Potential Advantages, Disadvantages and Limitations of Lung Cancer Screening

TRANSCRIPT & FIGURES
Lung cancer screening is something that's quite new in the United States. In 2010, the data was published on a 50,000 person trial where patients were either randomly allocated to get a CT (CAT) scan of their chest, a low dose radiation CT scan, or a chest x-ray, and the study showed a 20% reduction in lung cancer mortality in the patients who got screened for lung cancer with a CT.

There are a few things that you need to understand about that trial. One, it only included patients between the ages of 55 and 74; two, you had to have smoked at least 30 pack-years – that's 30 years at a pack a day, or for example, 15 years at two packs a day. So you need to have a certain smoking history and be of a certain age to enter into that trial, and now patients in that age range with that smoking history are eligible to be screened for lung cancer with a yearly CT.

The advantage is that you hope to get the cancer when it's quite small, and so it can be resected with a surgery, taken out, and that patient will have a better chance of being cured of their cancer because as we get to more advanced stages like when the cancer has spread outside of the chest, the hope for a complete cure is lessened. Early stage cancer, screen-detected cancer, has a better chance for cure.

There are some disadvantages to screening though that people need to be aware of. About one quarter of the time, patients who have a scan will have a spot on their lung, or a nodule, or a lesion it's sometimes called – a quarter of the time those spots are there, and 96% of the time they're benign spots, but they still need to be evaluated. Sometimes they're evaluated just with
following up with a CT scan, sometimes they’re evaluated with a biopsy, and even sometimes it requires surgery to get those out. That can cause a lot of anxiety in patients and certainly put them at risk for unnecessary procedures, particularly if you’re taking out something that was going to be benign all along. So that’s some of the disadvantage of being screened for lung cancer.

Also, as folks get older, so when you get up into that 75-77 age range, you also have other comorbidities, other things, other health issues that make it difficult for you to undergo surgery, and so some patients may not want to be screened if they have other health problems that may preclude a long life expectancy.

Overall, screening is being implemented in the United States the same way breast cancer screening was implemented years ago in the United States, and we’re doing it very carefully to make sure the patients are of the appropriate setting. The other thing we’re doing is making sure that if patients are smoking, that they get some smoking cessation as part of their screening endeavor.
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