unresectable or metastatic melanoma and progressed after ipilimumab/ipilimumab+BRAF inhibitor	250	30	187	63
	McArthur 2014	RCT/Phase 3	1b	5	untreated, stage IV or unresectable stage III BRAF mutation-positive melanoma	675	399	337	338
	Flaherty 2012	RCT/Phase 3	1b	4	treatment-naive metastatic melanoma and whose tumour tissue was positive for BRAF mutations	322	64	214	108
	Kirkwood 2012	RCT/Phase 2	1b	5	unresectable stage III or IV melanoma	200	130	104	96
	Dummer 2017	RCT/Phase 3	1b	5	stage IIIC or IV melanoma harbouring an NRAS Gln61Arg, Gln61Lys, or Gln61Leu mutation	402	228	269	133
IMM+CHE vs. CHE	Robert 2011/Maio 2015	RCT/Phase 3	1b	5	unresectable stage IIIC or IV cutaneous melanoma with BRAF mutation	502	414	250	252
TAR+CHE vs. CHE	Gupta 2014	RCT/Phase 2	1b	5	patients with wild-type BRAF melanoma	83	54	41	42
	Robert 2013	RCT/Phase 2	1b	5	advanced BRAF-mutant cutaneous or unknown primary melanoma	91	66	45	46
Adjuvant IMM vs. Placebo	Eggermont 2018	RCT/Phase 3	1b	5	completely resected stage III melanoma	1019	351	514	505
	Eggermont 2015/ Eggermont 2016	RCT/Phase 3	1b	5	stage IIIA, IIIB or IIIC melanoma with no in-transit metastasis	951	376	475	476
Adjuvant TAR vs. Placebo	Long 2017	RCT/Phase 3	1b	5	completely resected, stage III melanoma with BRAF mutation	870	153	438	432
	Maio 2018	RCT/Phase 3	1b	5	histologically confirmed stage IIC–IIIA–IIIB or stage IIIC BRAF mutation-positive melanoma that was fully resected	498	82	250	248