

## Image of the Month

Jenny J. Hong, MD, MPH; David S. Schrupp, MD; Marybeth S. Hughes, MD

**A** 52-YEAR-OLD, PREVIOUSLY HEALTHY MAN from Jamaica presented with mild abdominal pain, a 6-month history of dull upper chest pain, and nocturnal cough without dysphagia or dyspnea. Initial evaluation revealed a serum calcium level of 13.28 mg/dL (reference range, 8.2-10 mg/dL; to convert to millimoles per liter, multiply by 0.25) and intact parathyroid hormone level of 93 pg/mL (reference range, 16-87 pg/mL; to convert to nanograms per liter, multiply by 0.1053). Computed tomography revealed a 4.5- × 8-cm, right-sided, posterior mediastinal cystic mass extending from the root of the neck to the level of the aortic arch, with tracheal deviation. Neck ultrasound indicated normal thyroid and parathyroids. Results of testing for parathyroid sestamibi were also negative. He was referred to us with a diagnosis of primary hyperparathyroidism and a large mediastinal mass. Results of his examination were nor-

mal. Result of laboratory testing were ionized calcium, 8.16 mg/dL (reference range, 4.48-5.28 mg/dL) and intact parathyroid hormone, 1405 pg/mL. Chest x-ray showed an 8.5-cm right paratracheal mass. Upper gastrointestinal series demonstrated displacement of the proximal esophagus by the right-sided paratracheal mass. Parathyroid sestamibi revealed increased radionuclide uptake in the perimeter of the mass. Computed tomography of the chest (**Figure 1**) confirmed a large right mediastinal cystic paratracheo-esophageal mass. The patient had a right anterior thoracotomy and resection (**Figure 2**) with intraoperative intact parathyroid hormone monitoring. Laboratory values normalized, and he recovered completely.

### What Is the Diagnosis?

- A. Branchial cleft cyst
- B. Cystic parathyroid adenoma
- C. Thyroid adenoma
- D. Thymoma

Author Affiliations: National Cancer Institute, Bethesda, Maryland.



**Figure 1.** Chest computed tomography demonstrated a 5-cm cystic mass in the right upper mediastinum near the thoracic inlet with peripheral tissue attenuation.



**Figure 2.** Intraoperative specimen. The mass weighed 87 g and measured 8 × 5.6 × 4.6 cm.