

## QUIZ SECTION

### Nodule on the Chest: A Quiz

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A 64-year-old man presented with a 5-month history of an asymptomatic nodule on his chest (Fig. 1). This had increased rapidly in size over the previous few weeks. He had had a similar lesion excised 40 years previously from the same site. His medical history included Barrett's oe-



Fig. 1. Skin-coloured nodule on the sternal area outlined with blue ink.

sophagus secondary to long-standing gastric-oesophageal reflux disease. The lesion was completely removed through elliptical excision under local anaesthesia. Histopathological examination of haematoxylin-eosin-stained tissue sections showed a cyst, lined with a pseudostratified ciliated epithelium with a small number of goblet cells, that was not attached to the epidermis (Fig. 2a). The cyst's lining was negative for oestrogen and progesterone receptors, whereas thyroid transcriptase factor-1 (TTF-1) showed weakly positive staining (Fig. 2b).

*What is your diagnosis? See next page for answer.*

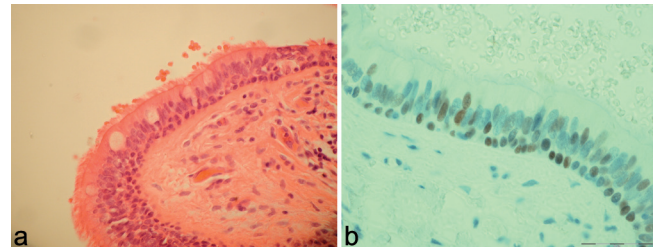


Fig. 2. (a) Cyst lined with pseudostratified ciliated epithelium with a small number of goblet cells. (b) Thyroid transcriptase factor-1 (TTF-1)-positive cells; original magnification  $\times 40$ .

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## ANSWERS TO QUIZ

### Nodule on the Chest: Comment

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#### **Diagnosis: Cutaneous bronchogenic cyst**

Ciliated cysts may be classified on the basis of their location and clinicopathological features as bronchogenic, branchial cleft, thymic, thyroglossal duct, perianal caudal gut, vulvar or cutaneous ciliated cysts (1).

Most bronchogenic cysts reported have features of the bronchial wall: ciliated pseudo-stratified columnar epithelium and/or goblet cells. Other features described are mucous glands, lymphocytes, cartilage and smooth muscle (2). Bronchogenic cysts are commonly located in the lungs or mediastinum, contiguous with foregut structures. There are, however, bronchogenic cysts in the skin and subcutaneous tissue. Cutaneous bronchogenic cyst is a rare and usually solitary lesion that is more common in males (3). The most common location is the suprasternal notch, followed by the pre-sternal area, the neck and, more rarely, the scapular area. It appears at, or soon after, birth as asymptomatic nodules that increase in size or a draining sinus (4). TTF-1 is a fairly specific marker for thyroid and bronchopulmonary tumours. The TTF-1 positivity and bronchial-type lining confirm that the lesion is a bronchogenic cyst.

The origin of bronchogenic cysts in extra-thoracic subcutaneous tissues is related to an embryological development alteration that causes distant migration of cells recruited from the tracheobronchial tree primordium along the midline of the body surface (3, 4). Different types of dermal cysts lined with respiratory-type ciliated pseudo-stratified columnar epithelium, including branchial cleft cysts, thyroglossal duct cysts, mature cystic teratomas and cutaneous ciliated cysts, can be distinguished and diagnosed histologically (2).

#### REFERENCES

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