



# The Max Planck Center Seminar Series

Speaker: **Dr. Matthew Meyerson, M.D., Ph.D.**  
American Cancer Society Research Professor  
Dana-Farber Cancer Institute  
Broad Institute  
Harvard Medical School



Title: **Somatic alterations in human cancer genomes**

Date: 17:00 ~ 18:00, March 2<sup>nd</sup>, 2015

Place: **Small Lecture Hall, Faculty of Medicine Bldg 2  
The University of Tokyo, Hongo 7-3-1, Bunkyo-ku, Tokyo**

## Abstract

The advent of high-throughput genome sequence analysis has enabled systematic discovery of somatic genome alterations through genome, exome, and transcriptome sequencing of paired human cancer and germline nucleic acids. These discoveries have led to the identification of somatic genome alterations in new pathways including epigenetic regulators, RNA splicing factors, and immune response regulators, in addition to previously known signal transduction, cell cycle, and transcriptional pathways. I will discuss alterations in these pathways by copy number disruption, mutation, and re-arrangement, especially as seen through the lens of recent and ongoing large-scale studies of lung adenocarcinoma and squamous cell lung carcinoma genomes, from The Cancer Genome Atlas and beyond—and will discuss the implications for the understanding of cancer pathogenesis and for the development of targeted and immunomodulatory therapies.

UT, Hongo Campus (東京大学 本郷キャンパス)



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