



American
Cancer
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THE OFFICIAL SPONSOR OF BIRTHDAYS.®

National Lung Cancer Roundtable

First Annual Meeting December 11-12, 2017

Ella A. Kazerooni, MD, MS, FACR, FSCBTMR

Professor of Radiology & Internal Medicine

Director, Cardiothoracic Radiology

Associate Chair for Clinical Affairs

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 **#NLCRT2017**





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CREATING LUNG CANCER SURVIVORS

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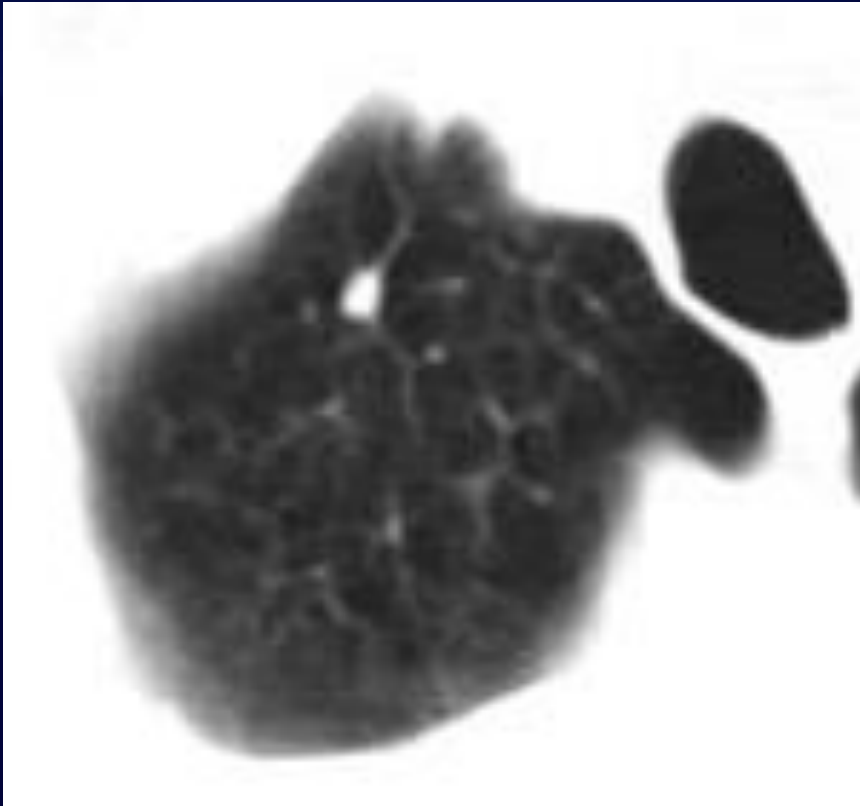
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Disclosures

- **No financial disclosures**
- **Chair, American College of Radiology Lung Cancer Screening Committee**
- **Chair, ACR Lung Cancer Screening Registry**
- **Vice-Chair NCCN Lung Cancer Screening Panel**

Lung Cancer



early stage



late stage

US Lung Cancer Screening Platform

Reduced Lung-Cancer Mortality with Low-Dose Computed Tomographic Screening

N Engl J Med 2011; 365:395-409 | August 4, 2011

The National Lung Screening Trial Research Team*

Cost-Effectiveness of CT Screening in the National Lung Screening Trial

William C. Black, M.D., Ilana F. Gareen, Ph.D., Samir S. Soneji, Ph.D., JoRean D. Sicks, M.S., Emmett B. Keeler, Ph.D., Denise R. Aberle, M.D., Arash Naeim, M.D., Timothy R. Church, Ph.D., Gerard A. Silvestri, M.D., Jeremy Gorelick, Ph.D., and Constantine Gatsonis, Ph.D. for the National Lung Screening Trial Research Team

N Engl J Med 2014; 371:1793-1802 | November 6, 2014 | DOI: 10.1056/NEJMoa1312547

Screening for Lung Cancer



U.S. Preventive Services Task Force

Current Recommendation

Release Date: December 2013

- The USPSTF recommends annual screening for lung cancer with low-dose computed tomography in adults ages 55 to 80 years who have a 30 pack-year smoking history and currently smoke or have quit within the past 15 years. Screening should be discontinued once a person has not smoked for 15 years or develops a health problem that substantially limits life expectancy or the ability or willingness to have curative lung surgery.

Grade: [B recommendation](#).

ACR Lung Cancer Screening Advocacy



US Lung Cancer Screening: Where Are We?

- **Current state:**
 - Implementation
 - Education
 - Monitoring quality & outcomes

ACS Lung Cancer Roundtable

- **Steering Committee**
- **Task Groups**
- **Member Organizations**
- **American Cancer Society**

ACS Lung Cancer Roundtable

- **Task Groups**
 - **Provider Engagement & Outreach:** Tom Houston & Ella Kazerooni
 - **Implementation Strategies:** Charlie White & Peter Mazzone
 - **Tobacco Cessation:** Jamie Ostroff & Peter Shields
 - **Triage for Appropriate Treatment:** Gerard Silvestri & Doug Wood
 - **Shared Decision Making:** Bob Volk & Peter Mazzone
 - **Lung Cancer in Women:** Patricia Rivera & Leah Backhus
 - **Advanced Imaging:** Dan Sullivan
 - **Policy:** Chris Berg & Anita McGlothlin

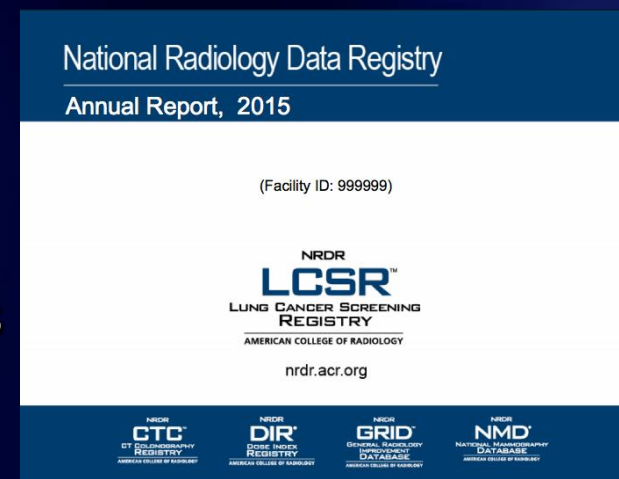
ACR Lung Cancer Screening Registry™

- Major data categories:
 - Patient, Facility & Radiologist
 - Appropriateness of screening
 - Smoking cessation
 - Screening test itself
 - CT radiation exposure
 - LungRADS structured reporting category
 - Outcomes at 12 months from screening CT
 - Additional risk factors *optional, recommended in patients who do not meet USPSTF screening criteria*

<http://www.acr.org/Quality-Safety/National-Radiology-Data-Registry/Lung-Cancer-Screening-Registry>

ACR Lung Cancer Screening Registry™

- **Benchmark Reports:**
 - Facility level in aggregate
 - Individual radiologists within the imaging facility
 - Performance comparisons on core metrics
 - Appropriateness
 - Radiation exposure
 - LungRADS™ category distribution
 - Diagnostic testing and tissue sampling rates
 - Lung cancer diagnosis rates





Implementation Snapshot...

ACR Lung Cancer Screening Registry

	2015*	2016	2017~	Total
# of facilities	908	905 new since 2015	307 new since 2016	2120
# of screening exams	42,126	167,663	171,075	380,864

* 2015 facility enrollment began in September 2015
~ 2017 data through 8/30/2017 (8 months)

ACR Lung Cancer Screening Registry

Appropriateness (USPSTF criteria)

	2015	2016	2017
% appropriate	82.9%	87.9%	90.5%
# appropriate	34,343	146,134	146,134
total screens	41,407	166,158	167,228

* 2015 facility enrollment began in September 2015
~ 2017 data through 8/30/2017 (8 months)

ACR Lung Cancer Screening Registry™

Smoking & Smoking Cessation

	2015	2016	2017
% current smokers	56%	58%	59%
smoking cessation offered to current smokers	79%	84%	85%

* 2015 facility enrollment began in September 2015
~ 2017 data through 8/30/2017 (8 months)

ACR Lung Cancer Screening Registry™

Radiation Exposure (mean CTDIvol)

	2015	2016	2017
underweight (BMI <18.5)	2.48	2.64	2.77
normal (BMI of 18.5 - 24.9)	2.79	2.66	2.666
overweight (BMI of 25 - 29.9)	3.22	2.98	3.19
obese (BMI 30 or greater)	4.06	3.88	3.91

* 2015 facility enrollment began in September 2015
~ 2017 data through 8/30/2017 (8 months)

ACR Lung Cancer Screening Registry™

Positive Screen Rate (LungRADS 3, 4A/B/X)

	2015	2016	2017
baseline screens	21.2 %	19.6%	18.3%
subsequent screens	14.2%	12.7%	11.2%
overall	20.7%	18.6%	16.8%
# of screens	41,407	166,158	167,228

* 2015 facility enrollment began in September 2015
~ 2017 data through 8/30/2017 (8 months)

ACR Lung Cancer Screening Registry™

Cancer Detection Rates

	2015	2016	2017
prevalence (baseline)	6.5% N = 245	5.1% N = 707	2.9% N = 365
incidence (subsequent screens)	1.5% N = 5	2.2% N = 56	1.3% N = 51

* 2015 facility enrollment began in September 2015
~ 2017 data through 8/30/2017 (8 months)

ACR Lung Cancer Screening Registry™

Positive Predictive Values (LungRads 3,4A/B/X)

	2015	2016	2017
PPV 1 lung cancers detected on percutaneous biopsies	0.48	0.57	0.53
PPV 1 lung cancers detected on bronchoscopies	0.46	0.44	0.51
PPV 1 surgically detected lung cancers	0.63	0.69	0.72

* 2015 facility enrollment began in September 2015
~ 2017 data through 8/30/2017 (8 months)

ACR Lung Cancer Screening Registry™

Positive Predictive Values at 1 year

	2015	2016	2017
PPV 2a for LungRADS 3 with 6 month recommended CT	0.01	0.01	0.00
PPV 2b for LungRADS 4A with 3 month recommended CT	0.14	0.12	0.08
PPV 3 LungRADS 3, 4A/B/X all biopsy types with tissue diagnosis of cancer	0.62	0.62	0.62

* 2015 facility enrollment began in September 2015
~ 2017 data through 8/30/2017 (8 months)

ACR Lung Cancer Screening Registry™

Where Screening is Being Done

Top 10 by exam count

State	# of Facilities	# of Screens
MA	45	12644
PA	107	11612
MI	78	10520
NY	102	10032
FL	117	8391
OH	108	8081
KY	66	8061
NC	78	7992
IL	54	6294
TX	113	6121

Lowest 10 by exam count

State	# of Facilities	# of Screens
AR	8	600
HI	8	543
NE	22	541
NV	7	417
DE	4	403
GU	1	341
AK	6	232
DC	3	199
WY	2	42
UT	2	7



American Cancer Society

National Lung Cancer Roundtable

- Formed in 2017
- To facilitate national lung cancer awareness, prevention, early detection, and optimal therapy through public education, provider education, and health policy activities
- Follows 20 year National Colorectal Roundtable experience

Creating lung cancer survivors



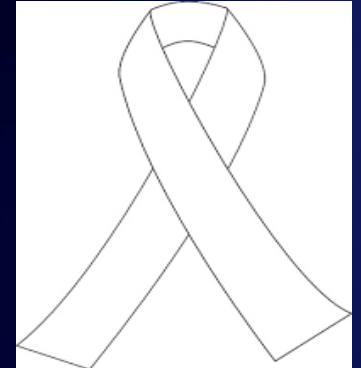
American Cancer Society

National Lung Cancer Roundtable

- First annual meeting December 11-12, 2017 in DC
- Multidisciplinary Steering Committee
- Member Organizations
- Task Groups:
 - Shared decision making
 - Implementation & program models
 - Smoking cessation in screening
 - Early lung cancer treatment
 - Provider outreach
 - Advanced imaging
 - Lung cancer in women
 - Policy
 - Improving screening input

Lung Cancer Screening

- It's very early in lung cancer screening implementation, and we have a lot to learn and do
- Awareness & education among patients & providers is not at the level of other cancer screenings
 - October breast cancer awareness month – pink
 - February colon cancer awareness – dark blue
 - November for lung cancer awareness - white





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