Lung Metastasectomy

- Should be considered standard in Germ cell tumors
  - Residual disease must be resected
- Applicaple in selected patients with other type of tumors - 10-50% survival in selected patients
- Lung cancer?

Metastasectomy

- Purpose: Curative intend
- Selection of tumor type
- Selection of patients
- Multidisciplinary individualization

Colorectal lung metastasis

- The most common tumor type for lung metastasectomy
  - Synchronous vs metachronous
  - Skip (never liver) vs prior hepatectomy

Favorable factors

- Long interval
- Low CEA - better differentiation
- Single metastasis
- No lymph node involvement – no distant meta

Counter - arguments

- No randomized study available
- Surgeons focus on how to , not whether to
- Post resection survival curves without plateau
- Circular argument: Documentation of good survival in the selected group with good prognosis proves nothing
  - Many British papers are attacking this practice

Retrospective analysis

(Landes BMC Surgery 2010, 10: 17

Table 1: Clinical and Pathological characteristics of 40 c patients who underwent lung metastasectomy

Gender (F/M)	13/27
Age (median, range) years	63.5 (33-82)
Primary Tumor T stage	
1	3
2	14
3	16
4	7
Liver metastases	
Yes/No	16/24
Liver metastases Number (median, range)	2 (1-8)
Liver metastases Location	
Unilobar (right/left)	9/4
Multilobar	3
Lung metastases Number	
Single	27
Multiple	13
Lung metastases Size	
< 3 cm	24
> 3 cm	16
Type of lung resection	
Wedge resection or segmentectomy	32
Lobectomy	7
Pneumonectomy	1
Disease-free interval median (range) months	32.5 (0-82)
Colectomy to lung metastases	
Disease-free interval median (range) months	17 (0-60)

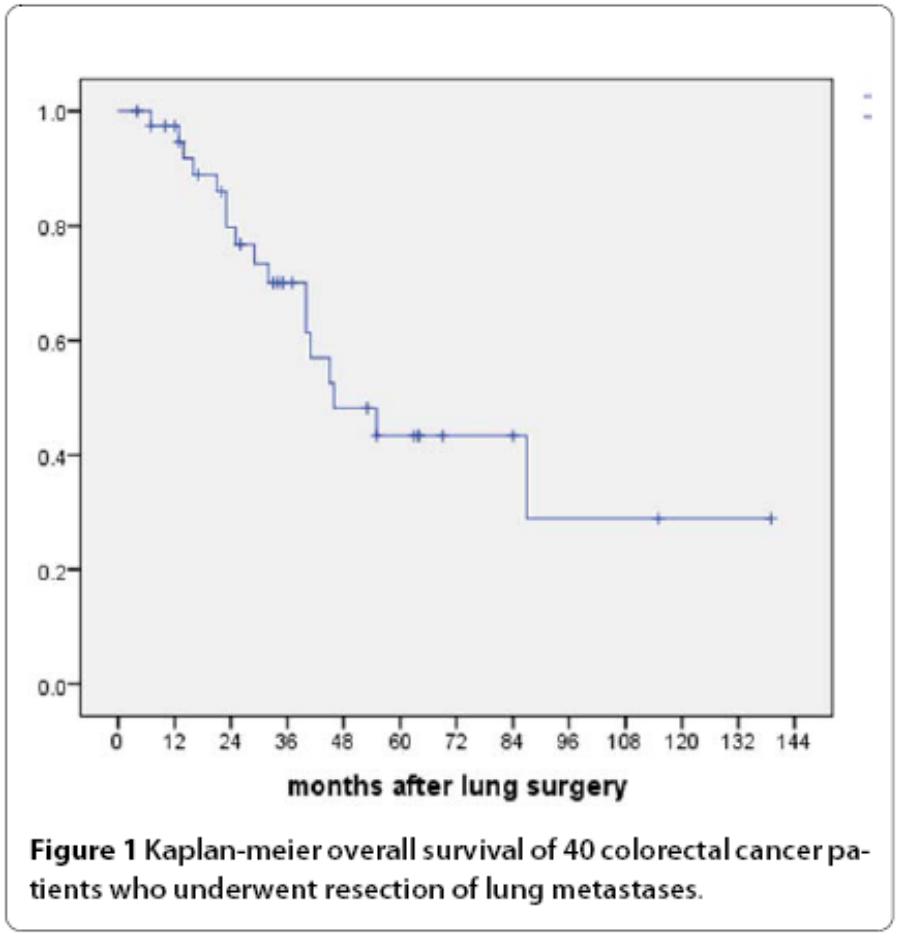


Figure 1 Kaplan-meier overall survival of 40 colorectal cancer patients who underwent resection of lung metastases.

Landes et al: Geneva Hosp.

Table 3: Multivariate analysis of risk factors for tumor recurrence and death

	Recurrence		Death	
Node 1-2 (versus 0)	1.7 (0.6 - 5.0)	0.34	1.5 (0.5 - 4.8)	0.48
Time primary to first metastasis (per year)	0.83 (0.48 - 1.44)	0.51	1.3 (0.8 - 2.1)	0.35
Liver metastasis	2.7 (0.7 - 10.0)	0.14	5.1 (1.1 - 24.8)	0.04
Size lung metastasis >20 mm	2.1 (0.6 - 6.6)	0.23	0.9 (0.3 - 2.7)	0.86
Multiple versus single lung metastasis	1.4 (0.4 - 4.6)	0.58	3.4 (0.9 - 12.9)	0.07

Median survival:

Prior liver mets 40 months

No prior liver mets : 87 months

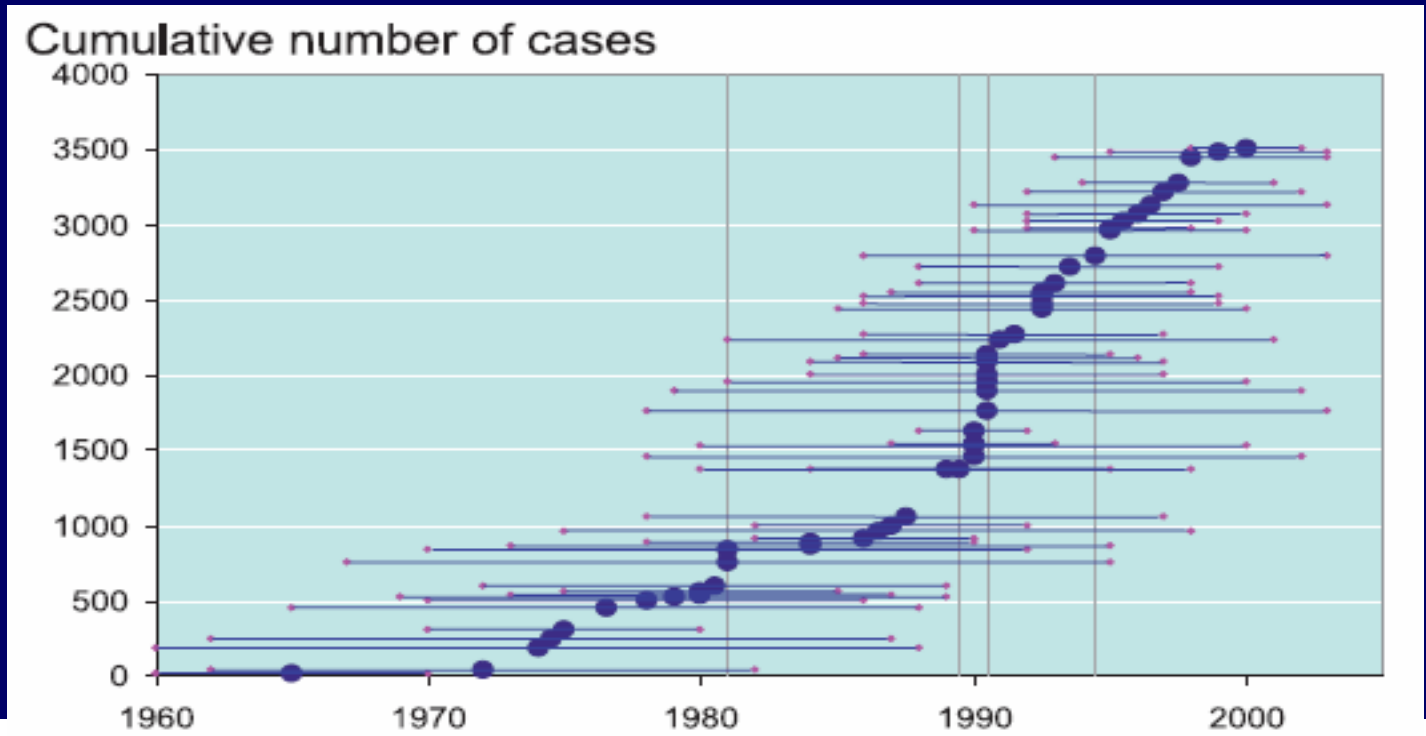
Turin study

Borasio et al: Int J Col dis: 2010 Oct 20

- 137 patients
- Median Survival: 36.2 months
- 10 y survival: 30%
- Favorable factors
  - Solitary lung metastasis
  - Disease-free > 24 months
  - No relation with prior hepatectomy

British Metaanalysis

51 studies

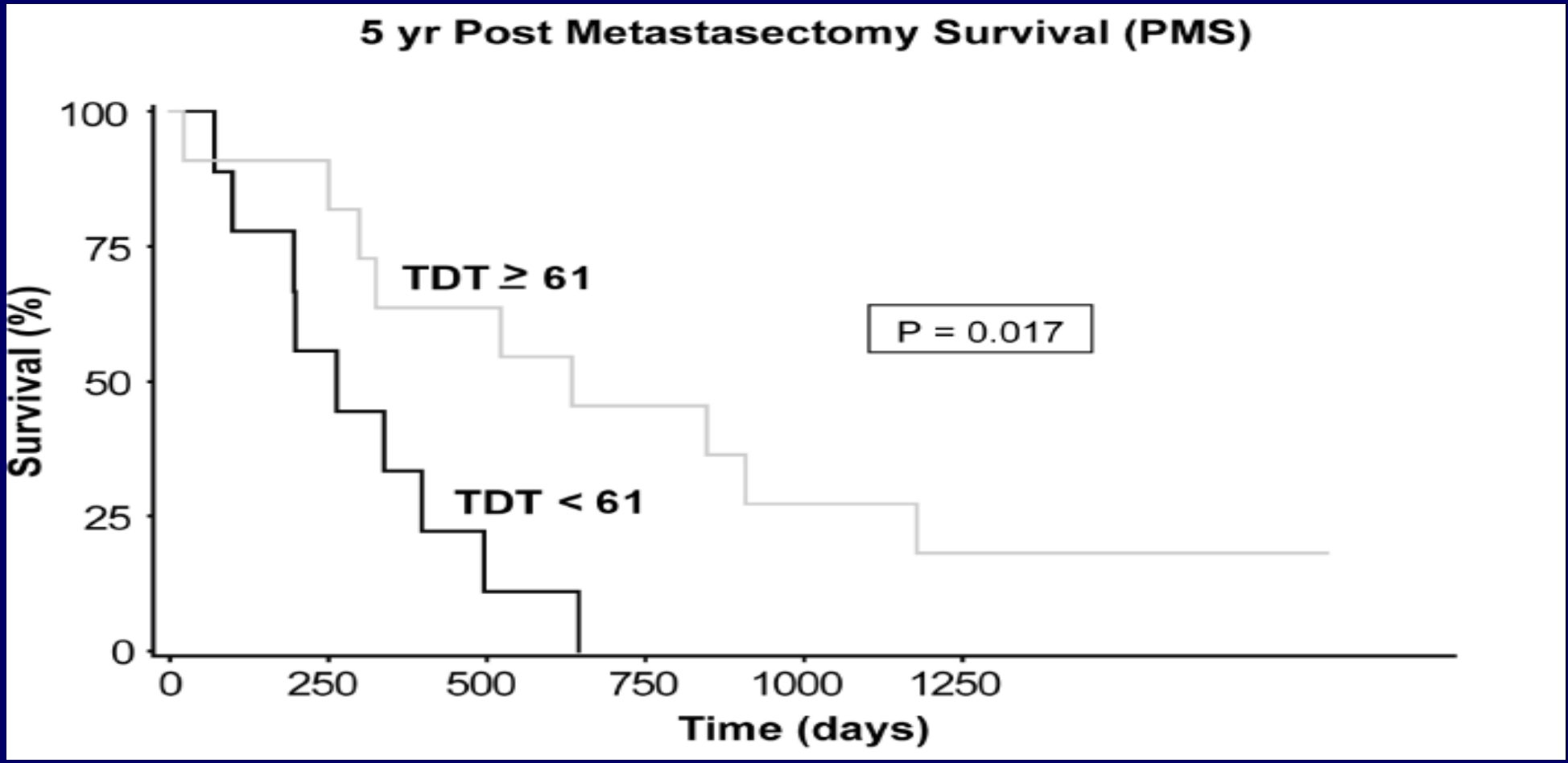


Prognostic factors and survival			*Alive at five years (%)*		
Multiple metastases reported in 15 studies comprising 1516 patients in total	30	29	31	22	37
Solitary metastasis reported in 25 studies comprising 2227 patients in total	46	45	48	49	54
CEA normal reported in 11 studies comprising 1159 patients in total	47	38	42	53	43
CEA elevated reported in 11 studies comprising 1159 patients in total	16	22	33	22	0**

Melanoma: Doubling time

- John Wayne Cancer Institute (Los Angeles)

Ann Surg Oncol 2009: 16:2834



Sarcoma: German study

Table 2. Tumor Grade

Grade	No. (%) of Patients
High	7 (11)
Intermediate	19 (32)
Low	35 (57)

Table 3. Tumor Staging: TNM Classification

Tumor Stage	No. (%) of Tumors
T	
pT1	13 (21)
pT2	48 (79)
N	
pN0	59 (96)
pN1	2 (4)
M	
M0	44 (72)
M1	17 (28)

Table 4. Extent of Metastatic Involvement to Lung

No. of Metastatic Lesions	No. (%) of Patients
1	11 (18)
2-5	30 (49)
>5	20 (33)

Table 5. Surgical Therapy

Surgical Approach	No. (%) of Patients
Anterolateral thoracotomy	29 (48)
Bilateral thoracotomy, 2 sessions	10 (16)
Median sternotomy	22 (36)
Total	**61** (100)
Wedge resection	52 (85)
Lobectomy	9 (15)
Total	**61** (100)

Recters et al: Arch Surg 2007

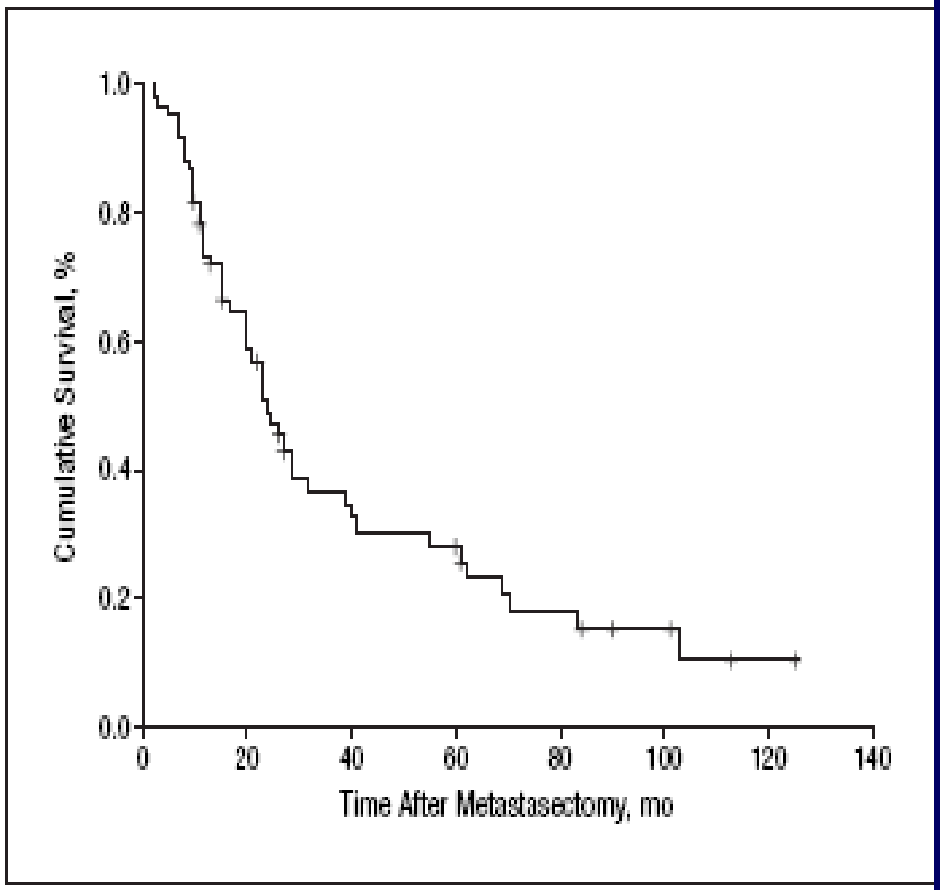


Figure 1. Kaplan-Meier overall survival curve after metastasectomy.

Table 7. Predictors of Tumor-Related Death

Variable	*P* Value*
Age†	.43
Sex	.52
Tumor grade	.31
No. of metastatic lesions	.42
Bilateral involvement	.48
Histologic type	.45
Site of primary tumor‡	.6
Disease-free survival after primary operation§	.53

*Univariate analysis, log-rank test.
†Younger than 60 years vs 60 years or older.
‡Subfascial vs subcutaneous.
§Twenty-four months or less vs more than 24 months.

Urothelial cancer

Kanzaki et al: ICVTS 2010, Nov

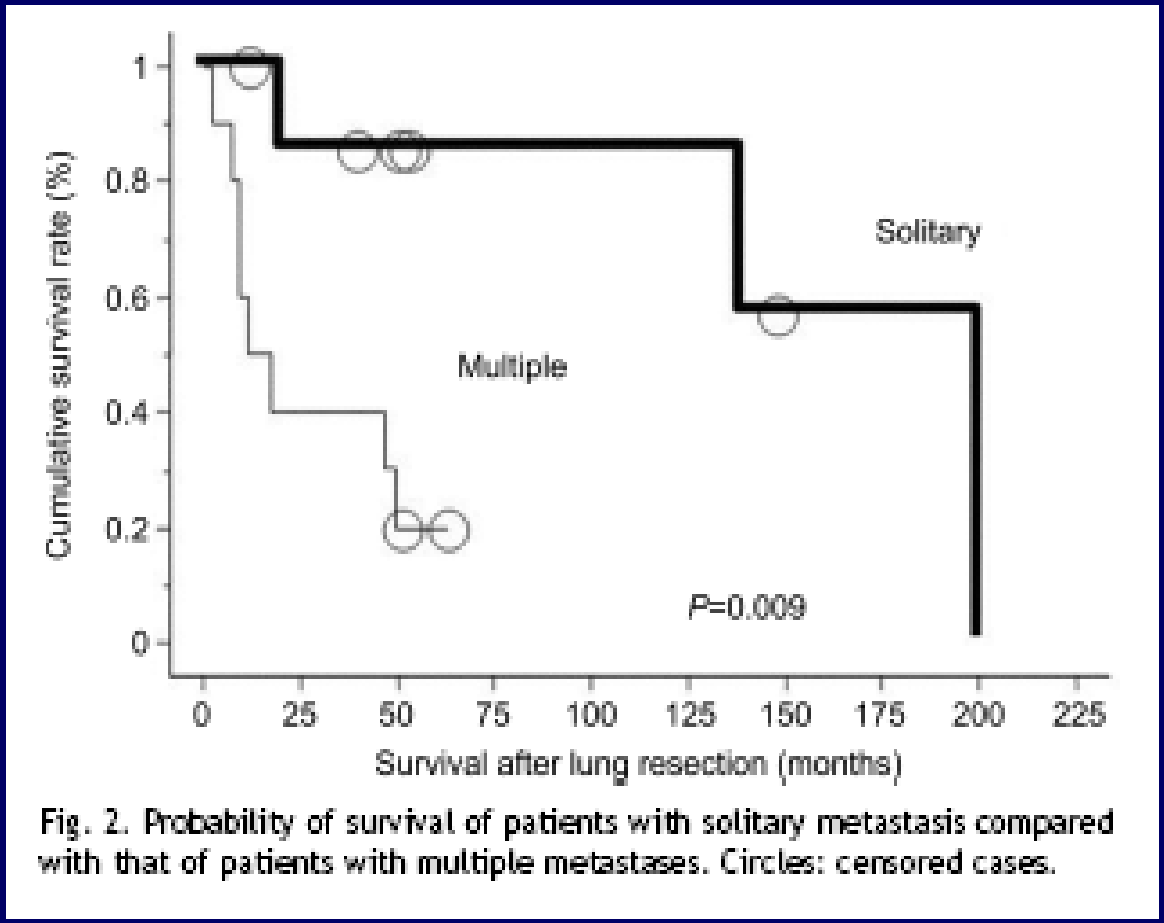


Fig. 2. Probability of survival of patients with solitary metastasis compared with that of patients with multiple metastases. Circles: censored cases.

18 patients in
15 years

What is the role of RFA?

Feasibility of ablation as an alternative to surgical metastasectomy in patients with unresectable sarcoma pulmonary metastases

Jesslyn H. Ding, Terence C. Chua, Derek Glenn and David L. Morris

Interact CardioVasc Thorac Surg 2009;9:1051-1053; originally published online Sep 18, 2009;

RFA seems to be a good alternative to surgery in subset of patients

Συμπέρασμα

- Η εκτομή πνευμονικών μεταστάσεων παραμένει μια μη αποδεδειγμένη πρακτική που πιθανόν να ωφελεί κάποιους ασθενείς

- Αρα χρειάζονται:

  Κοινή λογική, συνεργασία ειδικοτήτων, ανοιχτό πνεύμα, ψυχραιμία, περίσκεψη και εξατομίκευση