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La malattia oligometastatica/stadio IV resecabile

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No conflict of interest

Nessuna sessione specifica sullo stage IV oligometastatic disease durante Sydney

Oligometastatic NSCLC

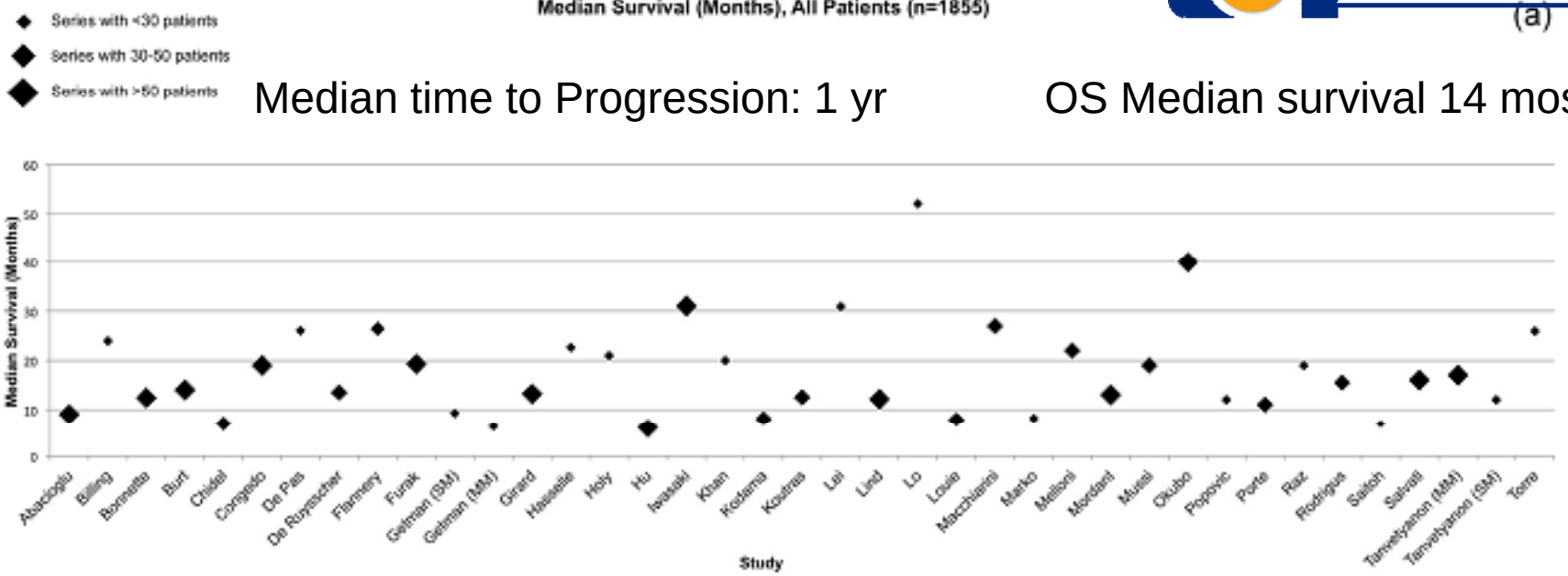
- Trattamento loco-regionale per malattia metastatica limitata - Oligometastatic state: Hellman and Weichselbaum
- Registro Internazionale Metastasectomie polmonari: sopravvivenza a 5 anni del 36%
- Questa lettura su:
  - Brain mets
  - Adrenal
  - Lung

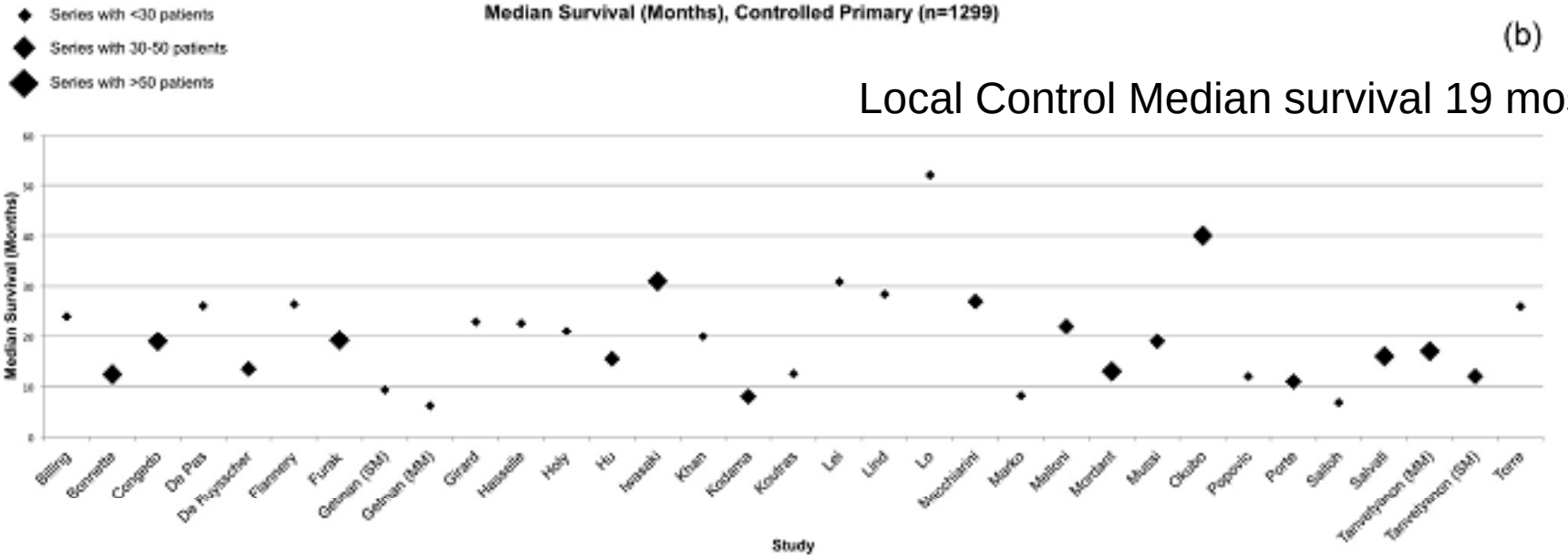
Ashworth A et al Lung Cancer 2013

Oligometastatic state

- Sopravvivenze a lungo termine sono riscontrate dopo trattamento loco-regionale della malattia NSCLC oligometastatica
- 2013: Meta-analisi secondo le PRISMA guidelines: 49/2176 studi accettabili su 1-5 metastasi sincrone o metacrone trattate con chirurgia (55%)/SABR (35%)/SRS(10%)
- 82% controllo locale della neoplasia primitiva; 60% con brain mets
- 1 yr survival: 15-100%; 2 yr survival: 18-90%

Ashworth A et al Lung Cancer 2013





Median time to Progression: 1 yr

OS Median survival 14 mos

Local Control Median survival 19 mos

Fig. 2. (a) Median survival for all patients who received locally ablative treatment of oligometastases ($n = 1855$) (b) median survival for patients with controlled primary lung tumors ($n = 1299$). SM: synchronous metastases, MM: metachronous metastases. Please refer to Supplementary Content, published online only, for corresponding appendix of references of authors listed in this figure.

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Outcomes

- Prognosticators definitivi: **controllo della malattia primitiva;status N; DFI di almeno 6-12 mesi**
- Outcomes dipendono dalla selezione dei pazienti con malattia indolente o dal tipo di trattamento?
- Mancano trials prospettico-randomizzato
- Quelli programmati sono stati interrotti per slow accrual

Ashworth A et al Lung Cancer 2013

Un modello oligometastatico

- 61 pazienti con oligometastatic disease (OM) (1-3 mets) trattato in due centri
- **Sopravvivenza ad 1 e 2 anni: 54 e 38%, rispettivamente**
- **Predittori positivi di overall survival**: chirurgia polmonare primaria e piccolo target volume radioterapico
- **Predittori positivi dell'intervallo tra trattamento primario e prima recidiva**: chirurgia polmonare primaria, presenza di brain mets ed assenza di meta ossee

Griffioen GH et al Lung Cancer 2013

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Brain metastasis

Database Analysis for GPA

Tumor	
NSCLC	1
Breast	
Melanoma	
Total	4

- NSCLC ~
- 50% of p
- >85% hav
- Most hav
- 1/3 have

Sperduto, et al

Lung Cancer Brain Mets are Different

N=401 (208 Control, 193 MGd). PCYC 98-01

Trait	Lung	Breast
Present with Brain Mets	46.6%	2.7%
Brain as only site of metastases	61.4%	22.7%
Mean number of prior chemo cycles	3.5	12.5

- Brain metastases occur early
- Often only site of metastases
- Less prior therapies

Mehta, et al, JCO 2003

Mehta WCLC 2011

What Is The Definition of Oligometastatic Brain Disease?

- No agreed upon definition
- 1 lesion: clear survival benefit from resection or radiosurgery in randomized trials compared to WBRT alone
- 2-3 lesions: survival benefit upon post-hoc subset analysis and clear benefit in terms of improved local control with the addition of SRS to WBRT, with possible improvement in softer endpoints
- No convincing level 1 evidence for >3 mets in support of SRS or surgery

Mehta WCLC 2011

ACCP guidelines 2013

- **6.3.2. In patients with no other sites of metastases and a *synchronous* resectable N0,1 primary NSCLC, resection or radiosurgical ablation of an isolated brain metastasis is recommended (as well as resection of the primary tumor)** (Grade 1C)**.**

Kozower BD et al Chest 2013

ACCP guidelines 2013

- **6.3.3. In patients with no other sites of metastases and a previously completely resected primary NSCLC (*metachronous* presentation), resection or radiosurgical ablation of an isolated brain metastasis is recommended** (Grade 1C).
- **6.3.4. In patients who have undergone a curative resection of an isolated brain metastasis, adjuvant whole-brain radiotherapy is suggested** (Grade 2B).
- **6.3.5. In patients who have undergone a curative resection of an isolated brain metastasis, adjuvant chemotherapy is suggested** (Grade 2B).

Kozower BD et al Chest 2013

From: Special Treatment Issues in Non-small Cell Lung CancerSpecial Treatment Issues in NSCLC: Diagnosis and Management of Lung Cancer, 3rd ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines

Chest. 2013;143(5_suppl):e369S-e399S. doi:10.1378/chest.12-2362

First Author	No. of patients	% Survival	
		2-year	5-year
Synchronous Presentation			
Bonnette[214]	103	28	11
Wronski[220]	86	14	8
Hu[223]	84	16	7
Xu[224]	64	20	13
Nakagawa[225]	60	10	-
Mordant[226]	57	-	13
Girard[217]	51	42	-
Flannery[228]	42	34	21
Flannery[229]	39	11	8
Louie[220]	35	22	-
Arrieta[230]	30	60	-
Granone[213]	30	47	14
Billing[215]	28	54	21
Average		**30**	**13**
Metachronous Presentation			
Wronski[220]	145	29	17
Moazami[222]	91	10	6
Furak[210]	45	-	16
Flannery[228]	33	59	13
Mussi[229]	30	47	19
Nakagawa[225]	28	11	-
Average		**31**	**13**

Figure Legend:

[Section 6.2] Isolated brain metastases. Inclusion criteria were studies of ≥ 20 patients reporting specific data for synchronous or metachronous brain metastases and curative-intent treatment from December 1989-April 2012.

Kozower BD et al Chest 2013

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Adrenal metastasis


0.5
0.4
0.3
0.2
0.1
0
0.11
0.15
0.22
0.36
0.47
Lung
Adrenal
Liver
Bone
Brain
Quint et al, Ann Thorac Surg, 1996

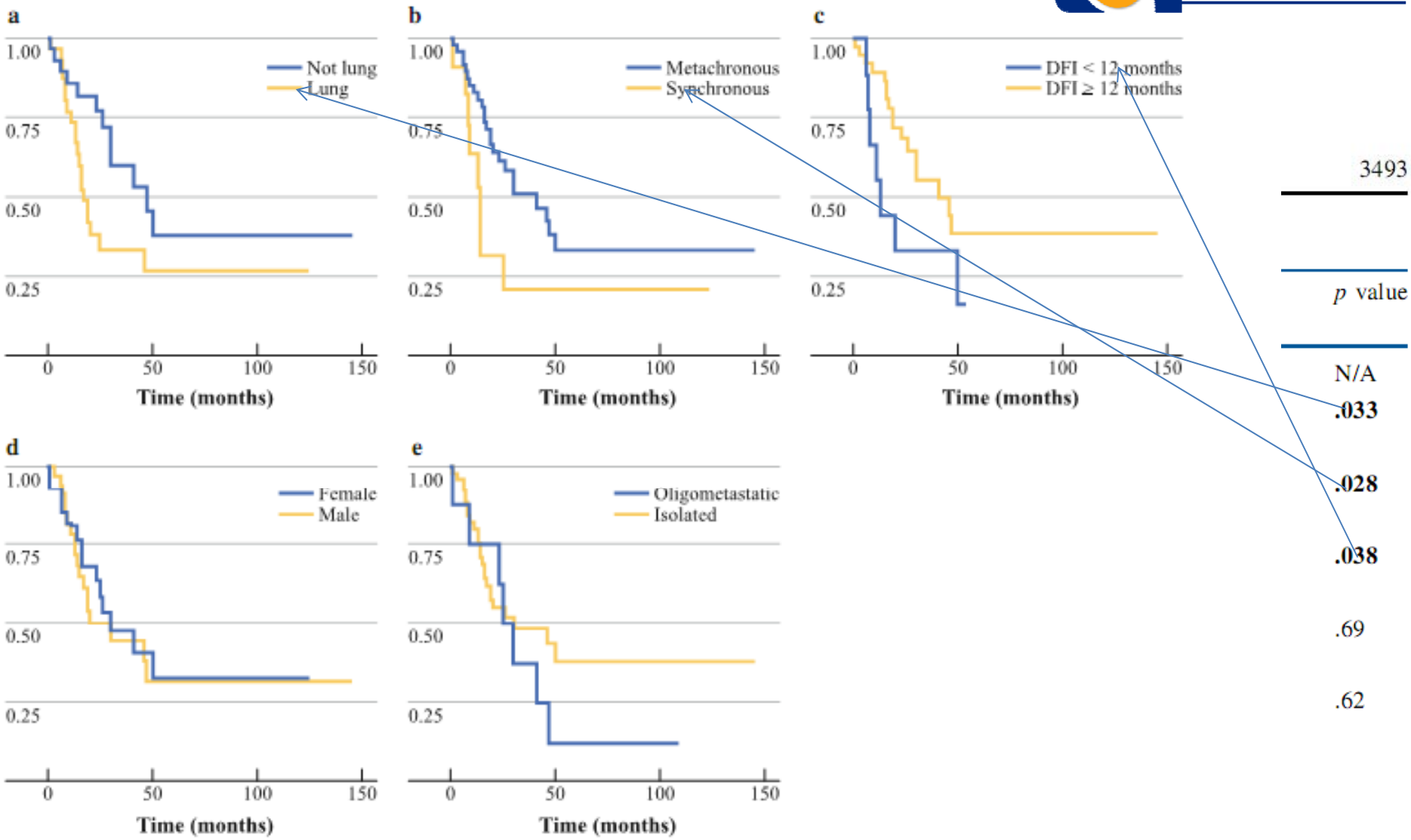


FIG. 1 Kaplan–Meier survival estimates for study population by **a** lung versus other primary malignancy, **b** synch metastasis, **c** disease-free interval < 12 versus ≥ 12 months, **d** gender, and **e** isolated versus oligometastatic disea

Ann Surg Oncol (2013) 20:3491–3496
DOI 10.1245/s10434-013-3050-2

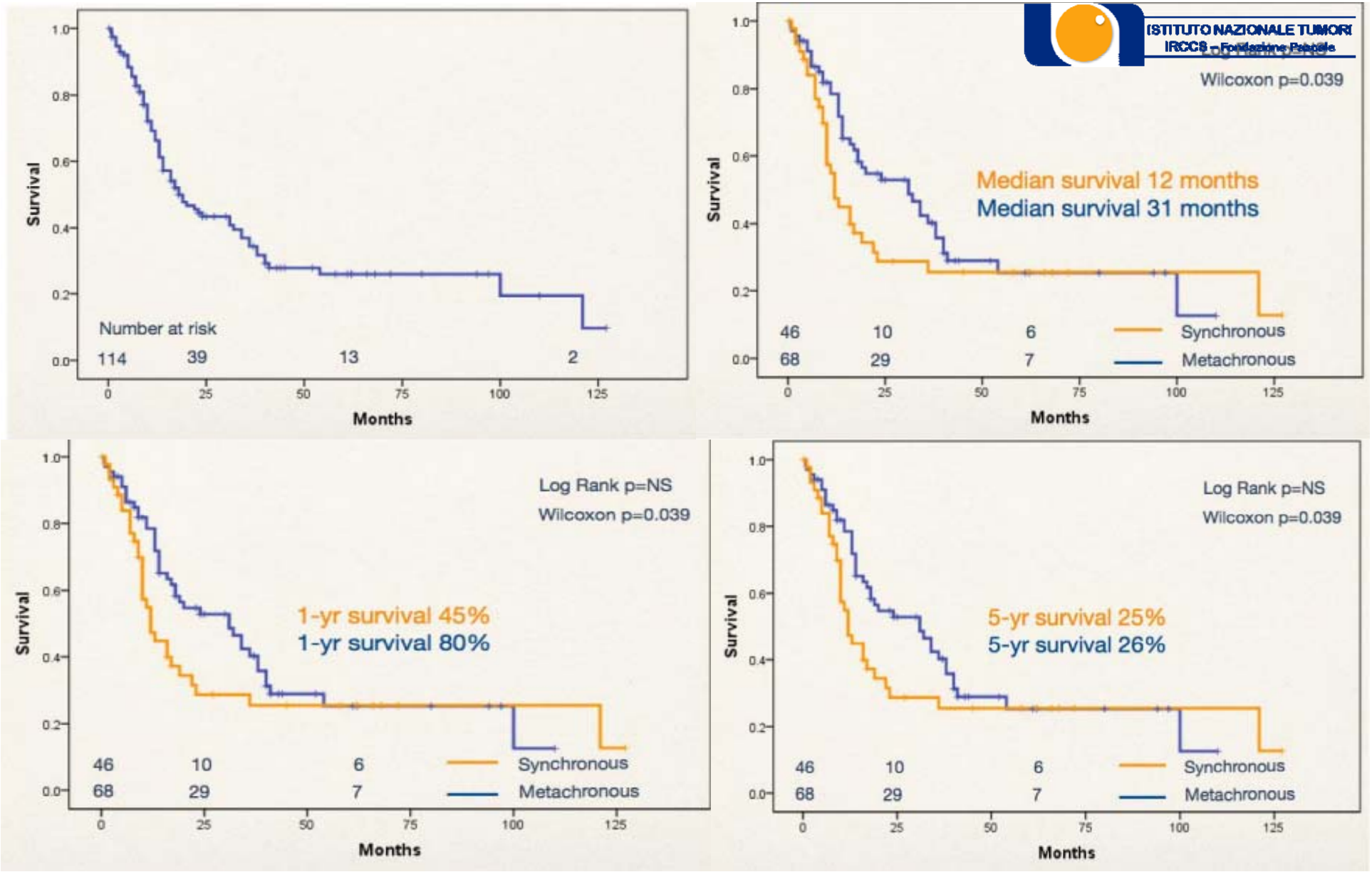
Annals of SURGICAL ONCOLOGY
OFFICIAL JOURNAL OF THE SOCIETY OF SURGICAL ONCOLOGY

ORIGINAL ARTICLE – ENDOCRINE TUMORS

Outcome and Prognostic Factors After Adrenalectomy for Patients with Distant Adrenal Metastasis

Gina M. Howell, MD, Sally E. Carty, MD, Michaele J. Armstrong, PhD, Michael T. Stang, MD, Kelly L. McCoy, MD, David L. Bartlett, MD, and Linwah Yip, MD FACS

Division of Endocrine Surgery and Surgical Oncology, Department of Surgery, University of Pittsburgh School of Medicine, Pittsburgh, PA



Tanvetyanon et al. JCO 2008

From: Special Treatment Issues in Non-small Cell Lung CancerSpecial Treatment Issues in NSCLC: Diagnosis and Management of Lung Cancer, 3rd ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines

Chest. 2013;143(5_suppl):e369S-e399S. doi:10.1378/chest.12-2362

First Author	No. of patients	% Lung Cancer	% 5-y Survival of Lung Cancer Patients	Positive Prognostic Factors
Tanvetyanon[245]	110	100	25	None
Pham[246]	78	100	40	Negative intrathoracic nodes
Porte[247]	43	100	12	None
Mercier[240]	23	100	23	DFI > 6 months
Raz[241]	20	100	34	Ipsilateral metastasis, N2 negative
Lucchi[242]	14	100	36	None
Strong[243]	94	39	29	None
Wade[244]	47	30	26	None
Average			27	

Figure Legend:

[Section 7.1] Adrenal metastasectomy. Inclusion criteria were patients with adrenal metastasis undergoing curative-intent surgical therapy reported in publications with ≥ 10 patients with lung cancer from December 1989-April 2012. DFI = disease-free interval from lung resection.

ACCP guidelines 2013

- **7.2.2. In patients with a *synchronous* resectable N0,1 primary NSCLC and an isolated adrenal metastasis with no other sites of metastases, resection of the primary tumor and the adrenal metastasis is recommended** (Grade 1C)**.**

Kozower BD et al Chest 2013

ACCP guidelines 2013

- **7.2.3. In patients with no other sites of metastases and a previously completely resected primary NSCLC (*metachronous* presentation), resection of an isolated adrenal metastasis is recommended** (Grade 1C).
- **7.2.4. In patients who have undergone a curative resection of an isolated adrenal metastasis, adjuvant chemotherapy is suggested** (Grade 2B).

Kozower BD et al Chest 2013

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Multifocal/multiple lung cancers (MLC)

Multiple lung cancers (MLCs)

- Tra 1 e 5% di tutti i NSCLC
- Sincroni o metacroni a seconda del timing di riscontro clinico
- **Sincroni: sono considerati primitivi**
  - **Istologia diversa**
  - **Evoluzione da carcinoma in situ**
  - **Non tumore nei linfatici condivisi**
  - **Niente malattia sistemica**

Martini and Melamed, 1975
Riquet et al 2008
Hamaji et al 2013

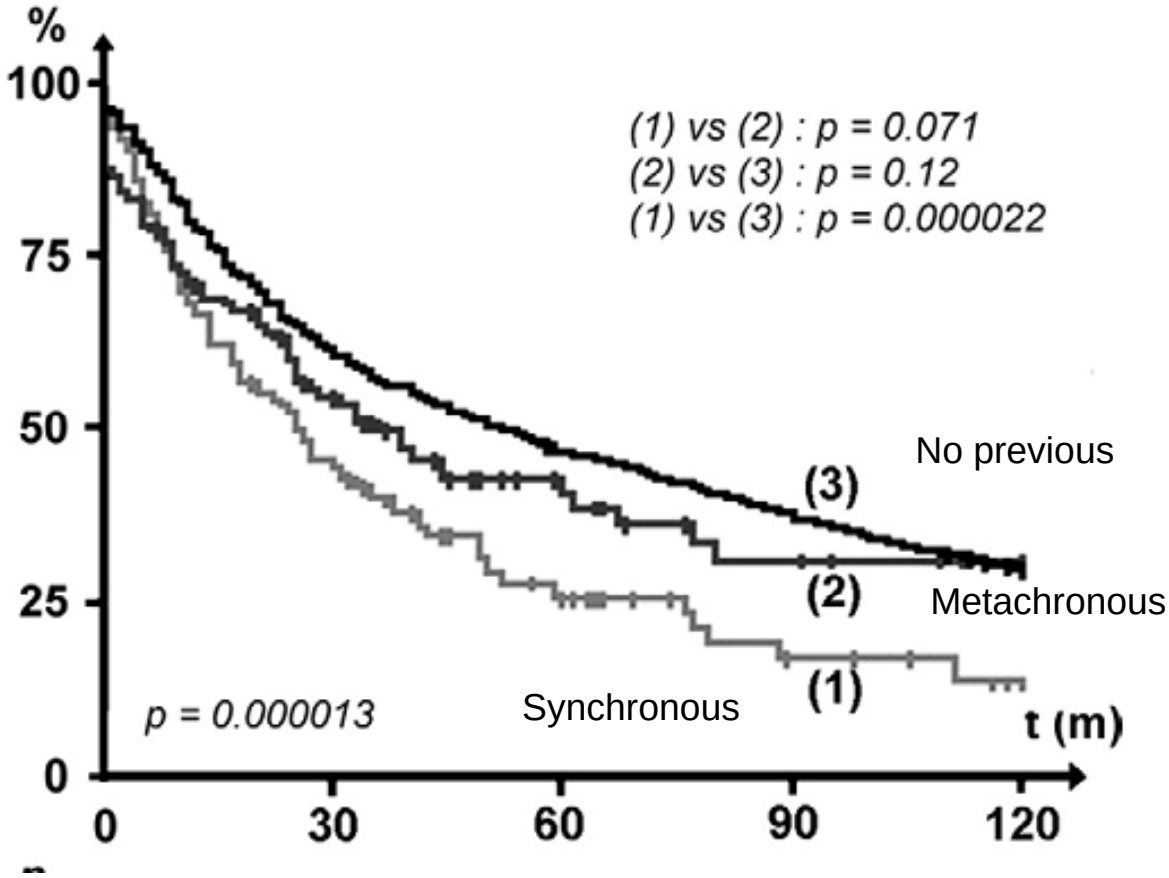
- **Metacroni: sono considerati primitivi**
  - **Istologia simile o differente, stesso lobo più di 2 anni dopo il primo tumore; in lobi diversi; da foci di ca in situ; non linfatici condivisi; non malattia sistemica**

Multiple Lung Cancers Prognosis: What About Histology?

Marc Riquet, MD, PhD, Aurélie Cazes, MD, PhD, Karel Pfeuty, MD, Ulrich Davy Ngabou, MD, Christophe Foucault, MD, Antoine Dujon, MD, and Eugeniu Banu, MD

Departments of General Thoracic Surgery, Pathology, and Medical Oncology, Georges Pompidou European Hospital and Paris Descartes University, Paris, and Cedar Surgical Centre, Boisguillaume, France

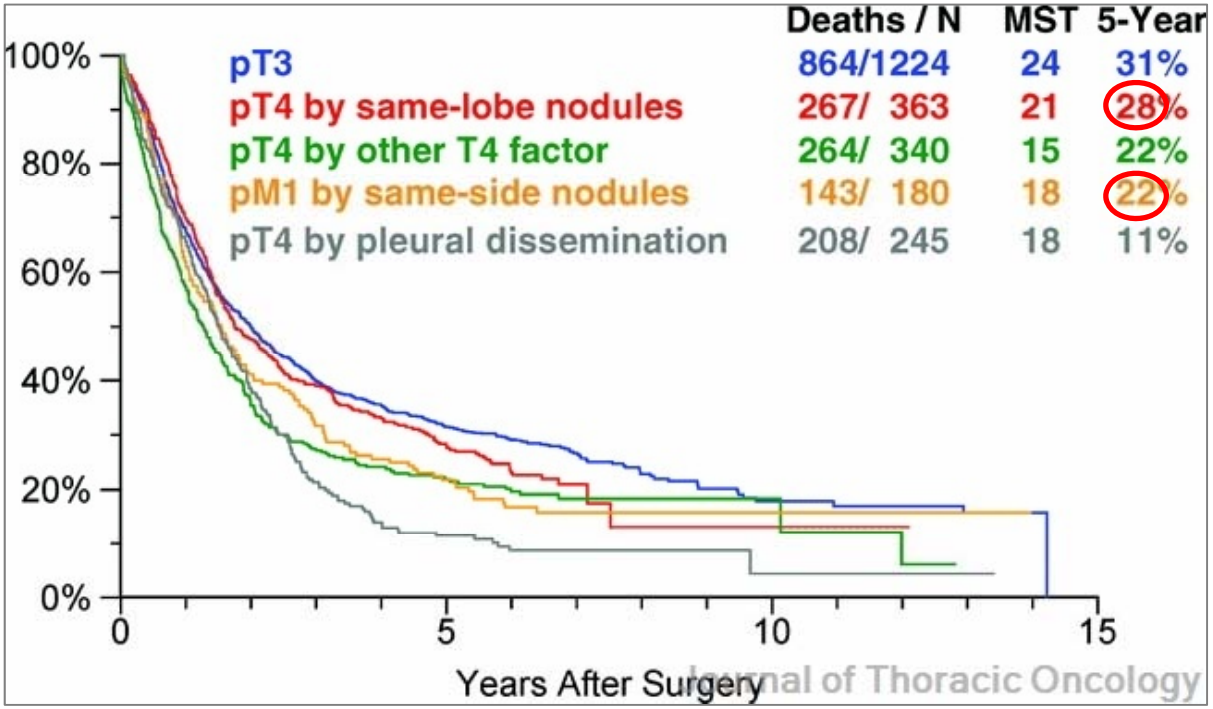
(Ann Thorac Surg 2008;86:921–6)



MLC Sincroni

- Raramente diagnosticati preoperatoriamente
- Alta operabilità
- Di solito localizzato nello stesso polmone ma non nello stesso lobo (peggiore sopravvivenza)
- **5 yr survival between 0 and 20%**

Figure 5



The IASLC Lung Cancer Staging Project: Proposals for the Revision of the T Descriptors in the Forthcoming (Seventh) Edition of the TNM Classification for Lung Cancer

Rami-Porta, Ramón; Ball, David; Crowley, John; Giroux, Dorothy J.; Jett, James; Travis, William D.; Tsuboi, Masahiro; Vallières, Eric; Goldstraw, Peter; on behalf of the International Staging Committee

Journal of Thoracic Oncology. 2(7):593-602, July 2007.

doi: 10.1097/JTO.0b013e31807a2f81

FIGURE 5. Overall survival for patients with pT3 tumors versus same-lobe nodules versus pleural dissemination by pathological finding versus other pT4 factor versus pM1 by same-side nodule, using UICC6 classification.

MLC Sincroni

Deschamps et al, 1990

- 36 synchronous MLCs
- 5.6% mortality
- 16% 5yr survival

- **Questioni aperte:**

✓ **Lesioni bilaterali**

✓ **Necessità di stadiazione aggressiva per evitare N2**

✓ **Risultati da serie con elevata numerosità**

Outcomes
Synchrono
of
ancers

Asad A. Shah, MI
Mark W. Onaitis,
and Mark F. Berr
nas A. D'Amico, MD,

Division of Cardiovascular
Durham, North Carolina
University Medical Center,

c Surg 2012;93:1055–60)

Variable	Frequency No. (%) (N = 47)
Resection	
Wedge + lobectomy	24 (51)
Bilateral VATS	13 (28)
VATS + thoracotomy	10 (21)
Bilateral thoracotomy	1 (2)
Wedge + wedge	5 (11)
Bilateral VATS	5 (11)
VATS + thoracotomy	0
Bilateral thoracotomy	0
Segmentectomy + lobectomy	6 (13)
Bilateral VATS	4 (9)
VATS + thoracotomy	2 (4)
Bilateral thoracotomy	0
Lobectomy + lobectomy	5 (11)
Bilateral VATS	3 (6)
VATS + thoracotomy	2 (4)
Bilateral thoracotomy	0
Wedge + segmentectomy	4 (9)
Bilateral VATS	2 (4)
VATS + thoracotomy	2 (4)
Bilateral thoracotomy	0
Other	3 (6)
Bilateral VATS	1 (2)
VATS + thoracotomy	1 (2)
Bilateral thoracotomy	1 (2)

Outcomes After Surgical Management of Synchronous Bilateral Primary Lung Cancers

Asad A. Shah, MD, Michael E. Barfield, MD, Chris R. Kelsey, MD, Mark W. Onaitis, MD, Betty Tong, MD, David Harpole, MD, Thomas A. D'Amico, MD, and Mark F. Berry, MD

Division of Cardiovascular and Thoracic Surgery and Department of Radiation Oncology, Duke University Medical Center, Durham, North Carolina

Histology
Same cell type and
Same grade or differ
Different grade or di
Grade or differentiati
Different histology

Table 3. Postoperative Complications

Complication	Frequency No. (%)
Prolonged air leak	5 (11)
Need for new chest tube	3 (6)
Atrial fibrillation	2 (4)
Respiratory arrest and death	1 (2)
Bleeding requiring reoperation	1 (2)
Hyponatremia	1 (2)
Recurrent laryngeal nerve injury	1 (2)
Prolonged oxygen requirement	1 (2)
Delirium	1 (2)
Alcohol withdrawal	1 (2)
Pneumothorax	1 (2)

Surg 2012;93:1055–60)

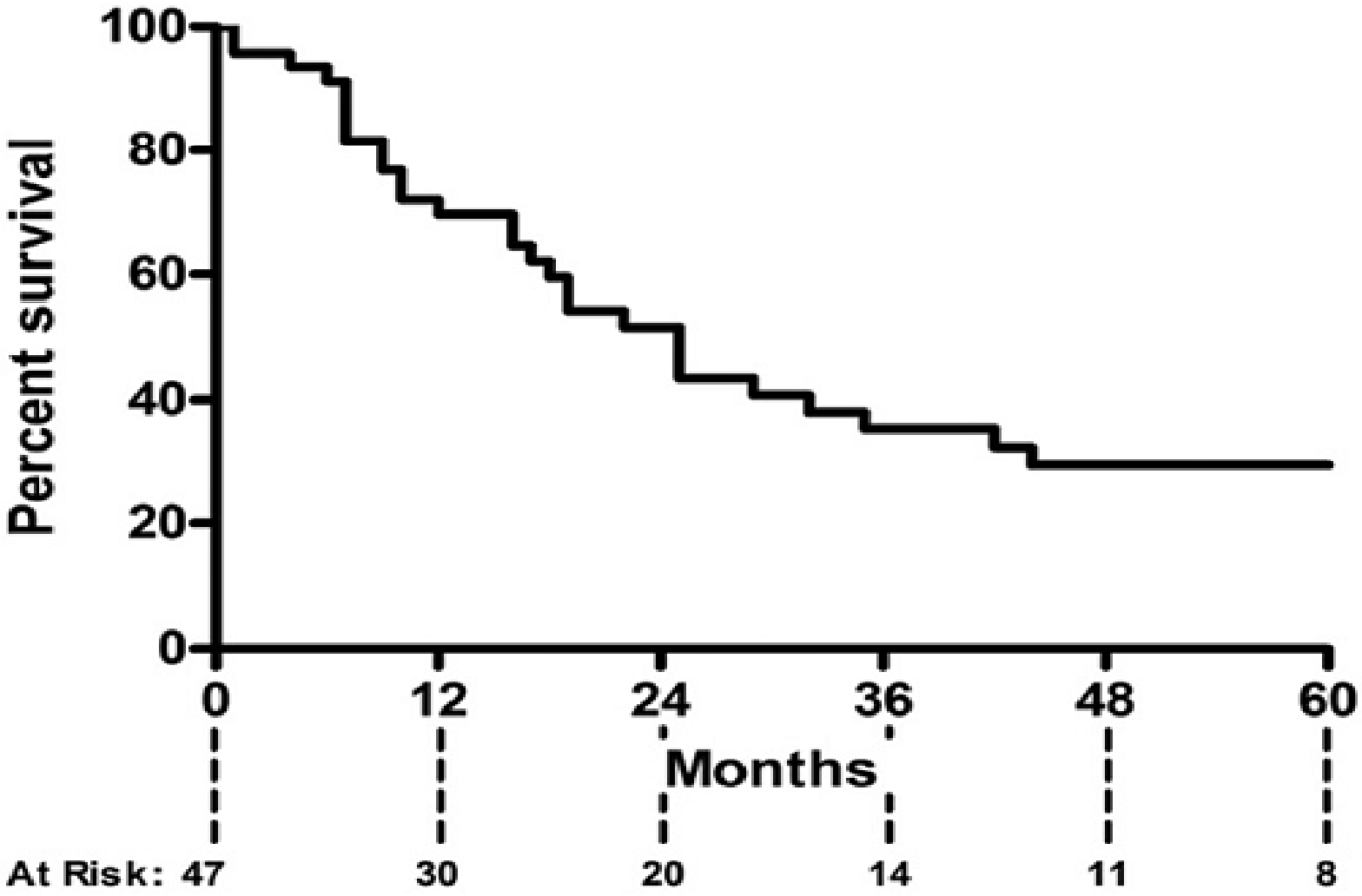


Fig 1. Kaplan-Meier survival curve shows overall survival of all patients.

MLC Sincroni ma N0

- 67 pazienti (44 con bilaterali)
- **Stadiazione aggressiva**: PET scan, mediastinoscopy, brain CT scan/MRI
- No N2 – no extrathoracic metastases
- 53% overall 5 year survival
- Non differenza tra stessa e diversa istologia o tra malattia monolaterale/bilaterale

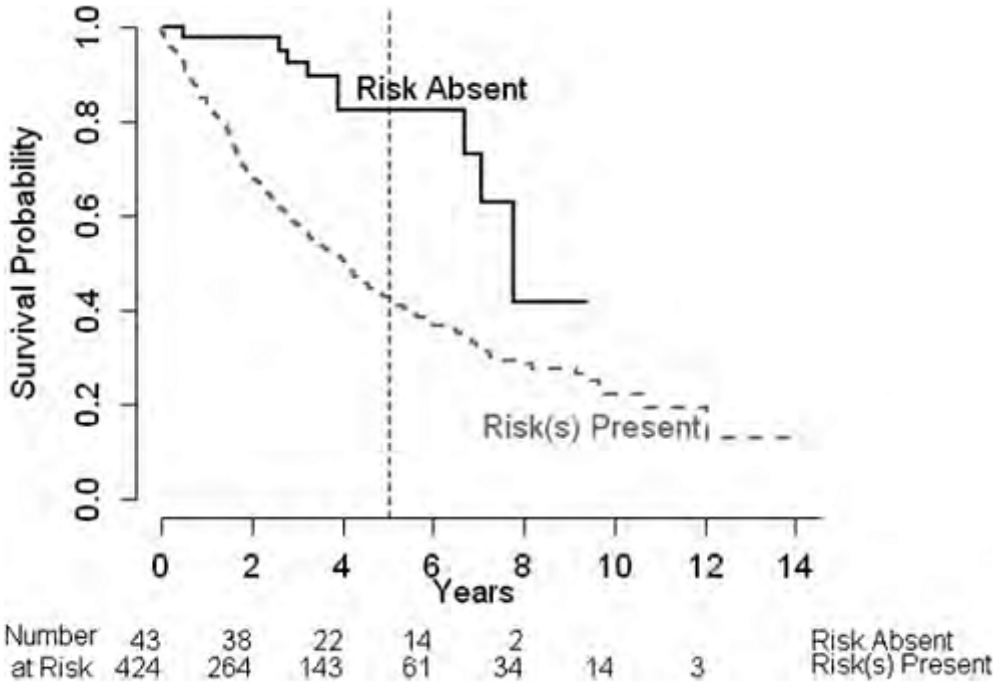
Cerfolio R et al , 2011

Annals of Oncology 24: 889–894, 2013
doi:10.1093/annonc/mds495
Published online 7 November 2012

Prognostic factors for survival after complete resections of synchronous lung cancers in multiple lobes: pooled analysis based on individual patient data

T. Tanvetyanon[1*], D. J. Finley[2], T. Fabian[3], M. Riquet[4], L. Voltolini[5], C. Kocaturk[6], W. J. Fulp[7], R. J. Cerfolio[8], B. J. Park[9] & L. A. Robinson[1]

[1]Department of Thoracic Oncology, H. Lee Moffitt Cancer Center, Tampa; [2]Department of Surgery, Memoral Sloan Kettering Cancer Center, New York; [3]Department of Surgery, Albany Medical Center, Albany, USA; [4]Thoracic Surgery Department, Georges Pompidou European Hospital, Paris, France; [5]Thoracic Surgery Unit, University Hospital of Siena, Siena, Italy; [6]Yedikule Hospital for Chest Disease and Thoracic Surgery, Turkey; [7]Department of Biostatistics, H. Lee Moffitt Cancer Center, Tampa; [8]Department of Surgery, University of Alabama at Birmingham, Birmingham; [9]Department of Surgery, Hackensack University Medical Center, Hackensack, New York , USA



467 patients

MLC Sincroni in più lobi

- **Sopravvivenza media: 52 mesi**
- **Fattori prognostici negativi:** sesso maschile (HR=1.64), età avanzata (1.40), N+ (1.68), lesione monolaterale (1.45)
- Lesioni bilaterali e simile istologia sembrano essere fattori prognostici positivi

Annals of Oncology 24: 888–894, 2013
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T. Tanvetyanon[1*], D. J. Finley[2], T. Fabian[3], M. Riquet[4], L. Voltolini[5], C. Kocaturk[6], W. J. Fulp[7], R. J. Cerfolio[8], B. J. Park[9] & L. A. Robinson[1]

MLC Metacroni

- Riscontrati al follow-up post-trattamento chirurgico
- Prolungato screening dei pz operati con LDCT – ci sono gli estremi per andare oltre i criteri dei programmi di screening (età compresa tra 54/55-74/79) ?
- Aumento della mortalità operatoria (ie, alto rischio/anziani)
- Diversa istologia è predittiva di migliore sopravvivenza
- **5 yr survival between 23 and 47%**

Doddoli et al 2001

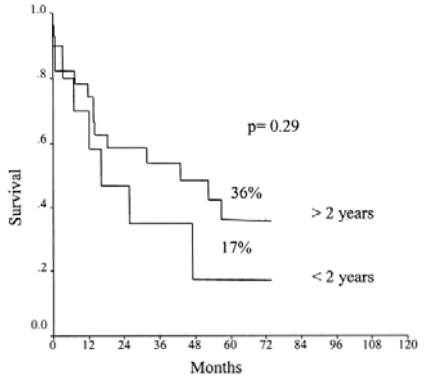

Fig. 1. Survival curves of patients in whom the metachronous lung cancer developed after or before 2 years.

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MLC Metacroni

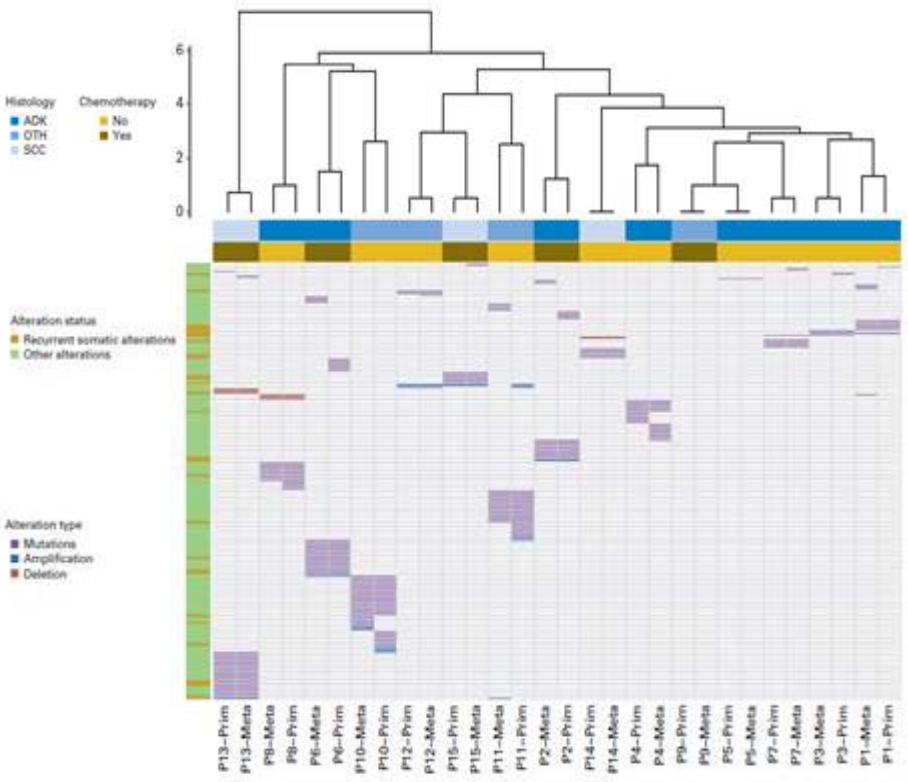
Recurrent disease?

Second primary?

HIGH CONCORDANCE BETWEEN PRIMARY TUMORS AND METASTASES BY NEXT GENERATION SEQUENCING

Table 4. Concordance Between Primary Tumor and Matched Metastasis for Recurrent Somatic Alterations and Likely Passenger Alterations

Alterations	No. of Evaluated Alterations	Shared	Unshared	Concordance Rate (%)
Mutations				
Recurrent	28	26	2	93
Passenger	144	88	56	61
Large structural alterations				
Recurrent	5	5	0	100
Passenger	15	7	8	40
Global				
Recurrent	33	31	2	94
Passenger	159	95	64	63



Slide da: Dacic S WCLC 2013

Vignot S. JCO 2013; 31(17); 2167

Survival After Recurrent Nonsmall-Cell Lung Cancer After Complete Pulmonary Resection

Hiroshi Sugimura, MD, Francis C. Nichols, MD, Ping Yang, MD, PhD, Mark S. Allen, MD, Stephen D. Cassivi, MD, Claude Deschamps, MD, Brent A. Williams, MS, and Peter C. Pairolero, MD

Department of Health Sciences Research, Division of General Thoracic Surgery, and Section of Biostatistics, Mayo Clinic College of Medicine, Rochester, Minnesota

(Ann Thorac Surg 2007;83:409–18)

Table 1. Initial Site of Recurrence in 390 Cases of Recurrent Nonsmall-Cell Lung Cancer

Initial Site of Recurrence	Patients (%)
Intrathoracic	171 (44)
Lung only	84
All other chest	87
Extrathoracic	172 (44)
Adrenal gland	11
Bone	40
Brain	55
Liver	16
Single site (other)	22
Multiple sites	28
Combined intrathoracic and extrathoracic	47 (12)

Multimodality treatment regimens

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Table 5. Effect of Treatment in Recurrent Lung Cancer Limited to the Lungs

Site	Treatment for Recurrence	Patients	Postrecurrence Survival		
			MST (months)	2 Year % (95% CI)	Adjusted RR[a] (95% CI)
Lung only	Surgical[b]	23	32.8	72 (56, 94)	0.2 (0.1, 0.5)
	Nonsurgical[c]	34	13.4	18 (9, 38)	0.4 (0.3, 0.7)
	None	27	8.4	28 (14, 57)	1.0 (reference)
Solitary focus	Surgical	15	>34.3	67 (45, 100)	
	Nonsurgical	16	13.3	25 (11, 58)	
	None	9	11.0	—	
Multiple foci	Surgical	8	28.2	75 (50, 100)	
	Nonsurgical	18	15.6	18 (6, 50)	
	None	18	6.4	28 (11, 67)	

[a] Adjusted for ECOG-PS at recurrence, symptoms at recurrence, administration of neoadjuvant chemotherapy or adjuvant radiation, and disease-free interval. [b] Treatment including surgical resection. [c] Treatment not including surgical resection.

CI = confidence interval; ECOG-PS = Eastern Cooperative Oncology Group performance status; MST = median post-recurrence survival time; RR = relative risk.

- **Surgery is to be considered since it prolongs postrecurrence survival**
- **No difference in 2 yr survival between single and multiple foci of disease**

(Ann Thorac Surg 2007;83:409–18)

MLC Metacroni

Deschamps, 1990

44 pazienti

4.5% mortalità operatoria

5yr and 10yr survival rates:

55% and 27%

Predire la recidiva dopo resezione polmonare

Tumor Recurrence After Complete Resection for Non-Small Cell Lung Cancer

Matthew D. Taylor, MD, Alykhan S. Nagji, MD, Castigliano M. Bhamidipati, DO, MS, Nicholas Theodosakis, BS, Benjamin D. Kozower, MD, Christine L. Lau, MD, and David R. Jones, MD

Division of Thoracic and Cardiovascular Surgery, Department of Surgery, University of Virginia Charlottesville, Virginia

Background. Long-term survival after R0 resection for non-small cell lung cancer (NSCLC) is less than 50%. The majority of mortality after resection is related to tumor recurrence. The purpose of this study was to identify independent perioperative and pathologic variables that are associated with NSCLC recurrence after complete surgical resection.

Methods. A retrospective examination was performed of a prospectively maintained database of patients who underwent resection for NSCLC from July 1999 to August 2008 at a single institution. Clinicopathologic variables were evaluated for their influence on time to recurrence. Cox's proportional regression hazard model examined the association of recurrence in NSCLC.

Results. A total of 1,143 patients met inclusion criteria and had complete follow-up information. Of these patients, 378 (33.1%) had recurrence of the primary cancer. Median follow-up was 24 months (range, 3–134 months). Preoperative tumor maximum standardized uptake value (SUV_{max}) greater than 5 was associated with increased risk of recurrence (hazard ratio [HR], 1.81; $p = 0.01$). Preoperative radiation was independently associated with recurrence (HR, 1.98; $p = 0.05$) as well as the presence of pathologic stage II and stage III disease (stage II: HR, 2.53; $p = 0.05$; stage III: HR, 6.49; $p = 0.006$). Subgroup analysis found that sublobar resection was also associated with locoregional recurrence after resection (HR, 4.17; $p = 0.02$) and lymphovascular invasion of distant recurrence (HR, 4.21; $p = 0.002$).

Conclusions. In the largest series reported to date on postresectional recurrence of NSCLC, SUV_{max} greater than 5, increasing pathologic stage, and the administration of preoperative radiation were independently associated with NSCLC recurrence after resection. Sublobar resection was independently associated with locoregional recurrence, and lymphovascular invasion was associated with distant recurrence.

(Ann Thorac Surg 2012;93:1813–21)

Predire la recidiva dopo resezione polmonare

Tumor Recurrence After Complete Resection for Non-Small Cell Lung Cancer

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Division of Thoracic and Cardiovascular Surgery, Department of Surgery, University of Virginia Charlottesville, Virginia

(Ann Thorac Surg 2012;93:1813–21)

Table 5. Multivariate Analysis of Risk Factors for Locoregional NSCLC Recurrences

Variable	Hazard Ratio	95% CI	*p* Value
Sublobar resection	4.12	1.190–14.268	0.02
SUV_{max}			
0–2.5	Reference	Reference	Reference
2.5–5	1.18	0.354–3.925	0.79
> 5	2.52	0.952–6.697	0.06
Pathologic stage			
Stage I	Reference	Reference	Reference
Stage II	41.5	0.587–2239.8	0.08
Stage III	126.7	1.196–13425.8	0.04

CI = confidence interval; NSCLC = non-small cell lung cancer; SUV_{max} = maximum standardized uptake value.

Secondi primitivi metacroni

- 161 pazienti durante un periodo recente di 10 anni alla Mayo Clinic
- DFI <2 anni> non considerato un criterio per definire primitività
- Nessuna mortalità operatoria
- 29% morbilità operatoria (specialmente dopo chirurgia dallo stesso lato o in pazienti con basso ppoFEV1)

Hamaji M et al, 2013

Secondi primitivi metacroni

- 148 mesi di sopravvivenza mediana dopo primo intervento
- Dopo il secondo intervento, **5 and 10 year survival 61% and 20%, respectively**
- Sopravvivenza mediana : 73 mesi
- Predittori di sopravvivenza: T di 2 cm; pack-year smoking
- Coerente con TNM 7th e la relazione tra fumo e alterazioni biomolecolari alla base dell'oncogenesi
- Impatto insieme ad NLST sulle policies sul prolungato follow-up dopo prima resezione polmonare

Hamaji M et al, 2013

TNM and MLC Metacroni

- “Qualsiasi NSCLC riscontrato dopo resezione polmonare”
- 58 pazienti a Cornell
- Brain MR and PET; mediastinoscopy in 10%
- 66% overall 5yr survival
- Stage IA: 74%; Stage IB: 59%; others:0%
- Only tumor stage was a predictor of survival

- Domanda: e se considerassimo altre forme di trattamento?

Lee et al 2009

NCI Naples Metacroni

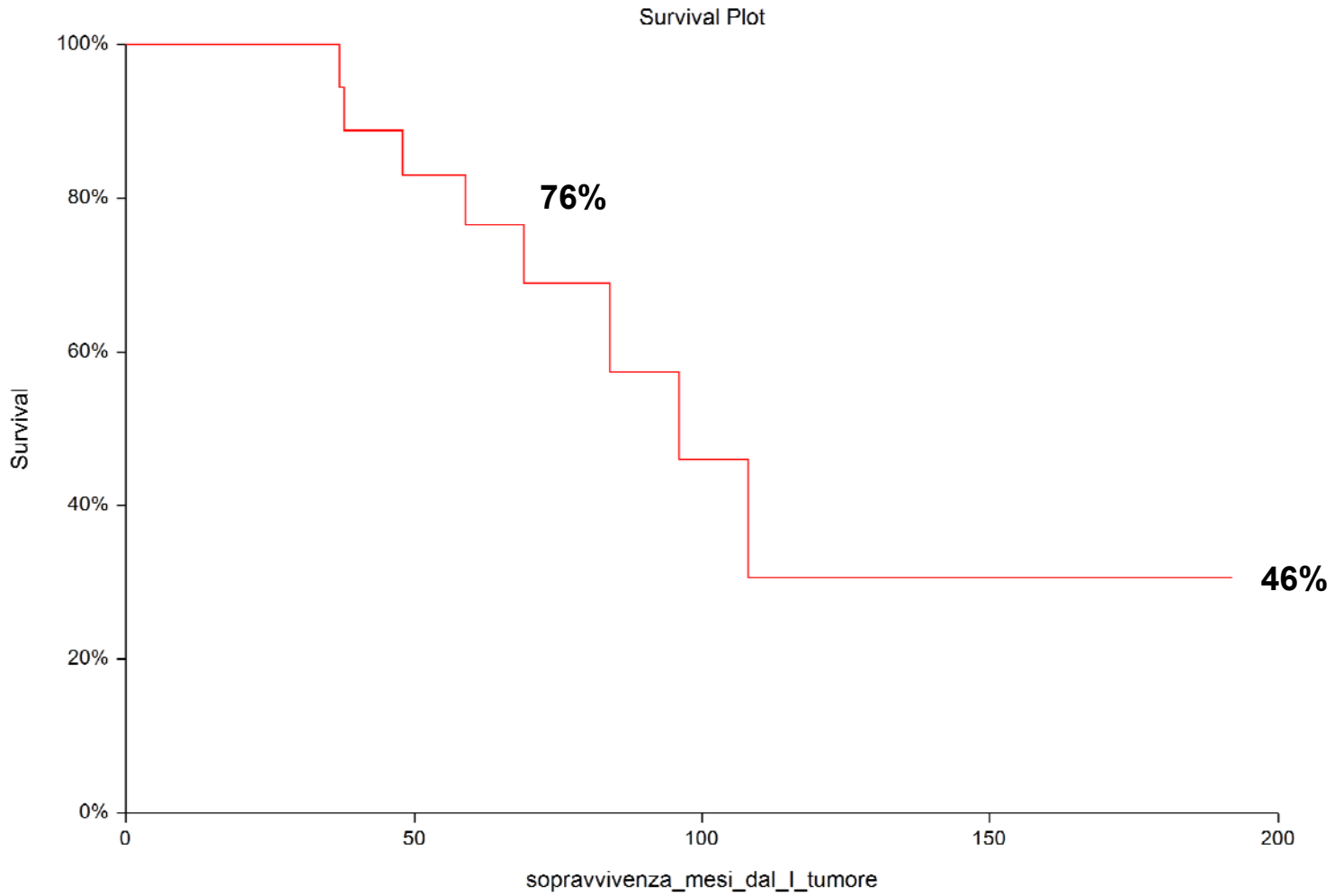
- 20 patients (1999-2013)
- Median age: 66 y
- Charlson median grade: 2
- Median FEV1= 2.13 L(76%)
- Median DLCO= 17.5 ml/min/mmHg (78.5%)
- VO2max=14.3 ml/kg/min (64%)

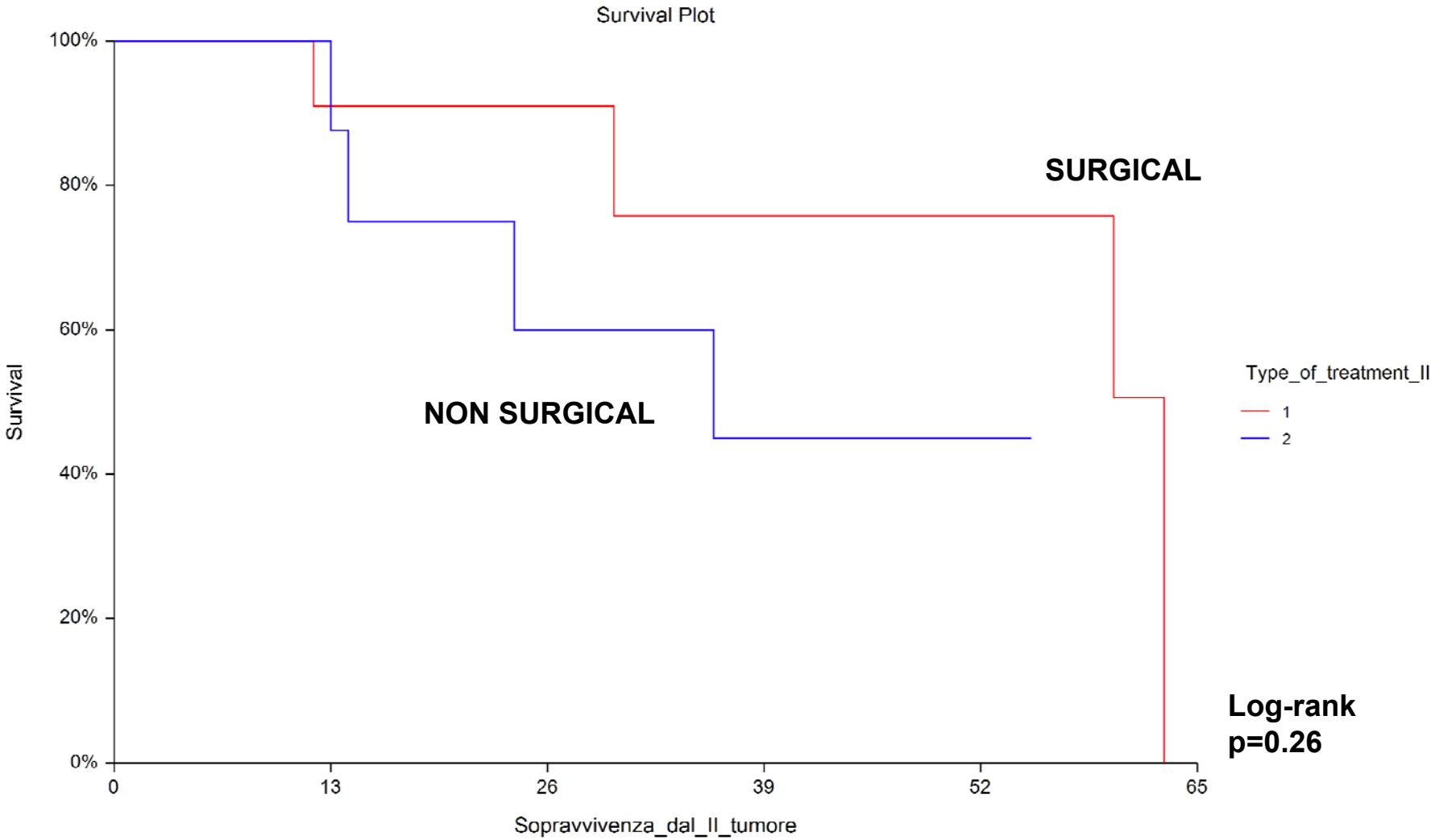
NCI Naples Metacroni

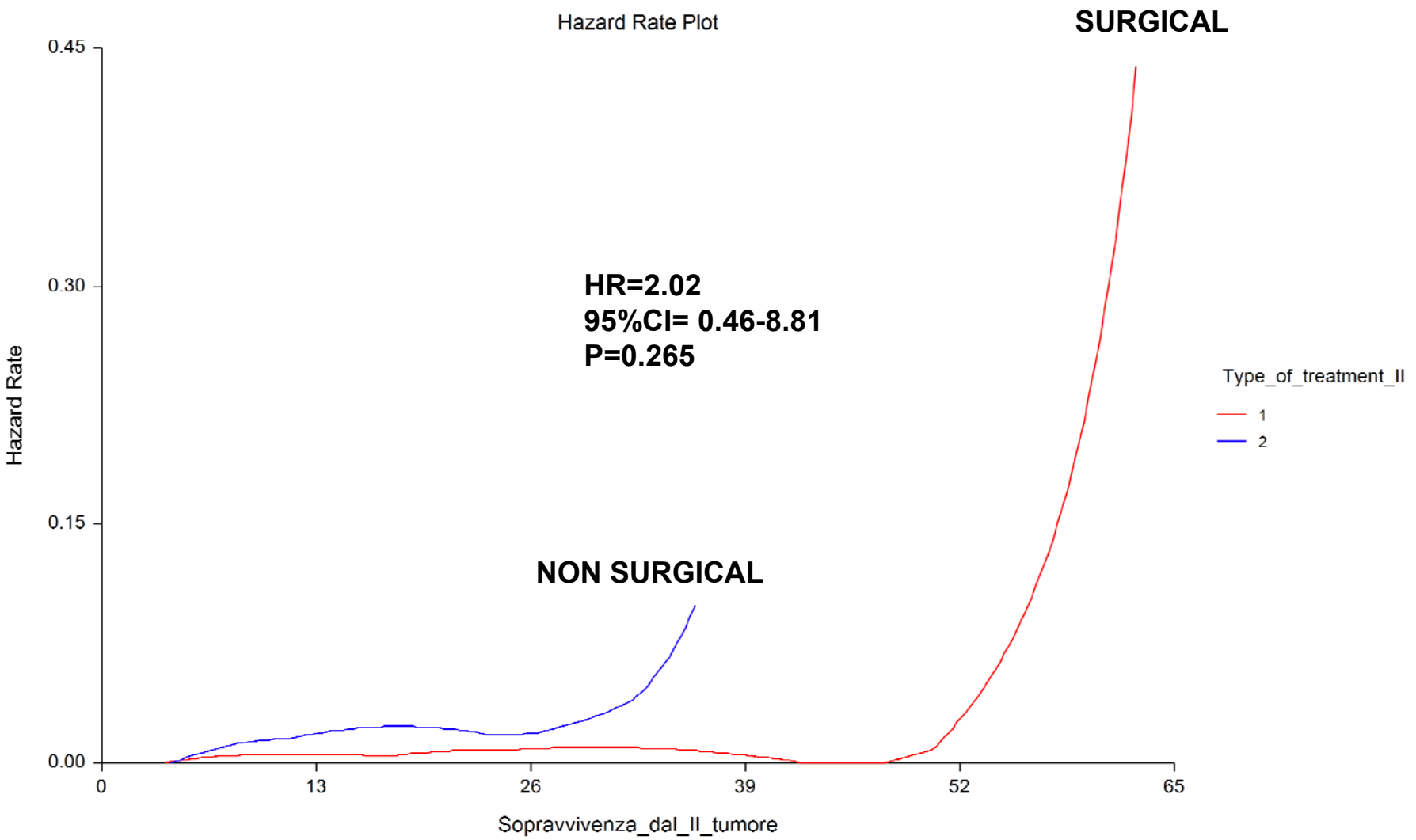
- **Primo intervento**: lobectomy/bilobectomy in 14 patients, wedge/segmentectomy in 6
- **Istologia**: 12 adenocarcinomas (2 formerly bronchoalv); 1 adenosquamous; 1 carcinoid; 6 epidermoid

NCI Naples Metacroni

- Intervallo tra I intervento e II trattamento= 25.5 months (2-156)
- **Secondo trattamento**: pneumonectomy in 1, lobectomy/bilobectomy in 3, wedge/segmentectomy in 5
- RFA in 1, SBRT in 2, Chemotherapy in 4 (in 1 combined to RT), refused treatment in 4
- **Istologia:** 13 adenocarcinomas (3 formerly bronchoalv); 6 epidermoid;1 SCLC


Survival Plot
100%
80%
60%
40%
20%
0%
Survival
76%
46%
0
50
100
150
200
sopravvivenza_mesi_dal_I_tumore


Survival Plot
100%
80%
60%
40%
20%
0%
Survival
0
13
26
39
52
65
Sopravvivenza_dal_II_tumore
SURGICAL
NON SURGICAL
Type_of_treatment_II
1
2
Log-rank
p=0.26



“Surgery is to be considered since it prolongs postrecurrence survival “ Ann Thorac Surg 2007

Conclusioni - MLC

- **Lesioni maligne centrali**: lobectomia/segmentectomia dipende dalle riserve cardiorespiratorie
- **Multipli GGOs operabili con meno del 25% di componente solida**: wedge resections
- **Multipli GGOs non completamente resecabili o in pazienti ad alto rischio**: osservazione; non appena aumento delle dimensioni o della componente solida GGO: presumed cancer
- **Lesione maligna stesso lobo**: lobectomia
- **Lesioni bilaterali sincrone**: la riserva cardiopolmonare determinerà l'estensione della resezione chirurgica

Rocco G et al STS Taskforce on CT screening Ann Thorac Surg 2013

Chirurgia oltre sincrono/metacrono

- **Incremento nel riscontro di noduli grazie ai programmi di screening (e di follow-up degli operati)**
- **Bisogno di tessuto per studi biomolecolari**
- **Profilo genomico quale maggiore fattore prognostico e funzionale per un trattamento preventivo**
- **Nuovi criteri soglia per l'operabilità**
- **Resecabilità tramite approccio miniinvasivo**
- **Ruolo della SBRT e della RFA**

Conclusioni

- La malattia oligometastatica si può giovare di un trattamento loco-regionale integrato ottenendo lunghe sopravvivenze
- La selezione accurata dei pazienti nell'ambito di un Tumor Board con pari expertise tra le varie componenti è fondamentale
- L'asportazione chirurgica del tumore primitivo polmonare risulta spesso un fattore prognostico positivo

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Table

Metas	
Bone	
Brain	therapy
Adren	rapy
Axilla	rapy
Liver	
Contra	rapy

Figure 1 **The Overall Survival Curves in Stage IV NSCLC Patients. The Postoperative 5-Year Survival Rate in the Patients With Stage IV Disease Was 26.8%.**