16th CONGRESS Lung ON CANCER

BARCELONA 27 / 28 NOVEMBER 2025

GECP lung cancer research

Long-term results of a real life SECT study: segmentectomy vs. lobectomy for c-stage IA lung cancer

Dr. Iker López
Hospital Universitario Donostia

CONFLICTO DE INTERESES

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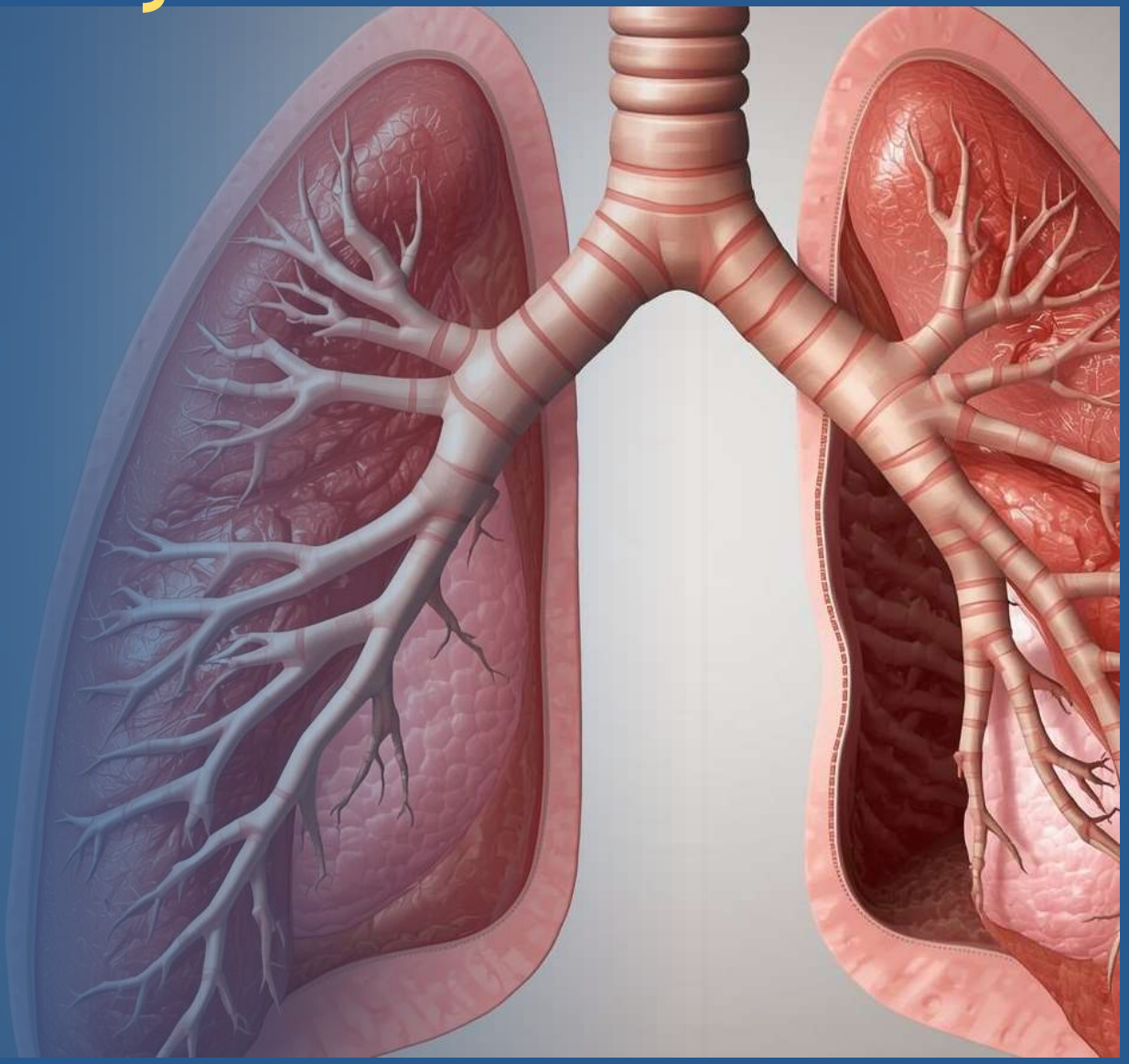
La información presentada no debe ser utilizada con fines promocionales, ni constituye asesoramiento médico o actividades promocionales. Además, contiene propuestas preliminares, planes, estrategias y opiniones que no representan posiciones finales ni garantías de desempeño futuro. En caso excepcional de que desee compartir algún contenido, deberá contar con la autorización previa, expresa y por escrito de **GECP.**

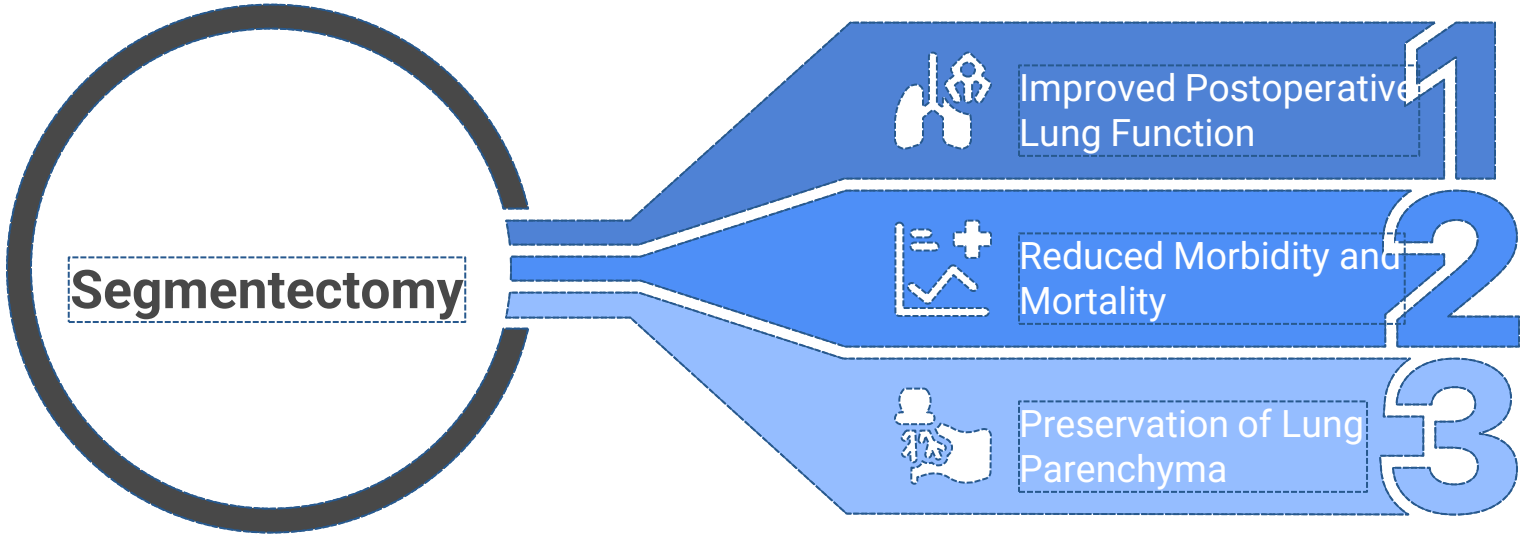
Segmentectomy vs Lobectomy



Why do we need to perform segmentectomy if we have good results with lobectomy?

Why remove the entire lobe when removing a segment can achieve the same or even better results?

Benefits of Segmentectomy



Thoracoscopic segmentectomy versus lobectomy: A propensity score–matched analysis

Julio Sesma, MD,[a,b] Sergio Bolufer, MD, PhD,[a,b] Antonio García-Valentín, MD, PhD,[a,b] Raúl Embún, MD, PhD,[c] Íker Javier López, MD, PhD,[d] Nicolás Moreno-Mata, MD, PhD,[e] Unai Jiménez, MD,[f] Florentino Hernando Trancho, MD, PhD,[g] Antonio Eduardo Martín-Ucar, MD,[h,i] and Juana Gallar, MD, PhD,[b] the Spanish Video-Assisted Thoracic Surgery Group[*]

JTCVS Open • March 2022

Segmentectomy

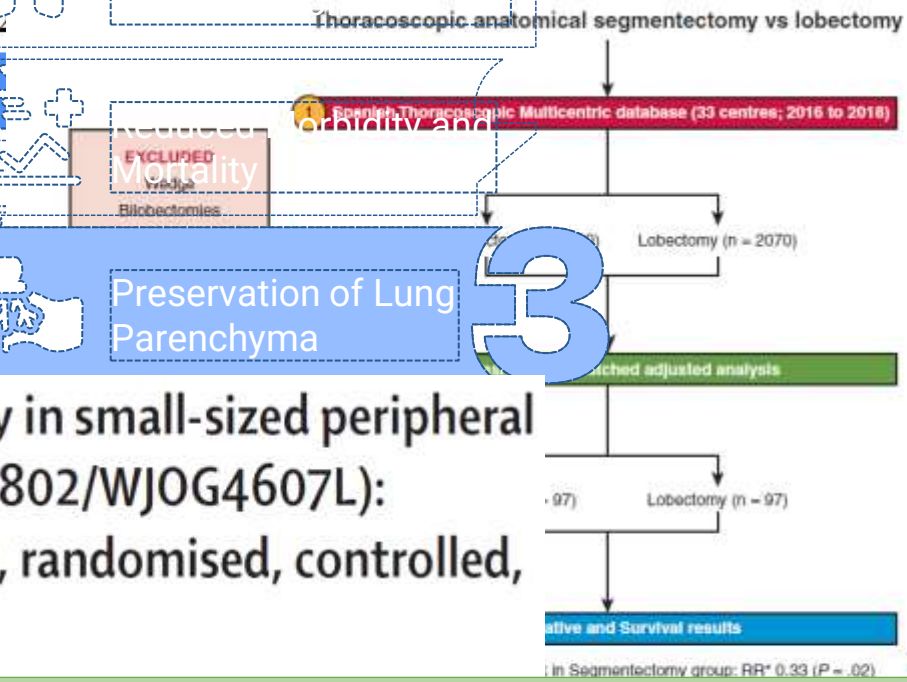
Segmentectomy

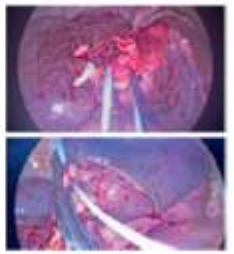
Segmentectomy

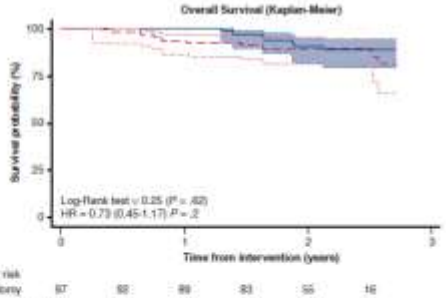
Reduced Mortality

Preservation of Lung Parenchyma

3







Segmentectomy versus lobectomy in small-sized peripheral non-small-cell lung cancer (JCOG0802/WJOG4607L): a multicentre, open-label, phase 3, randomised, controlled, non-inferiority trial

Hisashi Saji, Morihito Okada, Masahiro Tsuboi, Ryu Nakajima, Kenji S... Norihito Okumura, Masafumi Yamaguchi, Norihiko Ikeda, Masashi W... Tetsuya Mitsudomi, Shun-Ichi Watanabe, Hisao Asamura, on behalf

Lancet 2022; 399: 1607–17

- **Recurrence treatment: 80% lobectomies vs. 93% segmentectomies**
- **Secondary resection: 63% lobectomies vs. 89% segmentectomies**

In the debate between lobectomy and segmentectomy, what type of patient and tumor are we talking about?

ELSEVIER

A case-matched study of anatomical segmentectomy versus lobectomy for stage I lung cancer in high-risk patients☆

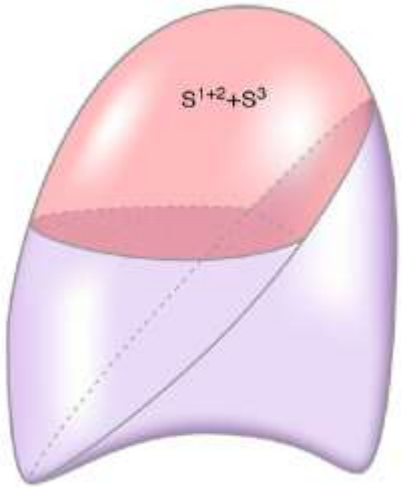
Antonio E. Martin-Ucar, Apostolos Nakas, John E. Pilling, Kevin J. West, David A. Waller*

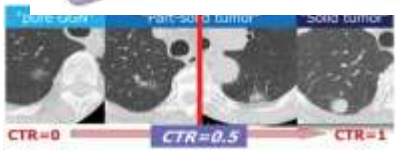
JOURNAL OF CLINICAL ONCOLOGY

Tailored Therapy for Stage I Non–Small-C Lung Cancer

CARDIO-THORACIC SURGERY

European guidelines fo glass opacities and pa Association of Cardio-T





Comparison between a Case-Matched Analysis of Left Upper Lobe Trisegmentectomy and Left Upper Lobectomy for Small Size Lung Cancer Located in the Upper Division

A. Iwasaki, W. Hamanaka, T. Hamada, M. Hiratsuka, S. Yamamoto, T. Shiraishi, T. Shirakusa

Department of Thoracic Surgery, School of Medicine, Fukuoka University, Fukuoka, Japan

Thorac Cardiov Surg 2007; 55: 454–457

Video-assisted thoracoscopic trisegmentectomy and left upper lobectomy provide equivalent survivals for stage IA and IB lung cancer

Harmik J. Soukiasian, MD, Edward Hong, MD, and Robert J. McKenna, Jr, MD

(J Thorac Cardiovasc Surg 2012;144:S23-6)

European Journal of Cardio-Thoracic Surgery 45 (2014) 1034–1039
doi:10.1093/ejcts/ezt514 Advance Access publication 30 October 2013

ORIGINAL ARTICLE

Split-lobe resections versus lobectomy for lung carcinoma of the left upper lobe: a pair-matched case–control study of clinical and oncological outcomes†

Biruta Witte, Michael Wolf, Hubertus Hillebrand and Martin Huertgen*

Sociedad Española de Neumología y Cirugía Torácica SEPAR

ARCHIVOS DE Bronconeumología

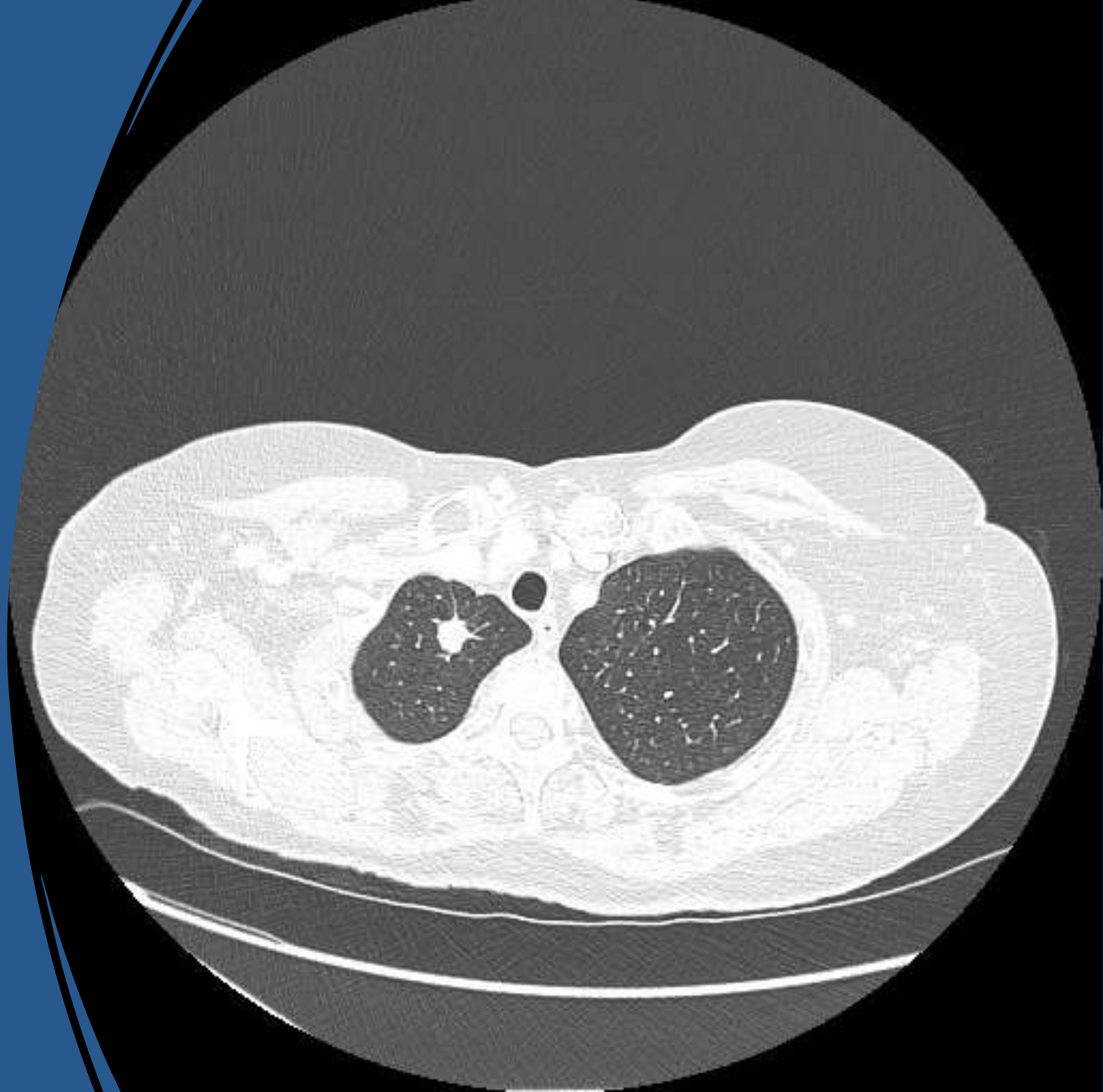
www.archbronconeumol.org

Original Article

Comparison of 5-Year Survival and Disease Recurrence After Trisegmentectomy or Left Upper Lobectomy: A Propensity Score Analysis of the National GEVATS Database

Borja Aguinagalde[a,b,c,*], Juan A. Ferrer-Bonsoms[d], Iker López[a,c], Ion Ander Lizarbe[a,c], Arantza Fernández-Monge[a,c], José Luis Recuero[e], Iñigo Royo[b], Raúl Embún[f], GEVATS[c]

Type of tumor and segment where there may be more uncertainty



Segmentectomy versus lobectomy in small-sized peripheral non-small-cell lung cancer (JCOG0802/WJOG4607L): a multicentre, open-label, phase 3, randomised, controlled, non-inferiority trial

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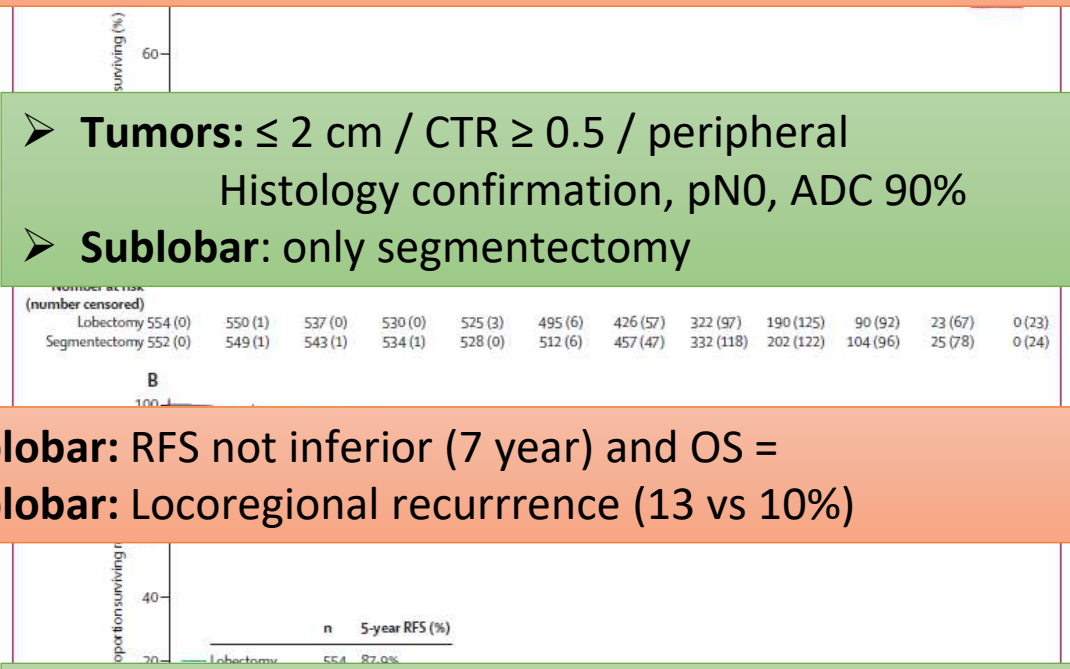
Lar

	Lobectomy group (n=554)	Segmentectomy group (n=552)
Total deaths	83	58
Lung cancer death	28	26
Other death	52	27
Other cancer (including second primary lung cancer)	31	12
Non-malignant disease	21	15
Respiratory disease	8	4
Cerebrovascular disease	7	2
Cardiovascular disease	4	4
Other diseases	2	5
Unknown	3	5

141 patients died during the follow-up period. *At median follow-up of 7·3 years (range 0·0–10·9).

Table 2: Summary of causes of death during follow-up*

Segmentectomy: > 5-year OS
Segmentectomy: > locoregional recurrence (6,9% vs 3,1%)



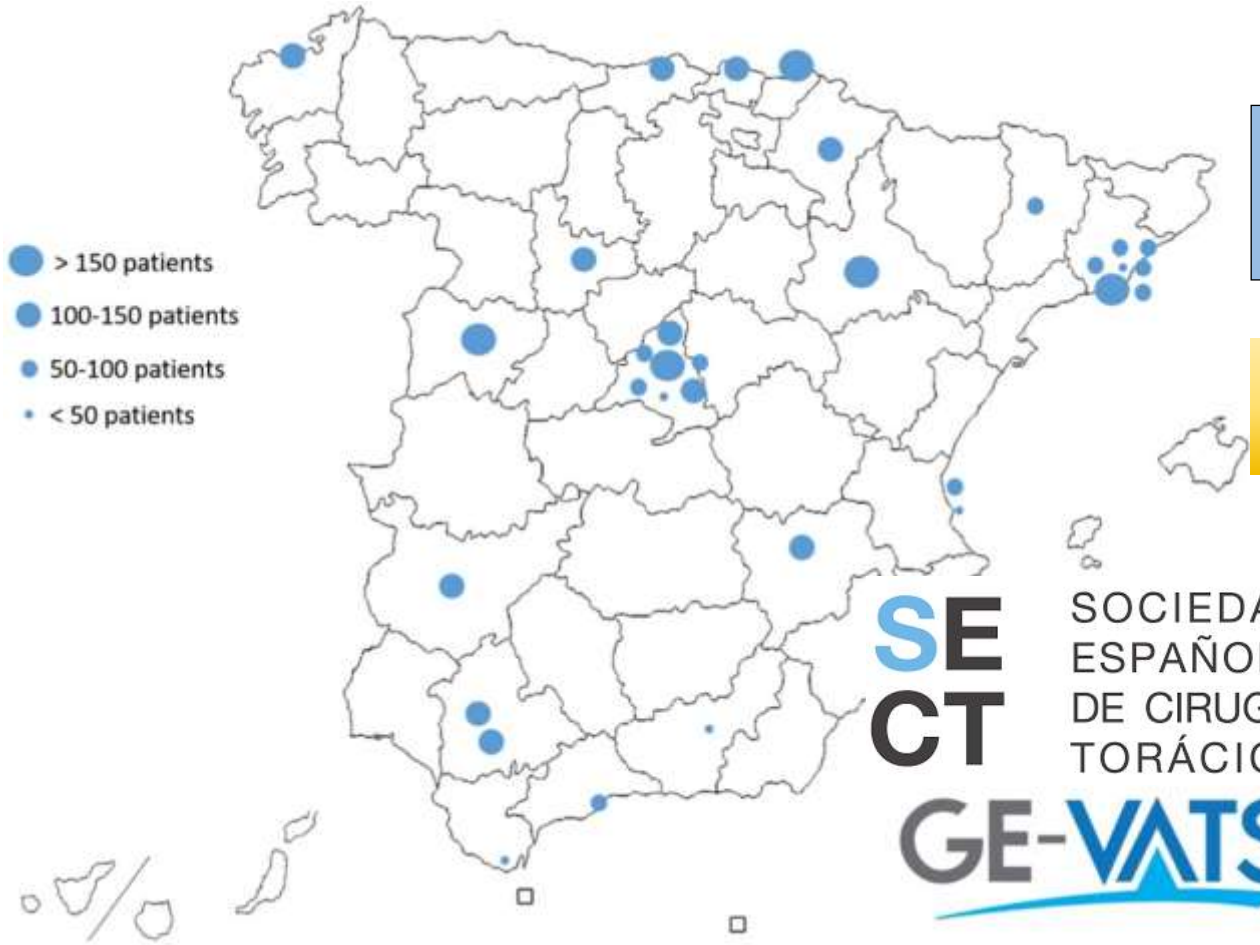
- **Tumors:** ≤ 2 cm / CTR ≥ 0.5 / peripheral
  Histology confirmation, pN0, ADC 90%
- **Sublobar**: only segmentectomy

Sublobar: RFS not inferior (7 year) and OS =
Sublobar: Locoregional recurrrence (13 vs 10%)

Tumors: ≤ 2 cm / solid / peripheral
Histology confirmation, pN0, ADC 64%

- **Sublobar**: 59% wedge

What results are we obtaining in our environment with routine clinical practice in real life?



Recruitment : Dic 2016 – Mar 2018
Follow-up: Jul 2022

3533 lung major resections

1004 Lobectomies

83 Segmentectomies

Inclusion criteria

- cT1a-c N0
- Solid or subsolid
- R0

Exclusion criteria

- Pure GGO
- Neoadjuvant therapy
- Previous lung cancer
- Synchronous tumours
- R1-2

Journal of Clinical Medicine

MDPI

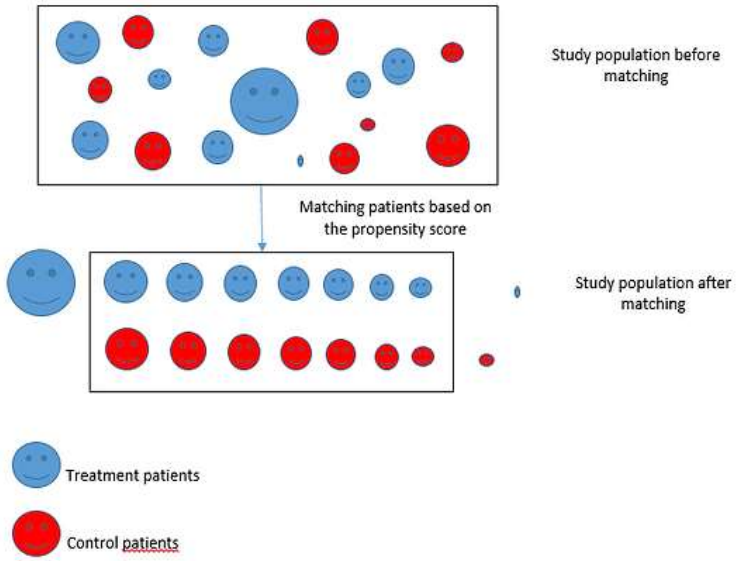
Article

Long-Term Results of Segmentectomy vs. Lobectomy for c-Stage IA Lung Cancer: A Real-Life Study with a Propensity Score Analysis Based on a National Cohort

Iker Lopez [1,2,*], Borja Aguinagalde [1,2], Juan A. Ferrer-Bonsoms [3], Laura Sánchez [4], Fernando Ascanio [5], Julio Sesma [6], José Luis Recuero [7], Arantza Fernandez-Monge [1,2], Jon A. Lizarbe [1,2] and Raul Embun [7]

J. Clin. Med. 2025, 14, 2267

Propensity score



- Software R, librería MatchIt
- Matching method : *nearest neighbor 2:1*

166 Lobectomies

83 Segmentectomies

Variables Propensity

Significant difference between groups

- Age
- Tumour size
- SUVmax tumour
- Tumour location
- Number of lymph nodes removed
- FEV1
- Alcoholism

Significant influence on survival

- Age
- Gender
- Smoking status
- Histological type
- Tumour radiological density
- Tumour SUVmax
- pN
- FEV1
- DLCO
- HBP
- Coronary heart disease
- Peripheral vascular disease
- DM

Analysis of all patients / all variables

Characteristics	Pre-Matching Groups Lobectomy (n = 1064)	Segmentectomy (n = 83)	p-Value	Post-Matching Groups Lobectomy (n = 166)	Segmentectomy (n = 83)	p-Value
Age (years)	**65.1 (10.1)**	**68.1 (8.2)**	**0.002**	**67.7 (9.5)**	**68.1 (8.2)**	**0.705**
Gender (M)	669 (66.6)	52 (62.6)	0.470	103 (62.1)	52 (62.6)	1
Smoking			0.149			0.941
Smoker	317 (31.6)	23 (27.7)		52 (31.3)	23 (27.7)	
Ex-smoker > 12 m	130 (12.9)	5 (6.0)		7 (4.2)	5 (6.0)	
Ex-smoker 1–12 m	394 (39.2)	42 (50.6)		79 (47.6)	42 (50.6)	
Never smoker	147 (14.6)	11 (13.2)		24 (14.5)	11 (13.2)	
Unknown	16 (1.6)	2 (2.4)		4 (2.4)	2 (2.4)	
HBP	458 (45.6)	46 (55.4)	0.087	92 (55.4)	46 (55.4)	1
DM	182 (18.1)	16 (19.3)	0.768	35 (21.1)	16 (19.3)	0.868
Cardiac failure	23 (2.3)	3 (3.6)	0.442	7 (4.2)	3 (3.6)	1
Ischemic heart disease	85 (8.5)	11 (13.2)	0.156	22 (13.2)	11 (13.2)	1
Arrhythmia	70 (6.9)	9 (10.8)	0.187	13 (7.8)	9 (10.8)	0.479
Peripheral vascular disease	104 (10.4)	9 (10.8)	0.852	22 (13.2)	9 (10.8)	0.686
Creatinine > 2	32 (3.2)	2 (2.4)	1	11 (6.6)	2 (2.4)	0.229
Previous cardiac surgery	16 (1.6)	1 (1.2)	1	4 (2.4)	1 (1.2)	0.667
Alcoholism	**79 (7.9)**	**1 (1.2)**	**0.025**	**1 (0.6)**	**1 (1.2)**	**1**
Liver failure	17 (1.7)	0 (0)	0.634	2 (1.2)	0 (0)	0.554
Tumor size (mm)	**17.8 (7.9)**	**16.0 (6.1)**	**0.014**	**16.4 (8.1)**	**16.0 (6.1)**	**0.686**
Radiological tumor density			0.445			0.435
Mixed	170 (16.9)	17 (20.5)		42 (25.3)	17 (20.5)	
Solid	834 (83.1)	66 (79.5)		124 (74.7)	66 (79.5)	
Tumor location			**0.002**			**0.839**
Peripheral	**718 (71.5)**	**72 (86.8)**		**146 (87.9)**	**72 (86.8)**	
Central	**286 (28.5)**	**11 (13.2)**		**20 (12.1)**	**11 (13.2)**	
Histological type			0.549			0.921
Adenocarcinoma	608 (60.6)	46 (55.4)		91 (54.8)	46 (55.4)	
Squamous	240 (23.9)	23 (27.7)		47 (28.3)	23 (27.7)	
Other	156 (15.5)	14 (16.9)		28 (16.9)	14 (16.9)	
Surgical approach			0.530			0.653
Open	290 (28.9)	21 (25.3)		48 (28.9)	21 (25.3)	
VATS	714 (71.1)	62 (74.7)		118 (71.1)	62 (74.7)	
pN			0.483			0.937
pN0	880 (87.6)	76 (91.6)		148 (89.2)	76 (91.6)	
pN1	61 (6.1)	2 (2.4)		5 (3.0)	2 (2.4)	
pN2	62 (6.2)	5 (6.0)		13 (7.8)	5 (6.0)	
pNx	1 (0.1)	0 (0)		(0)	0 (0)	

GECP lung cancer research

Journal of Clinical Medicine

MDPI

Article

Long-Term Results of Segmentectomy vs. Lobectomy for c-Stage IA Lung Cancer: A Real-Life Study with a Propensity Score Analysis Based on a National Cohort

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J. Clin. Med. **2025**, *14*, 2267

Journal of Clinical Medicine

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Recurrence

Article

Long-Term Results of Segmentectomy vs. Lobectomy for c-Stage IA Lung Cancer: A Real-Life Study with a Propensity Score Analysis Based on a National Cohort

Iker Lopez [1,2,*], Borja Aguinagalde [1,2], Juan A. Ferrer-Bonsoms [3], Laura Sánchez [4], Fernando Julio Sesma [6], José Luis Recuero [7], Arantza Fernandez-Monge [1,2], Jon A. Lizarbe [1,2] and Raul Em

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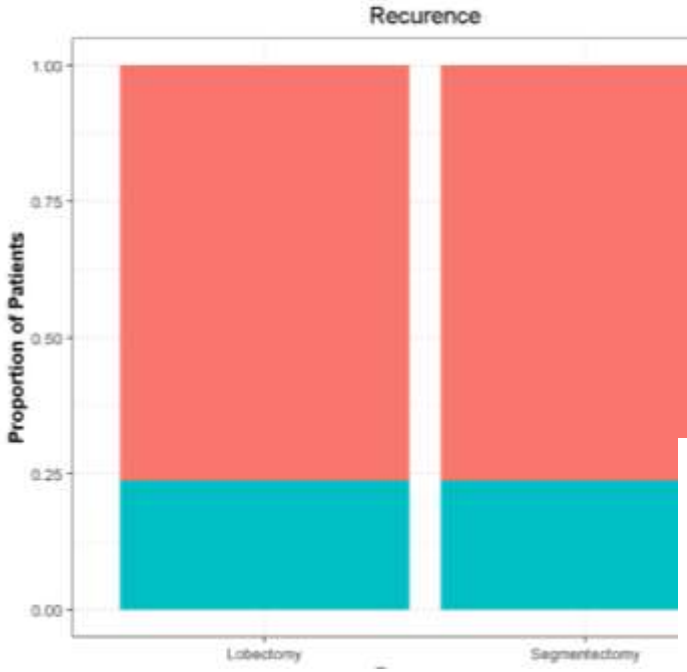

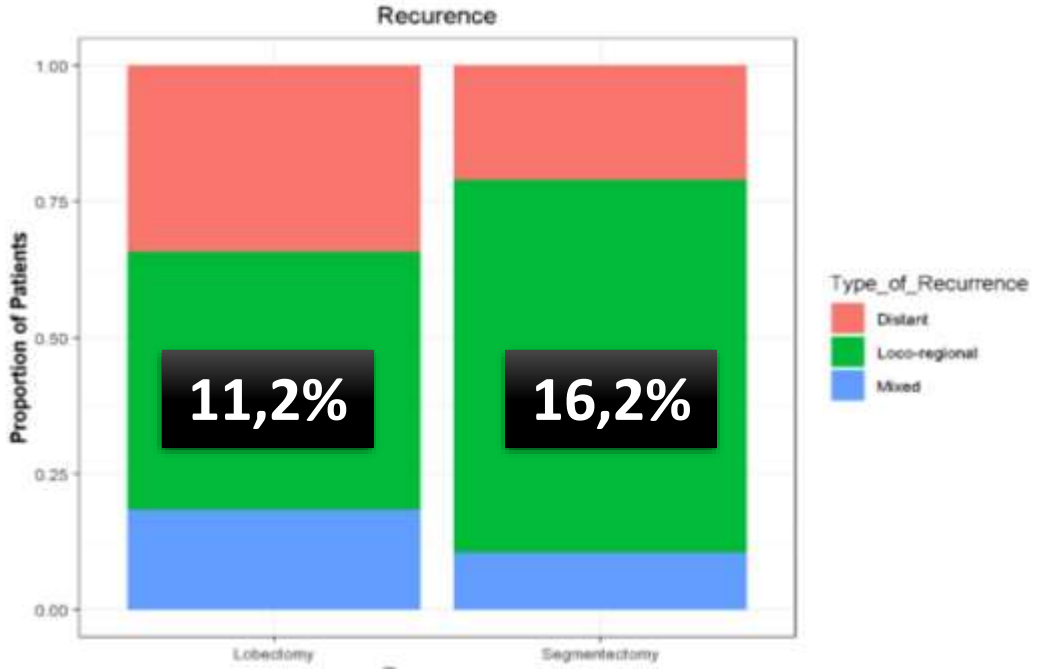

Type of Recurrence	Lobectomy (n = 160)	Segmentectomy (n = 80)	p-Value
Locoregional	18 (11.2)	13 (16.2)	0.309
Distant	13 (8.2)	4 (5.0)	0.436
Mixed	7 (4.4)	2 (2.5)	0.722

Data are shown with absolute number and percentage in parentheses.

Journal of Clinical Medicine

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Survival

Article

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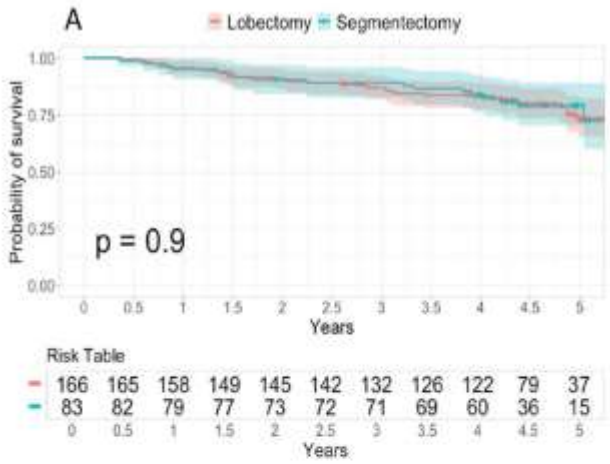
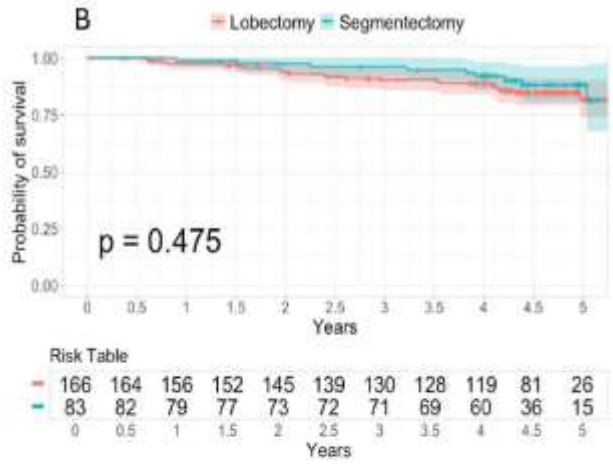
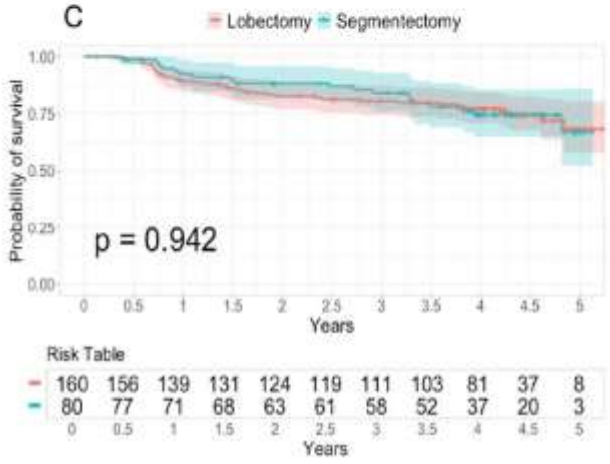
Iker Lopez [1,2,*], Borja Aguinagalde [1,2], Juan A. Ferrer-Bonsoms [3], Laura Sánchez [4], Fernando Ascanio [5], Julio Sesma [6], José Luis Recuero [7], Arantza Fernandez-Monge [1,2], Jon A. Lizarbe [1,2] and Rau

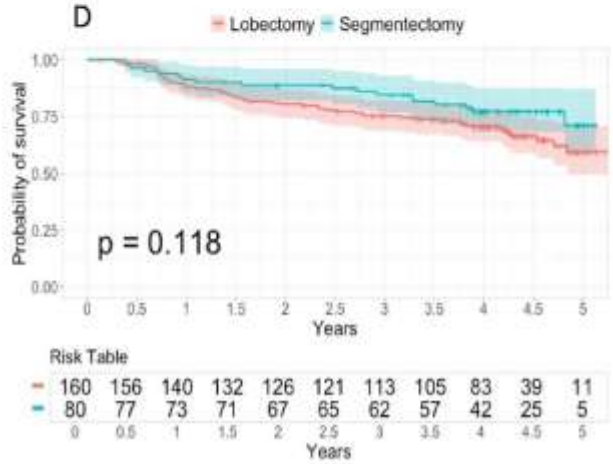
J. Clin. Med. 202

- Overall survival
- Cancer-specific survival
- Recurrence-free survival
- Disease-free survival

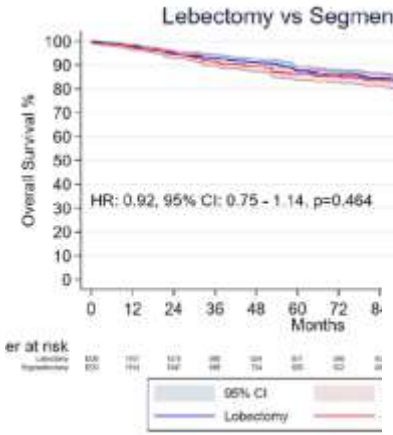


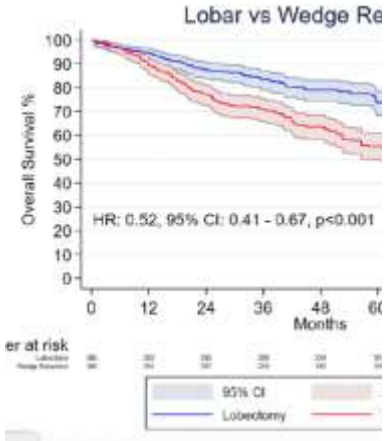


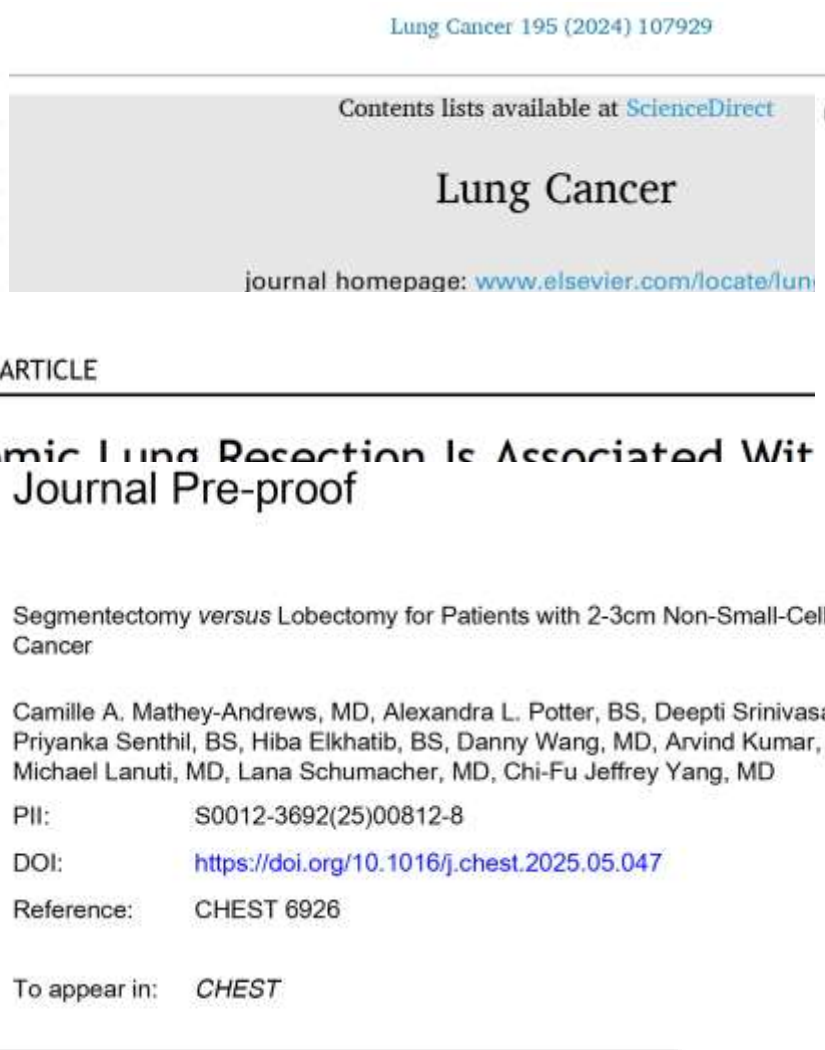


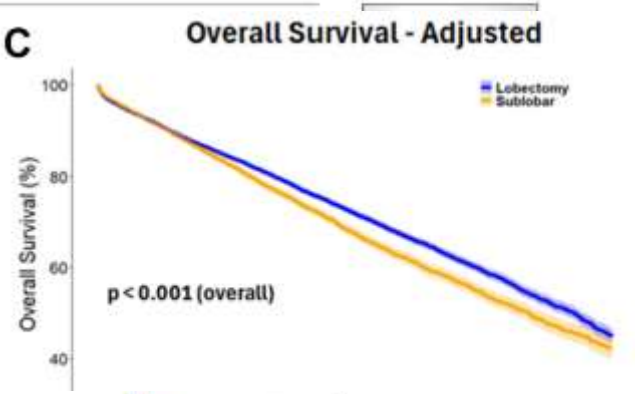


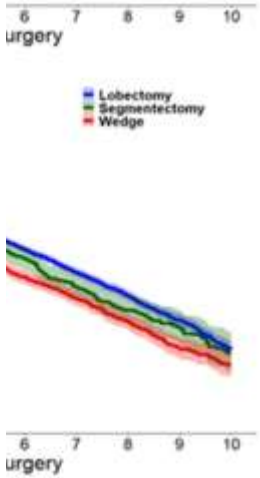
What does the evidence from the most recent real-world studies say?











Lobectomy = Segmentectomy > Wedge

::ReSECT
New Insights Into Your Data

Lung cancer / type of resection

```
-> year = 2023
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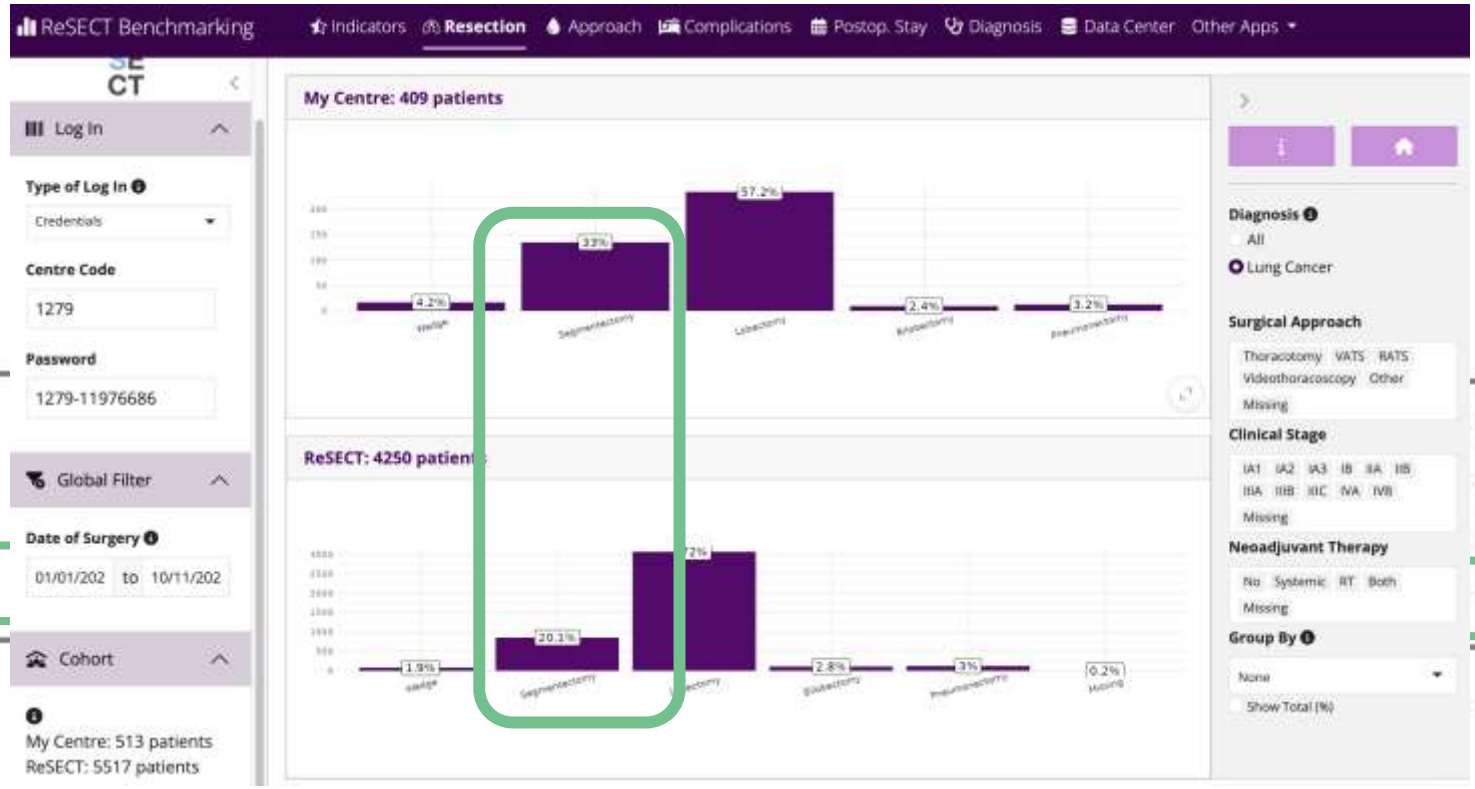
Resection type	Percent
Bilobectomy	1.32
Lobectomy	62.91
Neumonectomy	1.99
Segmentectomy	33.77
Total	100.00



Tumour size is not the only factor to consider when deciding between lobectomy and segmentectomy

Interactive CardioVascular and Thoracic Surgery 29 (2019) 517–524
doi:10.1093/icvts/ivz140 Advance Access publication 9 June 2019

ORIGINAL ARTICLE

Cite this article as: Lutfi W, Schuchert MJ, Dhupar R, Sarkaria I, Christie NA, Yang C-FJ et al. Sublobar resection is associated with decreased survival for patients with early stage large-cell neuroendocrine carcinoma of the lung. Interact CardioVasc Thorac Surg 2019;29:517–24.

Sublobar resection is associated with decreased surv for patients with early stage large-cell neuroendocr carcinoma of the lung

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c-stage IA lung cancer on positron emissic

Procedure-sp of micropapill resection stra adenocarcino

Hang Su, Huikang Xie, Chen
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J Thorac Oncol. 2019 Janu

Better survival wi with hypermeta to

Satoshi Shiono [a,*],

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Summ

723 patients who underv
sublobar resection for c-
and had a SUV ≥3.0 PE
Overall survival disease-
worse with sublobar rese
c-stage IA hypermetabol
SUV ≥3.0 on PET/CT wh
sublobar resection had a
than those who underwe

SUV: standardized uptake value; PET/CT

Lobectomy Is Ass Resection in Spre Lung Adenocarci

Takashi Eguchi[#a,b], Koji
Montecalvo[f], Jason C. C
Prasad S. Adusumilli[a,g]
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ORIGINAL ARTICLE

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ORIGINAL ARTICLE

Risk Factors for Locoregional Relapse After Segmentectomy: Supplementary Analysis of the JCOG0802/WJOG4607L Trial

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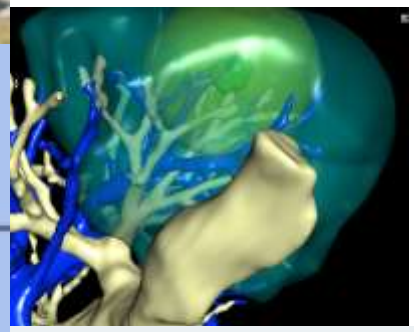
Check for updates

Table 2. Univariable and Multivariable Analyses to Identify Risk Factors for LR in the Segmentectomy Group

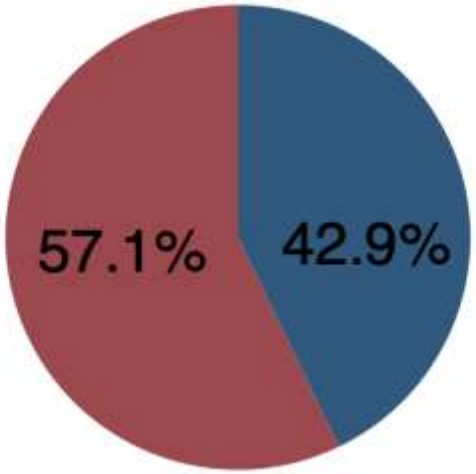
Baseline Variable	Group	N	Events	LR (%) (95% CI)	Univariable Analysis OR (95% CI)	*p* Value	Multivariable Analysis OR (95% CI)	*p* Value
Age	<70	324	25	7.7 (5.1-11.2)	1 (reference)	0.2368		
	≥70	205	22	10.7 (6.9-15.8)	1.438 (0.788-2.625)			
Sex	Female	252	14	5.6 (3.1-9.2)	1 (reference)	0.0121	1	0.0366
	Male	277	33	11.9 (8.3-16.3)	2.299 (1.200-4.405)		2.089 (1.047-4.169)	
Smoking status	Never	236	17	7.2 (4.3-11.3)	1 (reference)	0.2249		
	Former/present	293	30	10.2 (7.0-14.3)	1.469 (0.789-2.735)			
Thin-section CT findings	Part-solid	268	11	4.1 (2.1-7.2)	1 (reference)	0.0002	1	0.0016
	Pure-solid	261	36	13.8 (9.9-28.6)	3.737 (1.859-7.515)		3.230 (1.559-6.690)	
Histologic type	Adenocarcinoma	463	38	8.2 (5.9-11.1)	1 (reference)	0.1516		
	Others	66	9	13.6 (6.4-24.3)	1.766 (0.812-3.842)			
Pathologic margin distance	≥Tumor size	429	31	7.2 (5.0-10.1)	1 (reference)	0.0055	1	0.0049
	<Tumor size	98	16	16.3 (9.3-25.2)	2.505 (1.310-4.792)		2.682 (1.350-5.331)	

Influence of 3D-R on surgical planning for VATS segmentectomy (CT versus 3D-R)

October 2024 with initial
y and 3D-R performed



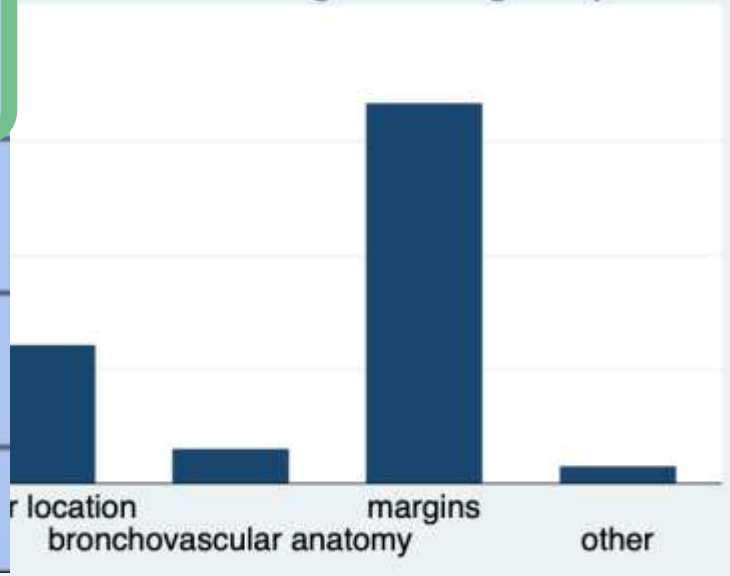
Surgical plan concordance CT vs 3D-R



2023

tipo_de_recidiva	tipo_de_reseccion Lobectomí	Segmentec
A distancia	6 8.70	2 3.23
Loco-regional (mismo	7 10.14	3 4.84
Loco-regional y a dis	7 10.14	0 0.00
.	49 71.01	57 91.94
Total	69 100.00	62 100.00

eason for change of surgical plan



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RESEARCH ARTICLE

Certification system for multidisciplinary thoracic tumour boards

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16th CONGRESS Lung ON CANCER

BARCELONA 27 / 28 NOVEMBER 2025

THANK YOU

GECP lung cancer research