A 74-year-old man has had confusion for 2 weeks. He has smoked two packs of cigarettes daily for 50 years. An x-ray of the chest shows a 5-cm mass in the lung. Laboratory studies of serum show:

- \( \text{Na}^+ \) 110 mEq/L
- \( \text{Cl}^- \) 72 mEq/L
- \( \text{K}^+ \) 4.5 mEq/L
- \( \text{HCO}_3^- \) 30 mEq/L
- Glucose 200 mg/dL
- Creatinine 1.4 mg/dL

Which of the following is the most likely cause of these findings?

(A) Adenocarcinoma of the lung
(B) Craniopharyngioma
(C) Medullary carcinoma of the thyroid gland
(D) Renal cell carcinoma
(E) Small cell carcinoma of the lung
### Learning Objectives

**The listener should be able to:**

1. Identify smoking as one of the biggest risk factors for small cell lung cancer.
2. Identify the common complications of small cell lung cancer.
3. Analyze serum values to identify paraneoplastic syndromes associated with small cell lung cancer.
4. Understand the systemic and cognitive symptoms associated with paraneoplastic secretions originating from small cell lung cancer.

### Key Teaching Points

- Paraneoplastic secretion of ACTH from small cell lung cancer causes the hyperglycemia demonstrated here.
- The hypoosmolar sodium and chloride values and volume expansion that resulted in the confusion and increased intracranial pressure resulted from paraneoplastic SIADH secretion.

### USMLE Test source:


### Keywords

Geriatrics, USMLE step exam, paraneoplastic syndrome, small cell lung cancer

### References


