## **Supplementary Materials**

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Figure S1. Literature selection process.

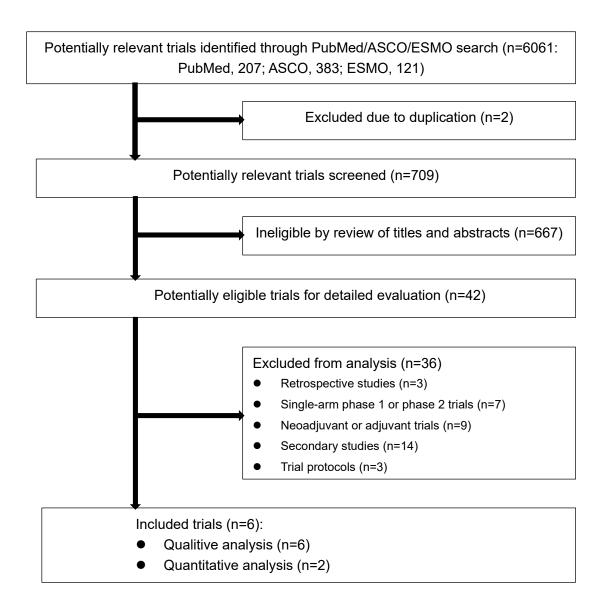


Figure S2. Quality assessment of data reconstruction and matching for the chemo-immunotherapy arm in CheckMate 649.

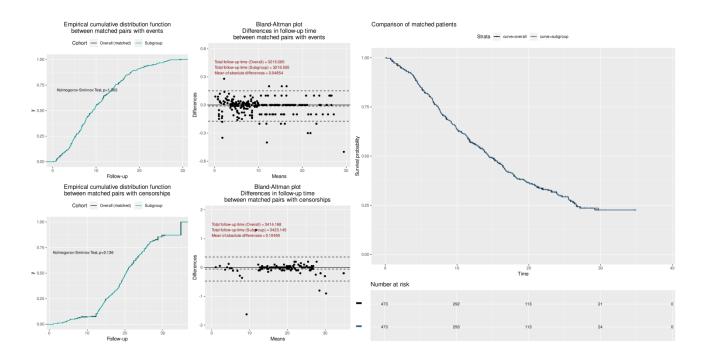


Figure S3. Quality assessment of data reconstruction and matching for the chemotherapy-only arm in CheckMate 649.

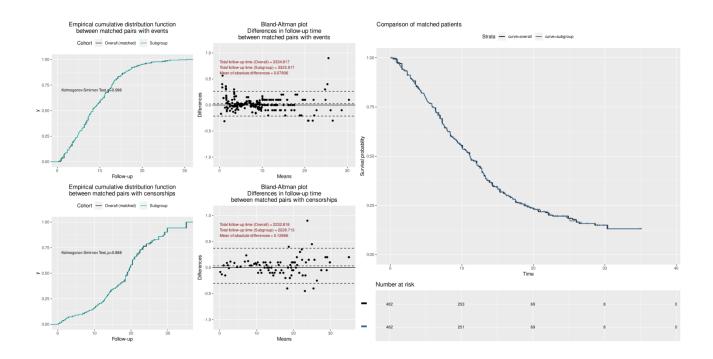


Figure S4. Quality assessment of data reconstruction and matching for the chemo-immunotherapy arm in ORIENT-16.

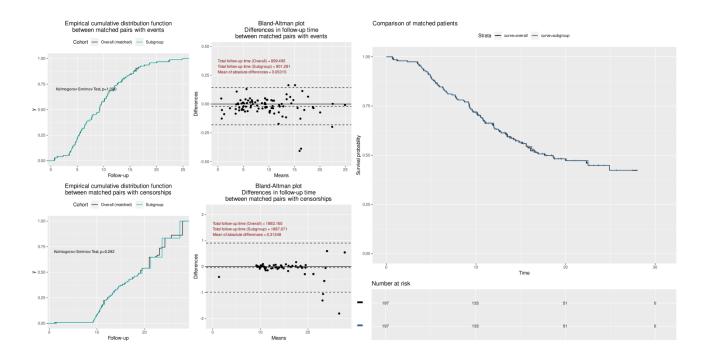


Figure S5. Quality assessment of data reconstruction and matching for the chemotherapy-only arm in ORIENT-16.

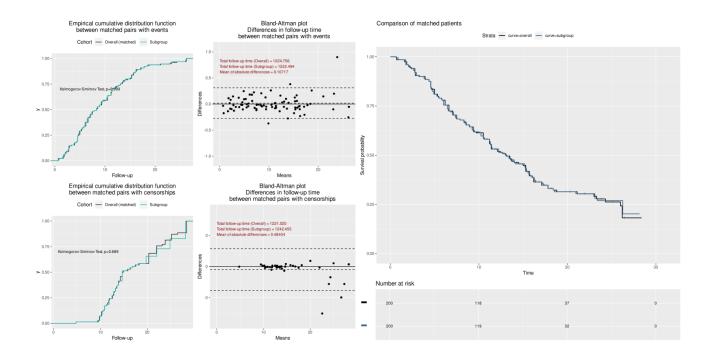


Table S1 The original reported data and reconstructed data of overall survival and progression-free survival in CheckMate 649 and ORIENT-16.

	OS		PFS	
	Reported	Reconstructed	Reported	Reconstructed
HR				
CheckMate 649, ITT	0.80	0.80	0.77	0.78
CheckMate 649, CPS≥5	0.71	0.71	0.68	0.70
ORIENT-16, ITT	0.77	0.74	0.64	0.67
ORIENT-16, CPS≥5	0.66	0.63	0.63	0.63
Median, months				
(Treatment arm)				
CheckMate 649, ITT	13.8	14.0	7.7	7.7
CheckMate 649, CPS≥5	14.4	14.4	7.7	7.7
ORIENT-16, ITT	15.2	15.6	7.1	7.3
ORIENT-16, CPS≥5	18.4	17.6	7.7	7.3
Median, months				
(Control arm)				
CheckMate 649, ITT	11.6	11.7	6.9	6.9
CheckMate 649, CPS≥5	11.1	11.1	6.0	6.1
ORIENT-16, ITT	12.3	12.6	5.7	6.0
ORIENT-16, CPS≥5	12.9	13.1	5.8	5.8

**Abbreviations:** CPS: Combined Positive Score; OS: overall survival; PFS: progression-free survival; ITT: Intention-to-treat population.