I think I’m too old for a big lung surgery: What can you do for my lung cancer?

For early stage NSCLC, the historic standard of care is a lobectomy. But the reality is that with the median age of patients with new lung cancer a little over 70 and many patients quite sick from their lung cancer, COPD, and/or other medical problems, not every patient is a great candidate for surgery.

An 86 year old retired fireman I saw in clinic for the first time this past week illustrates the challenge and provides an opportunity for us to consider the options for him. He has no smoking history (ironically, the other firefighters all smoked and made fun of him for not smoking), but he “ate smoke” in his work with no protective mask for decades and now has COPD as well as significant heart disease, with a first heart attack nearly 30 years ago, a triple bypass, a pacemaker now, and he walks with a walker. He was involved in a motor vehicle accident a month ago (not his fault, mind you), went to an ER, and had some imaging that incidentally revealed an asymptomatic 2.5 cm mass in the apex (top) of his left lung, with no enlarged lymph nodes. Of note, this is how most early stage lung cancers are detected: rather than being related to symptoms, they are found incidentally when someone undergoes pre-operative imaging for gall bladder surgery, goes to the ER for chest pain, etc., or now increasingly has a chest CT for lung cancer screening. With his very advanced age, compromised lung function, cardiac issues, and general frailty, what are the options for a man with still potentially curable lung cancer? The greatest history is with a lung surgery that is called a lobectomy, which entails removing an entire lung lobe (1/3 of the right lobe or 1/2 of the left lung, which is a little smaller because the heart sits in the left side of the chest). Until about the last decade, this kind of lung surgery almost always involved a long incision and cutting through several ribs, which is a lot for anyone to get through and recover from. This kind of “open thoracotomy (thora = chest, otomy = cutting open). Today, however, we have the luxury of a few fine options to consider.

Within the confines of lung surgery, many lung cancer surgeons now have a plenty of experience in performing minimally invasive video-assisted thoracoscopic surgery (VATS), which is a chest surgery done through a few dime-sized “ports” through which video equipment can be inserted and an entire surgery can be done laparoscopically. This development now markedly reduces the rigors of the surgery itself. Beyond that, there is also evidence that patients 75 or older with an early stage NSCLC can have the same overall survival with a wedge resection as with a larger lobectomy surgery. A wedge resection removes just the tumor with a margin of normal lung around it and allows for less of a loss of lung tissue.

But what is also exciting is the prospect of obviating surgery altogether. In the last 5-10 years, we’ve seen remarkable advances in the technique of stereotactic body radiation therapy (SBRT). The conventional, daily radiation for typically 6-7 weeks has always been the standby option for “medically inoperable” people with early stage lung cancer, it’s a prolonged process. In contrast, SBRT is now available at a growing number of centers and enables patients to undergo more focal radiation administered as just a few “fractions” (typically 4-5).
over a week and a half. For patients with no lymph node involvement or distant spread, results are very encouraging, with local control rates of up to 90% for cancers under 2-3 centimeters and at least 70% for tumors larger than about 3 cm. Long-term survival is harder to interpret because the patients getting SBRT often have other life-threatening problems independent of lung cancer, but the data thus far show that it appears very comparable to a wedge resection in important outcomes.

As if these main options weren’t enough to lead us to scratch our heads about the best approach, some less well studied alternatives are also potentially available, ranging from radiofrequency ablation (RFA) to high frequency ultrasound to treat such lesions. Each of these offers the potential to treat an early lung cancer effectively without surgery. My leading question about these agents is whether any of these offers any real incremental value over the treatments we already have or is just a lateral move we don’t need. Overall, though, the number of options is increasing and we’re getting more data on them.

With more than one appealing option available, my 86 year-old fireman already has more options than he needs for now. He’ll meet with both a surgeon and a radiation oncologist this week to determine which approach he’s inclined to take. But as I reflect on a time not very long ago where we felt limited by a lack of compelling options, it’s wonderful now to have not one but several choices.