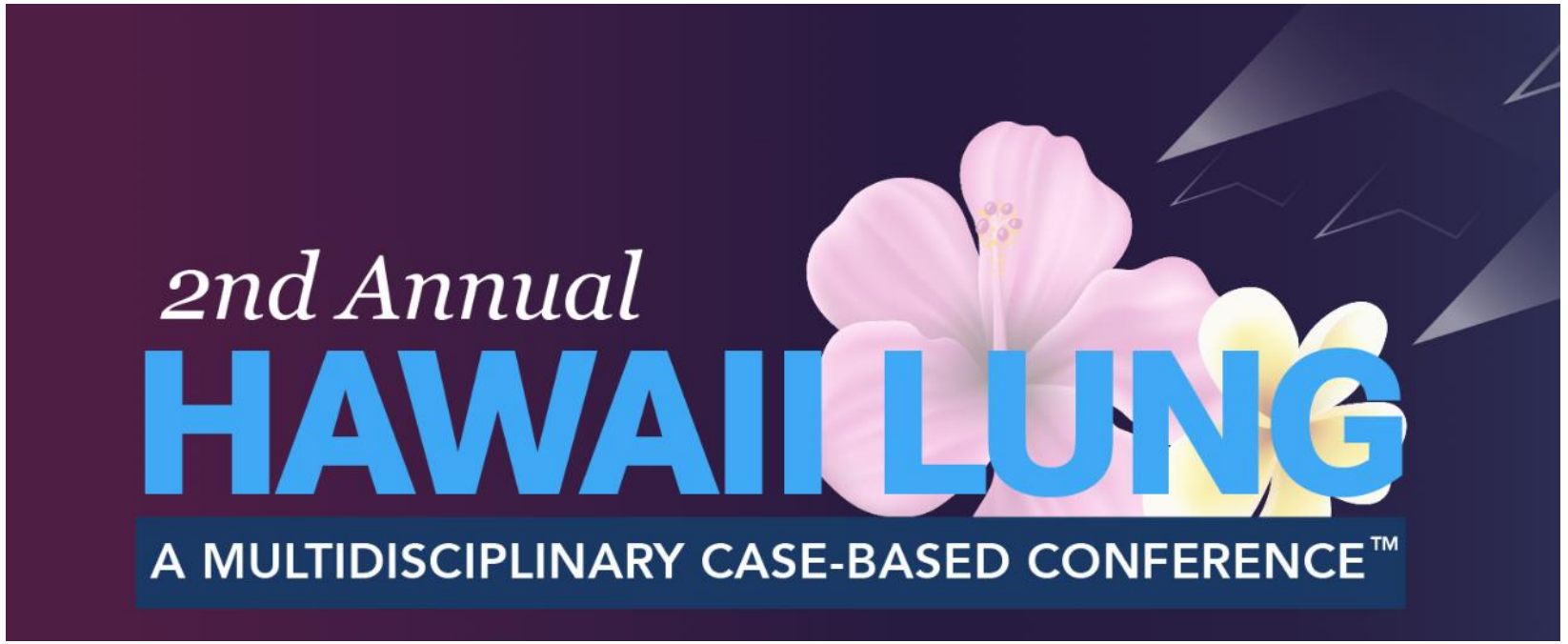


Case 1A: Early Detection & Screening

Moderators: Leah Backhus, Loic Le Marchand, Nick Stollenwerk

Panel: Judy Johnson, Jeff Berenberg, Eric Crawley, David Tamura, Christina Speirs, Ayman Abdul-Ghani

goto PER®.com

Case*

69 year old Caucasian F with 30 pack years history of smoking, quit 16 years ago, presents for consideration of lung cancer screening

- PMH: HTN, HLD
- PSH: Hysterectomy
- FH: Negative for cancer
- Performance status: 1

*Cases may have been modified for educational purposes

gotoPER®.com

Question

Which one of the following is NOT currently an eligibility requirement for LCS according to CMS?

- Age > 55 years
- Shared-decision making visit with healthcare provider
- Quit smoking < 15 years
- 20 pack years smoking history

gotoPER®.com

Lung Cancer Screening Guidelines

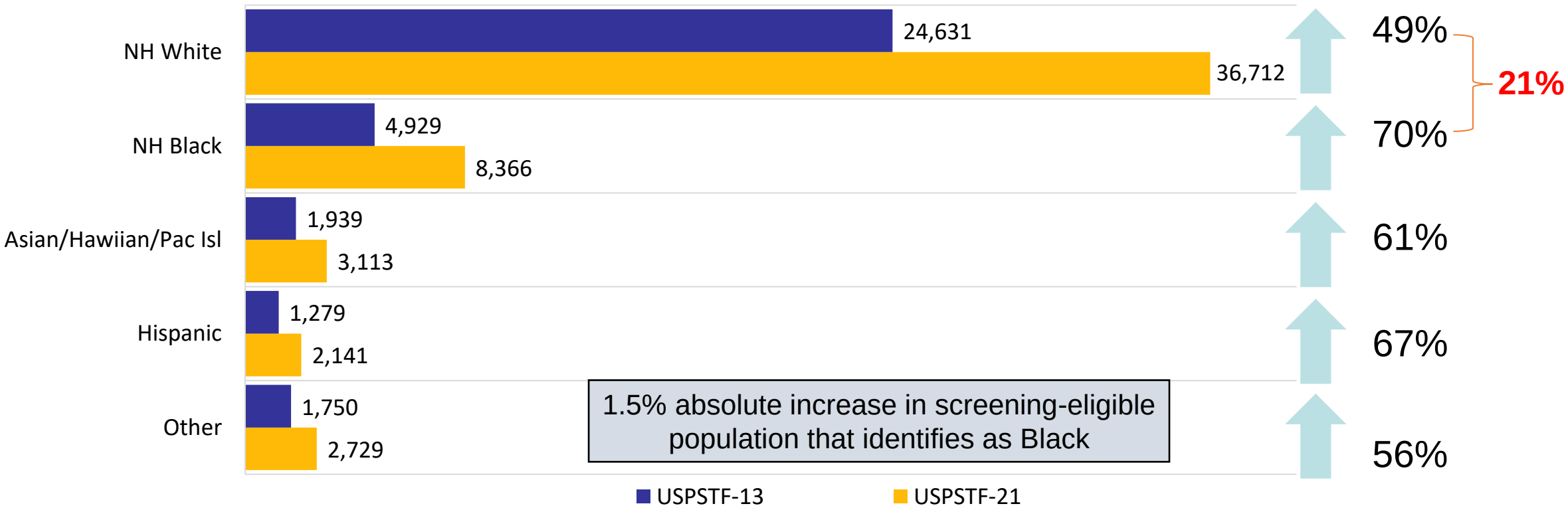
	NLST 2011	2013	NELSON 2021	2021 (ACCP, NCCN, USPSTF)
Age		• 55-74 years		• ~~55-74 years~~ • 50-80 years
Smoking Status		• 30 pack years • Quit < 15 years ago		• ~~30 pack years~~ • 20 pack years • Quit < 15 years ago
Exclusions		• Limited life expectancy < 5 y • Oxygen-dependence		• Limited life expectancy < 5 y • ~~Oxygen-dependence~~ • Inability to undergo further tx for LC
SDM		• SDM visit with qualified health professional • Smoking cessation counseling for those who currently smoke • Access to high-volume, high-quality LCS and Tx center		• SDM visit with qualified health professional • Smoking cessation counseling for those who currently smoke • Access to high-volume, high-quality LCS and Tx center

Estimated to lead to:

- *An increase of 122 averted lung cancer deaths per 100 000 adults in the population*
- *2035 life-years gained*

goto PER® .com

USPSTF-21 Guideline Expands by Race and Ethnicity



Ritzwoller, PROSPR Investigators et al. *JAMA Network Open* 2021

Lung Cancer Screening Guidelines

	NLST 2011	NELSON 2021		
	2013 (ACS, USPSTF)		2021 (ACCP, NCCN, USPSTF)	2023 (ACS)
Age	• 55-74 years		• ~~55-74 years~~ • 50-80 years	• ~~55-74 years~~ • 50-80 years
Smoking Status	• 30 pack years • Quit < 15 years ago		• ~~30 pack years~~ • 20 pack years • Quit < 15 years ago	• ~~30 pack years~~ • 20 pack years • ~~Quit < 15 years ago~~
Exclusions	• Limited life expectancy < 5 y • Oxygen-dependence		• Limited life expectancy < 5 y • ~~Oxygen-dependence~~ • Inability to undergo further tx for LC	• Limited life expectancy ~~< 5 y~~ • ~~Oxygen-dependence~~ • Inability to undergo further tx for LC
SDM	• SDM visit with qualified health professional • Smoking cessation counseling for those who currently smoke • Access to high-volume, high-quality LCS and Tx center		• SDM visit with qualified health professional • Smoking cessation counseling for those who currently smoke • Access to high-volume, high-quality LCS and Tx center	• SDM visit with qualified health professional • Smoking cessation counseling for those who currently smoke • ~~Access to high-volume, high-quality LCS and Tx center~~

gotoPER®.com

Screening for lung cancer: 2023 guideline update from the American Cancer Society

- All prior recommendations were largely based on eligibility criteria used in NLST and NELSON
- Neither NLST nor NELSON trials describe the evidence or rationale for the YSQ thresholds
- Given the length of follow up for trial patients, the cohorts included patients who were > 15 years since quitting but still demonstrated benefit in this group
- Compared with scenarios that include the ≤YSQ15 criterion for individuals who formerly smoked removing YSQ resulted in:
  - ***37.3% increase in screening examinations***
  - ***20.8% increase in lung cancer deaths averted***
  - ***19.1% increase in LYG per 100,000 population***

goto PER®.com

Case

1/2023

LDCT

Mild emphysema

Bi-apical pleural-parenchymal scarring

LLL 10 mm lobulated solid nodule

RLL 3.5 mm nodule

Question

What would you do next?

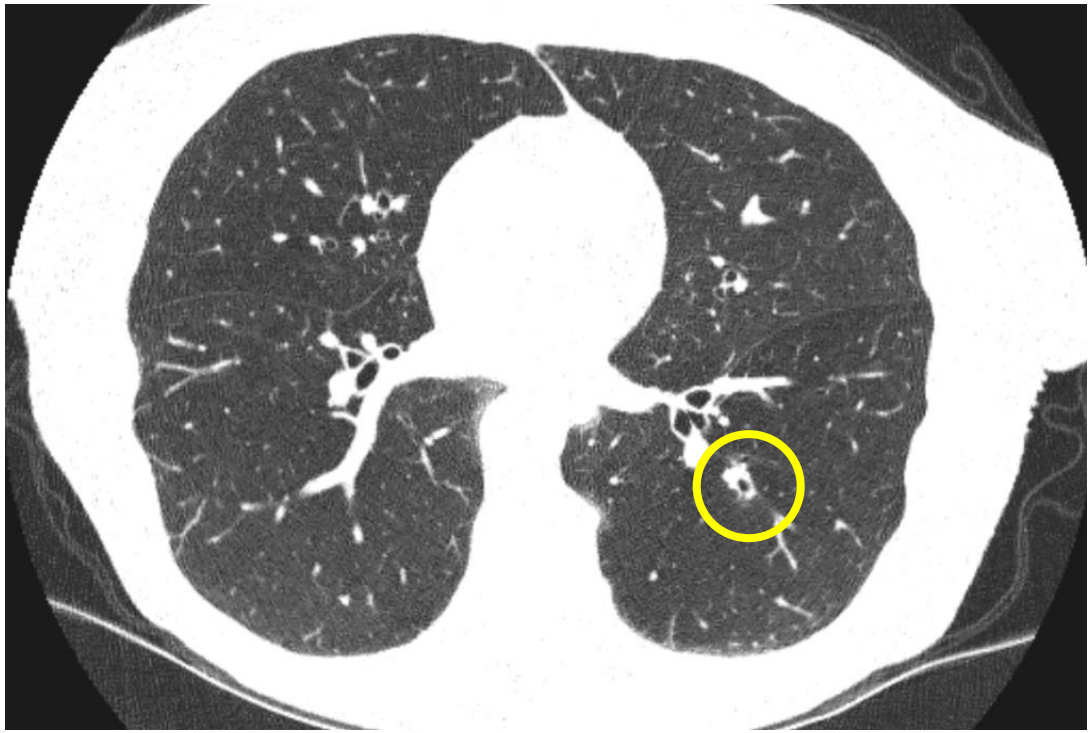
- PET/CT
- Continue CT surveillance
- CT-guided biopsy
- Pulmonary Nodule biomarker testing
- Navigational bronchoscopy with EBUS

ACR-Lung RADS Guidelines

3	**Probably Benign -** Based on imaging features or behavior Estimated Population Prevalence: 9%	**Solid nodule:** • ≥ 6 to < 8 mm (≥ 113 to < 268 mm^3) at baseline **OR** • New 4 mm to < 6 mm (34 to < 113 mm^3)	6-month LDCT
		Part solid nodule: • ≥ 6 mm total mean diameter (≥ 113 mm^3) with solid component < 6 mm (< 113 mm^3) at baseline **OR** • New < 6 mm total mean diameter (< 113 mm^3)	
		Non solid nodule (GGN): • ≥ 30 mm (≥ 14,137 mm^3) at baseline or new	
		Atypical pulmonary cyst: (see note 12) • Growing cystic component (mean diameter) of a thick-walled cyst	
		Category 4A lesion that is stable or decreased in size at 3-month follow-up CT (excluding airway nodules)	
4A	**Suspicious** Estimated Population Prevalence: 4%	**Solid nodule:** • ≥ 8 to < 15 mm (≥ 268 to < 1,767 mm^3) at baseline **OR** • Growing < 8 mm (< 268 mm^3) **OR** • New 6 to < 8 mm (113 to < 268 mm^3)	3-month LDCT; PET/CT may be considered if there is a ≥ 8 mm (≥ 268 mm^3) solid nodule or solid component
		Part solid nodule: • ≥ 6 mm total mean diameter (≥ 113 mm^3) with solid component ≥ 6 mm to < 8 mm (≥ 113 to < 268 mm^3) at baseline **OR** • New or growing < 4 mm (< 34 mm^3) solid component	
		Airway nodule, segmental or more proximal - at baseline (see note 11)	
		Atypical pulmonary cyst: (see note 12) • Thick-walled cyst **OR** • Multilocular cyst at baseline **OR** • Thin- or thick-walled cyst that becomes multilocular	

gotoPER®.com

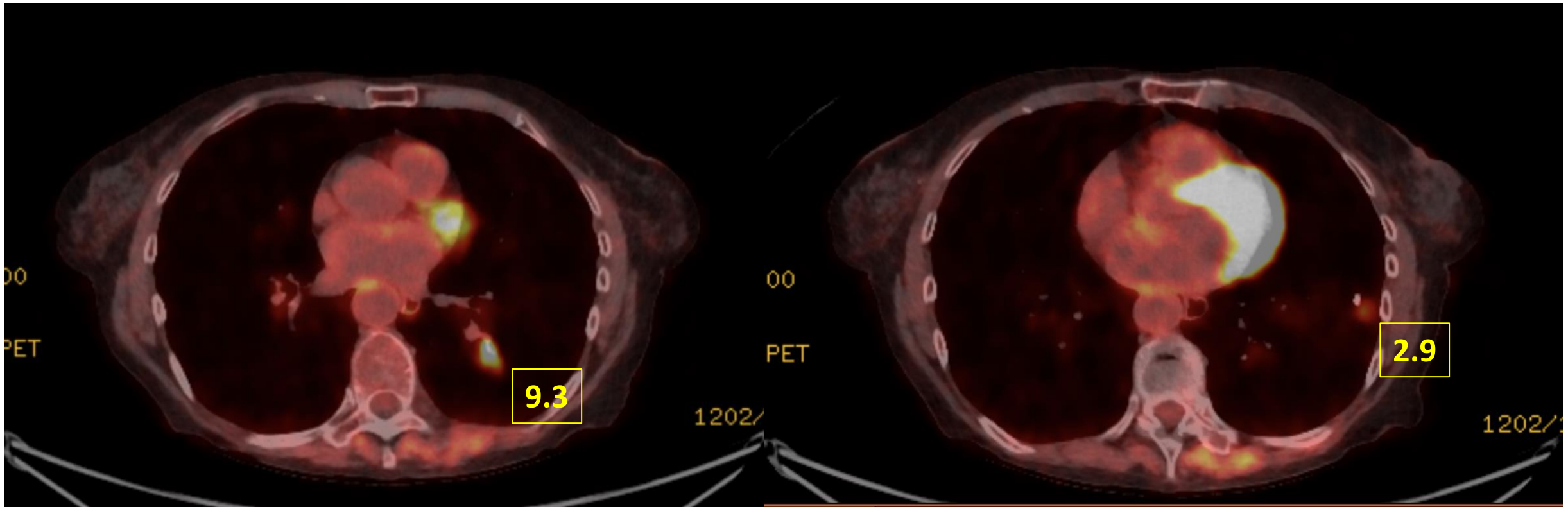
4/2023



- Unchanged part-solid 10 mm LLL lesion
- New 7 mm part-solid LLL lesion
- Resolution of RLL lesion

goto PER® .com

5/2023



Question

What is the next best step?

- CT-guided biopsy
- ctDNA/GRAIL
- EBUS
- Repeat imaging surveillance

Case

- 5/2023 Cone Beam CT bx
  - LLL anterior seg
    - Adenocarcinoma papillary and micropapillary patterns
    - No PDL1 expression
    - TPS < 1%
  - LLL lateral segment
    - no malignancy (fiducial marker placed)
- EBUS: 4L and 7 negative
- PFTs: FEV1 1.83L; 79% predicted and DLCO 104% predicted

goto PER®.com

Question

Which treatment option would you choose?

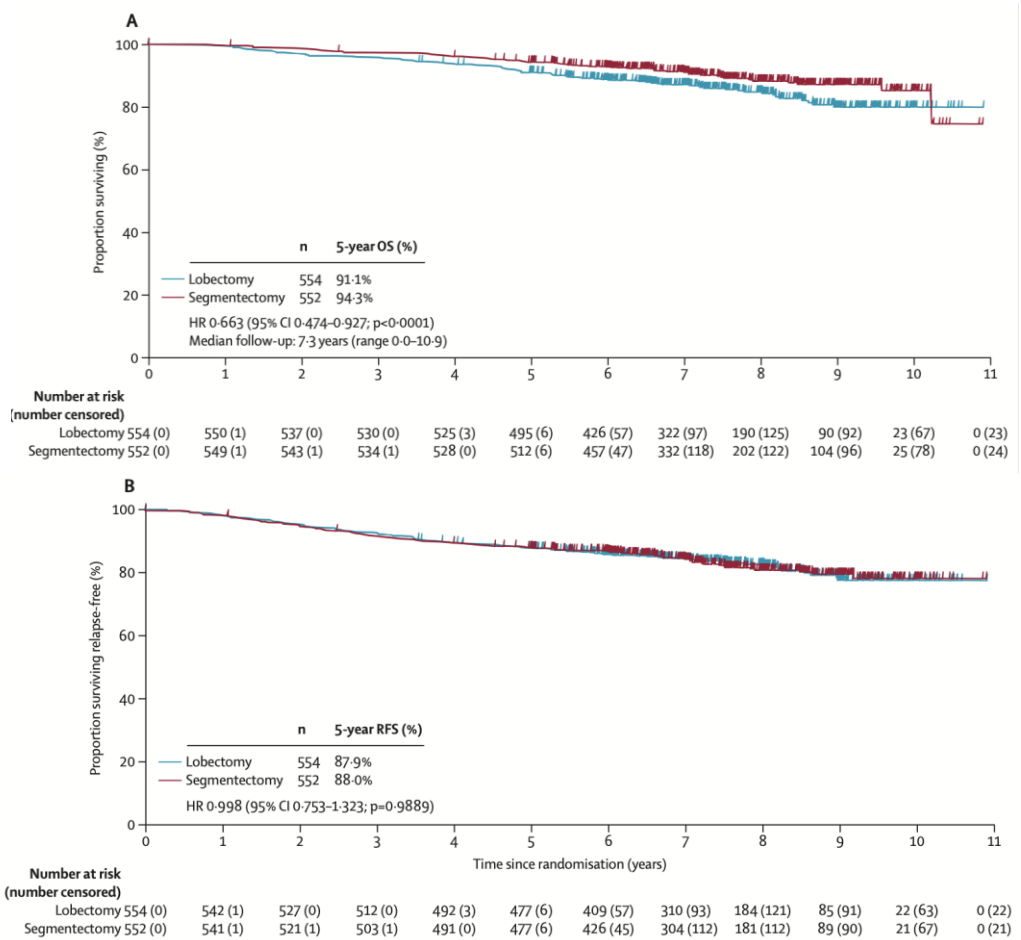
- Induction therapy followed by resection
- Lobectomy
- Basal segmentectomy
- Radiation therapy

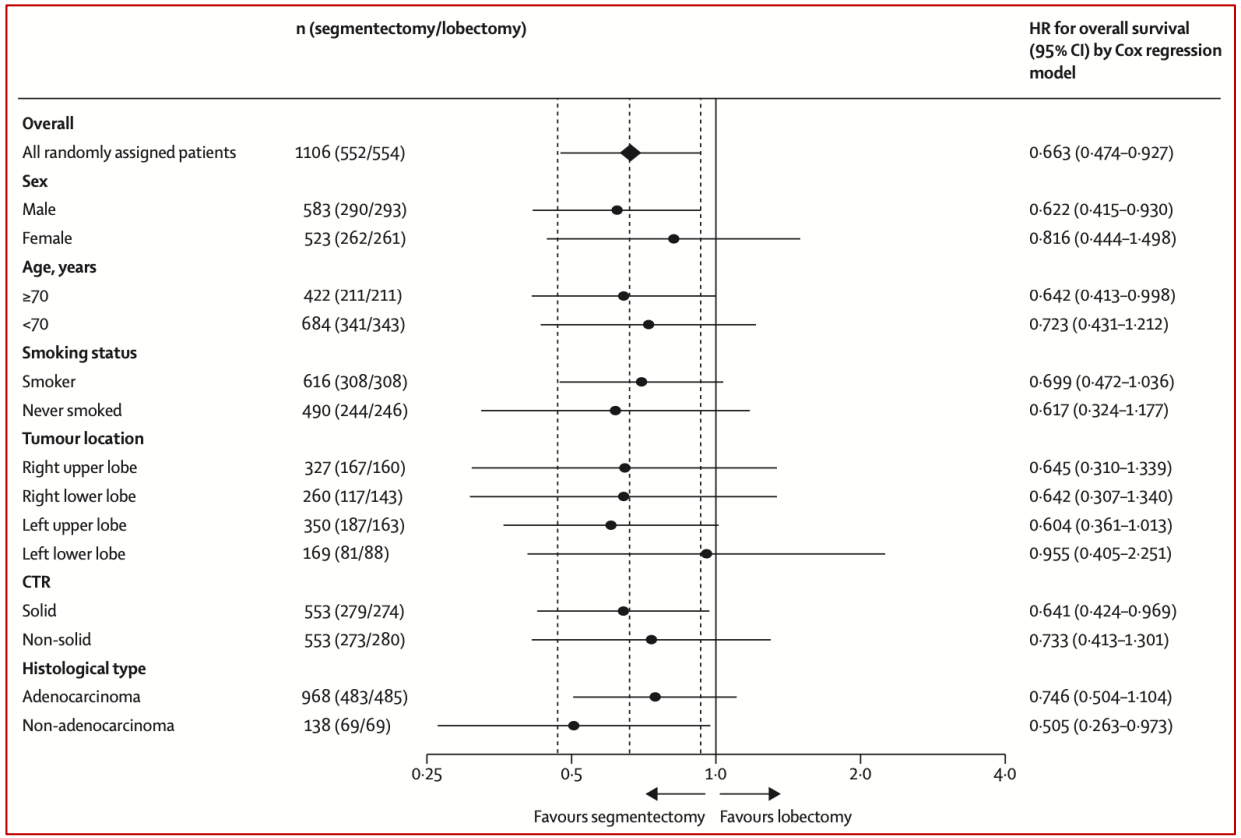
goto PER® .com

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

Prof Hisashi Saji, MD • Morihito Okada, MD • Masahiro Tsuboi, MD • Ryu Nakajima, MD • Kenji Suzuki, MD • Keiju Aokage, MD • et al. Show all authors • Show footnotes

THE LANCET



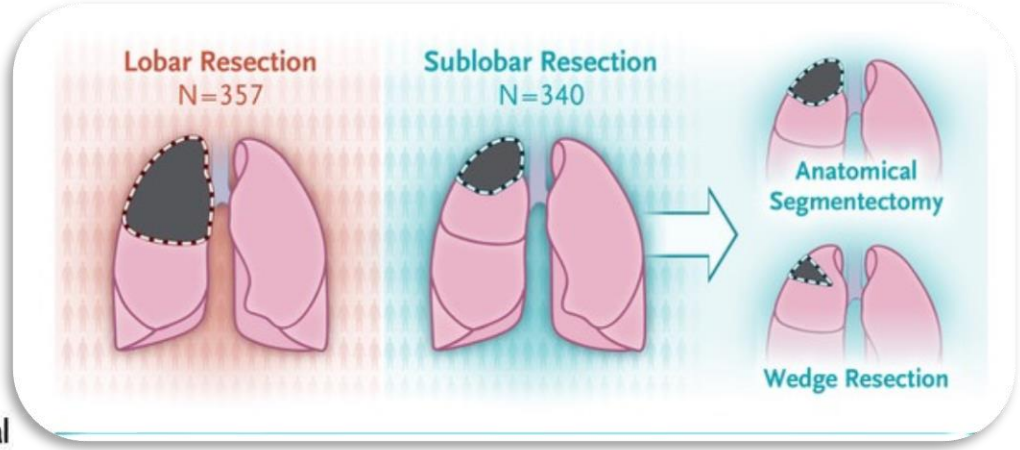


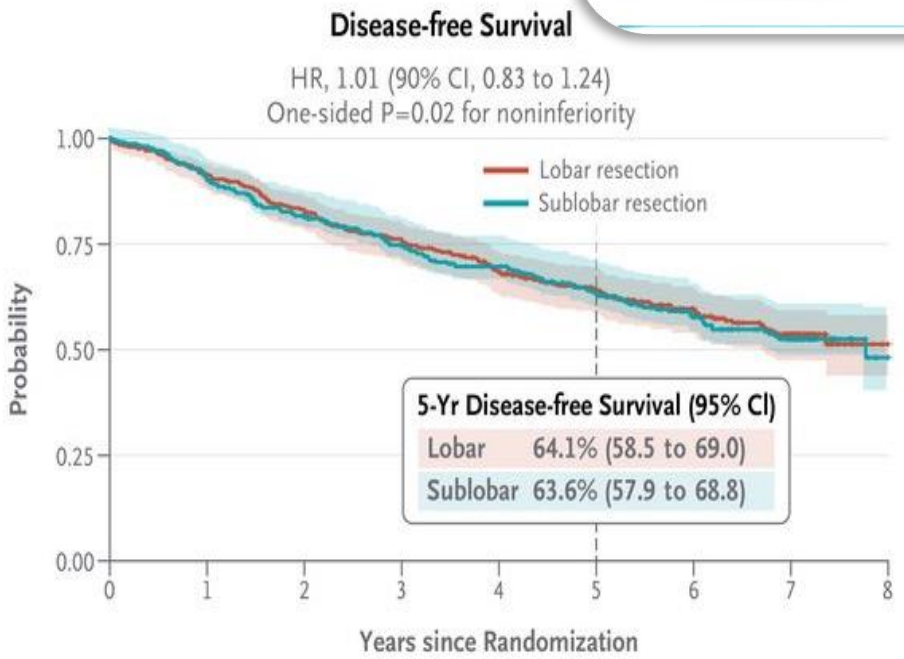
The NEW ENGLAND JOURNAL of MEDICINE

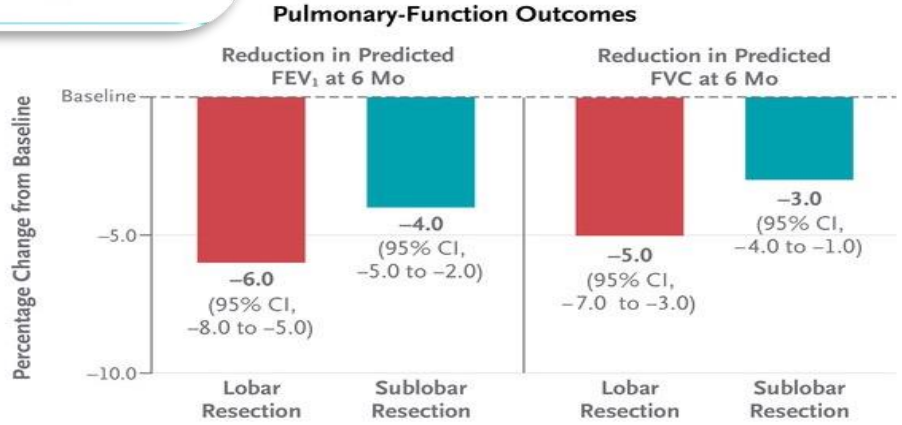
RESEARCH SUMMARY

Lobar or Sublobar Resection for Peripheral Stage IA Non–Small-Cell Lung Cancer

Altorki N et al. DOI: 10.1056/NEJMoa2212083







CONCLUSIONS

Among patients with clinical stage T1aN0 NSCLC, sublobar resection was noninferior to lobectomy with respect to disease-free survival.

Case

- 7/2023 Surgery: Robotic LLL lobectomy
  - Anterior segment: adenocarcinoma papillary predominant, 7 mm tumor No PDL1 expression (TPS <1%) KRAS G12 mutation VAF 15% Estimated TMB 2.8
  - Lateral segment: necrotizing granuloma
- pT1aN0 Stage IAI