

# An Unexpected Cause of Pulmonary Cannonball Lesion

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## CASE PRESENTATION

A 75-year-old woman presented to us with progressively worsening exertional breathlessness. On examination she was pale, had palpable hepato-splenomegaly with obvious ascites. Admission chest radiograph (CXR) showed a large, well-circumscribed mass occupying the right middle zone (Fig. 1A). Laboratory investigations were consistent with pancytopenia. Computerized tomography of her chest, abdomen, and pelvis revealed a  $7.9 \times 5.1$  cm well-defined, fat-dense lesion arising posteriorly to the right hilum and expanding from the right seventh rib (Fig. 1B). Abdomen sequences confirmed moderate-volume ascites, extensive nonocclusive portal vein thrombosis in absence of focal liver lesions, and a 18-cm spleen containing a 7.3-cm hyperenhancing focal mass (Fig. 1C). Paraesophageal, gastric, and pararectal varices were noted. A bone marrow aspiration and biopsy was consistent with myelodysplasia. Fine-needle aspiration of the mass revealed a variety of hematopoietic cell population rich in myeloid and erythroid precursors interspersed within adipose tissue. On the basis of the initial investigations the patient was diagnosed with extramedullary hematopoiesis (EMH) and compensated Child Pugh A6 cirrhosis.

EMH is very rare in nonreticuloendothelial organs and represents a late compensatory disorder of conditions such as myelodysplasia or myelofibrosis, resulting in bone marrow failure.<sup>1</sup> In our patient, the incidental finding of a *cannonball* mass on admission CXR prompted us to consider occult malignancy metastatic to the lung as our primary diagnostic hypothesis. Although a few cases of pulmonary EMH have been described, with either reticulo-nodular interstitial involvement<sup>2</sup> or discrete mass-forming elements,<sup>3</sup> the CXR appearances of our case have never been described before. Our case should prompt clinicians to consider EMH in the differential diagnosis of cannonball lesions on CXR in the context of bone marrow failure.

## REFERENCES

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**FIGURE 1.** A, Posteroanterior radiograph of the chest showing a large, round mass occupying the right middle zone. B, Mediastinal window of chest CT sequences delineating a  $7.9 \times 5.1$  cm EMH focus attached to the seventh rib. C, Abdominal CT sequences showing a 7.3 cm hyperdense EMH focus within the spleen and moderate ascites. CT, computerized tomography; EMH, extramedullary hematopoiesis.

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