conventional open lobectomy for patients with non-small-cell lung cancer (NSCLC), to stratify potential differences in long-term survival outcomes.

Methods: We established a multi-institutional registry for 4138 patients with NSCLC who underwent lobectomy between January, 2000, and December, 2007, from eight institutions in China. Age, gender, histological type, and tumour staging, based on the latest TNM classification, were entered into a non-parsimonious multivariable logistic-regression model. The predicted probability derived from the logistic equation was used as the propensity score for each individual. Based on similar propensity scores, we matched 1356 of the 1584 patients who underwent VATS lobectomy with 1356 of the 2554 patients who underwent open lobectomy, and compared their long-term survival outcomes.

Findings: The mean age of the 2712 matched patients was 59 years (SD 11). After propensity matching, VATS and open lobectomy were similar with regard to important prognostic variables. In multivariate analysis, four prognostic factors were independently associated with improved survival: gender ($p = 0.001$), histological type ($p < 0.001$), pathological staging ($p < 0.001$), and surgery type (lobectomy/sleeve resection vs. pneumonectomy ($p = 0.044$). Patients who underwent VATS versus open lobectomy had similar long-term survival ($p = 0.101$).

Interpretation: The current propensity-score analysis suggests that well-matched patients with NSCLC who underwent VATS lobectomy did not have inferior long-term survival outcomes compared with those who underwent open lobectomy.

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OP9 PREDICTIVE VALUE OF CD24 AND CD44 FOR RESPONSE TO NEOADJUVANT CHEMOTHERAPY AND PROGNOSIS IN PATIENTS WITH PRIMARY BREAST CANCER

K. Horiguchi [a,h,*], M. Toi [b], S. Horiguchi [c,h], M. Sugimoto [e,f], Y. Naito [d,e,f], Y. Hayashi [c], T. Ueno [b], S. Ohno [g], S. Sekine [a], D. Kitagawa [a], T. Aruga [a], E. Suzuki [a], T. Yamashita [a], N. Funata [c], M. Tomita [d,e,f], Y. Eishi [h], K. Kuroi [a]. [a] *Department of Surgery, Cancer and Infectious Diseases Center of Tokyo, Metropolitan Komagome Hospital, Tokyo, Japan.* [b] *Department of Surgery, Graduate School of Medicine, Kyoto University, Kyoto, Japan.* [c] *Department of Pathology, Cancer and Infectious Diseases Center of Tokyo, Metropolitan Komagome Hospital, Tokyo, Japan.* [d] *Institute for Advanced Biosciences, Keio University, Kanagawa, Japan.* [e] *Systems Biology Program, Graduate School of Media and Governance, Keio University, Kanagawa, Japan.* [f] *Department of Environment and Information Studies, Keio University, Kanagawa, Japan.* [g] *Department of Breast Oncology, National Hospital Organization Kyusyu Cancer Center, Fukuoka, Japan.* [h] *Department of Human Pathology, Tokyo Medical and Dental University Graduate School, Tokyo, Japan*

Background: We investigated the significance of CD24 and CD44 expression for predicting response to chemotherapy, and prognosis, in patients with primary breast cancer.

Methods: Diagnosis of breast cancer was confirmed by core-needle biopsy, and immunohistochemical studies were performed. Preoperatively, patients received anthracycline-containing chemotherapy. Expression of CD44 and CD24 was assessed immunohistochemically and the association with chemotherapy response and prognosis was analysed.

Findings: 139 women were enrolled in this study between 2001 and 2004. In correlation analysis, CD24 expression was negatively associated with pathological response to chemotherapy ($p = 0.0003$). A machine learning technique with an alternating decision tree showed that four logical rules are involved in predicting response, depending on the combination of CD24, HER2, tumour stage, CD44, progesterone receptor, and patient age. In survival analysis, patients who were CD44 (++) showed a significantly favourable prognosis compared with others ($p = 0.0002$). Multivariate analysis showed that CD44 expression had an independent prognostic value ($p < 0.001$).

Interpretation: We found a significant correlation between CD44 expression and prognosis, and between CD24 expression and response to chemotherapy. CD24 and CD44 expression could be useful predictive markers, although further studies are needed.

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OP10 CLINICAL UTILITY OF SURVIVIN GENE EXPRESSION IN PATIENTS WITH TRANSITIONAL-CELL CARCINOMA OF THE URINARY BLADDER

P.K. Singh [a,*], A. Srivastava [a], P. Singh [e], D. Singh [b], D. Dalela [b], M. Goel [c], S. Gupta [a], M.P.S. Negi [d], M. Bhatt [a], S. Rath [e].
[a] *Department of Radiotherapy, C.S.M. Medical University, Lucknow, India.* [b] *Department of Urology, C.S.M. Medical University, Lucknow, India.* [c] *Department of Pathology, C.S.M. Medical University, Lucknow, India.* [d] *Biometry and Statistics Division, Central Drug Research Institute, Lucknow, India.* [e] *Division of Toxicology, Central Drug Research Institute, Lucknow, India*

Introduction: The American Cancer Society estimated 70,980 new cases of bladder cancer in the USA during 2009, with approximately 14,330 bladder-cancer-related deaths during the same period. Cystoscopy, the gold standard diagnostic evaluation for detection of bladder cancer and surveillance after therapy, is invasive, expensive, and unpopular among patients. Urine cytology, as an adjunct to cystoscopy, is less sensitive for low-grade tumours. This study evaluated the clinical significance of survivin (an inhibitor of apoptosis) mRNA expression in diagnosis of transitional-cell carcinoma (TCC) in patients with bladder cancer.

Methods: Quantitative detection of survivin mRNA expression was evaluated in exfoliated cells in urine, by use of real-time quantitative (qRT)-PCR, in 135 patients with suspicion of new or recurrent bladder cancer, prior to transurethral resection. Of 135 cases, 98 were histologically proven TCC, whereas 37 had other, benign urological diseases. Fifteen healthy volunteers were also included, as well as 62 patients with treated superficial bladder cancer who had a current negative biopsy and were receiving follow-up care.