Lung Cancer Screening Evidence Summary

The below information can be used to raise awareness and promote implementation of lung cancer screening programs. After reviewing this information use the questions at the bottom to facilitate discussion about lung cancer screening and patient navigation with personnel in your healthcare organization.

**1) Lung cancer specific mortality reduction:** Screening efficacy has been described in several large trials, including a 20% relative reduction in lung cancer specific mortality in the landmark National Lung Screening Trial (NLST),1 and a 25% reduction (for men) in the Dutch-Belgian Lung Cancer Screening (NELSON) trial.2 Adherence to annual screening in these two large clinical trials exceeded 90%, directly contributing to lung cancer mortality reductions, with 58% and 73% of stage I lung cancers detected on annual imaging in the NLST and NELSON trials, respectively.1,2

**2) Early detection of lung cancer:** Overall, 50% of all CT detected lung cancers diagnosed in the NLST   
were stage I.1 Similar rates of early lung cancer diagnoses were observed in the Nelson trial, with 59% of CT detected cancers reported as stage I.2 High rates of stage I lung cancer diagnosis rates have also been reported outside of clinical trial settings, community healthcare systems and clinics have also reported stage   
I diagnosis rates of at least 63%.3,4

**3) Initial low uptake of lung cancer screening:** As a new cancer screening modality, initial uptake of lung cancer screening has been low with only 2-16% of eligible individuals currently receiving screening.5-9 While low uptake can be linked to barriers at the patient, provider, and system level, there is a general lack of awareness about lung cancer screening in the medical and lay communities.10 Continued education about screening is vital, so that one day low-dose CT screening will be as commonly known as mammography and colonoscopy for breast and colon cancer screenings.

**4) Lung cancer screening disparities:** Individuals that smoke tobacco, and are also potentially eligible for lung cancer screening, are likely to already face health disparities.11 This includes racial and ethnic minorities, sexual and gender minorities, individuals with low-socioeconomic status, and individuals that live in rural areas of the country.11 These populations also face increased lung cancer incidence and mortality with longer time to diagnosis and treatment.12 Anyone that works within a lung cancer screening program can help reduce lung cancer disparities by thinking how best to reach and educate these populations about lung cancer screening.

**5) Patient navigation in lung cancer screening:** Patient navigation has increased screening rates in a wide range of racial and ethnic groups in colon, breast, and cervical cancer screenings with both nurse navigators and lay navigators.13 Moreover, patient navigation has successfully reduced cancer rates by eliminating barriers for vulnerable populations14 and has recently been identified as a method to reduce disparities in lung cancer screening.12 The United States Preventive Services Task Force recommends several strategies to increase screening rates for breast, colon, and cervical cancers that can also be easily used for lung cancer screening (patient reminders, patient education, barrier reduction, small media, and provider reminders).15 Lung cancer screening programs can greatly benefit from the use of patient navigation to both optimize the screening process and improve patient outcomes with increased screening and decreased mortality rates!

**Question ideas to talk about lung cancer screening and patient navigation in your organization:**

1) How do organization personnel feel about lung cancer screening with or without patient navigation?

2) How would our patients benefit from lung cancer screening?

3) Is there adequate support from administration for lung cancer screening and patient navigation?

4) What resources and partnerships do we have now to help implement lung cancer screening with patient navigation?

5) What additional information or resources are needed to help us adopt lung cancer screening with patient navigation?

**References**

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