

# Calcified Metastases From Carcinoma Lung

S Gayathri, C Kaushik, U Garga, B Baruah

## Citation

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## Abstract

Reports of calcifying metastases of the liver in cases of lung cancer are sparse in literature. Several cases of calcifying liver metastases in cases of adenocarcinomas of gastrointestinal tract, bone tumours and ovarian tumours have been described. Reports of calcification developing in the primary tumours and the metastatic foci on resumption of chemotherapy are well known too.<sup>1</sup>

Also the presence of calcification in pulmonary cancers is considered generally as a pointer towards a possible benign nature. However studies have shown that calcification as a criterion to determine the benign nature is fallacious and can be misleading. Mechanism of calcification can be due to engulfment of a benign calcification or due to an intrinsic mechanism.<sup>2</sup>

Synchronous tumours of the lung are found occasionally and are associated with a poorer prognosis. Synchronous tumours of the lung have been described as two different tumours existing in different lobes or different sides of the lungs at the same time.<sup>3</sup>

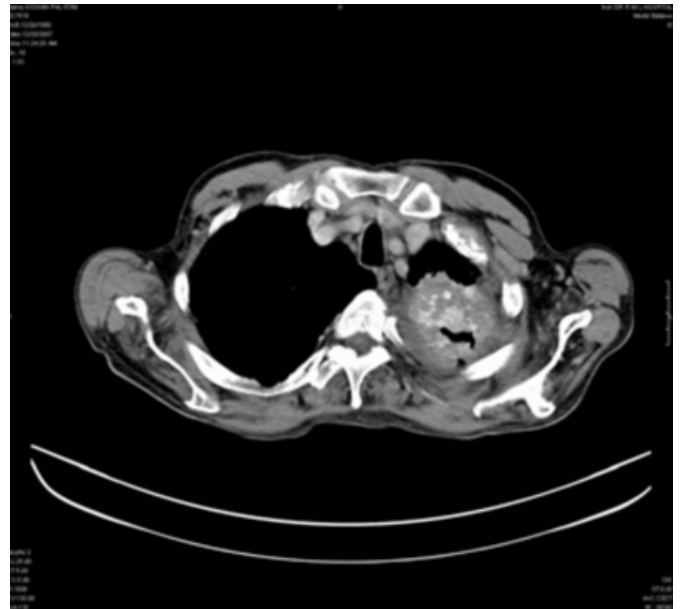
Here we describe an interesting case of synchronous primary lung cancer with calcification and multiple calcified liver metastases.

## CASE REPORT

A 57 year old male presented to the outpatient department of our hospital with fatigue and dry cough for the past two months, and history of a single episode of hemoptysis two days prior to presentation. On the chest film, an ill defined opacity was detected in the left upper zone and another ill defined opacity was noted in the right lung field with evidence of a few ill defined calcific opacities in the region of the right subdiaphragmatic area. A preliminary diagnosis of carcinoma of the lung was made and a computerized tomography (CT) scan of the chest was ordered. A CT guided biopsy of the left upper zone mass was done. The pathologic diagnosis was adenocarcinoma of the lung. On Ct-scan another mass lesion was noted in the right lower zone of lung. Calcified metastases were also noted in the liver. Serum calcium levels were normal. Patient was offered chemotherapy. However due to financial constraints the patient refused treatment and died one month later.

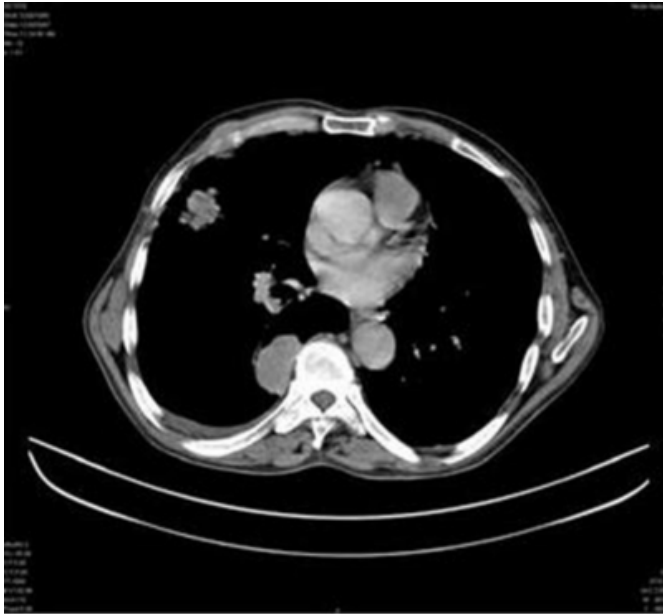
## Figure 1

Figure 1: Axial non enhanced CT scan showing evidence of an apical left lung mass lesion with punctate calcification seen.



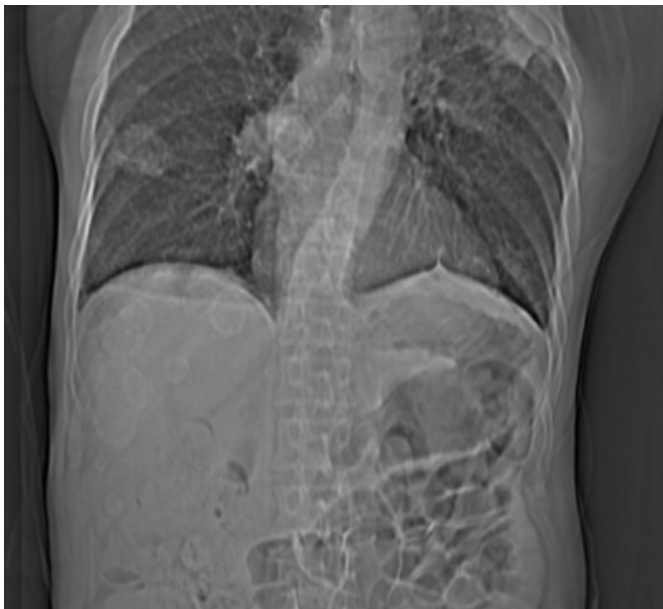
**Figure 2**

Figure 2: Axial non enhanced CT scan from a lower level shows evidence of another mass lesion in the right lung



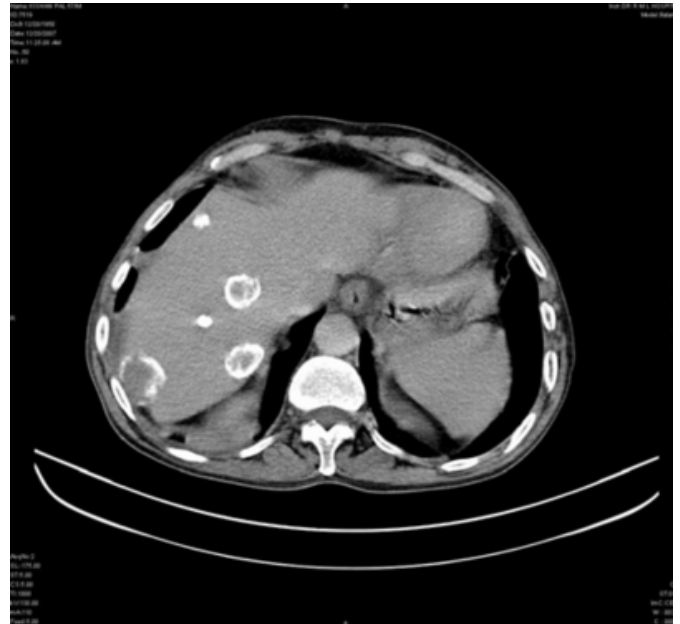
**Figure 3**

Figure 3: Chest X ray showing the mass lesion in the right lung field and the multiple calcified masses in the right subdiaphragmatic area.



**Figure 4**

Figure 4: Axial non enhanced CT scans through the upper abdomen showing the calcified masses seen in the liver s/o metastases.



## DISCUSSION

Calcification in primary lung cancers has been proposed to have different mechanisms ranging from engulfment of a calcific focus to dystrophic calcification in areas of tumour necrosis. Calcification may also develop as sequelae to chemotherapy or in association with hypercalcemia. Calcification pattern in the primary lung cancer may have a varied appearance such as isolated flecks, amorphous, punctate and reticular patterns. No correlation between the tumour histology and pattern of calcification has been found. In our case the patient had adenocarcinoma of lung.

Synchronous tumors may be misclassified as metastatic tumours. The demonstration of different histopathological features is one means of proving it. In our case the exact histology of the second lesion could not be ascertained however its presence in the other lung at a distant location at the same time strongly suggested a synchronous origin though metastatic focus is still a possibility. In cases of true synchronous tumors a separate grading and staging should be used for both the tumors.

Calcific liver metastases from a primary lung carcinoma are known but is a rare entity. One of the differential diagnosis is an echinococcus cyst. Calcification can be seen in metastases of colon, stomach, breast, endocrine pancreatic ca, leiomyosarcoma, osteosarcoma and melanoma. Also it has been postulated that any sign of calcification in liver

metastases should be regarded either as a manifestation of the malignant process or as a result of chemotherapeutic intervention<sup>1</sup>.

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