Background: We performed this retrospective study to assess the association of mutations in the epidermal growth-factor receptor (*EGFR*) gene with metastatic presentation in patients with advanced non-small-cell lung cancer (NSCLC).

Methods: Data from 125 patients with stage III or IV NSCLC, who were screened for *EGFR* mutations between March, 2007, and June, 2010, were analysed.

Findings: We detected *EGFR* mutations in exons 18, 19, and 21 in 36 patients (29%). *EGFR* mutations were predominant in never-smokers ($p < 0.001$), patients with adenocarcinoma ($p < 0.001$), and female patients ($p < 0.001$). Analysis of metastatic site with respect to mutation status showed that pleural metastases were associated with a high incidence of *EGFR* mutation ($p = 0.028$) – particularly, pleural metastases with minimal effusion (PMME; $p = 0.001$). Patients with N3 lesions were less likely to harbour *EGFR* mutations ($p = 0.033$). In multivariate analysis, N3 lesions ($p = 0.017$) and PMME ($p < 0.001$) remained significant factors for *EGFR* mutations, whereas gender did not ($p = 0.805$).

Interpretation: Our data indicate that *EGFR* mutations may be associated with different presentations of pleural and N3 nodal metastases in patients with NSCLC.

Funding: None.

The authors declared no conflicts of interest.

doi:10.1016/j.ejcsup.2011.02.042

P42 BREAST-CANCER RISK FACTORS IN PAKISTANI WOMEN – A CASE-CONTROL STUDY

N.A. Jadoon *, M. Hussain, A. Fatima, T. Rasheed, W. Sajjal, M.A. Shahzad. *Nishtar Medical College Hospital, Multan, Pakistan*

Background: There are limited data regarding risk factors for breast cancer in Pakistan, although it is the most common female cancer, with an incidence 2.5 times as high as other countries in the region. This study investigated risk factors for female breast cancer in a Pakistani population in southern Punjab.

Methods: A case-control study was done in the fall of 2010, involving 100 breast-cancer patients and 150 control individuals who screened negative for breast cancer on mammography. Information about demographic characteristics and potential risk factors for breast cancer was gathered from both groups using a standard questionnaire. Logistic regression analysis was done to determine the association of various potential risk factors with breast cancer.

Findings: In multivariate logistic regression analysis, risk of breast cancer was significantly increased in women older than 40 years (odds ratio [OR] 2.66, 95% CI 1.16–6.12), with more than four full-term pregnancies (OR 5.33, 1.96–14.53), married (OR 2.35, 1.34–3.14), living in rural areas (OR 3.86, 1.63–9.13), and postmenopausal (OR 4.19, 1.70–10.36). Breast-cancer risk was significantly decreased in women with contraceptive use (OR 0.13, 0.02–1.04) and no family history of breast cancer (OR 0.28, 0.12–0.69). In addition, no significant association was found between breast-cancer risk and age at menarche, age at first live birth, age at menopause, breastfeeding, and history of spontaneous or induced abortion.

Interpretation: The findings of this study suggest that age > 40 years, parity, marital status, locality, menopausal status, contraceptive use, and family history of breast cancer are significantly associated with breast-cancer risk in Pakistani women in southern Punjab.

Funding: None.

The authors declared no conflicts of interest.

doi:10.1016/j.ejcsup.2011.02.043

P43 EFFICACY OF ANTIEMETICS IN PATIENTS RECEIVING XELOX – A SINGLE-CENTRE, PROSPECTIVE STUDY

A. Chan [a,b,*], K.Y.L. Yap [a], S.H. Tan [c], X.H. Low [a]. [a] *Department of Pharmacy, Faculty of Science, National University of Singapore, Singapore.* [b] *Department of Pharmacy, National Cancer Centre, Singapore.* [c] *Department of Clinical Trials and Epidemiological Sciences, National Cancer Centre, Singapore*

Background: XELOX (combination therapy of capecitabine and oxaliplatin) is known to cause nausea and vomiting, despite adequate administration of antiemetics. Furthermore, specific risk factors that may increase the risk of nausea and vomiting are unknown.

Methods: This was a single-centre, prospective, cohort study. Patients were recruited on the day of chemotherapy, and were followed up after 5 days to assess nausea, vomiting, and use of antiemetics. Patients were assessed for nausea and vomiting control, as well as complete response, complete protection, and complete control of antiemetics. Use of delayed and breakthrough antiemetics were assessed, and multivariable logistic regression was done to evaluate risk factors that predisposed patients to nausea and vomiting despite use of antiemetics.

Findings: 156 patients were included in this analysis. The median age was 60 years (IQR 55–65) with 88 (56.4%) men and 68 (43.6%) women. The proportion of patients achieving complete response, complete protection, and complete control within 24 hours after chemotherapy was 87.8%, 80.8%, and 62.8%, respectively. These proportions continued to decline throughout the follow-up period to 76.9%, 64.7%, and 48.7%, respectively, at the end of the 5 days. Patients who had fewer than three risk factors (odds ratio [OR] 3.13, $p = 0.006$), who received oxaliplatin less than 100 mg/m^2 (OR 3.23, $p = 0.009$), and who received capecitabine less than 1500 mg/m^2 (OR 5.00, $p = 0.04$) were more likely to achieve complete response to antiemetics.

Interpretation: This study showed that an unacceptably high proportion of patients receiving XELOX were unable to attain adequate control of nausea. Future research should focus on the optimisation of antiemetic therapy for patients receiving XELOX.

Funding: National University of Singapore, Faculty of Science start-up grant.

The authors declared no conflicts of interest.

doi:10.1016/j.ejcsup.2011.02.044