Prasad S Adusumilli., J Cancer Sci Ther 2014, 6:9
http://dx.doi.org/10.4172/1948-5956.S1.039

OMICS Group Conferences
Accelerating Scientific Discovery

Global Cancer Conference & Medicare Summit
September 15-17, 2014 Hyderabad International Convention Centre, India

Tumor immune microenvironment in lung cancer: Is it prime time to add immunological prognostic markers to TNM classification?

Prasad S Adusumilli
Memorial Sloan Kettering Cancer Center, USA

Tumor-associated immune responses have polarized effects in regulating tumor growth. Although a clear association has been shown between the tumor immune response and clinical outcome in colorectal and ovarian cancers, the role of immune markers for stratifying prognosis in non-small cell lung cancer (NSCLC) is less defined. As a first step, our laboratory performed a comprehensive review of the prognostic significance of published immune markers in the tumor microenvironment and peripheral blood of NSCLC patients. To identify prognostic immune genes, we reviewed all published gene-profiling studies in NSCLC and delineated the significance of immune genes by doing subanalysis on the microarray database of the NIH Director's Challenge study from our institution. These results were published (Clinical Cancer Research 2011) and currently highly cited. We then performed extensive analysis of the immune responses in early-stage lung adeno and squamous cell cancers (n=1600). Parts of these results were published in JCO, Journal of Clinical Oncology, 2013. Subsequently, we identified the aggressive morphological subtypes of lung adenocarcinoma associations with specific immunological profile. These combined data provided solid evidence that immunological composition of lung cancers can provide more biological and prognostic information than current TNM staging. We propose that it is time to validate these results from a multi-national cohort and consider incorporating 'immunological score' into current TNM classification for lung cancer. Furthermore, this score will play a greater role in the management of emerging immunotherapies.

Biography

Prasad S Adusumilli has completed his M.B.B.S. at the age of 22 years from Guntur Medical College and postdoctoral studies from AIIMS, New Delhi, Southampton University, UK and from Memorial Sloan Kettering Cancer Center (MSKCC) and University of Pittsburgh, USA. He is now the Deputy Chief of Thoracic Surgery at the MSKCC and Member in Center for Cell Engineering at MSKCC. He has published more than 100 papers in reputed journals including JCO and JNCI. He is invited to be the Deputy Chief Editor for Molecular Therapy Oncolytics Journal (Nature Group Publication) serves as an editorial board member of PLOSOne.

adusumip@mskcc.org