

CT Features in Pleomorphic Carcinoma (PC) of the Lung: Comparison with Pathological Findings

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ABSTRACT

PURPOSE: To evaluate the CT features of pleomorphic carcinoma (PC) of the lung and to compare these features with the pathological findings.

MATERIALS AND METHODS: Ten patients with a pleomorphic carcinoma treated from June 2000 to January 2003 were ~~collected~~ **selected** from two institutions. Seven of the 10 patients were male, and 3 were female. Their mean age at the time of diagnosis was 64.1 years (age range, 43 to 75 years). Two radiologists retrospectively reviewed the CT features of **the** 10 cases, ~~of pleomorphic carcinoma of the lung,~~ which included: the size and location of the tumor; presence of calcification; the attenuation values and internal architectures of the mass; ~~as well as~~ **and the** invasion of the pleura and chest wall. The attenuation values of the mass on the CT scans were compared **with (to)** the pathological features of the tumors on the available gross specimens. Follow-up CT scans were not routinely obtained except ~~for in the case of~~ **two** ~~patients~~ who had **a** **(need 'a'?, or just 'progressive..')** progressive pleural effusion and showed rapid

growth of the tumor on serial chest radiographs.

RESULTS: On the unenhanced CT scans, the attenuation of the tumor was similar to that of the surrounding muscle. Calcification within the tumor was visible in one patient. Invasion into the chest wall was noted in two patients. Seven cases showed pleural invasion. The tumors were located at the lung periphery in nine patients. On the enhanced CT scans, the lesions whose longest diameter was more than 5 cm showed the presence of central low-attenuation areas with significant enhancement in the tumor periphery; whereas in comparison, the lesions whose longest diameter was < 5 cm showed homogeneous enhancement. The sizes of two of the lesions with a diameter > 5 cm increased rapidly after only a short follow-up period (of less than 3 weeks). The low-attenuation areas on the enhanced CT scans were found to correspond to the areas of myxoid degeneration, necrosis, or hemorrhage in the pathologic specimens.

CONCLUSION: This study suggests that pleomorphic carcinomas of the lung preferentially represent (manifest) as large, peripheral lung neoplasms with a central low-attenuation area, with and frequently invasion into the pleura and chest wall.

