

## RECENT PROGRESS IN EARLY DETECTION OF LUNG CANCER

Norihiko IKEDA\*

An effective method to reduce the mortality rate of lung cancer is to detect and treat the disease while it is in the pre-invasive stage. Endoscopic fluorescence diagnosis has been employed since 1997 in TMU and its usefulness has been established as below;

1. Increased detection rate of dysplastic lesions (50% in white light and 90% in fluorescence)
2. Objective evaluation of the area of cancer invasion
3. Improvement of the diagnosis of cases with abnormal sputum cytology findings (56% with white light and 72% with fluorescence)

Quantitative cytometry also has been evaluated for the improvement of sputum cytology. The device (AcCell-Savant System) can diagnose malignant cells as well as normal-looking cells derived from cancer patients. These ostensibly normal cells found in the vicinity of cancer lesion are morphologically different from normal cells obtained from normal subjects, which is captured by high resolution cytometry. This phenomenon was called Malignancy Associated Changes. By the clinical application of this concept, the sensitivity for cancer increased. The authors postulate that the combination of fluorescence diagnosis and quantitative cytometry contribute for early detection of high risk lesions.

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\* Department of Surgery, Tokyo Medical University,  
Tokyo, JAPAN.