# Fungal Infection Mimicking Metastasis in Lung Carcinoma

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## ABSTRACT:

In our investigation, we found out that the lung infections can be due to fungus which can make the treatment to cancer a bit confusing for medical therapy. People with weakened immune systems are susceptible to infections by opportunistic fungi and can invade the lungs. Here, one patient was diagnosed with squamous cell carcinoma of left lung but later on his right lung was found to show multiple cannon ball opacities which were reported to be metastasis by chest X-ray and CT Scan reports. However, it was not the exact case because when treated with anti-fungal drugs, the cannon balls disappeared within two weeks.

## INTRODUCTION

Lung cancer is the leading cause for the death of the people all over the world. Chemotherapy and radiotherapy are the most common treatment for the cancer patients. In addition to the recognized effects of chemotherapy induced neutropenia, immune defects related to underlying cancer can increase the risk of infection. Patients who develop severe infection or those who have died after chemotherapy are identified as having decreased phagocytic neutrophil activity, and as potentially having an increased oxidative burst before chemotherapy compared with mild infection. Thus, neutrophils are pre-activated and can have impaired function before chemotherapy. Chemotherapy activity, antibody-dependent cell-mediated cytotoxicity, and cytostatic activity of monocytes and macrophages are impaired in patients with cancer .[2]

Here, we report lung infections that are seen most commonly in patients with cancer who receive chemotherapy.

## CASE REPORT

We describe case of sixty five years old male patient with squamous cell carcinoma of left lung diagnosed six months before. He is chronic smoker with history of diabetes and hypertension. After diagnosis, he received five cycles of Cisplatin chemotherapy and repeated radiotherapy, both of which were completed two months back. He was on repeated follow of in the radiotherapy department. Dated on 04-11-2067 he was admitted for history of fever and cough on and off for two days.

INVESTIGATION REPORT. Blood routine examination was unremarkable. Chest X-ray and CT scans showed multiple cannon ball opacities on the right lung which was reported to be metastasis. Fever was not settled with anti-pyretics. Emperic anti-fungal drug was started which shows reserving of the cannon balls opacity in two weeks X-ray.

## DISCUSSION:

People with weakened immune systems are susceptible to infection by opportunistic fungi. Cancer patients, immune compromised patients suffering from HIV/AIDS or those who are on a course of immunosuppressive drugs before and after organ transplant, or bone marrow transplant, are at risk. Among infections 12% of opportunistic infection is encountered by fungus in carcinoma of lung. Fungal infection is almost exclusively by Aspergillus species. Other less common fungal infection are by Fusarium, Mucoralis, and Pneumocystis jiroveci species.

**Figure 1.** Chest X-ray before antifungal reported as lung metasis

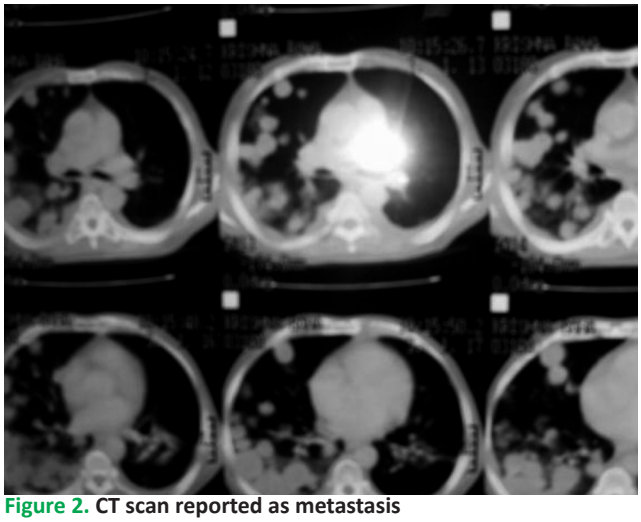

**Figure 2.** CT scan reported as metastasis

**Figure 3.** Chest X-ray after antifungal treatment

Patterns noted on chest radiography and CT is helpful, but no one radiographic finding is pathognomonic for a specific process. Standard chest radiography in patients with immunosuppression is more than a screening test, showing pathological findings in as few as 10% of high risk patients with febrile neutropenia. Early CT is mandatory in a study of patients with febrile neutropenia, CT can shows a pulmonary lesions not seen on radiography in 50% of individuals .[3]

## REFERENCES:


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