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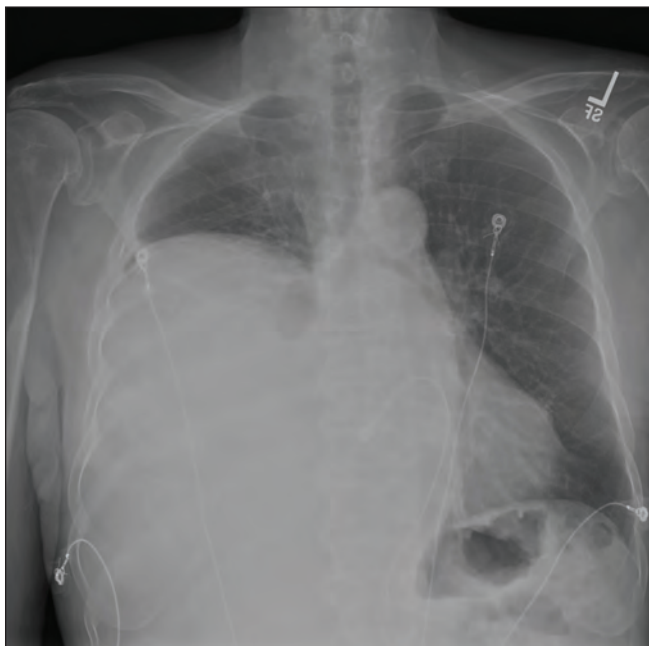
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## SARCOMATOID MESOTHELIOMA IN A PATIENT WITH ASBESTOS EXPOSURE

Abhik Roy, MD and Merritt Brown, MD

### Case

A 76-year-old man with no significant past medical history presented with a two month history of progressive shortness of breath, 25-pound weight loss, and sharp right-sided chest, abdomen, and pelvic pain without radiation. The patient noted his dyspnea became more pronounced in recent weeks, notably worse with climbing stairs or performing work around the house. He described the pain as having a positional component, and exacerbated with deep-inspiration. On further questioning, the patient reported a 50-pack-year history of smoking and past exposure to asbestos while working with heating insulation. Physical examination revealed an age-appropriate, but cachectic appearing male with tenderness of the right abdomen to palpation, mild tachypnea with 95% oxygen saturation on two liters of oxygen, and normal cardiac rate and rhythm. Initial chest radiograph revealed a large mass causing near complete opacification of the right hemithorax (Figure 1) which was a new finding compared to the patient's previous chest radiograph two years prior (Figure 2). Computed tomography (CT) scan of the chest/abdomen/pelvis performed to further evaluate this mass (Figure 3) revealed a 20 x 21 x 23 cm heterogeneous tumor above the right hemidiaphragm with extension into the left atrium via the right pulmonary vein (white arrow), as well as lateral and anterior diaphragmatic and pleural involvement. Differential diagnosis at this stage included malignant mass, benign pleural wall tumor, and mesothelioma. Pathology from surgical biopsy (Figure 4) suggested Sarcomatoid mesothelioma.



**Figure 1.** Chest radiograph (PA) shows a mass in the right thorax causing left deviation of midline structures

Mesothelioma is an aggressive, rare malignancy arising from mesothelial cells, most commonly in the pleura, but also noted to occur in the peritoneum, pericardium, or tunica vaginalis. Three major histologic subtypes of mesothelioma, epithelioid (most common), biphasic, and sarcomatoid, have been described. Accounting for only 10% of pleural malignant mesotheliomas, Sarcomatoid is the least common, defined by the absence of epithelial elements in biopsy material (Figure 4). Like other mesotheliomas, Sarcomatoid is most common in men older than 55, and is strongly associated with distant exposure to asbestos (particularly amphibole asbestos). Common presenting symptoms of all malignant pleural masses include dyspnea, weight loss, anorexia, night sweats and weakness.

Sarcomatoid type, the most aggressive subtype, shows the least response to surgery, chemotherapy, or radiation therapy. With a median survival near 6 months, Sarcomatoid mesothelioma is associated with a particularly poor prognosis compared to 12-24 months for epithelial mesothelioma and 12 months for biphasic mesothelioma. Given his poor prognosis, our patient was offered palliative chemotherapy; however, after much discussion, he decided to forgo any therapy and was discharged home under the care of his family.

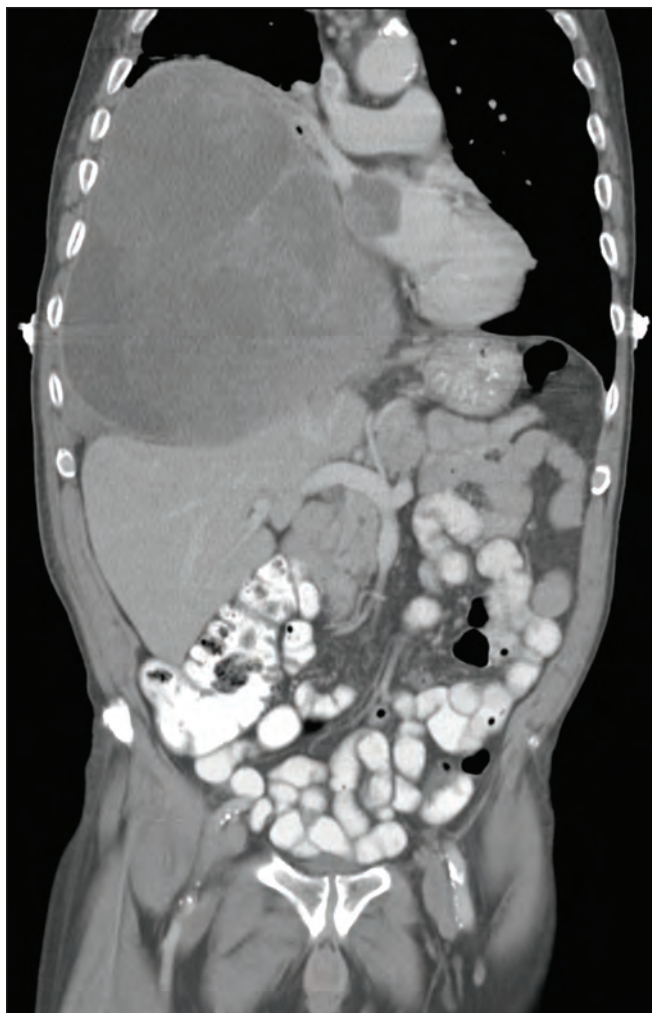
### References

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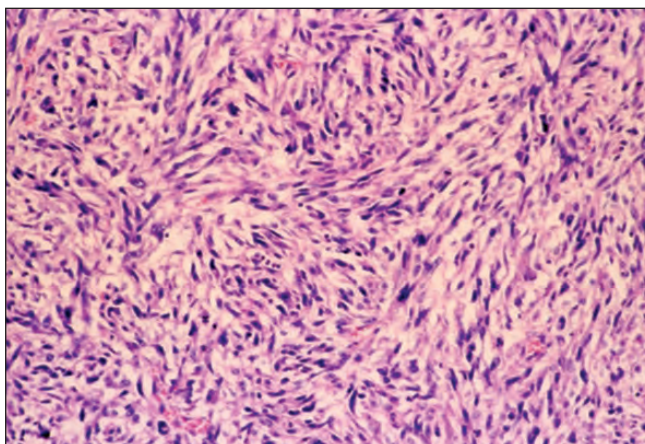


**Figure 2.** Chest radiograph from two years prior to current admission is unremarkable for any lesion or mass

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**Figure 3.** Coronal computed tomography (CT) of the abdomen/pelvis with reconstruction shows a circumscribed loculated mass with extension into the left atrium via right pulmonary vein (white arrow)



**Figure 4.** Hematoxylin & Eosin stained biopsy of right lung mass obtained by Trucut core needle biopsy shows absence of epithelial elements