St. Elizabeth HEALTHCARE

OVERVIEW LCS – ACHIEVING SUCCESS!

INDIANA UNIVERSITY – MELVIN AND BREN SIMON COMPREHENSIVE CANCER CENTER

END LUNG CANCER NOW

Michael Gieske, MD

November 4, 2022 **9:05 – 9:30 am**

St. Elizabeth PHYSICIANS

140 Million Dollar Center
244,000 Square Feet
Largest Cancer Center within a 250 mile radius

ST. ELIZABETH PHYSICIANS

- Serving over **392,000 patients**
- **728 Providers**
  - 468 Physicians
  - 260 Advanced Practice Providers
- **2,200 Associates** (including providers)
- 41 Specialties & Services
- 170 Practices / 55 Locations
- 2 States / 11 Counties
- One in two patients participating in value-based care programs
  - MSSP Track 1
  - CPC+ Track 2
  - 15 Value Based Contracts
- CBO 4 time recipient of HFMA MAP award
- 85% patients active users of patient portal
- 2020 recipient of AMGA Acclaim award

In 2021

- **Nearly 1.9 million visits, 8% virtual visits**
- Over $247 million in revenue
- Net growth of 2% physicians and providers

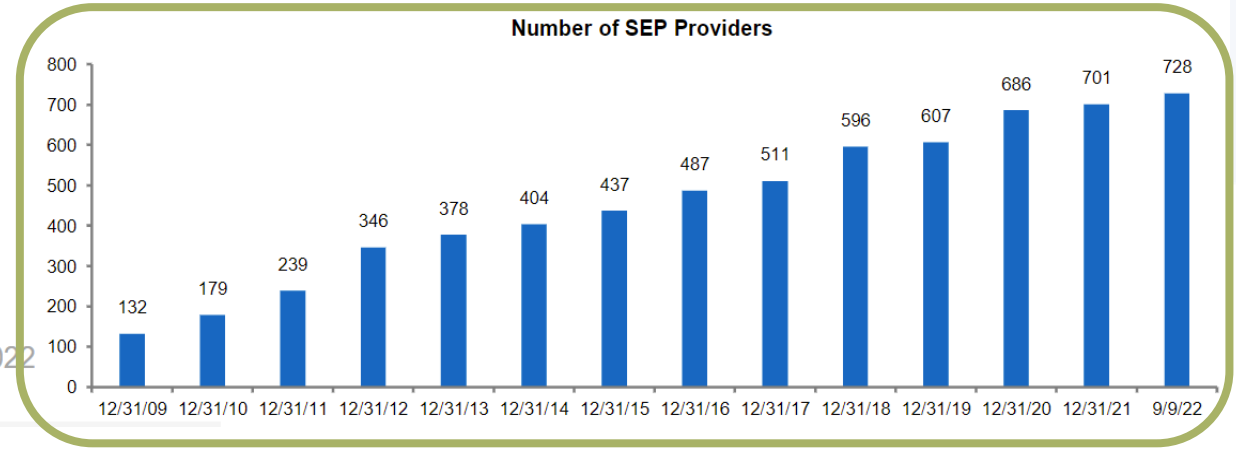
41 SPECIALTIES & SERVICES

Primary Care

- Family Medicine
- Internal Medicine
- Pediatrics
- Internal Medicine/Pediatrics
- Occupational Medicine/Business Health
- Urgent Care

Specialty Care

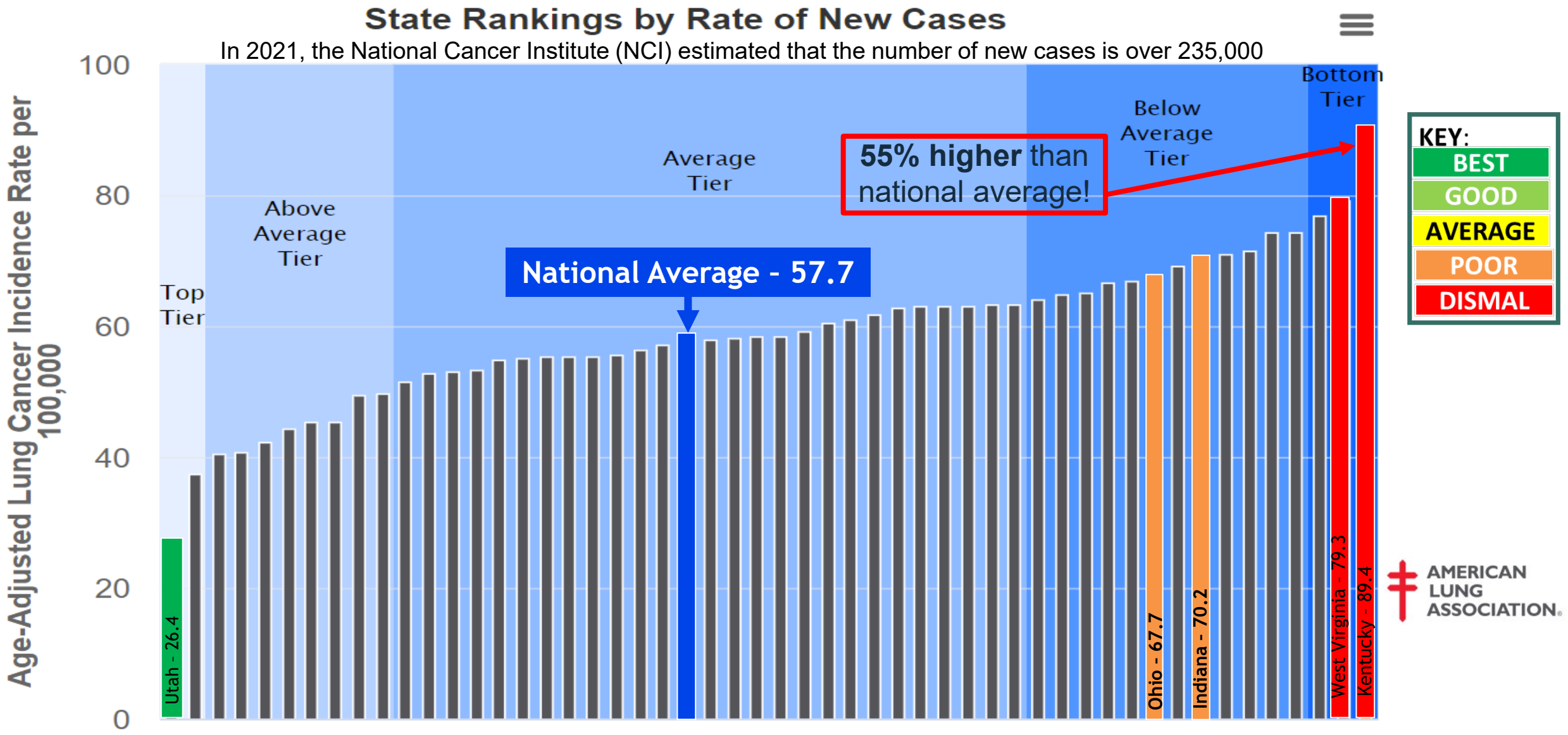
- Addiction Medicine
- Bariatric Surgery
- Behavioral Health
- Breast Surgery
- Cardiology
- Colon & Rectal Surgery
- Dermatology
- Electrophysiology
- Emergency General Surgery
- Endocrinology
- Gastroenterology
- General Surgery
- Geriatrics
- Hospital Medicine
- Infectious Disease
- Medical Oncology
- Medical Weight Management
- Neurology
- Obstetrics & Gynecology
- Ophthalmology
- Osteopathic Manipulation Medicine
- Pain Management/Spine
- Palliative Care
- Physiatry
- Plastic Surgery
- Podiatry
- Pulmonology
- Radiation Oncology
- Rheumatology
- Sleep Medicine
- Surgical Oncology
- Urogynecology
- Urology
- Vascular Surgery
- Wound Care



LUNG CANCER

NATIONAL LUNG CANCER INCIDENCE

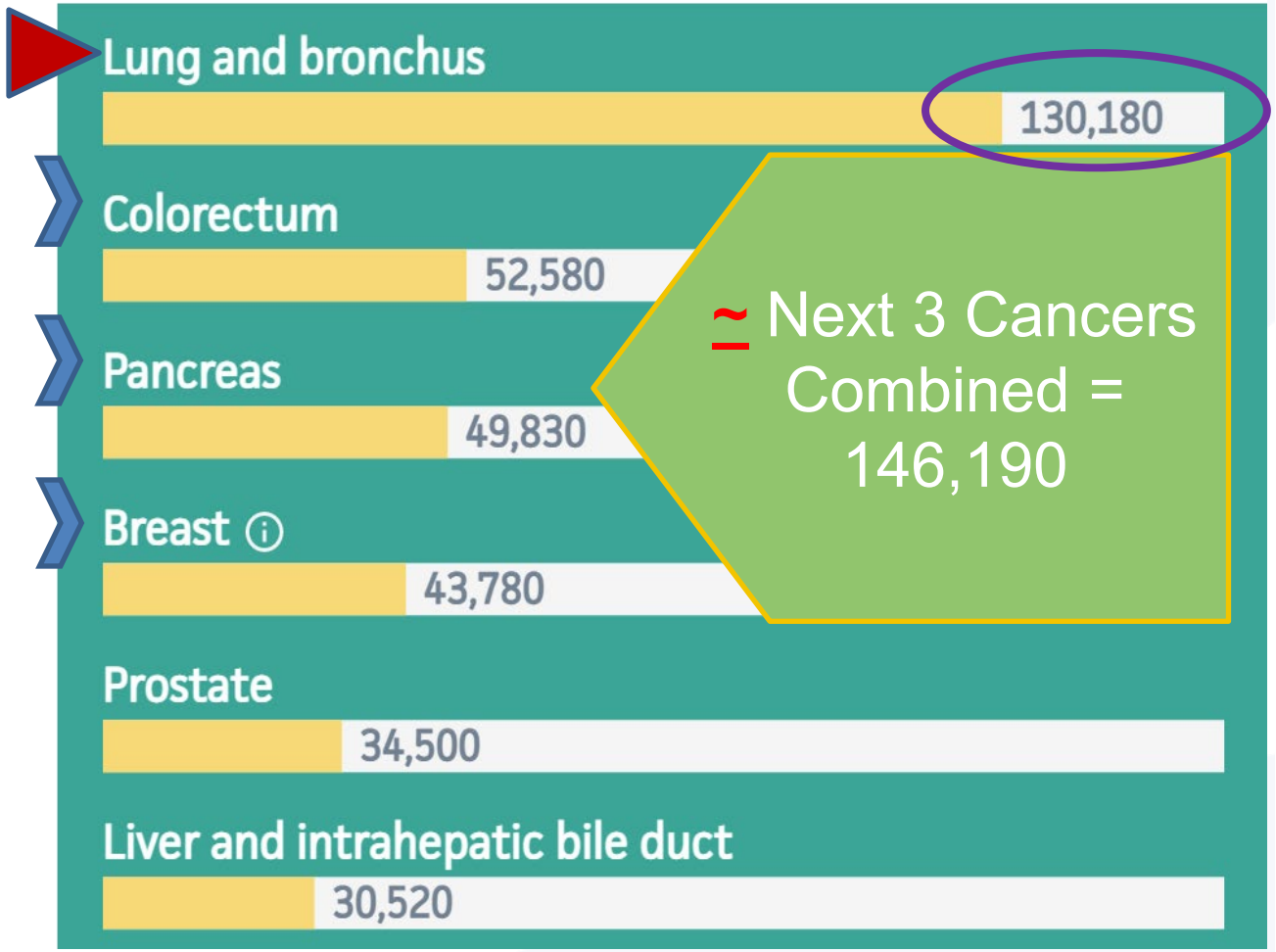
Nov. 16, 2021 Amer. Lung Assoc. State of Lung Cancer Report

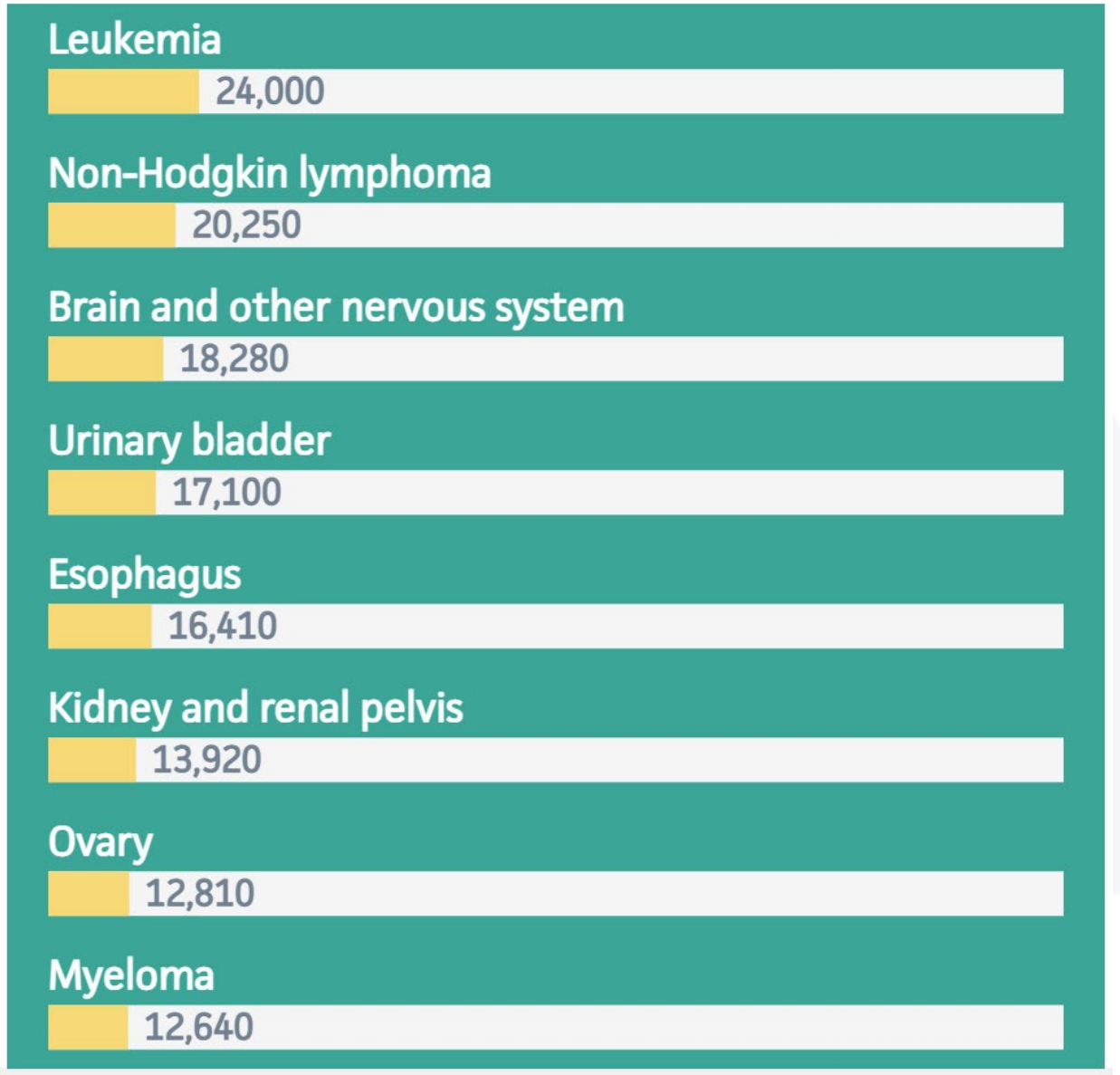


Estimated deaths, 2022 USA, American Cancer Society

By cancer type, both sexes combined

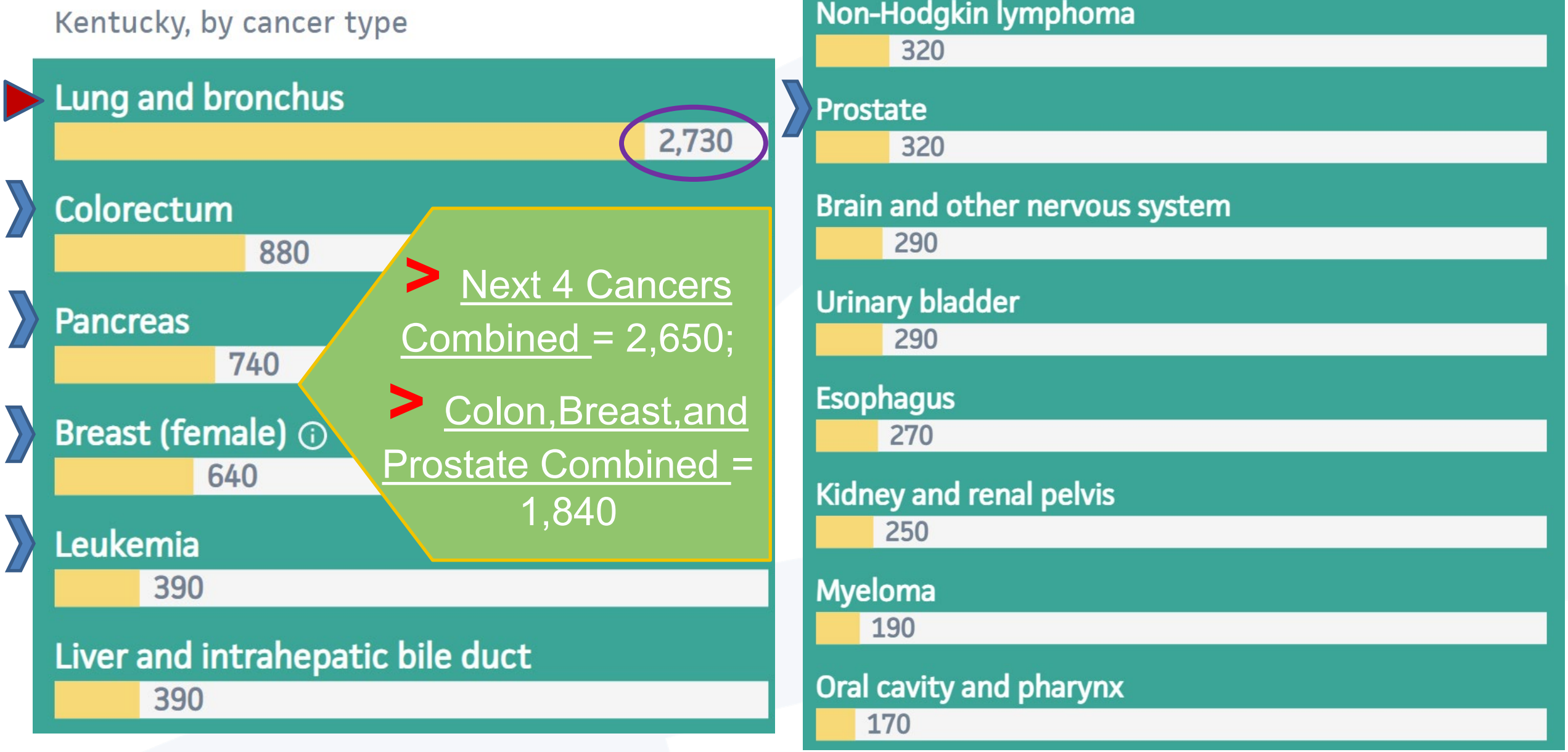
Open in Data Analysis Tool



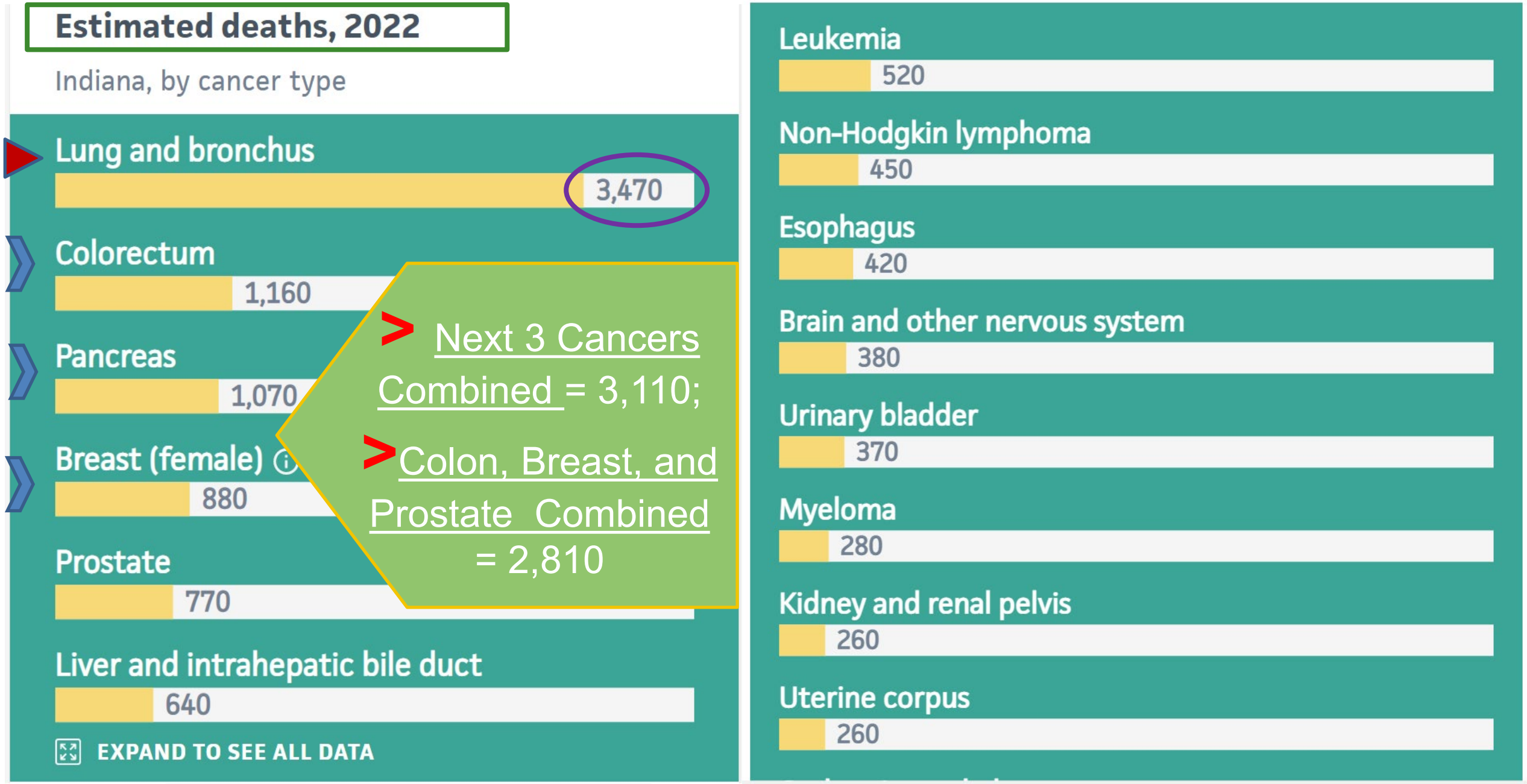


Kentucky, American Cancer Society

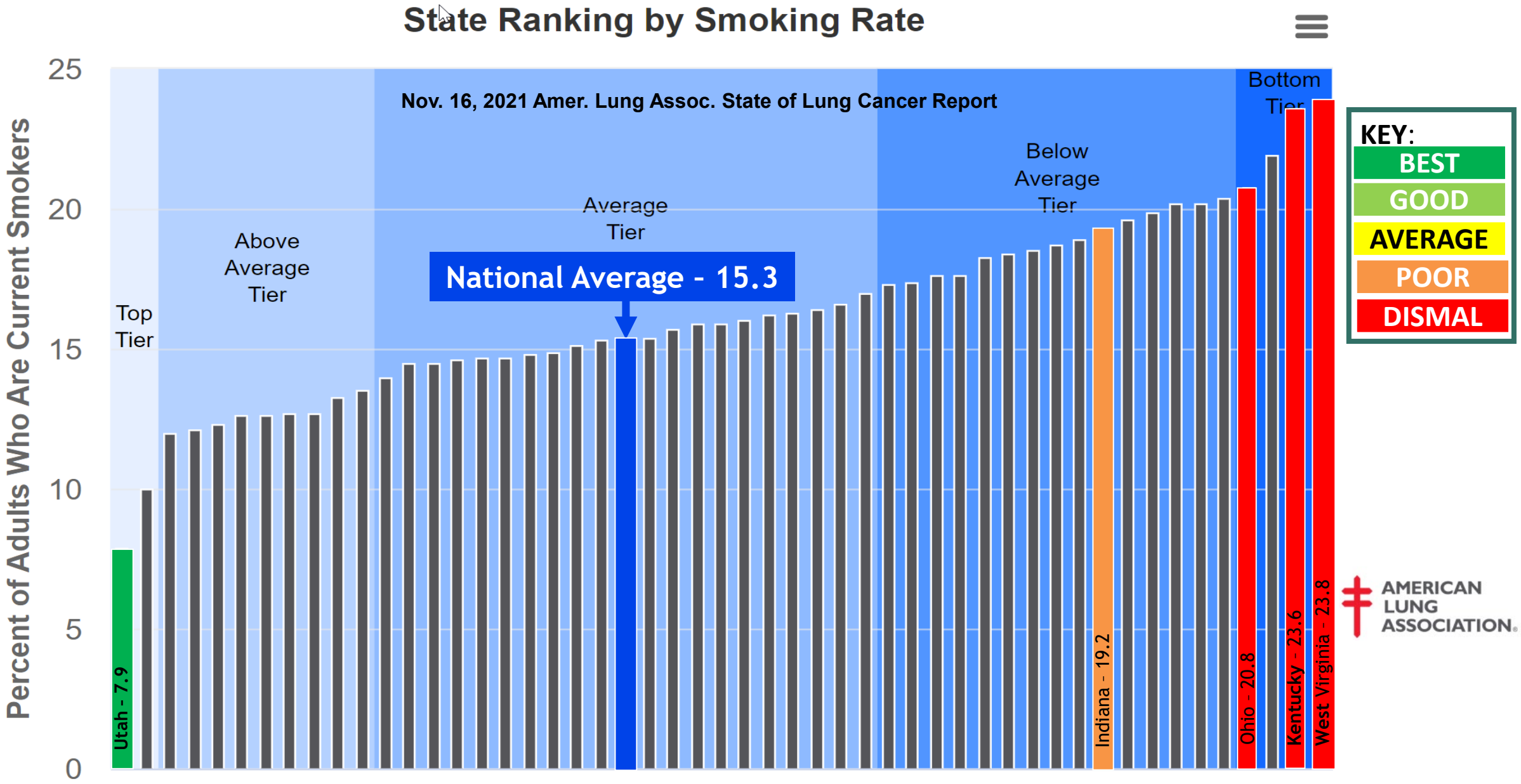
Estimated deaths, 2022



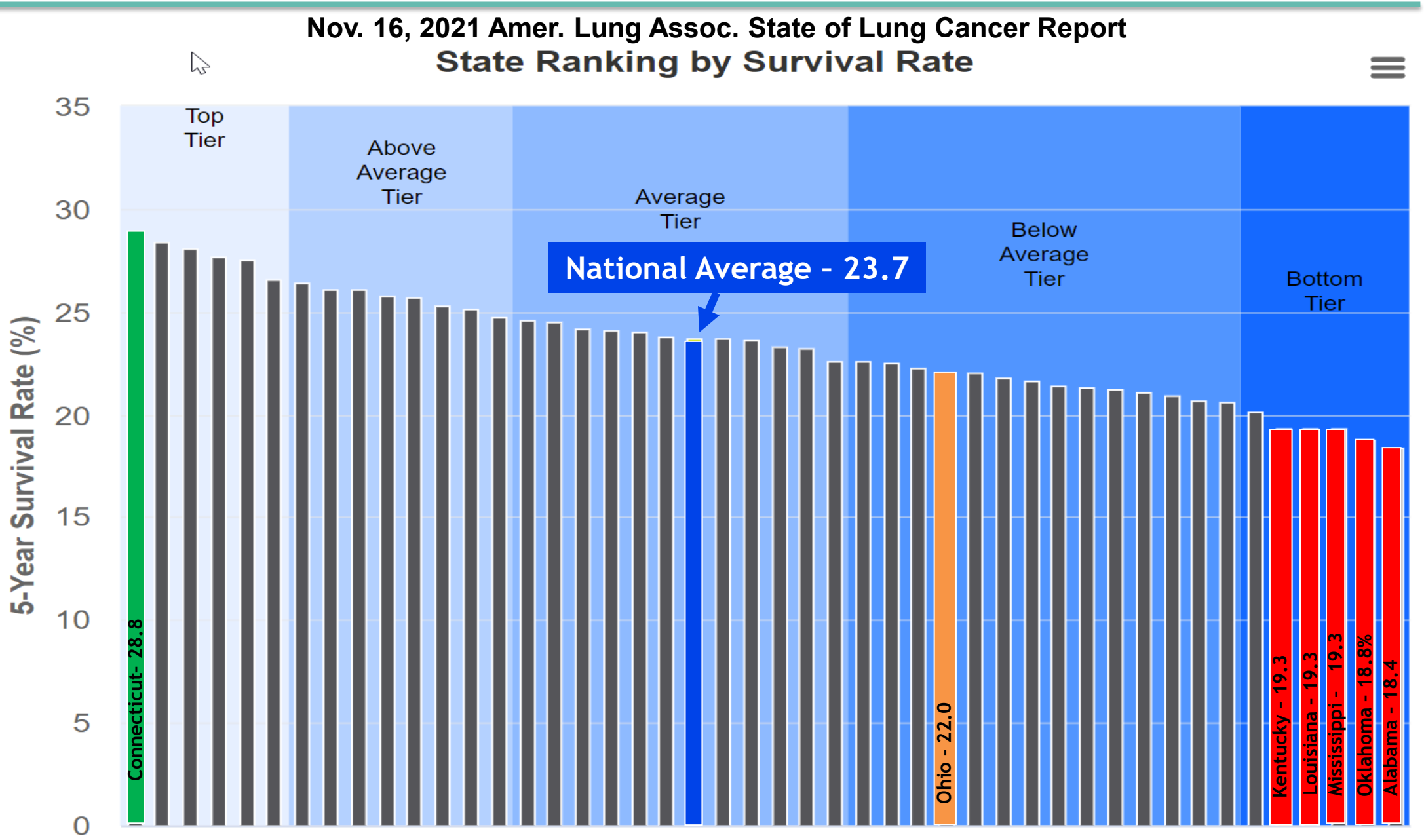
Indiana, American Cancer Society



Smoking Prevalence in the United States



National Lung Cancer 5-Year Survival



AMERICAN LUNG ASSOCIATION.

NLST – NATIONAL LUNG SCREENING TRIAL

LCS Criterion based on the NLST, National Lung Screening Trial, published in the NEJM in August 2011

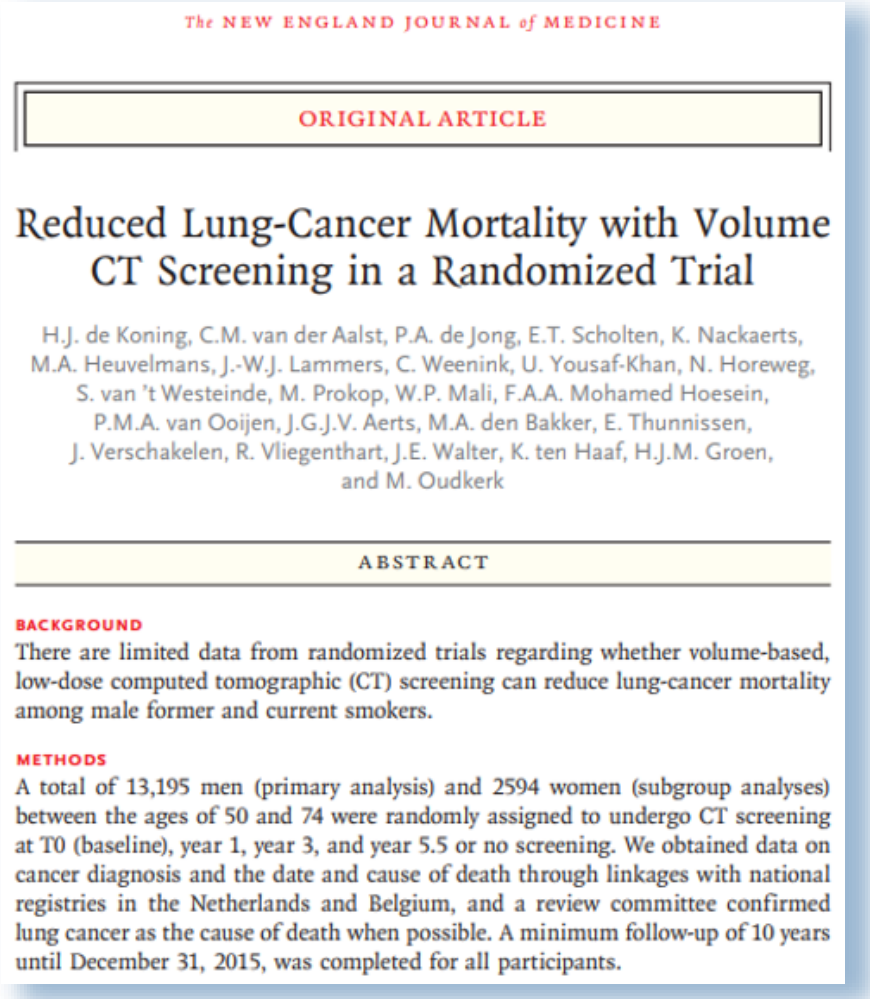
- **Screenings were performed on 53,454 individuals, meeting the high-risk criterion. Largest trial ever funded by NCI (National Cancer Institute)**
- **Data gathered across 33 Medical Centers in the USA**
- **Over a period of about 7 years, a 20% relative reduction in the rate of lung cancer deaths was demonstrated when compared to standard CXRs**
  - ***247 LC deaths/100,000 person-years – LDCT LCS vs.***
  - ***309 LC deaths/100,000 person-years – CXR Cohort***

NELSON – PUBLISHED NEJM JANUARY 29, 2020
NEDERLANDS-LEUVENS LONGKANKER SCREENINGS ONDERZOEK

- 15,822 Participants in Belgium and the Netherlands, aged 50 – 74 yo, randomized
  29,736 scans

- ≥15 cigarettes/day for 25 yr (18.75 PY), or
  ≥10 cigarettes/day for 30 yr (15 PY), and
  Quit < 10 yr ago
  (younger age and lower smoking rate than NLST)

- Randomized: 12/23/2003 – 07/06/2006
  Follow-Up: 12/23/2003 – 12/31/2015



The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Reduced Lung-Cancer Mortality with Volume CT Screening in a Randomized Trial

H.J. de Koning, C.M. van der Aalst, P.A. de Jong, E.T. Scholten, K. Nackaerts, M.A. Heuvelmans, J.-W.J. Lammers, C. Weenink, U. Yousaf-Khan, N. Horeweg, S. van 't Westeinde, M. Prokop, W.P. Mali, F.A.A. Mohamed Hoesein, P.M.A. van Ooijen, J.G.J.V. Aerts, M.A. den Bakker, E. Thunnissen, J. Verschakelen, R. Vliegenthart, J.E. Walter, K. ten Haaf, H.J.M. Groen, and M. Oudkerk

ABSTRACT

BACKGROUND
There are limited data from randomized trials regarding whether volume-based, low-dose computed tomographic (CT) screening can reduce lung-cancer mortality among male former and current smokers.

METHODS
A total of 13,195 men (primary analysis) and 2594 women (subgroup analyses) between the ages of 50 and 74 were randomly assigned to undergo CT screening at T0 (baseline), year 1, year 3, and year 5.5 or no screening. We obtained data on cancer diagnosis and the date and cause of death through linkages with national registries in the Netherlands and Belgium, and a review committee confirmed lung cancer as the cause of death when possible. A minimum follow-up of 10 years until December 31, 2015, was completed for all participants.

NLST AND NELSON – REDUCTION IN MORTALITY

Percent Lung Cancer Mortality Decrease			F:M ratio	50/50 M/F
Trial	Men	Women		
NLST	8%	27%	41/59	18%
NELSON	26%	39 - 61%	16/84	33 - 44%

PL02.05 - Effects of Volume CT Lung Cancer Screening: Mortality Results of the NELSON Randomised-Controlled Population Based Trial

08:45 - 08:55 | Presenting Author(s): Harry J De Koning | Author(s): Carlijn M. Van Der Aalst, Kevin ten Haaf, Matthijs Oudkerk IASLC 9/25/2018

LDCT – THE PATIENT EXPERIENCE

Overall, the entire process takes about 15 minutes or so; the scan itself takes less than 3 minutes

LDCT uses X-rays to scan the entire chest in about 5 to 10 seconds during a single breath-hold. Less than background dose of radiation for 1 yr, 1.3 mSv

The process is performed without needles or contrast/dye

NEW USPSTF RECOMMENDATION – MARCH 9, 2021

U.S. Preventive Services TASK FORCE

St. Elizabeth implemented March 1, 2022

Recommendation Summary

Population	Recommendation	Grade
Adults aged 50 to 80 years who have a 20 pack-year smoking history and currently smoke or have quit within the past 15 years	The USPSTF recommends annual screening for lung cancer with low-dose computed tomography (LDCT) in adults aged 50 to 80 years who have a 20 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.	B

Commercial Insurance payers have 1 year after the USPSTF guidelines are finalized to cover A and B recommendations under the PPACA; year begins after date of insurance contract renewal.

AAFP – GRADE B DECISION – APRIL 6, 2021!

AAFP Updates Recommendation on Lung Cancer Screening

April 6, 2021, 8:44 a.m. News Staff —Less than a month after the U.S. Preventive Services Task Force issued a final recommendation statement on screening for lung cancer with low-dose CT, the Academy has published an updated recommendation on the topic.

Lung Cancer Screening, Adult

Grade: B recommendation

The AAFP supports the United States Preventive Services Task Force (USPSTF) recommendation for annual screening for lung cancer with low-dose computed tomography (LDCT) in adults aged 50 to 80 years who have a 20 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.

The AAFP has reviewed the evidence and has **determined there is sufficient evidence to support a B recommendation for lung cancer screening in adults at increased risk.** However, the AAFP acknowledges that the harms from annual screening with LDCT are not well documented at this time and that there are considerable barriers to screening for lung cancer in the community setting. Future research is needed to determine the harms of annual screening with LDCT including overdiagnosis, unnecessary procedures due to incidental findings, and barriers to care among communities of color. (2021)

5 – Year Surival Rates – 2018 American Cancer Society

5 Year Survival Rate Non Small Cell Lung Cancer (NSCLC)		
Stage	IA1	92%
	IA2	83%
	IA3	77%
	IB	68%
	IIA	60%
	IIB	53%
	IIIA	36%
	IIIB	26%
	IIIC	13%
	IVA	10%
	IVB	< 1%

The numbers below come from thousands of people from all over the world who were diagnosed with NSCLC between 1999 and 2010. Although the numbers are based on people diagnosed several years ago, they are the most recent rates published for the current AJCC (Am Joint Comm. Ca) staging system. Chest, January 2017,Vol. 151, Issue 1, Pages 193-203

5 Year Survival Rate Small Cell Lung Cancer (SCLC)		
Stage	I	31%
	II	19%
	III	8%
	IV	2%

The numbers below are relative survival rates calculated from the National Cancer Institute's SEER database, based on people who were diagnosed with SCLC between 1988 and 2001

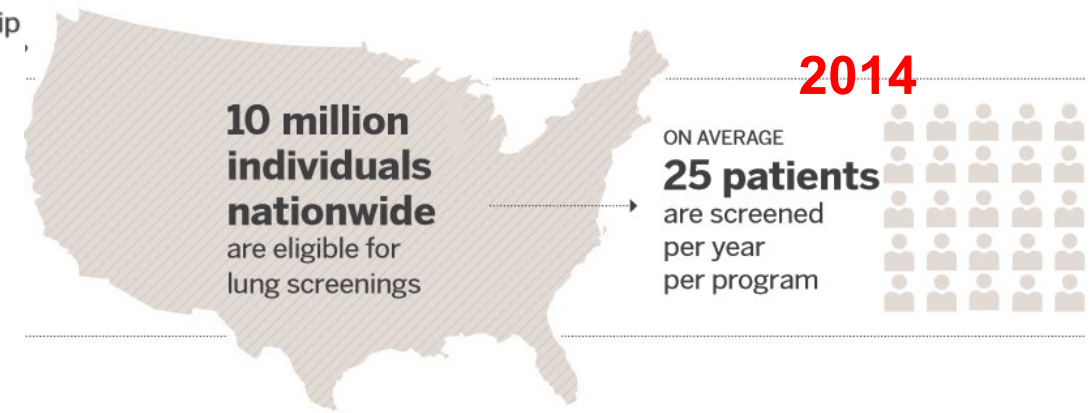
These survival rates are based on the TNM staging system in use at the time, which has since been modified slightly for the latest version. Because of this, the survival numbers may be slightly different for the latest staging system.

Stage Matters!

SO, HOW ARE WE DOING?

The Advisory Board Company | Imaging Performance Partnership and Oncology Roundtable

The estimated <u>population meeting USPSTF criteria</u> for lung cancer screening in 2015 was 8,098,000



A total **1.9%** of more than 7.6 million current and former heavy smokers in the United States underwent lung cancer screening in **2016**
2018 ASCO (Amer Soc Clin Oncol) Annual Meeting

Between 2010 and 2015, rates of LDCT screening in the past year stayed about the same: 3.3% in 2010 and 3.9% in 2015 ($P = .60$). JAMA September 2017

3.9% 2015

In **2015**, among those who met **<u>USPSTF</u>** criteria, **4.4%** (95% CI=3.0%, 6.6%) **Jan. 2019**
American Journal of Preventive Medicine

A total **5.7%** in the United States underwent lung cancer screening in **2019**, ranging from 1.0% in NV to 18.5% MA
Nov. 17, 2020 Amer. Lung Assoc. State of Lung Cancer Report

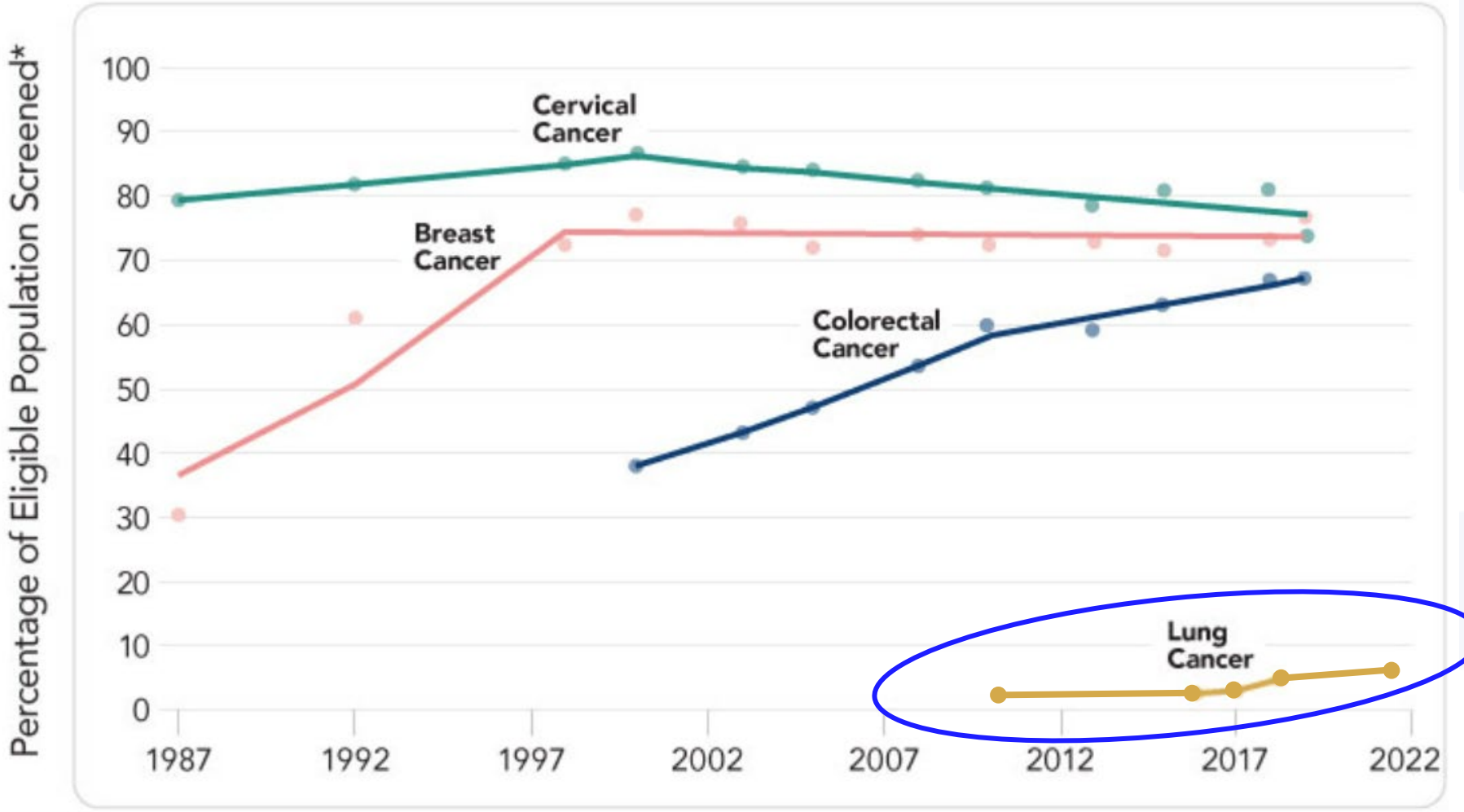
A total **6.5% of 8,510,000** in the United States underwent lung cancer screening in **2020**, ranging from 1.1% in CA to 19.7% MA (USPSTF 2013)
Aug. 3, 2021; Fedewa,Stacey. Chest.doi:10:1016/j.chest.2021.07.030

Up 3.2% in 10 years ☹ !

HISTORICAL PERSPECTIVE – SCREENING RATES FOR THE MAJOR CANCERS

Closing Gaps in Cancer Screening:
Connecting People, Communities, and Systems to Improve Equity and Access

U.S. Cancer Screening Rates

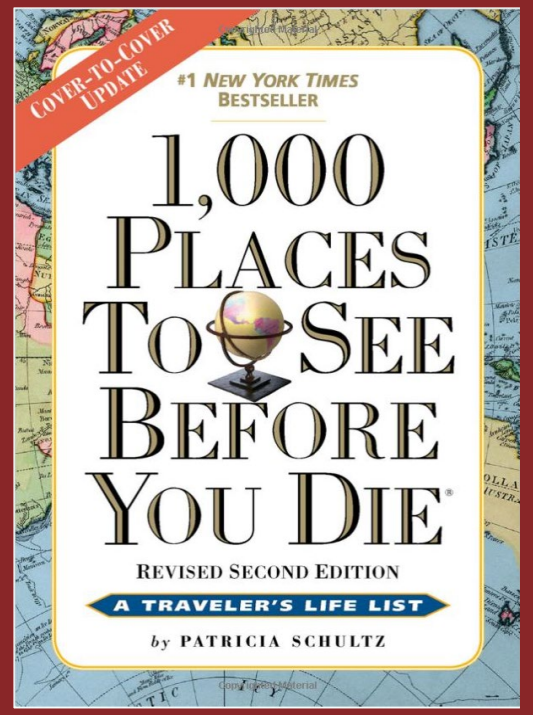


* Currently available screening tests for other types of cancer have not been shown to reduce deaths from those cancers.
Source: Centers for Disease Control and Prevention. Screening tests [Internet]. Atlanta (GA): CDC; [updated 2020 July 29; cited 2021 March 31]. Available from: https://www.cdc.gov/cancer/dcpc/prevention/screening.htm

KENTUCKY DERBY

KENTUCKY Bourbon

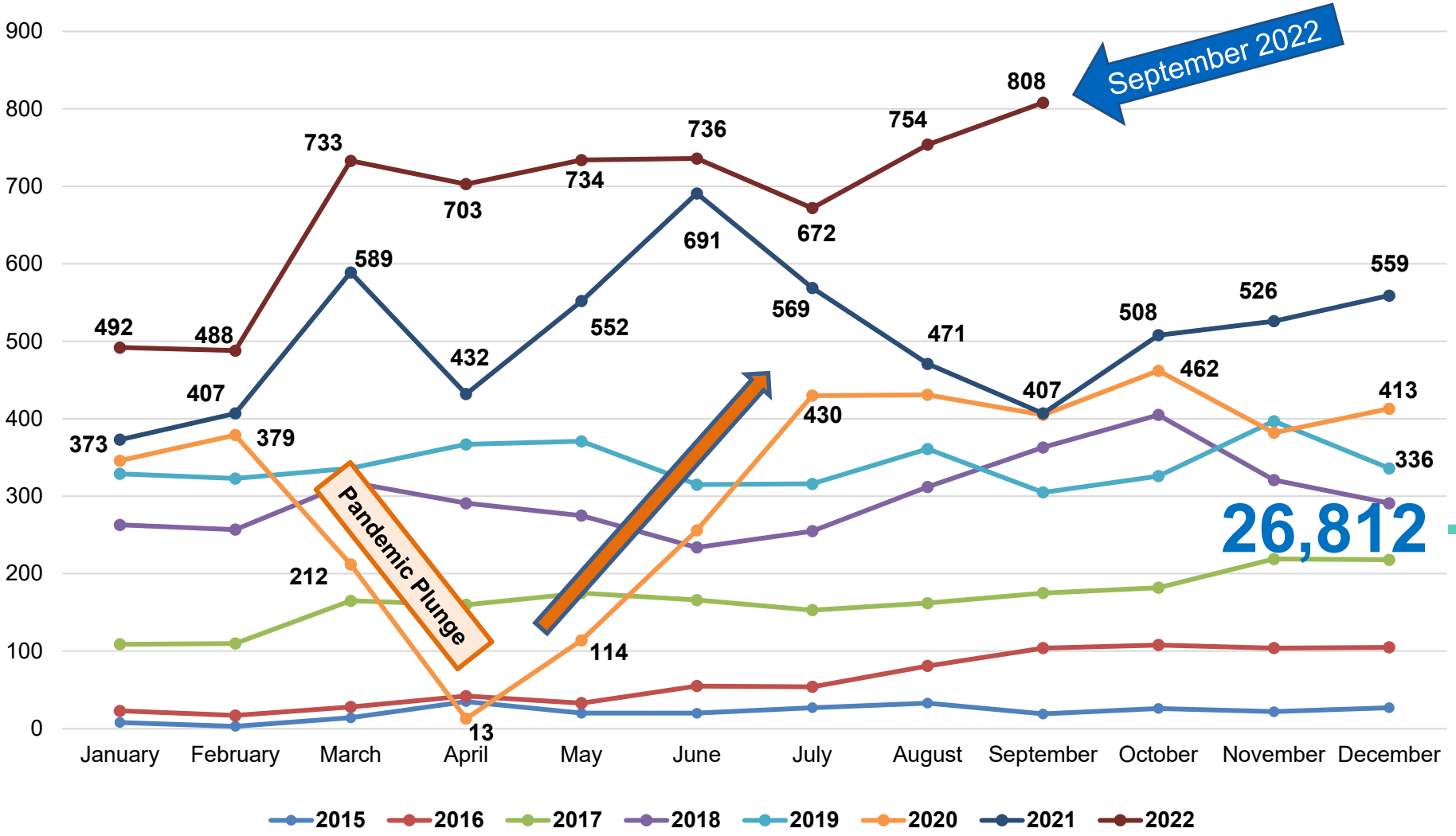
KENTUCKY



The Great Amish Country Auction and Flea Market

TRACKING OUR PROGRESS – THE PATH TO SUCCESS

St. Elizabeth LDCT Screening Volumes (2015 – 2022)



Year	Total LDCT Screening
2013	7
2014	121
2015	252
2016	753
2017	1,965
2018	3,585
2019	4,082
2020*	3,843
2021	6,084
2022 YTD**	6,120

**Methodology to include incident and interval screens starting 2022

*5.81% pandemic reduction 2020 vs. 2019

TRACKING OUR PROGRESS - MILESTONES

St. Elizabeth LDCT Screening Volumes (2015 – 2022)

100th Lung Cancer Identified August 10, 2018

300th Lung Cancer Identified July 1, 2021

400th Lung Cancer Identified August 1, 2022

10,000th LDCT Lung Cancer Screen completed Oct. 22, 2019

20,000th LDCT Lung Cancer Screen completed November 30, 2021

26,812

200th Lung Cancer Identified November 22, 2019

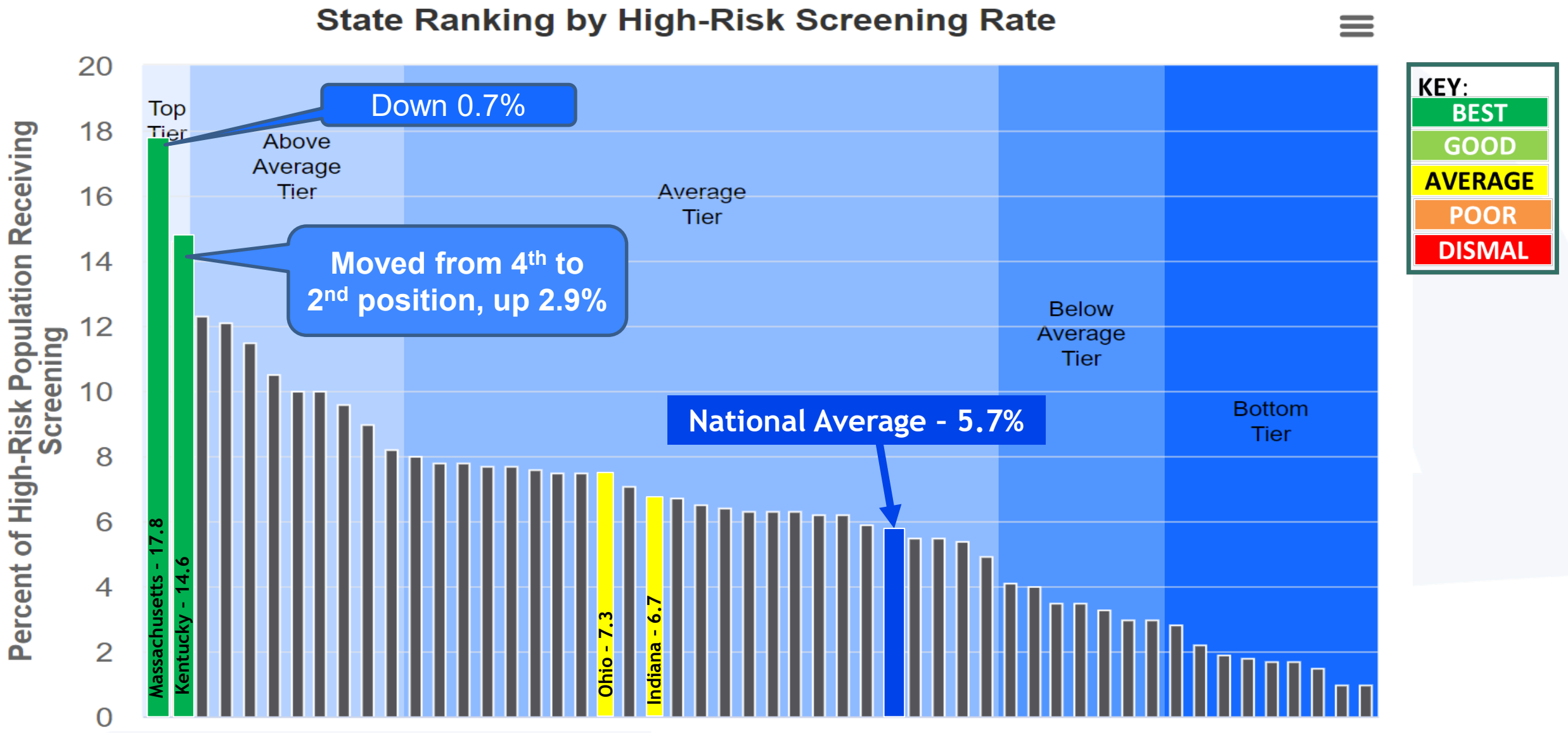
Annualized to 675 LDCT/month

Year	Total LDCT Screening
2013	7
2014	121
2015	252
2016	753
2017	1,965
2018	3,585
2019	4,082
2020*	3,843
2021	6,084
2022 YTD**	6,120

**Methodology to include incident and interval screens starting 2022

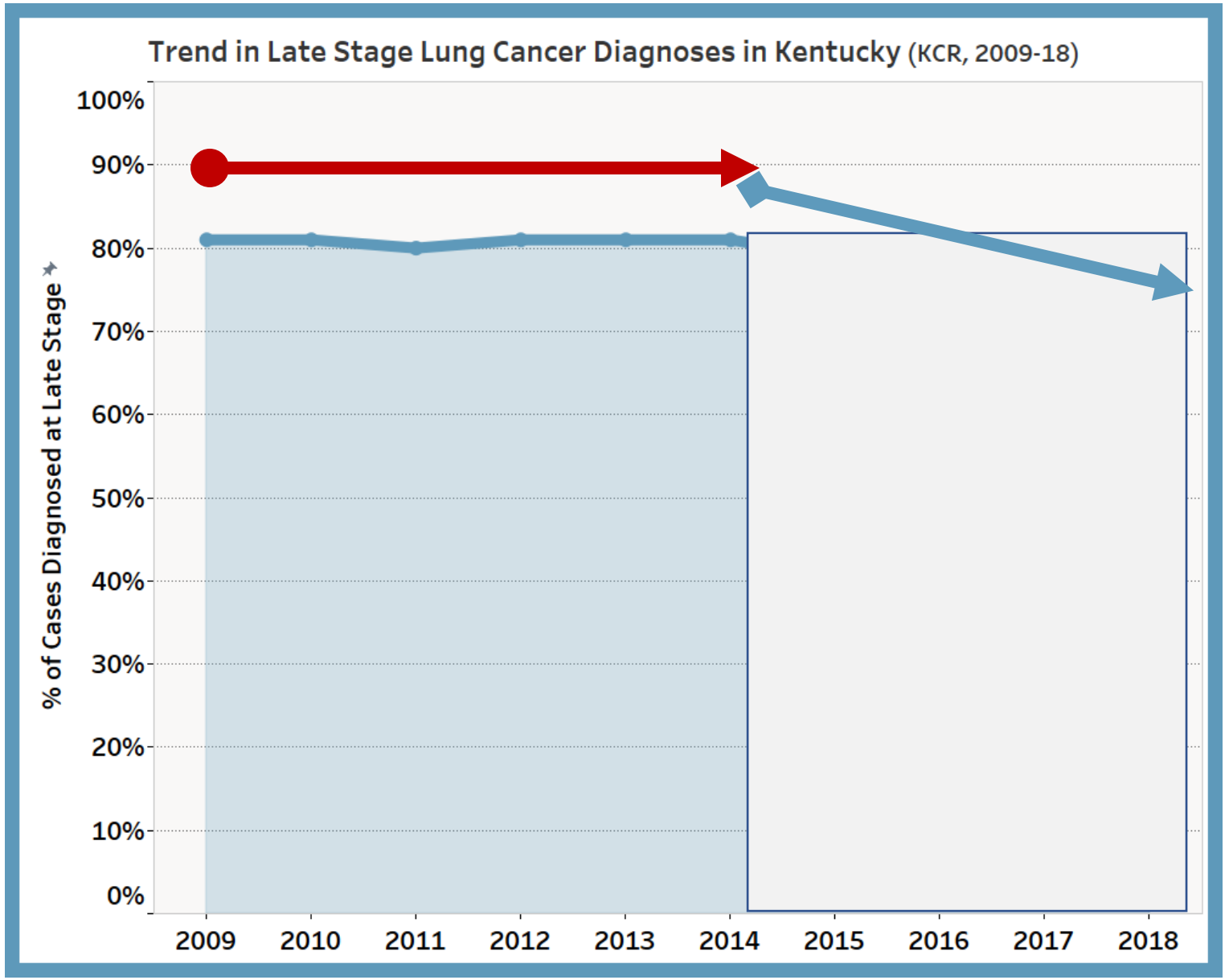
NATIONAL SCREENING RATE

Nov. 16, 2021 Amer. Lung Assoc. State of Lung Cancer Report



Reduction in Late Stage Lung Cancer Diagnoses in Kentucky

- Stable at ~81% from 2009 through 2014
- **Nearly 10% decline from 2014 to 2018!!**



25 Key Components and Best Practices

Leadership and Infrastructure – Build a Team

1. Program Medical **Director, Physician Champion** – paid position

   Ideally a Primary Care Provider; **Promote to Primary Care!**

2. **Administrative** Program Coordinator/**Dyad partner**

   Administrative and Executive support is critical

3. Multi-Disciplinary **Steering Committee**, Team-Based Approach
4. **Tobacco Treatment Program**, and Team
5. Dedicated Screening **Navigator(s),** Coordinators

   The **'glue'** for the program

   Maximize provider buy-in and confidence

POPULATION HEALTH SUPPORT SERVICES (PHSS)

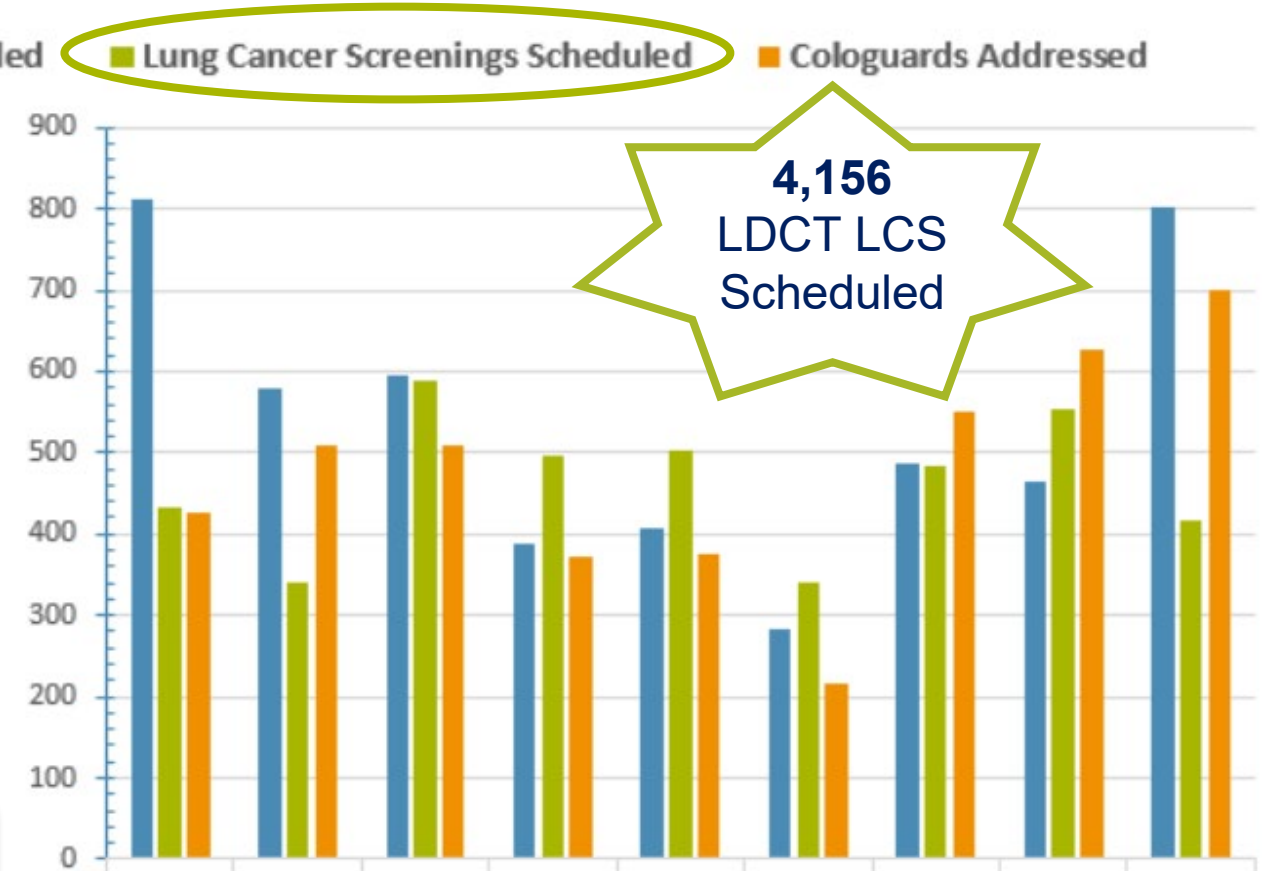
2021 Yearend (started 8/1/21)

Order Completion Totals	
Mammograms:	2,554
LDCT:	1,759
Cologuard:	1,815

Takes ~**180** qualifying patients to move uptake by 1% for attributed patients

November 2022 pilot project to begin contacting 'OVERDUE' patients

Order Completion 2022 YTD OUTSTANDING Orders



	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22
Mammograms Scheduled	813	579	596	388	407	282	487	465	802
Lung Cancer Screenings Scheduled	433	339	590	497	503	340	484	554	416
Cologuards Addressed	425	510	508	373	377	216	549	628	699

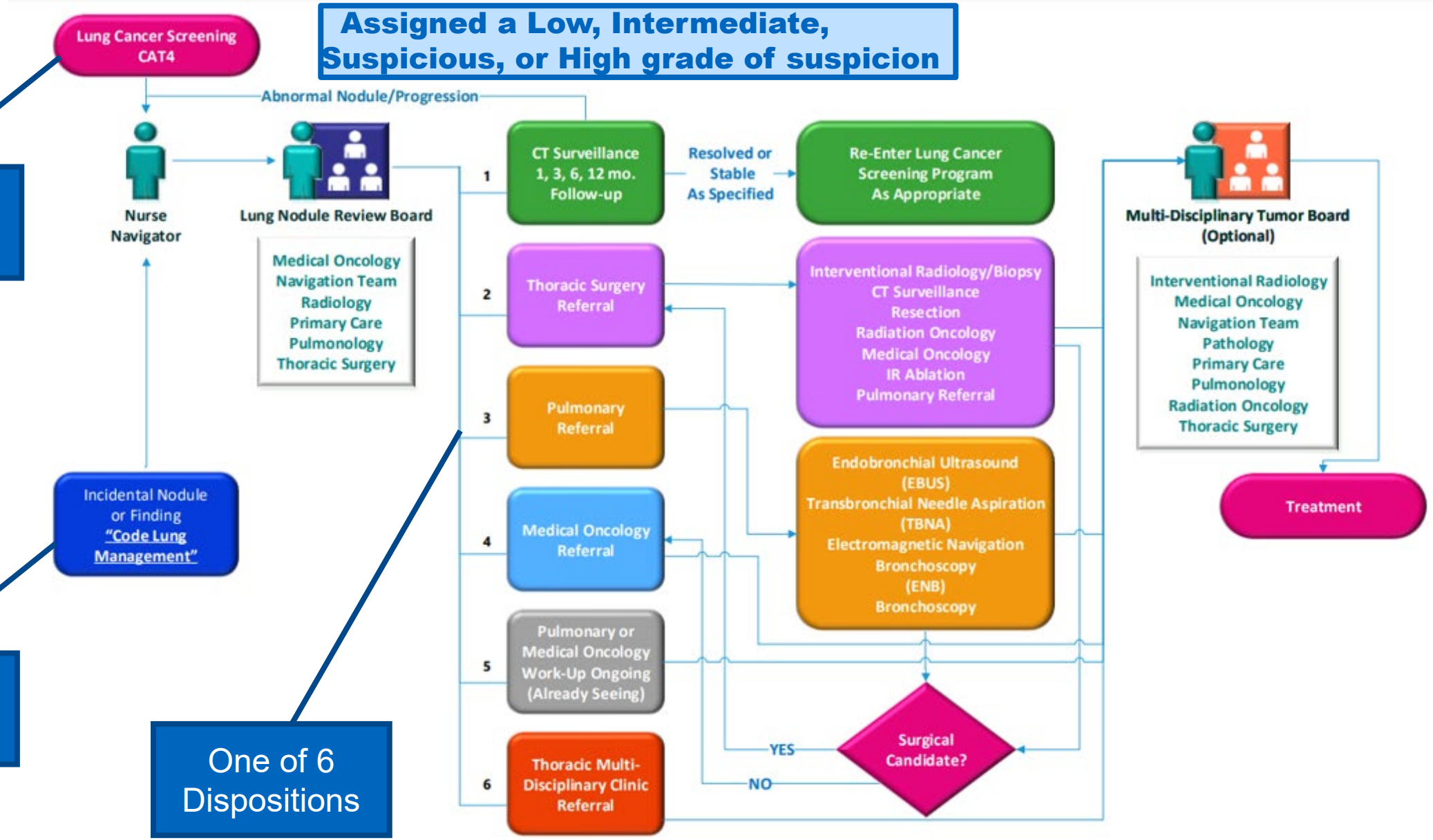
25 Key Components and Best Practices

Physician/Provider, Navigation Expertise

6. Thoracic **Tumor Board**, and
   Thoracic Oncology **Disease Management Team** (TODM)
7. **Structured Reporting**, Lung-RADS (Still mandated by CMS)
8. Multi-Disciplinary **Nodule Review Board** (NRB), **Programmatic approach** to Nodule **Identification, Tracking, and Management**
   - Thoracic Surgery
   - Pulmonology
   - Radiology
   - Navigators
   - Primary Care
   - (Oncology)

Evidence-Based Guidelines, Cost-Effective, Time-Efficient, Reduced Risk

SEHC – THE NRB ALGORITHM – NODULE REVIEW BOARD



All Lung-RADS cat 4

Suspicious Incidental

One of 6 Dispositions

25 Key Components and Best Practices

Accreditation, Registry Participation

9. Accreditation

ACR

GO2 Foundation

a. SCOE or
b. CCCOE

10. Participation in **Registry**, Required and Optional Data Elements (**No longer mandated by CMS, but ideal**)

25 Key Components and Best Practices

EMR Tools and Prompts – Simplify and Encourage

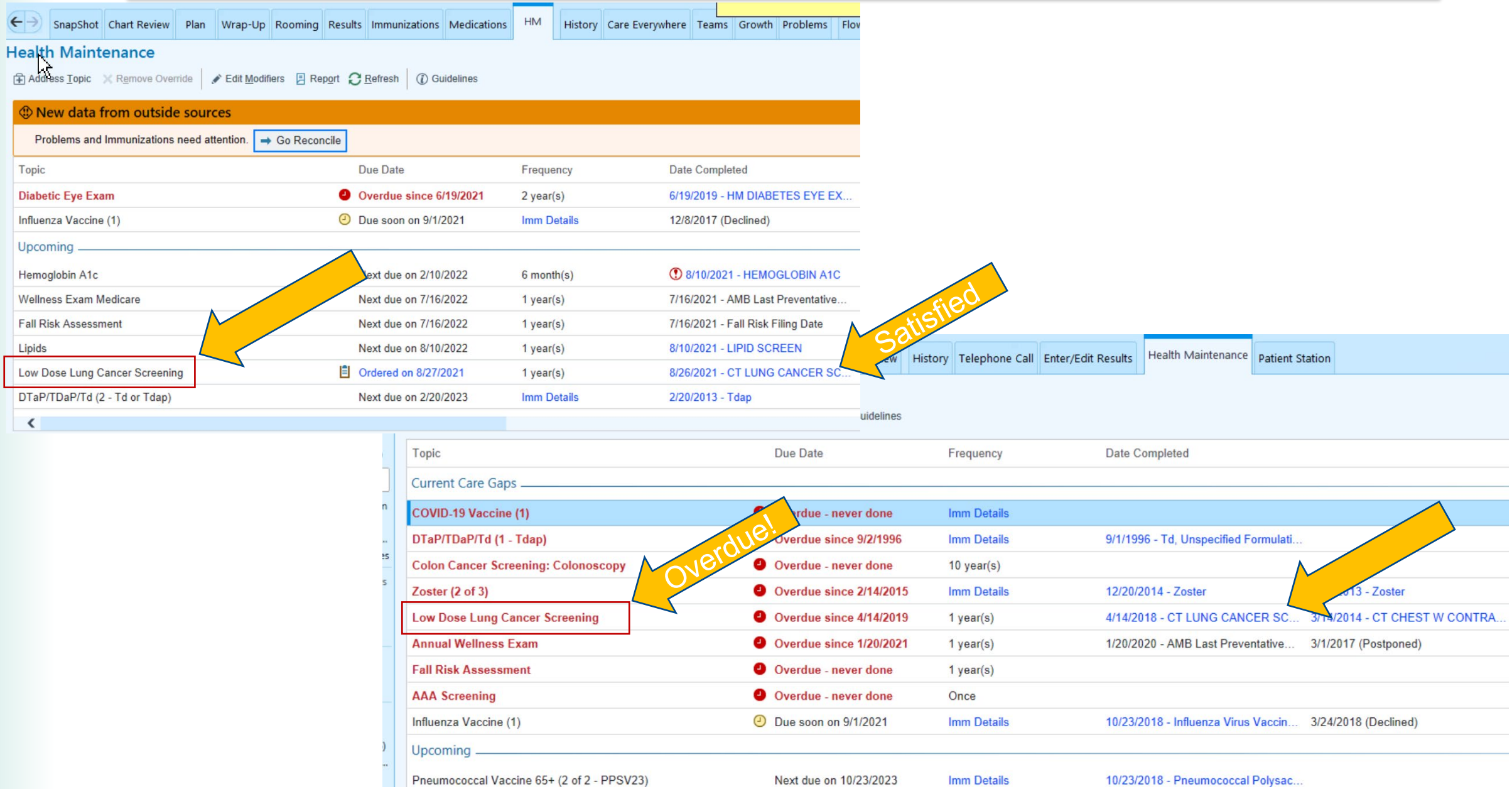
11. **BPA**s
12. Health Maintenance **Prompts**
13. **Other Qualifying** CTs of Chest
14. **Ordering Smart-Set**, SDM made easy, Standardized Progress Note Entry
15. **G0296 Code for SDM** (shared decision making) work
16. Accurate **Smoking History**

PUTTING SOME PIECES TOGETHER

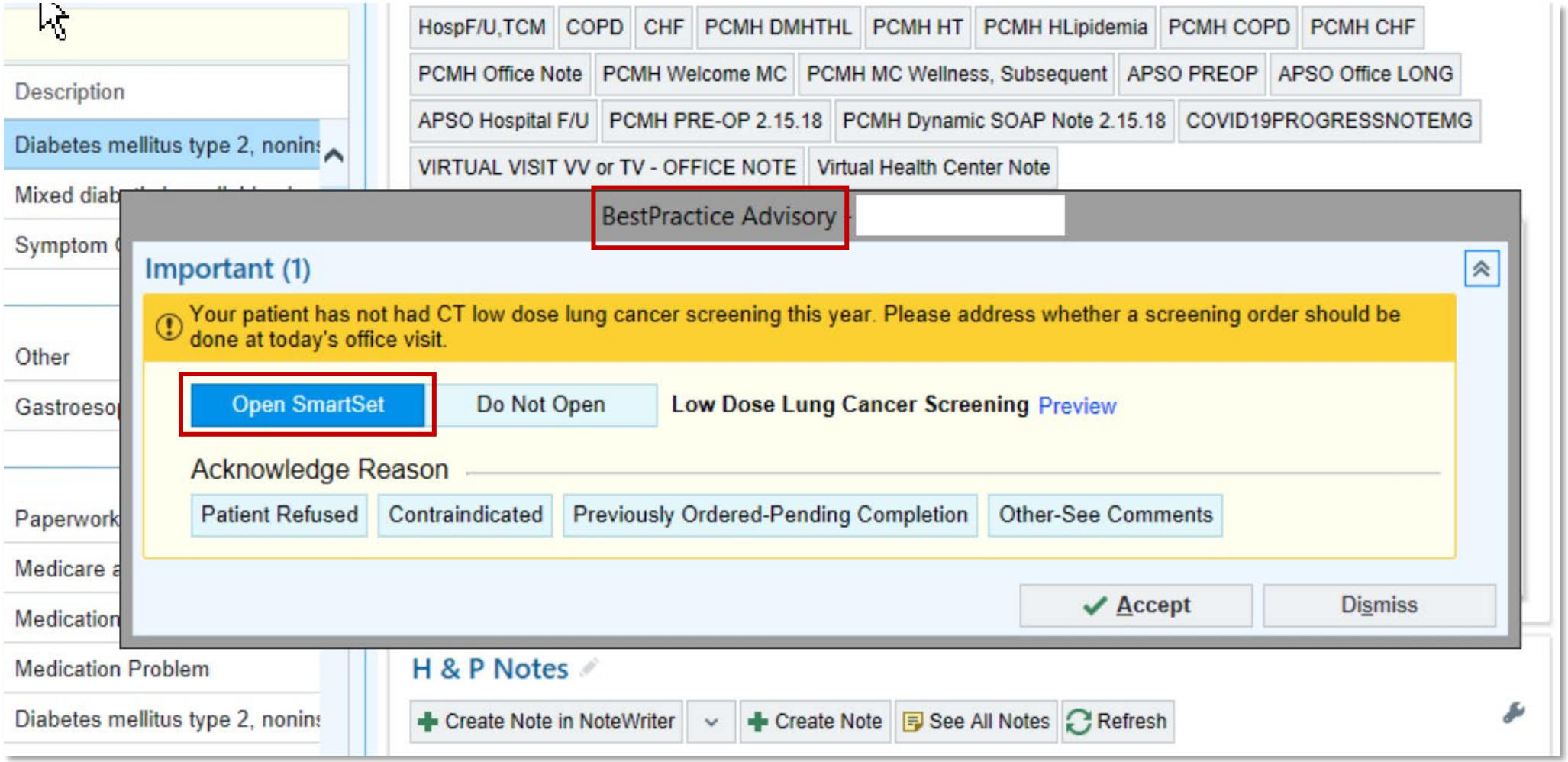
Lowering the barriers!

Tools of the trade

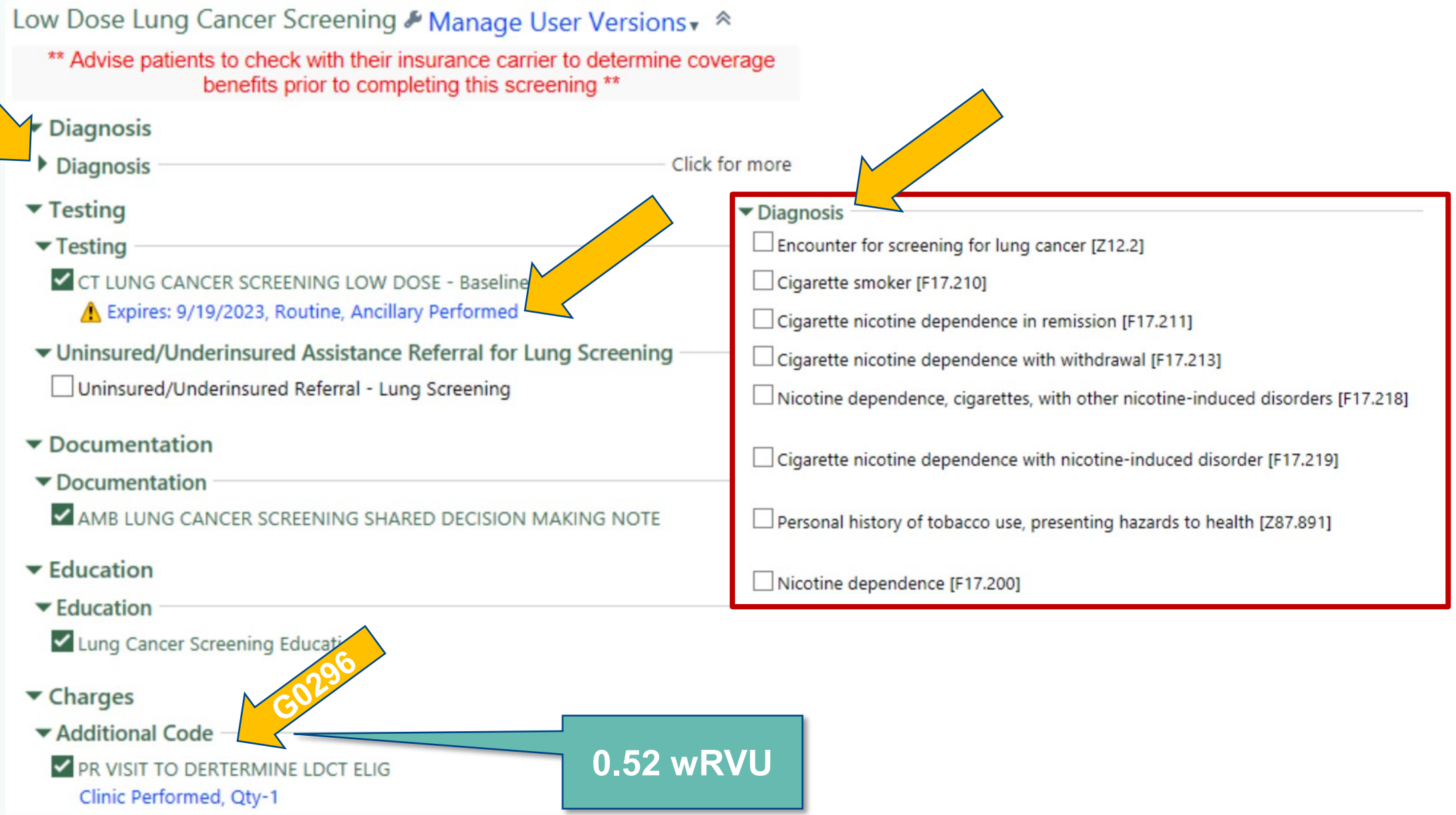
EMR – Health Maintenance Prompt



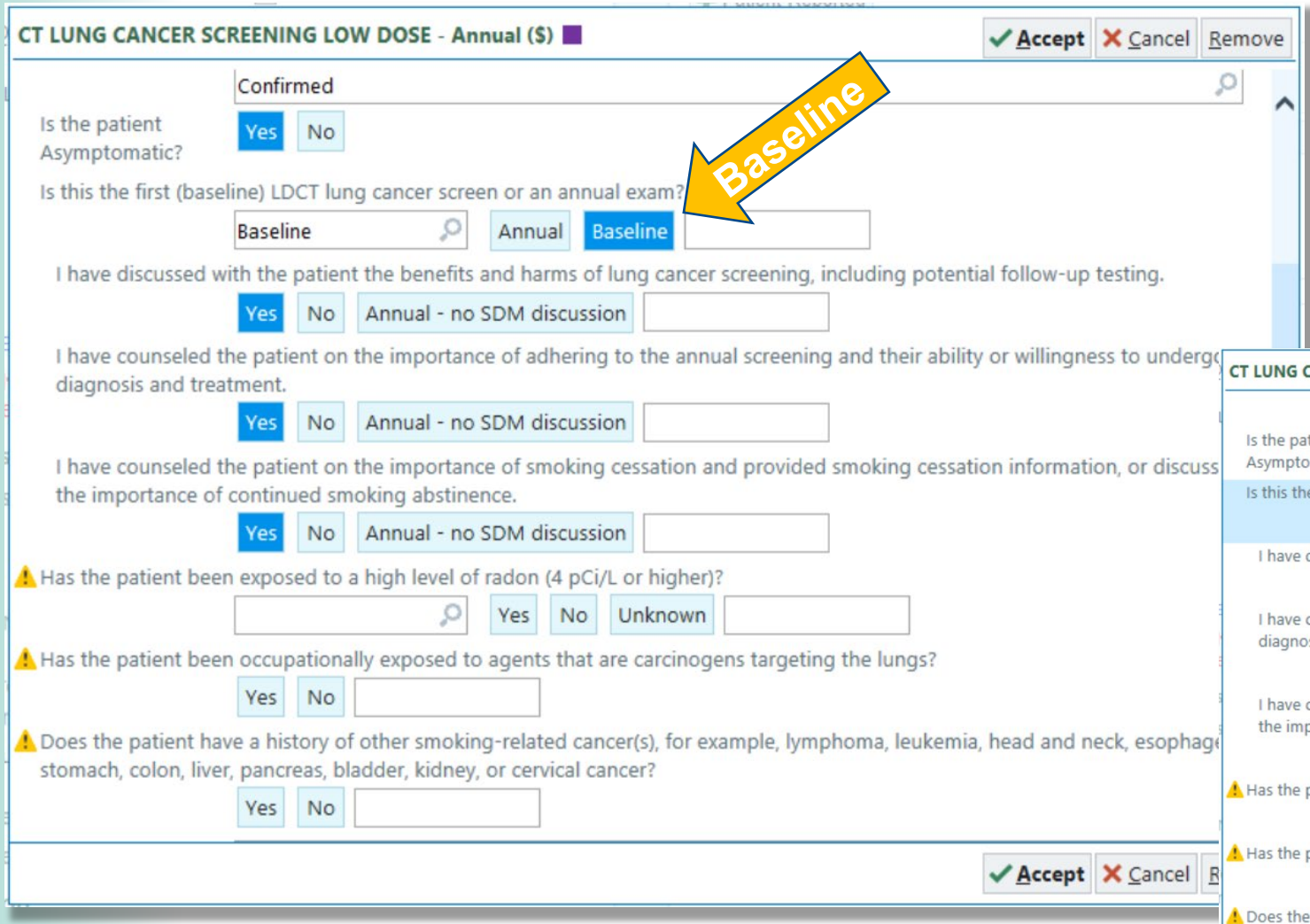
LDCT LCS BPA – Best Practice Alert/Advisory

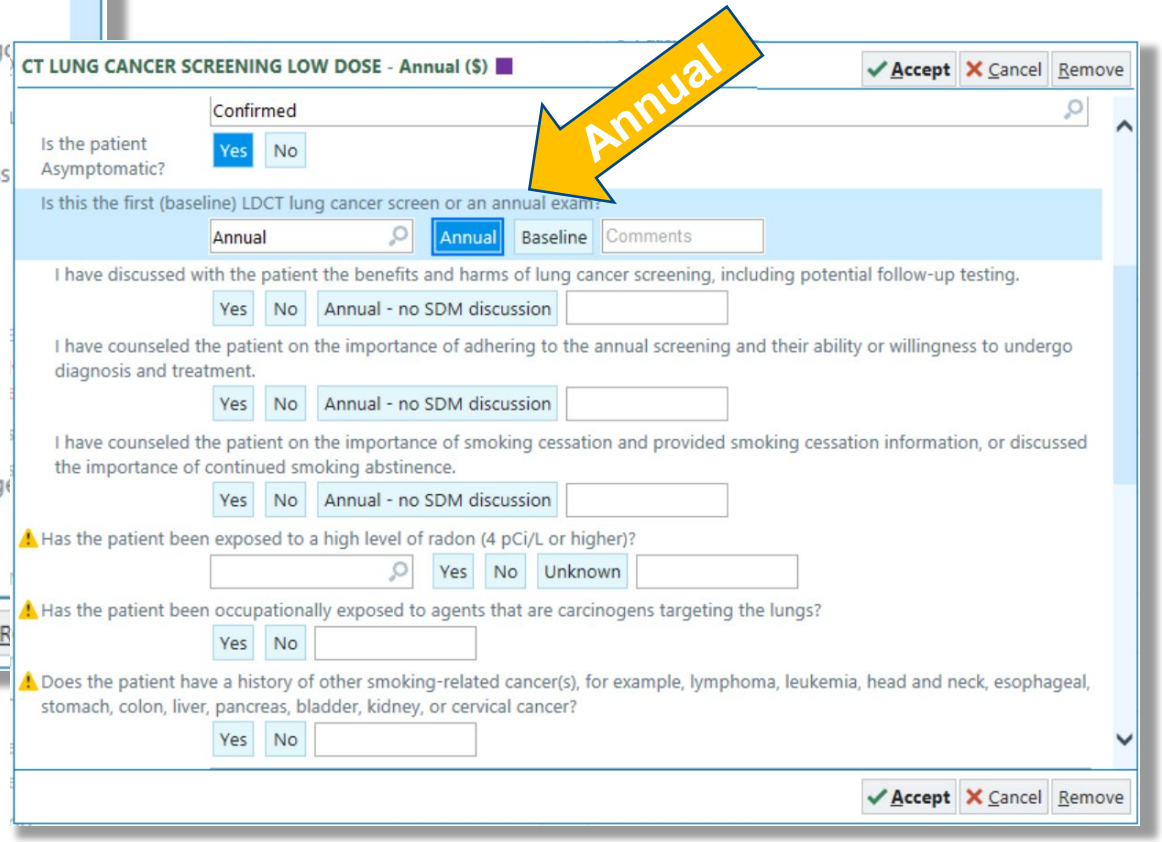


Our LCS EMR SmartSet



OUR LCS EMR SMARTSET, BASELINE OR ANNUAL





EPIC PROGRESS NOTE ENTRY
PROBLEM FOCUSED CHARTING, LDCT SDM COMPONENT

Diagnoses and all orders for this visit:

Needs flu shot
- QUADRIVALENT FLUZONE HIGH DOSF

Chronic anxiety (Chronic)
Overview:
Stable, continue meds, an

Orders:
- clonazePAM (KLONOPIN) 1 mg Oral T
Dispense: 90 Tablet; Refill: 2

Benzodiazepine dependence, continuou
Overview:
Stable, continue meds, an

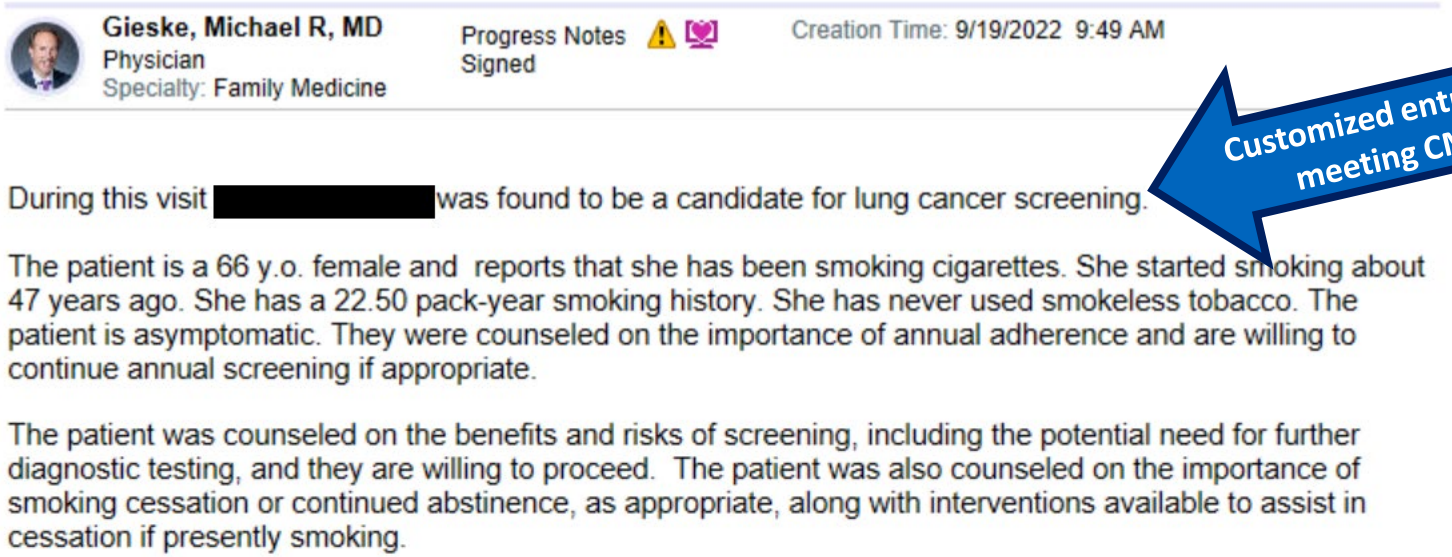
Orders:
- clonazePAM (KLONOPIN) 1 mg Oral T
Dispense: 90 Tablet; Refill: 2

Need for pneumococcal vaccination
- PNEUMOCOCCAL CONJUGATE VACCINE 20 VALENT IM

Screening for osteoporosis
- DX BONE DENSITY AXIAL SKELETON; Future

Postmenopausal
- DX BONE DENSITY AXIAL SKELETON; Future

Nicotine dependence, cigarettes, with other nicotine-induced disorders
- CT LUNG CANCER SCREENING LOW DOSE; Future
- PR VISIT TO DERTERMINE LDCT ELIG



Gieske, Michael R, MD
Physician
Specialty: Family Medicine

Progress Notes
Signed

Creation Time: 9/19/2022 9:49 AM

During this visit [redacted] was found to be a candidate for lung cancer screening.

The patient is a 66 y.o. female and reports that she has been smoking cigarettes. She started smoking about 47 years ago. She has a 22.50 pack-year smoking history. She has never used smokeless tobacco. The patient is asymptomatic. They were counseled on the importance of annual adherence and are willing to continue annual screening if appropriate.

The patient was counseled on the benefits and risks of screening, including the potential need for further diagnostic testing, and they are willing to proceed. The patient was also counseled on the importance of smoking cessation or continued abstinence, as appropriate, along with interventions available to assist in cessation if presently smoking.

Customized entry into progress note, meeting CMS LDCT Criterion

Qualifying diagnosis is added to the Assessment and Plan

Other qualifying Chest CT Codes

CT IMG Codes Meeting CT criterion for Lung Cancer Screening	
IMG Code	**LDCT SCREENING**
IMG10853	LDCT, Low Dose CT Screeening for Lung Cancer
IMG10944	LDCT, Low Dose CT Screeening for Lung Cancer, Maysville
IMG11369	LDCT, RETAIL, Low Dose CT Screeening for Lung Cancer
IMG10913	CT Chest - LDCT Follow-up (CT NAV LCS F/U)
IMG11290	CTChest - LDCT Follow-up (CT NAV LCS F/U), Maysville
IMG Code	**CT Chest - Other Qualifying**
IMG200	CT Chest without contrast
IMG202	CT Chest with contrast
IMG203	CT Chest with and without contrast
IMG206	CT Angiogram Chest with contrast
IMG789	CT Chest, Abd, Pelvis with and without contrast
IMG790	CT Chest, Abd, Pelvis without contrast
IMG1428	CT Chest , Abd, Pelvis with contrast
IMG1664	CT Angiogram Pulmonary, R/O PE
IMG10370	CT Head Neck Chest with contrast
IMG10371	CT Head Neck Chest with and without contrast
IMG10372	CT Head Neck Chest without contrast
IMG10373	CT Head Neck Chest Abdomen with contrast
IMG10374	CT Head Neck Chest Abdomen with and without contrast
IMG10375	CT Head Neck Chest Abdomen without contrast
IMG10376	CT Head Neck Chest Abdomen Pelvis with contrast
IMG10377	CT Head Neck Chest Abdomen Pelvis with and without contrast
IMG10378	CT Head Neck Chest Abdomen Pelvis without contrast
IMG10379	CT Chest Abdomen with contrast
IMG10380	CT Chest Abdomen with and without contrast
IMG10381	CT Chest Abdomen without contrast
IMG10382	CT Neck Chest with contrast
IMG10383	CT Neck Chest with and without contrast
IMG10384	CT Neck Chest without contrast
IMG 10396	HR (high resolution) CT of Chest without contrast
IMG10397	HR (high resolution) CT of Chest with contrast
IMG10538	CT Neck Chest Abdomen Pelvis without contrast
IMG10539	CT Neck Chest Abdomen Pelvis with and without contrast
IMG10540	CT Neck Chest Abdomen Pelvis with contrast
IMG10628	CT Angiogram Chest, Abd Pelvis with contrast
IMG10629	CT Angiogram Chest, Abd with contrast
IMG10855	CT Chest - Superdimensional with contrast
IMG10856	CT Chest - Superdimensional without contrast
IMG10914	CT Chest with Diag Lung F/U
IMG11078	CT Neck Chest Abdomen with and without contrast
IMG11079	CT Neck Chest Abdomen without contrast
IMG11080	CT Neck Chest Abdomen with contrast
IMG11081	IR CT Angiogram of Chest with contrast
IMG11218	CT Chest SN bronchoscopy
IMG11364	CT Trauma Chest Abdomen Pelvis with contrast
IMG11366	CT Chest, Abd, Pelvis with oral, without IV contrast
IMG11386	CT Angiogram Aorta/Chest with contrast

Current smoker = currently smokes any amount even occasionally
Former smoker = if they have quit smoking (does not include those in the process of quitting)

Start Date: should be patient's **very first** start date, not a re-start date

Most current quit date if patient has quit. This will reset the 15 year rule for screenings.

Packs/day: This will be the **average** of how many packs per day when the patient smoked full time. ("I smoked between 1 & 2 packs a day when I smoked all the time" = 1.5)

Type: Needs to be marked cigarettes to qualify for lung cancer screening

Update the years smoked every year if a current smoker.
ie: 2018 = 40 years
2019 = 41 years

If a patient starts smoking again:
- Remove quit date from box
- Do not update start date

To be used for: patients who are weaning down (ie: "pt down to 8 cigarettes a day), using electronic cigarettes, etc. **Do not** include dates for starting and stopping.

Years: Use the calculator to calculate if patient gives you a start date
ie: 2018 – 1966 = 52

25 Key Components and Best Practices

Data Collection, Performance, and Status Reports

17. **PCP Report** – attributed patients

    Site and Provider Specific – shared at least quarterly with providers and management

18. **System Summary and Update** - shared at least quarterly

19. Program **Dashboard/Data** – updated at least monthly

    Compendium of Lung Cancers Found

    Adherence, Uptake

    Stage Migration, Program Statistics, Disparity

    Good ‘HOMEGROWN’ data is invaluable

Tracking Our Progress – SEP Attributed Patients – 2021

Distribution of Lung Cancer Screening per CMS Criteria Eligible & Attributed Patients - By PCP - Yearend 2021
Listed by Percentage of Eligible Patients Captured, Rolling 12 month

Rank	PCP	Measure	Measure Date	Benchmark	Numerator	Denominator	%	Gap/PCP
	SEP per PCP Overall	Screening: Lung Cancer	9/30/2021	> 46.00%	6,184	12,46[illegible]	49.63%	2
1		Screening: Lung Cancer 55	12/31/2021	> 46.00%	34	47	[illegible]	12
2		Screening: Lung Cancer 55	12/31/2021	> 46.00%	5	7	71.43%	2
3		Screening: Lung Cancer 55	12/31/2021	> 46.00%	45	64	70.31%	16
4		Screening: Lung Cancer 55	12/31/2021	> 46.00%	53	76	69.74%	18
5		Screening: Lung Cancer 55	12/31/2021	> 46.00%	81	118	68.64%	27
6		Screening: Lung Cancer 55	12/31/2021	> 46.00%	44	65	67.69%	14
7		Screening: Lung Cancer 55	12/31/2021	> 46.00%	37	55	67.27%	12
8		Screening: Lung Cancer 55	12/31/2021	> 46.00%	46	69	66.67%	14
9		Screening: Lung Cancer 55	12/31/2021	> 46.00%	4	6	66.67%	1
10		Screening: Lung Cancer 55	12/31/2021	> 46.00%	6	9	66.67%	2
11		Screening: Lung Cancer 55	12/31/2021	> 46.00%	17	26	65.38%	5
12		Screening: Lung Cancer 55	12/31/2021	> 46.00%	60	92	65.22%	18
13		Screening: Lung Cancer 55	12/31/2021	> 46.00%	11	17	64.71%	3
14		Screening: Lung Cancer 55	12/31/2021	> 46.00%	38	59	64.41%	11
15		Screening: Lung Cancer 55	12/31/2021	> 46.00%	47	73	64.38%	13
16		Screening: Lung Cancer 55	12/31/2021	> 46.00%	23	36	63.89%	6
17		Screening: Lung Cancer 55	12/31/2021	> 46.00%	23	36	63.89%	6
18		Screening: Lung Cancer 55	12/31/2021	> 46.00%	110	175	62.86%	30
19		Screening: Lung Cancer 55	12/31/2021	> 46.00%	27	43	62.79%	7
		Screening: Lung Cancer 55	12/31/2021	> 46.00%	47	75	62.67%	13
		Screening: Lung Cancer 55	12/31/2021	> 46.00%	35	56	62.50%	9
		Screening: Lung Cancer 55	12/31/2021	> 46.00%	54	87	62.07%	14
		Screening: Lung Cancer 55	12/31/2021	> 46.00%	73	118	61.86%	19
		Screening: Lung Cancer 55	12/31/2021	> 46.00%	16	26	61.54%	4
		Screening: Lung Cancer 55	12/31/2021	> 46.00%	48	78	61.54%	12
		Screening: Lung Cancer 55	12/31/2021	> 46.00%	35	57	61.40%	9
		Screening: Lung Cancer 55	12/31/2021	> 46.00%	21	75	28.00%	-13
		Screening: Lung Cancer 55	12/31/2021	> 46.00%	4	15	26.67%	-3
		Screening: Lung Cancer 55	12/31/2021	> 46.00%	1	4	25.00%	-1
		Screening: Lung Cancer 55	12/31/2021	> 46.00%	1	4	25.00%	-1
		Screening: Lung Cancer 55	12/31/2021	> 46.00%	18	76	23.68%	-17
176		Screening: Lung Cancer 55	12/31/2021	> 46.00%	3	13	23.08%	-3
177		Screening: Lung Cancer 55	12/31/2021	> 46.00%	28	122	22.95%	-28
178		Screening: Lung Cancer 55	12/31/2021	> 46.00%	4	18	22.22%	-4
179		Screening: Lung Cancer 55	12/31/2021	> 46.00%	1	6	16.67%	-2
180		Screening: Lung Cancer 55	12/31/2021	> 46.00%	1	7	14.29%	-2
181		Screening: Lung Cancer 55	12/31/2021	> 46.00%	0	4	0.00%	-2
182		Screening: Lung Cancer 55	12/31/2021	> 46.00%	0	1	0.00%	0
183		Screening: Lung Cancer 55	12/31/2021	> 46.00%	0	2	0.00%	-1
184								
185								
186								
187								
					6,184	12,461		2

The "Hawthorne Effect"

National Average 6.5% of 8.5 million eligible population

Aug.3,2021;Fedewa,Stacey,Chest.doi:10:1016/j.chest.2021.07.030

Ranked by PCP (183)

Presented Quarterly to PCPs, Oncology Team, Management

Tracking Our Progress – SEP Attributed Patients – 2021

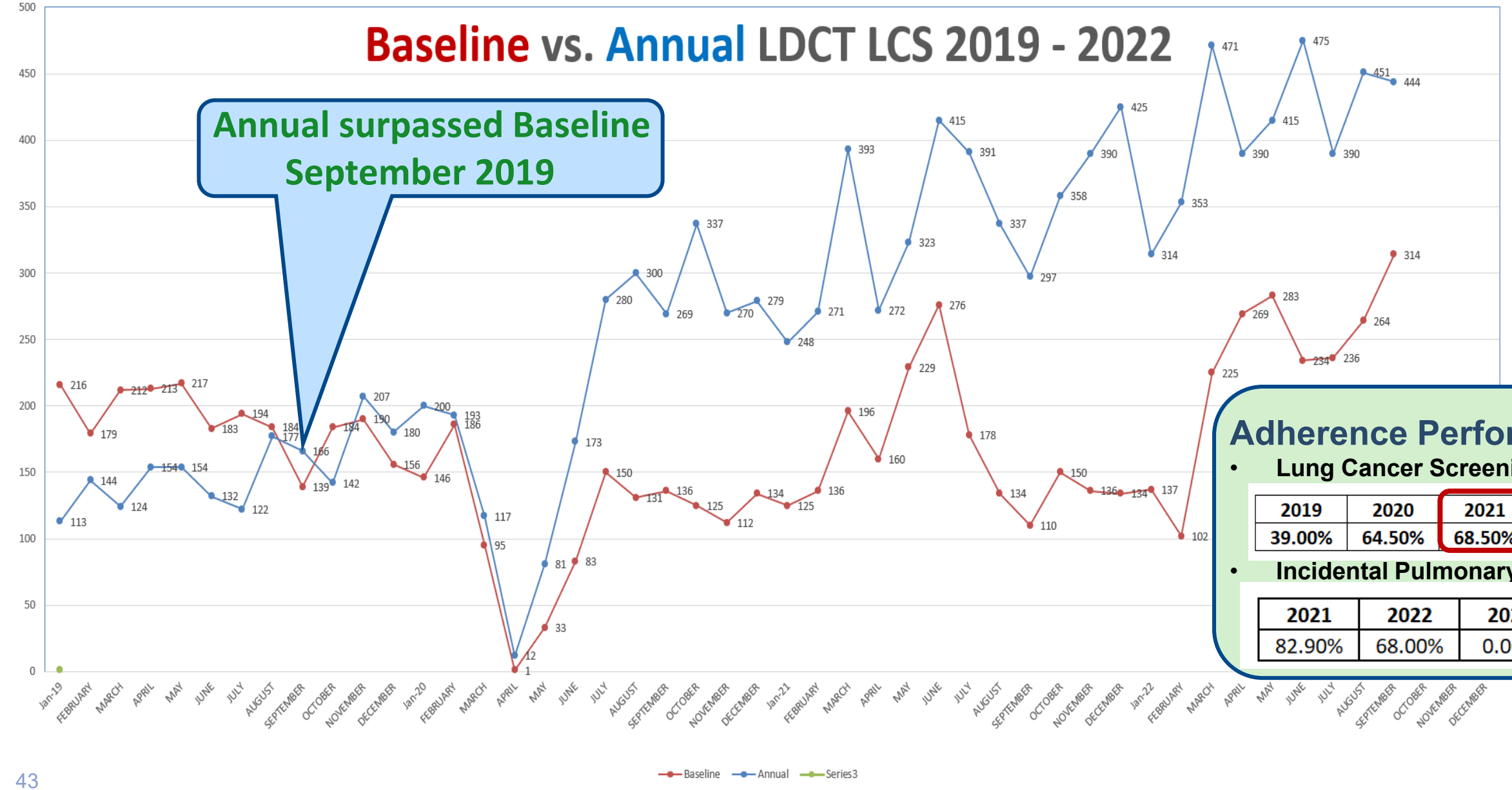
Distribution of Lung Cancer Screening per CMS Criteria Eligible & Attributed Patients - By Practice
2021 Yearend - Listed by Percentage of Eligible Patients Captured

Rank	Department	Metric	Measure Date	Benchmark	Numerator	Denominator	%	Gap/Site
	SEP Site Overall	**Screening: Lung Cancer**	**9/30/2021**	**> 46.00%**	**6,184**	**12,461**	**49.63%**	**11.0**
1	SEP CVH IM/PEDS	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	213	354	60.17%	50
2	SEP HIGHLAND HTS PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	445	769	57.87%	91
3	SEP COVINGTON PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	373	667	55.92%	66
4	SEP WALTON PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	171	308	55.52%	29
5	SEP TAYLOR MILL PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	236	426	55.40%	40
6	SEP CRESTVIEW HILLS IM	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	249	451	55.21%	42
7	SEP SOUTHGATE IM	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	137	249	55.02%	22
8	SEP EDGEWOOD PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	86	158	54.43%	13
9	SEP HEBRON CONNER PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	161	303	53.14%	22
10	SEP FLORENCE EWING PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	205	394	52.03%	24
11	SEP FORT MITCHELL PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	332	639	51.96%	38
12	SEP NPTFTT PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	148	287	51.57%	16
13	SEP FLO TURFWAY PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	356	692	51.45%	38
14	SEP UNION US 42 PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	316	619	51.05%	31
15	SEP CRITTENDEN PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	412	817	50.43%	36
16	SEP AURORA PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	56	112	50.00%	4
17	SEP CONCIERGE MEDICINE	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	1	2	50.00%	0
18	SEP INDEPENDENCE PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	228	460	49.57%	16
19	SEP BURLINGTON PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	116	235	49.36%	8
20	SEP UNION BRISTOW PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	182	374	48.66%	10
21	SEP COVINGTON IM	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	102	212	48.11%	4
22	SEP HEBRON LITTON PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	186	387	48.06%	8
23	SEP BUTLER PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	224	471	47.56%	7
24	SEP LBG WILSON CRK PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	62	132	46.97%	1
25	SEP BRIGHT PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	31	67	46.27%	0
26	SEP EDGEWOOD IM/PEDS	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	6	13	46.15%	0
27	SEP WILLIAMSTOWN PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	146	317	46.06%	0
28	SEP AURORA 107 PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	50	110	45.45%	-1
29	SEP BELLEVUE PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	224	498	44.98%	-5
30	SEP DRY RIDGE PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	215	507	42.41%	-18
31	SEP GREENDALE PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	97	234	41.45%	-11
32	SEP LBG ELM STREET PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	110	291	37.80%	-24
33	SEP ALEXANDRIA PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	174	476	36.55%	-45
34	SEP LBG IM/PEDS	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	17	47	36.17%	-5
35	SEP DILLSBORO NS IM	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	27	77	35.06%	-8
36	SEP LBG STATELINE PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	35	109	32.11%	-15
37	SEP VEVAY PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	15	48	31.25%	-7
38	SEP AT NUCOR	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	2	7	28.57%	-1
39	SEP RISING SUN PC	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	33	117	28.21%	-21
40	SEP AT MUBEA	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	4	18	22.22%	-4
41	SEP BUS HLTH AURORA	Screening: Lung Cancer 55 to 77	12/31/2021	> 46.00%	1	7	14.29%	-2
42								
					6,184	12,461		11.0

Ranked by Site (41)

Q3 2022, annualizing to **51.2% CMS** **46.1% USPSTF**

ADDRESSING AND IMPROVING ADHERENCE



Adherence Performance

- **Lung Cancer Screening**

2019	2020	2021	2022
39.00%	64.50%	68.50%	42.70%

- **Incidental Pulmonary Nodules**

2021	2022	2023
82.90%	68.00%	0.00%

LUNG CANCER COMPENDIUM 2015 – 2022 (DEIDENTIFIED)

YEAR	#	Patient	Sex	MRN	DOB	PY	baseline or annual	# scan Noted	Date Suspicious Scan	CAT	Location, Size	Presented in NRB	Date Diagnosed (biopsy obtained)	Date Diagnosed (pathologist signed)	Type of Cancer			Stage at Diagnosis AJCCa	synchr. Cancer	Status	Work-up, Additional Procedures	Treatment
2021	271	Smith, John	M	0000001	8/16/1954	47	B	1	1/6/2021	4 B	RLL, 11 X 14 mm, with multifocal patchy nodules bilat.	YES	2/2/2021	2/3/2021	NSCLC	adenocarcinoma	a	IV		deceased	2/2/21 IR TTNA + adenoca; 2/22/21 PET multiple mets throughout liver and abd, and throughout both lungs, LN, RLL SUV+ 6.53; CT brain 2/24/21 - neg.;	2/23/21 Kloeker - Considering his restricted mobility and signific difficult for him to tolerate and we are hoping for targeted th
	272	Smith, Mary	F	0000002	2/15/1963	43	B	1	1/13/2021	4 A	L Hilar mass, 2 cm, obstruction LUL bronchus	YES	4/14/2021	4/16/2021	NSCLC	Metastatic adenocarcinoma	a	IV A		alive	4/1/21 PET L hilum SUV 15.8, mult bilat + LN, R acetabulum SUV 9.7; 4/14/21 IR bx R acetabulum; 4/28/21 MRI brain neg.	Plan for 4 cycles of systemic palliative Carboplati consolidative radiation
	273	Jones, George	M	0000003	3/3/1961	40	B	1	1/29/2021	4 B	RUL, apex, 19 x 15 mm, mult other small scattered nodules	YES	7/20/2021	7/20/2021	NSCLC	adenocarcinoma, poorly differentiated, solid and acinar types	a	I A 2		alive	2/23/21 PET RUL +SUV 5.8 isolated; 6/3/21 CT chest WOC stable	7/20/21 RATS RUL wedge, MLN acinar types, 1.5 cm
	274	Mancion, Jorge	M	0000004	3/27/1945	45	A	2	2/1/2021	4 A	LLL, 7 mm - stable; new 7 mm RUL, prev 5 mm, LUL pleural 10 mm	YES	6/4/2021	6/4/2021	NSCLC	Poorly differentiated adenocarcinoma with intestinal immunophenotype	a	III A ?		alive	5/18/21 CT chest WOC - Several pulm nodules present in the R greater than L lung as described above. Interval enlargement and now fully solid appearance of pleural-based nodule at the medial aspect LUL now measuring 11 x 8 mm (previously measuring 11 x 4 mm) compared 2/1/21; 5/26/21 PET RUL 3.2 SUV, R hilum 2.9 SUV	6/4/21 RATS RU invasion
	275	Sineva, Christine	F	0000005	1/8/1946	100	B	1	2/8/2021	4 A	RUL, 1.9 X 1.8 cm, RLL 1 X 0.9	YES	6/24/2021	6/25/2021	NSCLC	Keratinizing squamous cell carcinoma, mod to poorly differentiated	sq	II B		alive	3/4/21 CT chest WOC enlarging RUL 2.8 X 2.8 cm; 6/17/21 PET RUL +SUV 14.7, localized; 6/24/21 EBUS, Super D TBNA RUL +ksq cell	

>40 metrics tracked for every cancer found

SBRT WOTD WTD	Surgery WOTD WTD	Surgery Stage I	Treatment Initiation Date	susp. scan to trtmnt, days	diagnosis to trtmnt, days, biopsy	diagnosis to trtmnt, days, path sign-off	Response	Complications, Adverse events	Miscellaneous	Date of First LCS	Age at First LCS	Age at suspicious scan	Smoking Status at 1st LCS	Smoking Status at Susp Scan	Smoking Status subsequent/ Present	Date Quit, or Current, Deceased	Date of Death
			NA	NA	NA	NA			12/17/19 LDCT LCS ordered, not done; 2/2/21 Biopsy is limited with abundant necrosis and predominantly solid growth pattern. TTF-1(8G7 clone) is positive and P40 is negative confirming the diagnosis.	1/6/2021	66	66	F	F	F	5/5/2020	4/8/2021
			6/8/2021	NA	NA	NA			10/18/19 LDCT LCS ordered, not done; 1/29/20 CT CAP WC - neg; The tumor cells are positive for CK7, and negative for CK20, TTF-1 (2 clones), PAX-8, CDX-2, ER, GATA-3, mammaglobin, WT-1, p40. History of lung mass is noted. The immunostains profile is not specific, but is compatible with lung origin.	1/13/2021	57	57	F	F	F	12/30/2012	
	WOTD	X	7/20/2021	172	0	0				1/29/2021	59	59	S	S	Q	6/15/2021	
			6/4/2021	123	0	0			Based on clinical and radiographic information the tumor is considered and staged as lung primary adenocarcinoma; however, the immunohistochemical profile is not specific and the differential diagnosis includes primary lung adenocarcinoma with intestinal phenotype or metastasis from gastrointestinal/pancreatic origin. Additional upper endoscopy and colonoscopy might be helpful to exclude this possibility. Neg colonoscopy 11/20.	7/31/2020	75	75	F	F	F	1/1/2007	
			021	169	33	32			positive for p40 and negative for TTF-1, confirming the diagnosis of squamous cell carcinoma. CD31 immunostain was performed on block F5 with appropriate controls and highlights tumor invasion of arterial walls, though no tumor is seen in lymphovascular spaces.	2/8/2021	75	75	S	S	Q	4/1/2021	

REGISTRY SUMMARY – THROUGH SEPTEMBER 2022

Analysis of Positive Scans - St. Elizabeth Healthcare --- 1/1/2015 - 2022 YTD

Year	2015	2016	2017	2018	2019	2020	2021	2022	TOTAL	% Scans	False Positive	False Discovery
Total LDCT LC Scr. SCANS	252	753	1965	3585	4082	3843	6084	5767	26331	*	**	***
Tot. # Unique Patients Scanned	237	716	1649	2751	2267	1332	1964	2064	12980			
Annual					1815	2511	4120	3703	12149			
Baseline					2267	1332	1964	2064	7627			
Annual LCS - % of total					44.5%	65.3%	67.7%	64.2%				
Follow-Up/Interval Screens	9	32	100	168	293	286	430	353	1671			
Cat 1	127	457	1164	2194	2312	2284	3630	3248	15416	58.55%		
Cat 2	76	201	506	887	1250	1118	1760	1775	7573	28.76%		
Cat 3 (Indeterminate)	22	47	143	240	250	256	401	411	1770	6.72%		
Cat 4 (Suspicious) - Total	27	48	152	264	270	185	293	320	1559	5.92%	4.38%	73.89%
Cat 4A	16	33	108	186	188	134	230	262	1157	4.39%		
Cat 4B	11	15	44	78	82	45	58	54	387	1.47%		
Cat 4X						6	5	4	15	0.06%		
Cat 3 + Cat 4 - Combined	49	95	295	504	520	441	694	731	3329	12.64%	11.10%	87.77%
Lung Cancer	5	16	37	82	81	51	66	69	407	1.55%	#Lung Cancer Screens to find 1 LC =	64.7
										3.14%	#Unique Patients Screened to find 1 LC =	31.9

Performance of LCSP, Histology - SEHC

Overall Lung Cancer Discovery		
Stage - all yrs	N	%
Stage I	245	58.06%
Stage II	50	11.85%
Stage III	74	17.54%
Stage IV	53	12.56%
Unknown	0	0.00%
Total	422	
Stage I & II	69.9%	

69.9% found in early stages

Average (Mean) PY =	60.5
Median PY =	51.0

Male	216	51.2%
Female	206	48.8%
	422	100%

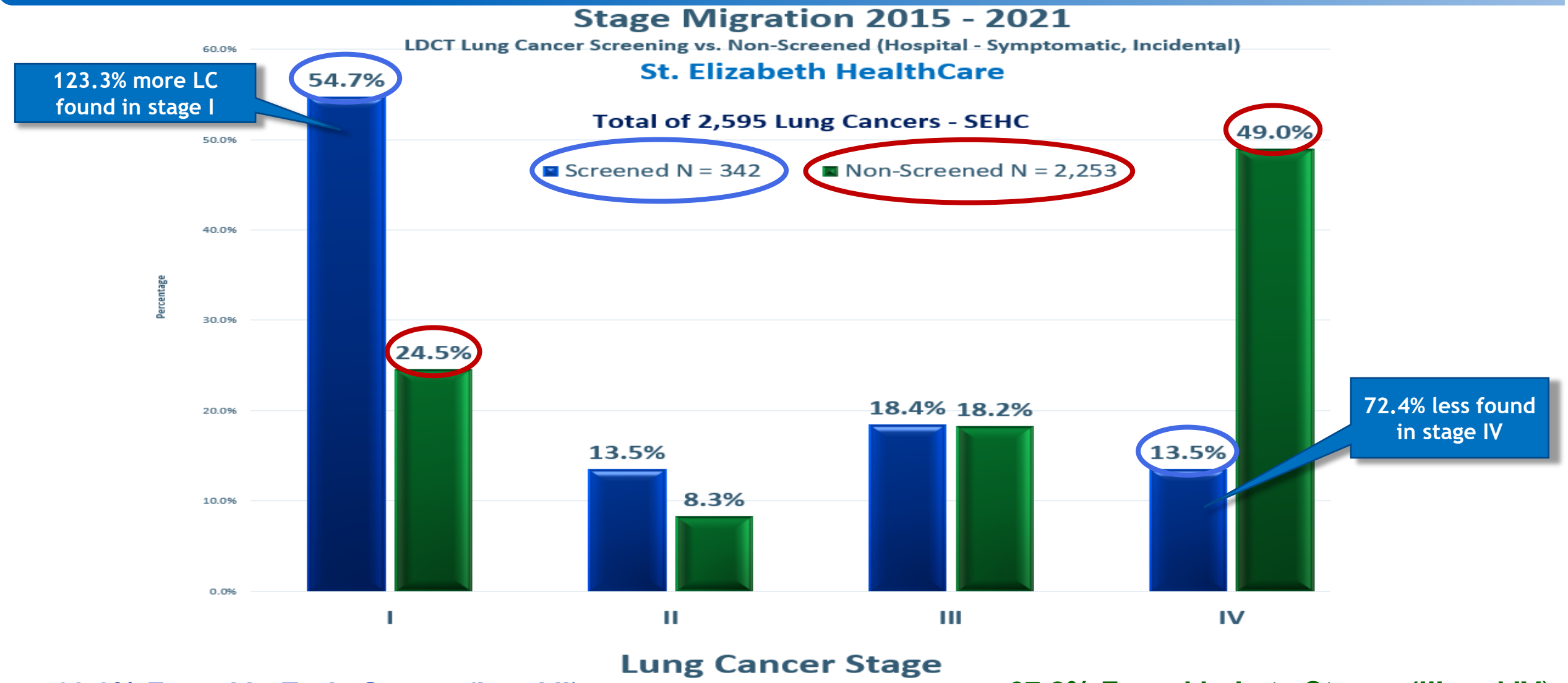
Lung Cancer Type			
Type		N	%
adenocarc.		178	42.2%
squamous		134	31.8%
small cell		48	11.4%
limited	25		
extensive	22		
large cell		9	2.1%
carcinoid		6	1.4%
other		6	1.4%
unknown		41	9.7%
		422	100%

2022 YTD:

Stage I - 75.6%

Early Stage, I & II – 79.1%

STAGE MIGRATION 2015 – 2021
LUNG CANCERS DISCOVERED – 2,595 OVER 7 YEARS

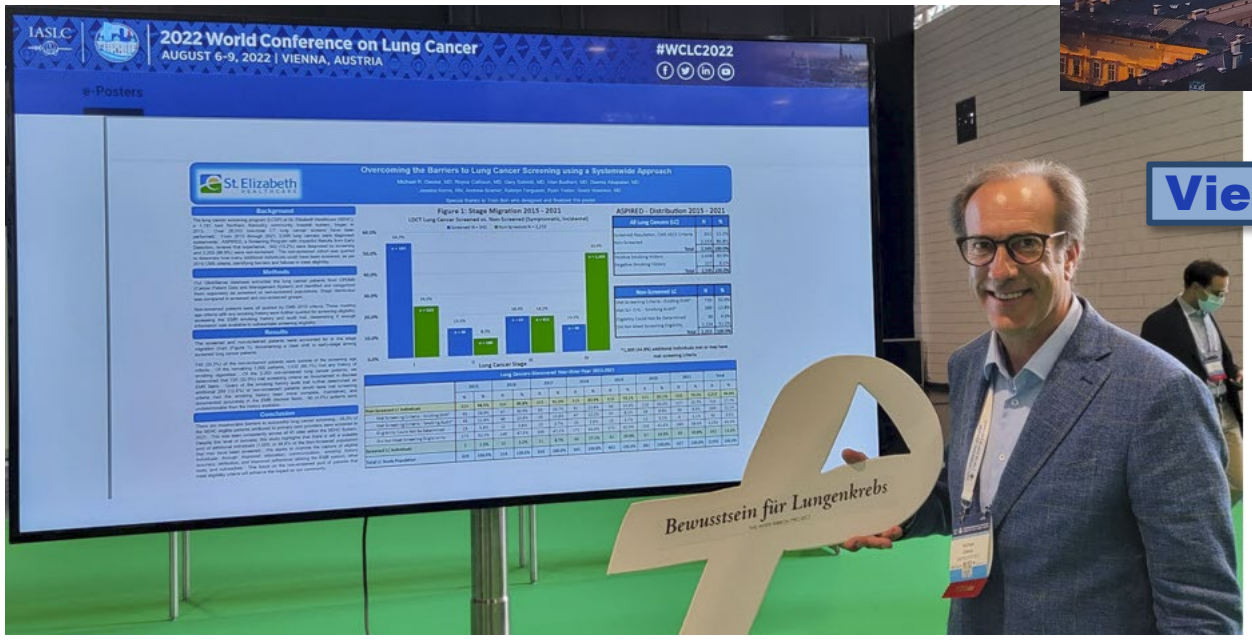


68.2% Found in Early Stages (I and II)
Screened

67.2% Found in Late Stages (III and IV)
Non-Screened

GOING INTERNATIONAL!

Toronto, Canada – WCLC 2018



Vienna, Austria – WCLC 2022

Overcoming the Barriers to Lung Cancer Screening using a Systemwide Approach

Michael R. Gieske, MD, Royce Calhoun, MD, Gary Schmitt, MD, Irfan Budhani, MD, Deema Alkapalan, MD,
Jessica Kerns, RN, Andrew Bramer, Katelyn Ferguson, Ryan Yadav, Goetz Kloecker, MD

Special thanks to Trish Boh who designed and finalized this poster.

Background

The lung cancer screening program (LCSP) at St. Elizabeth Healthcare (SEHC), a 1,191 bed Northern Kentucky community hospital system, began in 2013. Over 26,000 low-dose CT lung cancer screens have been performed. From 2015 through 2021, 2,595 lung cancers were diagnosed systemwide. ASPIRED, a Screening Program with Impactful Results from Early Detection, reviews that experience. 342 (13.2%) were diagnosed by screening and 2,253 (86.8%) were non-screened. The non-screened cohort was queried to determine how many additional individuals could have been screened, as per 2015 CMS criteria, identifying barriers and failures to meet eligibility.

Methods

Our QlickSense database extracted the lung cancer patients from CPDMS (Cancer Patient Data and Management System) and identified and categorized them separately as screened or non-screened populations. Stage distribution was compared in screened and non-screened groups.

Non-screened patients were all queried by CMS 2015 criteria. Those meeting age criteria with any smoking history were further queried for screening eligibility, accessing the EMR smoking history and audit trail, determining if enough information was available to substantiate screening eligibility.

Results

The screened and non-screened patients were accounted for in the stage migration chart (Figure 1), documenting a clear shift to early-stage among screened lung cancer patients.

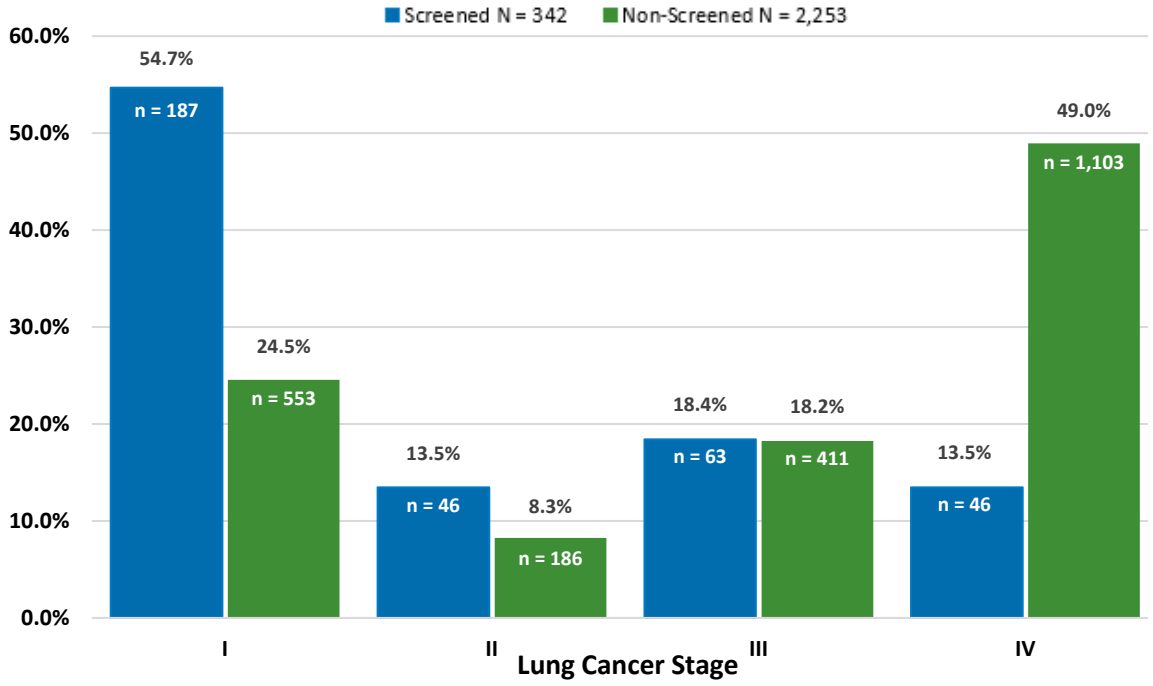
748 (33.2%) of the non-screened patients were outside of the screening age criteria. Of the remaining 1,505 patients, 1,432 (95.1%) had *any* history of smoking cigarettes. Of the 2,253 non-screened lung cancer patients, we determined that 720 (32.0%) met screening criteria as documented in discreet EMR fields. Query of the smoking history audit trail further determined an additional 289 (12.8%) of non-screened) patients would have met screening criteria had the smoking history been more complete, maintained, and documented accurately in the EMR discreet fields. 90 (4.0%) patients were undeterminable from the history available.

Conclusion

There are innumerable barriers to successful lung cancer screening. 49.3% of the SEHC eligible patients attributed to primary care providers were screened in 2021. This was seen consistently across all 41 sites within the SEHC System. Despite this level of success, this study highlights that there is still a sizeable pool of additional individuals (1,009, or 44.8% of the Non-Screened population) that may have been screened. We aspire to improve the capture of eligible individuals through improved education, communication, smoking history accuracy, attribution, and improved adherence utilizing the EMR system, other tools, and outreaches. This focus on the non-screened pool of patients that meet eligibility criteria will enhance the impact on our community.

Figure 1: Stage Migration 2015 - 2021

LDCT Lung Cancer Screened vs. Non-Screened (Symptomatic, Incidental)



ASPIRED - Distribution 2015 - 2021

All Lung Cancers (LC)	N	%
Screened Population, CMS 2015 Criteria	342	13.2%
Non-Screened	2,253	86.8%
Total	2,595	100.0%
Positive Smoking History	2,438	93.9%
Negative Smoking History	157	6.1%
Total	2,595	100.0%

Non-Screened LC	N	%
Met Screening Criteria - Existing EMR*	720	32.0%
Met Scr. Crit. - Smoking Audit*	289	12.8%
Eligibility Could Not Be Determined	90	4.0%
Did Not Meet Screening Eligibility	1,154	51.2%
Total	2,253	100.0%

*1,009 (44.8%) additional individuals met or may have met screening criteria

Lung Cancers Discovered Year-Over-Year 2015-2021

	2015		2016		2017		2018		2019		2020		2021		Total	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Non-Screened LC Individuals	324	**98.5%**	304	**96.8%**	325	**91.3%**	319	**82.9%**	318	**79.1%**	325	**85.1%**	338	**79.2%**	**2,253**	**86.8%**
Met Screening Criteria - Existing EMR*	95	28.9%	97	30.9%	95	26.7%	91	23.6%	99	24.6%	116	30.4%	127	29.7%	720	27.7%
Met Screening Criteria - Smoking Audit*	38	11.6%	46	14.6%	49	13.8%	47	12.2%	33	8.2%	38	9.9%	38	8.9%	289	11.1%
Eligibility Could Not Be Determined	19	5.8%	12	3.8%	13	3.7%	10	2.6%	15	3.7%	12	3.1%	9	2.1%	90	3.5%
Did Not Meet Screening Eligibility	172	52.3%	149	47.5%	168	47.2%	171	44.4%	171	42.5%	159	41.6%	164	38.4%	1,154	44.5%
Screened LC Individuals	5	**1.5%**	10	**3.2%**	31	**8.7%**	66	**17.1%**	84	**20.9%**	57	**14.9%**	89	**20.8%**	342	**13.2%**
Total LC Study Population	**329**	**100.0%**	**314**	**100.0%**	**356**	**100.0%**	**385**	**100.0%**	**402**	**100.0%**	**382**	**100.0%**	**427**	**100.0%**	**2,595**	**100.0%**

25 Key Components and Best Practices

Other

20. **Communicate, Educate**; Reduce Nihilism/Stigma
    a) Providers
    b) Community, Patients, Community Partners, Public Awareness
    c) Executives, Management, Associates
    d) Marketing
    e) Smoking History!
21. Demonstrate and refine **ROI** – FFS & Value-Based Care
22. **IPNP**, IPN Software
23. Participate **State-Based Initiatives**
24. National Organizations, **Advocacy**, Patient Testimonials
25. **Innovate, Evolve, Research, Policy**

LDCT LCS BROCHURE, ...A SDM AIDE

Once my test is completed, how do I get results?

- Most of the area physicians are now connected electronically with the hospital.
- Once the low-dose CT lung cancer screen is interpreted, the results will go straight to your physician.
- You will receive a result letter or be contacted by one of our nurse navigators. If you have any questions or concerns regarding your letter, please call our Lung Screening Nurse Navigator at (859) 301-4072.

Freedom from Smoking

Freedom from Smoking is a FREE 7-week tobacco cessation program developed by the American Lung Association and offered to you by St. Elizabeth Healthcare. The program is designed to help you, the nicotine dependent adult, develop a plan of action that leads to your quit day. The program gives you options, resources and support to quit for good as well as the support you need to remain smoke free for life.

For more information or to register for the next session, please call (859) 301-5570.

Available Locations

Testing is available at any of our eight American College of Radiology (ACR) or GO2 Care Continuum Center of Excellence (GO2 CCCOE) accredited convenient locations:

- Covington
- Dearborn
- Edgewood
- Florence
- Ft. Thomas
- Grant County
- Hebron
- Owen County

Once you have an order, please call Central Scheduling (859) 655-7400.

DESIGNATED Lung Cancer Screening Center — AMERICAN COLLEGE OF RADIOLOGY

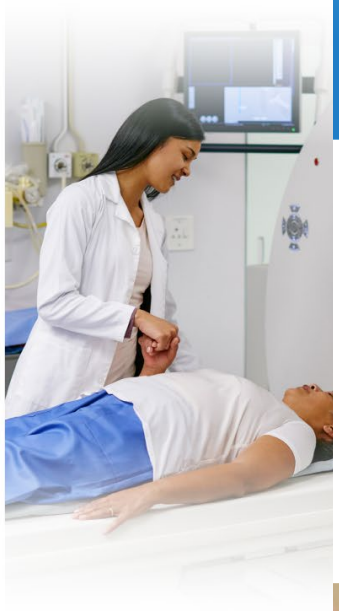
AMERICAN COLLEGE OF RADIOLOGY ACR RADIOLOGY ACCREDITED FACILITY

GO2 FOUNDATION FOR LUNG CANCER CENTER OF EXCELLENCE CARE CONTINUUM

Providing Excellence in Patient-Centered Care

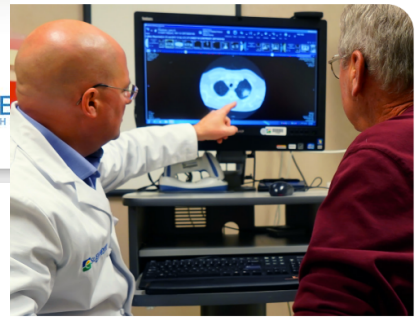
St. Elizabeth PHYSICIANS | St. Elizabeth HEALTHCARE | St. Elizabeth PHYSICIANS | St. E

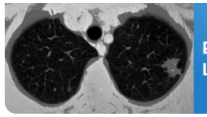
LOW DOSE CT LUNG CANCER SCREENING PROGRAM



LOW DOSE SCREENING CHEST CT

Lung cancer is the leading cause of cancer death in the United States. St. Elizabeth has initiated a Lung Cancer Screening Program in an effort to catch early, non-symptomatic disease, in patients who are considered high risk. The patients at risk have been defined by criteria based on the 2011 landmark National Lung Screening Trial, and more recently by the 2021 USPSTF (United States Preventive Services Taskforce) screening criteria. The benefit of screening is catching lung cancer in its earliest stages when it is most treatable, thereby reducing lung cancer death and maximizing cure. There is a potential for harm from unnecessary radiation exposure or procedures when patients who are not at risk are screened. Early diagnosis is the key to long term survival. Low Dose Screening Chest CT's have shown a 20 - 60% reduction in death from lung cancer.





Early Stage 1 Lung Cancer Nodule

What about the radiation dose for LDCT?

The radiation dose for the lung cancer screening is set extremely low. It is roughly less than one third of the yearly natural occurring background radiation on the earth.

What are the qualification criteria?

- Age 50 to 80;
- Have an equivalent of 20 pack year smoking history;
- Currently smoking or person that formerly smoked who has quit within the last 15 years.

To determine if you are a candidate for a lung screening CT scan, schedule an appointment with your primary care physician to discuss your options and ask about our Retail Lung Cancer Screening program

How much does the Screening Chest CT cost?

The test is now largely covered by the Center for Medicare & Medicaid Services (CMS) as well as most insurance carriers with no out of pocket cost.

How do I get a Screening?

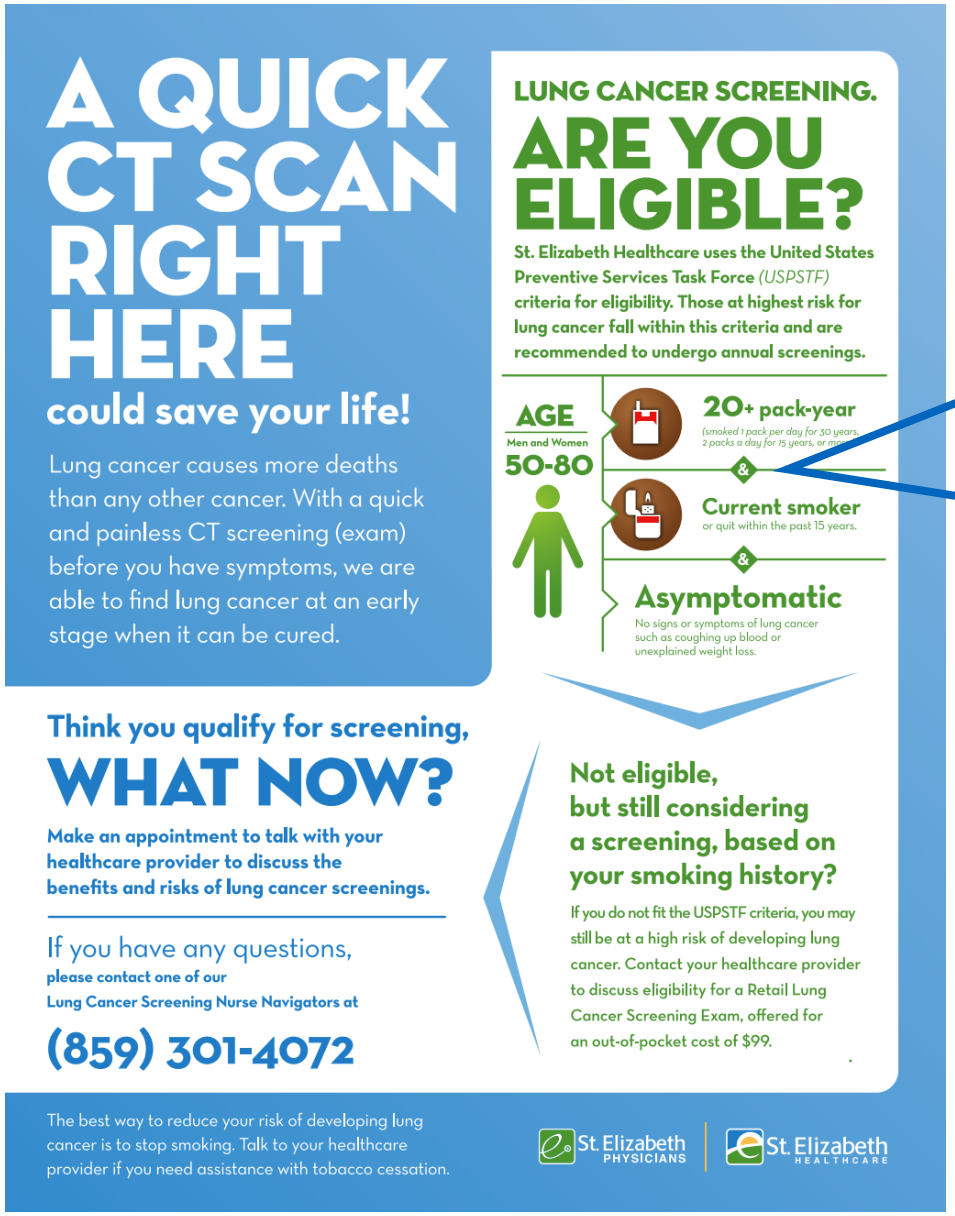
If you feel that you meet all of the qualification criteria, please talk to your physician or call our Lung Screening Nurse Navigator at (859) 301-4072.

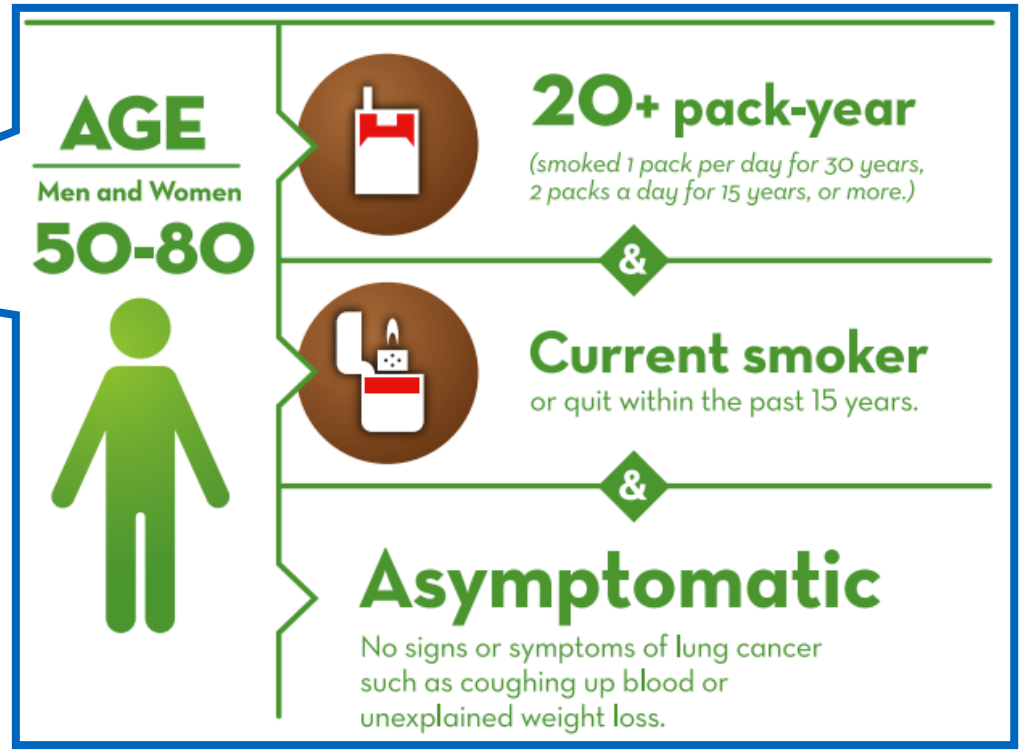
Once you have an order, please call: Central Scheduling (859) 655-7400.

What is involved in the test?

No IVs, needles or dye are required for this test. You will lie on your back on the table with your arms resting above your head. The table will slide in and out of the circular camera two to three times and you will be asked to hold your breath for less than 10 seconds each time. The entire test takes less than three minutes.

EXAM ROOM FLYER





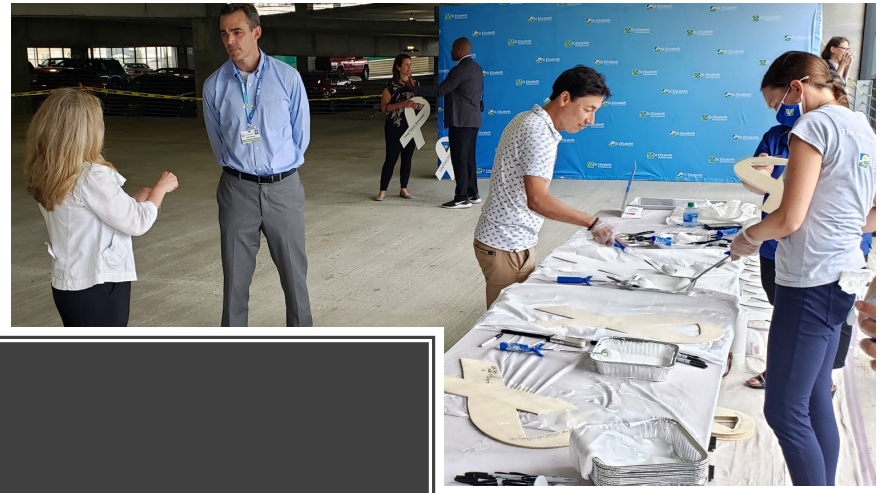
DETERMINING ROI – LUNG CANCER SCREENING

- Journal of Clinical Oncology 36, no.15, 6/01/18 – LCS net revenue of $770/case. Advisory Board article on 'Daffodil Health System' – demonstrated $739/case.
- 2019 ROI LCS SEHC $280.13 net revenue/scan (April 2019)
- 2021 6,084 LCSs → $1,703,520 at $280/screen
- (CRCS [colonoscopy] - $257.39; BCS - $125.84 – 2019 analysis)

THREE WAYS LCS Benefits System and Drives Value

1. Direct Revenue from scans, reimbursement; marginal return
2. Downstream Revenue; a significant contribution
3. Cost Savings (Reduction TCC, aka improved health!); highly impactful – more difficult to measure, but major driver in value-based market

The White Ribbon Project



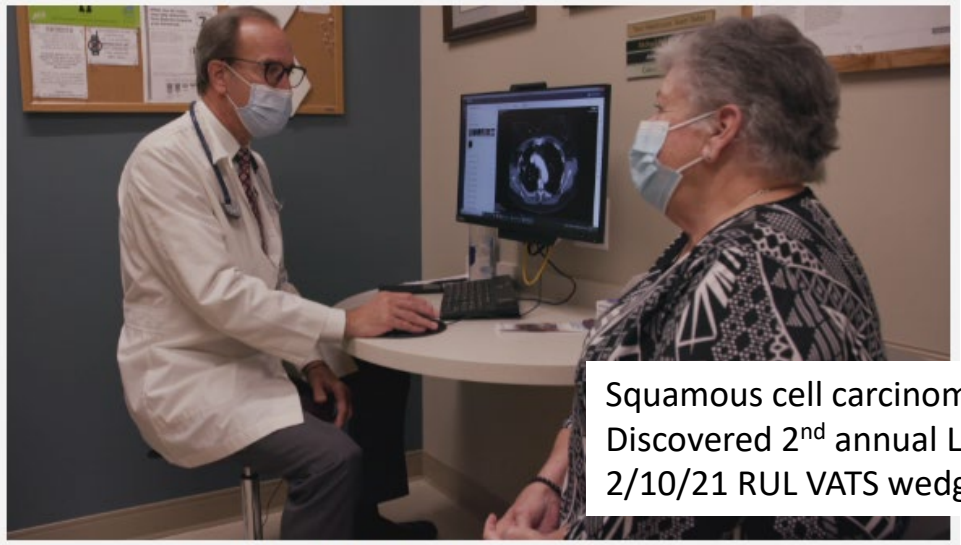
The White Ribbon Project

Promoting action through engagement

Patient Spotlights

Pam Perin

Stage IA2 adenocarcinoma, RLL
12/12/17 VATS RLL lobectomy
16 negative lymph nodes
Strong advocate LCS
Named her dog Royce, after her thoracic surgeon



Dr. Michael Gieske and patient Glenna Courtney

Squamous cell carcinoma stage IA1
Discovered 2nd annual LDCT LCS
2/10/21 RUL VATS wedge resection

Getting Back to What Matters Most

Ginny Hamlin is no stranger to lung cancer: She's battled the disease three times. And when it came back the fourth time, she wanted to know all her options.

"I was first diagnosed in January 2007 and did 16 rounds of chemotherapy and 35 rounds of radiation," Ginny shares. "It was gone for seven years, and then returned in

It's clear that Ginny is de
journey.

Know Your F

While Ginny's lung canc
the largest risk factor fo
health concern across c
has more deaths from lu
including breast, prostat

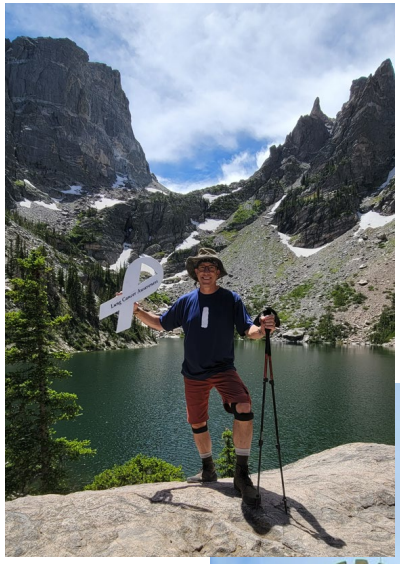
2007 Dx Stage IIIB adenocarcinoma
Chemoradiation, 2 subsequent primary LC - surgery
4th Primary LC, SBRT 2017

Mary Leonard

Mary Leonard learned about St. Elizabeth's lung cancer screening program from a flyer that arrived in the mail. She thought it was a great idea and proactively scheduled her first appointment. Mary just completed her fourth annual lung cancer screening – as

St. Elizabeth's 20,000th LCS!

MARY'S STORY



Hope...

Thank You!

...From the Mountaintops

THE 3 BRICKLAYERS

WE’RE BUILDING A CATHEDRAL!

APPENDIX

Lung-RADS category – specific follow-up protocols

LUNG CANCER SCREENING WORKFLOW

1. Ordering provider verifies eligibility and has Shared Decision-Making Discussion with patient and enters lung cancer screening order in EPIC
2. Patient schedules scan through Central Scheduling. Central Scheduling to verify patient meets criteria. (For 7 Pilot offices, Central Scheduling contacts patient to schedule)
3. Patient completes scan and results are forwarded to Lung Cancer Screening Nurse Navigator in-basket.

NURSE NAVIGATOR REVIEWS RESULTS, PROVIDES FOLLOW-UP INSTRUCTIONS

CAT 1 – No nodules found on scan

1. Patient receives letter
2. Annual low dose screening recommended

CAT 2 – Probably benign – new nodules less than 4 mm, nodules less than 6 mm, ground glass nodule less than 20 mm, or nodule that is stable for >3 months

1. Patient receives letter
2. Annual low dose screening recommended

NURSE NAVIGATOR REVIEWS RESULTS, PROVIDES FOLLOW-UP INSTRUCTIONS

CAT 3 – Probably benign – Nodules 6-7 mm at baseline, new nodules 4-5 mm, ground glass nodule greater than 20 mm

1. Patient contacted by Lung Cancer Screening Nurse Navigator regarding results. Ordering MD notified of results.
2. Lung Cancer Screening Nurse Navigator to enter order for follow-up lung cancer screening CT (IMG10913) and will route to ordering MD for co-signature. Lung Screening Nurse Navigator will offer to schedule the follow up scan, or the patient or ordering MD office will need to contact Central Scheduling to set up scan.
3. Patient receives letter, 6 months follow up recommended. If stable at 6 months, 12 months follow up thereafter.

NURSE NAVIGATOR REVIEWS RESULTS, PROVIDES FOLLOW-UP INSTRUCTIONS

CAT 4 – All cat 4 nodules are automatically reviewed at case conference, Nodule Review Board, including incidentally found nodules and masses: radiology report should end with 'Code Lung Management' (that tag means the case will be presented at the next nodule review board, and next steps will be forthcoming)

NURSE NAVIGATOR REVIEWS RESULTS, PROVIDES FOLLOW-UP INSTRUCTIONS

CAT 4A – Suspicious finding. Nodules 8mm to 14mm at baseline, new or enlarging nodule 6-7mm endobronchial nodule.

1. Ordering MD will be routed results
2. Patient will be reviewed at Nodule Review Board occurring every Monday at 7am
3. Patient will be contacted by Lung Cancer Screening Nurse Navigator on Monday or Tuesday regarding Review Board recommendations.
4. Nodule Review Board note/recommendations will be sent to ordering MD
5. Ordering MD to put in referral for Pulmonology or Thoracic Surgery, if applicable
6. Patient will receive letter with recommendations

NURSE NAVIGATOR REVIEWS RESULTS, PROVIDES FOLLOW-UP INSTRUCTIONS

CAT 4B – Suspicious finding. Solid nodule 15 mm or larger, new or growing nodule 8 mm or larger.

1. Ordering MD will be routed results
2. Patient will be reviewed at Nodule Review Board occurring every Monday at 7am
3. Patient will be contacted by Lung Cancer Screening Nurse Navigator on Monday or Tuesday regarding Review Board recommendations
4. Nodule Review Board note/recommendations will be sent to ordering MD
5. Ordering MD to put in referral for Pulmonology or Thoracic Surgery, if applicable
6. Patient will receive letter with recommendations

ROLE OF THE SCREENING NURSE NAVIGATOR

- Review LDCT results and convey results to patients and ordering providers
- Compile lists for Nodule Review Board (Screening CAT 4A/4B/4X, Incidental "CODE LUNG MANAGEMENT")
- Attend Nodule Review Board, enter recommendations notes, call patients with results and recommendations
- Enter orders for follow up scans, scheduling and referrals
- Track patients to make sure they're getting appropriate and timely referrals and follow up scans
- Provider and patient outreach - office visits, Thoracic Symposium presentations, health and senior fairs

WHEN WILL THE NURSE NAVIGATOR CONTACT MY PATIENT?

- Incidental findings on LDCT - “S"
- CAT 3 LDCT needing a follow up CT
- CAT 4A/4B/4X after NRB with recommendations
- "Code Lung Follow Up" needing follow up orders and scheduling
- "Code Lung Management" after NRB with recommendations
- Any time a provider or patient has questions or requests!