Treating Small-Cell Lung Cancer

Chemotherapy, immunotherapy and radiation are the mainstays of SCLC treatment.

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Small-cell lung cancer (SCLC) accounts for nearly 15% of all lung cancer diagnoses in the United States. While treatment for the more common non-small-cell lung cancer (NSCLC) has improved over the past decade with the advent of new targeted therapies, SCLC remains difficult to treat.

Lung cancer develops when cells in the lungs grow out of control. SCLC is an aggressive form of lung cancer that can progress rapidly. Because it is harder to treat and recurrence is common, the five-year survival rate for SCLC is 7%, compared with 25% for NSCLC, according to the American Society of Clinical Oncology.

Unlike most other cancers, SCLC is generally classified as limited stage (occurring in one part of the chest; equivalent to Stages I through III) or extensive stage (spread to the opposite lung or other parts of the body; equivalent to Stage IV). Limited stage disease is easier to treat, but about 70% of people with SCLC already have metastatic disease by the time they are diagnosed.

Treatment for SCLC depends on how advanced it is and how much it has spread. The primary treatment is chemotherapy, usually consisting of a platinum drug, such as cisplatin or carboplatin, plus etoposide or irinotecan(Camptosar). People who experience disease progression on these drugs may be treated with topotecan (Hycamtin or generics) or a newer medication, lurbinectidin (Zepzelca). These drugs are administered via IV infusion in cycles that allow recovery time after one or more days of treatment.

People with limited stage SCLC confined to one part of the chest may receive radiation therapy, often in combination with chemotherapy. Radiation directed at the chest can shrink lung tumors and relieve symptoms; cranial radiation is sometimes used to prevent the cancer from spreading to the brain. Surgery is generally not an option for people with SCLC unless they have very early disease.

People with extensive stage SCLC may receive immunotherapy, or treatment that helps the immune system fight cancer, in addition to chemotherapy. Some tumors can turn off immune responses; checkpoint inhibitors release the brakes and restore the activity of cancer-killing T cells. Two checkpoint inhibitors, atezolizumab (Tecentriq) and durvalumab (Imfinzi), are approved for SCLC. Patients who respond well to several cycles of combination therapy may be able to continue on immunotherapy alone.

Chemotherapy stops cancer cells from multiplying, but it can also harm normal, healthy cells. This can lead to side effects, including fatigue, nausea and vomiting, loss of appetite, mouth sores, hair loss, peripheral neuropathy and damage to the bone marrow, resulting in red and white blood cell and platelet deficiency. Radiation can also damage healthy cells and cause side effects. Immunotherapy that restores immune responses against cancer can also activate the immune system more broadly, causing excessive inflammation.

In addition to therapies intended to treat the cancer itself, palliative care can help relieve symptoms and side effects and improve quality of life. Several new therapies, as well as medications already used for other types of cancer, are being tested for SCLC. Ask your doctor whether a clinical trial might be a good option for you.

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