$p < 0.003$). QoL was significantly better ($p = 0.0001$) than in the control group. There was no difference in the haematological parameters or 24-month overall survival for all stages [study 74% versus control 56% ($p = 0.174$)]; however, there was a trend for longer survival in the patients treated with *W. somnifera* root extract plus chemotherapy.

Interpretation. Addition of *W. somnifera* to chemotherapy could have a positive effect on fatigue and improve QoL in patients with breast cancer. The effectiveness and toxicity of chemotherapy were not altered. Thus further study with a large sample size, uniform tumour criteria, and risk stratified patients with breast cancer could help to validate our preliminary outcome.

Funding. RU grant of University Sains Malaysia (2009-02011).

The authors declared no conflicts of interest.

doi:10.1016/j.ejca.2012.02.031

AOS15 ASSESSMENT OF COGNITIVE FUNCTION IN PATIENTS WITH BREAST AND COLON CANCERS UNDERGOING CHEMOTHERAPY: RESULTS FROM AN EXPLORATORY PILOT STUDY

S. Poovaneswaran *, S.Y. Yeo, Z.L. Gwee, Z.H. Wong, H.H. Tan. *International Medical University, Negeri Sembilan, Malaysia*

Background. Memory loss after chemotherapy is one of the most commonly reported post-treatment symptoms by patients with cancer. This deterioration in cognitive function, commonly referred to as chemobrain or chemofog, was largely unacknowledged by the medical community until in recent years. An exploratory pilot study was undertaken in Tuanku Jaafar Hospital, Negeri Sembilan, Malaysia. The aim in the study was to assess the effect of chemotherapy on cognitive function of patients with breast and colon cancers.

Methods. Ten patients with cancer (6 patients with breast cancer patients and 4 with colorectal cancer) who were receiving adjuvant chemotherapy (anthracycline and/or 5-fluorouracil) were assessed using the Montreal Cognitive Assessment (MoCA) and the Mini Mental State Examination (MMSE) before the first cycle of chemotherapy and again after the third cycle.

Findings. There were mean reductions of 6.1% in MoCA and 5.3% in MMSE; no difference was noted between patients with breast and those with colorectal cancer.

Interpretation. The reductions in both the tests suggest that chemotherapy does have an impact on cognitive function, although it must be noted that the sample size was small. Based on the results of this exploratory pilot study, we aim to do a further larger scale, longer study to assess cognitive function after chemotherapy.

The authors declared no conflicts of interest.

doi:10.1016/j.ejca.2012.02.032

AOS16 CANCER CARE ISSUES DURING RECOVERY: OBSERVATIONS FROM INDIA

M.M. Nympha, B. Thomas*. *Christ University, Bangalore, India*

Background. Because of the lack of literature about patients with cancer in the Indian setting, increasing incidence of the disease, changing trends in treatment, and residual cancer or side-effects that restrict activities of daily living (bathing, eating, using the bathroom) or functional disabilities (e.g. in walking, standing, or sitting), the care of people with cancer has been transferred to caregivers (Hewitt et al., 2003). Hence, in this study, the needs of caregivers were assessed to develop an organised programme for caregivers in the Indian setting.

Methods. Sixty caregivers were interviewed according to a schedule in a cross-sectional study. The patients receiving care had heterogeneous cancer diagnoses and were hospitalised for at least one month.

Findings. The highest need was financial followed by informational, family, personal, social, psychological, and spiritual needs by contrast with findings of the studies from the west where psychological need was the highest.

Interpretation. Changing trends in treatment have led to patients being discharged early from hospital. Consequently, there is a transition of care from hospital to family caregivers. Additionally, the residual cancer or side-effects of the disease that restrict activities of daily living (e.g. bathing and eating) or functional disabilities (e.g. difficulty in walking, standing, or sitting) or make the care recipients more dependent on the caregivers. Thus reduced hospitalisation and increased dependence of care recipients on the caregivers have resulted in increased care demands that in turn would affect the caregiver's needs.

The authors declared no conflicts of interest.

doi:10.1016/j.ejca.2012.02.033

AOS17 *KRAS* GENOTYPES IN THAI PATIENTS WITH COLORECTAL CANCER

P. Autkittanon [a], B. Reukumneuychok [b], N. Limsuwanachot [b], T. Ativitavas [a], T. Sirisinha [a], R. Panvichian [a], V. Ratanatharathorn [a], E. Sirachainan *,a. [a] *Department of Medicine, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand,* [b] *Department of Pathology, Faculty of Medicine, Ramathibodi Hospital, Mahidol University, Bangkok, Thailand*

Background. The reported prevalence of *KRAS* mutations, the predictive factor of efficacy of cetuximab in colorectal cancer, varies in 30–40% of patients. However, the prevalence and correlations between *KRAS* mutation and clinical outcome in Thai patients have never been investigated. We did a retrospective study to define the *KRAS* genotype in Thai patients with colorectal cancer.

Methods. Genomic DNA from patients' paraffin-embedded tumour tissues was analysed for *KRAS* mutation at codons 12 and 13 by use of direct sequencing. Their clinical characteristics and outcomes were correlated with the genotype patterns. The concordance of *KRAS* genotype between primary tumour and available metastatic tumour was analysed

Findings. One hundred and seventeen patients with colorectal cancer were enroled. Eighty-three patients (70.9%) had wild-type *KRAS* (WT-*KRAS*) whereas 34 patients (29.1%) had mutant *KRAS*. Gly12Asp (GGTGAT at codon 12) was the most common mutation (41.2%). The G13D mutation was detected in 14.7% of patients. Non-hepatic metastases were associated with mutant *KRAS* (adjusted OR = 3.699). The overall survival at 1, 2, and 5 years in patients with mutant *KRAS* was 85%, 75%, and 54%, respectively, compared with 96%, 83%, and 47%, respectively, in those with wild-type *KRAS* ($p = 0.56$). Discordance of the *KRAS* genotype (wild-type primary tumours and mutant metastatic tumours) was detected in 2 of 9 patients (22.2%). After cetuximab-chemotherapy, the PFS of one case with discordant *KRAS* was shorter than the median PFS in 10 cases with primary WT-*KRAS* (2.7 months versus 12.8 months).

Interpretation. The prevalence of *KRAS* mutation in Thai patients with colorectal cancer was similar to that in other reports. Patients with mutant *KRAS* had more non-hepatic metastases than did those with WT-*KRAS*. Overall survival in patients with wild-type *KRAS* was not different from those with mutant *KRAS*. The mosaic pattern of tumour cells might account for the discordance in the *KRAS* status.

Funding. Ramathibodi cancer committee research budget.

The authors declared no conflicts of interest.

doi:10.1016/j.ejca.2012.02.034

AOS18 CALRETICULIN EXPRESSION IS REQUIRED FOR ORAL CANCER-CELL PROLIFERATION AND MIGRATION, AND IS CORRELATED WITH CLINICOPATHOLOGIC FEATURES IN ORAL SQUAMOUS-CELL CARCINOMA PATIENTS

C. Wang, Y. Wu, C. Chiu, H. Kuo, C. Hsu, J. Chen

Withdrawn.

AOS19 OESTROGEN RECEPTOR-α GENE POLYMORPHISM (T392C) IN IRANIAN WOMEN WITH BREAST CANCER

S. Abbasi. *Department of Laboratory of Medical Sciences, Faculty of Allied Medicine, Tehran University of Medical Sciences, Tehran, Iran*

Background. Receptor-mediated oestrogen activation plays a part in the development and progression of breast cancer. Evidence suggests that alterations in oestrogen signalling pathways, including oestrogen receptor-α (ESR1-α) occur during breast cancer development. ESR1-α gene polymorphism is known to be associated with breast cancer and clinical features of the disease in Caucasians. Results of epidemiological studies have shown that age-incidence patterns of breast cancer in women from the Middle East differ from those in Caucasians. Genomic data for *ESR1-α* in either population are therefore important in the clinical setting for each ethnic group and we have investigated whether polymorphisms in the *ESR1-α* are associated with risk of breast cancer.

Methods. A case–control study was done to establish a database of *ESR1* polymorphisms in the Iranian population for comparison of western and Iranian (Middle East) distributions and to assess *ESR1* polymorphism as an indicator of clinical outcome. The *ESR1* gene was scanned in 150 Iranian patients who were newly diagnosed with invasive breast tumours and in 147 healthy individuals. Single-strand conformation polymorphism polymerase chain reaction (PCR) and direct sequencing were done.

Findings. Silent single nucleotide polymorphisms (SNPs), as reported in previous studies, were found but at significantly different frequencies. The frequency of allele 1 in codon 10 (TCT → TCC) (T/C, S392S) of exon 1 was significantly higher in patients with breast cancer (45.7%) than in the controls (39.8%; $p = 0.148$). We found that allele 1 (TCT → TCC) in codon 10 was significantly more common in patients with breast cancer who had a family history of breast cancer (78.9%) than in those without such a history (40.8%; $p = 0.001$). The allele 1 in codon 10 showed an association with the occurrence of lymph node metastasis (58.7% and 43.3% with and without lymph node metastases, respectively). Therefore, this SNP marker further increased predictive accuracy in the Iranian population.

Interpretation. Our data suggest that *ESR1* polymorphisms correlated with various aspects of breast cancer in Iranian women, as determined during pre-surgical assessment, might represent a surrogate marker for predicting breast cancer.

The authors declared no conflicts of interest.

doi:10.1016/j.ejca.2012.02.035

AOS20 EFFECTIVENESS OF A SELF-REPORTING PAIN ASSESSMENT TOOL AT THE BEDSIDE OF INPATIENTS WITH CANCER

E.B. Kim, J.H. Chung, B.R. Park, S. Lim, H.S. Han*, K.H. Lee, S.T. Kim. *Department of Internal Medicine, Chungbuk National University Hospital, Cheongju, South Korea*

Background. Pain is common in cancer and a patient's self-report of pain is an essential first step in the management of such pain. However, according to reports of many studies, cancer pain is often managed inadequately because we do not listen to patients' complaints of pain and tend to underestimate their cancer pain. The aim in this study was to assess the effectiveness of self-assessments of pain intensity at the bedside of inpatients, using a self-reporting pain board.

Methods. Pain assessments were done with patients' answers to questions asked by the medical staff that were recorded with a numerical rating scale (NRS) for 3 days and then for the next 3 days patients reported pain using a self-reporting pain board with moving indicators, representing 0–10 on the NRS, and they reported the frequency of their breakthrough pain.

Findings. Fifty consecutive inpatients admitted to the Oncology Department of Chungbuk National University Hospital were included in this observational prospective study from February 2011 to December 2011. Reliability in the patients' self-reported pain versus that recorded by the medical staff increased from 74% to 96% with use of the self-reporting pain board ($p = 0.004$). The difference (mean ± standard deviation [SD]) between the NRS reported by patients and that reported in medical records decreased from 3.16 ± 2.08 to 1.00 ± 1.02 ($p < 0.001$). Patients' satisfaction with pain management increased from 54% to 82% ($p = 0.002$). Moreover, the difference in the workload of medical staff in assessing patients' pain (mean ± SD) decreased from 46.9 ± 15.5 to 24.3 ± 11.2 ($p < 0.001$).

Interpretation. We suggest that this self-reporting bedside pain assessment tool provides a reliable and effective means for the assessment of cancer pain in inpatients.

The authors declared no conflicts of interest.

doi:10.1016/j.ejca.2012.02.036

AOS21 ROLE OF PET/CT IN PATIENTS WITH OCCULT PRIMARY CANCER WITH NECK METASTASIS

S. Mohindra*, A. Bhattacharya, S. Ghoshal, S. Mohindra. *Postgraduate Institute of Medical Education and Research, Chandigarh, India*

Background. The aim in this study was to assess whether positron emission tomography/computed tomography (PET/CT) could be useful for detection of the occult primary tumour site in patients with neck metastasis.

Methods. PET/CT was compared with detailed examination, imaging, and panendoscopy in a prospective study of 79 consecutive patients with occult primary tumours plus neck metastases in a tertiary care centre.