Birefringent Crystals in a Lung Cavity
(See pages 1849–50 for Answer to Photo Quiz)

Figure 1. CT scan of the chest showing right upper lung cavity

A 47-year-old black man with a history of diabetes mellitus underwent kidney-pancreas transplantation in 1990. In February 2004, he received a diagnosis of *Mycobacterium kansasii* infection with small cavitary lesions in the middle zone of the left lung. He was undergoing treatment for this infection when he presented to the hospital in May 2004 with complaints of nonproductive cough and shortness of breath lasting 1 week. He had pleuritic chest pain on the right side, and he had no fever or hemoptysis. On physical examination, he was afebrile and was dyspnic on exertion, and radiography of his chest revealed a right upper lobe cavitary lesion. A CT scan of the chest is shown in figure 1. Biopsy of bronchial samples revealed necrotic material containing crystals, which were birefringent under polarized light (figure 2).

What is your diagnosis?