Examining Lung Cancer Screening Practices in North Carolina Radiology Facilities
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Background

• Lung cancer causes more deaths in the U.S. than colorectal, breast, and prostate cancers combined.

• Since the signs and symptoms of lung cancer are nonspecific, most lung cancers are detected at late stages when treatment is less effective and survival is poor.

• In 2011, the National Lung Screening Trial (NLST) reported a 20% reduction in lung cancer mortality among high risk patients screened with low dose computed tomography (LDCT) versus chest X-ray over a 6.5 year follow-up.

• NLST results initiated recommendations from the American College of Radiology (ACR) to use LDCT for lung cancer screening in current and former heavy smokers.

• ACR is approved by the Centers for Medicare and Medicaid Services (CMS) to enable providers to meet quality reporting requirements for LDCT screening reimbursement.

• The ACR/CMS lung cancer screening patient qualifying criteria:
  o Aged 55-77 years
  o 30+ pack years of smoking
  o Current smoker or have quit within the past 15 years
  o Asymptomatic
  o Have a shared-decision making conversation with a qualified health professional before screening
Rationale / Purpose

• After results of the NLST were published, numerous sets of guidelines regarding lung cancer screening with LDCT emerged.

• Data is needed to understand how LDCT for lung cancer screening is diffusing and being used in community practice.

• The purpose of this study is to examine lung cancer screening practices across North Carolina following new coverage criteria for screening eligible patients with LDCT.
Methods

• A mailed survey was distributed to all American College of Radiology accredited CT facilities across North Carolina (n=111) in the Fall of 2015.

• From responses to this 27 item survey, we describe the availability and patterns of lung cancer screening with LDCT among community facilities throughout North Carolina.

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Results: Survey Response

- 48 facilities responded (response rate = 43%) from 34 counties across North Carolina
Results: Facility Demographics

*Participants could choose multiple responses

- Most (69%) responding facilities were part of a hospital network or emergency or outpatient department.

- Approximately 42% of facilities were primarily private, solo, or group practices or freestanding clinics.

- Few facilities were academic hospital facilities, government clinics or community hospitals.
Results: Screening Practices

- 60% of responding facilities currently have a lung cancer screening program in place.

- 21% of respondents have plans to implement a program.
  - The timeline to start a screening program ranged from 3 to 12 months.
Results: Guideline Usage

• 26 of 29 facilities (90%) currently offering screening reported using screening guidelines.

• Of the 26 using guidelines, most (n=18, 69%) follow ACR guidelines.
Results: Referrals and Tracking

- Most facilities receive patient referrals from outside (34%) and within network (17%) physicians, or through a combination of both (45%), rather than patient self-referral.

- Among facilities offering lung cancer screening, the average number of patients screened per month is 9 (range: 0 to 30).

- Among facilities who track patients, the most common tracking mechanisms noted were a screening coordinator (50%), an electronic tracking database (41%), and a lung registry (37%).
Conclusions

• The majority of survey respondents currently have a lung cancer screening program, or plan to implement one in the future.

• Current screening volumes are low and come from direct physician referral rather than patient self-referral.

• Most facilities that are screening use ACR guidelines, and track screening patients via a screening coordinator.
Future Research

• We will explore variation in screening coverage, guidelines, and practices by geographic region, facility type, and other facility characteristics.

• Using results of the facility survey we will identify community facilities interested in participating in a regional lung cancer screening registry.

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