Analysis of the correlation between HLA phenotype and prognosis and the role of a novel tumor antigen useful for immunotherapy

Yoshika Nagata
Shonan Kamakura General Hospital, Japan

The incidence and mortality of lung cancer continue to increase worldwide and also that of breast cancer tends to increase in Japan. The prognosis for patients with Non-Small Cell Lung Cancer (NSCLC) remains extremely poor and therefore, additional predictive indicators are required to determine the high risk groups and to improve the postoperative outcome. The Histocompatibility Leukocyte Antigen (HLA) in humans has some hereditary features with a high degree of genetic polymorphism. The present study was undertaken to investigate the correlation between HLA phenotype and the prognosis of patients with breast cancer and NSCLC. We reviewed the medical records of breast cancer and NSCLC patients who underwent surgical resection. Serological typing of HLA class I was performed and revealed that certain types of HLA themselves may be genetically involved in both the susceptibility and resistibility of breast cancer and NSCLC. Then, the correlation between HLA phenotypes and clinic-pathological features was analyzed. HLA-A2 and HLA-A24 were the prognostic factors in NSCLC patients. However, there was no significant difference in breast cancer patients. A large number of tumor-associated antigens have been used in vaccination trials for mainly melanomas. It is regarded as important to identify a novel antigen useful for immunotherapy. Analysis of an autologous tumor-specific CTL clone was established from RLNLs of a patient with lung cancer by a mixed lymphocyte-tumor cell culture. We identified an autologous tumor associated antigen recognized by a CTL clone from a patient with large cell carcinoma of the lung in the context of HLA-Cw*0702.

Biography
Yoshika Nagata has completed her PhD from the University of Occupational and Environmental Health, Japan. She has worked as a Research Associate and Assistant Professor in the Department of Surgery. She is currently a Chief Physician in the Department of Breast Surgery at Shonan Kamakura General Hospital, Kanagawa, Japan. She has published papers on tumor immunology. She is a Board Certified Member and Senior Fellow of the Japanese Surgical Society, Board Certified Member of the Japanese Breast Cancer Society, General Clinical Oncologist and Educational Physician of the Japanese Board of Cancer Therapy.

y-nagata@med.uoeh-u.ac.jp