

Small cell lung cancer (SCLC) can produce ectopic ACTH, leading to Cushing's Syndrome. It is important to note that because this production is ectopic, the cortisol levels will not be suppressed by low or high-dose dexamethasone suppression tests.

## Syndrome Of Inappropriate Antidiuretic Hormone (SIADH)

[Inappropriate Ant-tie on a Die-rocket](#)

Syndrome of Inappropriate Antidiuretic Hormone (SIADH) occurs when antidiuretic hormone (ADH) is secreted in inappropriately increased amounts. ADH, or vasopressin, is normally released by the posterior pituitary gland and regulates water retention by the kidneys, but ectopic production by tumors like small cell lung cancer will cause SIADH. Patients with SIADH are usually asymptomatic until hyponatremia begins, and then the patient will experience symptoms like confusion, lethargy, and muscle weakness. First line treatment of asymptomatic SIADH is strict water restriction.

## Lambert-Eaton Syndrome

[Lamb-eating](#)

About 1-3% of patients with small cell lung cancer (SCLC) will present with Lambert-Eaton Myasthenic Syndrome (LEMS). In these patients, the symptoms of LEMS are often the first symptoms of the lung cancer. LEMS is a neuromuscular disorder caused by antibodies against the presynaptic calcium channels, inhibiting the release of acetylcholine. Patients display weakness, which improves with repeated muscle use. This syndrome is different from myasthenia gravis, in which the weakness worsens with muscle use.

## Diagnosis

### Kulchitsky Cells

[Cool-chips](#)

As the name implies, small cell carcinoma cells are smaller than normal cells with little to no room for cytoplasm. Small, dark blue cells called Kulchitsky cells are typically visualized on histology. Kulchitsky cells, also known as enterochromaffin cells, are a type of neuroendocrine cell that has been implicated in the pathogenesis of SCLC.

### Neuron-Specific Enolase Positive

[Neuron Emo-lace Positive](#)

These tumors frequently express markers of neuroendocrine differentiation, such as chromogranin A and neuron-specific enolase. Neuron-specific enolase is a protein present in high concentrations in neurons and neuroendocrine cells. This stain can also help identify carcinoid tumors.

### Chromogranin A Positive

[Chrome-granny \(A\) Apple Positive](#)

These tumors frequently express markers of neuroendocrine differentiation, such as chromogranin A and neuron-specific enolase. Chromogranin A is a tumor marker used to detect the presence of tumors arising from neuroendocrine cells. This tumor marker is also elevated in carcinoid syndrome, pheochromocytoma, and pancreatic cancer.

## Treatment

### Chemotherapy and Radiation

[Chemo-head-wrap and Radiation-radio](#)

Since the majority of patients present with metastatic disease, surgical resection is often not indicated. Therefore, in the majority of patients diagnosed with SCLC, chemotherapy and radiation is the best treatment option.