Small-cell lung cancer: ESMO Clinical 
Recommendations for diagnosis, treatment 
and follow-up

incidence

The crude incidence of lung cancer in the European Union is 52.5/100,000 per year, mortality being 48.7/100,000 per year. Rates among men are 82.5 and 77.0/100,000 per year, and among women 23.9 and 22.3/100,000 per year, respectively. Small-cell lung cancer (SCLC) accounts for 18% of all cases. In recent years, the incidence of SCLC is decreasing. SCLC is strongly associated with cigarette smoking.

diagnosis

Pathological diagnosis should be made according to the World Health Organization classification from bronchoscopy, tru-cut, surgical biopsy, or fine needle aspiration.

staging and risk assessment

In addition to a complete history and physical examination, staging procedures should include the following: chest X-ray, complete blood count, liver and renal function tests, lactate dehydrogenase and sodium levels, and a computed tomography (CT) scan of chest and upper abdomen.

In patients with symptoms or abnormal physical examination suggesting metastasis, additional tests are bone scintigraphy, CT scan or magnetic resonance imaging of the brain, and bone marrow biopsy. Once any one of these tests is positive detecting metastases, there is no need to proceed with the rest of the tests [V, D].

Patients are usually staged as limited disease or extensive disease according to a simple two-stage system developed by the Veteran’s Administration Lung Cancer Study Group.

limited disease

The definition is on the basis of the possibility of encompassing all detectable tumor within a ‘tolerable’ radiotherapy port. Patients with limited disease have tumor deposits restricted to one hemithorax with regional lymph node metastasis including ipsilateral hilar, ipsilateral supraclavicular, mediastinal, and contralateral hilar nodes.

extensive disease

Any tumor beyond the bounds defined above including ipsilateral lung metastases and malignant pleural effusion.

treatment of limited disease

Standard regimens in limited disease, as well as for patients diagnosed at surgery, include a variety of platinum-containing regimens [I, A].

Limited disease patients should be treated with four to six cycles of etoposide–cisplatin with thoracic radiotherapy [II, A].

Thoracic radiotherapy increases local control and survival in limited disease patients. Several studies suggest starting concurrent thoracic radiotherapy early during chemotherapy [II–III, A].

Prophylactic cranial irradiation is indicated in patients with complete remission from limited disease since it reduces the lifetime risk of cerebral metastases and improves survival [II, B].

Multiple trials have shown that maintenance chemotherapy is not effective in improving survival and four to six cycles of chemotherapy is considered optimal [II, A].

treatment of extensive disease

Chemotherapy with the same regimens as for limited disease and given for four to six cycles is the treatment of choice. In Europe, doxorubicin combinations were until recently commonly given in extensive disease patients, but etoposide–platinum regimens are now increasingly used in this group of patients [II, A].

second-line chemotherapy

Patients relapsed from a response to first-line chemotherapy should be considered for second-line chemotherapy [III, B].

response evaluation

Response evaluation is recommended, at least at the end of treatment, by repetition of the initial radiographic tests [V, D].

follow-up

There is no evidence that follow-up of asymptomatic patients is needed. Specific examinations should be as clinically indicated.
For patients who survive long-term, monitoring for development of a second primary may be considered.

**note**

Levels of evidence [I–V] and grades of recommendation [A–D] as used by the American Society of Clinical Oncology are given in square brackets. Statements without grading were considered justified standard clinical practice by the experts and the ESMO faculty.

**literature**


