Delays in Treatment for Lung Cancer: Frustrating, but Do They Impact Survival?

In practicing oncology, one of my patients’ (and even more so, the families’) greatest concerns is how long it takes between when the patient was first diagnosed with probable lung cancer and when they can begin treatment. Of course this is a completely natural reaction, and is based on a lot of very real concerns.

Often the patient perceives that the cancer came on suddenly, with chest pain or coughing up of blood, and worries that it is growing and spreading rapidly. In reality this is at the end of a longer period where the cancer grew without causing symptoms until it crossed a threshold where the symptoms arose (the straw that broke the camel’s back, as it were), but the perception and worry is real. In cases where the cancer appears to be at an early, curable stage, there is also an understandable concern that if we wait too long to complete staging that the cancer will have progressed to a point where it is no longer curable.

And of course, there is the psychological distress that comes with a cancer diagnosis. I have cancer, I want it out now! Or if it is not curable, I want to begin treatment immediately so I can begin to fight back. But what time frame are we talking about here? What delay is OK without compromising outcomes? In truth, we have no idea. There have been numerous studies that have studied the growth of lung cancers over time, and most indicate that cancers (at least non-small cell lung cancers) tend to grow over a period of months rather than days or weeks.

In addition, diagnosis and staging of NSCLC is a complicated process that takes time. After an initial CT scans shows a lung tumor, there is the necessary step of getting a biopsy by bronchoscopy or needle aspiration, then a PET-CT or full body CT followed by bone scan, often pulmonary function testing prior to surgery and perhaps referral to a cardiologist for “clearance” for surgery. Surgeons often need to perform a mediastinoscopy to confirm the absence of mediastinal lymph node involvement, and if that is positive then referral to medical and radiation oncology is a necessary step. Subtle signs on scans may need to be further investigated, such as a liver MRI for a suspicious spot or a bone biopsy of a spine lesion that may or may not be cancer.

All of this takes time, but the best excuse we (as doctors) have is that knowing the right treatment is more important than starting treatment as fast as possible but possibly getting the it wrong. I think this is absolutely the right thing to do, and communicating this to the patient is important to make sure they understand why there are delays. But at the same time, I do expect these studies to happen as quickly as possible so that we can begin treatment within a couple of weeks on average.

But how would you feel if it took more than 2 months between getting that scan report and beginning treatment? That sounds to my ears like WAY too long to wait, so I can’t imagine what it would seem like to a worried patient. However, apparently this is all too common.

In this month’s *Journal of Thoracic Oncology*, researchers led by Dr. Jeffrey Yorio looked at the
time course between initial scans and treatment start dates for 482 patients with stage I-III NSCLC at University of Texas Southwestern hospitals in Dallas. They compared patients treated at a large public hospital (241) with those treated at affiliated private hospitals (also 241 patients), and looked at a number of factors including race, sex, income, age, and insurance coverage to see if they could determine what issues were related to delays.

What they found probably won’t surprise many people, namely that patients were treated faster in the private hospitals and that patients at the public hospital tended to be younger, poorer, were more likely to be black or Hispanic, and have less insurance coverage. There were also more advanced (stage III) patients in the public hospital. The timelines themselves were more shocking to me. The time to treatment at the private hospital was 45 days and 76 days at the public hospital, a statistically significant difference. The patients with the longest interval were those with Medicaid (i.e. poor), who waited an average of 140 days, and 25% of all patients waited more than 116 days (4 months). There was also a significantly longer interval between initial imaging and diagnosis and from diagnosis to treatment in the public hospital.

Even 45 days seems like an inordinate time to wait between that first scan and treatment, but I think I would have a conniption if I or someone I cared about had to wait 76 days or 140 days! But the next question is: did this impact patient survival by waiting this long? We can assume patients would be less happy with longer waiting times, but if there was a clear relationship between longer times and shorter survival then it would be easier to get someone to change.

Perhaps surprisingly, it turns out there was no significant difference in survival between the patients who had longer image-treatment intervals and those who waited a shorter time. This has also been shown in other similar studies in Europe and US, and is a little hard to fathom. The accompanying editorialists point out that this study excluded stage 4 disease, so hypothetically if patients waited so long that they progressed from curable to incurable they would not have been included in the study.
Even if there is no detectable influence on survival, why is the waiting time so long? We know from studies at VA medical centers that delays come from inadequate staffing and equipment, so I’m sure this contributes to the delay in public hospitals. One could argue that it doesn’t matter given the lack of difference in outcome, but I still think it does. This study can’t tell me that an individual patient wouldn’t be affected adversely by a several month delay. And we cannot ignore the psychological burden of patients living in limbo, wondering what is happening and when someone will begin to do something about it.

So I will continue to try and get studies done and treatment started ASAP until someone tells me not to!

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