



Lung Cancer Screening

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Conflicts of Interests

- None

Goals



- Review the history of lung cancer screening
- Discuss current guidelines
- Describe the Renown Pulmonary Nodule Program
- Summarize the work-up until Pulmonary handoff

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Incidence

Estimated New Cases

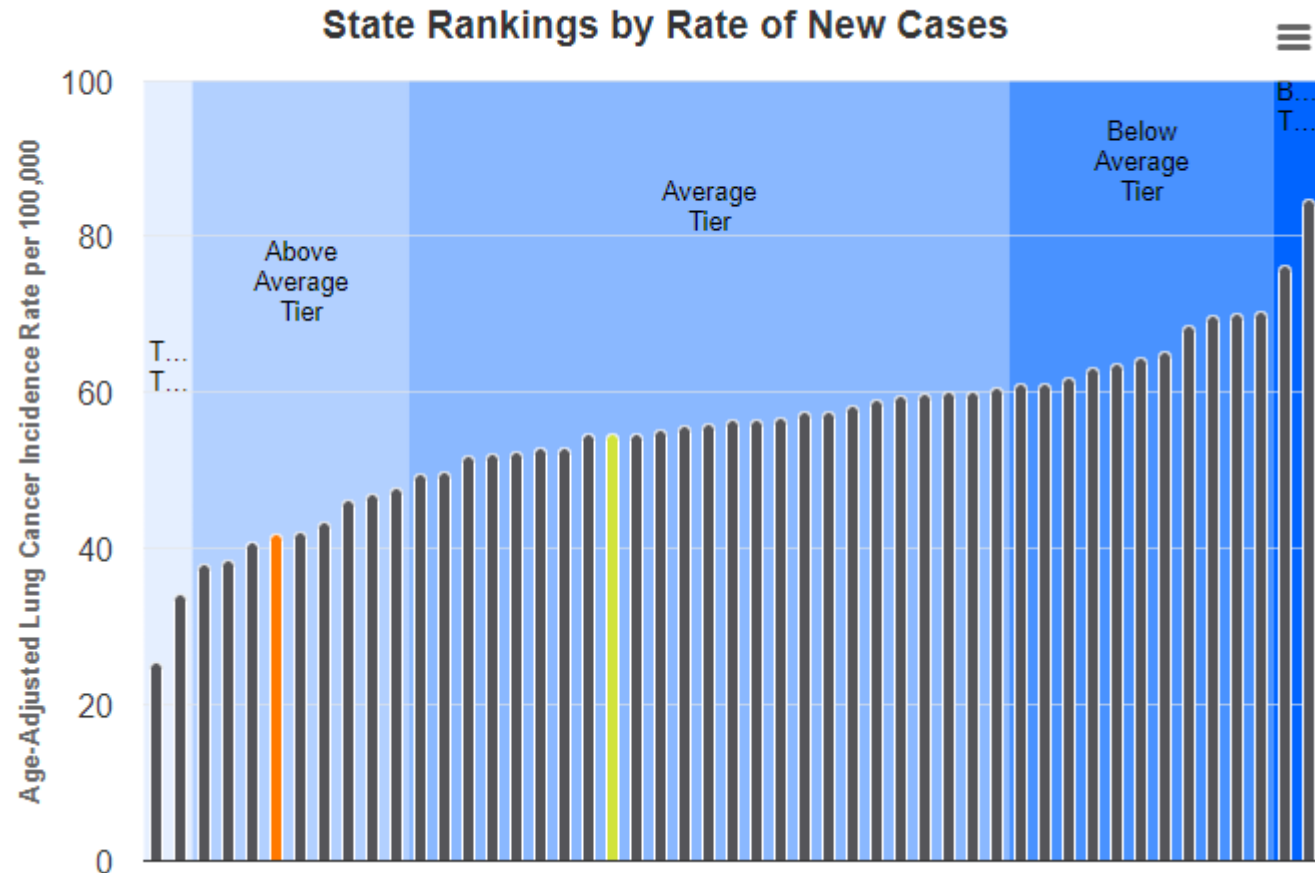
			Males	Females			
Prostate	288,300	29%			Breast	297,790	31%
Lung & bronchus	117,550	12%			Lung & bronchus	120,790	13%
Colon & rectum	81,860	8%			Colon & rectum	71,160	8%
Urinary bladder	62,420	6%			Uterine corpus	66,200	7%
Melanoma of the skin	58,120	6%			Melanoma of the skin	39,490	4%
Kidney & renal pelvis	52,360	5%			Non-Hodgkin lymphoma	35,670	4%
Non-Hodgkin lymphoma	44,880	4%			Thyroid	31,180	3%
Oral cavity & pharynx	39,290	4%			Pancreas	30,920	3%
Leukemia	35,670	4%			Kidney & renal pelvis	29,440	3%
Pancreas	33,130	3%			Leukemia	23,940	3%
All Sites	1,010,310	100%	All Sites	948,000	100%		

Death

Estimated Deaths

			Males	Females			
Lung & bronchus	67,160	21%			Lung & bronchus	59,910	21%
Prostate	34,700	11%			Breast	43,170	15%
Colon & rectum	28,470	9%			Colon & rectum	24,080	8%
Pancreas	26,620	8%			Pancreas	23,930	8%
Liver & intrahepatic bile duct	19,000	6%			Ovary	13,270	5%
Leukemia	13,900	4%			Uterine corpus	13,030	5%
Esophagus	12,920	4%			Liver & intrahepatic bile duct	10,380	4%
Urinary bladder	12,160	4%			Leukemia	9,810	3%
Non-Hodgkin lymphoma	11,780	4%			Non-Hodgkin lymphoma	8,400	3%
Brain & other nervous system	11,020	3%			Brain & other nervous system	7,970	3%
All Sites	322,080	100%	All Sites	287,740	100%		

Hawaii: Cases/100k



Rate of new lung cancer cases =
41.9

National average = **54.6**

Hawaii ranks #6

National Lung Screening Trial: 2002-2010

**How does a low-dose CT chest compare to a CXR
at detecting early-stage lung cancer in high-risk individuals?**

- 53,454 current smokers or former smokers that quit < 15 years
- 30+ pack years
- 55-74 years old
- No signs/symptoms or history of lung cancer
- Randomly assigned 1:1 x 3-year follow-up

Results

- 320 patients screened to save one life from lung cancer
- 20% decrease in mortality from lung cancer with LDCT compared to CXR
- 6.7% reduction in the rate of death from ANY cause in the LDCT group compared to CXR

Nelson Study 2004-2012

Does low-dose CT screening reduce lung cancer mortality?

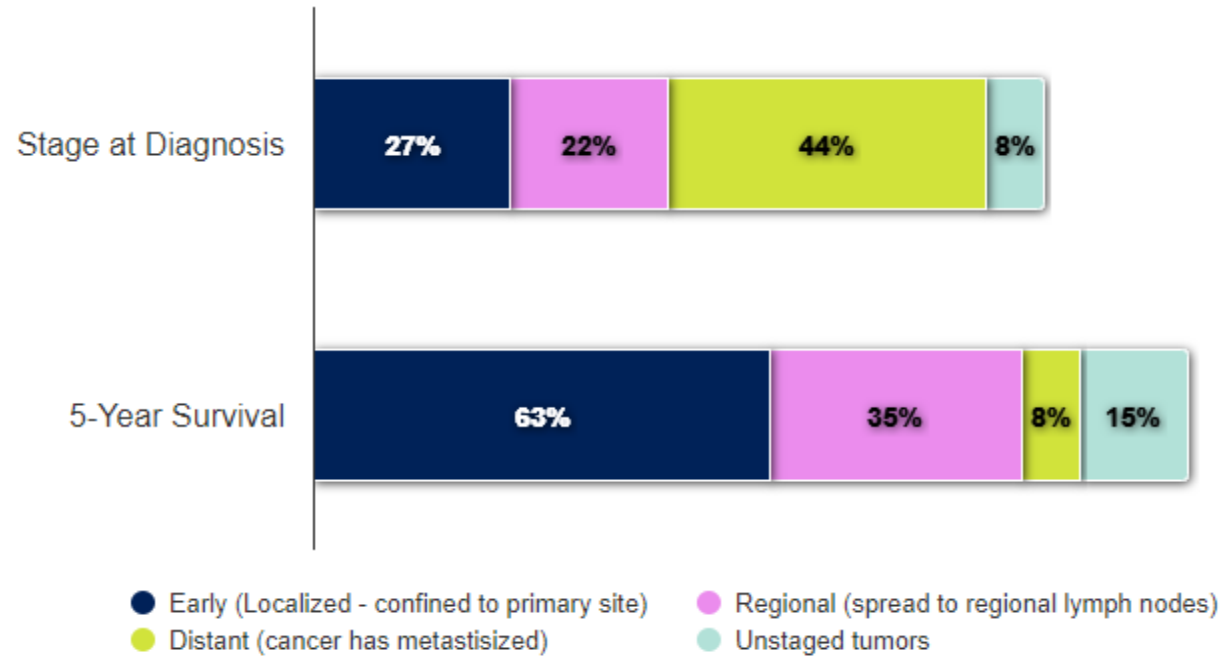
- 13,195 men and 2,594 women
- 50-74 years old
- No signs/symptoms or history of lung cancer
- 4 rounds of CTs: intervals of 0, 1, 2, and 2.5 years
- Minimal follow-up of 10 years
- Nodules were managed based on size and density

Results

- 130 patients screened (over 10 years) to save one life from lung cancer
- 26% decrease in mortality from lung cancer
- Earlier stage lung cancers were found with screening
 - Stage 1: 58.6% of screening-detected vs 13.5% in the control group
 - Stage 4: 9.4% of screening-detected vs 45.7% in the control group

Screening!

National Stage at Diagnosis and 5-Year Survival Rate



Stage Shift:

Early detection = **better survival**

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2021 USPSTF Screening Guidelines

	2013 Guidelines	2021 Guidelines
Eligibility	Adults aged 55 -80 years who have a 30 pack-year smoking history and currently smoke or have quit within the last 15 years	Adults aged 50 -80 who have a 20 pack-year smoking history and currently smoke or have quit within the last 15 years
Estimated population	8.1 million people in the US	14.5 million people in the US

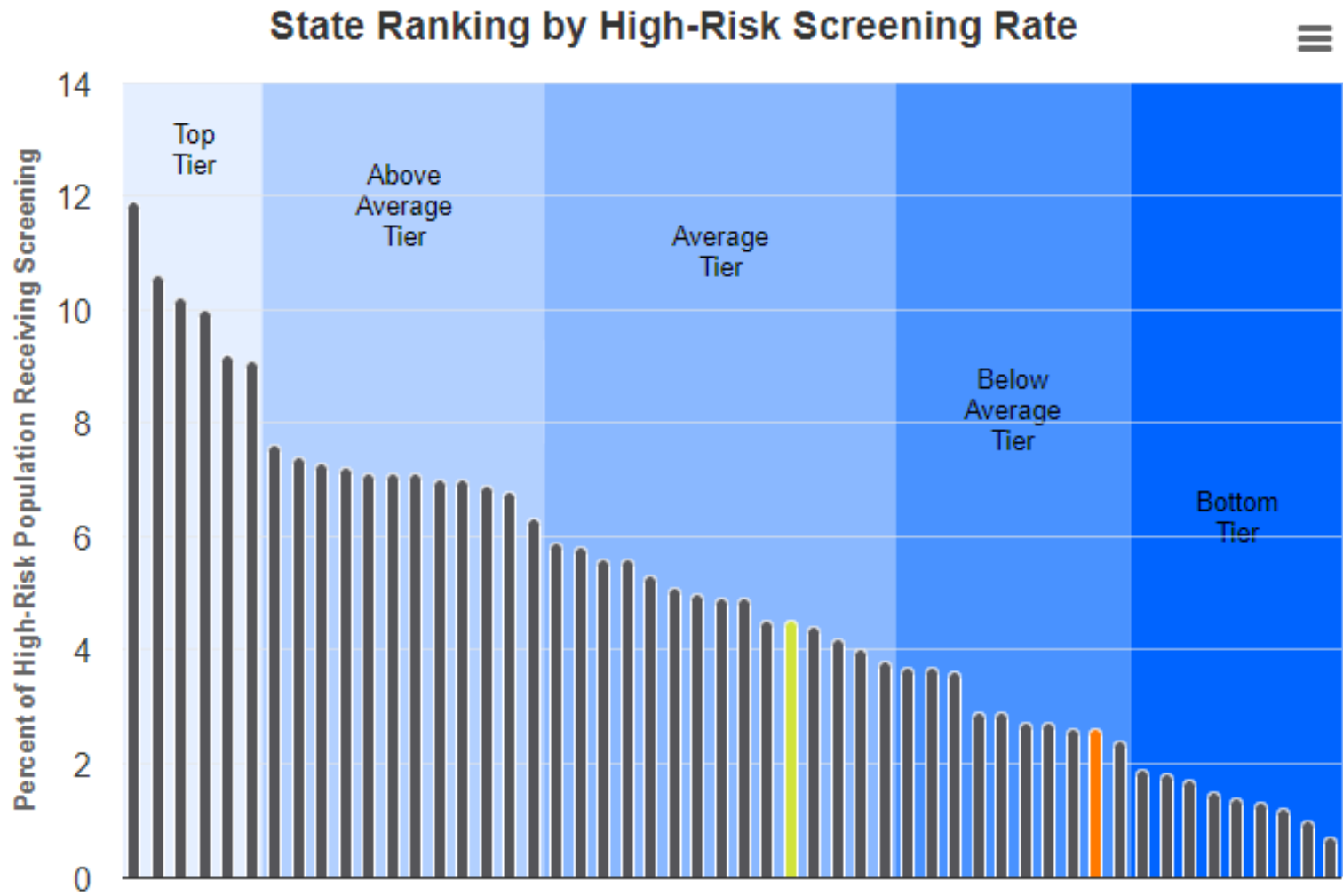
Nearly **DOUBLES** the # of Americans eligible for screening!!!

2023 ACS Screening Guidelines

Yearly screening for lung cancer with a low-dose CT scan for people aged 50 to 80 who:

- Current or former smoker AND
- Have at least a 20 pack-year history of smoking

Removed <15 years since last cigarette requirement



- National average screening rate: 4.5%
- In Hawaii, 2.6% of those at high risk were screened, ranking 40th among all states

Barriers to Screening

- Accessibility/fragmented care
- Cost
- Coverage
- Competing health concerns

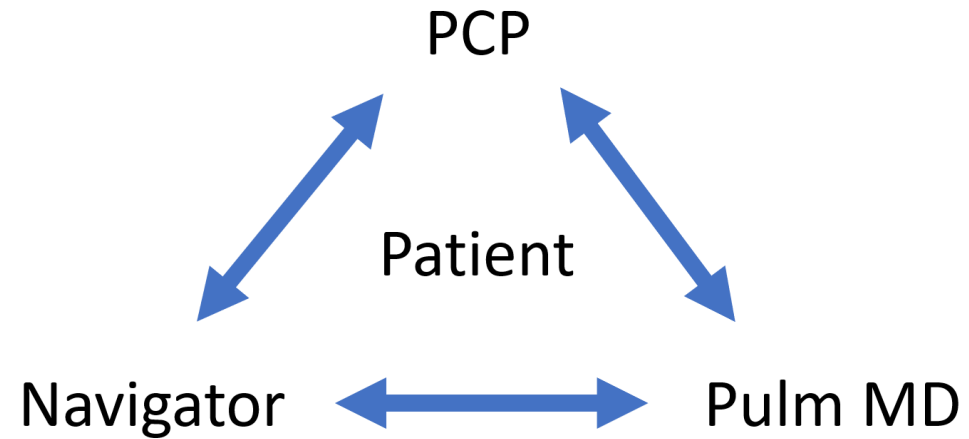
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Renown Pulmonary Nodule Program

- 2016: Oncology department creates first screening program in Northern Nevada
- 2020: GO2 Foundation Lung Cancer Center of Excellence Award
- 2022: CMS broadens screening criteria
- 2023: Screening merged into the Pulmonary Nodule Clinic, with dedicated providers specifically for screening and nodule care, new IT infrastructure to support Lung Cancer Screening Program
- 2024+: Broaden our outreach, simplify screening, minimize barriers

Renown Pulmonary Nodule Program



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Renown Pulmonary Nodule Program

- Dedicated Physician Navigator who:
 - Provides education to PCPs and staff regarding lung cancer screening
 - Performs shared decision-making visits
 - Coordinates with PCPs and pulmonologists to minimize barriers, gaps, or delays in care
 - Sees low risk patients for nodule evaluation, monitoring, testing
 - Encourages clinical trial participation for detection of early-stage lung cancer
 - Coordinates with IT to optimize workflows
 - Sends reminders when patients are due for follow-up

Renown Pulmonary Nodule Program

- Turn around time (referral -> pulmonary appointment): less than 14 days
- Only center in Northern Nevada performing robotic bronchoscopy for diagnosis, with higher yield and lower risk of pneumothorax
- Study site for multiple clinical trials for detection of early-stage lung cancer

2023 LCSP review

- 271 new enrollees since April 17, 2023
- 80.5% of new enrollees (219/271) obtained or scheduled their CTs
- 685 CTs completed
- LCSP new enrollees account for 31% of CTs for lung cancer screening
- Resulted in **17** new cancer diagnoses

2024 LCSP review

- 336 new enrollees
- 71.7% of the new enrollees scheduled or obtained their CTs
- LCSP new enrollees account for 37% of CTs for lung cancer screening
- 649 CTs completed as of 10/3/24
- Resulted in 7 new cancer diagnoses

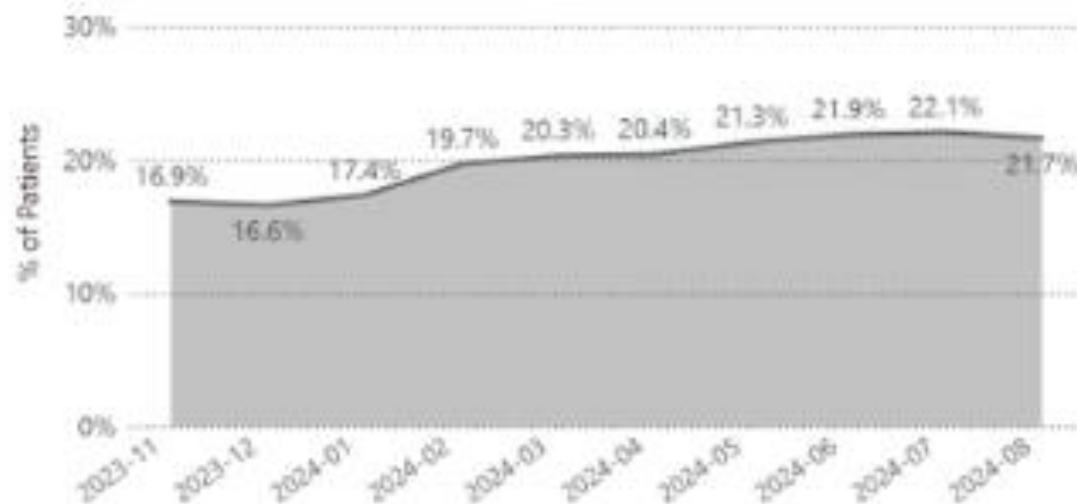
RMG Overview

Select Period: **Current** | 2024-08 | **Reliable & Exact Care - Lung Cancer Screening** | Filtered for: **HTH** | **SCP**

3,936
All Patients

All Measures Met 21.67%
Decline ▼ -0.42%

% Patients with All Measures Met



Annual Screening Met 37.88%

Improvement ▲ 0.07%

Shared Decision Making Met 33.82%

Improvement ▲ 0.46%

Key Takeaways

- Lung cancer is lurking.... Screen for it!
- Sooner detection = better survival. Stage Shift!!
- Coordination of care is needed to improve screening rates

Citation List

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- Slide 7: American Lung Association State of Lung Cancer. Hawaii. Accessed October 3, 2024. <https://www.lung.org/research/state-of-lung-cancer/states/hawaii>
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- Slides 10-11: de Koning, H. Reduced Lung-Cancer Mortality with Volume CT Screening in a Randomized Trial. *The New England Journal of Medicine*. 2020; 382:503-513. Accessed April 24, 2024. <https://www.nejm.org/doi/full/10.1056/NEJMoa1911793>
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