

Real-world cardiovascular toxicity of immune checkpoint inhibitors

Supplementary Table 1. Commonly used immune checkpoint inhibitors

Drug	Drug target	Approval agency	The usual dose and cycle of the drug
Camrelizumab	PD-1	NMPA	200 mg IV Q3W
Tislelizumab	PD-1	NMPA	3 mg/kg IV Q2W
Pembrolizumab (Keytruda)	PD-1	FDA, NMPA	2 mg/kg IV Q3W
Toripalimab	PD-1	NMPA	3 mg/kg IV Q2W
Durvalumab	PD-L1	FDA, NMPA	10 mg/kg IV Q2W
Navulumab (Opdivo)	PD-1	FDA, NMPA	3 mg/kg IV Q2W
Sintilimab	PD-1	NMPA	200 mg IV Q3W

Abbreviations: FDA, Food and Drug Administration (United States); NMPA, National Medical Products Administration (China).

Supplementary Table 2. Commonly used traditional chemotherapy drugs

Drug	The usual dose and cycle of the drug
Docetaxel	75 mg/m ² IV Q3W
Pemetrexed	500 mg/m ² IV Q3W
Nedaplatin	75 mg/m ² IV Q3W
Etoposide	150 mg (D1-D3) IV Q3W
Gemcitabine	1250 mg/m ² (D1) IV Q3W
Paclitaxel-albumin	260 mg/m ² D1 IV Q3W
Paclitaxel	100 mg/m ² IV Q3W

Supplementary Table 3. ACEs after receiving different ICI treatments

	Camrelizumab (N=154)	Pembrolizumab (N=20)	Tislelizumab (N=11)	Toripalimab (N=7)	Navulumab (N=4)	Sintilimab (N=4)	Durvalumab (N=3)
Abnormal ECG	16/136 (miss 18) 11.8%	5/17 (miss 3) 29.4%	2/10 (miss 1) 20.0%	1/6 (miss 1) 16.7%	1/4 25.0%	1/4 25.0%	0/3 0%
Pericardial effusion	3/153 (2.0%)	1/20 (5.0%)	0	0	1/4 (25.0%)	0	0
NT-ProBNP abnormal	5/148 (miss 6) 3.4%	2/18 (miss 2) 11.1%	1/11 9.1%	0/5 (miss 2) 0.0%	2/3 (miss 1) 66.7%	0/3 (miss 1) 0.0%	0/3 0.0%
Acute myocarditis	3/154 (1.9%)	0	0	0	0	0	0
cTnT abnormal	8/153 (5.2%)	0	1/12 (8.3%)	0	0	0	0

Abbreviations: ACEs, adverse cardiovascular events; ICI, immune checkpoint inhibitors; ECG, electrocardiogram; NT-ProBNP, N terminal pro B type natriuretic peptide; cTnT, cardiac troponin T.

Supplementary Table 4. ACEs in cancer patients of different stages after receiving ICI treatment

	Stage 1 (N=10)	Stage2 (N=27)	Stage 3 (N=98)	Stage 4 (N=69)	P value
Abnormal ECG	3/9 (miss 1) 33.3%	3/24 (miss 3) 12.5%	16/85 (miss 13) 18.8%	16/62 (miss 7) 25.8%	0.387*
Pericardial effusion	0	1/27 (3.7%)	2/96 (miss 1) 2.1%	2/69 (2.9%)	0.874#
NT-ProBNP abnormal	0/9 (miss 1)	3/26 (miss 1) 11.5%	4/87 (miss 11) 4.6%	3/65 (miss 4) 4.6%	0.506#
Acute myocarditis	0	0	1/98 (1.0%)	2/69 (2.9%)	0.571#
cTnT abnormal	0	0	5/97 (miss1) 5.2%	4/69 (5.8%)	0.779#

Abbreviations: ACEs, adverse cardiovascular events; ICI, immune checkpoint inhibitors; ECG, electrocardiogram; NT-ProBNP, N terminal pro B type natriuretic peptide; cTnT, cardiac troponin T. *Chi-square test or #Fisher's exact test for contingency table.