10.9% smoked cigarette, 65% chewed raw tobacco, 18% chewed Hans and 28% had a combination of smoking and smokeless tobacco usage. The reason for practicing these habits were as a measure to combat the cold, relieving stress and body pain after work, and the lack of awareness of the hazards of the materials used. Prevalence of oral mucosal lesions in the study population was due to tobacco usage and alcohol consumption and lack of awareness regarding the deleterious effects of the products used.

Conclusion From the results of this study it may be concluded that the Malayali tribes were characterised by a lack of awareness about oral health, deep rooted dental beliefs, high prevalence of tobacco use and limited access to health services.

PO-099 AGE DIFFERENCES IN COPING STRATEGIES AMONG PATIENTS WITH COLORECTAL CANCER

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Introduction Background Colon and/or rectum cancer (CRC) patients use various strategies to cope with their condition, and these can vary between age groups.

Objective To investigate differences between psychosocial/spiritual variables and coping strategies in CRC patients of different age groups (younger vs. older) and to identify the predictors of coping for both age groups.

Material and methods A cross-sectional descriptive study was conducted at 3 outpatient clinics in Korea. The Hospital Anxiety-Depression Scale (HADS), Social Support Scale, and Self-Transcendence Scale were used to measure psychosocial and spiritual variables; the Mini-Mental Adjustment to Cancer Scale was used to assess cancer-specific coping strategies.

Results and discussions Both younger and older patients who were psychologically distressed used more maladaptive coping.

Our findings suggest that age differences in regard to psychological distress, social support, and self-transcendence are important protective or risk factors for the coping styles adopted by CRC patients. This finding suggests that age may be a salient factor affecting coping related to psychological and social variables of patients with CRC; older patients with CRC exhibit greater psychological distress and a tendency to utilise less adaptive strategies of coping. In summary, health care professionals should be aware of patients’ coping strategies, and should take them into account when planning age-specific, coping-related interventions before hospital discharge.

Conclusion Differences in psychological distress, social support, and self-transcendence due to age are important protective or risk factors for the use of coping strategies among CRC patients.

Poster Presentation: Prevention and Early Detection

PO-101 RELATION BETWEEN PSA LEVEL, ITS DYNAMICS AND PERFORMANCE OF 18F-CHOLINE PET-CT IN RECURRENT PROSTATE CANCER

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Introduction PET-CT using 18F-choline is widely used in diagnosis of prostate cancer local recurrence and metastases, whereas Prostate Specific Antigen (PSA) measurement is routinely used for biochemical monitoring. The purpose of our study was to evaluate performance of PET-CT with 18F-choline in relation to the PSA level or its change in time, in patients with biochemically diagnosed recurrent prostate cancer.

Material and methods 263 consecutive prostate cancer patients with elevation of PSA after treatment were included into the study. PSA values were evaluated at the time of PET scan (not more than 30 days before) and the PSA level change (ΔPSA) was calculated as a per month difference between two recent measurements. PET-CT was performed using Discovery IQ scanner (GE Healthcare), 3 and 20 min after injection of 18F-choline (3 MBq/kg). Data are shown as median values (quartiles).

Results and discussions In 164 patients, in whom PET-CT scan was positive and has shown local recurrence or metastases both the PSA level [5.85 (2.09; 17.37)] ng/ml and ΔPSA [0.54 (0.06; 2.00)] ng/ml/month were significantly (p<0.01) higher than in 99 subjects with negative PET-CT: 1.23 (0.25; 3.59) ng/ml and 0.00 (-0.11; 0.10) ng/ml/month, respectively. The ROC curve analysis has indicated that PSA level of 1.70 ng/ml and ΔPSA of 0.12 ng/ml/month are the optimal cut-off values, with sensitivity 80%, 99% and 70.2%, and specificity 69.1% and 84.3%, for PSA and ΔPSA respectively.

Conclusion Diagnostic performance of 18F-choline PET-CT in patients with recurrent prostate cancer is dependent on the level of PSA and its change in time. The calculated cut-off values can be used to select patients who would benefit from PET-CT.

PO-102 PRE-DIAGNOSTIC SERUM CALCIUM CONCENTRATIONS AND RISK OF COLORECTAL CANCER DEVELOPMENT IN A PROSPECTIVE EUROPEAN COHORT

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Introduction Higher intake levels of dietary calcium have been shown to be associated with decreased risk of colorectal cancer (CRC) development in several prospective studies. However, very little information is available on the CRC risk association of circulating calcium concentrations, particularly since elevated serum calcium has been associated in some settings with
material dysfunction and diabetes, factors which appear to be related to higher CRC risk.

Material and methods In order to explore this question, we conducted a case-control study nested within the European Prospective Investigation into Cancer and Nutrition (EPIC) cohort to investigate the association between serum calcium levels and the risk of colorectal cancer (CRC) development. 975 first incident CRC cases were matched to 975 matched controls from within the cohort by sex, age, study centre, length of follow-up and some additional relevant variables. Serum calcium levels were measured using reflection X-ray fluorescence spectrometry on the pre-diagnostically-collected serum samples from cases and matched controls. Conditional logistic regression was used to calculate multivariable-adjusted odds ratios (OR) and 95% confidence intervals (CIs).

Results and discussions Higher levels of serum calcium were associated with reduced risk of CRC (OR Q5 vs Q1 = 0.61, 95% CI: 0.48–0.99; p trend = 0.02). Sub-group analyses by anatomical sub-site suggest that the observed inverse cancer risk association is apparent in the colon (OR Q5 vs Q1 = 0.61, 95% CI: 0.38–0.98; p trend = 0.04) and not in the rectum (OR Q5 vs Q1 = 0.99, 95% CI: 0.53–1.85; p trend = 0.54) where the association appeared to be non-linear. The magnitude of the association in the colon is similar to that observed with dietary calcium at the same anatomical site. Stratified analysis by sex is suggestive of a stronger association for men than women.

Conclusion In conclusion, elevated serum calcium levels are inversely associated with risk of CRC development, with some evidence for heterogeneity by anatomical sub-site and sex. Additional studies are necessary to confirm these findings and to further investigate potential underlying mechanisms for the role of serum calcium in CRC development.

Poster Presentation: Radiobiology, Radiation Oncology

Cell Cycle and Apoptosis in Radiation Responses

Material and methods 266 subjects (164 control, 102 CRC cases) were asked to sign a proper informed consent and answer a Food Frequency Questionnaire validated for Portuguese population. The conversion of food into nutrients was done using Food Processor Plus. Nutritional information allowed the determination of the adherence to the MDiet through the MAI (Mediterranean Adequacy Index). Anthropometric and lifestyle data were collected and physical exercise was quantified by the consumption of kilocalories per week (kcal/w). Risk factors of CRC were analysed. The information obtained allowed to compare several parameters between control and cases groups, using SPSS.

Results and discussions CRC group showed a statistically significant increase in calories, proteins, carbohydrates, fat, sugar and cholesterol intake compared to the control group (p<0.001). In contrast, the control group had a consumption of kcal/w significantly higher than CRC group (p<0.001). Studied population showed a low adherence to MDiet, not allowing obtaining differences between groups. Regarding CRC risk factors, CRC individuals are more constipated (p<0.001) and have higher body mass index values (excess weight). Multivariate analysis, using a logistic regression model (χ2=40.3; p<0.001), demonstrated that individuals are more likely to develop CRC if they are constipated and if they stay more hours without eating in between meals.

Conclusion Diet of CRC patients was characterised by the generalised high consumption of nutrients. Physical exercise was associated with a lower risk of CRC. Additional studies may promote the establishment of dietary guidelines and plans adapted to the Portuguese population for CRC prevention.

The project was approved by 4 Ethics Committees.