

Low-dose CT – *truly* helping a patient who won't quit smoking

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It is well past 7 pm and I have just finished the last case of the day in the operating room (OR). I head to the floors, where four patients are waiting for me to record their medical history and perform physical examinations and consent them for their upcoming surgeries. The first patient is a 68-year-old male with 90% stenosis of the left anterior descending artery, 80% stenosis of the circumflex, and total occlusion of the right coronary artery. He is scheduled for triple coronary artery bypass graft surgery. During our encounter, he reports smoking about 1.5 packs of cigarettes a day for over 30 years. When attempting to counsel him on the benefits of cutting back on his smoking, he quickly interrupts me and says “Doc, thank you, but I’m way too worried about my upcoming heart surgery to even consider talking about smoking cessation”. The next patient is a 62-year-old diabetic female with severe aortic stenosis awaiting valve replacement surgery. Soon enough, the conversation came down to smoking. The patient knew all too well how detrimental smoking can be, especially to a diabetic. She tried quitting a few times in the past. The first time, she was really excited about leading a smoke-free life. A few weeks down the road, however, she got fired and relapsed. The second time around, she was going through a nerve-wrecking divorce and turned back to smoking as a way of releasing tension.

The third patient was a 35-year-old mother who had just got off the phone with her young daughter when I walked in the room. While interviewing her, she reported a 40-pack per year history of smoking. She was recently diagnosed with a large atrial septal defect and was utterly

petrified. If anything, she had been smoking even more for the past couple of months. The fourth patient was a 60-year-old patient with chronic obstructive pulmonary disease undergoing right upper lobectomy for stage IIB adenocarcinoma who had repeatedly tried to quit smoking but failed despite giving it her best. She asked me whether there was anything she could have done that might have helped detect her cancer at an earlier stage. I could not help but wonder why her primary care provider (PCP) or pulmonologist never mentioned the option of low-dose chest CT (LDCT).

A few days later, I was seeing cardiac surgery patients for their one-month postoperative check. Although, upon discharge, all active smokers received counselling and were provided with resources to help them quit smoking, only one of them reported cutting down. Unfortunately, many people simply will not quit smoking despite their best efforts and the well-meaning guidance of their healthcare providers. Being fully aware of that harsh reality, should we re-evaluate our role as physicians in mitigating the catastrophic impact of smoking? Is it ethically acceptable to limit our efforts to just counselling against the use of tobacco products? Or should, for certain people, “quit smoking” be followed by “get your annual CT”. If so, under which circumstances would such an intervention be best received by patients?

The answer is simple. The more the merrier. All encounters could be utilised to educate high-risk patients about this painless and potentially life-saving intervention. Universally, all physicians across all specialties, healthcare systems, and countries take several patient histories every day. During that interactive process, providers inquire about their patients’ smoking history. When treating a heavy smoker, it is crucial not only to counsel them regarding potentially effective ways to curtail the use of

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Submission: 18.04.2023, Acceptance: 15.06.2023

Key Words: *Low-dose computed tomography; lung cancer; screening*

tobacco products, but also to educate them about the value of screening.

The U.S. Preventive Services Task Force recommends yearly lung cancer screening with LDCT for people with a 20 pack-year or more smoking history, who are active smokers or have quit within the past 15 years, and are between 50 and 80 years old [1]. The CHEST/American Society of Clinical Oncology guidelines as well as the American Thoracic Society also support lung cancer screening with LDCT. It should be emphasised that LDCT has been shown to afford a 20% relative decrease in lung cancer death (from 1.66 to 1.33%, or 3 fewer deaths per 1,000 screened) as well as a 7% relative reduction in all-cause mortality [2,3].

To put these statistics into tangible perspective: The European Union currently has a population of approximately 447 million people of whom 30%, aka 134.1 million, are between 50 and 80 years of age. According to data from the European Commission, 6% (8,046,000) of those are heavy smokers [4]. If this high-risk subgroup of people underwent LDCTs annually that would lead to a staggering reduction in lung-cancer related deaths by 24,138 patients.

Despite these encouraging data, it has been shown that annual radiologic screening for high-risk patients is infrequently ordered by PCPs (0 tests: 33%, 1–5 tests: 36%, 6–10 tests: 16%, 11–24 tests: 10%, 25+ tests: 4%, not sure: 2%). Surprisingly, most PCPs who engage in lung cancer screening seem to rely on plain chest x-ray with less than half utilizing LDCT routinely [5].

It is high time for a paradigm shift. It does not matter if the provider is a medical student, a nurse, a gastroenterologist, a nephrologist, an ophthalmologist, a dermatologist, an orthopedist, or a neurosurgeon. Being proactive about

eradicating smoke-related lung cancer is not, and should not be, solely the job of PCPs, pulmonologists, oncologists and thoracic surgeons. The infamous Swiss cheese model is the key. Truly, the more, the merrier.

So, do you have a patient that is eligible for LDCT? Let them know about this option. Many have never heard of it and those who have probably do not know a lot about it. Again, the truth of the matter is that many patients will never succeed in quitting smoking. But, if properly and routinely educated, they might consider getting an annual CT. It could save their life.

Conflict of interest: *None*

Funding: *None*

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