Non-Small Cell Lung (NSCL) cancer search for biomarkers from body fluids to microarrays

Lung and bronchus cancers are still one of the most common cancers worldwide and the estimated numbers of new cases and deaths are more than 2.2 and 1.5 million, respectively in the United States in 2013. Despite multi-model treatment strategies, including surgery, radiotherapy, chemotherapy and targeted therapy are used, the death rate of lung cancer is still the first leading cause of cancer-related death both in the World and in the America. The 5-year survival rate of lung cancer, predominantly NSCLC, remains as low as 15%. Therefore, improvements in diagnostics (marker associated with different degrees of malignancy and the consequent clinical behavior of lung tumors) and treatments are urgently needed. Serological markers such as CEA, NSE (neuron-specific enolase) and Cyfra 21-1 are included in the diagnosis and management of lung cancer, but their diagnostic and prognostic value is still being debated and currently the usefulness of tumor associated antigenic biomarkers in the care of patients with lung cancer is limited. Panel of markers has gained widespread acceptance as a diagnostic test, as a prognostic indicator, or as a monitor of the treatment response. In fact, no useful marker for the screening of asymptomatic patients has been identified to date. Ideally, a biomarker should have one strategy of potentially increase both sensitivity and specificity parameters combining several biomarkers into a prognostic panel. Identification of lung cancer-specific biomarkers, together with other noninvasive methods, may allow for much needed further refinement of lung cancer screening to reduce mortality.

Biography
Giulio Tarro has graduated from Medicine School, Naples University. Presently he is the President Foundation de Beaumont Bonelli for Cancer Research. He has worked as Research Associate in the Division of Virology and Cancer Research, Children’s Hospital, Assistant Professor of Research Pediatrics, College Medicine, Cincinnati University, USA, Oncological Virology Professor at Naples University, Chief of Virology Division and Head of the Department of Diagnostic Laboratories, D. Cotugno Hospital for Infectious Diseases, Naples.

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