Lung Consolidation in Elderly Patient Case Study

A 68-year old patient with Alzheimer disease was brought to the emergency room by the staff of a local nursing home. He presented as lethargic with a sallow complexion. He had an admission temperature of 102.4F and a respiratory rate of 33 breaths/minute. During respiration, the right side of his chest moved better than the left. He showed dense consolidation of the lower lobe of the left lung on physical exam. A sputum sample revealed blood and a greenish color.

A chest x-ray showed tight consolidation of the left lung with evidence of formation of cavities in the lung tissue from cytotoxic damage. The patient complained of chills in the exam room, combined with his fever. A smear of his sputum demonstrated no acid-fast bacteria.

1. What is your presumptive diagnosis for this case?
2. What evidence could the sputum give for this case?
3. Is the increased respiration rate and unequal chest movement indicative of the pathology?
4. Is this a bacterial or viral disease?