Supplementary Table S1. The characteristics of included studies

Study	miRNAs	Expression	Patient (n)	Control (n)	Detection methods	Reference Standard	Sample types	Stage	Clinical Setting	Funding
Martino et al. 2023[a]	hsa-miR-200c-3p, hsa-miR-144-3p, hsa-miR-221-3p	Up Down Down	44	22	RTqPCR	Histopathology	Plasma exosomes	I-IV	Multi-center	European Union's Horizon 2020 research and innovation program
Martino et al. 2023a	hsa-miR-200c-3p	Up	44	22	RTqPCR	Histopathology	Plasma exosomes	I-IV		
Martino et al. 2023b	hsa-miR-144-3p	Down	44	22	RTqPCR	Histopathology	Plasma exosomes	I-IV		
Martino et al. 2023c	hsa-miR-221-3p	Down	44	22	RTqPCR	Histopathology	Plasma exosomes	I-IV		
Armand-Labit et al. 2016[a]	miR-1246, miR-185	Up	29	43	RTqPCR	Histopathology	Plasma	III -IV	Hospital	-
Armand-Labit et al. 2016a	miR-1246	Up	28	16	RTqPCR	Histopathology	Plasma	III -IV		
Armand-Labit et al. 2016b	miR-185	Up	28	16	RTqPCR	Histopathology	Plasma	III -IV		
Armand-Labit et al. 2016c	miR-20a	Up	28	16	RTqPCR	Histopathology	Plasma	III -IV		
Armand-Labit et al. 2016d	let-7b	Up	28	16	RTqPCR	Histopathology	Plasma	III -IV		
Armand-Labit et al. 2016e	miR-338-3p	Up	28	16	RTqPCR	Histopathology	Plasma	III -IV		
Fogli et al. 2017[a]	miR-149-3p, miR-150-5p, miR-193a-3p	Up Up Down	30	32	RTqPCR	Histopathology Histopathology Histopathology	Plasma	I-IV	Hospital	Associazione Contro il Melanoma (ACM) Onlus (Italy)
Fogli et al. 2017a	miR-149-3p	Up	30	32	RTqPCR	Histopathology	Plasma	I-IV		
Fogli et al. 2017b	miR-150-5p	Up	30	32	RTqPCR	Histopathology	Plasma	I-IV		
Fogli et al. 2017c	miR-193a-3p	Down	30	32	RTqPCR	Histopathology	Plasma	I-IV		
Fogli et al. 2017d	miR-15b-5p	Up	30	32	RTqPCR	Histopathology	Plasma	I-IV		
Fogli et al. 2017e	miR-524-5p	Down	30	32	RTqPCR	Histopathology	Plasma	I-IV		
Guo et al. 2016	**miR-16**	Down	120	120	RTqPCR	Histopathology	Serum	I-IV	Hospital	Program for New Century Excellent Talents at the University of China and others
Solé et al. 2019a	miR-320a-3p	Down	96	28	RTqPCR	Histopathology	Plasma	I-IV	Multi-center	IKERBASQUE Foundation, and others
Solé et al. 2019b	miR-134-5p	Down	96	28	RTqPCR	Histopathology	Plasma	I-IV		
Mo et al. 2019a	miR-489	Down	60	40	RTqPCR	Histopathology	Serum	I-IV	Hospital	-
Mo et al. 2019b	miR-21	Up	60	40	RTqPCR	Histopathology	Serum	I-IV		
Bai et al. 2017	miR-10b	Up	85	30	RTqPCR	Histopathology	Serum	I-IV	Hospital	-
Leidinger et al. 2010[a]	16 Signature[b]	-	35	20	microarray	Histopathology	Blood	I-IV	Multi-center	German Ministry of Research Education, and Hedwig-Stalter foundation
Stark et al. 2015[a]	MELmiR-7[c]	Up	255	130	RTqPCR	Histopathology	Serum	I-IV	Multi-center	National Health and Medical Research Council of Australia, and others
Van Laar et al. 2023[a]	MEL38[d]	-	372	210	NanoString nCounter	Histopathology	Plasma	I-IV	Multi-center	-
Sabato et al. 2022[a]	miR-412-3p, miR-507, miR-1203, miR-362-3p	Up Up Up Down	35	20	microarray	Histopathology Histopathology Histopathology Histopathology	Blood	I-IV	Multi-center	Italian Ministry of Research, and others

Note:
[a]miRNA combinations
[b]16 Signature: hsa-miR-186, hsa-let-7d*, hsa-miR-18a*, hsa-miR-145, hsa-miR-99a, hsa-miR-664, hsa-miR-501-5p, hsa-miR-378*, hsa-miR-29c*, hsa-miR-1280, hsa-miR-365, hsa-
[c]MELmiR-7: **miR-16**, miR-211-5p, miR-4487, miR-4706, miR-4731, miR-509-3p, and miR-509-5p
[d]MEL38: hsa-miR-424-5p, hsa-miR-548l, hsa-miR-34a-5p, hsa-miR-497-5p, hsa-miR-299-3p, hsa-miR-205-5p, hsa-miR-1269a, hsa-miR-624-3p, hsa-miR-138-5p, hsa-miR-1-5p, hsa-
Study by Sabato et al was excluded in meta-analysis due to insufficient data to construct 2-by-2 contingency table

Abbreviations:
RTqPCR: Real-time Quantitative Polymerase Chain Reaction