Basics of Small Cell Lung Cancer

Rachel Sanborn, MD, Medical Oncologist and Co-Director,

Providence Thoracic Oncology Program

TRANSCRIPT

When we think about a lung cancer that is being diagnosed for a person, many people think of lung cancer as one single entity. However, what we know is that lung cancer is an entire spectrum of different kinds of cancers that have just started inside the lungs. At the very first blush when we think about breaking those different lung cancers apart in order to understand how that cancer may need to best be treated and what the behavior of that cancer is, the first broad breakdown that we look at is a category we call small cell lung cancer and then other lung cancers are in a broad category we generally term non-small cell lung cancer. The reason that there is that first separation is that small cell lung cancers behave in a very different fashion than a non-small cell lung cancer.

When a small cell lung cancer forms, these are very rapidly dividing, rapidly moving cancers that tend to spread very quickly in the body. A very classic story that people tell when they are diagnosed with a small cell lung cancer is that they were feeling fine and that they suddenly became very ill. This is not a cancer that sneaks up on a person over the course of a year, or they've had a gradual decline or a gradual symptom onset over that time. This is something that hits people harder and faster than that.

When a small cell lung cancer is diagnosed, because of how rapidly it moves in the body, for the vast majority of people starting with trying to remove the cancer by surgery is not going to be helpful, because that only would attempt to tackle something locally, but the problem is more systemic. So when we think about small cell lung cancer there is urgency to start a treatment because of how quickly people get sick and how rapidly it spreads in the body. When we think about that what that means is starting urgently with chemotherapy, which as a systemic treatment that is traveling through the bloodstream helps to treat the cancer wherever it may be located in the body.

The next question that we need to look at is understanding head to toe where that small cell lung cancer is located in the body, and as we think about these lung cancers in general we consider whether that cancer may be still limited inside the lung area where it started or whether the cancer may have become more extensive, where it has spread in other locations in the body. In general, if a person has a cancer that is limited in the chest where it started, then we may be able to think about treating that cancer with the attempt

to try to cure it, using the combination of chemotherapy in addition to radiation right to where the cancer is located. If the cancer is extensive in the body, then what we know is that although the cancer is very treatable the cancer at that time is not going to be curable. So we generally start with chemotherapy. In both situations, because of the high risk of the cancer spreading to the brain – small cell lung cancer spreads to the brain very quickly – then after the after the chemo and radiation therapy, or after chemotherapy alone, one considers preventive, low dose radiation to the brain.

The reason that we talk about the urgency with starting treatment is because if left untreated, small cell lung cancer can take a person's life generally within weeks of the time that they are diagnosed. However, if it is diagnosed and treatment is started quickly, for those patients who have limited stage disease, then a small number of people can have their cancer cured, meaning going on to live the rest of their life without that cancer coming back. Even if the cancer is not able to be cured, the treatment in either setting can significantly help to prolong life and to help with quality of life.