

Figure S1 Comprehensive results of subgroup analysis of clinicopathological factors.

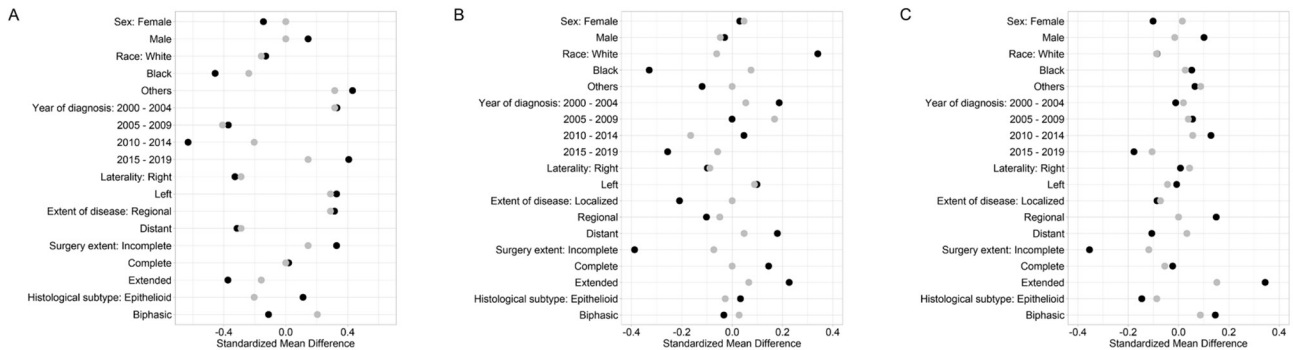


Figure S2 Standardized mean difference (SMD) of patients before and after match. The black dot indicated the SMD before match, and the grey dot indicated the SMD after match. (A) <50 years group; (B) 50 to <65 years group; (C) ≥65 years group.

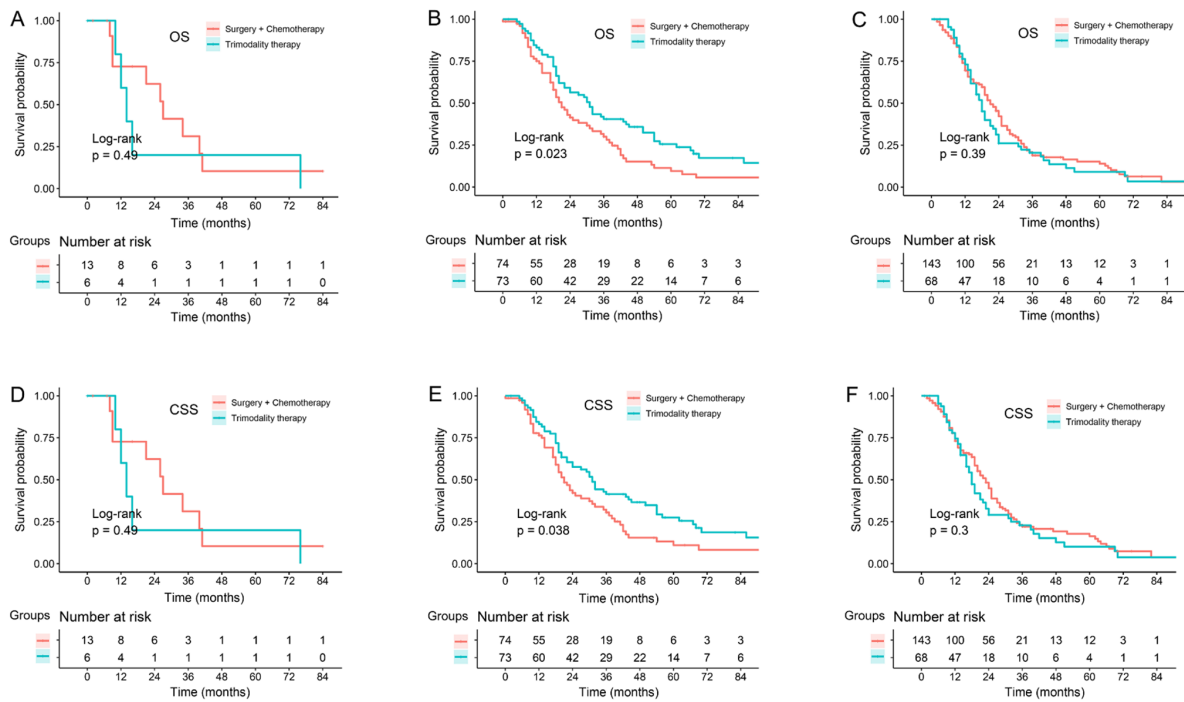


Figure S3 Survival comparison of pleural mesothelioma patients undergoing surgery + chemotherapy versus trimodality therapy, matched and excluding biphasic patients, across different age groups. (A, D) <50 years group; (B, E) 50 to <65 years group; (C, F) ≥65 years group. OS: overall survival; CSS: cancer-specific survival.

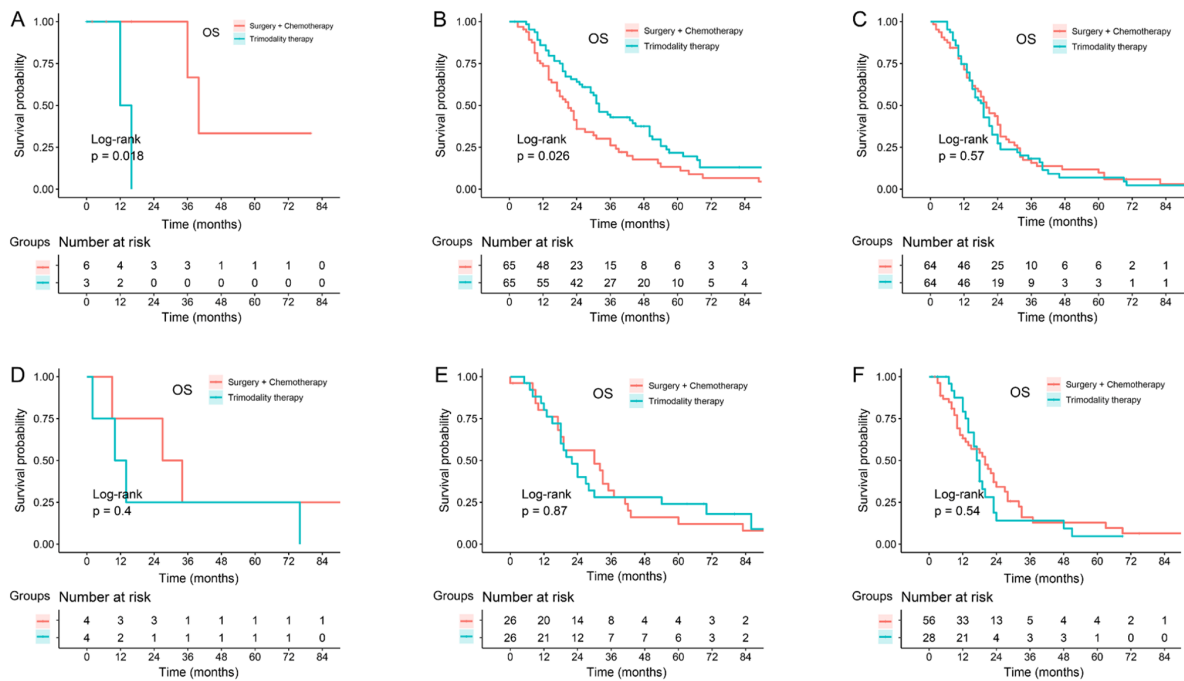


Figure S4 Survival comparison of pleural mesothelioma patients, stratified by extent of surgery and age, who received surgery + chemotherapy *vs.* trimodality therapy after match.

Table S1 Baseline characteristics of patients after propensity matching stratified by age

Characteristics	< 50 years			[50, 65) years			≥ 65 years		
	Surgery + chemotherapy	Trimodality therapy	P value	Surgery + chemotherapy	Trimodality therapy	P value	Surgery + chemotherapy	Trimodality therapy	P value
Sex			>0.99			0.87			>0.99
Female	6 (42.9)	3 (42.9)		27 (29.7)	29 (31.9)		27 (14.7)	14 (15.2)	
Male	8 (57.1)	4 (57.1)		64 (70.3)	62 (68.1)		157 (85.3)	78 (84.8)	
Race			0.60			0.84			0.72
White	11 (78.6)	5 (71.4)		89 (97.8)	88 (96.7)		169 (91.8)	82 (89.1)	
Black	1 (7.1)	0 (0.0)		1 (1.1)	2 (2.2)		7 (3.8)	4 (4.3)	
Others [†]	2 (14.3)	2 (28.6)		1 (1.1)	1 (1.1)		8 (4.3)	6 (6.5)	
Year of diagnosis			0.78			0.57			0.89
2000-2004	2 (14.3)	2 (28.6)		17 (18.7)	19 (20.9)		15 (8.2)	8 (8.7)	
2005-2009	4 (28.6)	1 (14.3)		20 (22.0)	27 (29.7)		39 (21.2)	21 (22.8)	
2010-2014	3 (21.4)	1 (14.3)		36 (39.6)	29 (31.9)		63 (34.2)	34 (37.0)	
2015-2019	5 (35.7)	3 (42.9)		18 (19.8)	16 (17.6)		67 (36.4)	29 (31.5)	
Laterality			0.88			0.65			0.83
Right	8 (57.1)	3 (42.9)		55 (60.4)	51 (56.0)		100 (54.3)	52 (56.5)	
Left	6 (42.9)	4 (57.1)		36 (39.6)	40 (44.0)		84 (45.7)	40 (43.5)	
Extent of disease			0.87			0.95			0.87
Localized	-	-		3 (3.3)	3 (3.3)		13 (7.1)	5 (5.4)	
Regional	4 (28.6)	3 (42.9)		27 (29.7)	25 (27.5)		66 (35.9)	33 (35.9)	
Distant	10 (71.4)	4 (57.1)		61 (67.0)	63 (69.2)		105 (57.1)	54 (58.7)	
Surgery extent [‡]			0.94			0.87			0.48
Incomplete	7 (50.0)	4 (57.1)		29 (31.9)	26 (28.6)		66 (35.9)	28 (30.4)	
Complete	2 (14.3)	1 (14.3)		22 (24.2)	22 (24.2)		40 (21.7)	18 (19.6)	
Extended	5 (35.7)	2 (28.6)		40 (44.0)	43 (47.3)		78 (42.4)	46 (50.0)	
Histological subtype			>0.99			>0.99			0.58
Epithelioid	13 (92.9)	6 (85.7)		74 (81.3)	73 (80.2)		143 (77.7)	68 (73.9)	
Biphasic	1 (7.1)	1 (14.3)		17 (18.7)	18 (19.8)		41 (22.3)	24 (26.1)	

Values are numbers (percentages), and percentages may not total 100 because of rounding. [†], others include American Indian/AK Native, Asian/Pacific Islander. [‡], incomplete surgeries are simple/partial surgical removal of primary site and surgery stated to be “debulking”; complete surgery is total surgical removal of primary site; extended surgery is radical surgery and partial or total removal of the primary site with a resection in continuity with other organs.

Table S2 Baseline characteristics of patients received complete surgeries after propensity matching stratified by age

Characteristics	< 50 years			[50, 65) years			≥ 65 years		
	Surgery + chemotherapy	Trimodality therapy	P value	Surgery + chemotherapy	Trimodality therapy	P value	Surgery + chemotherapy	Trimodality therapy	P value
Sex			>0.99			>0.99			0.30
Female	2 (33.3)	1 (33.3)		22 (33.8)	21 (32.3)		6 (9.4)	11 (17.2)	
Male	4 (66.7)	2 (66.7)		43 (66.2)	44 (67.7)		58 (90.6)	53 (82.8)	
Race			>0.99			0.21			0.95
White	5 (83.3)	2 (66.7)		60 (92.3)	64 (98.5)		58 (90.6)	57 (89.1)	
Black	-	-		5 (7.7)	1 (1.5)		1 (1.6)	1 (1.6)	
Others [†]	1 (16.7)	1 (33.3)		-	-		5 (7.8)	6 (9.4)	
Year of diagnosis			0.74			0.43			0.99
2000-2004	-	-		8 (12.3)	12 (18.5)		6 (9.4)	7 (10.9)	
2005-2009	1 (16.7)	0 (0.0)		19 (29.2)	24 (36.9)		21 (32.8)	20 (31.2)	
2010-2014	2 (33.3)	1 (33.3)		23 (35.4)	16 (24.6)		18 (28.1)	18 (28.1)	
2015-2019	3 (50.0)	2 (66.7)		15 (23.1)	13 (20.0)		19 (29.7)	19 (29.7)	
Laterality			>0.99			0.48			0.38
Right	3 (50.0)	2 (66.7)		41 (63.1)	36 (55.4)		28 (43.8)	34 (53.1)	
Left	3 (50.0)	1 (33.3)		24 (36.9)	29 (44.6)		36 (56.2)	30 (46.9)	
Extent of disease			>0.99			0.82			0.85
Localized	-	-		3 (4.6)	2 (3.1)		-	-	
Regional	3 (50.0)	1 (33.3)		21 (32.3)	19 (29.2)		22 (34.4)	24 (37.5)	
Distant	3 (50.0)	2 (66.7)		41 (63.1)	44 (67.7)		42 (65.6)	40 (62.5)	
Surgery extent [‡]			>0.99			>0.99			0.70
Complete	1 (16.7)	1 (33.3)		22 (33.8)	22 (33.8)		21 (32.8)	18 (28.1)	
Extended	5 (83.3)	2 (66.7)		43 (66.2)	43 (66.2)		43 (67.2)	46 (71.9)	
Histological subtype			>0.99			>0.99			0.84
Epithelioid	5 (83.3)	3 (100.0)		52 (80.0)	51 (78.5)		47 (73.4)	45 (70.3)	
Biphasic	1 (16.7)	0 (0.0)		13 (20.0)	14 (21.5)		17 (26.6)	19 (29.7)	

Values are numbers (percentages), and percentages may not total 100 because of rounding. [†], others include American Indian/AK Native, Asian/Pacific Islander. [‡], Complete surgery is total surgical removal of primary site; extended surgery is radical surgery and partial or total removal of the primary site with a resection in continuity with other organs.

Table S3 Baseline characteristics of patients received incomplete surgeries after propensity matching stratified by age

Characteristics	< 50 years			[50, 65) years			≥ 65 years		
	Surgery + chemotherapy	Trimodality therapy	P value	Surgery + chemotherapy	Trimodality therapy	P value	Surgery + chemotherapy	Trimodality therapy	P value
Sex			>0.99			>0.99			>0.99
Female	3 (75.0)	2 (50.0)		7 (26.9)	8 (30.8)		6 (10.7)	3 (10.7)	
Male	1 (25.0)	2 (50.0)		19 (73.1)	18 (69.2)		50 (89.3)	25 (89.3)	
Race			0.55			0.35			0.89
White	2 (50.0)	3 (75.0)		26 (100.0)	24 (92.3)		52 (92.9)	25 (89.3)	
Black	1 (25.0)	0 (0.0)		0 (0.0)	1 (3.8)		4 (7.1)	3 (10.7)	
Others [†]	1 (25.0)	1 (25.0)		0 (0.0)	1 (3.8)		-	-	
Year of diagnosis			0.72			0.97			0.99
2000-2004	1 (25.0)	2 (50.0)		7 (26.9)	7 (26.9)		2 (3.6)	1 (3.6)	
2005-2009	1 (25.0)	1 (25.0)		3 (11.5)	3 (11.5)		2 (3.6)	1 (3.6)	
2010-2014	1 (25.0)	0 (0.0)		14 (53.8)	13 (50.0)		30 (53.6)	16 (57.1)	
2015-2019	1 (25.0)	1 (25.0)		2 (7.7)	3 (11.5)		22 (39.3)	10 (35.7)	
Laterality			0.48			>0.99			>0.99
Right	3 (75.0)	1 (25.0)		14 (53.8)	15 (57.7)		36 (64.3)	18 (64.3)	
Left	1 (25.0)	3 (75.0)		12 (46.2)	11 (42.3)		20 (35.7)	10 (35.7)	
Extent of disease			>0.99			0.58			0.95
Localized	-	-		0 (0.0)	1 (3.8)		9 (16.1)	5 (17.9)	
Regional	1 (25.0)	2 (50.0)		7 (26.9)	6 (23.1)		17 (30.4)	9 (32.1)	
Distant	3 (75.0)	2 (50.0)		19 (73.1)	19 (73.1)		30 (53.6)	14 (50.0)	
Surgery extent [‡]			NA			NA			NA
Incomplete	4 (100.0)	4 (100.0)		26 (100.0)	26 (100.0)		56 (100.0)	28 (100.0)	
Histological subtype			>0.99			>0.99			0.74
Epithelioid	3 (75.0)	3 (75.0)		23 (88.5)	22 (84.6)		49 (87.5)	23 (82.1)	
Biphasic	1 (25.0)	1 (25.0)		3 (11.5)	4 (15.4)		7 (12.5)	5 (17.9)	

Values are numbers (percentages), and percentages may not total 100 because of rounding. [†], others include American Indian/AK Native, Asian/Pacific Islander. [‡], incomplete surgeries are simple/partial surgical removal of primary site and surgery stated to be “debulking”.