Case 7

**History**

30-year-old I.V. drug abuser with hemoptysis and fever.

![PA view of the chest showing multiple peripheral nodular opacities, some of which are cavitating.](image)

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![Radiograph of the chest taken fourteen days later, which shows an increase in number and varying stages of cavitation, some with thin walls, some with walls of intermediate thickness.](image)

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**Diagnosis?**

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Septic Pulmonary Emboli.

**Findings**

The site of origin of septic pulmonary emboli includes: tricuspid valve endocarditis (particularly in intravenous drug abusers), ventricular septal defects, and septic thrombophlebitis. The majority of patients are young (less than 40 years of age). The most common organism in septic emboli is Staphylococcus Aureus, followed by Streptococcus. Most of the cases are true septic emboli, that is, the organism is present in the thrombus. However, secondary bacterial infection of an initially sterile infarct can result in a similar pathologic and roentgenographic appearance.

The chest film typically discloses multiple, bilateral, round or wedge-shaped opacities that frequently cavitate. The cavities may have a thick wall with a shaggy inner lining at different stages or degree of cavitation. The lesions are usually peripheral and may become thin-walled in the healing phase.
The differential diagnosis for multiple cavitary lesions should include:

- Multiple granulomata
- Metastatic epidermoid carcinoma
- Wegener's granulomatosis
- Rheumatoid nodules

Fever, cough (productive and nonproductive), tachypnea, and tachycardia are the major clinical manifestations of septic pulmonary emboli.