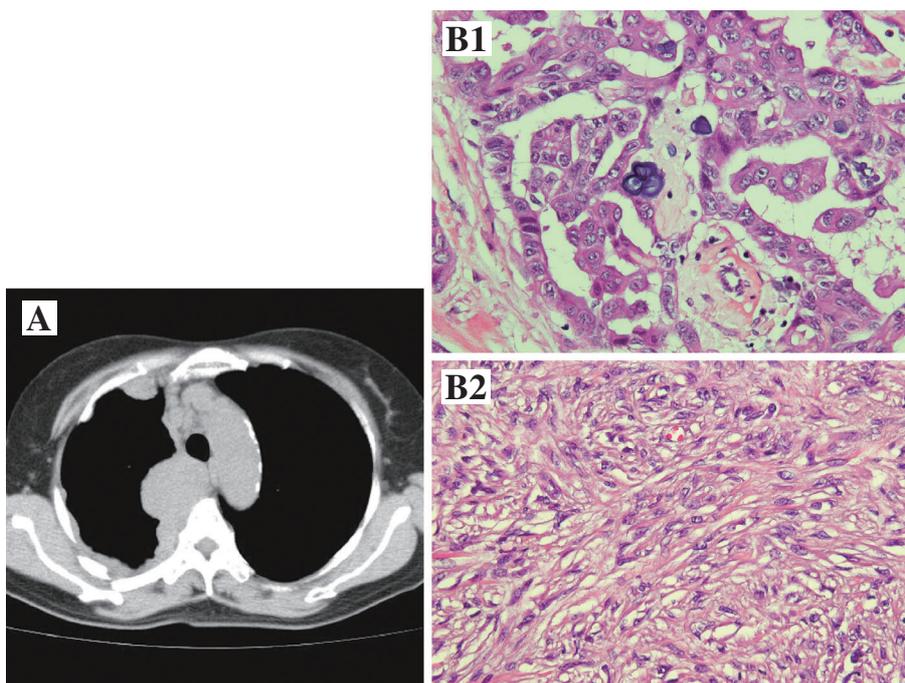


## Psammoma Bodies in Malignant Pleural Mesothelioma

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**Picture A.** Chest CT scan showing a right superior paravertebral mass, irregular nodular thickening of the right pleura, and mediastinal lymphadenopathy.

**Picture B.** Section from the pleural tumor showing mesothelioma composed of epithelioid cells with psammoma bodies (B1) and spindle-like cells (B2) (HE stain).

A 55-year-old never-smoker housewife presented with cough and exertional dyspnea. Chest computed tomography (CT) demonstrated a right superior paravertebral mass, irregular nodular thickening of the right pleura, and mediastinal lymphadenopathy (Picture A). A CT-guided needle biopsy showed a papillary pattern of cuboidal tumor cells that were positive for calretinin and cytokeratin 5/6 and negative for CEA by immunohistochemistry. A diagnosis of malignant mesothelioma was made. She was treated with chemotherapy (gemcitabine, vinorelbine, cisplatin) but the response

was poor. She then developed superior vena cava syndrome and multiple cerebral metastases, for both of which radiotherapy was given. The patient's condition rapidly worsened and she died 15 months after onset. Postmortem examination revealed mesothelioma involving the total right pleura with contiguous spread to the right lung, right diaphragm, superior vena cava, and pericardium. In addition, there were metastases to bilateral lungs, cervical, mediastinal and paraaortic lymph nodes, and left adrenal gland. The brain was not examined at autopsy. Histologically, the tumor ex-

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hibited a biphasic morphology of epithelioid (A) and sarcomatoid (B) elements (Picture B1). Also notable was the presence of a small number of psammoma bodies in the tubulopapillary component of the mesothelioma (Picture B2). Malignant mesothelioma is regarded as an asbestos-related neoplasm. However, the present patient had no history of occupational or environmental exposure to asbestos and no asbestos bodies could be extracted from the lung tissues, suggesting another, yet unknown, causative factor. Psammoma bodies are laminated spherical concretions that occur

in a variety of malignant and benign conditions, especially in ovarian and thyroid papillary adenocarcinoma. They are believed to be produced by degenerating tumor cells, secretions from these cells, or a mixture of both. The association of psammoma bodies with pleural mesothelioma has been rarely reported (1, 2).

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