

Is Age Just a Number? : Lung Cancer Surgery in Octogenarians and Beyond

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Context

01

Introduction

02

The risks of operation for Octogenarian

03

Surgical extent

- Lobectomy vs Limited resection
- Mediastinal LN dissection

04

Etc.

05

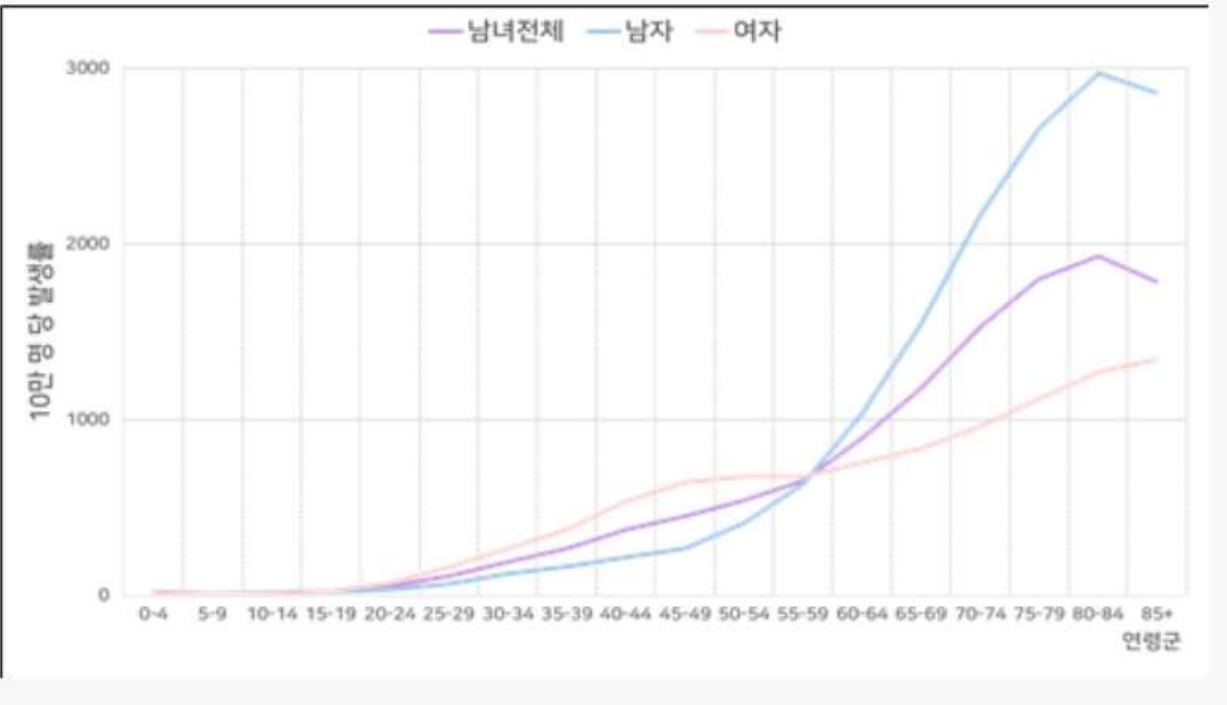
Conclusion



01 Introduction

- Age : risk factor (cancer occurrence, operation, treatment)
- Traditionally old age is contraindication for operation
- Octogenarian for lung cancer surgery : limited implementation
- STS risk calculator : age is independent factor (13.2%, ≥ 75)
- Old aging : developing -> Increasing demands for treatment Lung cancer older patient

01 Introduction



구분	60-69세	70-79세	80세이상
전체	폐	폐	폐
남자	전립선	전립선	폐
여자	유방	폐	대장

국가암지식정보센터 (2023)

Variables	Category	All Age	%	Age <80	%	Age >=80	%	P-value
		N=182,520		N=151,584		N=30,936	16.9	
Age		69.06±10.98		66.03±9.41		83.89±3.57		<.0001
Sex								<.0001
	Male	126,455	69.3	106,960	70.6	19,495	63.0	
	Female	56,065	30.7	44,624	29.4	11,441	37.0	
SEER Stage								<.0001
	Localized	41,147	22.5	35,961	23.7	5,186	16.8	
	Regional	47,859	26.2	41,757	27.5	6,102	19.7	
	Distant	78,652	43.1	64,720	42.7	13,932	45.0	
	Unknown	14,862	8.1	9,146	6.0	5,716	18.5	
Histology								<.0001
	Adenocarcinoma	84,709	46.4	75,876	50.1	8833	28.6	
	Squamous	42,124	23.1	35,604	23.5	6520	21.1	
	NSCLC, others	35,006	19.2	22,257	14.7	12749	41.2	
	SCLC	20,253	11.1	17,478	11.5	2775	9.0	
	Sarcoma and others	428	0.2	369	0.2	59	0.2	
Number of Comorbidity								<.0001
	0	40,504	26.7	34,994	29	5,510	17.8	
	1	35,206	23.2	28,137	23.3	7,069	22.9	
	2+	75,874	50.1	57,517	47.7	18,357	59.3	
Treatment								<.0001
	None	52,053	28.5	31,473	20.8	20,580	66.5	
	Yes	130,467	71.5	120,111	79.2	10,356	33.5	

2012-2019 Lung cancer diagnosed (K-CURE, 2025 제57차 추계학술대회)

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Pulmonary Resection in Octogenarians With Stage I Nonsmall Cell Lung Cancer: A 22-Year Experience

Malcolm V. Brock, MD, Min P. Kim, BA, Craig M. Hooker, MPh, Anthony J. Alberg, PhD, Margaret M. Jordan, RN, Carmen M. Roig, RN, Li Xu, BS, and Stephen C. Yang, MD

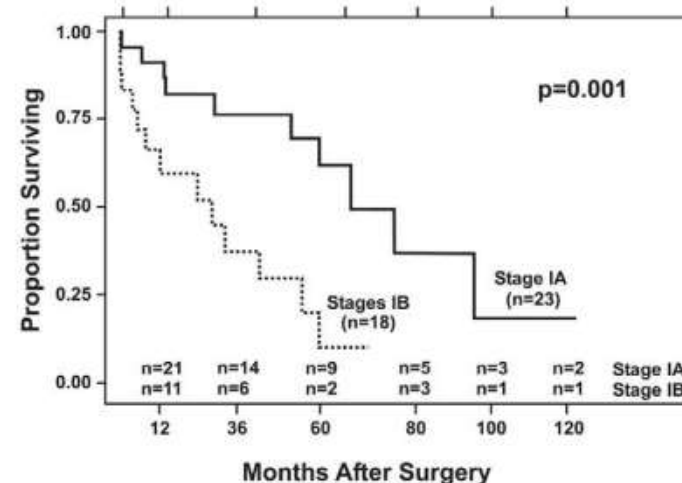
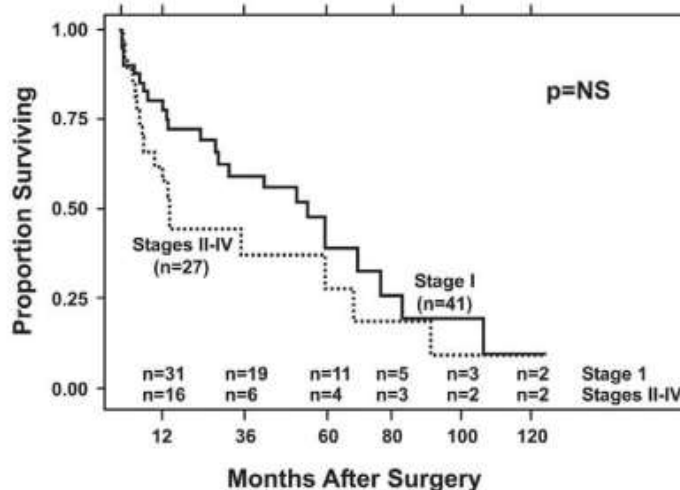
The Johns Hopkins Medical Institutions, Baltimore, Maryland

Table 3. Postoperative Complications Experienced by 30 Octogenarian Lung Cancer Surgical Patients: Johns Hopkins Medical Institution, 1980–2002

Complications	Number of Complication Events (%)	Number of Deaths (Postoperative Days Until Onset of Complications)
Pulmonary embolus	1 (1%)	1 (3 days)
Atelectasis	3 (4%)	
Pneumonia	3 (4%)	2 (4 days; 3 days)
ARDS	1 (1%)	1 (10 days)
Prolonged air leaks (>7 days)	12 (18%)	
Pleural effusion	1 (1%)	
Myocardial infarction	2 (3%)	
Dysrhythmia	12 (18%)	1 (2 days)
Change in mental status	3 (4%)	
Respiratory failure	4 (6%)	
Systemic sepsis	2 (3%)	
Other	1 (1%)	1 (21 days)
Total	45	

ARDS = adult respiratory distress syndrome.

Total 68 (1980–2002), 30d-mortality : 8.8% (n=6)
5 years OS : 34% (Ia : 61%, Ib : 10%)



Malcom V Brock, et al, Ann Thorac Surg. 2004 Jan;77(1):271-7

Lung Cancer in Octogenarians

Elizabeth M. Blanchard, MD,* Konstantinos Arnaoutakis, MD,† and Paul J. Hesketh, MD‡

TABLE 1. Surgical Series in Patients Older than 80 yr with Non-small Cell Lung Cancer

Author	No. of Patients	Predominant Type of Surgery	Percent Pneumonectomy	MLN Evaluation	Predominant Stage	Postoperative Mortality	5-yr OS	VATS
Dominguez-Ventura et al. ¹⁶	379	Lobectomy (63.3%)	6.6	93.4%	I (67.1%)	6.3%	NM	9.2%
Okami et al. ⁴¹	367	Lobectomy (66.8%)	0	0	I (60.9%)	NM	NM	
Wada et al. ¹⁵	225	NM	NM	NM	NM	2.2	NM	
McVay et al. ¹⁸	159	Lobectomy (96%)	2	NM	I (100%)	1.8	NM	100
Suemitsu et al. ¹⁹	146	Lobectomy (54.1%)	0.7	100	I/II (75.3%)	NM	NM	
Brokx et al. ¹³	124	Lobectomy (70%)	12	NM	I (64%)	4	24	
Ikeda et al. ²⁰	73	Lobectomy (63.3%)	0	86	I (76%)	4.1	57.4 ^a	
Dillman et al. ²¹	70	Lobectomy (84%)	1	NM	NM	1.4	NM	
Brock et al. ²²	68	Lobectomy (69%)	1.5	80.9	I (60.3%)	8.8	34	
Port et al. ²³	61	Lobectomy (75.4%)	6.5	100	I (44%)	1.6	38	
Mun and Kohno. ²⁴	55	Lobectomy (67.2%)	0	NM	I (80%)	3.6	NM	100
Pagni et al. ²⁵	54	Lobectomy (79.6%)	1.8	NM	I (76%)	3.7	43	
Aoki et al. ²⁶	49	Lobectomy (100%)	0	44.8	I (100%)	2	52.5 ^a	
Chida et al. ²⁷	48	Lobectomy (89.5%)	4.2	100 ^b	I (62.5%)	NM	NM	
Bolukbas et al. ²⁸	47	Lobectomy (66%)	4.3	100	I (38.3%)	4.3	NM	
Matsuoka et al. ²⁹	40	Lobectomy (60%)	0	40	I (87.5%)	0	56.9	85 ^c
Mizuguchi et al. ³⁰	40	Lobectomy (80%)	0	100 ^b	I (60%)	0	42	27.5
Naunheim et al. ³¹	37	Lobectomy (70.2%)	13.5	NM	I (95%)	16	NM	
Ginsberg and Rubinstein ³²	37	Lobectomy and wedge resection (63.3%)	8.1	NM	NM	8.1	NM	
Muraoka et al. ³³	33	Sublobar resection (69.6%)	0	33	I (100%)	0	NM	
Shirakusa et al. ³⁴	33	Lobectomy (63.6%)	9.1	100	I (54.5%)	0	55	
Osaki et al. ³⁵	33	Lobectomy (66.6%)	9.1	NM	I (48%)	3	32.3	
Koizumi et al. ³⁶	32	Lobectomy (100%)	0	59.4	I (68.8%)	12.5	46.6 ^d	53
Hope et al. ³⁷	20	Lobectomy (60%)	15	NM	I (50%)	10	NM	
Hanagiri et al. ³⁸	18	Lobectomy (50%)	0	NM	I (50%)	0	NM	
Harvey et al. ³⁹	17	NM	NM	NM	NM	17.6	42	
McKenna ⁴⁰	9	Lobectomy (77.7%)	11.1	100	I (100%)	0	NM	100

- Low Op Mortality (mostly <10%)
- Cancer stage : related to survival outcome
- Adenocarcinoma : better outcome
- Lung cancer related death < 50%
- Retrospective, single center
- Mostly lobectomy
- Open or Pneumonectomy: morbidity risk

Elizabeth M Blanchard, et al, J Thorac Oncol. 2010 Jun;5(6):909-16.

Results of Lung Cancer Surgery for Octogenarians

Haruaki Hino, MD, Tomohiro Murakawa, MD, Junji Ichinose, MD,
Kazuhiro Nagayama, MD, Junichi Nitadori, MD, Masaki Anraku, MD,
and Jun Nakajima, MD

Total 94 (1998-2012, stage I), 30d-mortality : 0
5 years OS : 57.5%

Table 2 Postoperative co-morbidity, mortality and summary of cause of death

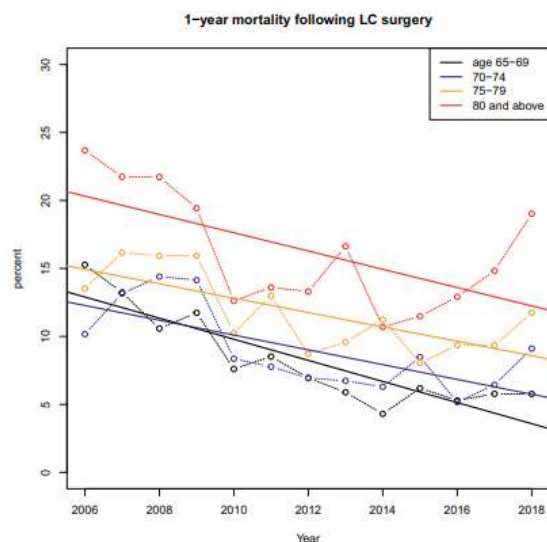
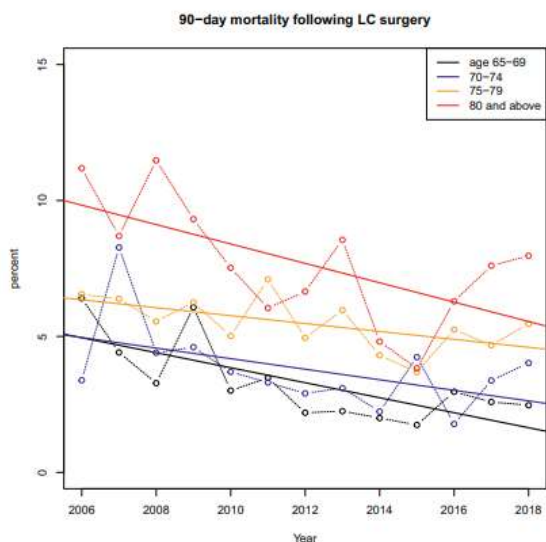
Co-morbidity		
Pneumonia		13
	Percutaneous tracheal catheter	6
	Mechanical Ventilator	2
Delirium		5
Empyema		4
Prolonged air leak (>7 days)		3
Arrhythmia		3
Postoperative bleeding		2
Gastrointestinal bleeding		2
Postoperative hypoxia		2
Bronchopleural fistula		1
Chylothorax		1
Cerebral infarction		1
Total		26/94 (27.7%)
30-day mortality		0/94 (0%)

Cause of death	
Lung cancer-related death	13
Died of nonmalignant diseases	12
Other cancer-related death	1
Surgical mortality	1
Unknown	2
Total	29
Details of died of nonmalignant disease	
Pneumonia	5
Cerebral infarction	2
Heart failure	2
Acute subdural hematoma	1
Trauma	1
Rupture of Thoracic Aortic Aneurysm	1

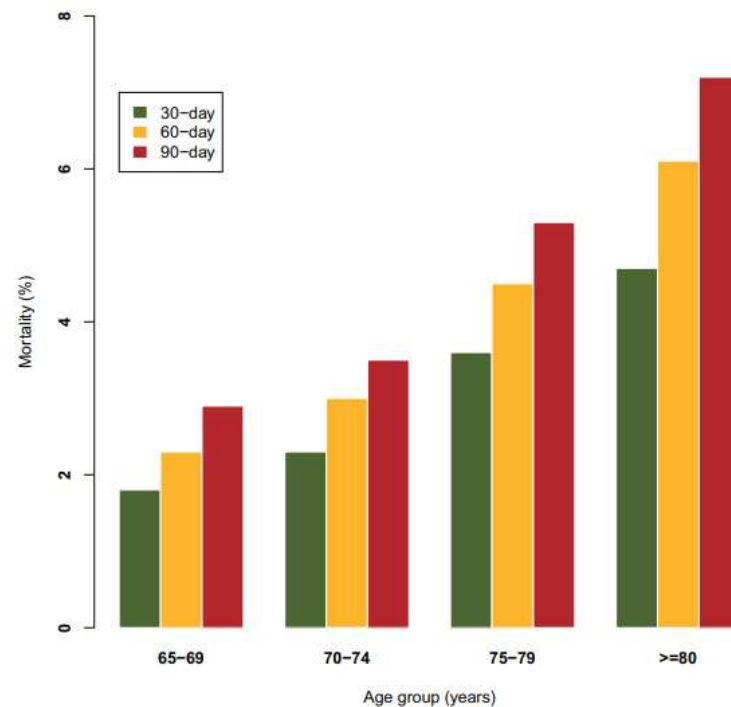
BPF: bronchopleural fistula

Outcomes After Surgical Management of Early-Stage Lung Cancer in Octogenarians: An In-Depth Analysis of a Nationally Representative Cohort

Ian C. Bostock, MD, MS,^a Adam H. Fox, MD, MS,^b Ralph C. Ward, PhD,^c Kathryn E. Engelhardt, MD, MS,^a Farhood Farjah, MD,^d Chi-Fu Jeffrey Yang, MD,^e Robert A. Smith, PhD,^f Barry C. Gibney, DO,^a Gerard A. Silvestri, MD, MS,^{b,*} for the American Cancer Society National Lung Cancer Roundtable (NLCRT)



Post-surgical mortality rates by age group



MEDICARE database (2006-2018)

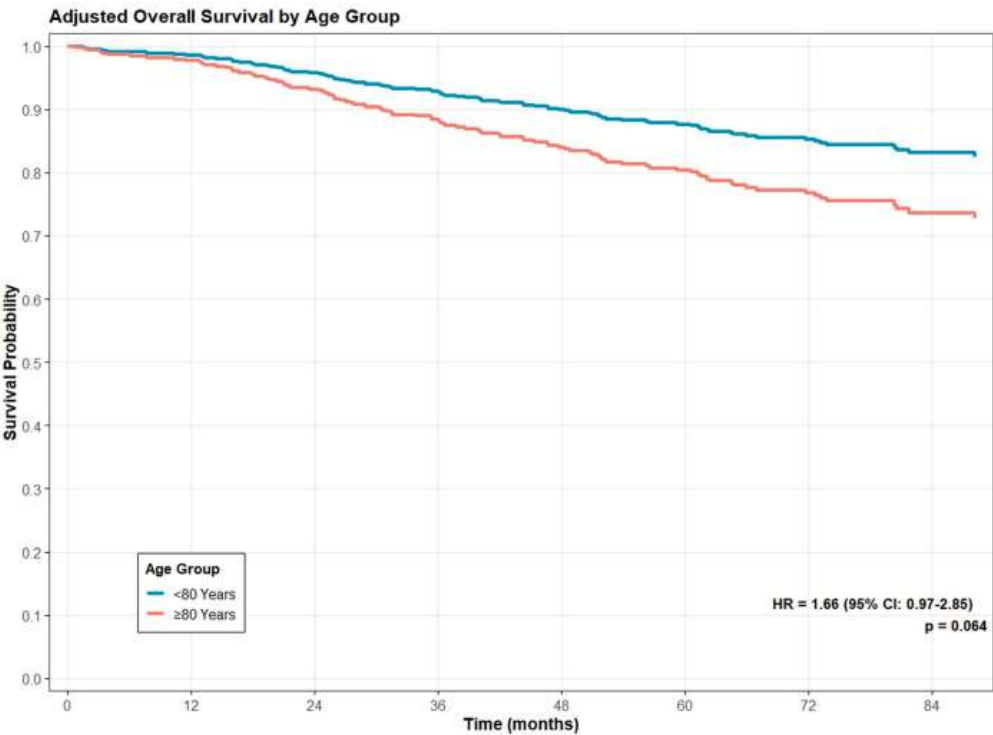
1-yr mortality : 15.2 % vs 7.3% (65-69)

Ian C Bostock, et al, J Thorac Oncol. 2025 Jun;20(6):786-798

Surgical outcomes and quality of life in octogenarians with early-stage non-small cell lung cancer: a prospective cohort study

Louis Gros,^{a,b,d} Rowena Yip,^{a,d} Wenchao Ma,^a Jeffrey Zhu,^a Jiafang Zhang,^a Sydney Kantor,^a Siyang Cai,^a Andrew J. Kaufman,^c Andrea S. Wolf,^c Ardeshtir Hakami-Kermani,^c Daniel Nicastri,^c Dong-Seok Lee,^c Kimberly J. Song,^c Brian Housman,^c David F. Yankelevitz,^a Emanuela Taioli,^c Claudia I. Henschke,^{a,*} and Raja M. Flores,^c for the IELCART Investigators^e

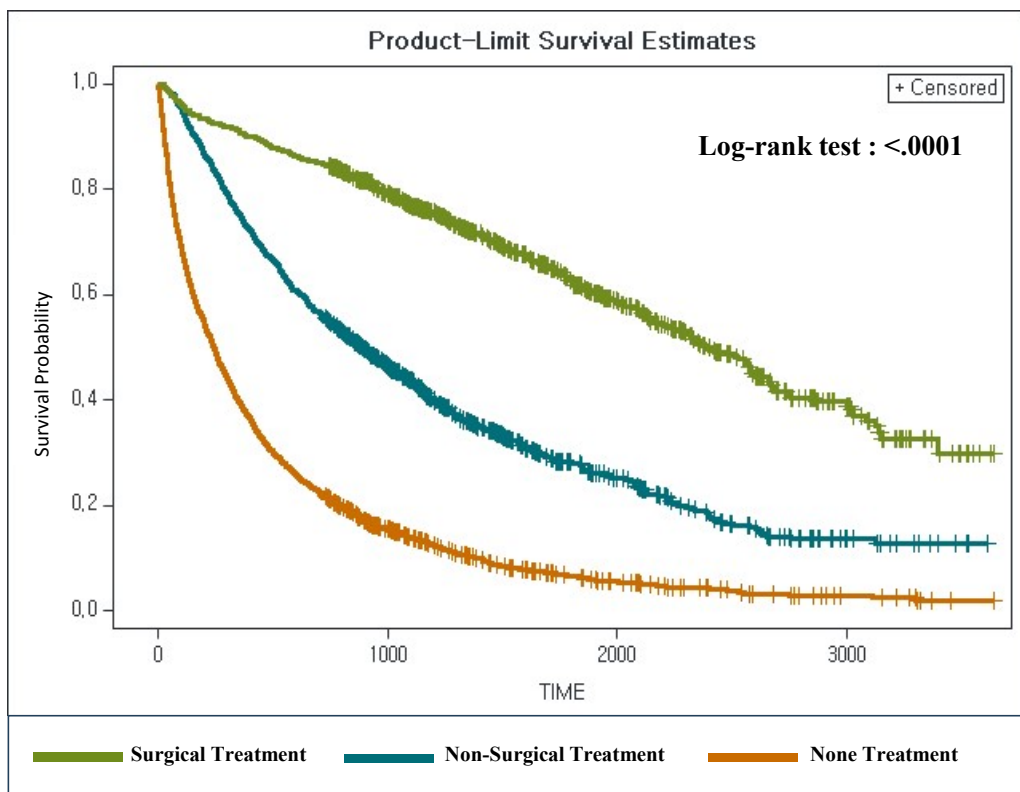
Characteristic	Overall N = 884 ^a	<80 Years N = 770 ^a	≥80 Years N = 114 ^a	p-Value ^b
Length of stay (Days)	3.00 (2.00, 4.00)	3.00 (2.00, 4.00)	3.00 (3.00, 4.00)	0.10
ICU Care required	9 (1.0%)	6 (0.8%)	3 (2.6%)	0.10
Postoperative complications	214 (24%)	168 (22%)	46 (40.4%)	<0.0001
Pulmonary				
Air leak greater than 5 days duration	55 (6.2%)	45 (5.8%)	10 (8.8%)	0.23
Pneumothorax req. CT [†] reinsertion	38 (4.3%)	30 (3.9%)	8 (7.0%)	>0.9
Other pulmonary event	4 (1.9%)	4 (0.5%)	0 (0%)	0.58
Cardiovascular	11 (5.2%)	9 (0.1%)	2 (0.2%)	1.00
Atrial arrhythmia req. treatment	57 (6.4%)	45 (5.8%)	12 (11%)	0.06
Ventricular arrhythmia req. treatment	51 (5.8%)	40 (5.2%)	11 (9.6%)	1.00
Other CV event	4 (0.5%)	4 (0.5%)	0 (0%)	0.58
Gastrointestinal	3 (0.3%)	1 (0.1%)	2 (4.3%)	0.12
Ileus	4 (0.5%)	2 (0.3%)	2 (1.8%)	0.08
Hematology	1 (0.1%)	0 (0%)	1 (1.8%)	0.22
Blood transfusion	7 (0.8%)	6 (0.8%)	1 (0.9%)	1.00
Urologic	7 (0.8%)	6 (0.8%)	1 (0.9%)	1.00
Urinary tract infection	122 (13%)	90 (12%)	32 (28%)	<0.0001
Urinary retention req. catheterization	11 (1.2%)	7 (0.9%)	4 (3.5%)	0.26
Discharged with Foley catheter	113 (13%)	83 (11%)	30 (26%)	0.06
Neurology	23 (2.6%)	16 (2.1%)	7 (6.1%)	0.29
New central neurological event	13 (1.5%)	7 (0.9%)	6 (5.3%)	0.0032
Delirium	1 (0.5%)	1 (0.1%)	0 (0%)	1.00
Infection	12 (1.4%)	6 (0.8%)	6 (5.3%)	0.025
Chylothorax req. medical intervention	3 (0.3%)	3 (0.4%)	0 (0%)	1.00
Miscellaneous	6 (0.7%)	6 (0.8%)	0 (0%)	1.00
30-day readmission after surgery	37 (4.2%)	29 (3.8%)	8 (7.0%)	0.13



Prospective (2016-2024)
5-yr OS : 84.2% vs 87.3% (younger patients)

Louis Gros, et al, Lancet Reg Health Am. 2026 Mar 13:56:10 1428.

02 The risks of operation for Octogenarian



Octogenarian Overall Survival

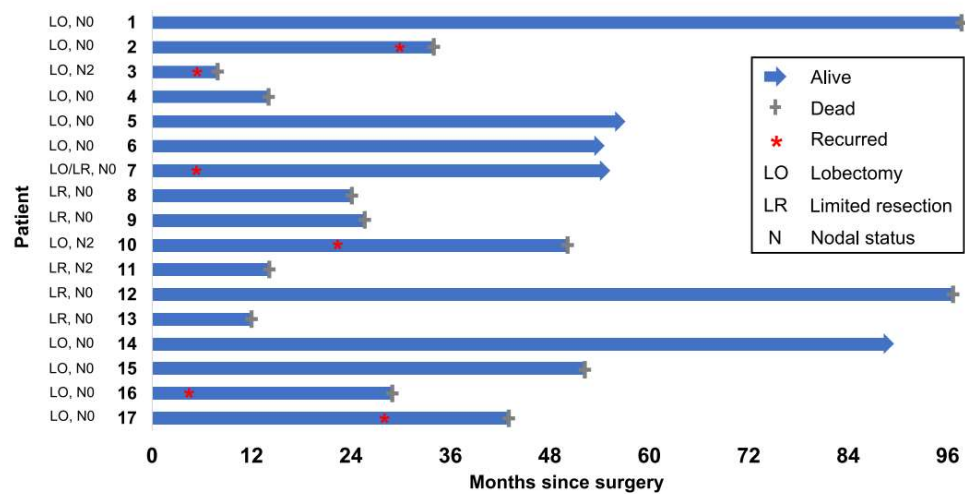
	Surgical Treatment	Non-Surgical Treatment	None Treatment
3-Year	75.23 (72.49-77.74)	43.83 (41.17-46.46)	14.08 (12.78-15.44)
5-Year	59.96 (56.46-63.28)	27.7 (24.95-30.51)	6.56 (6.1-7.04)

Local Stage (SEER), 2012-2019

2012-2019 (K-CURE, 2025 제57차 춘계학술대회)

Nonagenarians: Outcomes after lung cancer surgery

Hely Ollila , Amina Tidjani , Bernard J. Park, David R. Jones , Prasad S. Adusumilli 



Total 17 (2001-2021), Op mortality : 0
Overall survival : 43 months

Hely Ollila, et al, Lung Cancer, 2025 Aug:206:108632

02 The risks of operation for Octogenarian

- Operation risk : tolerable
 - Proper patients selection
- Increasing Morbidity: cardiovascular (arrhythmia), Urologic complication
- During follow up period, Lung cancer related death is not high (<50%)
- Adenocarcinoma, Lower Stage : favor outcome
- Pulmonary function Test : indicator (post operative outcome)

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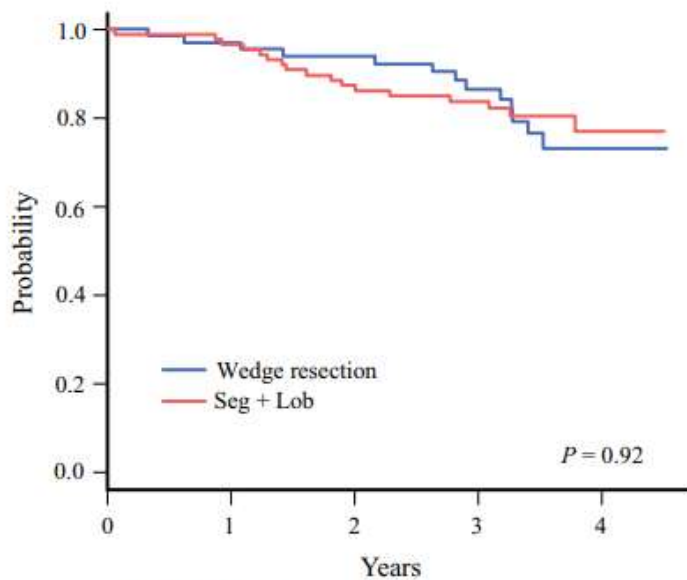
05

Conclusion



Survival of Octogenarians with Early-Stage Non-small Cell Lung Cancer is Comparable Between Wedge Resection and Lobectomy/Segmentectomy: JACS1303

Takahiro Mimae, MD, PhD¹, Hisashi Saji, MD, PhD², Hiroshige Nakamura, MD, PhD³, Norihito Okumura, MD, PhD⁴, Masanori Tsuchida, MD, PhD⁵, Makoto Sonobe, MD, PhD⁶, Takuro Miyazaki, MD, PhD⁷, Keiju Aokage, MD, PhD⁸, Masayuki Nakao, MD, PhD⁹, Tomohiro Haruki, MD, PhD³, Morihito Okada, MD, PhD^{1,10}, Kenji Suzuki, MD, PhD^{10,11}, and Masayuki Chida, MD, PhD^{12,13}



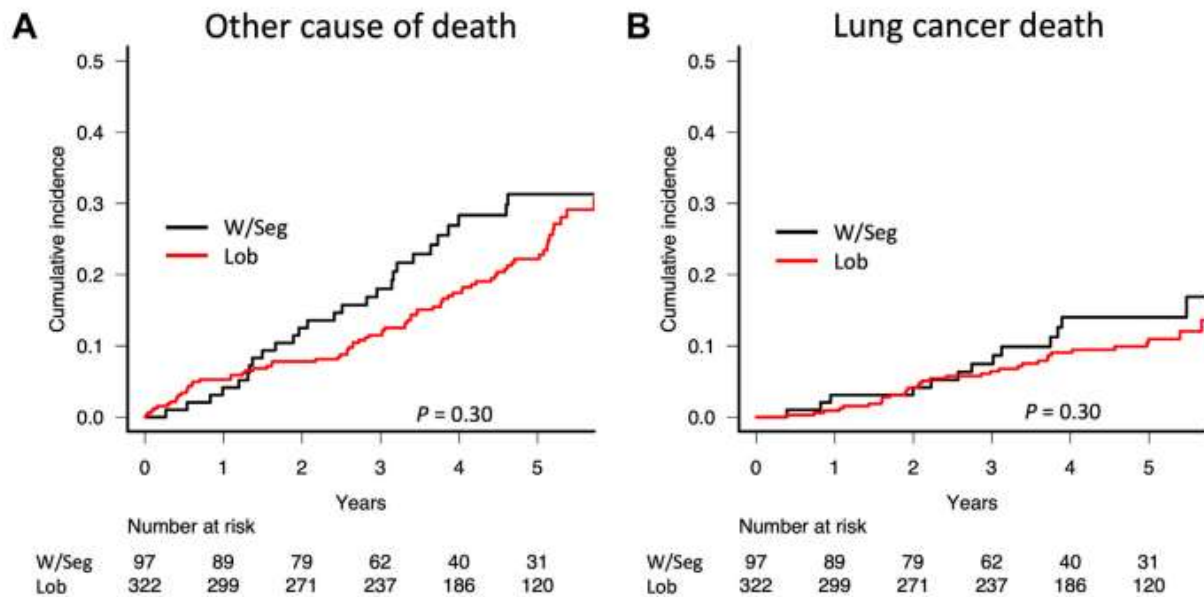
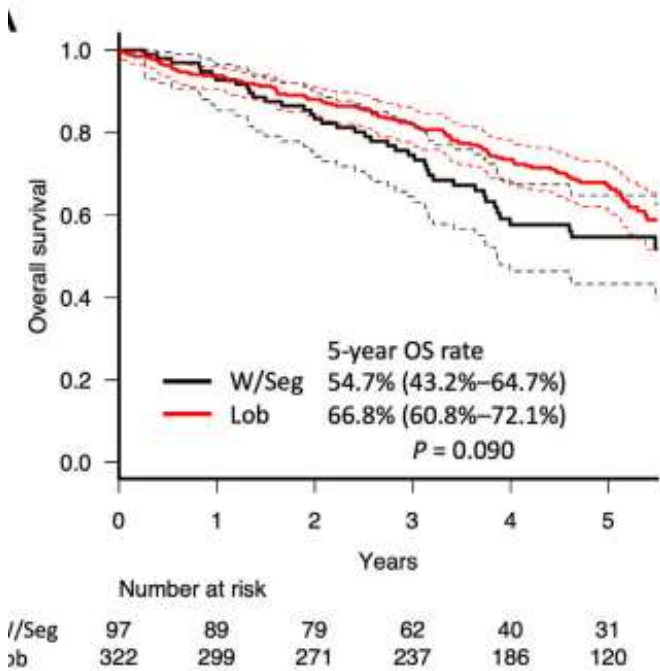
	Number at risk				
Wedge resection	66	64	55	42	10
Seg + Lob	90	83	75	57	13

895 (2015-2016, 82 institutions)
3-yr OS : 86.5% (wedge) vs 83.7%

Takahiro Mimae, Ann Surg Oncol. 2021 Nov;28(12):7219-7727

Sublobar Resection for Non-Small Cell Lung Cancer in Octogenarians: A Prospective, Multicenter Study

Takahiro Mimae, MD, PhD,¹ Hisashi Saji, MD, PhD,² Hiroshige Nakamura, MD, PhD,³ Norihito Okumura, MD, PhD,⁴ Masanori Tsuchida, MD, PhD,⁵ Makoto Sonobe, MD, PhD,⁶ Takuro Miyazaki, MD, PhD,⁷ Keiju Aokage, MD, PhD,⁸ Masayuki Nakao, MD, PhD,⁹ Tomohiro Haruki, MD, PhD,³ Morihito Okada, MD, PhD,^{1,10} Kenji Suzuki, MD, PhD,^{10,1} Ichiro Yoshino, MD, PhD^{12,13}



892 (2015-2016, 82 institutions)
5-yr OS : 54.7% (sub-lobar) vs 66.8%

Takahiro Mimae, et al, Ann Thorac Surg. 2023 sep;116(3):543-551.

Feasibility of different types of lung resection for early-stage non-small cell lung cancer in octogenarians: A systematic review

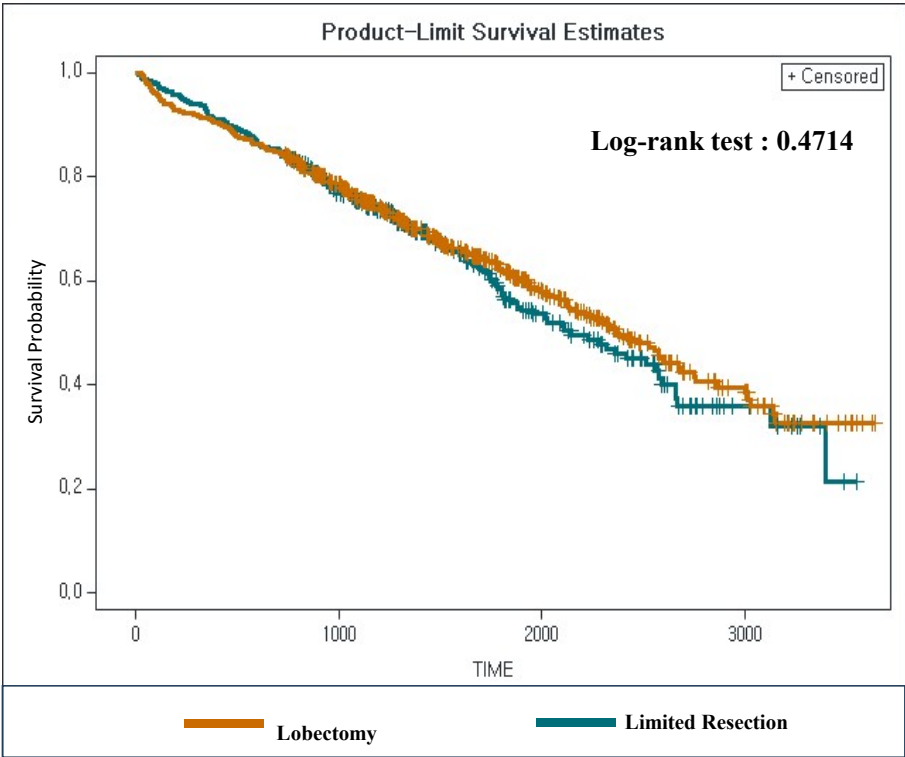
Antonio Sarubbi^{a,b,1,*}, Giovanni Tacchi^{a,ib}, Filippo Longo^a, Luca Frasca^a,
Valentina Piccioni^{b,1,ib}, Pierfilippo Crucitti^a

Author, Year	Sex	Sample size	Clinical stage	Type of Resection	Complications	OS	DFS
Igor Saftic et al., 2021 [9]	151 (M); 106 (F)	257	ES	90.7 % (LOB); 9.3 % (SLR)	43.6 %	NA	NA
Mimae et al., 2021 [11]	76 (F); 85 (M)	161	IA	89 % (LOB); 30 % (SEG); 42 % (WR)	Grade ≥ 2: 17.6 % (LOB); 22.9 % (SEG); 10.5 % (WR)	3Y OS 86.5 % (WR); (SEG + LOB)	NA
Mimae et al., 2020 [6]	31 (M); 27 (F)	58	IA	36.2 % (LOB); 15.5 % (SEG); 48.3 % (WR)	Grade ≥ 3: 3.5 % (WR); 13.3 % (LOB + SEG)	3Y OS 88.9 % (WR); 75.5 % (SEG + LOB)	3Y DFS: 85.2 % (WR); 74.1 % (SEG); 67.1 % (LOB)
Jhala et al., 2024 [13]	93 (M); 93 (F)	189	ES	69.8 % (LOB); 3.2 % (SEG); 21.2 % (WR)	56.8 % (LOB); 66.7 % (SEG); 37.5 % (WR)	NA	NA
Mimae et al., 2023 [12]	260 (M); 159 (F)	419	ES	76.8 % (LOB); 23.3 % (SLR)	Grade ≥ 2: 22 %	5Y OS 62.2 % (SLR); 70.7 % (LOB)	5Y DFS 46.8 % (SLR); 59.4 % (LOB)
Chan et al., 2022 [5]	5550 (M); 5940 (F)	11490	ES	69.6 % (LOB); 30.4 % (SLR)	NA	5y OS 48.5 % (LOB); 44 % (SEG); 40.8 % (WR)	NA
Huang et al., 2022 [2]	3578 (M); 4283 (F)	7861	IA	40.3 % (LOB); 4.5 % (SEG); 20.5 % (WR)	NA	5y OS: 35.8 % (LOB); 25.2 % (SEG); 25.8 % (WR)	NA
Mimae et al., 2021	65 (F); 91 (M)	156	IA	57.7 % (SEG + LOB); 42.3 % (WR)	Grade ≥ 2: 10.6 % (WR); 17.8 % (SEG + LOB)	3Y OS 86.5 % (WR); 83.7 % (SEG + LOB)	5Y DFS 54.8 % (SLR); 63.9 % (LOB)
Vazirani et al., 2018 [14]	129 (M); 76 (F)	205	I	59 % (LOB); 39 % (SLR)	NA	5y OS: 83 % (LOB); 61 % (SLR)	NA
Matsuoka et al., 2015 [15]	123 (M); 51 (F)	174	ES	74.7 % (LOB); 10.3 % (SEG); 13.8 % (WR)	Grade ≥ 3: 24 %	5y OS: 48.3 %	NA
Dell'Amore et al., 2014 [1]	58 (M); 15 (F)	73	IA (77 %) IB (8 %) IIA (15 %)	60.3 % (LOB); 17.8 % (SEG); 21.9 % (WR)	41 %	5Y OS 60 % (LOB, SLR)	3Y DFS 90 % (LOB); 92 % (SLR) 5Y DFS 79 % (LOB); 78 % (SLR)
Zhang et al., 2012 [16]	39 (M); 13 (F)	52	ES	61.5 % (LOB); 7.7 % (SEG); 30.8 % (WR)	56.3 % (LOB); 25.0 % (SLR)	5Y OS 21.5 % (LOB); 18.7 % (SLR) 3Y OS 61.8 % (LOB); 58.3 % (SLR)	NA
Okada et al., 2012 [3]	30 (M); 14 (F)	44	IA; IB	32 % (LOB and SLND); 68 % (SEG or WR or LND)	23 % (LOB and SLND); 14 % (SEG or WR or LND)	5Y OS 50.5 % (LOB and SLND); 42.1 % (SEG or WR or LND)	NA

13 studies (17,073)
Lobectomy (67.7%)
Segmentectomy (13.2%) Wedge (19.1%)

OS, DFS : similar
Lobectomy : more complication

03 Surgical extent



All-Cause Death Survival Probability

	Lobectomy	Limited Resection
3-Year	75.83 (72.30-78.97)	75.31 (70.50-79.45)
5-Year	62.09 (57.72-66.14)	56.62 (50.12-62.60)

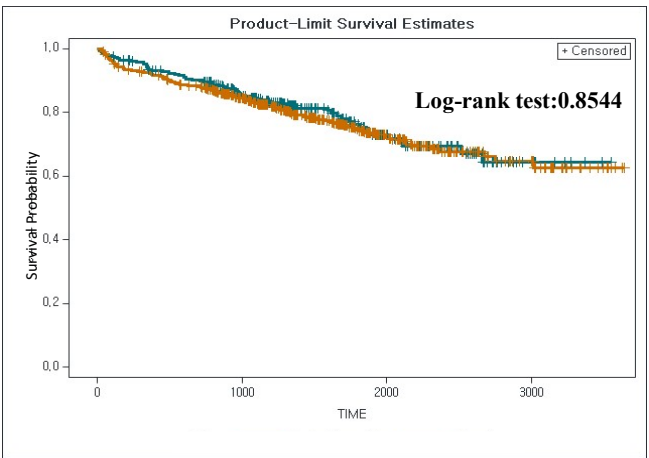
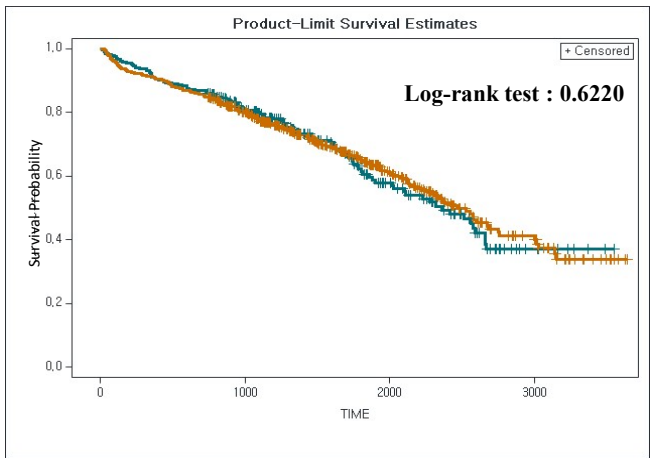
Local Stage (SEER), 2012-2019

2012-2019 (K-CURE, 2025 제57차 추계학술대회)

All Cause Death Survival Probability

Cancer-Specific Death Survival Probability

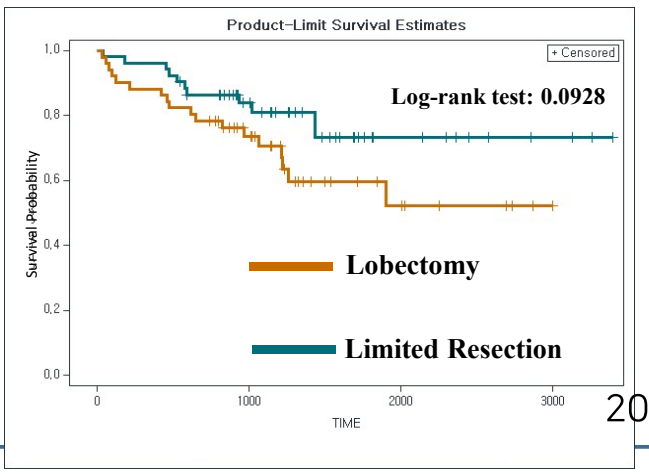
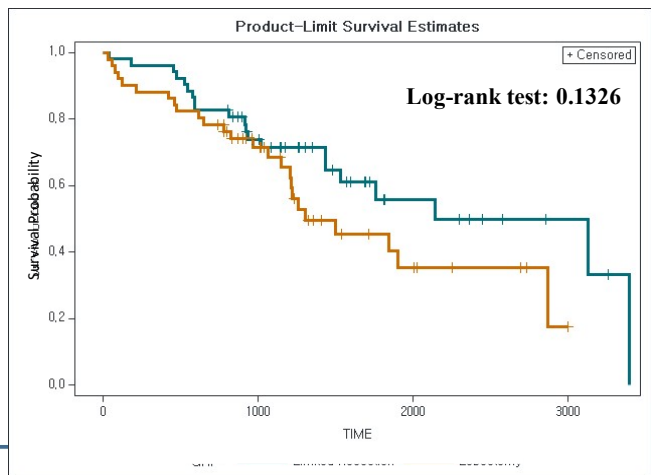
Age : 80-84



Age : 80-84

		Lobectomy	Limited Resection
All	3-Year	77.58 (73.83-80.86)	79.67 (74.45-83.94)
	5-Year	64.9 (60.23-69.17)	60.68 (53.23-67.31)
Cancer-specific	3-Year	82.99 (79.52-85.93)	84.58 (79.69-88.38)
	5-Year	74.54 (70.15-78.39)	75.16 (68.24-80.78)

Age : 85+



Age >= 85

		Lobectomy	Limited Resection
All	3-Year	69.07 (53.85-80.16)	71.81 (56.97-82.29)
	5-Year	44.41 (27.1-60.37)	57.16 (39.08-71.68)
Cancer-specific	3-Year	71.3 (56.24-81.97)	81.61 (67.50-90.02)
	5-Year	60.04 (42.41-73.83)	74.95 (58.53-85.62)

Local Stage (SEER), 2012-2019

2012-2019 (K-CURE, 2025 제57차 춘계학술대회)

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Worsened long-term outcomes and postoperative complications in octogenarians with lung cancer following mediastinal lymph-node dissection

Masayuki Chida^{a,*}, Muneo Minowa^b, Yoko Karube^b, Syunsuke Eba^b, Yoshinori Okada^c,
Shinichiro Miyoshi^a, Takashi I

Cause of death in each group

	ND2 (n=23)	ND0-1 (n=25)	
All deaths	21	13	NS
Cancer extension	11	7	NS
Other disease	9	2	P=0.092
Dementia	1	0	
Heart disease	2	0	
Liver disease	1	0	
Interstitial pneumonia	1*	1	
Ileus	0	1	
Other cancer	1	0	
Others	3	0	
Unknown	1	1	NS

NS, not significant. *Hospital death.

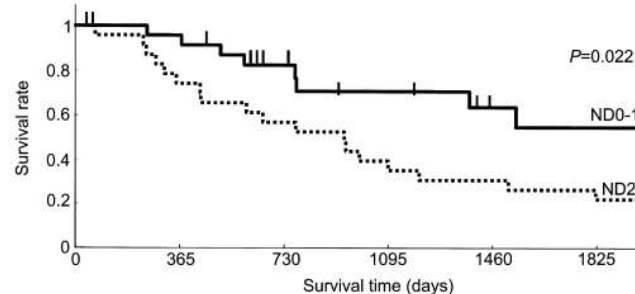


Fig. 2. Cumulative survival curves for ND2 and ND0-1 groups.

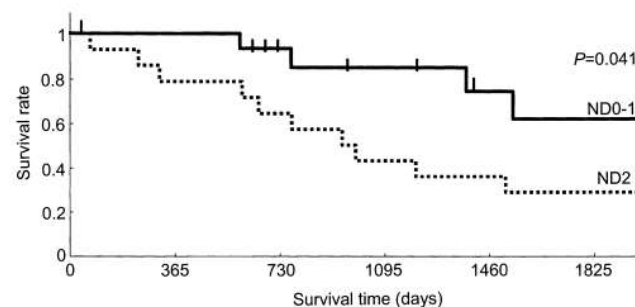


Fig. 3. Cumulative survival curves for pathological stage I subset in both groups.

Total 48 (1981-2006)
ND 0-1 vs ND 2
5-yr OS : 54.3% vs 21.7%
Stage I : 61.9% vs 28.6%

Masayuki Nakao et al, Interact Cardiovasc Thorac Surg. 2009 Jan;8(1):89-92

Safety and prognosis of limited surgery for octogenarians with non-small-cell lung cancer

Akira Okada, MD, PhD · Tatsuhiko Hirono, MD, PhD
Takehiro Watanabe, MD, PhD



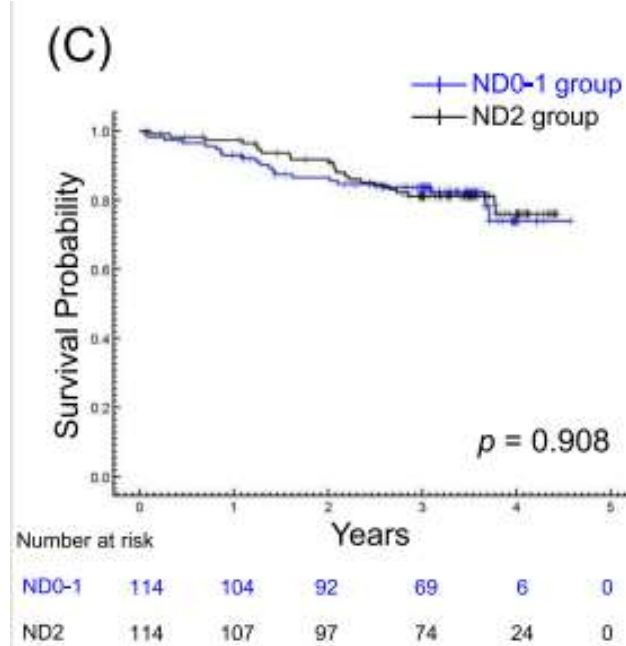
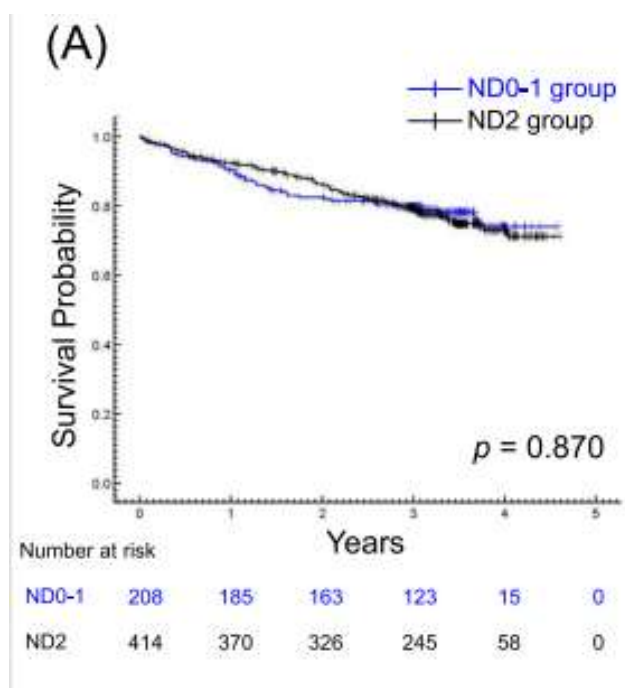
44 (1996-2008)

Sub-lobar resection or Limited LN dissection

5-yr OS : 50.5% vs 42.1% (limited)

Akira Okada, et al, Gen Thorac Cardiovasc Surg (2012) 60:97-103

Prognostic Impact of Mediastinal Lymph Node Dissection in Octogenarians With Lung Cancer: JACS1303



622 (Lobectomy, 2015-2016), 82 institutions
3-yr OS : 79.7% (ND0-1) vs 79.3%
Matching 3-yr OS : 89.6% vs 81.1%

Masayuki Nakao et al, Clin Lung Cancer 2022 May;23(3):e176-e184

03 Surgical extent

- Lobectomy & Mediastinal LN dissection : standard therapy
- Sub-lobar resection : Similar outcome or non-inferior with Lobectomy
- Mediastinal LN dissection : increase operation time, morbidity, no survival outcome gain
- Sub-lobar resection and reduce Mediastinal LN dissection field : considerable option for octogenarian

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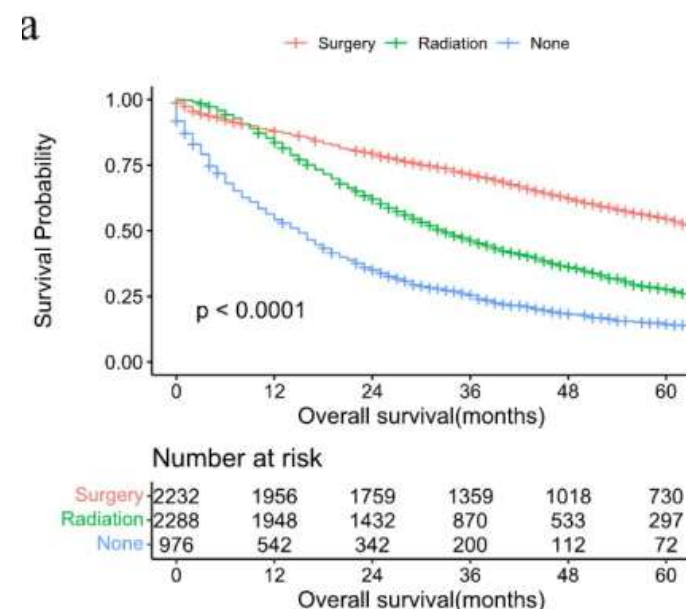
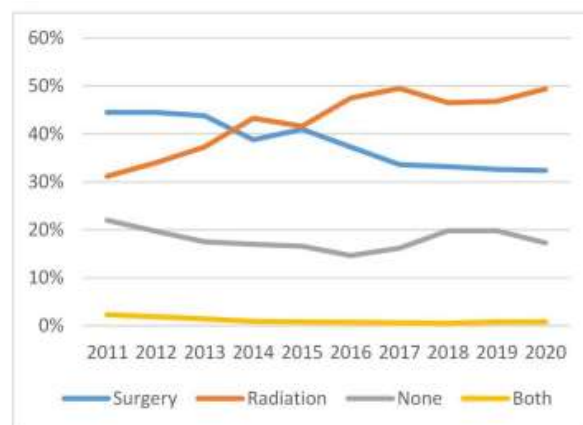
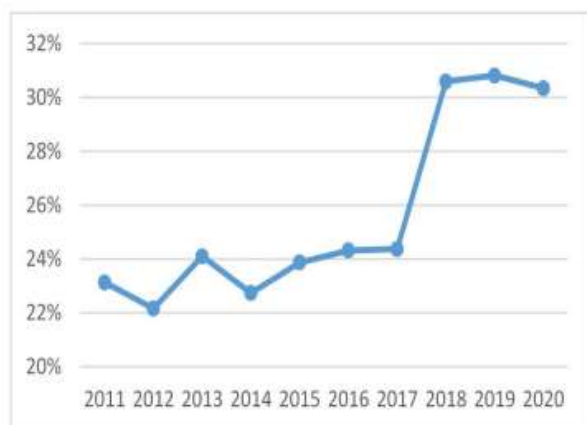
05

Conclusion



Comparison of surgical and radiotherapy outcomes in octogenarians with early-stage non-small cell lung cancer: a SEER database retrospective cohort study

Wenxuan Hua¹ · Zhigang Zhang¹ · Lianfang Ni¹ · Xinmin Liu¹

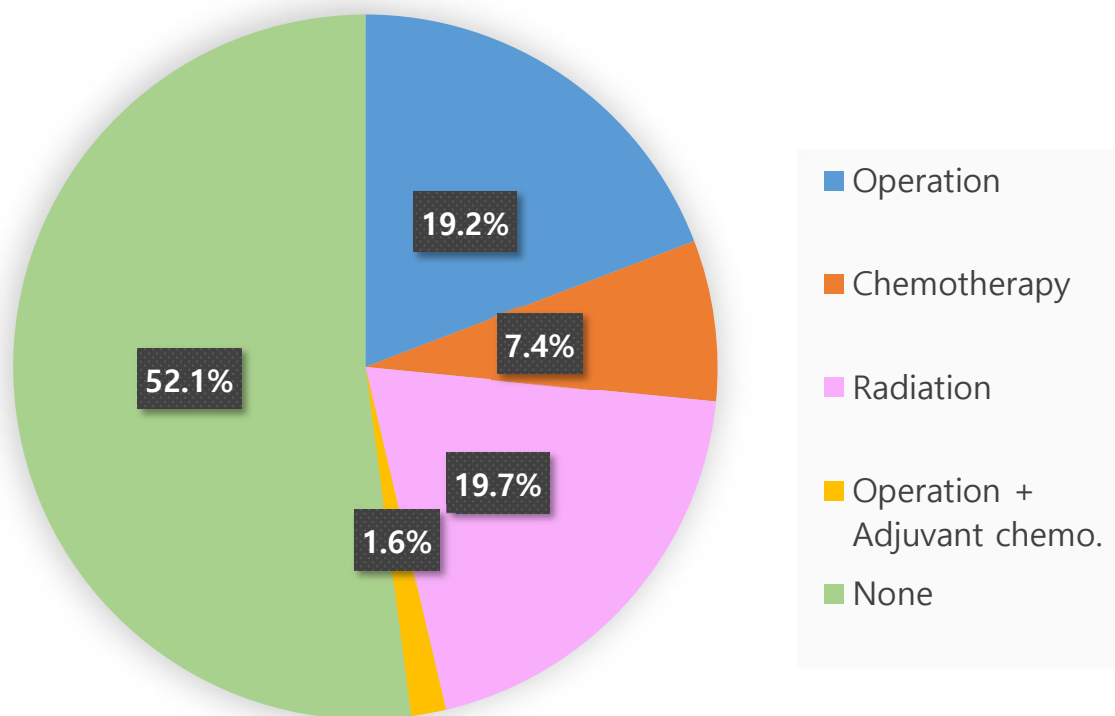


SEER 17 database (2000-2020). 26.5% USA
Octogenarinas proportion increase (<25% -> 30%)
RT increase (31.2%->49.4%)
Median OS : 67 M (surgery) vs 33 M

Wenxuan Hua, et al, Aging Clin Exp Res. 2025 Feb 27; 37(1):53.

04 Et

Demographics and Outcomes of Local stage Lung cancer patients with aged 80 and above



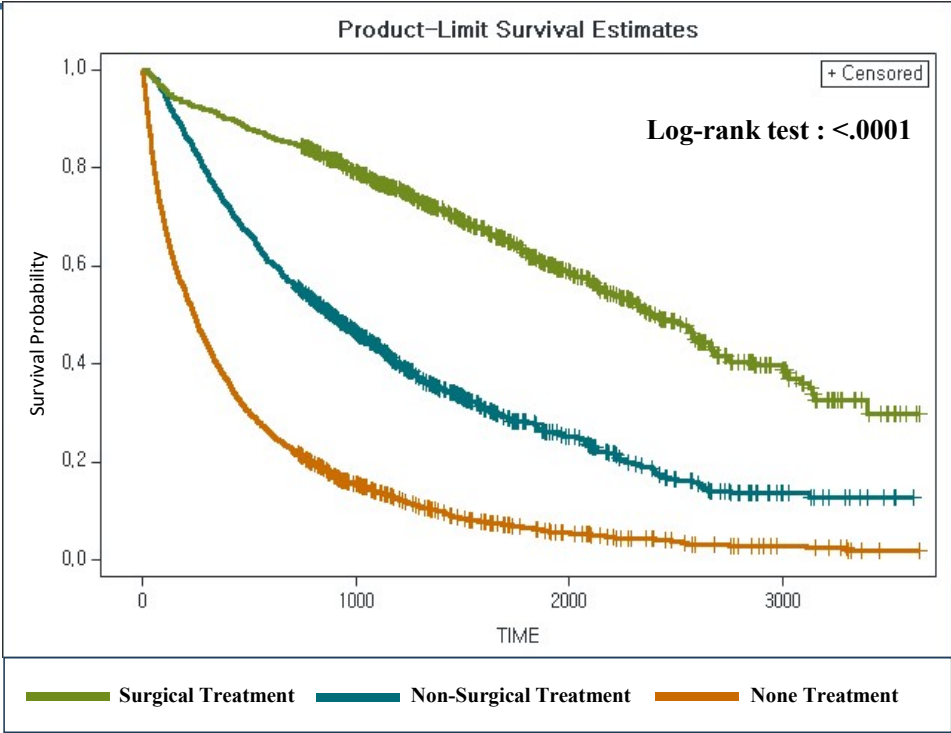
Total	5186	%
Operation	995	19.2
Chemotherapy	383	7.4
Radiation	1024	19.7
Operation + Adjuvant chemo.	83	1.6
None	2701	52.1

Local Stage (SEER), 2012-2019

2012-2019 (K-CURE, 2025 제57차 춘계학술대회)

04 Etc.

All-Cause Death Survival Probability



	Surgical Treatment	Non-Surgical Treatment	None Treatment
3-Year	75.23 (72.49-77.74)	43.83 (41.17-46.46)	14.08 (12.78-15.44)
5-Year	59.96 (56.46-63.28)	27.7 (24.95-30.51)	6.56 (6.1-7.04)

Local Stage (SEER), 2012-2019

2012-2019 (K-CURE, 2025 제57차 추계학술대회)

04 Preoperative Considerations

- ECOG Performance Status
- Charlson Comorbidity Index
- Albumin : nutrition status index
- Lung function (PFT with DLCO)
- Pre-Rehabilitation : reduce complication
- Physiologic (biologic) age

Anca Pislaru, et al, Geriatrics 2024, 9(4), 101:

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05 Conclusion

- Lung cancer surgery in Octogenarian : feasible
 - Lobectomy & mediastinal LN dissection : not mandatory
 - Any treatment (include surgery) : favor outcome than no treatment
 - Considerable patient selection & Surgical plan
 - The need is increasing (Aging society progress & Screening expansion)
-



Thank you

01

텍스트 입력

Introduction

- 목차의 소목록 필요시 입력
- 목차의 소목록 필요시 입력
- 목차의 소목록 필요시 입력

02

텍스트 입력

Old age

- 목차의 소목록 필요시 입력
- 목차의 소목록 필요시 입력
- 목차의 소목록 필요시 입력

03

텍스트 입력

Operation 범위

- 목차의 소목록 필요시 입력
- 목차의 소목록 필요시 입력
- 목차의 소목록 필요시 입력

04

텍스트 입력

목차 텍스트 입력

- 목차의 소목록 필요시 입력
- 목차의 소목록 필요시 입력
- 목차의 소목록 필요시 입력

05

텍스트 입력

목차 텍스트 입력



01 클릭해서 입력하세요

- 클릭해서 입력하세요

Is the Outcome of Pulmonary Resections due to Non-Small Cell Lung Cancer in Octogenarian Patients Worse?

Ali Cevat Kutluk, MD, Hasan Akin, MD, Altan Ceritoglu, MD, Celalettin Ibrahim Kocaturk, MD, Salih Bilen, MD, Yasar Sonmezoglu, MD, and Kemal Karapinar, MD

Table 1 The distribution and comparison of the postoperative complications of the two groups graded according to Clavien-Dindo

Grade	Complications	Group 1 n (%)	Group 2 n (%)	P
I	Wound infection	13 (4)	2 (4.4)	0.37
II	Arrhythmia	47 (13)	11 (24)	0.04
II	Pneumonia	33 (9.5)	4 (8.5)	0.57
II	Acute renal failure	11 (3)	2 (4)	0.42
IIIa	Prolonged air leak	49 (14)	8 (17)	0.32
IIIa	BPF + empyema	7 (2.5)	1 (2.2)	0.66
IIIa	Respiratory failure	21 (6)	4 (8.5)	0.31
IIIB	Postoperative bleeding	14 (4)	1 (2)	0.47
IVa	Myocardial infarction	4 (1)	0 (0)	0.63

BPF: bronchopleural fistula

Group 1 (282, 70-79) vs Group 2 (42, Octogenarian)

5 years OS : 42.5%, median survival : 50 M vs 49 M

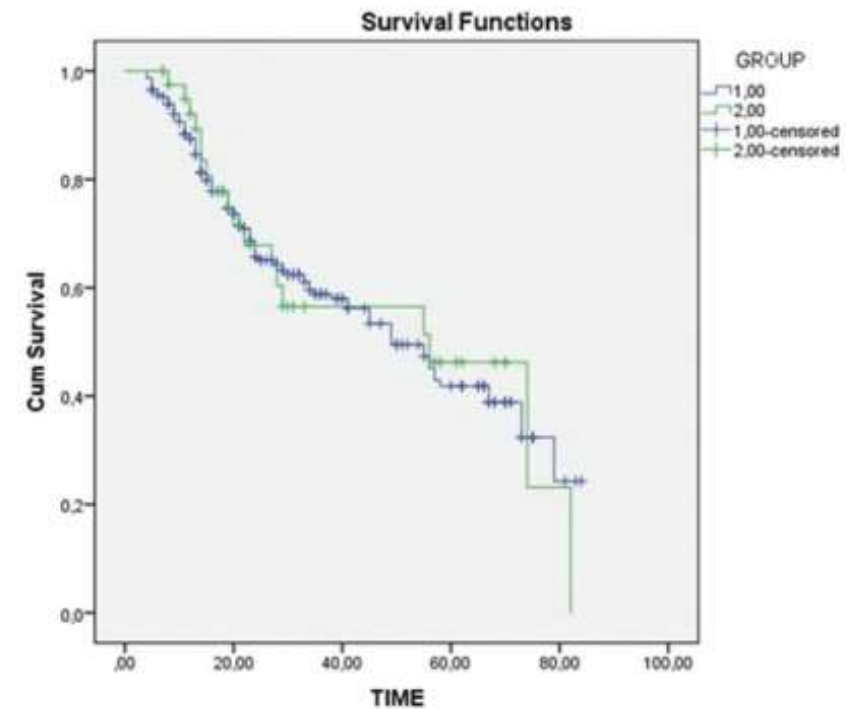


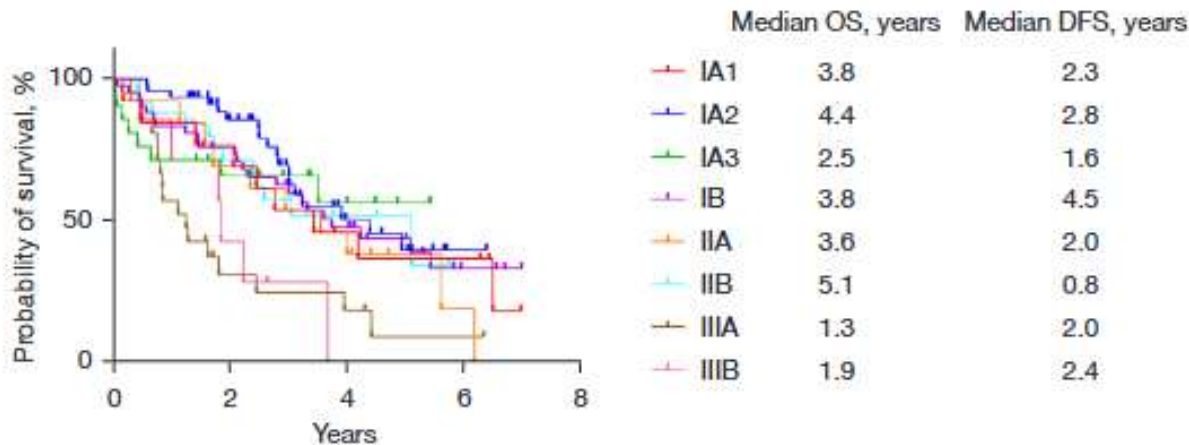
Fig. 2 The survival analysis of the two groups.

Ali Cevat Kutluk, et al, Ann Thorac Cardiovasc Surg 2019;25:95-101

Specific risks and outcomes of octogenarians post-lung cancer resection: our 5-year experience

Hiral Jhala^, Jennifer Whiteley, Mathew Thomas

Jhala et al. Risks of lung cancer resection in octogenarians



Total 189 (2016-2021)
5 Year OS : 38.2%

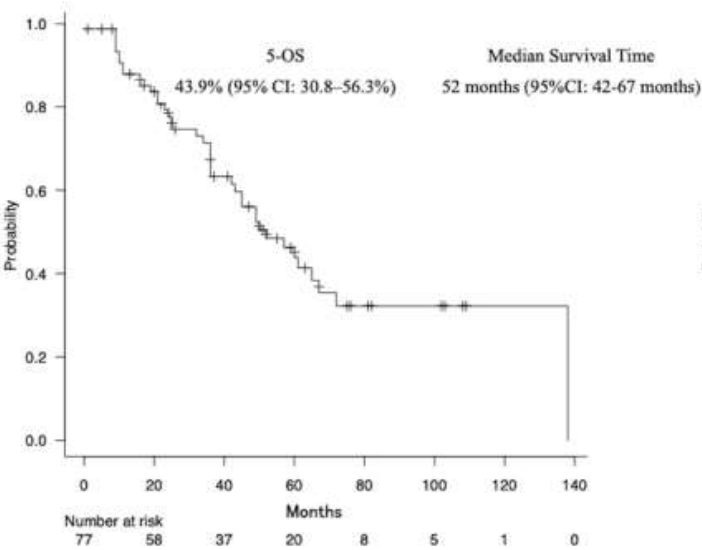
Lung cancer surgery for patients aged 85 Years and Older: A retrospective study

Yasushi Mizukami*, Yasuyuki Nakamura, Ryunosuke Maki, Hirofumi Adachi

Department of Thoracic Surgery, NHO, Hokkaido Cancer Center, Sapporo, Japan

Causes of death identified in 42 patients.

		n = 42
Cause of death n (%)	Lung cancer	19 (45.2)
	Other cancer	8 (19.0)
	Pneumonia	4 (9.5)
	Cardiovascular	3 (7.1)
	Stroke	2 (4.8)
	Perioperative	1 (2.4)
	Others	5 (11.9)



Total 77 (2009-2023), Op mortality : 1 (1.3%)
5-yr OS : 43.9%

Yasushi, Mizukami, et al, International Journal of Lung cancer, volume 1, Issue 2, June 2026

헬스조선

가

폐암

“80세 넘은 고령 암 환자도 폐암 수술 적극 고려를”



폐암 수술이 환자 연령에 관계없이 안전성이 높고 장기적인 삶의 질 개선에 긍정적인 영향을 미치는 것으로 나타났다./사진=클립아트코리아

고령 암 환자의 경우, 노화에 따른 신체 쇠약과 앓고 있는 만성질환 수를 고려해야 해 젊은 층보다 소극적인 치료를 택하는 게 일반적이다. 그런데 최근, 80세 이상 고령이더라도 안전하고 효과적으로 폐암 수술을 받을 수 있다는 연구 결과가 나왔다.

미국 마운트 시나이 아이칸 의과대·마운트 시나이 티쉬 암센터 연구팀이 1기 비소세포 폐암 환자 884명을 대상으로 조기 폐암 치료 여부를 분석했다. 연구팀은 80세 이상 고령 환자(114명)를 젊은 환자(770명)와 비교해 임상 양상, 수술 유형, 수술 후 결과 및 생존율을 비교했다. 참여자들의 수술 전, 수술 후 1개월·6개월·12개월 시점의 신체 및 정신 건강 점수를