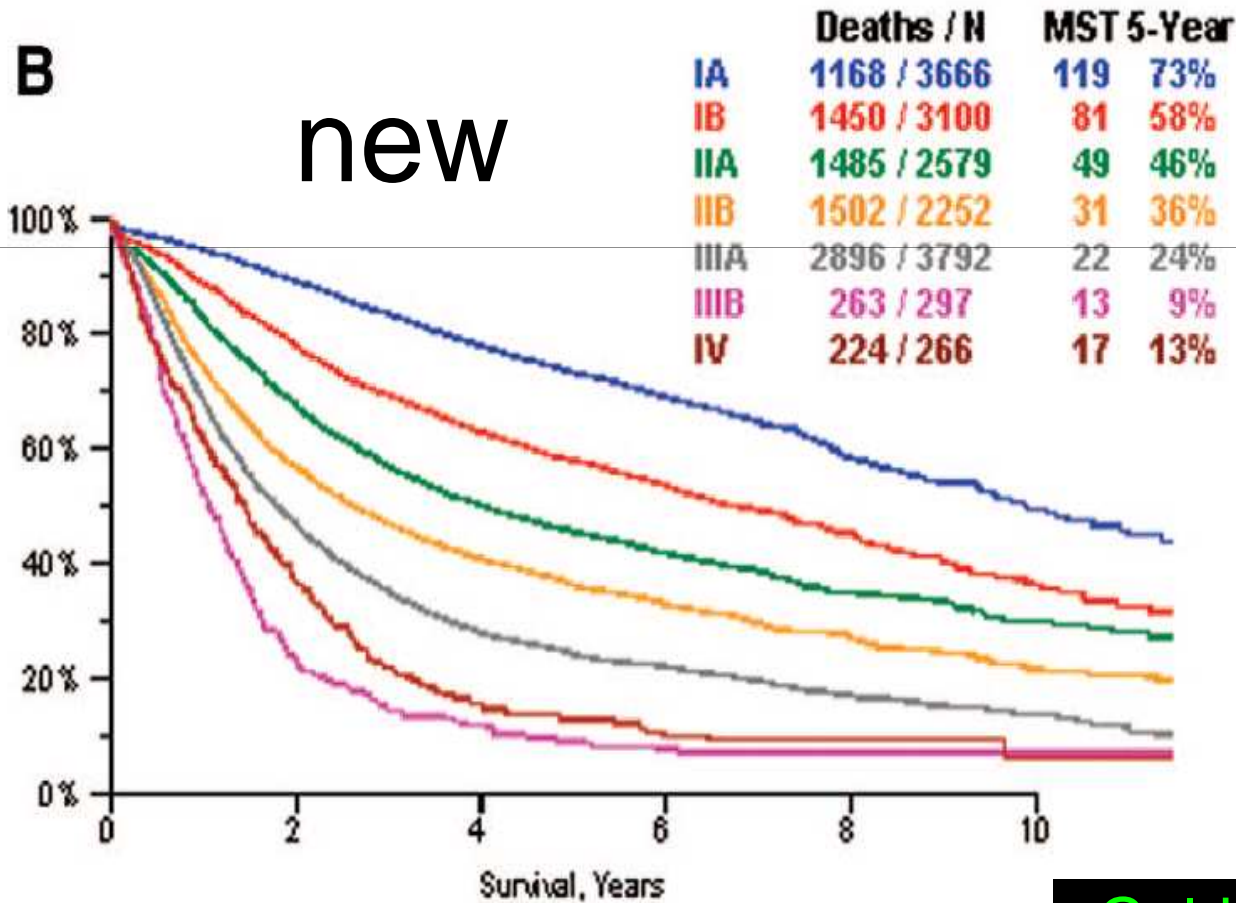
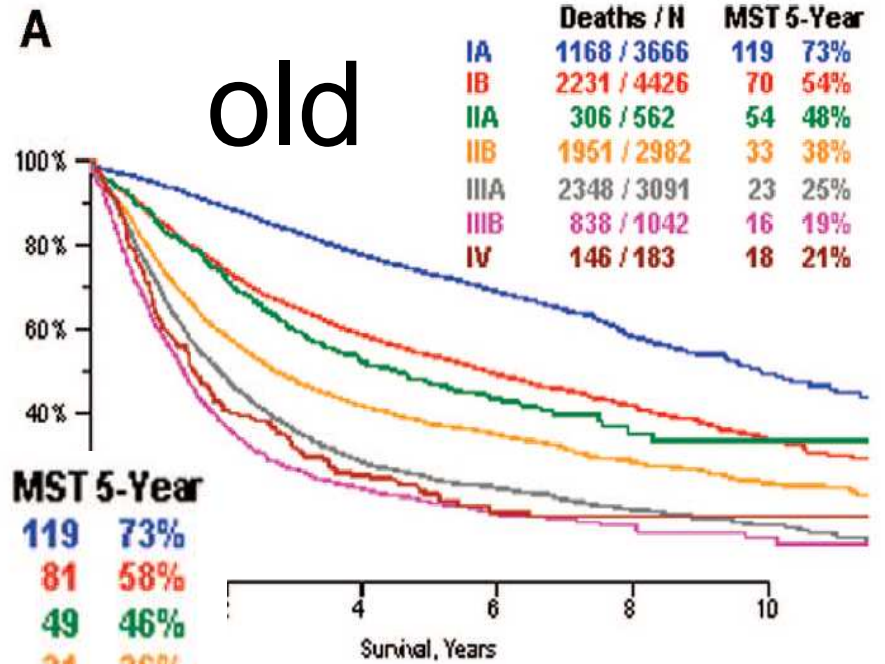


# Problemi e prospettive del trattamento chirurgico del paziente anziano con tumore - Ca. polmone

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# TNM 2009



Goldstraw JTO, 2:706, 2007

## Age is not an independent risk factor in lung cancer surgery (1418 cases)

**Table 3 - Mortality**

		No. of deaths	%	<i>P</i> *
Overall		26	1.8	
Age (yr)	≤65	12	1.6	0.549
	>65	14	2.1	
Gender	Male	21	1.9	0.897
	Female	5	1.7	
Cardiovascular morbidity	Absent	9	1.1	0.001
	Present	17	2.8	
Pulmonary morbidity	Absent	23	2.2	0.093
	Present	3	0.8	
Resection volume	Pneumonectomy	9	3.7	0.020
	Lobectomy	17	1.7	
	Sublobar	0	0	

## Age is not an independent risk factor in lung cancer surgery (1418 cases)

Type	Squamous cell	13	50	
	Adenocarcinoma	8	30	
	Other	5	20	
Pathological stage	IA	1	0.5	0.013
	IB	4	0.9	
	II	7	2.2	
	III A	11	3.6	
	III B	3	2.7	
	IV	0	0	
	Induction therapy	None	19	1.7
	Chemo and/or radiotherapy	7	2.4	

## Age is not an independent risk factor in lung cancer surgery (1418 cases)

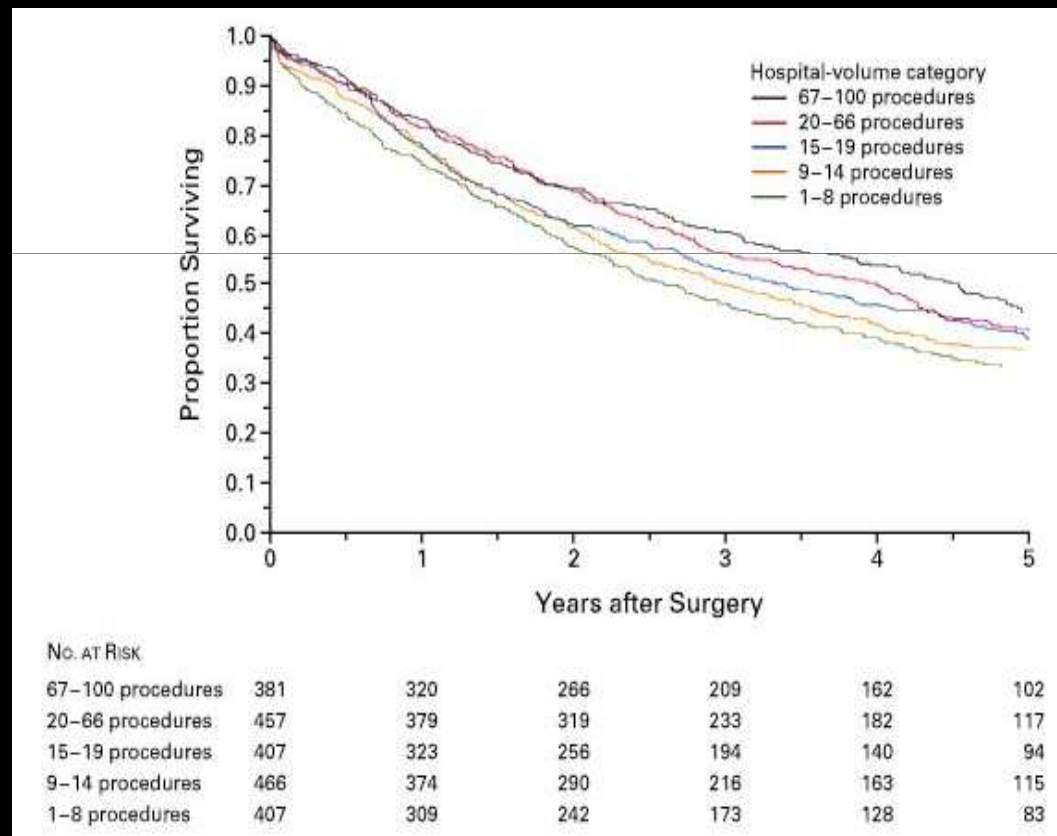
**Table 4 - Mortality: multivariable logistic model**

	Odds ratio	95% Confidence interval	<i>P</i> *
Cardiovascular morbidity Yes vs No	3.08	(1.3-7.07)	0.008
Resection volume Pneumonectomy vs other	2.4	(1.06-5.78)	0.036
Pathological stage Trend	1.54	(1.054-2.2)	0.027

\*Wald test.

# Building an evidence base in NSCLC surgery can be challenging

- NSCLC survival by surgical expertise



# LUNG CANCER STAGING

**all patients**

physical examination  
CXR  
sputum cytology  
FOB  
chest CT or MRI  
abdominal  
ultrasound

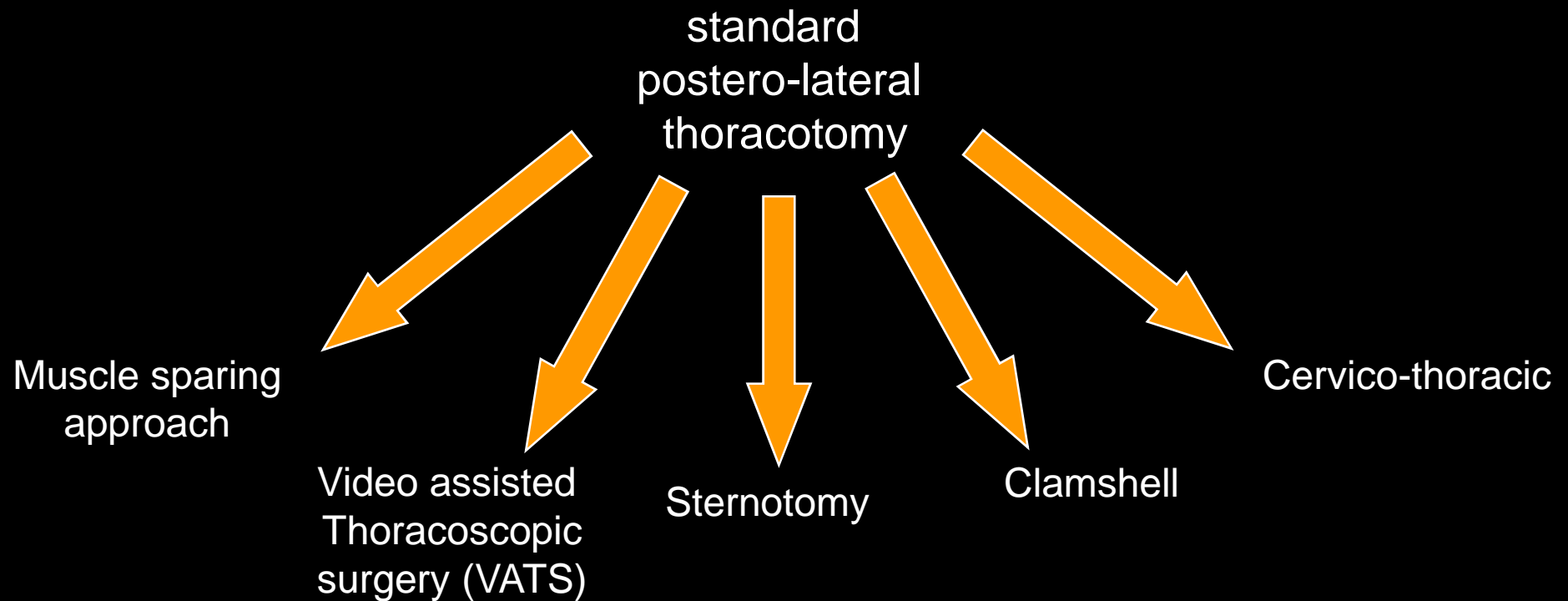
suspicious N2  
symptoms / advanced  
bone pain  
effusion  
non surgical  
SCLC  
biopsy

mediastinoscopy  
brain CT scan  
bone scan  
toracocentesis  
FNA  
bone marrow

# Surgical staging

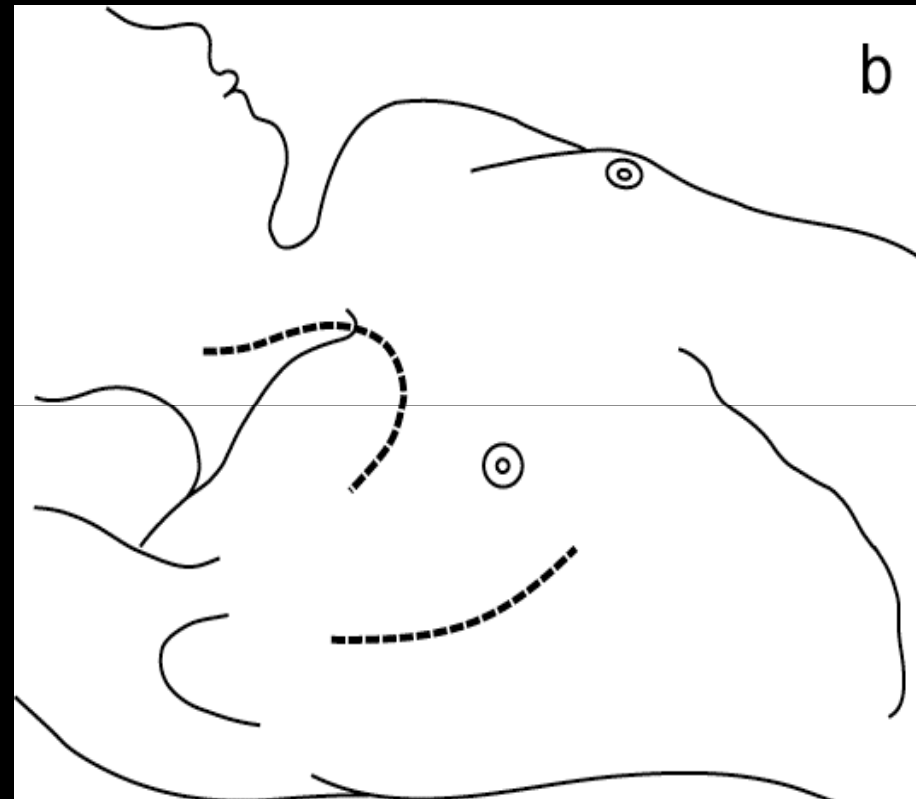
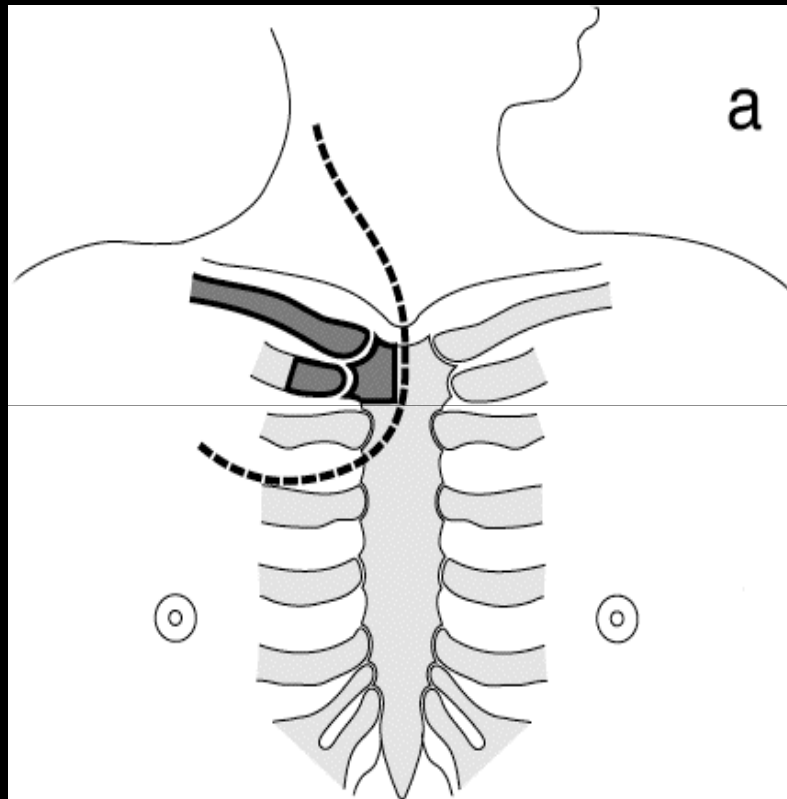
- Staging indicated after ultrasound and biopsy
- MED/LAM still a valuable test → in PET+ N2
  - primary surgery for cN2 is useless
  - false positive PET on nodes occurs in > 20% of cases
  - not necessary if PET is negative
- TBNA may be a valid alternative
- VATS is useful in cyto-effusion exploratory thoracotomy in < 5% of cases

# 20 years of progress in thoracic approaches



**individual modelling**  
**better exposure**  
**preservation of function**

# TMA + muscle-sparing thoracotomy



## Limited resection for cT1N0

- Wedge causes more local relapses and reduced survival
- Lobectomy is better than wedge resection even after adequate intraoperative nodal staging (proven N0)
- Without frozen section of hilar and segmental nodes, wedge results are much worse
- “Radical” segmentectomy achieves similar results compared with lobectomy in the appropriate site and anatomy

# Randomized controlled trial of resection versus radiotherapy after induction chemotherapy in Stage IIIA–N2 NSCLC

- 579 eligible patients received 3 rounds of platinum-based CT
- 61% of initial group responded to treatment and randomised to:
  - 167 received surgery (50%, Radical resection; 46%, pneumonectomy)
  - 165 received radiation

	surgery	RT
• Median survival	16.4	17.5
• 5-year survival	15.7%	14.0%
• mortality	4.0%	0.6%

*Conclusions: radiotherapy should be the preferred option because of lower rate of complications and mortality*

# Stage IIIB surgery: technical advances

- Vascular resection / reconstruction
- Tracheal / carinal resection
- Anterior approach to thoracic inlet
- Vertebrectomy
- Safety after induction CT/RT

# RECONSTRUCTIVE THORACIC SURGERY

**prosthesis**

SVC

pericardium

chest wall

sternum

**flaps**

myocutaneous

free flaps

intercostal

pericardial

omental

**replacement**

oesophagus

**transplantation**

lung

heart-lung

# Adjuvant chemotherapy for resectable NSCLC: major randomized trials

Trial	Patients (n)	% 5-year survival	Hazard ratio	P
ALPI	1209	3	0.96	.59
IALT	1867	4	0.86	<.03
BLT	381	0	1.02	.98
NCI-C	482	15	0.7	.012
CALGB	344	12	0.62	.028
ANITA	840	9	0.76	.017

## Regimens:

ALPI: MVP regimen (mitomycin 8 mg/m<sup>2</sup>, day 1; vindesine 3 mg/m<sup>2</sup>, days 1 and 8; and cisplatin 100 mg/m<sup>2</sup>, day 1 every 3 weeks for three cycles)

IALT: Four cycles of vinorelbine (25 mg/m<sup>2</sup> weekly for 16 weeks) plus cisplatin (50 mg/m<sup>2</sup> for days 1 and 8 every 4 weeks)

BLT: Three 3-weekly cycles of either cisplatin/vindesine, mitomycin/ifosfamide/cisplatin, mitomycin/vinblastine/cisplatin or vinorelbine/cisplatin

NCI-C: 50 mg cisplatin p/square meter of body-surface area on D1+8 every 4 weeks for four cycles & 25 mg of vinorelbine p/square meter weekly for 16 weeks

CALGB: Two cycles of induction chemotherapy (vinblastine and cisplatin)

ANITA: Four cycles of adjuvant cisplatin and vinorelbine

# Adjuvant chemotherapy for resectable NSCLC: benefit by stage

Stage	IA	IB	II	IIIA
ALPI	-	-	-	-
IALT	-	-	-	+
NCI-C		-	+	
CALGB		+		
ANITA		+	+	+

Not Tested

Positive

Negative

# Who in practice is a candidate for adjuvant therapy after resection?

- Stage II–III diagnoses where risk of systemic relapse exceeds 20–30%
- Good PS
- No major comorbidities
- Age is not an absolute indicator
- Potential future prognostic indicators
- Adjuvant radiotherapy plays no role in the majority of cases (only in exceptional circumstances)

# Should there be routine screening for smokers?

nature  
CLINICAL  
PRACTICE

# ONCOLOGY

2006; 355:1763-71

PRACTICE POINT

[www.nature.com/clinicalpractice/onc](http://www.nature.com/clinicalpractice/onc)

## COMMENTARY

Ugo Pastorino

Pilot studies in heavy smokers have proved that low-dose spiral CT can detect early lung cancer, with very high detection and resection rates. The excellent survival rate of patients with CT-detected stage I lung cancer in the International (I-)ELCAP report is not a surprise, particularly considering that median follow-up was only 3 years and the end point was lung-cancer-specific rather than overall survival. What is remarkable is the high proportion of stage I lung cancers detected in this study: over 60% compared with 20% in historical clinical series. Whether this change will translate into significant reductions in mortality is unknown. We must remember the lesson of early randomized trials in which 4-monthly chest X-ray screening improved cancer stage distribu-

## PRACTICE POINT

The efficacy of annual low-dose spiral CT scans must be proven by a reduction in lung cancer mortality in large-scale randomized trials before routine screening can be recommended to current or former smokers

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