







0 - 89% ( 23.8 ± 21.4%)  
 0 - 33% ( 15.3 ± 12.4%)  
 가 (p=0.018),  
 0 - 75% ( 18.8 ± 17.1%) 0 - 35%  
 ( 12.2 ± 10.5%) 가  
 (p=0.134) (Fig. 4).

가  
 가 (10).  
 가  
 (delayed hypersensitivity)  
 가  
 (11).  
 가  
 80% (12).  
 , PCR (DNA  
 . Saiki  
 (13) DNA  
 primer-directed DNA  
 가  
 DNA PCR  
 , PCR  
 PCR  
 DNA  
 가



Fig. 3. False-positive diagnosis as active tuberculosis on HRCT scan.  
 Well-demarcated centrilobular branching linear structures in the right lower lobe raise the possibility of reactivation of the tuberculosis. Micronodules and ground-glass opacities are findings of tuberculosis sequelae in the right upper lobe.

: 가  
 (14). 가 가  
 가  
 30%, 1%  
 51.4%, 62.2%  
 가 (15).  
 , ( ),  
 6  
 (16). CT  
 CT 가  
 CT  
 , 가 (97%),  
 (79%), tree-in-bud (72%), 5-8 mm  
 (69%), (66%) (3).  
 CT  
 CT (17).  
 bud, 1.0 cm ( ),  
 가  
 가 가 CT 2-4 mm

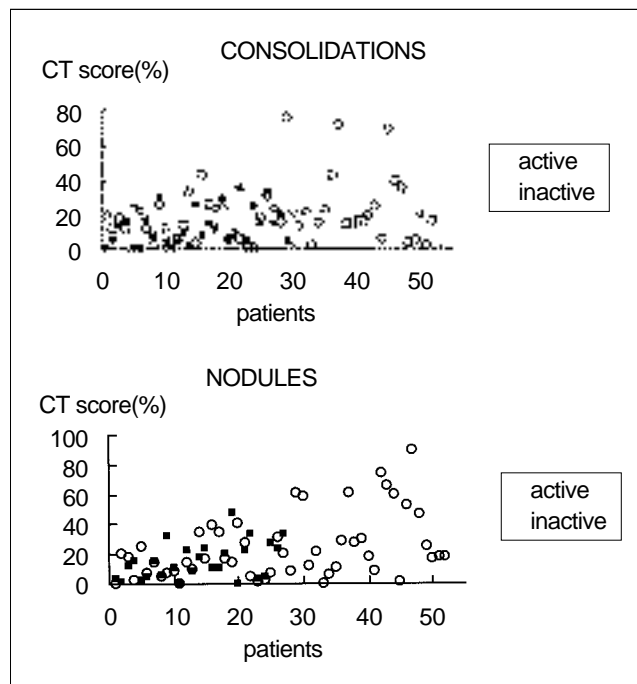


Fig 4. CT scorings of nodules and consolidations in active and inactive tuberculosis.

가 (18).

(21)

가 46.7%

Im (3)

12

가 (12%)

가 19%

가 (20%)

가

가 ( )

(tubercle)

(submucosal layer)

가

(22, 23).

가 (24)

가 (anterior segment bronchus)

(subsegmental bronchus)

가

가

(n=6), (n=1)

(n=4),

2

(n=2),

(n= 5)

(3)

, tree-in-bud

(Fig. 1A).

가

가

가

가 (19).

6.7%

가 49.2%

(25).

2

가

(20).

(22%)

(58%). (10).

가

가

가

space)

GGO가

(ground-glass opacity: GGO)

Poey (5)

27 26 2 9

6

GGO가

GGO

(alveolar 5%

GGO



## **Determination of the Activity of Pulmonary Tuberculosis: the Utility of High-Resolution Computed Tomography<sup>1</sup>**

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**Purpose:** To evaluate the utility of high-resolution computed tomography(HRCT), as used to determine the activity of tuberculosis, and to analyze the HRCT findings in active and in inactive tuberculosis.

**Materials and Methods:** We analyzed the HRCT findings of 100 patients (54 men, 46 women; average age, 54 years) who according to the results of chest radiography had pulmonary tuberculosis of undetermined activity. We assessed HRCT findings such as the presence of a centrilobular, macro-, or micronodule; consolidation, ground-glass opacity, cavity, interlobular septal thickening, irregular linear opacities, bronchial wall thickening, bronchovascular bundle distortion, bronchiectasis, atelectasis, and pericatricial emphysema. We compared the ratio of the area of nodule and consolidation to that of whole lung, and compared the findings between active and inactive tuberculosis.

**Results:** Eleven of 100 patients were excluded because the final diagnosis was other than tuberculosis. In 59 patients, the presence of active pulmonary tuberculosis was proven by positive sputum smear and/or culture for *Mycobacterium tuberculosis*. On the basis of the negative results of these tests, pulmonary tuberculosis was found to be inactive in 30 patients; serial chest radiographs indicated that their condition remained stable over a 6-month period. For HRCT, sensitivity was 96.6%, specificity 56.7%, positive predictive value 81.4%, negative predictive value 89.5%, and accuracy 83.1%. For active tuberculosis, the presence of centrilobular nodules, tree-in-bud, macronodules, cavity within the nodule, and consolidations was statistically significant, while for inactive tuberculosis, that of irregular linear opacities, micronodules, bronchiectasis, and cicatrization atelectasis was similarly significant. The CT score for the area of nodules and consolidations was higher in active than in inactive tuberculosis, but only the nodule score showed statistical significance.

**Conclusion:** HRCT can be a useful diagnostic tool for evaluating the activity of pulmonary tuberculosis.

**Index words :** Lung, CT  
Lung, infection  
Tuberculosis

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E-mail (Objective, Materials and Methods, Results, Conclusion )

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13:00-

14:00-18:00

15:00-17:00 Korean-Japanese Society of Uroradiology Meeting

Special Lectures &amp; Panel Discussion

See attached meeting schedule

6 10 ( )

8:00-10:00

10:00-12:00 (Imaging and Intervention of GI System)

. Taro Takahara, M.D.(Kyorin University School of Medicine)

“ MR Imaging of Bowel Obstruction ”

. Hae Gyu Lee, M.D.(Chatholic University Medical College)

“ Imaging Diagnosis of Infectious Bowel Disease ”

. Hiromu Mori, M.D. (Oita Medical School)

“ Imaging of Pancreatic Veins for Preoperative Staging of  
Pancreatic Carcinomas ”

. Jae Hyung Park, M.D. (Seoul National University College of Medicine)

“ Vascular Intervention of the Liver, Except HCC ”

13:30-18:30

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(http://www.radiology.or.kr)