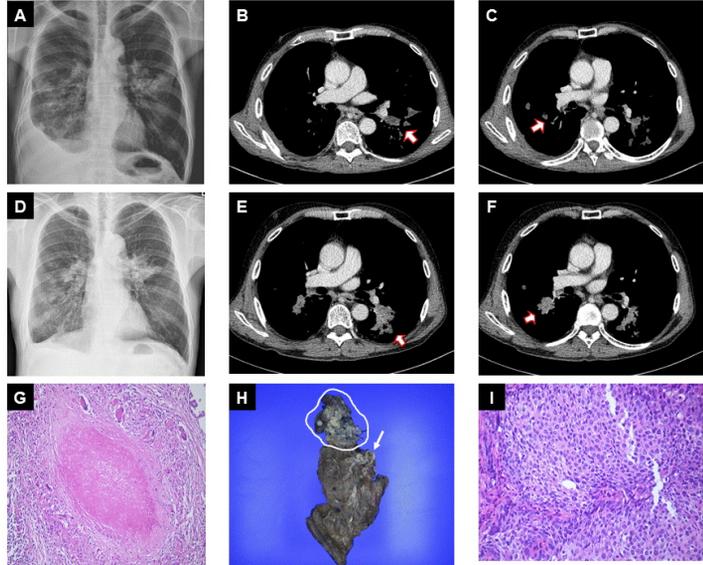


Stage I lung cancer diagnosed during treatment of tuberculosis presenting as multiple masses

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Because of radiologic similarities between pulmonary tuberculosis and lung cancer, differential diagnosis is difficult especially when two are presented simultaneously. Here, we report a case of stage I lung cancer presenting as multiple pulmonary nodules with increase in size during treatment of pulmonary tuberculosis. A 65-year-old man was admitted for further evaluation of an endobronchial nodule and aggravation of consolidations on computed tomography (CT). He had smoking history of 60 pack years. Six months ago, he had been diagnosed as tuberculous pleural effusion (Figure 1A, 1B, 1C) with positive culture of mycobacterium tuberculosis and treated with anti-tuberculous drugs. CT scan on admission showed increased extent of consolidations in both lower lobes (Figure 1D, 1E, 1F). Bronchoscopy showed 3 mm sized hyper-vascular nodule in the left medial basal segmental bronchus and bronchoscopic biopsy was performed. Histological examination showed squamous cell carcinoma. [<sup>18</sup>F]fluoro-2-deoxy-D-glucose positron emission tomography(FDG-PET)/CT showed a 5.0 \* 7.4 cm-sized FDG-avid mass in the left lower lobe (LLL) and a 3.2 \* 10.5 cm-sized FDG-avid mass in the right lower lobe (RLL) suggesting lung cancer in both lungs. Percutaneous transthoracic needle biopsy of the RLL mass was performed and showed granulomatous inflammation characterized by central caseation necrosis corresponding to mycobacterium tuberculosis (Figure 1G). PTNB of the LLL was also done and confirmed diagnosis of pulmonary tuberculosis. Left lower lobectomy was performed. Histopathologically, the tumor showed endobronchial growth and very limited invasion into the surrounding parenchyma (Figure 1H, I). Multiple nodular lesions showed granulomatous inflammation characterized by central caseation necrosis. Final tumor node metastasis staging of the patient was T1aN0M0. The differential diagnosis between pulmonary tuberculosis and lung cancer is difficult. Therefore, if multiple lesions are presented in the patients with pulmonary tuberculosis and other diseases such as lung cancer, biopsy of each lesion should be considered.



A case report of pulmonary cryptococcosis in a ruxolitinib treated patient

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**Background:** Pulmonary cryptococcosis is known to occur frequently in immunocompromised hosts. However, there are only a few reports of pulmonary cryptococcosis in patients treated with JAK inhibitors. Ruxolitinib, an inhibitor of Janus kinase has been approved for the treatment of myelofibrosis, exert immunosuppressive activities through the downregulation of several cytokines. We report a case of pulmonary cryptococcosis in a ruxolitinib treated patient with primary myelofibrosis. **Abstract:** We present the case of a 58-year-old woman being treated with ruxolitinib for primary myelofibrosis who showed multiple pulmonary masses on right lung. She was an inflammatory breast cancer patient and had completed post-operative chemotherapy. (2016/08/25–2017/08/23). Chest computed tomography (CT) showed masses with few cavities. Also PET-CT scans showed multiple hypermetabolic pulmonary masses. First, under suspicion of recurrent breast cancer, we examined the lesions by transbronchial lung biopsy and bronchial lavage. Pathologic findings showed acute inflammation and cryptococcus was confirmed by several staining tests including AFB staining. Culture of bronchial lavage fluid was *Cryptococcus neoformans*, serum was negative for cryptococcal antigen. The patient underwent spinal tapping to exclude disseminated cryptococcus. Patient started to treat with fluconazole after CNS infection was excluded. **Conclusion:** The present case of pulmonary cryptococcosis occurred in a patient treated with ruxolitinib. In the initial diagnosis, the patient had to be differentiated from a metastatic tumor. Clinician should be aware of the potential opportunistic infections associated with using immune modulating agent.

