A Painful Swelling on the Chest
(See pages 148–50 for the Answer to Photo Quiz)

Figure 1. Chest radiograph demonstrating a shadow in the lower field of the right lung (arrow) and pleural thickening.

A 43-year-old Lebanese man was referred because of cachexia, productive cough, diffuse chest pain, and a chest radiograph showing a shadow on the right lung (figure 1). The man had a history of substance abuse but no further medical history. A diagnosis of pulmonary tuberculosis could not be confirmed at the local community health department. On physical examination, the patient appeared to be moderately ill, with generalized wasting of body muscle and subcutaneous fat. Body weight was 48 kg (body mass index, calculated as weight in kilograms divided by the square of the height in meters, 16.1). The patient had a low-grade fever and tachycardia. The oral cavity showed dental caries. There was no local or generalized
Figure 2. CT scan of the thorax, showing a mass protruding through the thoracic wall (arrows).

Figure 3. Gram stain of the purulent transthoracic aspirate (oil immersion; original magnification, 10 × 100).
lymphadenopathy. A slightly painful swelling was palpable in the right sixth intercostal space. Percussion of the right hemithorax was dull and tender. Diminished breathing sounds were heard on auscultation, without crackles or rales. The abdomen was not painful, and there was no organomegaly. The results of laboratory tests showed marked leukocytosis with normal differentiation (leukocyte count, $26.9 \times 10^9$ leukocytes/L), anemia (hemoglobin level, 5.2 mmol/L), thrombocytosis (platelet count, $819 \times 10^9$ platelets/L), and an elevated C-reactive protein level (200 mg/L). Liver enzyme levels and the results of kidney function tests were normal. Bronchoscopy did not reveal endobronchial abnormalities, and analysis of bronchoalveolar lavage fluid and transbronchial lung biopsy samples did not yield a diagnosis. CT of the thorax (figure 2) showed a mass protruding through the thoracic wall. A puncture at the site of the palpable swelling was performed, and pus was aspirated. Three strains of bacteria were isolated from the aspirate, 2 of which are seen in figure 3.

What is your diagnosis? What 3 strains of bacteria were isolated?