Recurrence and New Cancers after Curative Treatment of Lung Cancer

Among the key issues in following patients with a history of treated lung cancer is the pattern of recurrence. We need to have a sense of when the risk is highest and where people are more likely to demonstrate new evidence of disease. Fortunately, there are several studies that can help us with these questions.

Looking at patients who have undergone potentially curative surgery for stage I NSCLC, we know that recurrence rates in the range of 20-35%. Most of these recurrences are distant metastatic disease, not failure of local treatment that leads to disease recurrence close to the site of the original primary. This is why we feel that chemotherapy, which goes throughout the body, is the more effective way to reduce the risk of cancer recurrence after surgery. In addition, most recurrences are in the first 3-4 years after surgery, but there are also reported recurrences beyond 5 years out. We know that people who have nodal involvement have a higher risk of recurrence than those with stage I disease (and no lymph node disease), and they also tend to develop recurrences earlier than those without nodal involvement.

In addition to the risk of recurrence of a prior cancer, there is also a risk of a new cancer developing. We know that patients with a history of lung cancer, not only have a risk of their prior cancer returning, but they also generally have a greater predisposition to develop another, independent lung cancer. In many cases, the cells of the lung have a field defect (a problem that affects not just the cancer, but an area around the cancer as well), often from prolonged exposure to carcinogenic tobacco smoke, which means a large population of cells is also part way along a path toward cancer. The estimate of risk for developing a new lung cancer is in the range of 1-2% per year, and this remains constant with more time after potentially curative surgery for a first cancer.

Of course, when we talk about risk of cancer recurrence after surgery, we’re generally talking about NSCLC, but studies have also been done looking at SCLC patients, who are at risk for developing NSCLC as well. Within just two years after treatment for SCLC, the risk of developing a metachronous (new cancer at a later time than the original, vs. synchronous, which is two different cancers in a person at the same time) NSCLC tumor is as high as 12-15%.

These results underscore the need to follow patients closely after treatment for cancer. While it may or may not be feasible to treat a cancer recurrence with curative intent, it’s certainly appropriate to be vigilant about jumping on a new cancer early, and we know that people with a history of a treated lung cancer are at unacceptably high risk for a new cancer.

Next we’ll review how we do in treating recurrences and new cancers.

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