

Supplementary

Table S1 Pathological types of primary tumors in the surgery group

The surgery group	Before/after PSM (N=43), n (%)
Colorectal cancer	16 (37.2)
Soft tissue sarcoma	10 (23.3)
Osteosarcoma	2 (4.7)
Renal cell carcinoma	4 (9.3)
Cervical squamous carcinoma	3 (7.0)
Breast cancer	2 (4.7)
Hepatocellular carcinoma	2 (4.7)
Cervical adenocarcinoma	1 (2.3)
Adenosquamous carcinoma of the cervix	1 (2.3)
Head and neck squamous cell carcinoma	1 (2.3)
Gastric carcinoma	1 (2.3)

PSM, propensity score matching; N/n, number.

Table S2 Pathological types of primary tumors in the chemotherapy group

The chemotherapy group	Before PSM (N=79), n (%)	After PSM (N=43), n (%)
Colorectal cancer	25 (31.6)	14 (32.6)
Breast cancer	22 (27.8)	9 (20.9)
Soft tissue sarcoma	9 (11.4)	6 (14.0)
Osteosarcoma	3 (3.8)	2 (4.7)
Esophageal squamous cell carcinoma	4 (5.1)	3 (7.0)
Germ cell tumor	4 (5.1)	2 (4.7)
Cervical squamous carcinoma	3 (3.8)	3 (7.0)
Cervical adenocarcinoma	3 (3.8)	2 (4.7)
Adenoid cystic carcinoma	2 (2.5)	0
Gastric carcinoma	1 (1.3)	1 (2.3)
Pancreatic cancer	1 (1.3)	1 (2.3)
Hepatocellular carcinoma	1 (1.3)	0
Ovarian carcinoma	1 (1.3)	0

PSM, propensity score matching; N/n, number.

Table S3 Univariate analysis of the prognosis of patients in the two groups after PSM

Characteristic	N [%]	OS, %		P
		3 years	5 years	
Age, years				0.716
≤52	43 [50]	79.6	65.5	
>52	43 [50]	72.8	57.8	
Sex				0.219
Male	44 [51]	80.7	72.4	
Female	42 [49]	71.3	50.1	
DFI, months				0.808
<21	42 [49]	82.3	59.3	
≥21	44 [51]	70.4	63.5	
Smoking				0.313
Yes	18 [21]	79.4	63.6	
No	68 [79]	75.2	57.4	
Pathology for primary lesion				0.455
Cancer	64 [75]	79.8	62.3	
Sarcoma	20 [23]	62.9	55.9	
Germ cell tumor	2 [2]	–	–	
No. of metastases				0.015*
Single (=1)	42 [49]	86.9	78.1	
Multiple (≥2)	44 [51]	65.7	47.7	
Adjuvant therapy				0.188
No	44 [51]	80.3	72.3	
Yes	42 [49]	72.6	52.1	
Diameter, mm [§]				0.014*
≤30	52 [60]	87.3	69.7	
>30	34 [40]	58.8	48.2	
Treatment method				0.017*
Surgery	43 [50]	85.1	75.1	
Chemotherapy	43 [50]	67.1	48.0	

*, P<0.05; §, sum of the diameter for metastatic lesions. PSM, propensity score matching; N, number; OS, overall survival; DFI, disease-free interval.

Table S4 Univariate analysis of the prognosis of patients in the surgery group after PSM

Characteristic	N [%]	OS, %		P
		3 years	5 years	
Age, years				0.165
≤53	22 [51]	85.3	64.0	
>53	21 [49]	85.7	71.4	
Sex				0.143
Male	23 [53]	86.2	75.5	
Female	20 [47]	84.1	60.1	
DFI, months				0.005*
<24	21 [49]	79.3	52.8	
≥24	22 [51]	90.9	81.8	
Smoking				0.935
Yes	11 [26]	77.9	51.9	
No	32 [74]	87.1	72.6	
Pathology for primary lesion				0.153
Cancer	31 [72]	93.2	85.4	
Sarcoma	12 [28]	65.6	52.5	
No. of metastases				0.038*
Single (=1)	36 [84]	90.6	84.1	
Multiple (≥2)	7 [16]	57.1	38.1	
Adjuvant therapy				0.925
No	24 [56]	87.1	77.4	
Yes	19 [44]	83.2	72.8	
Diameter, mm [§]				0.141
≤20	24 [56]	95.2	86.6	
>20	19 [44]	73.7	61.4	
Surgical route				0.014*
Open	14 [33]	61.9	44.2	
VATS	29 [67]	96.4	82.7	
Resection scope				0.027*
Wedge	26 [60]	90.9	77.9	
Lobectomy	17 [40]	62.3	51.9	
Lymph node management				0.037*
Untouched	22 [51]	95.5	86.8	
Sampling and dissection	21 [49]	72.9	60.8	

[§], sum of the diameter for metastatic lesions; *, P<0.05. PSM, propensity score matching; N, number; OS, overall survival; DFI, disease-free interval; VATS, video-assisted thoracic surgery.

Table S5 Univariate analysis of the prognosis of patients in the chemotherapy group after PSM

Characteristic	N [%]	OS, %		P
		3 years	5 years	
Age, years				0.272
≤51	22 [51]	68.8	61.2	
>51	21 [49]	65.4	36.0	
Sex				0.701
Male	21 [49]	74.1	56.0	
Female	22 [51]	60.1	40.6	
DFI, months				0.026*
<20	21 [49]	84.7	65.9	
≥20	22 [51]	49.9	33.3	
Smoking				0.289
Yes	7 [16]	80.0	40.0	
No	36 [84]	64.7	43.4	
Pathology for primary lesion				0.415
Cancer	33 [76]	67.5	42.1	
Sarcoma	8 [19]	57.1	38.1	
Germ cell tumor	2 [5]	-	-	
No. of metastases				0.636
Single (=1)	6 [14]	66.7	44.4	
Multiple (≥2)	37 [86]	67.3	49.3	
Adjuvant therapy				0.128
No	20 [47]	72.2	65.0	
Yes	23 [53]	63.6	34.3	
Diameter, mm [§]				0.512
≤40	22 [51]	73.7	43.8	
>40	21 [49]	60.0	49.5	
Response of chemotherapy				0.024*
PR	16 [43]	72.0	54.9	
SD	15 [41]	84.6	65.3	
PD	6 [16]	33.3	16.7	

[§], sum of the diameter for metastatic lesions; *, P<0.05. PSM, propensity score matching; N, number; OS, overall survival; DFI, disease-free interval; PR, partial response; SD, stable disease; PD, progressive disease.

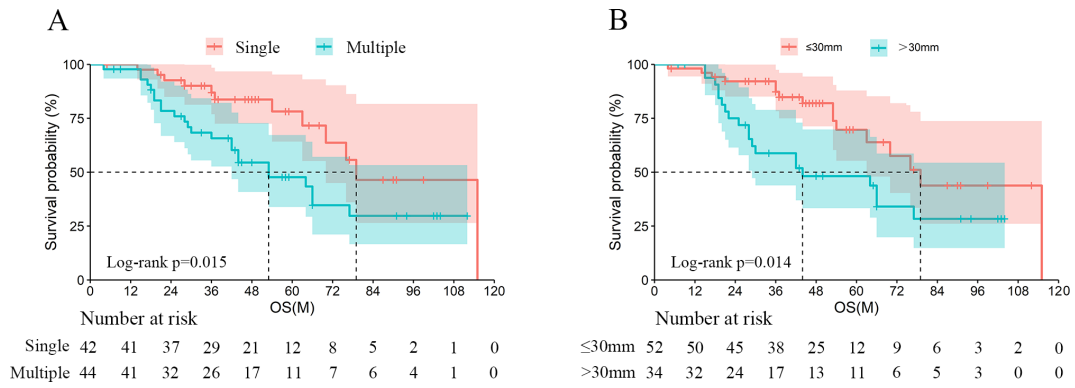


Figure S1 Survival curve of univariate prognostic analysis in the two groups after PSM. (A) Survival curve for the number of metastases (single *vs.* multiple); (B) survival curve of pulmonary metastases diameter (≤ 30 *vs.* > 30 mm). PSM, propensity score matching; OS, overall survival; M, month.

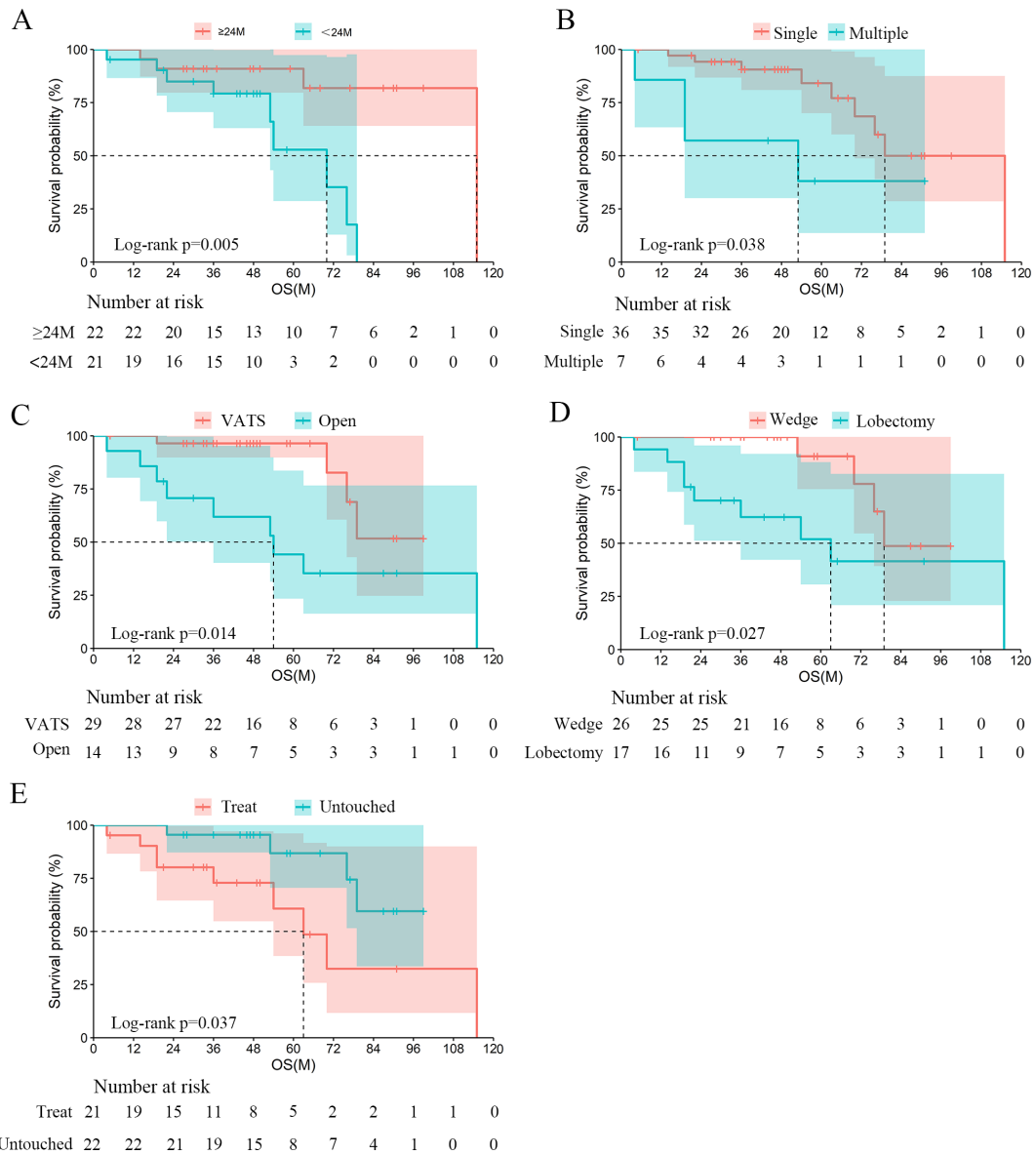


Figure S2 Survival curve of univariate prognostic analysis in surgery group after PSM. (A) Survival curve of DFI (≥ 24 vs. < 24 M); (B) survival curve for the number of metastases (single vs. multiple); (C) survival curve of surgical route (VATS vs. open); (D) survival curve of resection scope (wedge vs. lobectomy); (E) survival curve of lymph node management (treat vs. untouched). OS, overall survival; M, month; PSM, propensity score matching; DFI, disease-free interval; VATS, video-assisted thoracic surgery.

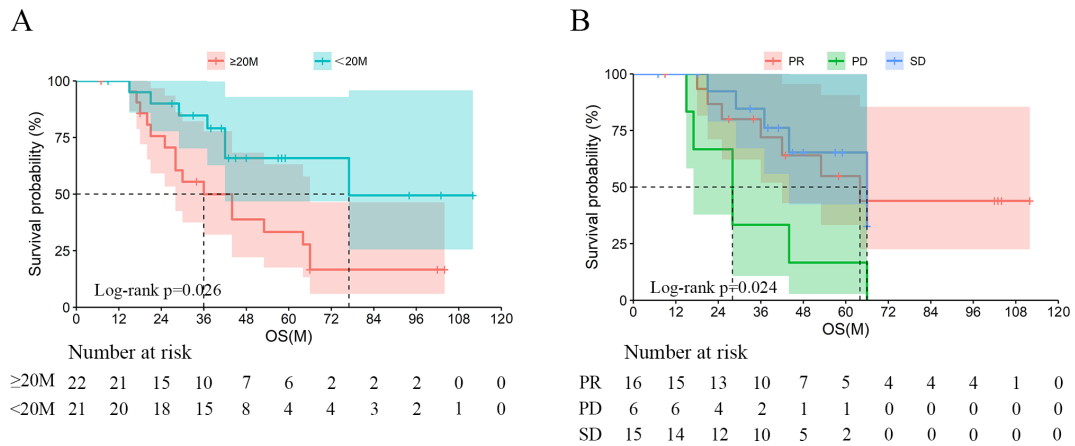


Figure S3 Survival curve of univariate prognostic analysis in the chemotherapy group after PSM. (A) Survival curve of DFI (≥ 20 vs. < 20 M); (B) survival curve of response to chemotherapy (PR vs. PD vs. SD). OS, overall survival; M, month; PSM, propensity score matching; DFI, disease-free interval; PR, partial response; PD, progressive disease; SD, stable disease.