Supplementary

Table S1 Binary logistic regression analysis predicting primary lung cancer in final histology in pulmonary metastasectomy

Variable	adjusted* OR (95% CI)	P
MODEL 1: All pulmonary metastasectomies		
Smoking history		0.097
No	1.00 (reference)	
Yes	5.42 (0.73-40.07)	
DFI		0.057
<24 months	1.00 (reference)	
≥24 months	6.45 (0.95-43.92)	
Age		0.201
<65 years	1.00 (reference)	
≥65 years	0.29 (0.04-1.95)	
Single pulmonary nodule		0.998
Yes	1.00 (reference)	
No	0.00 (0.00-)	
MODEL 2: First pulmonary metastasectomies		
Smoking history		0.118
No	1.00 (reference)	
Yes	5.41 (0.65-44.81)	
DFI		0.041
<24 months	1.00 (reference)	
≥24 months	8.45 (1.09-66.03)	
Age		0.126
<65 years	1.00 (reference)	
≥65 years	0.20 (0.03-1.57)	
Single pulmonary nodule		0.998
Yes	1.00 (reference)	
No	0.00 (0.00-)	

*models were adjusted with smoking history (no/yes), DFI (<24 months/≥24 months), age (<65years/≥65years) and single pulmonary nodules (yes/no). DFI, Disease-free interval.

Table S2 Patient characteristics of stage I primary cancer cohort (n=415)

Measure	2000–2005, n (%)	2006–2010, n (%)	2011–2015, n (%)	2016–2020, n (%)	P-value
Gender					0.682
Male	23 (31.5%)	26 (35.6%)	47 (38.5%)	58 (39.5%)	
Female	50 (68.5%)	47 (64.4%)	75 (61.5%)	89 (60.5%)	
Age (mean)	64	68	68	68	0.069
BMI (mean)	25.08	25.32	25.49	26.65	0.142
WHO					0.597
0	23 (33.8%)	28 (40.6%)	54 (45.4%)	67 (46.5%)	
1	41 (60.3%)	38 (55.1%)	58 (48.7%)	67 (46.5%)	
≥2	4 (5.9%)	3 (4.3%)	7 (5.9%)	10 (6.9%)	
CCI					0.056
0	28 (38.4%)	20 (27.4%)	35 (28.7%)	27 (18.4%)	
1	27 (37.0%)	28 (38.4%)	44 (36.1%)	58 (39.5%)	
≥2	18 (24.7%)	25 (34.2%)	43 (35.2%)	62 (42.2%)	
ASA					0.200
1	9 (12.7%)	4 (5.6%)	11 (9.0%)	8 (5.5%)	
2	32 (45.1%)	34 (47.9%)	56 (45.9%)	65 (44.5%)	
≥3	30 (42.3%)	33 (46.5%)	55 (45.0%)	73 (50.0%)	
Imaging					<0.001
CT	72 (98.6%)	58 (80.6%)	64 (53.3%)	39 (26.5%)	
PET-CT	1 (1.4%)	14 (19.4%)	56 (46.7%)	108 (73.5%)	

ASA, American Society of Anesthesiologists; CCI, Charlson Comorbidity Index; CT, computed tomography; PET-CT, position emission tomography computed tomography; WHO, World health organization performance status.

Table S3 Postoperative complications and mortality of pulmonary metastasectomy patients stratified by extent of resection

Measure	Anatomical resection, n (%)	Wedge resection, n (%)	P-value
LOS (MD, IQR)	4 (3–5)	3 (2–4)	<0.001
Clavien-Dindo			0.386
No complications	21 (72.4%)	101 (83.5%)	
Minor (CD I–III)	5 (17.2%)	13 (10.7%)	
Major (CD IV–V)	3 (10.3%)	7 (5.8%)	
Overall complications			0.03
No	21 (72.4%)	106 (88.3%)	
Yes	8 (27.6%)	14 (11.7%)	
VATS-conversion			0.372
No	28 (96.6%)	111 (91.7%)	
Yes	1 (3.4%)	10 (8.3%)	
Reoperation			0.369
No	28 (96.6%)	106 (87.6%)	
During hospital stay	0 (0.0%)	1 (0.8%)	
Later	1 (3.4%)	14 (11.6%)	
30-day mortality	1 (3.6%)	0 (0.0%)	0.205
90-day mortality	1 (3.6%)	0 (0.0%)	0.205
1-year mortality	82.3%	93.4%	0.046
5-years mortality	43.4%	53.3%	0.392

CD, Clavien-Dindo; LOS, length of hospital stay; VATS, video-assisted thoracoscopic surgery.
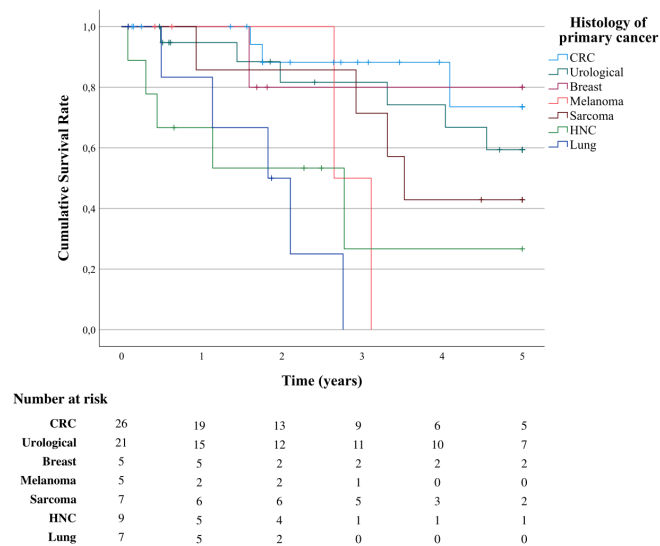

Figure S1 5-year overall survival stratified by primary cancer histology. HNC, Head and neck cancer.

Table S4 Patient characteristics and survival in studies on CRC PM

Author	N	Study Period	5-v surv	CRC stage 4	Age (MD)	CCI	Rectal	Synch	Bilater	LM	SM	Repeat PM	DFI (MD)	Size (mm)	Wedge
Ratnayake et al. (25)	1551	-	47%	32–54%	58–72	-	42–56%	-	18–36%	-	-	-	-	-	-
Gössling et al. (27)	58	1985–2019	49.8%	19.2%	64	MD 2 (91.4 %: CCI 1-4)	51.7%	-	-	25.9%	53.4%	36.2 %	13 mo	15 (MD)	88%
Sponholz et al. (26)	233	1999–2014	47%	27.5%	63	MD 6 (74.2 %: CCI=6)	50.6%	-	36.9%	32.6%	46.8%	-	27.5 mo	-	32.2%
Davini et al. (28)	210	2000–2016	54%	-	65	-	46.2%	3.8%	-	13.8%	75.7%	-	47.6 %: >36 mo	25,7 (M)	80%
Suzuki et al. (29)	94	1991–2013	45.5%	31.9%	66	-	56.4%	31%	20%	25.5%	56.4%	-	57.0 %: >12 mo	22.9 (M)	-
Fukada et al. (31)	126	2000–2019	60.8%	29.4%	66	-	52.4%	32.5%	14.3%	35.7%	70.6%	-	13.5–17.8 mo	12	51.6%
Nanji et al. (33)	526	2002–2009	40%	-	64	10%: ≥2	-	-	-	4.7%	-	16%	24.5 mo	n. 20	30%
Sakamaki et al. (30)	101	1998–2019	64.7%	-	70	-	46%	16%	15%	-	72%	-	19 mo	-	57%
Corsini et al. (32)	194	2011–2017	-	41%	57	-	21%	-	25%	-	-	-	-	14 (MD)	29%
Karjula et al. (our results)	34	2000–2020	73.5%	38.5%	65	mode 2, (11% >2)	50.0%	27%	32.4%	35.3%	70.6%	30.4%	9.9 mo	12 (MD)	67.6%

Bilater, bilateral metastases at time of diagnosis; CCI, Charlson comorbidity index; LM, former liver metastasectomy; Rectal, rectal cancer proportion; Repeat PM, proportion of patients with remetastasectomies; SM, solitary metastases; Synch, synchronic pulmonary metastases; Wedge, proportion of wedge resections.