

Antiangiogenesis Induced Tumor Cavitation in Lung Cancer

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A 52-year-old Chinese female never smoker presented in June 2009 with multiple bilateral cavitations and a large tumor in the left lower lobe (Figures 1 and 2). She was diagnosed with stage IV adenocarcinoma in December 2006 with multiple pulmonary nodules and a destructive lesion at C5 (Figure 3). Biopsies of the left lower lobe and C5 confirmed a metastatic poorly differentiated adenocarcinoma

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of the lung. The patient was commenced originally on erlotinib in January 2007 followed by carboplatin/paclitaxel (February 2008) and pemetrexed (July 2008). Bevacizumab (15 mg/kg every 3 weeks) was added to the erlotinib in March 2007 and was maintained continuously throughout both second and third line chemotherapeutic regimens until November 2008 when brain metastases were diagnosed. The diffuse cavitating lung lesions were first found in July 2007. Three negative bronchoscopies and numerous blood and sputum cultures ruled out tuberculosis, opportunistic infection, parasitic infestation, and other potential causes of cavitation. Tumor cavitation induced by antiangiogenic agents is common occurring in 16% of patients with lung cancer.^{1,2}

REFERENCES

1. Marom EM, Martinez CH, Truong MT, et al. Tumor cavitation during therapy with antiangiogenesis agents in patients with lung cancer. *J Thorac Oncol* 2008;3:351–357.
2. Crabb SJ, Patsios D, Sauerbrei E, et al. Tumor cavitation: impact on objective response evaluation in trials of angiogenesis inhibitors in non-small-cell lung cancer. *J Clin Oncol* 2009;27:404–410.

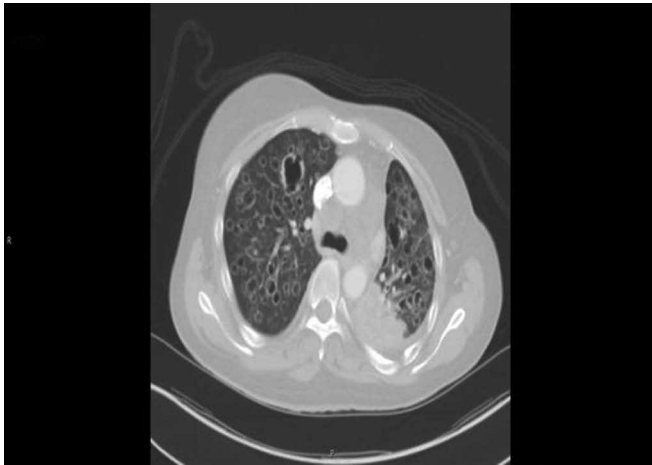


FIGURE 1. Computed tomography (CT) thorax (June 2009) showing diffuse bilateral cavitations and a large tumor in the left lower lobe.

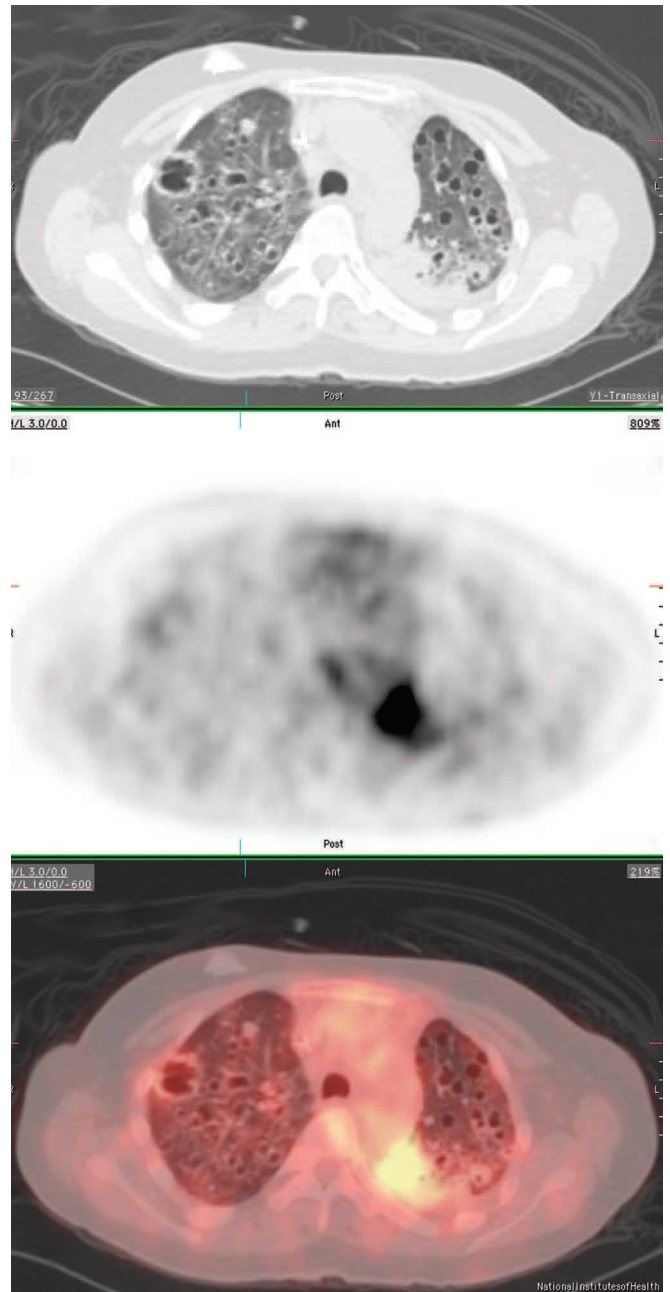


FIGURE 2. Positron emission tomography/computed tomography (PET/CT) thorax (June 2009) showing diffuse bilateral cavitations and a large tumor in the left lower lobe.



FIGURE 3. Computed tomography (CT) thorax (December 2006) demonstrating innumerable pulmonary nodules and the main lung mass in the left lower lobe.