

## Case illustrated

## Community-acquired lobar pneumonia encountered at autopsy



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A 72-year-old woman 12 years status-post partial mastectomy, adjuvant radiation, and five years of anastrozole for stage I estrogen receptor/progesterone receptor positive breast adenocarcinoma presented with neck pain. MRI showed extensive metastatic disease involving the skull and the vertebral bodies of the cervical and thoracic spine. She was started on dexamethasone. Bone scan revealed multiple sites of disease, including the ribs, spine, and pelvis. Four weeks following initiation of radiation to the cervical spine for palliation of neurologic symptoms, the

patient exhibited a few days of fever at home, without respiratory distress, and died in her sleep. The patient did not have any documented pneumococcal vaccination. At autopsy, dense lobar consolidation with red hepatization was found in the entire lower lobe of the left lung (Fig. 1). On microscopic examination, the alveolar spaces were completely filled with fibrin and scattered neutrophilic leukocytes (Fig. 2). Gram stain revealed multiple lancet-shaped Gram positive diplococci in pairs, consistent with *Streptococcus pneumoniae* (Fig. 3). Additionally, several bones

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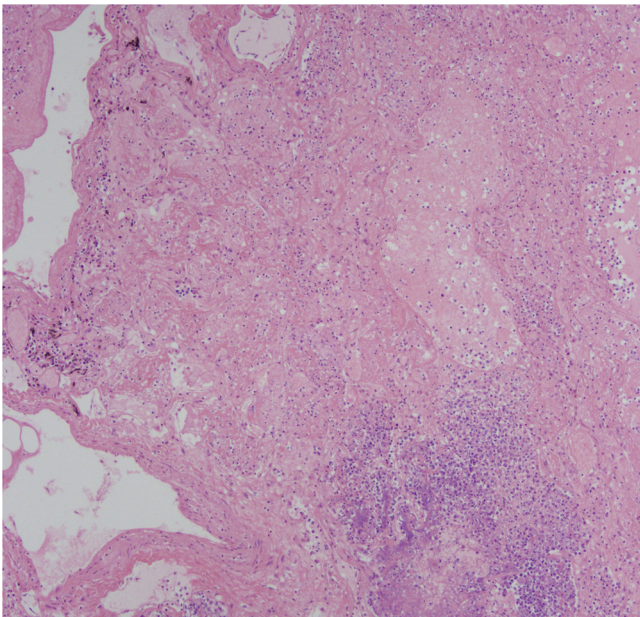
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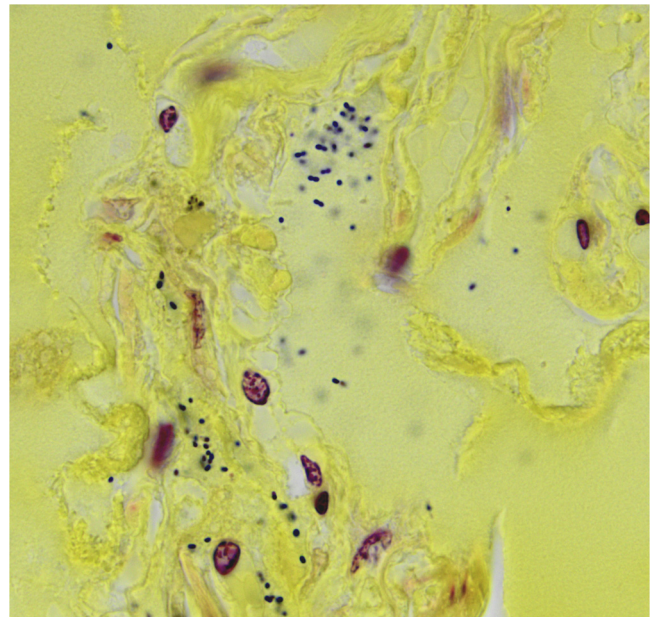
**Fig. 1.** Photograph of the lungs at autopsy in the fresh state, demonstrating sharp demarcation at the interlobar fissures, with diffuse consolidation (hepatization) of the left lower and right middle lobes.

contained metastatic ER positive adenocarcinoma (not shown). The cause of death was typical community-acquired lobar pneumonia with respiratory failure in the setting of widely metastatic breast cancer. In the era of modern antimicrobials and

polyvalent vaccination, *S. pneumoniae* accounts for approximately 10–15% of cases of community-acquired pneumonia, and is attended by a 10–12% 30-day mortality rate.



**Fig. 2.** Photomicrograph of a hematoxylin and eosin stained section of the parenchyma of the left lung lower lobe (10× objective magnification). The alveolar spaces are completely filled with fibrinous exudate, and frequent neutrophils are present.



**Fig. 3.** Photomicrograph of a Gram stained section of the alveolated parenchyma of the left lung lower lobe (40× objective magnification) showing numerous gram positive diplococci.