

O-001 HELICOBACTER PYLORI INFECTION: ASSOCIATION WITH BLOOD GROUP, DEMOGRAPHICS AND LIFE STYLE IN A PAKISTANI POPULATION

A. Khuwaja*, A. Valliani**, B. Ahmed** *Aga Khan Univeristy **Dow University of Health Sciences

Abstract Background: It is well known that blood group antigens are related to the development of peptic ulcer and gastric carcinoma.. Its intensification in the individual populations is strongly related to economic conditions. Developing countries are at high risk, due to people living in poor socioeconomic conditions. Methods: Cross-sectional prospective study was conducted at endoscopy suit in Public Sector Hospitals of Karachi from Sep 2008- Nov 2008. All the symptomatic patients coming for upper GIT endoscopy were included in this study. Results: Biopsy for histopathology was taken from 558 patients out of them 222 (39.8%) were males with age range 18-65 years. Age group of 21-40 years was found to be related with H.pylori infection. Out of 558 patients 216 (38.7%) were turned out H.pylori positive with a significant male preponderance ($p < 0.05$). Distribution of ABO blood groups in H. Pylori group was A= 66/216 (30.5%), B= 12/216 (5.5%), AB= 6/216 (2.7%) and O= 132/216 (61.1%) which is statistically significant ($p < 0.05$). Rh factor was also related to H.pylori infection ($p = 0.514$). H.pylori could not be related with smoking ($p = 0.075$). Conclusion: This study demonstrates that H. pylori infection can be related to ABO blood group, age, gender and even lifestyle. People of blood group are more prone to develop the infection related gastritis, ulcers, and even perforations, so they should be cautious against transmission of it. We suggest that there is a need for making aware people to promote healthy life style, especially after knowing their their own health condition and demography.

O-002 UNIQUENESS OF BREAST CANCER AFFECTING ARAB WOMEN IN ISRAEL

K. Baddarni Al-Taj Organization

Abstract Background: in the Arab sector, cancer constitutes the second most frequent cause of death (17%) after heart diseases (19%). For the last 30 years, cancer in Arab women had an increase of 123% compare to only 24.4% for Jewish women. During last 50 years, researchers found a rapid increase of over 400% in breast cancer in the Arab women in Galilee compare to an increase of 24% in Jewish partner. Uniqueness: breast cancer at Arab sector affecting younger women (45.7% are under the age of 50 compare to only 23.3% of Jewish). Diagnosed at later stage: only 36% are diagnosed at stage 0-1 compare to 53% for Jewish women, while 42% of Arab diagnosed at stage 3-4 compare to 12% of Jewish. Late diagnoses usually due to poor screening mammography: 20% of Arab women compare to over 60% for Jewish. Breast cancer with higher affinity to HER2: 39% of Arab patients compare to 24% of Jewish (25% globally). Arab breast cancer with higher severity type: 28% at severity grade 3 compare to 12% for Jewish. Ratio of incidence to mortality of breast cancer is 2.2 for Arab compare to 3.0 for Jewish reflecting advanced stage of diagnoses. Conclusions: life style modification been identified as a major cause for cancer morbidity at general and breast cancer at particular. Early intervention by health promotion for prevention and early detection can improve quality of life of women at various cultures with transition of life style.

O-003 SERUM TRIGLYCERIDE LEVEL AND RISK OF PROSTATE CANCER: A MULTICENTER CASE-CONTROL STUDY

S. Salem, M. Rezaeidanesh, H. Ahmadi, Z. Kor, A. Mehraei, M. Nikoobakht, G. Pourmand Urology Research Center, Tehran University of Medical Sciences

Abstract Introduction: Serum lipid concentration as a part of the metabolic syndrome is supposed to be linked to prostate cancer risk. However, few epidemiological studies have assessed the relation between serum triglyceride level and risk of prostate cancer. This study sought to further evaluate the probable association between serum triglyceride level and prostate cancer risk. Methods: Using data from a prospective hospital-based multi-center case-control study, serum triglyceride concentration as well as thorough demographic and medical characteristics were determined in 194 cases with the newly diagnosed, clinicopathologically confirmed PC and 317 controls, without any malignant disease, admitted to the same network of hospitals. Odds ratios (ORs) and corresponding 95% confidence intervals (CIs) were obtained after adjustment for major potential confounders, including age, body mass index, smoking, alcohol, education, occupation and family history of PC. Results: The mean (\pm SD) serum triglyceride level in case and control groups were 141.24 ± 74.39 mg/dl and 143.38 ± 71.51 mg/dl, respectively; the difference was not statistically significant ($p = 0.76$). Comparing the highest with the lowest tertile, serum triglyceride concentration was not associated with the increased risk of prostate cancer (OR: 1.24, 95% CI: 0.08-3.12; $P = 0.18$). Conclusion: Our findings do not support the hypothesis that serum triglyceride level may be involved in the pathogenesis of prostate cancer.

O-004 LIFESTYLE AND DIETARY FACTORS RELATED TO THE RISK OF CHOLANGIOCARCINOMA IN HIGH-RISK AREA OF THAILAND

N. Songserm*, S. Promthet**, P. Sithithaworn***, D. Parkin**** Graduate School, Khon Kaen University, Thailand
Department of Epidemiology, Faculty of Public Health, Khon Kaen University, Thailand*Department of Parasitology, Faculty of Medicine, Khon Kaen University, Thailand****Clinical Trials Service Unit and Epidemiological Studies Unit, University of Oxford, United Kingdom

Abstract Introduction & Objective: In Thailand, liver cancer is the most common cancer, especially in Khon Kaen Province. Cholangiocarcinoma (CCA) is one of cancers in gastrointestinal tract, but there is limited information on lifestyle and dietary factors related to the risk of CCA. This study aimed to explore lifestyle and dietary factors for CCA in high-risk area of Thailand. Methods: This study is a nested case-control study within a cohort study. Cases were 219 subjects with proven CCA by ultrasound at least that obtained from linkage between files of the Khon Kaen Cohort Study and the Khon Kaen Provincial Cancer Registry. Two non-cancer controls were matched to each case on sex, age at recruitment (± 3 years) and result of liver fluke's egg in stool. A structured questionnaire was constructed based on questionnaire used at recruitment. Odds ratios (ORs) with 95% confidence intervals (CIs) were estimated using conditional logistic regression. Results: Distribution of sex and age at recruitment were similar in case-control status. In the final analysis, factors that found to be higher risk with statistically significant were alcohol drinking (OR=4.02, 95%CI: 2.34-6.92), freshwater fish consumption (OR=1.92, 95%CI: 1.08-3.40), beef consumption (OR=2.54, 95%CI: 1.03-6.25) and history of liver fluke infection (OR=3.25, 95%CI: 2.10-5.04). Conclusion: Our study confirmed the effects of consumption of alcohol, freshwater fish and beef against CCA development and showed increase risk among individuals who had history of liver fluke infection. Increased knowledge in changing of lifestyle and dietary patterns targeted toward subjects in high-risk area is recommended to effective for cancer control.

O-005 PLANTS AS A FOOD AND MEDICINE SOURCE IN THE MIDDLE EAST

A. Abu-Rabia *University of the Negev*

Abstract Introduction and objectives: Nutritional anthropologists are interested in monitoring what we eat, how we eat and why we eat what we eat. The considerable variation in dietary habits from culture to culture is widely accepted as a factor underlying differences in cancer incidences in different populations around the globe. This paper presents examples of different edible plants and their use as foodstuffs and treatment of diseases—mainly cancer- and other medical disorders. Methods: Interviews with healers, patients, physicians and dieticians. Plants were identified and classified by healers and university botanists & scientists. Results: Olive oil & olives (composed oleic acid, linoleic acid) have protective effects against gastric cancer; Origanum (Marjoram) has been found to have potential benefit with anti-cancer/anti-carcinoma (breast, colon, lung, pancreas, prostate) effects. Conclusions: Comparative studies in the Middle East reveal that the differences between the prevalence of cancer are the result of different dietary patterns, which include nutritional factors that serve as cancer-inducing or cancer-protective mechanisms. A lot of Plants are a source of food and medicine in the Middle East; and contain a host of biologically-active compounds. Their potential application as cancer-protective and/or cancer chemo-preventive agents needs to be a focus of research attention.

O-006 HPV VACCINE INTRODUCTION IN LOW AND MIDDLE INCOME COUNTRIES

A. Jumaan, S. Lamontagne *PATH*

Abstract About 500,000 cases of cervical cancer and 270,000 deaths are estimated to occur annually worldwide. The highest incidence and mortality rates are in sub-Saharan Africa, Latin America, and South Asia. About 80% of cervical cancer deaths occur in developing countries. Currently, two highly efficacious HPV vaccines are available for the prevention of infection with HPV types 16 and 18 that are associated with 70% of cervical cancer cases. The greatest impact is expected in low and middle income countries. Objective: Assess factors associated with successful HPV vaccine introduction in four low and middle income countries: Peru, Uganda, India and Vietnam. Methods: Regions/districts typical for their respective countries were selected for demonstration projects. We conducted formative research, and then utilized the results to design vaccination strategies that were integrated into existing health delivery systems for immunizations. We evaluated vaccine coverage, HPV vaccine acceptability, feasibility of integrating HPV vaccine into current systems and incremental costs of vaccination. Results: Formative research results helped reveal complexities of HPV vaccine introduction from the perspective of communities. High vaccine coverage, feasibility and acceptability were achieved by implementing HPV vaccination through national immunization programs, effective community education, strengthening existing services, using schools/clinics to reach young adolescent girls. Incremental implementation cost varied by country. Conclusion: Results from four diverse low- and middle resource countries suggest that HPV vaccines can be effectively delivered, provided that the local context is understood, existing systems are supported and strengthened, and community and health officials input are secured.

O-007 OCCUPATIONAL EXPOSURE ASSESSMENT IN CASE-CONTROL STUDY OF NASOPHARYNGEAL CANCER IN THAILAND

S. Sangrajang*, **K. Thepsuwan****, **S. Sangkittipaiboon*****, **P. Supaattagorn******, **S. Penpattanakul*******, **T. Phonglaoaphan*******, **T. Sinthusake*******, **C. Ekpanyakul5** **National Cancer Institute, Thailand **Chonburi Cancer Center***Lopburi Cancer Center ****Ubonratchathani Cancer Center*****Udonthani Cancer Center*****Lampang Cancer Center*****Mahavajiralongkorn Center5Srinakarinwirot University*

Abstract Nasopharyngeal carcinoma (NPC) is rare in most parts of the world but is endemic in some regions, particularly Southeastern Asia. Occupational exposure to and wood dust is believed to play role in NPC development, however, the link between these factors is poorly understood. The objective of the study was to evaluate the link between occupational exposure to wood dust and the development of NPC. A case-control study was conducted among 327 newly diagnosed cases of NPC and 327 controls at National Cancer Institute and regional cancer centers. Information was collected by interviewer about demographic variables, cigarette smoking, alcohol drinking, eating habits, past history of disease, family history of cancer and a lifetime history of every job that was held for one year or longer. A complete occupational histories were blindly assessed by 3 industrial hygienist to estimates of exposure to wood dust. We found the association of wood dust exposure and NPC risk with OR=1.77 (95% CI 1.11-2.82) especially for those who exposed more than 10 years (OR=1.97, 95% CI 1.02-3.81). Our results suggest that occupational exposure to wood dust are likely to be involved in the development of NPC among Thai population. This findings will be benefit for our cancer prevention program.

O-008 BREAST CANCER AWARENESS, SCREENING, OR EARLY DETECTION-WHAT IS FEASIBLE IN A HEAVILY POPULATED SOUTHEAST ASIAN COUNTRY WITH A VERY HIGH INCIDENCE OF BREAST CANCER?

F. Badar, N. Uddin, Z. Faruqi *Shaukat Khanum Memorial Cancer Hospital & Research Center, Lahore, Pakistan*

Abstract INTRODUCTION AND BACKGROUND: The annual age-standardized (world) incidence rate of breast cancer in the Karachi South district of Pakistan is 69.0 per 100,000 females (≥ 15 years), the third highest in Asia. It is generally perceived that women are barely aware of breast-cancer/self-examination; therefore, they approach the clinicians once the disease has reached an advanced stage. The extent to which general practitioners are familiar with clinical breast-examination or screening for latent disease has not been studied extensively either. POPULATION ESTIMATES: The 2009 estimates show that Pakistan has a population of 177 million. This figure is based on the last census held in 1998 and an average annual growth rate of almost 2.7%. Females comprise approximately _ (85 million) of the total population. Of the female population, those in the 50-69 year age-group are about 8.1% (6.9 million). RESULTS TO BE ACHIEVED IF SCREENING IS TO BE CALLED SUCCESSFUL: If we base our recommendations on mammographic screening for average-risk women in the target age-band of 50-69 years biennially, we would need to start screening nearly 3.4 million women every year. In a resource-constrained country like ours, introducing mammography to ensure that at least 70% of the target population is screened appears unlikely because of the exorbitant costs. CONCLUSION: Following the guidelines on increasing the knowledge about breast cancer symptoms/signs, improving the services for early detection, and imparting quality treatment/follow-up care seems to be the prime need of the hour. This can be made feasible by government intervention/interest.

O-009 THE EFFECT OF NUTRITIONAL CHARACTERISTICS ON COLORECTAL CANCER IN IZMIR: A POPULATION BASED CASE-CONTROL STUDY

G. Ergor*, **R. Meseri***, **N. Karakus***, **S. Eser****, **M. Akarsu*****, **R. Cehreli******, **H. Akpınar****** *Dokuz Eylül University Medical School Dept of Public Health**Izmir Cancer Registry Provincial Health Directorate***Dokuz Eylül University Medical School Dept of Gastroenterology****Dokuz Eylül University Oncology Institute

Abstract Objective: Colorectal cancers are one of the most common malignancies in western countries. Similarly, it is the second most common cancer in males and third in females in Izmir. There is substantial epidemiological and experimental evidence showing the importance of nutritional characteristics in cancer development. The objective of this study was to determine the nutritional characteristic of patients and controls in Izmir and to evaluate its effect on developing colorectal cancer. Methods: This is a population based case control study conducted in the metropolitan area of Izmir. Minimum sample size was determined with 80% power, 50% prevalence of various food groups in the community, and OR =1.6 with 95% confidence interval. The cases were taken from Izmir Cancer Registry and controls were chosen within the same age group (± 5), same sex and same residence. Food frequency questionnaire was used to assess the frequency of consumption of various food groups. "Mediterranean diet" was defined from the data collected. Results: There were 293 cases and 293 controls in the study. There was no significant risk for colorectal cancer in people who had Mediterranean diet and the ones that did not ($p > 0.05$). After adjusting for age, education and economical status, frequently consuming honey-jam and chips increase the risk of developing cancer, where using olive oil, consuming legumes and ketchup decrease the risk significantly. Conclusion: The effect of Mediterranean diet on colorectal cancer should be discussed carefully in settings where this type of diet is the usual practice.

O-010 RISK FACTORS FOR ENDOMETRIAL CANCER IN SAUDI WOMEN

H. Salem*, **D. Al Sufyani***, **M. Al Eker**** *KFSH%RC **KFSH&RC

Abstract Objective: This study was conducted to evaluate the risk factors predisposing Saudi women for endometrial cancer. From the review of tumor registry for Saudi Arabia we found that endometrial cancer is the commonest gynecological cancer affecting Saudi women with the percentage of 5.5% of all malignancies affecting Saudi women at different age group. The study was designed as a retrospective study through chart review for all patients diagnosed with endometrial cancer referred to KFSH&RC in the period of 1995 up to 2005. From the review of the charts for the 175 patients included in the study we could recognized the presence of the history of obesity, history of hypertension, history of diabetes mellitus or history of unopposed estrogen as clear risk factors predisposing women for endometrial cancer. Conclusion: It is obvious that we can reduce the incidence of endometrial cancer in Saudi population if we can have better control for the major risk factors affecting Saudi female including medical issues like hypertension, diabetes mellitus and obesity as a major risk factor for the improvement of endometrial cancer for those women and this should be done thru a clear campaign to bring public awareness about those risk factors and trying to reduce them in our Saudi female population.

O-011 THE CORRELATION BETWEEN HPV INFECTION AND p53, pRb, Ki-67 AS WELL AS TUNNEL EXPRESSION OF CERVICAL CARCINOMA

Irianiwati, Ahmad Ghozali, Endang Sutristi, Fx. Ediati T., Totok Utoro Department of Pathology, Gadjah Mada University, Yogyakarta, Indonesia

Abstract HPV infection has an important role in cell proliferation and apoptosis of malignant neoplasia through the binding of their E6 and E7 protein to the p53 and pRb. In cervical cancer, the role of HPV infection in cells proliferation and apoptosis has not been defined up to now, since mutation of p53 gene and Rb gene in cervical cancer is vary rare. Thirty-eight block paraffin cases of squamous cell carcinoma of the cervix were stained immunohistochemically with polyclonal Ab against HPV and Mo Ab against p53, pRb, Ki-67 and Tunnel, with chromogen DAB and counterstain Hematoxyllin Meyer. The expression of HPV, p53, pRb, Ki-67 and tunnel were counted based on the number of = cells/100 tumor cells in 5 microscopic fields. The correlation between each variable will be analyzed with Pearson correlation. There was a significant correlation between HPV expression with either p53 expression ($r:0.491;p:0.002$) and Ki-67 expression ($r:0.397;p:0.067$), but there was no significant correlation between HPV expression with pRb expression ($r:0.300;p:0.067$) and Tunnel expression ($r:0.888;p:0.599$). This research showed that HPV infection had important role in cell proliferation but not in cell apoptosis.

O-012 A CASE CONTROL STUDY OF EATING HABITS AS RISK FACTORS OF LUNG CANCER

A. Abdullah, S. Shah, M. R Hassan UKM, rohaizat_hassan@yahoo.com

Abstract A matched case-control study was conducted in order to determine the risk factors of frequency of food intake and their relation to lung cancer. 162 pairs of cases and controls were matched according to their gender, age and race and a study was conducted from June 2007 until May 2008 at the Sultanah Aminah Hospital in Johor, Malaysia. The analyses were done using SPSS 15 through the McNemar test (univariate) and the conditional logistic regression (multivariate) to determine the risk factors and their relation to lung cancer. The results of the study found that the factors increased the risk of lung cancer; a high frequency intake of salted food with ORM=1.61 (95%CI:1.05-2.51) or ORa=2.50 (95%CI:1.16-5.43), a high frequency intake of grilled food with ORM=1.83 (95%CI:1.00-3.46) or ORa=3.22 (95%CI:1.40-7.39), a high frequency intake of fried food with ORM=1.65 (95%CI:1.08-2.55) or ORa=6.82 (95%CI:2.85-16.34) and a high frequency consumption of caffeine with ORM=1.84 (95%CI:1.03-3.41) or ORa=3.46 (95%CI:1.62-7.36). However, these factors lower the risk of lung cancer; a high frequency intake of fruits with ORM=0.45 (95%CI:0.26-0.75) or ORa=0.33 (95%CI:0.15-0.71), a high frequency intake of vegetables with ORM=0.60 (95%CI:0.37-0.94) or ORa=0.14 (95%CI:0.06-0.33) and a high frequency intake of spicy food with ORM=0.50 (95%CI:0.30-0.81) or ORa=0.43 (95%CI:0.20-0.92). An unhealthy lifestyle can increase the risk of lung cancer but a high intake of fruits, vegetables and spicy food can lower the risk of being diagnosed with this disease.

O-013 STRUCTURAL AND NON-STRUCTURAL MANAGEMENT OF CARCINOGENIC WASTEWATER FACTORS IN A SEWAGE TREATMENT PLANT

A. Malakahmad, N. Mohd Hilmin, A. Matori, S. Mohamed Kutty, M. Isa *Universiti Teknologi PETRONAS*

Abstract Genotoxin materials are a group of chemicals or other agents that damages cellular DNA, resulting in mutations or cancer. Municipal wastewaters, although ranking low in genotoxicity potency, can achieve loading values that are several orders of magnitude greater than those of most industries. Furthermore, Genotoxicity calculations for the urban community municipal wastewater treatment facilities indicate that over 90% of the genotoxic loading is nonindustrial in origin. Although wastewater treatment plant operators are exposed to these substances daily, there is no regulation regarding to genotoxin materials discharge from municipal wastewater treatment plants to water streams in Malaysia, the country which statistics show 30000 cases of cancer annually. Therefore in this study, population forecasted, wastewater volume, flow and load were calculated for a sewage treatment plant in a university campus and then, genotoxin parameters in the wastewater were identified. Finally, structural and non-structural management methods were implemented to control genotoxin factors discharged in water bodies.

O-014 CANCER CONTROL PROGRAMS IN DEVELOPING COUNTRIES: WOMEN'S CANCERS CONTROL AS AN EXAMPLE

J. Li*, A. Reeler, Y. Qiao*** **Cancer Institute/Hospital, Chinese Academy of Medical Sciences, Peking Union Medical College **Axios International, Paris*

Abstract Although the cancer death rates have shown decrease in developed countries, yet the number of cancer cases and deaths is projected to more than double worldwide over the next 20-40 years, with the largest number in the developing countries, where there are great needs but limited resources and less concerns from the governments. Successful implementation of cancer control programs in developing countries will (1) first require addressing priorities based on domestic epidemiological situation and available evidence based data; (2) Choose demonstration sites allowing for a systematic progression and expansion to evaluate obtainable technologies; (3) Decide the most appropriate technology that is cost-effective, acceptable, sustainable and of benefit to the majority of the targeted population according to the country's specific situation; (4) Expand sites with assessed technologies. For example, breast and cervical cancer are much more deadly in developing countries and early detection can make a significant difference for the treatment outcome and there are now cost-effective tools for prevention and screening. China, as a major developing country took these two cancers as priorities and made a stepwise planning by initiating demonstration sites and succeeded in expanding the sites nationwide. Taken as the example of a 'top-down' planning process for cancer control by WHO, China has proposed to gradually widen access to cancer prevention service so that women in rural China are included, this shows a step towards provision of universal cervical and breast cancer screening nationwide. If this program success, it could provide a good experience for other developing countries.

O-015 LOH PATTERNS IN ESOPHAGEAL SCC AND HEAD AND NECK SCC FROM RAW BETEL NUT CHEWERS OF MEGHALAYA, INDIA

A. Rai*, A. Freddy*, A. Chatterjee*, G. Rangad** **North Eastern Hill University, **Nazareth Hospital, Shillong, India*

Abstract Betel chewing, besides tobacco and alcohol, is an established risk factor for Head and neck Squamous cell carcinoma (HNSCC) & Esophageal Squamous cell Carcinoma(ESCC) in South East Asian countries including India. The Khasi tribe of Meghalaya, North East (N.E.) India, chew Raw and unprocessed Betel nut (RBN), locally said as 'Kwai', with betel leaf and slaked lime. Loss of Heterozygosity (LOH) was used to investigate allelic losses with the use of 18 highly polymorphic microsatellite markers at three chromosomal sites (9p,13q,17p) most frequently affected in many solid tumors including HNSCC and ESCC. A total of 74 tumor samples from RBN chewers were used. The results from these studies are as follows: (a) Esophageal tumor samples analysis showed LOH 76% (9p), 57% (13q), 48% (17p) whereas for Head and Neck Tumor samples allelic losses were 47% (9p), 18% (13q), 21% (17p). This study demonstrates that LOH patterns of HNSCC and ESCC have characteristic variation. We propose that the deregulation of p16 gene (9p) is a significant factor along with RB and p53 genes in pathogenesis of ESCC. But in HNSCC RB and p53 genes deregulation are not that important factors in association with p16 gene. The LOH patterns from this study differ from studies done in other parts of India. These variations in LOH could be attributed to differences in etiology, ethnicity, geographical location etc. Thus, it is essential to understand the initiation and progression factors involved in pathogenesis of ESCC & HNSCC patients of Meghalaya.

O-016 EVIDENCE BASED GUIDELINES FOR CANCER PREVENTION FROM UNDERSTANDING COMMUNITY CONTEXT TO CHANGING BEHAVIORS

M. Lim, E. Yun, J. Oh, E. Park *National Cancer Control Institutes, National Cancer Center, Republic of Korea*

Abstract Background : In Korea, since 2006 with launching 'Second Term 10-Years Comprehensive Plan for Cancer Control', the importance of the cancer prevention has been focused. Purposes : To develop national guidelines for cancer prevention and to evaluate its impact on changing public awareness and behaviors. Methods : Web-based review system and standardized guidelines for evaluation were developed. Knowledge on cancer prevention were systematically reviewed and evaluated by expert groups. Awareness and behavior on cancer prevention has been investigated in every year with the interview survey using 'Precaution Adoption Process Model' among randomly selected adult population (1,000 individuals) to identify the effects of these codes and guidelines applied. Results : Evidence based knowledge and risk, cancer, and target specific practical guidelines focusing on '10 Codes for Cancer Prevention' was developed and disseminated. Those who know that cancer is avoidable and who aware the 10 Codes is 84% and 46%, respectively, while those who were in acting stage of these codes is relatively smaller than. Subjects having awareness on the 10 Codes tend to be on acting stage for each code. These patterns were not much changed after 1 year. Definitely increasing awareness on the fact that safe sexual behavior can prevent cancer showed short term effect of application of these codes and guidelines. Conclusions : Core message and guidelines seems necessary for cancer prevention, and the experience from Korea might give practical information to understand how the practical cancer prevention strategies could be developed and applied with evidence based knowledge.

O-017 BREAST CANCER RISKS IN THE MIDDLE EAST: IMPLICATIONS OF BREAST FEEDING PRACTICES

S. Al-Akras*, **A. Abou- Ismail***, **A. Ahmad***, **K. Becetti***, **N. Al-Shahwani****, **M. Jaffar*****, **H. Burgut******

*Weill Cornell Medical College in Qatar, **Al Basheer Hospital-Jordan, ***Alcham Medical Center for Cancer Diagnosis and Treatment- Syria, ****School of Medicine, C ukurova University, Adana Turkey, *****Çukurova University, School of Medicine

Abstract Background: Breast cancer is the most common malignancy among women worldwide. It accounts for one-third of all cancer in women. Moreover, breast cancer is a multifactorial disease with genetic predispositions and environmental contributions. One such factor is breastfeeding. Multiple studies conducted in the United States and Europe showed that its association with breast cancer to be controversial. Methods: In a Case-Control study, we investigated the relationship between breast cancer risk and breastfeeding practices among Arab women living in the states of Qatar, Syria and Jordan. A total of 1200 subjects from the 3 countries were interviewed using a pre-structured survey looking at general demographic information, menstrual history, breastfeeding and breast cancer history. Data was statistically assessed using the SAS software and was expressed as an OR with 95% Confidence Interval. Cases and controls show similar pattern with respect to number of pregnancy, and of living children but showed significant difference with respect to breast feeding practices(87% vs 98%, $p < 0.01$). Controls breast- fed their children longer than that of cases. Odds ratios (CI's) for the association between breast cancer and breast feeding practices will be provided. Implication from the result of this study for the women in the Middle East will be given.

O-018 ROLE OF SOME RISK FACTORS IN THE ETIOLOGY OF BREAST CANCER IN THE SUDAN

H. Ahmed *Sudanese Cancer Foundation*

Abstract The aim of this study was to correlate breast cancer by common breast cancer risk factors in the Sudan. Out of the 150 women with breast cancer, 38 (25.3%), 22(14.7%), 26(17.3%), 20(13.3%), 21(14%), 11(7.3%), 72(48%), and 86(57.3%) were identified as having a previous history of oral contraceptives usage, a family history of breast cancer, a past history of benign breast disease, a previous history of breast cancer, a previous breast biopsy, claimed other cancers in their families, confessed a pesticides exposure, and over weigh in most of their lives respectively . Out of the 150 women, 44(29.3%) were found to have a previous physical activity. Moreover, 44.8% and 66.9% have attended the menage at the age of 13 and 14 respectively. According to the ethnic group, Gaalyaen tribes represented 61(40.7%) of the study subjects. Most of the patients were from Khartoum state, constituting 37.3%. There was variable exposure to many risk factors for breast cancer in the Sudan. The study suggests further separate measurement of risk factors for breast cancer, as well as, factors that might reduce those risk factors. Cohort mean of evaluation is highly recommended.

O-019 HUMAN PAPILLOMAVIRUS-INFECTION & CERVICAL CANCER PROBLEMS IN INDIA: DOES SOCIO-CULTURAL VARIATION MAKE A DIFFERENCE?

C. Duttagupta*, **S. Sengupta**** *Institute of Technology & Marine Engineering, WB, **Indian Statistical Institute, Kolkata. India*

Abstract Uterine cervical cancer (CaCx) is a major women's health problem in India. The incidences are six-fold higher than those in the developed nations. Socioculturally India is heterogeneous and high level of reproductive morbidity exists. We aimed to determine whether sociocultural differences influence the human papillomavirus [HPV] infection followed by abnormal cytology among different populations of India. This was examined on married women enrolled mostly from lower socioeconomic strata from three States, two northeastern [Manipur(MN), $n=692$] and [Sikkim(SK), $n=415$] and an eastern state [West Bengal(WB), $n=1112$]. Women were attending the clinics in their respective region for receiving reproductive health care counseling. Pap-smear and cervical-scrape were taken on all, which were screened respectively for the abnormal cytology-status and presence/types of HPV DNA. Result showed that independently the presence of oncogenic HPV-infection was higher in WB(8%) than in MN(3%) and SK(4%). Cervical abnormality was significantly higher in SK(13.5%) compared to WB(9.5%) and MN(3%). Jointly abnormal cytology and HPV-infections were present in WB(21%) and SK(14%) and none in MN. That oncogenic HPV-infection (and abnormal cytology) among Indian women varies in different States bring out discussions on the demographic and other lifestyle variables for the development of abnormal cytology/CaCx. We shall address social/ethical issues that may reflect on the overall health-status of these Indian women in a rural set up. The knowledge/awareness of these women for their own rights to lead a healthy life will also be discussed.

O-020 PARITY AND BREAST FEEDING ARE PREVENTIVE MEASURES FOR BREAST CANCER IN IRANIAN WOMEN

A. Akbari*, **Z. Razzaghi***, **F. Homae****, **M. Khayamzadeh***, **M. Movahedi***, **M. Akbari*** *Cancer Research Center, Shahid Beheshti University of Medical Sciences **Cancer Research Center, Mashhad University of Medical Sciences*

Abstract Background: Breast cancer (BC) is the most prevalent cancer in Iranian women and the fifth cause of cancer related death. Among predicting and preventive measures the parity and breast feeding (BF) are controversial issues. So we conducted this case control study to find out the relation of parity and BF with incidence and risk of BC. Method: A structured questionnaire that covered demographic criteria and BC risk factors were filled up for case (376) and control (425) groups. The two groups were matched by demographic variants, some reproductive issue and socioeconomic status. Odds ratio (OR) and 95% confidence intervals (CI) were computed as measures of association from the logistic models. Results: Parity significantly reduces the risk of BC ($p-v < 0.001$, $OR=2.05$, $CI=1.4-3.3$), and BF is protective ($p-value=0.0001$, $OR=0.39$, $CI=0.27-0.56$). The best result gained with 1-3 parity and 24 months BF and mean duration of 18-24 months per child ($p-value=0.037$, $OR=0.7$, $CI=0.5-0.98$) for duration of 18-24 months per child. Conclusion: Base on the hypothesis of anatomical and physiological changes in breast during pregnancy, parity and breastfeeding; full term pregnancies and parities with efficient BF significantly reduced the risk of breast cancer comparing with non pregnant and nulliparous women or never BF, the number of children should be limited to 1-3, and the cumulative duration of BF not less than 25-36 months, so it is fully recommended to get marry, with pregnancy 1-3 and duration of BF not less than 18 months and best result with 24 months per child.

O-021 CANCER REGISTRY AND COMPREHENSIVE CANCER CONTROL PROGRAM (CCCP) IN IRAN'S NATIONAL REPORT

M. Gooya*, **R. Ramazani***, **A. Akbari****, **F. Fattahi****, **L. Farkhondekish****, **M. Khayamzade****, **M. Akbari****

**Ministry of Health And Medical Education, I. R. Iran (MOH&ME), **Cancer Research Center, Shahid Beheshti University of Medical Sciences*

Abstract The number of new cancer cases expected to rise up with 50% increase in incidence during next 15 years throughout the world which 60% of those cases occurring in developing countries. Also the largest increase in cancer death among the world health organization regions in the next 15 years (104%) is likely to be in the eastern Mediterranean region in which projection modeling predicts an increase of 181%. In Iran, cancers are the third cause of death with 30000 cases annually. Cancer registry in Iran is started from 1984, when registry and reporting of cancer cases was approved by the parliament law and developed to nowadays which 81% of whole cases are registered entire country based on laboratory diagnoses. Completion of this registry is beginning in four provinces with adding hospital cases and death certificates. Now cancer incidence in Iran is 70000 new cases annually (1/1000 inhabitants) and age specific rate is 117.27 and 102.23 per 100000 for male and female respectively. A comprehensive cancer control program (CCCP) was designed in 2006 and now is running in four provinces as pilot project. This program follows the goals as below: -Decreasing of cancer incidence, mortality and morbidity. -Increases quality of life in cancer patients and their families. The main strategies are: cancer prevention, early detection and screening programs, well and beneficial diagnoses and treatment based on national guide lines and spatial attention to palliation care. The activities are public education, health personnel training, political commitment, inter sectoral collaboration and using appropriate technologies. In this paper we will review the mechanism of cancer registry and CCCP in Iran in a national manner.

O-022 GEOGRAPHIC HETEROGENEITY OF CYTOGENETIC CHARACTERISTICS OF ACUTE MYELOID LEUKEMIA IN THE EARLY DETECTION: CANCER PREVENTION STUDY OF IRANIAN AND INDIAN ADULT PATIENTS

Abolfazl Movafagh *Department of Medical Genetics, Shahid Beheshti Medical University*

Abstract Introduction :Acute Myeloid Leukemia(AML) in adults is known to be a heterogeneous disease with diverse chromosome abnormalities. Some of these chromosome abnormalities are found with high incidence in populations from specific geographical areas and ethnic societies. Therefore, we studied the cytogenetic features of AML cases distributing in the contrasting societies of Iran and India. Material and Methods: Cytogenetic investigation were performed in various subtypes of AML with unstimulated short term culture and High Resolution Cell Synchronization with some modification. Results: Cytogenetically, Iranian M3 displayed a high frequency of t(15;17) than Indian (33.8% vs 19.3%) followed by M2 t(8;21) (27.7% vs 16.2%) and M1 t(9;22) (16.0% vs 11.3%) whereas, inv(16),11q23 and numerical chromosomal aberrations in chromosome 5,7,8 occurred more frequently in Indian than Iranian. Conclusion: : Similarities and dissimilarities of present research work between two populations and other reports could be due to methodological variations, although geographic differences, different chromosomal sensitivity to breakage, populations with different ethnic origin must not be disregarded. These point to the need for extensive biological studies between Iran and India and various countries should help to provide epidemiological clues, that play a role in the pathogenesis of AML in different geographic regions of the world. These findings represents different cytogenetic characteristics of t(15;17) between the two populations. Extensive biological studies of AML in Iran and India and various countries to be needed to clarify the role of genetic as well as geographic heterogeneity in the pathogenesis of AML.

O-023 THE FCTC IMPLEMENTATION AND CANCER PREVENTION IN GEORGIA

N. Peikrishvili *Tobacco Control Alliance in Georgia*

Abstract Objective: To learn correlation between the FCTC obligations and Georgian national legislation, particularly with tobacco control legislation. To find ways, terms and conditions for implementing the FCTC in national tobacco control legislation will affect cancer prevention in Georgia. Methods: Analyzing Georgian national legislation in tobacco control and authentically confirmed text of the FCTC. Analyzing data related cancer cases and find correlations between smoking restrictions of smoking in public places and cancer. Results: During last 10 years formed some legislation basis in tobacco control in Georgia. There were created law on advertisement, Act of President regarding tobacco control activities, law on licensing of tobacco production, law on agriculture and tobacco, law on tobacco control. First Law on tobacco control was adopted in 2003. Georgia becomes member of the FCTC since 2006. New changes of the obligations of the FCTC were adopted in the law on tobacco control in December 2008. During the period from 2003-2008 the rate of lung cancer and other locations of cancer cases related to smoking increased by 9%. The implementation level of smoking restrictions in public places was very low. It means that administering of law regulations are not effective at this stage and had no influence on change the picture regarding cancer control too. If the new regulations will be implemented and enter into force fully with appropriate administrative measures it give us tendency of decreasing of cancer cases during next few years.

O-024 CASE SERIES ANALYSIS OF ORAL CANCER AND THEIR RISK FACTORS

A. Rashid Khan*, **N. Anwar****, **A. Abdul Manan***** **Penang Medical College, **Penang General Hospital ***Penang Cancer Registry, Penang State Health Department, Malaysia*

Abstract Introduction: In Malaysia, Indians have the highest incidence of mouth cancer compared to other races, and females are more affected compared to males. Objective: To determine the risk factors associated with the oral cancer cases treated in the dental department of Penang hospital, Malaysia Methodology: Medical reports of all oral cancer cases treated in the dental department of Penang Hospital from 1994 to 2004 were reviewed. Results: 46 oral cancer cases were treated in the department during this time period, 22 males and 24 females. The mean age of the patients was 61.2 years old. Indians were the majority (n=23; 50%) followed by Malays (n=12; 26.1%) and Chinese (n=11; 23.9%). 54.3% (n=25) had used quid, 39.1% (n=18) smoked cigarettes and 32.6% (n=15) consumed alcohol. Indians made up 76% of all quid users (p<0.05). 56% of all quid users used the combination of betel leaves, areca nut and lime (p<0.05). Females made up 81% of the quid users and smokers were solely males (p<0.05). Chinese were the majority among the smokers (54.5%) and alcohol consumers (54.5%). The most common presentation of the tumours was swelling, pain and bleeding (n=16; 34.8%). Oral mucosa was the commonest site of the tumours (n=31; 67.4%) followed by tongue (n=9; 19.6%) and jaw (n=6; 13%). Histopathologically, 91.3% were squamous cell carcinoma. Conclusion: Risk of cancer due to tobacco and betel quid use is high. Focused health promotion programmes such as prevention of betel chewing among Indian women and reduction of smoking among Chinese is advised.

O-025 DETECTION OF CHROMOSOMAL ALTERATIONS IN ORAL CANCER USING MICROARRAY COMPARATIVE GENOMIC HYBRIDIZATION IN MALAYSIA

N. Mat Amin*, **S. Syed Hussain****, **Z. Abdul Rahman***, **K. Tay*****, **N. Jalil*****, **T. Abraham*****, **W. Wan Mustafa*****, **R. Zain*** **Oral Cancer Research and Coordinating Centre (OCRCC), Faculty of Dentistry, University of Malaya (UM), Kuala Lumpur Malaysia **Unit of Cytology and Cytogenetic, Department of Pathology, Hospital Universiti Kebangsaan Malaysia (HUKM), Cheras Malaysia***Oral Health Division, Ministry of Health (MOH), Putrajaya Malaysia*

Abstract This study aimed to determine chromosomal alterations and identify genes involved in oral cancer(OC) by using array Comparative Genomic Hybridization(aCGH). 20 frozen tumour tissues diagnosed with OC were mounted and macrodissected to obtain more than 70% of epithelial tumour tissue. The DNA was extracted using Qiagen DNeasy and Blood Kit (Qiagen GmbH) and amplified by GenomePlex® Complete Whole Genome Amplification(WGA) Kit (Sigma Aldrich®). The WGA DNA was then applied onto Unrestricted HD-CGH Microarray 4x44K microarray chips (Agilent Technologies Inc, USA) and digitalized by Agilent Genomic Workbench 5.0 (Agilent Technologies Inc, USA). Analysis from array CGH study showed that, the most frequent amplifications were detected at chromosome regions 8q24.3 (60%) and 8q11 (55%) while the most common deletions were detected at chromosomes regions 16p13.3 (60%), 19p13 (75%), 19q13 (75%), 21q22 (55%) and 22q13 (65%). The most common genes that amplified were DUSP22(chromosome 6) and KIAA046(chromosome 8) which signify 30%(n=6) of oral cancer cases studied. The most common deleted genes were detected at chromosomes 8(30% n=6)(FBX025), 10(30% n=6)(INPP5A, NKX6-2, C10orf92), 17(25% n=5)(FAM57A) and 20(25% n=5)(CDH4,TAF4,LSMI4B). The amplification of OSCC on chromosome 8q24 and losses on chromosome 21q were consistent with previous findings from conventional Comparative Genomic Hybridization (CGH) from an earlier study. From these genes list, none have been reported linked directly with OC. DUSP22 linked to breast cancer, INPP5A and NKX-2 to brain tumour, FAM57A(lung cancer) and CDH4 to colorectal/gastric cancer. Genes related to region 8q24 and 21q should be investigated further to determine its relationship with tumorigenesis and development of OC.

O-026 NATIONAL PLAN OF COLORECTAL CANCER SCREENING IN IRAN

R. Fatemi, E. Maserat, S. Shivarani, F. Nemati Malek, Y. Iranpour, S. Amin Sharifi, N. Gooran, A. Safaei, B. Moghimi-Dehkordi, M. Pourhoseingholi, F. Ghafarnejad, M. Soltani, M. Zali *Research Center of Gastroenterology and Liver Diseases, Shahid Beheshti University M. C, Tehran, Iran*

Abstract Colorectal cancer (CRC) is one of the most prevalent cancers and leading cause of cancer mortality worldwide. In 2004, treatment costs for colorectal cancer were \$8.4 billion. According to report and documentation of Iranian annual Ministry of health of Islamic Republic of Iran, colorectal cancer is third common cancer in women and 5th in Iranian men. Also this cancer is increased during last years. However it is also one of the most curable cancers if detected early. Evidence state colorectal cancer inci-dence and mortality are reduced with regular screening. National plan colorectal cancer screening with compliance new and comprehensive perspective is performing by Research center Gastroenterology and Liver Disease, Shahid Beheshti University in Iran. This article review principle strategies of colorectal cancer screening in the fields of preparation of medical record, data analyzing in intelligent software, pathology and colonoscopy, patient tracking and genetics. One of positive view of plan is special attention to genetics because this issue has impacted on high risk populations diagnostics. Generally aim of this survey preventive strategy of colorectal cancer high risk populations in Iran.

O-027 PREVENTION CAMPAIGN AGAINST ANTI- TOBACCO AND SMOKING IN NEPAL

S. Kadariya *Cancer Council Nepal*

Abstract Background: Smoking and tobacco use in its different forms is highly prevalent in Nepal especially among marginalized population of slum area. Almost all people used to be smoking: teenage in urban area and female in villages. Smoking seems quite great challenge to ban by government of Nepal. Second-hand smoking is also great challenge to cause cancer and other problem. Objectives: Currently there is more than 50 slums area in different locations of Kathmandu, the capital of Nepal. The main objectives of this project will be to find out the status and magnitude of smoking and tobacco users in these area, to initiate health education in order to prevent new users and to control using of tobacco among users. Methods: In first phase, the project site will be randomly selected. Structured questionnaire will be used to collect data from heterogeneous respondents (male, female and teenagers) by Cancer Council Nepal (CCN) volunteers. In 2nd phase, awareness and educational program will be done by poster, meetings, newsletters and advocacy. In 3rd phase, this project will also include screening program of the affected people by experts. The project will be launched and completed within the stipulated time as mentioned in proposal. Results: Members of CCN such as gynaecologists, epidemiologists, public health nurses, par-medics, assistant nurse, midwives, social workers, volunteers and administrative staffs will be involved in the study. This project will be a milestone to carry on further cessation in other areas of Nepal. Conclusions: We hope people become aware of the dangerous of smoking after this pilot pilot study. We also would like to discuss and exchange ideas of the procedure to increase the success.

O-028 IN VITRO STUDY OF THAI MEDICINAL PLANT EXTRACTS ON CANCER PREVENTION; STRUCTURAL INVOLVEMENT AND MECHANISM OF ACTION

V. Leardkamolkarn *Department of Anatomy, Faculty of Science, Mahidol University, Thailand*

Abstract Several plant extracts and vegetables consumed in Thailand are recognized as health promotion agents and used in traditional medicine without scientific approval. To reassure bioactive activities of the plant extracts in cancer prevention and as potential chemotherapeutic agents, our studies focus on mechanisms of action of the compounds in human cancer cells. Plant flavones with varies amount of hydroxyl and methoxyl groups were evaluated for toxicity, invasion inhibition, apoptosis induction and cell cycle arrest in HuCCA-1, RMCCA-1, HepG2 and Caco-2 cell lines in cultures. The results revealed variable degree of cell proliferation inhibition by compounds containing three, four and five methoxyflavone in different cancer cells. Both tri-methoxyflavone and penta-methoxyflavone compounds potentiated cell death induction. However, the mechanism of action of tri-methoxyflavone was directly via caspase-3 mitochondrial enzyme activation, whereas the penta-methoxyflavone action was indirectly via cell cycle arrest in association with cyclin B1 regulation. Apoptosis induction of penta-methoxyflavone was further enhanced by up-regulation of p53 protein and down-regulation of Bcl-2 expression together with decrease of caspases-3 enzyme activity. Tri-methoxyflavone compound also exhibited inhibitory effect on cancer cell invasion. The possible structural interaction between the compounds and cell surface molecules as well as the intracellular proteins controlling cell cycle was under extensive studied to determine the mechanical involvement. The results suggested that besides poly-phenolic structure of flavonoids, the side chain molecules also participated in the mechanism of the compound actions.

O-029 SINGLE VISIT APPROACH TO PREVENT CERVICAL CANCER IN KARAWANG DISTRICT, INDONESIA

F. Lambe, D. Soetikno, A. Sulistomo *Jhpiego*

Abstract Cervical cancer in Indonesia is a serious problem whose impact is neither widely appreciated nor well documented. Existing services are expensive and out of reach of the average woman. There are only 277 pathologists and fewer than 100 cytotechnicians in the whole country (to serve an at risk female population of 55,500,000 million), which means that a Papsmear-only based program will never achieve sufficient coverage to make impact on cervical cancer-related morbidity and mortality. The coverage rate in 2003 was a mere 3% (Indonesian Cancer Foundation). With funding from Ford Foundation, JHPIEGO is providing technical assistance to the Indonesian Ministry of Health (MOH) to establish cervical cancer prevention services using Single Visit Approach (SVA) to screening with visual inspection with household vinegar (VIA) and cryotherapy. This approach is an evidence based effective method for detecting and treating precancer cervical lesions. It can be provided by trained midwives, nurse or doctors. Since August 2007, the program has established services at 4 health centers (Puskesmas) in Karawang, and with the district hospital as the referral point. To date, a total of 15,901 clients have been screened by puskesmas staff through the SVA, of which 69 were found to have cancer and has been refer to RSUD Karawang, 414 were found to have precancerous lesions and 158 underwent cryotherapy treatment. SVA is an effective and low cost approach compared to other method. Karawang district health office has also request for more funding to local government in scaling up for other puskesmas within Karawang.

O-030 A MALAYSIAN WEBSITE FOR PROMOTING CANCER PREVENTION TARGETING NUTRITION AND LIFESTYLE RISK FACTORS : [HTTP://WWW.NUTRIHEALTH-UPM.COM](http://WWW.NUTRIHEALTH-UPM.COM)

M. Kandiah, Y. Ang, Z. Mohd Shariff, H. Abu Saad, Y. Chan *Department of Community Medicine and Aden Cancer Center, Faculty of Medicine and Health Sciences, Aden, Yemen*

Abstract Introduction: The World Wide Web (WWW) is now acknowledged as the 21st century tool for health communication and promotion. Objectives: This paper describes the development, implementation and feasibility of a website for promoting cancer prevention through healthful nutrition and lifestyle. Methods: The website originated from a 2-year workplace intervention among staff (n=339) of a Malaysian university. The website features include introduction, evidence based educational modules, related publications, a video-clip, contact us column, research committee, forum for discussion and links to local and international cancer agencies. Ten cognitive/ behavioural modules in the national language were developed in accordance with the World Cancer Research Fund/ American Institute for Cancer Research (2007) guidelines for cancer prevention. Emails containing a link to a web page for downloading the PDF format of the module were sent weekly to participants for 10 consecutive weeks. The number of modules downloaded was monitored through requisition of a read-receipt report. Results: The feasibility study showed that 68% were pleased with the features of the website, 97% understood the educational contents, 57% found the module length to be adequate, 59% logged in 1-3 days/month and 88% expressed they would continue to seek more information from this site. Conclusion: This website was found to be a feasible channel for creating awareness on cancer prevention in a Malaysian worksite population. Future research should maximize the use of the internet to educate the general public for disease prevention.

O-032 PREVALENCE OF HUMAN PAPILLOMA VIRUS (HPV) INFECTION AND PRE-MALIGNANT LESIONS OF CERVICAL CANCER AMONG WOMEN LIVING IN AREAS OF HIGH ARSENIC EXPOSURE

S. Roychowdhury, S. Biswas, M. Siddiqi *Cancer Foundation of India*

Abstract Introduction & Objective: Several districts in West Bengal (India) are facing high level ground-water Arsenic contamination. While Arsenic is known to be a human carcinogen with epidemiological evidence showing dose-response relationship with increased risk of cancers of Lung, Liver, Bladder, Kidney, Skin in exposed population globally, there is no report on the increasing incidence of cervical cancer or its pre-cancer lesions. Methodology: In order to understand the carcinogenic role of long-term arsenic exposure in cervical cancer, asymptomatic women (30-64 yrs) were screened from High arsenic (100- 300 µg/l) and arsenic-free (below 25 µg/l) villages using Visual inspection with Acetic acid and Lugol's iodine solutions followed by colposcopic examination of cervix. A punch-biopsy was taken from the suspicious area from all screen positive women for histological evaluation. The high risk HPV infection was detected using hybrid-capture assay (HC-II) Results: Out of 1040 women screened from high arsenic villages, 95 were found to be Acetic acid / iodine positive of which 22 had CIN lesions (2.4 %) and 3 had invasive carcinoma cervix (0.29 %). From 735 women screened from Arsenic free villages, 62 were positive with 12 CIN cases (1.6 %) and 1 case of invasive cancer (0.13 %). Of the screen positive women in high Arsenic area, 12 showed high-risk HPV infection (12.6%) compared to 4 cases (6.45%) from arsenic-free area. Among the early lesions from high arsenic area CIN II/III were 21.7% where as such lesions women from arsenic-free area Conclusions: Results from this on-going study will be discussed.

O-033 IS A POSITIVE ASSOCIATION OF EDUCATIONAL LEVEL WITH BREAST CANCER RISK CONFOUNDED BY PARITY AMONG WOMEN

K. Hajian-Tilaki, T. Khavesh-Ahangar *Babol University of Medical Sciences*

Abstract Background and objective: A high educational level has been found to be a risk factor of breast cancer risk. However, it is not clear whether such association is confounded by individual risk factors of breast cancer in particular parity. Methods: We conducted a case-control study of 100 confirmed histologically breast cancer cases and 200 age matched controls in genitally homogenous population, in Babol, northern Iran. The demographic, reproductive and life style data were collected by in person interview and clinical examination. The education level was categorized at 3 levels (illiterate and primary level, elementary and high school level and above high school). The adjusted odds ratio was estimated using multiple logistic regression model after controlling several potential confounding factors such as parity, age at first pregnancy, menarche age, physical activity, smoking, BMI, duration of breastfeeding, family history, residence area, abortion and menopausal status. Results: The unadjusted odds ratio showed a non-significant positive association of educational level with breast cancer. However, after controlling several potential confounding factors, the higher education level was significantly corresponded with a decreased in breast cancer risk (OR=0.17, 95% CI:0.06-0.45 and OR=0.10, 95% CI:0.03-0.34 for education level at high school and above high school respectively compared to illiterate an primary level). Conclusion: The inverse association of educational level with breast cancer risk observed in this study appear dissimilar in direction to education inequalities found in breast cancer risk in other western countries. The present findings provide a rationale for screening at early age in women with low education.

O-034 STUDY OF EFFECT OF EDUCATIONAL PAMPHLET IN THE IMPORTANCE OF CLINICAL BREAST EXAMINATION IN TEACHERS OF YASUJ CITY, IRA

Z. Mohebbi Shiraz Medical Science University, Iran

Abstract Introduction & purpose: According to the American cancer Association recommendation one of the effective secondary prevention for breast cancer is CBE. This study was hold in order to determine the effect of educational pamphlet in the importance of Clinical Breast Examination in teachers. Materials & methods: this is a semi – experimental study in which there were 200 teachers which were randomly divided in two groups of 100. One educational pamphlet was given to the case group. Then number of teachers attending to the centers was determined after two months. Results: findings showed that, in each control & case group, 9% of samples had breast hygienic problem. Also , 20% of case group samples were attending for CBE before educating them but, after giving education the number of attendance were 58% . Meanwhile, chi-square statistical test, showed significant relationship between attending after education in two control & case groups ($p=0.00$). Conclusion: Giving attention to the produced results, with educational programmes in large level, breast problems can be diagnosed & disease progress can be prevented. Also, we can take positive step in increasing women’s knowledge & health behavior in the society , becoming successful in continuo's performance & regular breast cancer screening programme .

O-035 HEPATITIS VIRUSES AND RISK OF CHOLANGIOCARCINOMA IN THE NORTHEAST THAILAND

P. Srivatanakul*, **S. Honjo****, **P. Kittiwatanachot*****, **A. Jedpiyawongse***, **M. Miwa****** *National Cancer Institute, Bangkok, Thailand**Fukuoka National Hospital, Fukuoka, Japan***Nakhon Phanom Hospital, Nakhon Phanom, Thailand****Nagahama Institute of Bio-Science and Technology, Shiga, Japan

Abstract Introduction and Objectives: Liver cancer is the most common cancer in males in Thailand and the third in females. A high incidence of cholangiocarcinoma (CCA) is estimated in northeast of Thailand. Chronic infection with *Opisthorchis viverrini* (OV) is the major risk factor for development of CCA. It has been demonstrated that HCV infection is a risk factor for CCA in non – endemic area of OV infection. We examined the association of HBV and HCV and risk of CCA in northeast Thailand. Methods: All cases of CCA were recruited between 1999 and 2001 from Nakhon Phanom provincial hospital and all community hospitals in the province. One control per case was selected, matched by sex, age (± 5 years) and residence. 106 case-control pairs were obtained. Anti-OV, HBsAg, and Anti HCV were determined by ELISA. Results: Among 103 age-sex-place of residence matched case – control pairs, there were 7, 0, 0, 96 pairs for anti-HCV (+) case vs. (-) control, (+) case vs. (+) control, (-) case vs. (+) control and (-) case vs. (-) control combinations (OR = 7/0). Among 106 matched pairs, there were 9, 2, 4, 91 pairs for the similar four combinations of HBsAg OR = 2.25 (95%CI: 0.63 – 10.00). If the subject had anti-HCV and/or HBsAg, the OR for CCA was 4.00 (95%CI: 1.29 – 16.44). After adjustment for anti-OV, risk for HBsAg and/or anti-HCV positive was marginally increased. Conclusions: HBV and HCV may also play role in the development of CCA in northeast Thailand.

O-036 A PUTATIVE PRO-OXIDANT MECHANISM OF DIETARY POLYPHENOLS IN CANCER CHEMOPREVENTION

M. Ullah, H. Khan, H. Zubair, S. Hadi Department of Biochemistry, Faculty of Life Sciences, A. M. U. , Aligarh, India

Abstract Polyphenols are important constituents of plant-derived human diet and a number of these are considered to possess chemopreventive and therapeutic properties against cancer. These include resveratrol (found in red grapes and red wines), epigallocatechin-3-gallate or EGCG (present in green tea) and genistein (a soy isoflavone). They are recognized as naturally occurring antioxidants. However, we believe that antioxidant properties of these compounds may not fully account for their anticancer effects. We have proposed a hypothesis where we explain that the prooxidant, rather than the antioxidant activity of these compounds, is important for their anticancer effects. Such a prooxidant effect is induced in the presence of transition metals, such as copper. Using Comet assay, we have shown that polyphenols are able to mobilize endogenous copper, leading to oxidative breakage of cellular DNA. Further, we have demonstrated that polyphenols are able to degrade DNA in cell nuclei and that such DNA degradation is inhibited by copper chelators neocuproine and bathocuproine (both of which are able to permeate the nuclear pore complex), but not by compounds that specifically bind iron and zinc (desferrioxamine mesylate and histidine, respectively). Moreover, we have also shown that neocuproine inhibit the cytotoxicity of polyphenols against breast cancer cells. It also inhibited the polyphenol induced apoptosis in these cell lines, whereas desferrioxamine mesylate and histidine failed to do so. Copper is a major metal present in nuclei and it is well established that tissue, cellular and serum copper levels are considerably elevated in various malignancies. Therefore cancer cells may be more subject to electron transfer between copper ions and polyphenols to generate reactive oxygen species. Such a mechanism better explains the anticancer properties of dietary polyphenols, as also their preferential toxicity against cancer cells. Studies on the chemopreventive potential of such polyphenolic compounds assume significance as they are constituents of human diet and possess negligible/low toxicity even at relatively higher concentrations. We have proposed a novel mechanism of action of these compounds, which could be further explored, for therapeutic targets and drug design.

O-037 DIETARY AND PHYSICAL ACTIVITY FACTORS CAUSING PROSTATE CANCER AMONG MALAYSIAN MEN: FINDINGS FROM A CASE CONTROL STUDY

S. Shahar, S. Abas, N. Abu Hasan Shaari, R. Rajikan, N. Rajab, Z. Md Zainudin Universiti Kebangsaan Malaysia

Abstract Epidemiological evidence on the roles of dietary and lifestyle factors on the occurrence of prostate cancer (PC) are inconsistent and remains unclear. Therefore, a case control study has been conducted to determine the relationship between these factors with PC risk among Malaysian men. 105 subjects (35 cases, 70 controls, matched for age and ethnicity) participated. Social and health data, dietary pattern and physical activity as assessed using International Physical Activity Questionnaire (IPAQ) and lifetime physical pattern questionnaire were obtained through an interview. In addition, 3mL fasting venous blood was drawn to assess lymphocytes oxidative %DNA damage using Alkaline Comet Assay. Results indicated that % of energy from fat in cases was higher than controls ($p<0.05$). Mean intakes of fruits and vegetables, fruits, vegetables and lycopene were higher in controls than cases ($p<0.05$ for all). Subjects consumed at least 3 servings of fruits and vegetables/day reduce PC risk up to 6.5 times [Adjusted OR 6.52 (95% CI 2.3-17.8)] ($p<0.05$). Lycopene intake less than 2498 mcg/day (50th percentile) increased PC risk by double [Adjusted OR 2.5 (95% CI 0.99-6.31)]. Subjects who had not engaged with physical activities at 45 to 54 years old had a three fold risk of PC [Adjusted OR 2.9(95% CI 0.8-10.8)] ($p<0.05$). No oxidative damage was observed among subjects. In conclusion, high intake of fruits, vegetables and lycopene rich food were found to be chemo protective, whilst, high fat intake and not physically active at the age of 45 to 54 years old were carcinogenic.

O-038 AN AIRBORNE CARCINOGEN REMOVAL USING BIOPOLYMERS**A. Tirgar***, **F. Golbabaei****, **K. Nourijelyani*****, **J. Hamed******, **S. Shahtaheri****

*Dept of Social Medicine and Health, Babol University of Medical Sciences, **Dept. of Occupational Health, School of Public Health, Tehran University, ***Dept. of Epidemiology and Biostatistics, Faculty of Public Health, Tehran University, ****Dept. of Biology, Faculty of Science, Tehran, Iran

Abstract Introduction and Objectives: Hexavalent chromium, Cr (VI), is a known mutagen and carcinogen. Chromium electroplating plants are the major sources of atmospheric chromium. On the other hand, capability of metal adsorption from solution by biopolymers is well documented. . The feasibility of a new method to remove of this pollutant using three biopolymers (Alginate, Chitosan and Carrageenan) was investigated. Methods: A special electroplating bath with producing homogenous atmosphere was used as a Cr (VI) generator. Using two sampling trains (with and without biopolymer) and homogenous atmosphere, airborne Cr (VI) were flown through sorbent media. Chromium concentration in the samples was determined by flameless atomic absorption spectroscopy. Influences of effective factors (pH, Temperature, Pollutant concentration, sorbent Concentration and Impaction velocity) were studied using Taguchi and One factor at a time statistical methods. Results: Our results showed that the highest Cr (VI) ions removal by biopolymer beads(32-45%) were happened at higher temperature (20-35oC), higher biosorbent concentration (10-20 g/l), lower impaction velocity (1.12-2.25 m/s), lower pollutant concentration (10-500 μ g/m³), and pH 5 ,6, and 9 respectively. Conclusion: According to the results, Alginate, Chitosan and Carrageenan could be effective for Cr (VI) ions removal and air purification.

O-039 ANTIPROLIFERATIVE ACTIVITY OF ESSENTIAL OILS ISOLATED FROM MENTHA SPP.**I. Demirtas***, **I. Telci***, **A. Sahin****, **H. Aksit*** *Gaziosmanpasa University **Cankiri Karatekin University

Abstract Cancer is one of the major causes of death in developed countries, together with cardiac and cerebrovascular diseases [1]. Cancer is clinically treated by surgery, radiotherapy and chemotherapy. In our previous work, Sideritis libanotica was carried out as dose-dependent assay starting from 25 μ g/mL to 250 μ g/mL for different anticancer cells. The extract found to be active against Vero, HeLa and C6 cancer cell lines with IC50 values [2]. Figure: Antiproliferative activity of Mentha spp. against Vero, HeLa and C6 cells. There is no report on the antiproliferative activity of essential oils of wild growing Mentha spp. The present study aimed to investigate the antiproliferative effects on Vero, HeLa and C6 cells of essential oils obtained from different wild growing Mentha spp and cultured in the Agriculture (see Figure and Scheme). The compounds were identified with GC-MS, NMR and other techniques. Scheme: Piperitone oxide as an active compound against Vero, HeLa and C6 cells Referances: [1] World Health Organization (1998). World Health Statistics Annual 1996, World Health Organization, Geneva. [2] Demirtas I., Sahin A., Ayhan B., Tekin S., Telci I., Rec. Nat. Prod., 3:2, 104-109 (2009).

O-040 NATIONAL CANCER CONTROL PLANNING: THE JORDAN EXPERIENCE**M. De Sabata, R. Diab, T. Nusairat, N. Obeidat, S. Khatib** King Hussein Institute for Biotechnology and Cancer (KHIBC)

Abstract Introduction and objectives Jordan is a middle-income country of 6 million people in the Middle East. Cancer has been recognized by national authorities as a public health issue requiring urgent attention. A national cancer control planning initiative was therefore initiated to tackle this problem, spearheaded by the Ministry of Health and the King Hussein Institute of Biotechnology and Cancer. Methods An initial stakeholder meeting was convened late in 2008 to inform and involve all national interested parties in the nascent initiative. Major challenges and preliminary priority action areas were identified at this meeting. Detailed information on which to refine priority action areas was collected in 2009 with the collaboration of national stakeholders. Results Substantial information for a situation analysis on which evidence-based action can be based was collected. Information gaps were identified, mostly data to be generated. This additional data will allow an in-depth situation analysis and be extremely beneficial to the delivery of cancer control actions. Conclusions The process of gathering and generating information for an evidence-based cancer control plan yielded increased collaboration among players and started buy-in for the completion of the planning process as well as the eventual finalization and implementation of the national cancer control plan. A second stakeholder meeting will convene in 2010 to finalise priority action areas for the national cancer control plan, appoint responsible officers at all levels, and integrate the national cancer policy in the national budgeted health plan.

O-041 KNOWLEDGE, ATTITUDE AND PRACTICE OF BREAST SELF EXAMINATION AMONG RURAL WOMEN IN EKITI STATE, NIGERIA**T. Ola** University of Ado-Ekiti

Abstract Background/Objectives Cancer remains a major health problem in many developing countries including Nigeria. In Ekiti State, there is currently virtually no information on the incidence and prevalence of breast cancer. The main aim of the study therefore was to evaluate the knowledge, attitudes, and actual practice of BSE among rural women in the study area. Method This descriptive cross sectional study to examine the knowledge, attitude and practice of BSE among rural women in Ekiti State carried out between October and November 2009 using both qualitative and quantitative methods. A structured questionnaire designed by the researchers and administered by research assistants was used in collecting the quantitative data. Statistical analysis was done using Statistical Package for Social Sciences and information from focus group discussions and in-depth interviews were transcribed and organized under broad headings that depict different aspects of the discussions. The transcribed information were analyzed descriptively (qualitatively) and used to explain results of quantitative analysis where and when necessary. Results Majority of the respondents were not aware of BSE. Attitude of respondents to BSE was positive but practice was low, with a fairly high degree of acceptability of the idea. The concept of cancer from the respondents view was characterized by mixed perceptions shrouded in mystery Conclusion: There was poor knowledge of cancer and practice of BSE was low in the study area though towards BSE was positive. It is recommended that public education and awareness on the importance of BSE be intensified using the mass media.

O-042 FOR BETTER CANCER CONTROL, WHETHER WE NEED A GLOBAL FRAMEWORK CONVENTION ON ALCOHOL CONTROL?

L. Mula-Hussain, A. Salim, S. Hashem, I. Jaradat, A. Al-Mousa *King Hussein Cancer Center*

Abstract INTRODUCTION AND OBJECTIVES: It is well known that there are causal relationships between alcohol consumption and more than 60 types of diseases, cancers and injuries, however, relative to these harms, alcohol is not high on the global health agenda like tobacco, AIDS and H1N1 infection, nor international policy is in place. For this reason, this review will try to raise the issue of alcohol burden worldwide, in order to find a suitable way to control it. METHODS: review of some of the available literature. RESULTS: Alcohol consumption is an optional habit (with some benefits and huge risks to human body and life) and it is increasing rapidly in many countries worldwide. Despite the clear facts of the contribution alcohol makes to the global burden of disease and economic costs, focus on alcohol control is inadequate internationally and in most countries and the researchers here will try to make alcohol control a priority more and more. CONCLUSIONS: Burden of alcohol associated diseases and injuries, is substantial in many countries. Lessons from some communities (like in muslim communities where alcohol is prohibited by religion) probably have a role in controlling alcohol burden. Promoting Health Education toward alcohol control in all age groups especially the young group. An effective national and international responses will need not only governments, but also NGOs. International health policy, in the form of like a Framework Convention on Alcohol Control, is needed like Framework Convention on Tobacco Control.

O-043 ARE YOU BEING SERVED? (7 CRITICAL NEEDS TO FOSTER EFFECTIVE CANCER CONTROL)

R. Sivaram *Prashanti Cancer Care Mission*

Abstract This abstract highlights lessons learnt to address emerging issues in community breast health and tobacco free initiatives, reaching cancer prevention to the community. 7 critical needs to foster effective cancer control are identified: Objectives: To reach community breast health and tobacco free initiatives in the community through awareness programs. Method: 1. Pro-active Government- NGO nexus built on common goals, shared routes and multiple players- to establish uniform, measurable programs and interface between education- health - community and key stakeholders. 2. Nodal NGOs to train in advocacy, holistic education and referral for early detection/treatment/follow-up. Total NGO experiences to prepare consensus guidelines. 3. Community Monitoring of Health Services adapting National Rural Health Mission database to monitor Community Based Enquiry of Health services for cancer control. Nodal NGOs could 'provide human resource, logistics and administrative set-up for community monitoring program'.* 4. Perception change from bio-medical to socio-medical, disease orientation to wellness, curative to preventive-curative, limited to multiple agenda. 5. Horizontal programs dovetailing with NRHM. Our TFI training indicated need to go beyond tobacco module to address teacher- adolescent perception disparities. To identify with and understand target groups is pre-requisite to enable risk reduction. 6. Minimum Infrastructure: Place, ambience, privacy, local funds, trained personnel in situ for program sustenance and follow-up. 7. Constellation-based approach: An ethical dilemma in CBHE program is provision of services. Education without clinical services is wasted. Prashanti has embarked on an ambulatory constellation approach- providing CBHE, counseling and opportunistic screening.

Notes

O-045 AN ALTERNATIVE FORM OF CIGARETTE SMOKING: USE OF SMOKELESS TOBACCO AMONG THE PARAMEDICS OF THE GOVERNMENT RUN HOSPITALS IN THE ECONOMIC CAPITAL OF PAKISTAN

A. Khuwaja*, **A. Valliani****, **B. Ahmed**** *Aga Khan University **Dow University of Health Sciences

Abstract Background: Use of smokeless tobacco (SLT) is common in South Asia. SLT is significantly associated with poor oral hygiene and malignancies. Care providers are the main influential factors for their society, especially for the in-patients of their hospitals. The objective of this study is to evaluate the prevalence of smokeless tobacco usage among the paramedics in the public sector hospitals of Pakistan. Methods: In a cross-sectional study, 560 paramedical staff of different public sector hospitals in Karachi were interviewed in a questionnaire based survey, from May 2009 to Aug 2009. Nurses, ward boys and technicians are counted as a paramedic staff. Smokeless tobacco use was considered as usage of any of the following: betel quid (paan) with or without tobacco, betel nuts with or without tobacco (gutkha) and snuff (naswar). Results: Questionnaires were completed from 560 subjects, out of those, 288 (51.42%) were non users and 272 (48.57%) were using smokeless tobacco. Among the males, the prevalence of usage was 57.3%. The highest percentage of the smokeless tobacco used was 'gutkha' (39.7%). 51.5% of the users are using these substance for more than 10 years and 46.3% were influenced by either family or friends. The frequency of using these substance for more than 3 times per day was 53.7%. Conclusion: In this study, over half of the populations were using different forms of smokeless tobacco and in them; approximately half of it were influenced by their family or friends. We suggest that there is a need for socially and culturally acceptable education and behavioral interventions for its control.

O-046 CONCORDANCE OF SELF-REPORTED WITH MEDICAL CHART INFORMATION REGARDING CANCER DIAGNOSIS AND TREATMENT: A REPORT FROM THE SHANGHAI BREAST CANCER COHORT STUDY

V. Gupta*, **K. Gu****, **Z. Chen*****, **W. Loo****, **X. Shu*****, **Y. Zheng**** *Columbia University, College of Physicians & Surgeons, **Department of Cancer Control & Prevention, Shanghai Municipal Center for Disease Control and Prevention, ***Division of Epidemiology, Vanderbilt University School of Medicine

Abstract Epidemiologic studies often rely on data gathered from patient self-report. However, not only do self-report instruments such as interviews or questionnaires depend on adequate patient comprehension and recall ability, they also are affected by the wording of questions, the length of recall required, and the interview setting. Therefore, validating the accuracy of these information-gathering tools is important for the interpretation of subsequent results. Using data collected from the Shanghai Breast Cancer Survival Study (SBCSS), a large, population-based, prospective cohort study of 5,042 women who were diagnosed with breast cancer in Shanghai, China, the authors compared the concordance of patient questionnaire responses with corresponding medical chart information across several disease and treatment-related variables. Of 5,042 SBCSS participants, medical chart information was available for 4,948 (98.1%) women. Concordance between medical chart and patient self-reported information was excellent for the majority of disease-related variables including: diagnosing hospital (agreement: 98.7%), surgery conducted (agreement: 94.0%), ER/PR (estrogen-receptor/progesterone receptor) status (agreement 94.5%), and tumor position (agreement 98.2%) as well as for important calendar dates such as the dates of diagnosis, surgery, and the date of first receiving chemotherapy. The 10 most commonly used chemotherapeutic drugs were all reported with agreement values of at least 80%. Although the patient survey was collected, on average, approximately 6 months after medical chart information was obtained, our study found excellent validity in patient self-reported information among a variety of disease and treatment-related variables, suggesting its utility as an important source of clinical information for both epidemiological research and patient care.

O-047 CANCER PREVENTION BY MEANS OF SMOKING CESSATION

V. Levshin *Russian cancer research center*

Abstract Tobacco is the leading of the proved sources of carcinogens in the present human population. The smoking prevalence in Russia is one of the highest in the world, 63% of men and 14% of women are current smokers. Consequently about 50% of total male cancer deaths in the country attributed to smoking. The purpose of the study is to explore possibilities for cancer prevention through smoking cessation implementation. The special survey in Moscow covered more than 1000 adult current smokers shown that 85% of them knew that smoking can increase cancer risk. 60% of all interviewed current smokers, in age group over 40 years even 80%, want to quit smoking. In view of the told above the smoking cessation group session (SCS) method was implemented and evaluated. About 1650 smokers visited SCS. Results of these smokers follow-up show that 41% of them stopped smoking for different periods and 15% remained abstinent more than 12 months. 18% of the smokers had reduced their daily consumption of cigarettes by more than 50% and 95% of the smokers who could not to quit or were after relapse of smoking continued to keep motivation to quit smoking. The main determinants of long term quitting are past quitting experience, high level of motivation to quit smoking and using complex smoking cessation therapy. It is concluded that smoking cessation assistance is feasible and effective way of cancer prevention. These findings have implications for intervention strategies in public health projections.

O-048 STUDY ON TOBACCO USE AND AWARENESS AMONGST MARGINALISED CHILDREN IN INDIA

S. Raval, **S. Maudgal**, **N. More** *Cancer Patients Aid Association*

Abstract Background: The current study entailed a survey of children from the lower socio-economic strata of rural and urban regions of Maharashtra and Assam who are vulnerable to tobacco usage. Over 1700 children were checked for precancerous lesion and 1004 surveyed for tobacco habits and awareness. Aims: The objective of the survey was to determine and report on all variant factors affecting the use of tobacco amongst the under privileged children population. The aim of the clinical check-up was to detect precancerous lesions in the tobacco-using children at an early treatable stage. Methods: Awareness lectures and ENT camps were conducted at 12 organisations/ community centres. A cross section of children was interviewed to understand tobacco use. All children were screened for precancerous lesions. Children with suspicious oral lesions were sent for further evaluation at a nearby diagnostic cancer facility. The survey was conducted by trained social workers. Results: The percent of tobacco users in urban Mumbai was extremely low at 4.8% compared to rural Kasara (36%) and Assam (76%). 74.6% of the children were aware that tobacco use is dangerous and harmful to health. The average age of initiation was 9 years. 253 out of the 1004 surveyed were tobacco users, 79% were males. Of the 1700 children screened, 23.5% presented with precancerous oral lesions. Conclusion: This study addresses the tobacco habits of a typical sample of marginalised children in India and their need for effective interventions aiming to reduce the burden of tobacco-related cancers by control at the point of initiation.

O-049 FACTOR ASSOCIATED WITH QUIT MAINTENANCE AMONG ADOLESCENT QUITLINE USER IN KOREA

H. Kim, M. Lim, E. Yun, J. Oh, E. Park, S. Shin *National Cancer Control Institute, National Cancer Center*

Abstract Background : The effective of telephone-based quitline services has been well established regarding efficient process and easy access. Purpose : To improve Quitline program for adolescents, we identified factors associated with quit maintenance among Quitline adolescent users. Materials and methods : 642 adolescents(491 boys and 151 girls) who registered to Quitline from April 2006 to July 2009 were included in the observational study. Information on demographic characteristics, smoking-related behaviors, reasons of cessation, self-efficacy for quitting, and the presence of supporter were collected when they registered. Subjects have been followed up until they relapse or end of this study under the schedule of quit protocol. We used Cox proportional hazards model to estimate the predictors associated with quit maintenance or relapse. Results : Quit pressure from family or intimate (HR=1.71, 95% CI=1.17-2.49) and the number of past quit attempt (HR=1.58, 95% CI=1.18-2.12) were investigated as statistically-significant hazardous factors for quit maintenance in boys, and higher self-efficacy for quit showed preventive effect on relapse both boys (HR=0.69, 95% CI=0.51-0.94) and girls (HR=0.53, 95% CI=0.31-0.91). Nicotine dependence was not a significant factor associated with quit maintenance (boys : HR=1.06, 95% CI=0.79-1.44; girls : HR=1.23, 95% CI=0.73-2.08). Conclusion : To maintain abstinence among adolescent Quitline users, increasing self-efficacy, restraining pressure, and giving intensive and appropriate help in the first try for quit should be considered as important factors. Further study with relatively bigger sample size and longer follow-up period should be done to get more concrete evidence for these results.

O-051 SMOKING AND CANCER DISEASES IN GEORGIA

G. Bakhturidze *Georgian Health Promotion and Education Foundation*

Abstract Objective: Tobacco consumption in Georgia has increased to alarming proportions since 1990. The research addressed in the study of epidemiology of tobacco production consumption during of last 5 years: 2003-2008 and correlation with cancer diseases. Methods: Quantitative research structured interviews. For choosing of population was used cluster method. A group of interviews was used for this purpose, their training and selection were conducted. The research group's professional composition: epidemiologists, medical doctors, sociologists, psychologists, teachers. Results: There were researched population from 13 to 70 years old. These researches have shown that in Georgia smoking rate is nearly 59,8% in men and 14,9% in women population in 2007-2008. It is 36.1 % of our population. In comparison with the 1985 the number of smokers among youth and among young women increased 3 times. In the year 1985 smoking rate in Georgia was 42,8% men and 4,1% women. In 2008, 1.310 smokers had lung cancers; 1.630 - other location cancers; 9.800 - bronchitis, emphysemes and asthma. To compare such data with results we get in 2003 the rate of cancer increased by 9%. In year 2008 in Georgia 11.000 people died because of smoking, which is 24% of total mortality.

O-052 THE IMPACT OF TOBACCO AND THE BURDEN OF CANCER

M. Daher *President, Lebanese Cancer Society*

Abstract Cancer is a leading cause of death worldwide. From a total of 58 million deaths worldwide in 2005, cancer accounts for 7.6 million (or 13%) of all deaths); more than 70% occurred in low and middle income countries. Tobacco-related diseases kill half of all smokers, and so, tobacco smoking is the largest single preventable cause of death and disease. Tobacco's role in increasing the chance of lung cancer is one of the most widely known of tobacco's harmful effects on human health. Environmental tobacco smoke (passive smoking) causes also lung cancer. Tobacco is also an important risk factor for several cancers: throat, mouth, pancreas, bladder, stomach, liver, kidney, breast and other types; Each of these will be described and the impact of tobacco on its incidence will be defined. Tobacco use is the single largest preventable cause of cancer in the world. 40% of cancer can be prevented by a healthy diet, physical activity and not using tobacco. Because cigarette smoking and tobacco use is an acquired behavior, one that the individual chooses to do, smoking is the most preventable cause of premature death in our society. A comprehensive strategy including bans on tobacco advertising and sponsorship, tax increases on tobacco products, and cessation programmes can reduce tobacco consumption in many countries. The WHO Framework Convention on Tobacco Control, adopted in May 2003, aims to curb tobacco-related deaths and disease.

Notes

O-053 THE TOBACCO EXCISE SYSTEM IN INDONESIA: HINDERING EFFECTIVE TOBACCO CONTROL FOR HEALTH

B. Sarah*, **A. Abdillah**** *World Health Organization, **Demographic Institute, University of Indonesia

Abstract Background : Tobacco price and tax increases are considered the most cost-effective means to reduce consumption and address the burden of tobacco-attributable morbidity and mortality. Objective: To describe the tobacco excise system in Indonesia and its impact on consumption and health. Method: Literature reviews of excise tax and price structure for tobacco products were obtained from Ministerial Decrees of MoF. Brand-specific rates for 2008 and 2009 are derived from surveys, published data in market reports, and data reported by the MoF. Result: 1. Tobacco tax system The tobacco excise structure varies by 11 types of tobacco products, mode of cigarette production, and firm size as measured by production level. The tax is based on the government's retail sales price (HJE) and derived from reports detailing the cost components for each brand produced. 2. Current excise rates The customs law caps excise rates for tobacco at 57 per cent of the government's banderol price (HJE), which is firm and brand specific. However, the MoF set the minimum HJE for the brand-specific range by type of product and firm production scale. 3. Industry responses Differential tax rates by production scales provide an incentive for firms to reduce their production levels to fall within lower tax brackets. Conclusion: This paper shows that the structure and implementation of the excise system can reduce or negate the impact of a tax increase on consumption. The design of the Indonesian excise system maintains the affordability of tobacco products.

O-054 IMPLEMENTING SMOKE FREE LEGISLATION IN DEVELOPING COUNTRIES ; THE NIGERIAN EXPERIENCE

O. Makanjuola *Nigeria Tobacco Control Alliance*

Abstract Background : Smoking is a major contributor to morbidity and preventive deaths amongst the people in Nigeria. Exposure to second hand smoke is now one of the major causes of cancers in Nigeria. The absence of adequate legislation to protect the populations in major Nigeria cities has been of the major contributors to the rise of cancer cases in the country. The only legislation which sought to guarantee the safety of Nigerians against exposure to Second hand tobacco smoke was the Tobacco control Act 20 of 1990 which banned smoking in public places . however this law had not been properly implemented due to successive change in governments and the negligence of public officials in Nigeria in curbing the tobacco menace for 20 years. Methods In January 2009, the Nigeria Tobacco Control Alliance in partnership with the administration in the Federal Capital Territory organised a training workshop for the special task force on implementation of the Smoke Free law giving information on the areas covered by the law; their role and responsibilities. Another special training session was organized for Restaurant and bar owners with an insight into their important role as Smoke Free Agents. The Media was also used to create maximum awareness on the commencement of the implementation. Conclusion Since the commencement of the partnership with the task force the smoking rate has been reduced thus proving that Nigeria can effectively implement smoke free laws.

O-055 THE NEED TO PROTECT CHILDREN FROM TOBACCO IS A GLOBAL PAEDIATRIC CONCERN

H. Awnallah *National Cancer Control Foundation (Yemen)*

Abstract Tobacco has major adverse consequences for children in developing countries. Poverty related challenges such as lack of access to potable water, infectious diseases and malnutrition, all lead to viewing the issue as a lower priority health threat. Tobacco use is a global problem; worldwide there are almost 1 billion male and 250 million female smokers. Glob-ally, tobacco is marketed to children and the tobacco industry recognizes that new smokers must be recruited to replace those who quit or die from tobacco-relat-ed diseases. Every day an estimated 82000 to 99000 young people start smoking; many are children under the age of 10 and most reside in low-or middle-income countries ; prevalence in some of these countries reaches has reached 77% and 29% amongst males and females >15 years of age, respectively . This alarming rate clearly represents an urgent call for action through utilizing every available means to combat tobacco and the industry's effective and damaging promotional practices which have are putting the lives of over 50% of many countries' children at risk. It also calls for international partnerships and alliances to combat this global paediatric epidemic. Actions are needed to call attention to the harm that tobacco causes to children, disseminate best practices to reduce exposure of children to tobacco and second-hand smoke, and train clini-cians in advocacy for policy change and effective methods of counselling parents regarding these issues. There is also a need to ensure relevant local laws provide adequate protection to children and that such laws are properly enforced and that relevant stakeholders participate in the process.

Notes

O-056 INTEGRATIVE PROTEOMICS AND TRANSLATIONAL STUDIES FOR THE IDENTIFICATION OF REGULATORS OF EARLY STAGE BREAST CANCER INVASION

P. Alaoui-Jamali, D. Xu *Departments of Oncology/Medicine and Segal Cancer Center, McGill University, Montreal, Canada*

Abstract Background. Primary breast cancer invasion of neighboring tissue structures and distant organs is an ominous event in many patients at primary diagnosis and is unpredictable. Presently, biomarkers and signaling pathways that initiate and drive breast cancer invasion beyond primary sites remain poorly understood, which hampers discovery of efficient approaches for the prevention/management of metastatic disease. This study aims at dissecting and targeting novel breast metastasis regulators. Methods and results. We carry-out functional proteomics (LC-MS/MS) combined with molecular assays on matched pairs of non-invasive/invasive breast cancer models selected from established cell lines and from patients with progressive breast cancer disease, including DCIS. We identified biomarkers that either promote (e.g. focal adhesion kinase "FAK" and specific Rab-GTPases) or suppress (cytoskeleton proteins such as the scaffolding protein filamin A "FLNa"). The pro- and anti-invasive activity of these markers were confirmed by immunohistochemistry on tissues from patients; e.g. FLNa is downregulated in invasive cancers and metastatic nodules while FAK is upregulated. Molecular studies established the mechanisms of how these biomarkers promote or repress early breast cancer cell invasion and metastasis formation. Therapeutic implications were established in preclinical animal models for metastatic breast cancer using RNA interference and investigational small molecule drug candidates. Conclusions. These results provide a framework of knowledge on the intricate network of signaling molecules involved in the regulation of breast cancer invasion. They identify both prognostic and therapeutic biomarkers with the potential to be translated into clinical applications to manage/prevent the progression of breast cancer to metastases.

O-057 HEPATOCYTE GROWTH FACTOR IN EGYPTIAN FEMALES WITH BENIGN BREAST LUMPS AND FEMALES WITH BREAST CANCER

H. Mohamed Ali El-Attar Aliel-Attar, M. Sheta, A. Saad *Alexandria University Medical Research Institute*

Abstract The present study aims at estimation of the plasma level of Hepatocyte growth factor (HGF) in females with benign breast lumps and with breast carcinoma and correlating its levels with the prognostic parameters. Subjects: 68 adult premenopausal females were divided into: Group1: 15 normal healthy volunteers and 53 patients subdivided into: Group2A (15 with benign breast lumps) and Group2B (38 with breast carcinoma). Methods: Clinical examination, pre-operative fine needle aspiration cytology for breast lumps, Estimation of fasting serum glucose, creatinine, ALT and HGF and histopathological examination of the mass. Results: Significant increase in HGF levels were found in patients with benign lumps, in whole breast cancer patients and those having breast cancer without and with LN metastasis groups when each was compared to control group. No significant differences in HGF level and age, tumor size, tumor grade, stage, with positivity or negativity of estrogen and progesterone receptors nor with angiogenesis were found in breast cancer patients. Conclusion: Significant increase in HGF level were found in patients benign breast lumps and in breast cancer patients. Serum level of HGF is a negative or an independent prognostic indicator of breast cancer.

O-058 SERUM FATTY ACIDS AND COLORECTAL ADENOMA RISK

R. Ghadimi*, K. Kuriki, S. Suzuki***, I. Esfandiary****, S. Tokudome******* **Dept of Social Medicine and Health, Babol University of Medical Sciences, Iran **Aichi Cancer Center, Japan ***Nagoya City University, Japan ****Iranian Pharmacy Association *****National Institute of Health and Nutrition, Japan*

Abstract Introduction and Objectives: Epidemiologic studies of n-3 fatty acids (FAs) and risk of colorectal cancer have been inconsistent, and their relation to risk of colorectal adenomas (CRA), as precursors of colorectal cancer, has not been evaluated in detail. We here focused on possible associations of serum FAs with CRA in the Japanese population. Methods: We conducted a case-control study of 203 asymptomatic CRA cases (148 men, 55 women) and 179 healthy controls (67 men, 112 women) during 1997-2003 in Nagoya, Japan. Baseline information was obtained using lifestyle questionnaire, and serum FA levels were measured by gas chromatography. Results: A non-significant inverse association with CRA was observed for eicosapentaenoic acid (EPA) among women. Moreover, the concentrations of docosahexaenoic acid (DHA), a major component of n-3 highly-unsaturated FAs (HUFAs), were significantly lower in cases in both sexes. In addition, serum concentrations of total FAs, saturated FAs (SFAs) and mono-unsaturated FAs (MUFAs) had strong positive links with CRA risk. In contrast, arachidonic acid (AA) and DHA were inversely related, with 66% and 59% risk reduction, respectively. Ratios of SFAs/n-3 PUFAs and SFAs/n-3 HUFAs exhibited significant positive relations with CRA risk but there was no clear link with n-6 PUFAs/n-3 PUFAs. Conclusions: Our findings suggest a promoting influence of SFAs and MUFAs along with a protective effect of DHA on CRA risk. However, further research is needed to investigate the discrepancy with the generally accepted roles of the AA cascade in carcinogenesis.

O-059 THE EFFECT OF PREOPERATIVE D-DIMER, FIBRINOGEN AND CEA LEVELS ON TUMOR STAGE AND SURVIVAL IN PATIENTS WITH COLORECTAL CANCER

M. Kara*, Y. Esatoglu*, O. Gunes, O. Ozkan***, M. Tilki****, G. Tellioglu*, I. Titiz*** **1st General Surgery, Haydarpasa Numune Training and Research Hospital, **4st General Surgery, Haydarpasa Numune Training and Research Hospital, ***2st General Surgery, ****3st General Surgery, Haydarpasa Numune Training and Research Hospital, Istanbul, Turkey*

Abstract Background: Tumor angiogenesis is one of the most important level for tumor growth and metastatic spreading of colorectal cancer. Tumoral angiogenesis is a complex process including the activation of clotting, fibrinolysis and plasminogen system activation. Previous studies demonstrates that the extent of activation of hemostatis and angiogenesis related factors such as D-dimer, fibrinogen, vascular endothelial growth factor and platelets affects the survival in patients with colorectal cancer. Methods: Correlation of preoperative plasma D-dimer fibrinogen and CEA levels with histopathological findings, TNM, Dukes classification and survival were analyzed on 44 patients who underwent surgical resection of colorectal cancer between July 2007 – March 2009. Results: Higher preoperative plasma D-dimer and fibrinogen levels, were significantly associated with T4 tumor lymph node invasion and metastasis. On the other hand higher plasma CEA levels were only associated with metastasis. Plasma D-dimer and fibrinogen values were normal in patients with Dukes B, however these values significantly elevated in patients with Dukes C and D. D-dimer and fibrinogen levels were more correlated with tumoral deep wall penetration than tumor size. It was determined that high preoperative D-dimer fibrinogen and CEA levels have affected survival of the patients negatively. Conclusions: According to the results of the study, the levels of elevated plasma D-dimer and fibrinogen in patients with colorectal cancer correlates more with relatively advanced tumor stage that determines the tumor level better than CEA. It is revealed that the preoperative diagnosis of tumor stage and prediction of postoperative survival would become effective with measurement of preoperative D-dimer and fibrinogen levels.

O-060 A NOVEL BRCA-1 MUTATION IN ARAB KINDRED FROM EAST JERUSALEM WITH BREAST AND OVARIAN CANCER

L. Kadouri, D. Bercovich, A. Elimelech, I. Lerer, M. Sagi, G. Glusman, C. Shochat, S. Korem, T. Hamburger, A. Nissan, N. Abu-Halaf, M. Badryyah, D. Abeliovich, T. Peretz *National Cancer Control Project Officer in Palestine -Italian Cooperation Office-Jerusalem herb2heal@yahoo.com*

Abstract Background The incidence of breast cancer (BC) in Arab women is lower compared to the incidence in the Jewish population in Israel; still, it is the most common malignancy among Arab women. There is a steep rise in breast cancer incidence in the Arab population in Israel over the last 10 years that can be attributed to life style changes. But, the younger age of BC onset in Arab women compared with that of the Jewish population is suggestive of a genetic component in BC occurrence in that population. Methods We studied the family history of 31 women of Palestinian Arab (PA) origin affected with breast (n=28) or ovarian (n=3) cancer. We used denaturing high performance liquid chromatography (DHPLC) to screen for mutations of BRCA1/2 in 4 women with a personal and family history highly suggestive of genetic predisposition. Results A novel BRCA1 mutation, E1373X in exon 12, was found in a patient affected with ovarian cancer. Four of her family members, 3 BC patients and a healthy individual were consequently also found to carry this mutation. Of the other 27 patients, which were screened for this specific mutation none was found to carry it. Conclusion We found a novel BRCA1 mutation in a family of PA origin with a history highly compatible with BRCA1 phenotype. This mutation was not found in additional 30 PA women affected with BC or OC. Therefore full BRCA1/2 screening should be offered to patients with characteristic family history. The significance of the novel BRCA1 mutation we identified should be studied in a larger population. However, it is likely that the E1373X mutation is not a founder frequent mutation in the PA population.

O-061 HEAD AND NECK CANCER: IS IT A PROBLEM AMONG YEMENI PATIENTS ?

H. Basaleem, A. Bawazir, K. Al-Sakkaf *Department of Community Medicine and Aden Cancer Center, Faculty of Medicine and Health Sciences, Aden, Yemen*

Abstract Introduction and Objective: Head and neck cancers have numerous repercussions for the medical system and individual patient. In Yemen, data on this cancer are scarce. This study aimed at describing the pattern of head and neck cancers registered in Aden Cancer Registry. Methods: The registered cancers (oral cavity, pharynx, nasal cavity, larynx, paranasal sinuses and salivary glands) during the period 1st January 2003–December 2007 were analyzed. Classification and coding of the neoplasm were carried out using the ICD–O and ICD–10. Results: Head and neck cancers were the fourth cancers among registered cancers. Oral cancer was the most frequent (36.3%), followed by nasopharyngeal cancer (31.6%) and laryngeal cancer (19.3%). Two-thirds were males (36.7%). The incidence increases with increasing age up to 40–60 years. Among males, the highest age-specific incidence rate was at the 55–64 years and it was for laryngeal cancer followed by oral cancer (9.3 and 7.1 per 100.000 inhabitants respectively). For females, the highest age-specific incidence rate was at later age; 65-74 years for oral and nasopharyngeal cancers and ≥75 years for nasal cavity cancer with the highest age-specific incidence rate of 13.2 per 100.000 inhabitants for oral cancer. Conclusion: These cancers are among the leading cancers in our community. Raising awareness about their early warning signs for early detection and management and the need for further larger studies to investigate the community-related risk factors and survival of patients are pointed.

O-062 CANCER REGISTRY OF SETIF, (ALGERIA) INCIDENCE, TRENDS AND SURVIVAL 1986-2005

M. Hamdi Cherif, Z. Zaidi, D. Abdellouche, S. Hamdi, N. Lakhdari, A. Djema, S. Laouamri, A. Mahnane, H. Moussaoui, L. Kadri, D. Guerra *Cancer Registry Setif*

Abstract It is a study relating cancer incidence and survival in Setif, Algeria during the period 1986-2005. Lung cancer is the first commonly site and is raising; the age-standardized rate (ASR) increases from 11.7 to 21.9 per 100.000 inhabitants for male. The cancer of the prostate is in second position, increasing from 2.0 in 1986 to 7.2 per 100.000 men in 2005. At the two sexes between 1986 and 2005, the number of new cases of colorectal cancer raises also. The incidence rate of the cancer of the bladder increases 2.2 to 8.7 per 100.000 people in man. The incidence rates of cancers of the nasopharynx, the stomach, the lymphomas and leukemia's remained stable during these two last decades. At the woman, the incidence rate of breast cancer is raising, the rates pass from 10.4 to 19.6 per 100.000 women. With regard to the incidence of the cancer of thyroid increases from 1.1 in 1986 to 4.3 Per 100.000 women in 2005. The rates are stable for the incidence of the cancer of the lymphoma gallbladder and, cervix. The data of survival relative to 5 years, not exceeding 40%, according to the last study CONCORD 1990-1994 for the common cancers of the cancer registry.

O-063 TRENDS IN LUNG CANCER HISTOPATHOLOGY IN IZMIR, TURKEY

S. Eser, C. Yakut, R. Ozdemir *Izmir Cancer Registry*

Abstract Purpose: Although there is a legislation for tobacco control in Turkey since 1991, smoking related cancers still have increasing trends except larynx cancer which has a steady trend. This pattern might be attributable to the changes in the consumption of cigarette types. We would like to present time trends for histopathologic types in lung cancer between 1993-2005 to support our findings. Methods: We calculated annual age adjusted incidence rates (ASR) according to World Standard Population for lung cancers totally and four main histological types, squamous-cell carcinoma (SCC-M8050-8076), adenocarcinoma (AC-M8140, 8211, 8230-8231, 8250-8260, 8323, 8480-8490, 8550-8560, 8570-8572), small-cell carcinoma (SmCC-M8040-8045) and large-cell carcinoma (LCC-M8012-8031, 8310) for each year of 1993-2005. Results: Among male ASRs were 64.9, 72.5 and 84.9 per 100 000 for 1993, 1999 and 2005 years respectively for lung cancer. ASRs were, for SCC 28.0, 19.0, 21.9, 17.7, 18.6 in males, 0.6, 0.2, 0.3, 0.2, 0.2 in females; for SmCC 12.7, 11.8, 11.1, 11.5, 11.4 in male, 0.6, 1.0, 1.1, 0.8, 1.8 in female; for AC 5.2, 6.5, 8.5, 12.0, 16.2 in males, 1.0, 1.2, 1.8, 1.9 and 3.1 in females; for LCC 3.5, 2.0, 2.1, 2.7, 2.5 in males, 0.6, 0.2, 0.3, 0.2, 0.2 in females per 100 000 for the same years respectively. Conclusion: The trends in the histological types of lung cancer support our previous findings for related with the changing pattern of consuming cigarette from non manufactured to more manufactured, from untipped to tipped and from black to blond tobacco.

O-064 THE EPIDEMIOLOGY OF PANCREATIC CANCER IN SHANGHAI FROM 1973 TO 2006

K. Gu*, **C. Wu***, **V. Gupta****, **F. Jin***, **Y. Zheng*** *Department of Cancer Prevention, Shanghai Municipal Center for Disease Control and Prevention, Shanghai, China**, Columbia University, College of Physicians and Surgeons, New York, USA

Abstract The epidemiology of pancreatic cancer in Shanghai, China is poorly understood. Using data collected between 1973 and 2006, our study sought to characterize the epidemiology of pancreatic cancer across the 17 districts comprising Shanghai province. Incidence data was age standardized according to the world standard population, and annual percentage changes (APC) were calculated. During the 34-year time period, the average annual incidence of pancreatic cancer among men was 1.72% (95% confidence interval [CI] 1.34%-2.09%) and among women was 1.69% (CI 1.40%-1.99%). More detailed information was available for cases diagnosed between 2002 and 2006. During this 5-year period, pancreatic cancer was the eighth most common cancer diagnosed among males and the seventh most common among females, with a male/female incidence ratio of 1.18:1. 71.1% of all diagnosed cases occurred in individuals aged ≥ 65 years, with the highest incidence rates (88.7 cases/100,000 persons) occurring among individuals aged 80-84 years. Malignancy was most often confined to the head of the pancreas (75.5%), and 64.4% were diagnosed at with stage IV. The burden of disease in Shanghai province approaches the mean incidence rates worldwide (US rates: male:8.3 cases/100,000, female: 6.3 cases/100,000; worldwide: male:4.6 cases/100,000, female: 3.3 cases/100,000). However, among individuals aged ≥ 65 years, Shanghai demonstrates comparatively higher incidence and prevalence (urban Shanghai: male:65.8/100,000, female: 54.9/100,000; worldwide mean: male:35.3 cases/100,000, female: 28.8 cases/100,000). In summary, although the annual incidence of pancreatic cancer has remained consistent over the observed five period, the comparatively high prevalence rates among older adults in Shanghai is cause for concern.

O-065 DEVELOPING A NOVEL SYSTEM TO SHARE EXPOSURE AND CANCER RELATED EPIDEMIOLOGY INDICATORS OF THE APOCP MEMBER STATES

H. Mousavi-Jarrahi*, **M. Golmahi****, **A. Mosavi-Jarrahi**** *Mashad University of Medical Science, **The Cancer Institute Reseach Center

Abstract Background: The advances in information technology throughout the member country of APOCP plus the diversity in terms of cancer rate as well as risk profile across the vast geographical regions of Asia Pacific bring the need to develop an online Country Specific Epidemiologic Indicator System to be available to cancer scientist for prevention and control measure. Methods and description: A basic online system was developed to address the regional cancer diversity rate and exposure. The system takes into consideration the three pillars of epidemiologic indicators (place, time, and human diversity) for cancer incidence and exposure prevalence. The system offers two ends (back and front end) available to scientist as well as public. The scientist can 1) share information through depositing indigenous developed indicators into system 2) compare the indicators into three different medium of mapping, charting and tabling, 3) leave indigenous indicator to be deposited into the system for future use of other scientist. The system, in part, utilizes the Geographic Information System technology for mapping of indicators. The system considers ethical aspect of sharing information by adhering to the copyright nature of the generated indicators in all aspect of sharing, referring as well as acknowledgments. The system is under test trial in the Health Metrics Research Core of the Dept. of Social Medicine, Medical school, Shaheed beheshti University of Medical Sciences. Conclusion: The system is a novel idea to utilize the potentials of the exploding electronic information cancer control.

O-066 DEATHS DUE TO LUNG CANCER IN SOUTH AFRICA: A MULTIPLE-CAUSE OF DEATH ANALYSIS

M. Rahman University of Swaziland

Abstract Introduction and objectives: To describe trends and patterns of lung cancer deaths in South Africa and to identify the diseases associated with lung cancer. Methods: Multiple cause death data compiled by Statistics South Africa from the death certificates from 1997 to 2005 were analysed using descriptive measures and measures of association. Lung cancer cases were separated from all records of deaths to create a data-file consisting of all deaths with any mention of lung cancer (ICD-10 code: C34). Results: The total number of deaths recorded during the study period was 4 257 415, of which 286 056 (6.72%) had a diagnosis of any form of cancers (C00-C97). Almost 14% of all decedents with cancer were diagnosed having lung cancer. The lung cancer was mentioned as underlying cause of death in 92.9% of all decedents with lung cancer. Out of total 39 205 lung cancer deaths, 50.8% had only one cause of death, 34.3% had two causes and the remaining had three or more causes. Conclusions: Lung cancer is the leading cause of death among all cancer deaths in South Africa, of which 70% were male. Almost 85% of these decedents had one or two causes of death, indicates that the lung cancer is a disease, not highly dependent on other co-morbid conditions to cause death. The measures of association provide among most significant associated diseases are cardiac arrest, heart failure, Pneumonia, respiratory failure and haemorrhage from respiratory passages.

O-067 CANCER MAGNITUDE IN SHAM COUNTRIES

M. Tarawneh*, **S. Khatib**** *Ministry Of Health, **KHIBC

Abstract Objective : This study was designed to present some epidemiological characteristics of cancer in Sham countries Methodology In this study we analyzed available data on some epidemiological characteristics of cancer in Sham countries . Results: It was found that cancer of all sites is more predominate in females . The median age at diagnosis of cancer in all Sham countries is within the range (52-56) years . The ASR for males in Sham countries is within the range 113- 179. The leading cancers among men in Sham are : Jordan (Colo-rectal (11.4%) Leukemia (11.2%) Lung (10.7%) . Lebanon : (Prostate (16.5%) Urinary Bladder 16% Lung (15%) .Palestine: (Lung 12.4%, Lymphoma (9.6%) Colorectal 9.2% . In Syria: (Lung 11.8% ,U. Bladder 9.8 % , Colorectal 9.6% . Whereas among women the 1st rank cancer in all Sham countries is the breast with relative frequency as follow (Jordan , Lebanon , Palestine , 34.8% , 40.2% , 27.2% respectively) except Syria the uterus is the 1st (32.6 %) . The 2nd is colorectal (Jordan , Lebanon , Palestine , Syria , 9% , 7.6% , 27.6% 9.4% respectively. Conclusions and recommendations Cancer incidence is on the rise in all Sham countries as in other Arab countries where incidence rates for both men and women is increasing. Comprehensive cancer control programmes is highly needed.

O-068 SURVIVAL RATE OF GASTRIC CANCER IN IRAN

M. Movahedi, A. Afsharfard, A. Akbari, A. Moradi, N. Moadeli, J. Khoshnevis, F. Fattahi, M. Akbari *Cancer Research Center, Shahid Beheshti University of Medical Sciences*

Abstract Background: Cancer of the stomach is among the most common malignancies worldwide. In Iran, the mortality of stomach cancer is the first cause of death due to cancer in both sexes. The survival pattern of stomach cancer in different regions of Iran has already been investigated by a few numbers of studies. This study was designed to estimate survival rate of stomach cancer at national level. Methods: we called 3439 cases of stomach cancer from the national cancer registry file that had telephone number and were diagnosed between years 2001 and 2005 to obtain information about their life status. Survival estimates were calculated using the Kaplan–Meier method, and the survival probability was calculated for the overall cohorts and also for gender and anatomical sites of tumor. Relative risks according to demographic and risk variables were calculated by Cox's proportional hazard model. Results: The overall 5-year survival rate was 12.8% .the likelihood of death was higher in men (RR=1.21; 95% CI: 1.11-1.33) and patients more than 70 years old had worse prognosis rather than those below fifty years old (RR= 1.67; 95% CI: 1.46-1.91).The 5-year survival rate for tumors located in antrum was significantly higher than corpus and cardia (15.3%, 13.2% and 7% respectively; p=0.009). Patients with lymphoma had a significantly higher 5-year survival rate compared to those with adenocarcinoma (RR= 0.46; 95% CI: 0.31-0.66). Conclusion: The status of stomach cancer, including relative low survival rate in Iran, indicates the extremely urgent needs for health authorities to adopt measures of cancer prevention that proved effective in other countries.

O-069 RELATION BETWEEN DEMOGRAPHIC FACTORS AND TYPE OF GASTROINTESTINAL CANCERS USING PROBIT AND LOGIT REGRESSION

A. Pourhosiengholi, M. Pourhosiengholi, M. Vahedi, A. Safae, B. Moghimi-Dehkordi, F. Ghafarnejad, M. Zali *Research Center of Gastroenterology and Liver diseases, Shahid Beheshti University, (M. C), Tehran, Iran*

Abstract Background: Approximately 50,000 new cases of cancer occur each year in the Iranian population of 70.4 million. The most common organ system involved with more than 38% of all cancers is the gastrointestinal (GI). The objective of this study is to investigate the relation between demographic factors and type of gastrointestinal cancers using probit and logit models. Methods: This study was designed as a cross-sectional survey included all consecutive GI cancer patients admitted over one year period in a random selected hospital group located in Tehran in 2006. Results: The vast majority of cancer cases are colorectal cancer (40.0%), followed by gastric cancer (34.5%) and esophagus cancer (17.1%). There was a significant gender effect in the colorectal, gastric and esophagus cancer also there was a significant association between age and gastrointestinal cancers in both logit and probit regression. The factor of duration was not significant in gastric cancer. Conclusion: Men have colorectal cancer more likely than women. Older people have gastric cancer more likely than younger people. In esophagus cancer all factors were significance. Results from probit and logit models were similar to each others, indicated that probit analysis can be employed as a logit model to analyze the relationship between demographic factors and kind of cancers.

O-070 TREND ANALYSIS OF GASTRIC CANCER AND COLORECTAL CANCER MORTALITY IN IRAN, 1995-2003

M. Pourhoseingholi*, S. Faghihzadeh, G. Gatta***, E. Hajizadeh**, A. Abadi****, M. Zali*** **Research Center of Gastroenterology and Liver diseases, Shahid Beheshti University M. C, Tehran, **Department of Biostatistics, Tarbiat Modares University, Tehran, Iran, ***Fondazione IRCCS, Istituto Nazionale Tumori, Via Venezian 1, Milan, Italy, ****Department of Biostatistics, Shahid Beheshti University M. C, Tehran, Iran*

Abstract Background: Cancer is the third most common cause of death in Iran. Gastric cancer (GC) and colorectal cancer (CRC) are two important causes of mortality due to cancer. The aim of this study was to evaluate the mortality rates and trends from GC and CRC in Iranian population during a period of almost a decade, i.e. from 1995 to 2003. Methods: National death Statistic Reported by the Ministry of Health and Medical Education from 1995 to 2003, stratified by age group, sex, and cause of death are included in this analysis. CRC and GC were expressed as the annual mortality rates/100,000, general and/or per gender, and age group. Results: The general mortality rate of CRC slightly increased during the years under study from 0.44 to 2.54 and CRC mortality was higher for older age male. The general mortality rates of GC showed a sharp increasing from 1.68 to 9.67. Conclusion: Our study indicated remarkable increasing trends in GC and CRC mortality. So developing for a gastric cancer for both primary prevention and early detection programs and manage the delays of diagnosis is recommended to decrease the trend of GC mortality. For CRC, since the rate of CRC screening is very low in Iran, it is recommended that in Iran screening be started at least in family with the history of CRC in order to control the mortality and burden of CRC in the future.

O-071 USES OF HOSPITAL BASED CANCER REGISTRIES DATA IN THE SETUP OF DEVELOPING COUNTRIES

M. Dhar *JSS Medical College (Dept of Community Medicine), JSS University, Mysore, India*

Abstract Uses of cancer registration are well established and documented. Population based cancer registries (PBCRs) in the developed world have been meeting the requirements of cancer control activities. In the developing countries however, PBCRs suffer from many difficulties and lacunae. Use of hospital based cancer registries (HBCRs) on the other hand has been limited to the study of magnitude and patient care. Barring few exceptions, there is no attempt to interpret HBCR data at the population level. In fact, there are additional potential uses of HBCRs, which are not tested in the setup of developing countries. Therefore the objective of present study was to explore all the potential uses of HBCR data and test their validity in India. Required data on number, proportion and rates of various forms of cancer were compiled for PBCRs and HBCRs in Mumbai, Bangalore and Chennai from the published reports of National Cancer Registry Programme. Patterns, incidence and trends in the leading sites of cancer were studied by comparing the same as derived from HBCRs with that obtained from PBCRs. Over-representation of easily accessible sites resulted in some variations in the top ten leading sites. However, in general, HBCRs did depict leading sites in the registry areas. HBCR data may also be utilized for studying the pattern, trend and down staging of cancer, of course, with additional precautions in interpretation. Findings of present study may encourage the expanded use of HBCR data thereby providing an economical alternative to the PBCRs viable for the developing countries.

O-072 RISK OF DEVELOPING GASTRIC CANCER IN RELATIVES: A CASE-CONTROL STUDY**B. Moghimi-Dehkordi, A. Safaee, S. Fatemi, E. Maserat, M. Pourhoseingholi, M. Zali** *Research Center for Gastroenterology and Liver Disease, Shahid Beheshti University of Medical Science, Tehran, Iran*

Abstract Introduction and Objective: Gastric cancer is one of the major causes of cancer related death in the world. A number of risk factors are now known to be related to the development of the disease. Previous reports indicated that family history is a serious risk for gastric cancer, but there is a little information about this, in Iran. The aim of this study was to explore the relation between family history of cancer in first and second degree relatives and the risk of GC in Iran. Methods: The present study was designed as unmatched case control study. Cases were 746 patients that histologically confirmed Gastric cancer and 746 controls were randomly selected among the healthy participants in a health survey. The family history was extracted from a standard history form completed by the patient or from the record created by a health care provider. Mantel-Heanszel Odds Ratio was computed for removing the confounding effect of age and sex. Results: Overall, 9.7% of cases versus 5.6% of controls reported a family history of gastric cancer. Gastric Cancer risk increased over twofold for subjects reporting a family with gastric cancer. There is no statistical association among family history of other cancers and gastric cancer ($P > 0.05$). Conclusion: In conclusion, this study showed that family history of gastric cancer, especially in first-degree relatives, increases the risk of gastric cancer. Further studies are needed to better understand the role of genetic factors and environmental factors and their interaction in gastric cancer development in Iranian community.

O-073 EXPERIENCE AND OUTCOME OF CANCER REGISTRATION IN BASRAH 2005-2008**Omran Habib** *University of Basrah*

Abstract Introduction: This paper describes the mechanism of a recent population-based cancer registration in Basrah-Southern Iraq and presents a profile on the outcome over a period of four years (2005-2008). Objectives: During these four years, extensive work was done to create culture of scientific approach to cancer, to enhance adequate cancer registration and subsequently to quantify the risk of cancer and enhance actions for its control within a national strategy. Methods: The mechanism of registration: Since 2005 cancer cases which are diagnosed and/or treated at any of the major hospitals and governmental diagnostic facilities in Basrah are reported to the Cancer Control Centre (the main registration office). Additional cases are also notified from the Cancer Registration Section at the department of Pathology and Forensic Medicine, College of Medicine, University of Basrah (which compiles histopathologically ascertained cases) and from haematological laboratories.

To back up these sources, during the four years (2005-2008) all accessible records at the level of Basrah governorate (hospitals, registries, laboratories, specialized oncology centres and early detection centres etc) were checked for verification of all newly diagnosed cancer cases.

For this purpose, individual records of every diagnosed case were examined and every case of cancer were identified and added to the pool of cases. Data on all reported cases were re-fed on an excel programme and carefully checked for repetition and apparent errors. The verified cases were used in this paper to present an estimate of the risk of cancer in Basrah during 2005-2008. Results: A total of 8748 cases were compiled, 72.9% were from the inhabitants of Basrah governorate and 27.1% were from outside Basrah governorate. The reported numbers for the years 2005, 2006, 2007 and 2008 were 1850, 2155, 2410, and 2333 in that order. Cases among males and females accounted for 48.1% and 51.9% respectively. The Five leading cancers during 2005-2008 were those of breast, urinary bladder, lymphomas, lung & Bronchus and leukaemias. Conclusion: Population – based registration is a strong prerequisite for a dynamic strategy on cancer control encompassing prevention, treatment, and registration. It is the only means to deal effectively and sensibly with an ever increasing health problem. Doctors' role in cancer registration is crucial.

O-075 CANCER IN KUWAIT: MAGNITUDE OF THE PROBLEM**A. Elbasmi***, **A. Al-Asfour***, **Y. Al-Nesf****, **A. Al-Awadi*** **KCCC, **MOH*

Abstract The analysis used data of the Kuwait Cancer Registry (KCR) from year 1974 to 2007. Aim of this study: was to estimate the magnitude of the cancer problem in Kuwait over the last 33 years. Materials and methods: Age-adjusted incidence rates (ASR) with standard error (er) and 95% confidence intervals (95% CI) of age-standardized rates were estimated. Statistical significance was assessed by examining the standardized rate ratio (SRR). Results: by following the Cancer registry data there was a trend of increase in adjusted rates among both males and females. The ASR of colorectal cancer among Kuwaiti males increased by about 5 folds over the last 33 years and ranked the 1st most frequent site on the years 2003-2007. Prostate cancer incidence increased by 3 folds (14.5 cases /100,000 populations) and ranked the 4th most frequent site among Kuwaiti males. The incidence of Non Hodgkin's Lymphoma (NHL) and leukemia had increased by 1.5 to 2 folds over the same time period. The rise of lung cancer incidence declined to similar rates compared to that observed in the early 70s and 80s. For Kuwaiti females breast cancer had the highest incidence among Kuwaiti population (15 cases /100,000 populations), it increased by 3 folds (50 cases /100,000 populations) over the last 33 years. The incidence of colorectal cancer increased by about 4 folds; (13 cases /100,000 populations). NHL and leukemia increased by 2-2.5 folds over the same studied duration. Meanwhile Thyroid cancer increased by one fold.

Notes

O-076 HRQOL AND FUNCTIONAL LIMITATIONS OF ORAL CANCER PATIENTS BEFORE TREATMENT

R. Raja Jallaludin, M. Jamaludin, A. Ab Sallam, J. Geraldine Doss, I. Abdul Razak, A. Bustam, N. Abdullah, H. Lai, W. Ghani, M. Survashe, R. Mohd Zain *Oral Cancer Research and Coordinating Centre, Faculty of Dentistry, University of Malaya, 50603 Kuala Lumpur, Malaysia*

Abstract The aim of the study was to investigate factors associated with HRQoL status of oral cancer patients before treatment. The Oral Cancer Research and Coordinating Centre collects data prospectively from patients. Patients were interviewed within 2 weeks after they were informed of their diagnosis. HRQoL information was captured using a modified UW-QOL Version 4 instrument. Most (144/166, 87%) patients had at least one functional limitation. About 58% were female, 50% elderly, 42% Indian, 32% financially independent and 34% currently have no spouse. In terms of high risk habits practiced, 65% have never smoked, 69% have never drunk alcohol, 49% have never chewed quid. Almost a quarter (23%) were seeking alternative treatment. Many (44%) had lesion size of more than 4cm; 42% had tongue lesions and for 24% their lesions were on the gum or retromolar area. One fifth (19%) were staged 3 and 47% staged 4. About 19% had family history of cancer. Common symptoms experienced included oral pain (73%), depression (62%), chewing difficulties (48%) and swallowing difficulties (42%). Problems with recreation, physical activities, speech, appearance, opening the mouth, shoulder movement and taste were reported among 15-33%. Three or more functional limitations were present among 54%. Disruption of daily activities due to functional limitations was reported among 34%. At the point of diagnosis prior to treatment, oral cancer patients face many functional limitations that compromise their HRQoL. The need for patient support should be emphasized early before clinical intervention.

O-077 10 YEARS EPIDEMIOLOGIC STUDY OF HEAD & NECK CANCERS IN GUILAN PROVINCE, IRAN

F. Shahsavari*, M. Nikpasand, S. Karimi***, M. Ghanbariha**** **Guilan University of Medical Sciences, Islamic Azad University of Tehran, **Private Office*

Abstract Introduction: Head & neck cancers have been known as the 10th common cancer in the world. Since they can cause morbidity & mortality, their early diagnosis is worth everywhere. So it is important to know the prevalence of them in different places. Aim: The aim of this study was to evaluate the frequency of head & neck cancers in Guilan Province since 1999 to 2008. Materials & Methods: This is a retrospective-descriptive study based on existing data in Guilan Cancer Registry Center. The information about age, sex, location and type of the cancer was recorded. All data were analyzed using SPSS 13. Results: Out of 2335 cases, 1372(59%) & 936(41%) were male and female respectively. SCC (997 cases, 43%) was the most common cancers and then after BCC (538 cases, 23%). The cancers were more commonly found in 10th decade and then 7th decade of life. Common site of involvement were esophagus, face skin and thyroid gland. Conclusion: Out of 12830 cancers in this period (10 years), 2335 cases were Head & neck cancers. In the other hand, H&N cancers comprised 18% of all cancers.

O-078 SOCIO-ECONOMIC INEQUALITIES IN TESTICULAR CANCER SURVIVAL WITHIN TWO RANDOMISED CLINICAL TRIALS

U. Nur *London School of Hygiene and Tropical Medicine*

Abstract Testicular cancer is the most common cancer in men under 35 years of age, and has the highest survival for all adult male malignancies. Despite the fact that survival is very high, there is strong evidence that survival differs by socio-economic groups. We analyzed survival patterns for 1,611 testicular cancer patients; diagnosed during 1984-2001 and recruited to one of two clinical trials studies. TE04 a surveillance study to determine the relapse-free rate after orchidectomy, of stage I nonseminomatous germ-cell testicular cancer patients, diagnosed during 1984-1994. In the second trial TE19, patients with stage I seminomatous germ-cell tumours were assigned to receive radiotherapy or one injection of carboplatin. Crude and relative survival was estimated at 5 and 10 years for the five categories of socio-economic deprivation. No significant socio-economic gradient was seen in the study population 1.42% (95% CI -0.25% to 3.09%) at 5 years and 2.12% (95% CI -0.48% to 4.71%) at 10 years. We conclude that given equal treatment at a given stage of disease, survival from testicular cancer does not depend on the socio-economic status, suggesting that the socio-economic gradient seen in the general population for patients diagnoses during a comparable, might be due to health care system factors.

O-079 A STUDY OF THE FAMILIAL AGGREGATION OF ESOPHAGEAL CANCER IN BABOL, NORTHERN IRAN

K. Holakouie Naieni, T. Shafieezadeh, A. Fotouhi, M. Mahmoodi *School of Public Health, Tehran University of Medical Sciences*

Abstract This study was done to look at the familial aggregation of esophageal cancer in the population covered by Babol Research Station (affiliated to Tehran University of Medical Sciences). The purpose was to assess the risk of disease in first-degree relatives of cases found in a population known to have a high incidence rate of this malignancy. This research used data from three to four consecutive generations in the relatives of patients affected with esophageal and other cancers registered in Babol between 2001 and 2003. We used logistic regression (within a Generalized Estimating Equations model) to estimate cancer odds ratios in the first-degree relatives of esophageal cancer patients. Confounding variables controlled for in this study include proband and relative's age and sex. The overall proportion of cancer patients in first-degree relatives was 3.09% (3.8% for men and 2.3% for women). The pairwise odds ratio for first-degree relatives was estimated at 1.79 (CI 0.95 = 1.1-2.93); the same index was 2.21 (CI 0.95 = 1.1 - 4.44) for parent-offspring pairs and 1.92 (CI 0.95 = 0.87 - 4.24) for sibling pairs. No relationship was detected in the case of spouse pairs (between parents). Therefore, familial aggregation was detected in first-degree relatives of esophageal cancer patients in this area. The parent-offspring relationship suggests the presence of a genetic component.

O-080 BURDEN OF THE GASTRIC CANCER IN IRAN**M. Khayamzadeh***, **R. Salmanian****, **F. Abou Alhasani*****, **M. Moradi Lakeh****, **M. Naghavi******, **M. Akbari***

*Cancer Research Center, Shahid Beheshti University of Medical Sciences, **Iran University of Medical Sciences, ***Tehran University of Medical Sciences, ****Ministry of Health and Medical Education, Tehran, Iran

Abstract Introduction: The policy makers and social managers need some criteria for building up the appropriate health status of the community and observe the equity and equality on it. They have to know the burden of diseases as a main determining factor for decision making, planning and programming. Disability adjusted life years (DALYs) is a criteria which shows the wasted life time due to early death and also wasted time due to disease morbidity and disability. Gastric malignancies as commonest cancers in Iran are important and estimating the burden of these malignancies will enable the health policy makers to share the community sources, as appropriate. Material and Methods: The estimation of burden of disease and risk factors was a national study that began on 2003 by the ministry of Health and Medical education (MOH&ME) after establishing cancer registry in the country. This study was the first and only national study for burden of cancers. Here by we discussed about the burden of gastric malignancies as a part of this study. This study was performed by a special modeling and new software. Results: Due to wasted life time of early death and morbidity, gastric malignancies are the first malignancy in Iran. Year waste in Iranian population is 1.05 DALYs in each 1000 person. The burden of the cancer in Iranian women was less than male population. Conclusion: In Iran the burden of gastric cancer was more than Eastern Mediterranean region (0.83 DALYs/1000) and the whole World (1.30 DALYs/1000).

O-081 EPIDEMIOLOGICAL AND MINERALOGICAL INVESTIGATIONS ABOUT ENVIRONMENTAL RISK FOR MALIGNANT MESOTHELIOMA IN NEW CALEDONIA**F. Baumann***, **P. Maurizot****, **B. Robineau*****, **J. Ambrosi****** *Institut Pasteur de Nouvelle-Calédonie, **Bureau de la Recherche Géologique et Minière, ***CNRT Nickel et son Environnement, ****CEREGE *francine_surf@hotmail.com*

Abstract Malignant mesothelioma (MM) is a rare tumor of the pleura due to inhalation of asbestos, or occasionally erionite fibres. Incidence rates are usually five times more elevated in men than in women, because of occupational exposure. New Caledonia (NC) is located in the South Pacific, where the majority of the Melanesian population has kept a tribal way of life. Very high incidences of MM and lung cancer are observed. A relationship was established between MM and the use of a whitewash with local outcroppings (called "po"). A second study showed that the SIR of MM was 7.52 per 100,000 inhabitants per year in Melanesians, against 0.57 in Caucasians. The early onset of disease, and the sex ratio equal to 1.03, suggested a non occupational exposure for Melanesians. All Caucasian cases were men over the age of 60 years, implying an occupational exposure. Statistical analysis demonstrated a significant association between soil containing serpentinite and MM. Epidemiological and geological investigations were conducted in the tribes of the two highest incidence areas. The main objectives were to study the clusters of MM, and the links between MM and the possible environmental sources of asbestos exposure. Cases were identified from the Cancer Registry of New Caledonia. We collected demographic characteristics, residential history, school and occupational history. Mineralogical analysis were realized on samples of po, outcrops, embankments of roads, quarries, ... We will present the results of cluster analysis, univariate and multivariate analysis of risk factors using ecological regression.

O-082 THREE AND FIVE YEAR SURVIVAL RATE OF BREAST AND OVARIAN CANCER: CORRELATION TO BODY MASS INDEX (BMI) IN "DHARMAIS" NATIONAL CANCER HOSPITAL, INDONESIA DURING THE PERIOD 1997-1999**E. Suzanna, S. None** *Dharmais National Cancer Hospital*

Abstract According to hospital based cancer registry in "Dharmais" National Cancer Hospital, breast and ovarian cancer are among the ten most common cancer in women, i.e. 27.5% and 7.25% respectively. Currently, body mass index (BMI) has an important role for a breast cancer patient especially in early stage. But the results of studies still have inconsistencies which are normal BMI has a good prognosis and other study said the opposite. Thus, we want to know the survival rate of breast and ovarian cancer and the correlation with BMI in Indonesia. We used retrospective study by reviewing breast and ovarian cancer medical records during the period 1997 until 1999. We got 268 cases of breast cancer and 82 cases of ovarian cancer whose BMI were underweight (18 cases /6.72% and 19 cases/23.17%), normal (148 cases/55.22% and 48 cases/58.54%), and overweight (102 cases/38.06% and 15 cases/18.29%). Among breast cancer cases, we found that three year survival rate according to normal and overweight BMI was 39.66% vs 58.32%, while five year survival was 22.73% vs 38.39% respectively. Meanwhile for patients with underweight BMI, three year survival was 0%. For ovarian cancer, three year survival rate according to normal and overweight BMI was 22.2% vs 66.67% and five year survival rate was 22.5% vs 25% respectively. While underweight BMI has the same three and five year survival namely 12.5%. In this study we revealed that both of breast and ovarian cancer with overweight BMI have longer three and five year survival than normal BMI.

O-083 INCIDENCE RATES OF RECTUM CANCER IN ALMATY AND ASTANA CITIES**N. Iginov***, **A. Narbaev***, **S. Iginov**** *Astana Medical University, **Kazakh Research Institute of Oncology and Radiology

Abstract Peculiarities of prevalence of a rectum cancer among big cities of Kazakhstan as Almaty and Astana have its meaning that organization questions of proctologic services are put much better, than in other regions of Kazakhstan. Therefore questions of diagnostics and the account of oncological patients with RC in these cities are carried out rather well. From the period 1997 till 2005 in Almaty 1,292 patients had been registered that has made 13.5%, and in Astana for this period 292 patients were revealed that has made 3.1%, from all patients of Kazakhstan. Thus the number of patients of RC among women in the specified cities was above (53.6 and 51.7%, accordingly) than among men (46.4 and 48.3%, accordingly). Middle age of patients of all population in both cities had appeared identical (68.0±0.8 and 66.9±3.1 years, accordingly). Middle age of patients with such disease among the man's population of Almaty (68.4±1.2 years) was higher than in Astana (67.6±4.8 years), however 95% their confidential intervals were imposed, consequently these distinctions statistically were not essential (p>0.05). The similar data is received among the female population (67.6±1.7 and 66.0±3.0 years, accordingly). The general incidence of all population of Almaty (12.5±1.30/0000) in 1.4 times higher, than similar incidence in Astana (8.8±1.20/0000). Probably, they depend on a demographic factor, in particular from relative density of people over 60 years, and also from ethnic structure of the population, etc. As standardized (world standard) incidence rates of disease of RC were almost identical (10.7±0.5 and 9.8±0.30/0000, accordingly)

O-084 BREAST CANCER HISTORY AND PREVALENCE**M. Shahnazari Aval, S. Taavoni** *Iran University of Medical Sciences*

Abstract INTRODUCTION: Breast cancer was recognized by the Ancient Egyptians as long ago as 1600 BC. However, over the past 50 years it has become a major health problem affecting as many as one in eight women during their lifetime and leading cause of cancer death and morbidity among women worldwide. Among women living in developing countries the risk is lower but appears to be increasing. OBJECTIVE: To search history and prevalence of Breast Cancer. METHODS: In this study by using the key words of Breast Cancer, History, Prevalence, USA, Europe, Australia, and Middle East in Pub med, Science Direct, Google search engines and WHO Website on December 2007, also related books we found more than 50 articles, in the mentioned field. RESULTS: Due to the report of WHO, Global Prevalence of Breast cancer is 46%. In Cairo indicates a rate of 8 per 1000 breast cancer. In Jordan, breast cancer constituted 14.2% of all cancer cases in women. Lebanon ;There is 49% of cases being below 50 and a median age of 49.8 years. In Morocco breast cancer was the second most common, in 22.3% of cases. In Oman breast cancer constituted 13.7% of all female cases. Palestinians: breast cancer in 26% of the Ashkenazi group, 13% in the Sephardic group, and only 9% in the Palestinian group. In Saudi Arabia A National Registry was reported of 19.1% of breast cancer. All breast cancers in Tunisia ASR was calculated at 16.7/100,000. CONCLUSION Regarding to all mentioned studies, which may be useful to medical group, who care for female clients when undertaking any cancer control program, understanding these statistics, their source, and their quality is important for assessing the current situation, allocating resources to different control strategies, and evaluating progress.

O-085 EFFICACY OF SCALP COOLING ON THE PREVENTION OF ALOPECIA IN BREAST CANCER PATIENTS UNDERGOING ADJUVANT CHEMOTHERAPY**M. Mohsen*, A. El-Badawy**, N. Abd-El-Bary***, G. Shehata****** **Faculty of Nursing, **Faculty of Nursing-***Faculty of Medicine-Menofia University*

Abstract Introduction: Chemotherapy-Induced alopecia has become a significant health problem for cancer patients. Aim of this study was to investigate the effect of scalp cooling on the prevention of Chemotherapy-Induced alopecia in post-mastectomy women Undergoing Adjuvant Chemotherapy. Methods; The study was conducted at the chemotherapy unit in the Oncology Institute, Menofia University-Egypt. Sixty patients with mastectomy Undergoing Adjuvant Chemotherapy who met the study criteria were selected. Patients were randomly assigned into two equal groups, a study group and control group of 30 patients each. The study group was received scalp cooling while receiving their chemotherapy cycle, while the control group received the hospital routine. Tools of the study includes; 1) Structure interview questionnaire, 2) Physiologic measurement of hair loss, 3) Photo documentation before and after chemotherapy and 4) State-Trait Anxiety Inventory (STAI). Both study and control group were interviewed and their hair were assessed 6 times throughout the study. Results: The scalp cooling group had delay total alopecia rate by 80 % at sixth chemotherapy cycle when compared with those who did not use scalp cooling. As all of control group (who did not use scalp cooling) all of control group (who did not use scalp cooling) 100% developed total alopecia after fourth cycle. Also a significant reduction in the anxiety total score of the study group as compared with control group. Conclusion:- Scalp cooling during chemotherapy cycle was an effective nursing intervention for controlling total alopecia and improved psychological status of women with post mastectomy undergoing adjuvant chemotherapy.

O-086 EFFECT OF STRESS ON IMMUNE RESPONSE AFTER SURGICAL TREATMENT OF BREAST CANCER**S. Weheida*, M. El-Bassuni**, S. El-Ghafar***, S. Elalem***** **Dept of Medical Surgical Nursing, University of Alexandria, **Dept of Clinical Pathology, ***Dept of Adult Health Nursing, Menoufyia University*

Abstract Breast cancer has become a significant health problem. Cancer women need for reducing emotional stress; fear and anxiety which effect on immune response. Aim: was to determine the effect of stress on immune responses after surgical treatment of breast cancer. Method; study was carried out on a convenient sample of 30 adult patient diagnoses as breast cancer for stage II or III and scheduled for mastectomy at oncology hospital and surgical department of Menofia University Hospitals. A descriptive design was used. Tools: 1) stress assessment scale, 2) Immune response assessment questionnaire, and 3) Nutritional Assessment questionnaire. Result: o 46.7% of breast cancer patient aged between (45-to less than 55)years,80.0% were married,63.3% lived in rural areas,50.0% a monthly income between (150-less than 300) Egyptian pound,40.0% were illiterate, o 36.7% of the sample had sever level of stress at preoperative assessment while 56.7% had sever level of stress at post operative assessment, o There was negative statistically signification correlation between total stress and immune response were T lymphocytes, CD4 helper, CD56 NK cell, and CD14 monocytes is pre operative assessment. And T lymphocytes, CD4 helper CD8 Cytotoxic, CD56 NK cell, CD14 monocytes in post operative assessment. Conclusions: the higher degree of stress, the lower the value of T Lymphocytes, CD4 helper, CD8 cytotoxic CD 56 NK cell, and CD14 Monocytes. Supporting cancer patient during treatment was recommended to improve psychological and physical well-being.

O-087 PTEN GENE MUTATION AND PRIMARY PROSTATE CANCER PROGRESSION**S. Salem, A. Mehraei, A. Abedi, G. Pourmand** *Urology Research Center, Tehran University of Medical Sciences*

Abstract Introduction: PTEN is a putative tumor suppressor gene located on 10q23 in prostate cancers, the second most common cause of cancer-related death in men. The PTEN mutation rate is not exactly determined, especially in Asian people. This study sought to further clarify the role of PTEN gene in combination with Gleason scoring for better prediction of progression and survival of cancer, also to identify PTEN mutation frequency among Iranian patients. Methods: Fifty-one cases of primary prostate cancer were studied and followed for at least 5 years. The methods of tissue microdissection and single-strand conformational polymorphism were used. The clinicopathological data were collected. Results: Fifty-seven, twenty-one and twenty-two percents of the tumors were Gleason score (GS)<7,7 and >7 respectively. In addition, the stages of the tumors in 51 primary prostate cancers were IIa(27.5%),IIb(7.8%),IIc(43.1%) and IV(21.6%). Six of fifty-one (11.6%) primary prostate cancers showed mutations in PTEN, which involved exons 1,2 and 5. The stages of the tumors with positive mutations were 16.7% (IIa),33.3% (IIb) and 50% (IV). Of them 16.7% and 83.3% were GS=7 and >7 respectively. Five of six patients died as a result of metastases. Patients with a positive mutation of PTEN had a significantly greater GS (P<.001), lower survival rate(P=.001), higher tendency to metastasis(P=.002), and higher prostate-specific antigen(P=.03). Cox proportional hazard model showed that only GS was significantly correlated with mortality(P=.03). Conclusion: The PTEN mutation frequency in Iranian patients was 11.6%. Prostate cancer with positive PTEN mutation has a worse prognosis, greater proclivity to metastase, with higher stage and grade.

O-088 EFFECT OF ORAL CARE PROTOCOL ON ORAL CLINICAL OUTCOME AMONG PATIENTS RECEIVING HEAD AND NECK RADIOTHERAPY

S. Weheida*, **A. Shehata****, **Z. Hessian***** * *Medical Surgical Nursing, Faculty of Nursing, University of Alexandria*, ***Adult Health Nursing, Faculty of Nursing, University of Menoufyia*, ****Adult Health Nursing, Faculty of Nursing, University of Helwan, Egypt*

Abstract Radiotherapy in the head and neck region constitutes a major therapeutic challenge. Oral side effects occur in virtually all patients receiving radiation for head and neck malignancies. Aim: This study was carried out to determine the effect of oral care protocol on oral clinical outcome among patients receiving head and neck radiotherapy. Methods: A convenience sample of 60 patients with head and neck cancer were randomly and alternatively divided into two equal groups: 30 for each group: Study group (I) received protocol of oral care. Control group (II) exposed to routine hospital care. The study was conducted at the cancer Institute of Shebin El-Khom Menofia University Hospital. Tools: Tool 1) Oral care structured interview questionnaire, Tool 2) Oral cavity Observational check list and Tool 3) Oral Mucositis Scale. Results: o Highly significant differences between patient in study and control group in the third assessment in relation to lips condition and gingival status. o Concerning sense of taste and swallowing ability a significant progress in sense of taste and swallowing ability among patients in the study group for the third assessment compared to baseline assessment. Conclusion: a proposed program of oral care when implementing showed a reduction in the oral cavity problems among patients who received radiotherapy to head and neck region. Enrichment of patients with knowledge and skills about oral care and its management encourage patients to continue course of treatment and can lead to improvement of clinical outcomes.

O-089 STUDY ON TOBACCO AWARENESS, USAGE & HABITS AMONGST MARGINALISED CHILDREN IN INDIA

S. Maudgal, S. Raval, S. Mitra, N. More, M. Parab *Cancer Patients Aid Association*

Abstract Tobacco related Head and Neck cancers are the most common cancers in India. CPAA has put a great deal of effort into raising awareness and early detection of this cancer in adults. The present study relates to our efforts for children, especially street children and juvenile delinquents in remand homes in Mumbai and Kasara, Maharashtra; and Guwahati and Amsong, Assam who were interviewed and provided ENT screening. Children start using tobacco in the company of friends and classmates. The earliest was 3 and average was 11 years. Tobacco was obtained with money given by parents for treats or earned or begged or stolen from temples. Amount spent was between 1 and 200 rupees. Mashed or roasted tobacco was used in Kasara, gutkha and raw areca nut in Assam and raw tobacco, pan masala, areca nut and cigarettes in Mumbai. 75% of the children were aware of the dangers of tobacco use. Children who attended even a rudimentary school had higher awareness about hazards and the addictive ingredient, Nicotine and its effects. Areca Nut or supari was not considered dangerous. In Assam most children had access through trees grown in their backyards. No connection was found between parents and children's tobacco usage. Young adults are influenced by tobacco advertisements and promotions, but not younger children. The personality that came to mind was actor Shahrukh Khan. When 253 users were asked if they wanted to quit, 215 said yes. When further asked if they had ever tried to quit, 135 said yes.

O-090 THE FRAMEWORK CONVENTION ON TOBACCO CONTROL (FCTC) 7 YEARS AFTER: WHERE DO WE STAND

N. Ferraud-Ciandet *Grenoble Ecole de Management*

Abstract Legislation plays a major role in the fight against tobacco related diseases. The World Health organization (WHO) adopted a treaty in order to lower tobacco consumption (2003). This presentation analyses its implementation at a country level. Method The method is a comparative country survey including: USA, France, Germany and Turkey. Turkey has shown a commitment to surveillance, beginning with its first implementation in 2003 and 2009. It's the 1st country to complete data collection for the Global Adult Tobacco Survey. The analysis is based on: prevention policies, smoke-free places, taxes rising on tobacco. Results Although 168 States have signed the treaty, the Report on the global tobacco epidemic (WHO, 2009), finds that, even as the global toll of tobacco grows, most governments are falling short in implementing the policies required by the international tobacco control treaty. They are not moving quickly enough to enact comprehensive smoke-free laws that provide protection from deadly second-hand smoke (only 17 countries currently have smoke-free policies that provide universal and effective protection from second-hand smoke), with more than 94% of the world's population still unprotected. Conclusion Compliance with smoke-free laws is low: 2% of the world's population lives in countries with high levels of compliance.

O-091 LIVER TISSUE MICROREGION CHANGES IN WALKER-256 CARCINOSARCOMA-BEARING RATS

T. Kunts, S. Michurina, G. Vakulin, A. Belkin *Central Research Laboratory, State Medical University, Novosibirsk, Russia*

Abstract Background and aim: homeostatic function of the liver is provided owing to close interaction between liver cells and structural components of microcirculatory bed. Different pathologic conditions upset the cooperative relations among hepatocytes and sinusoidal cells. Our objective in current study was to investigate changes in liver tissue microregion in rats on tumor growth conditions. Methods: male Wistar rats were divided into two groups: normal and Walker-256 carcinosarcoma transplanted (on day 7 after subcutaneous injection of 10⁶[SUP6] cells). Liver samples were obtained and investigated by light and electron microscopy. Results: Light microscopy and morphometric analysis of rat liver revealed increasing of stereological parameters, such as surface density sinusoidal bed and sinusoidal cells. Ratio sinusoidal/hepatic cells was significantly higher in tumor-bearing group than in a control group. Electron microscopy results demonstrated sinusoid dilation, occlusion and sludged erythrocytes in the tumor-bearing rat liver. It was revealed ultrastructural changes in hepatocytes: mitochondrial swelling and matrix fading, fat drops increasing, smooth endoplasmic reticulum dilation, rising of hepatocyte nucleus surface and activation hepatocyte poles. The number of Ito cells was greater then compared with the control group, a lot of collagen fibers were found in the space of Disse. Conclusion: The study revealed deregulation microcirculatory hemodynamic leading to tissue hypoxia and liver cells alterations. We suppose the cross-talk coupling between hypoxic hepatocytes and sinusoidal cells possibly plays an important role in the progression of liver diseases, in particular fibrosis.

O-092 LONG-TERM SURVIVAL AFTER ESOPHAGECTOMY FOR EARLY SQUAMOUS CELL ESOPHAGEAL CARCINOMA IN LINXIAN, CHINA

P. Song*, **H. Liang****, **W. Wei****, **Y. Qiao**** **Johns Hopkins School of Medicine; **Cancer Institute, Chinese Academy of Medical Sciences*

Abstract Linxian in Henan Province, China, has among the highest rates of esophageal cancer in the world. Little is known about long-term survival after esophagectomy performed on early precursor lesions found in early detection screening programs. We present a survival analysis of 315 esophagectomy patients from Linxian. Cases were patients who underwent esophagectomy for early squamous cell esophageal carcinoma found in screening programs in Linxian, China. A 1:2 match of healthy age- and gender-matched controls from Linxian found 630 controls for 315 cases. Survival analyses were performed with SPSS-15. Kaplan-Meier survival analysis revealed that cases had a 5-year survival of 87% and a 10-year survival of 77%. Controls had a 5-year survival of 83% and a 10-year survival of 64%. The difference between cases and controls was not statistically significant by the Log-Rank test ($p = 0.332$). One unresolved issue in esophageal cancer is the efficacy of early screening and intervention programs. In this study, survival rates of cases were not significantly different from those of healthy age- and gender-matched controls. Thus, early intervention for patients who would otherwise have developed advanced esophageal carcinoma may have improved their survival rates. Also, cases were younger than typical esophagectomy patients since cases were found by screening before presentation of symptoms. Furthermore, the esophageal cancer hospital in Linxian has extensive experience in performing esophagectomies, which has been associated with improved results. Early screening and intervention may thus be relevant for areas with high risk for esophageal cancer such as Linxian.

O-093 EMOTIONAL DIFFICULTIES EXPERIENCED BY CHILDHOOD CANCER PATIENTS' SIBLINGS

V. Shukla, **M. Nigwekar**, **S. Maudgal** *Cancer Patients Aid Association*

Abstract Childhood cancer has substantial emotional impact on siblings of sick children as they undergo tremendous changes in their lives. CPAA interacts with families of patients at wards, in municipal and private hospital OPDs and at our centre. The current paper is part of a larger study aimed at achieving a deeper understanding of the cancer experience and its effects on the entire family to enable healthy coping. This initial study was carried out as a pilot to explore alexithymia or the inability to describe emotions in a verbal manner in cancer patient's siblings. 45 children (15 each patients, siblings and control healthy children matched for age and sex) were administered a validated scale for alexithymia and empathy. Some of the components studied were ability to identify feelings, describe feelings and externally oriented thinking. The subjects were chosen from among families undergoing therapy at various hospitals in Mumbai. The study showed a significant difference between the component of difficulty in feeling between siblings and patients. Compared to the control group, patients showed significant levels of alexithymia, but significantly siblings showed even higher levels. The consequences of alexithymia are seen in poor adjustment and lack of empathy. It was observed that siblings of children with cancer have lower levels of empathy compared with healthy brothers and sisters. Empathy was a significant predictor of ability to externalize and deal with the problem. The findings reinforce our observation that more needs to be done in helping healthy siblings through the childhood cancer experience.

O-094 A COMPARISON OF SERUM SURVIVIN AND ALPHA FETOPROTEIN IN EGYPTIAN PATIENTS WITH HEPATOCELLULAR CARCINOMA ASSOCIATED WITH HEPATITIS C VIRAL INFECTION

H. Mohamed Ali EL-Attar, **Y. El-Kerm**, **M. Kandil**, **M. El-Ghandour** *Medical Research Institute*

Abstract The aim was evaluating the plasma level of Survivin and Alpha fetoprotein in patients with chronic hepatitis C viral infection (HCV) without and with hepatocellular carcinoma (HCC). **SUBJECTS:** Control group (Group I) (20 healthy volunteers) and Patients groups: Group II : HCV group (20 patients) and Group III: HCC with HCV(30 patients) . **METHODS :** Physical examination , ultrasonography of the abdomen ,laboratory investigations {liver profile, anti-HCV antibodies, hepatitis B surface antigen, ,Alpha fetoprotein (and Survivin) were performed . **RESULTS:** There was a significant increase in Survivin level in HCV patients (Group II) when compared to the control group ($p = 0.039$) .There was a significant increase in alpha fetoprotein in(Group II) and (Group III) when compared to (Group I)($P = 0.000$ for both). Also a significant increase when (Group III) was compared to (Group II) ($P = 0.000$). The best generated cut off value for AFP was 10.85ng/ml and for Survivin 13.7pg/ml . Serum Survivin diagnostic sensitivity was 53.3 % diagnostic specificity 62.5 % and efficiency 58.57 % . While, Serum Alpha fetoprotein sensitivity was 100 % , specificity 92.5 % and efficiency 95.7 % . **CONCLUSION :** Survivin showed a lower diagnostic performance and proved to be less reliable as a tumor marker for HCC than did Alpha fetoprotein.

O-095 SERUM EPIDERMAL GROWTH FACTOR IN CANCER BREAST

H. Mohamed Ali EL-Attar, **S. Moghazi**, **G. Fadaly**, **M. Abu Diba** *Medical Research Institute*

Abstract The aim was to evaluate the serum level of Epidermal growth factor (EGF) in breast cancer female patients in comparison with other prognostic parameters. **Subjects:** 57 females were divided into : Control group ($n=20$ healthy women) and Breast cancer patients group($n=37$)non-pregnant and not on contraceptive therapy. **Methods:** Clinical examination, ultrasonography of the abdomen and pelvis , preoperative fine needle aspiration cytology and histopathologic examination of breast masses in addition, glucose , creatinine , aminotransferases and Epidermal growth factor were estimated. **Results:** Serum EGF in breast cancer patients was relatively lower than in controls. No significant difference in the serum EGF levels were found in relation to the change in tumor size, type, grade and stage. There was positive correlations between EGF and tumor size ($p = 0.039$) and AJCC stages ($p = 0.032$). In patients having lymph node metastasis, there was significant negative correlation between serum EGF level and the number of lymph node metastasis ($p = 0.000$). EGF level was significantly increased with estrogen receptor(ER) negative than in patients with ER positive ($p = 0.049$). A negative correlation between EGF level and ER positivity ($p = 0.005$) in patients and in the subgroup having LN metastasis ($p = 0.000$). **Conclusion:** The addition of EGF determination could be useful in determining tumor prognosis and the selection of treatment modality with better results obtained on adding Epidermal growth factor receptor in resected tumors.

O-096 THE EFFECT OF CHEMOTHERAPEUTIC AND DEMETHYLATING AGENTS ON NOTCH SIGNALING PATHWAY IN HEPATOBLASTOMA

S. Aktas, Z. Zadeoglulari, P. Ercetin, N. Olgun *Dokuz Eylul University, Institute of Oncology, Izmir, Turkey*

Abstract Hepatoblastoma is a childhood neoplasm of liver. Its molecular mechanisms are not well explored yet. Notch signaling pathway has a crucial role in tumors in many aspects. The aim of this study is to determine the effect of chemotherapeutic and demethylating agents (cisplatin, doxorubicin, 5-azacytidine) in gene expression and methylation status of notch signaling pathway in hepatoblastoma. HepG2 cell line was cultured and the agents and their combinations were applied for 24 hour in pre-optimized 50% lethal doses. After RNA isolation and cDNA converting, expression of 84 custom array genes of notch signaling pathway (SABiosciences, PAT059F-24) was determined by Real Time PCR for each condition. The methylation status of 6 genes that showed more than 5 fold changes compared with control group (tumor cells without agent) were explored by Methylation qPCR Assay. High expressed genes are HDAC1, NFKB1, CHUK, CDKN1A, and CBL. Low expressed genes are DLL1, CD44, FZD2, GLI1, IL17B, LMO2, NOTCH1, LOR, PAX5, PTCRA, SH2D1A, and WISP1. The genes searched for methylation (DLL1, HEY1, DTX1, HDAC1, NOTCH2 and JAG1) were not found to be related with methylation. The high expressed genes are related with cell proliferation. The main signaling genes that are closed to notch in signaling pathway are low expressed in hepatoblastoma. The agents do not show prominent effect of gene expression in many genes and methylation is not the reason of expression changes after chemotherapeutic and demethylating agent application.

O-097 TANGERETIN MODULATES CELL CYCLE PROGRESSION AND SENSITIZES OF BREAST CANCER CELLS, MCF-7 AND T47D, AGAINST DOXORUBICIN

E. Meiyanto*, A. Hermawan*, A. Fitriasari*, S. Junedi, R. Susidarti*** **CCRC-Pharmacy UGM, **CCRC-Pharmacy*

Abstract Tangeretin showed moderate cytotoxic effect and modulates cell cycle progression against several cancer cell lines. The aim of this research was to investigate cytotoxic activities of tangeretin alone and in combination with doxorubicin on MCF-7 and T47D cells. Cell viability assay of tangeretin, doxorubicin, and their combination were carried out by using MTT assay. Cell cycle distribution was determined by flowcytometry FACS-Calibur analysis. Apoptosis assay was done using double staining method using Ethidium Bromide-Acridine Orange. Tangeretin did not show cytotoxic effect on both MCF-7 and T47D cells, but doxorubicin showed cytotoxic effect with IC-50 467 nM and 15 nM, respectively. Tangeretin (5, 50 and 100 µM) increased cytotoxic effect of doxorubicin 200 nM and 7.5 nM on both cells. The strongest cytotoxic activity was showed by the combination of 200 nM doxorubicin and 100 µM tangeretin in MCF-7 cells, and 7.5 nM doxorubicin and 100 µM tangeretin in T47D cells. Single treatment of doxorubicin 200 nM and tangeretin 100 µM induced G2/M arrest and G1 arrest, while their combination induced G1 arrest and apoptosis in MCF-7 cells. Tangeretin 100 µM and doxorubicin 200 nM alone induced G1 arrest and G2/M arrest respectively, while their combination induced G2/M arrest but not apoptosis in T47D cells. This research concluded tangeretin and doxorubicin performed synergistic effect on both MCF-7 and T47D cells. Tangeretin is potentially to be developed as co-chemotherapeutic agent for breast cancer, while molecular mechanism need to be explored.

O-098 THE EFFECT OF VITAMIN A AND ZINC SUPPLEMENTATION ON SERUM THE VITAMIN, MINERAL AND RETINOL BINDING PROTEIN LEVELS IN WOMEN WITH OVARY CANCER

M. Aksoy*, C. Akkoyun** **Hacettepe Universitesi, Beslenme ve Diyetetik Bolumu, **Ankara Universitesi*

Abstract Over cancer incidence is about 23% between all gynecologic cancers. Malign ovary tumors are usually appeared after 50 years of age. The roles of vitamin A or its active form of retinol in cancer are that prevention of cancer formation, control of malign development and abnormal cell activation. Essential element zinc is necessary for synthesis of retinol binding protein (RBP) which binds and makes able to circulation, releasing of retinol from liver. Some cancer patients have low levels of vitamin A and zinc. Twenty five women with ovary cancer (age 40-67) and the same number-age matched health women were included in to the research as subject and control groups respectively. Blood samples were taken from them after diagnose and one month after the vitamin-mineral supplementation. The vitamin supplement was 10,000IU and the mineral was 0.5 mg daily. According to general information the subjects used to have irregular menstrual cycle. The energy, macro nutrients and vitamin A consumption were found to be statistically significant lower than the control group. Moreover the subject's serum retinol, beta-carotene, RBP and zinc levels were also statistically lower than the control group. But after one month of supplementation these nutrients levels were increased in their serum compared that of the first level but not reached to the controls value. This result showed that by controlled supplementation of vitamin A and zinc could increase their and RBP levels in serum, and help to increase tolerance of chemotherapy in patients.

O-099 IMMEDIATE IMPROVEMENT IN THE QUALITY OF LIFE OF MASTECTOMY PATIENTS

M. Gupta*, A. Niketan** **Cancer Patients Aid Association, **King George V Memorial*

Abstract Introduction and objectives After a patient has undergone radical mastectomy, breast prosthesis is the only solution to bring back her normal outer appearance, body balance, comfort level and self-confidence. In developed countries, silicone gel prostheses, in various shapes and sizes are the object of choice. But in developing and poor countries, these imported breast forms prove to be very expensive, not easily available, and due to uncontrolled weather conditions, have a short shelf-life. Methods Therefore we, at the Rehabilitation Centre of Cancer Patients Aid Association, have developed an indigenous alternative to the silicone prosthesis, which is safe, affordable and eco-friendly. The outer layer of this hand-made breast prosthesis is made from stretchable cotton fabric which makes it comfortable for long hours of wear in hot and humid weather also. The inside stuffing is made of machine washable fiber, and the body-mass-weight is provided with a pellet of natural ocean pebbles. Each prosthesis is provided with a 100% cotton, removable, and washable, outer cover. The Prostheses can be stocked in the smallest to the largest of desired sizes. Special sizes can be custom made. Result These breast forms can be easily made economically, in large quantities, stored for long periods, and safely transported to the remotest health care centres, to be sold or distributed free of cost to mastectomy patients. Conclusion Self image is an important part of the recovery process for mastectomy patients and this eco-friendly prosthesis is very safe, affordable and easy to use within weeks of surgery.

O-100 15 YEAR REVIEW OF ER STATUS – AN ANALYSIS OF THREE 5-YEAR COHORTS FROM 1994 TO 2008 IN A DEVELOPING COUNTRY IN ASIA

C. Yip*, **N. Taib***, **K. Mun**** *Dept of Surgery, **Dept of Pathology, University Malaya Medical Centre, Kuala Lumpur

Abstract Introduction: Studies in western countries have shown that the percentage of ER positive breast cancers are increasing over time. This has been postulated to be the result of mammographic screening leading to the detection of breast cancers at earlier stages. The aim of this study is to review the changes in ER positivity over a 15 year period in the University Malaya Medical Centre, Kuala Lumpur. Methodology: Data on ER status of 3062 patients over a 15 year period from 1994 to 2008 was analysed. The patients were divided into three 5-year cohorts. The ER status were retrieved from pathology reports during this period. ER was determined by immunohistochemistry and a cut-off point of 10% was used. Results: Although not significant, ER positivity increased by about 2% for every 5 year cohort, from 54.3% in 1994-1998, 56.6% in 1999-2003, and 58.3% in 2004-2008. ER positivity was significantly lower in Malays (52%) compared to the Chinese (59.4%) and the Indians (55.1%). ER positivity was also significantly lower in women below 40 years old (51.1%) compared to 40 years and above (58.3%). Malays presented with later stages and at an earlier age compared to Chinese and Indians. Conclusion: As seen in the West, the percentage of ER positive cancers increased over time, and appeared to be related to the race and age of patients. It is possible that ER positive cancers are related to diagnosis at earlier stages.

O-101 DEVELOPMENT OF A STANDARDIZED PALLIATIVE CARE PLAN BASED ON NEEDS ASSESSMENT OF CANCER PATIENTS IN A LIMITED RESOURCE SETTING

N. Elkateb, S. Hashem, M. Elshater National Cancer Institute, Cairo University

Abstract Palliative care is a concept of holistic care for patients who have incurable disease, or those who need symptom relief during complications from which they will recover. It seeks to maximize quality of life for patients and families. Perception and level of experience of health care professional may affect the continuity of care. Nurses need written guidelines to enhance their performance and provide quality palliative care. The purpose of this study is to develop a standardized care plan based on assessment of palliative needs of cancer patients, and evaluate the impact of the implemented care on the quality of care. Methods: A convenient sample of adults and pediatric cancer patients were recruited from the palliative care unit. Patients assessed before and after implementation of the care plan. Setting: National Cancer Institute, Cairo University, Egypt. Tools: 1- Patients structured interview completed by the researchers. 2- Palliative Performance Scale (PPSV2). 3- Problems assessment tools. 4- Checklist for recording activities performed by assigned nurses and facilities available. 5- Nursing guidelines and patients self-care instructions. The presentation will describe the results of patients response before and after implementation of the care plan. Also the significant differences in nursing performance in spite of the shortage of staff and workload. Implications for practice: Palliative care is important specialty, nursing guidelines and educational resources have great great impact in improving the quality of care provided during the various stages of illness. Training programs should be adapted to the needs of local setting.

O-102 TREATMENT DELAY OF BREAST CANCER IN MALAYSIA

B. Norsal'Adah*, **K. Rampal****, **M. Rahmah****, **N. Naing***, **B. Biswal***** *Unit of Biostatistics & Research Methodology, School of Medical Sciences, ***Department of Medical Nuclear, Radiotherapy and Oncology, Universiti Sains Malaysia, Kota Bharu 16150 Kelantan, **Department of Community Health, Faculty of Medicine, Universiti Kebangsaan Malaysia, 56000 Cheras, Kuala Lumpur, Malaysia.

Abstract Background: Treatment delay of breast cancer has serious consequences since it is associated with advanced stage and lower survival rate. Research in this area is important because it is preventable. This study was aimed to measure time taken to treat breast cancer and its associated factors. Methods: A prospective study was conducted in five medical centres. Respondents were 328 primary breast cancer patients diagnosed from year 2005 to 2007 and interviewed using standardized questionnaires. Treatment delay was time from symptom recognition to treatment. Kaplan Meier survival analysis and Cox Proportional Hazard models were used for analyses. Results: The mean (SD) age was 47.9 (9.4) years with 79.9% Malay ethnic, 79.3% currently married, 54.9% housewives, 61.0% had high school or higher education and 51.2% low socio-economic status. Respondents in stage I was 5.2%, stage II 38.7%, stage III 44.8% and stage IV 11.3%. Treatment delay ranged between 0.3 months to 16 years with median 6.79 months (95% CI 5.93, 7.64). Factors significantly associated with treatment delay were age (HR 1.4, 95% CI 1.1, 1.8), pregnancy (HR 2.0, 95% CI 1.2, 3.4), weight lost (HR 1.9, 95% CI 1.2, 3.0), axillary lymph node (HR 1.5, 95% CI 1.1, 1.9), initial diagnostic test negative (HR 1.8, 95% CI 1.3, 2.5) and initially refused mastectomy (HR 2.5, 95% CI 1.8, 3.4). Conclusions: Breast cancer patients in Malaysia had treatment time longer compared to those in developed countries. Treatment delay was associated with age, pregnancy, clinical presentation, initial diagnostic test and mastectomy refusal. More awareness campaigns about early treatment are needed.

Notes

O-103 BRAIN METASTASIS**V. Dong, T. Trinh** *VietDuc Teaching Hospital*

Abstract Objective: Clinical symptoms and images of cerebral MRI and CTscan were described and the result of surgical treatment was assessed and analyzed. Material and methods: Retrospective study. The 79 patients with brain metastase were operated in VietDuc teaching hospital from 1/2005 to 5/2009. The authors described the clinical symptoms and the images of cerebral Ctscan and MRI. The result of surgery was assessed (GOS) and analyzed. Results: Among 79 patients, there are 61 men (77.2%) and 18 women (22.8%). Age range from 4 to 79 years old (52 ± 15.2). The primary tumors were identified in 43 patients (54.4%) including 25 lung cancer (58.1%) and 5 digestive cancer (11.6%). The clinical symptoms were headache in 55 (69.6%); vomiting in 11 (13.9%); hemiplegia in 36 (45.6%) and seizure in 3 (3.8%). The consciousness: 56 patients in full consciousness (70.9%); 22 in confuse condition (27.8%) and one in coma. There were 62 lesions on the 54 images of cerebral CTscan: sphere lesion with central hypodensity in 39 (62.9%); cerebral oedema in 52 (82.8%); contrast enhanced on CTscan in 32/37 (86.5%). There were 87 lesions on the 67 IRM: 55/87 (63.2%) with hypersignal in capsula and hyposignal in centre of lesions; hypersignal in 14 (16.1%); severe cerebral oedema in 73/87 (83.9%). Results: total removal in 77 (97.5%) and partial remove in 2. There were one death, severe sequel in 5 (13.4%), mild sequel in 10 (22.7%); good recovery in 28 (61.6%). The follow-up was 3 months or more in 44 patients: the mean survival was 8,2 ± 1,2 months. The risk factor was: age, primary tumors, treatment of primary, RPA criteria and Karnosky Scale before surgery. Conclusion: The brain metastatic tumors were the most frequent cerebral tumors. The results of surgical treatment was good and quality of life was improved.

O-104 CONSIDERATION OF XPC ALTERATIONS FOR HEAD AND NECK CANCER**M. Yang*, K. Tae**** **Sookmyung Women's University, **Hanyang University*

Abstract Xeroderma pigmentosum group C (XPC) participates in the DNA nucleotide excision repair in global genomic repair. Among the studies of genetic susceptibility to squamous cell carcinomas of the head and neck (SCCHN), XPC showed some potential to be involved in initiation or progress of SCCHN. In addition, chromosomal comparative genomic hybridization (CGH) is a well-established technique to evaluate genetic alteration in the entire genome. Thus, I performed CGH analyses in SCCHN tissues of Koreans who were first diagnosed in the hospital and did not occupationally, diagnostically, or therapeutically receive any radiation (N=16: 10.8 yrs; male =15). Most of them were tobacco smokers and alcohol±age, 55.6 drinkers and belonged to Stage IV. As results, I found multiple genetic aberrations throughout the genome. Particularly, losses of gene amplification were condensed at chromosome 3p22~26. Among the altered genes, XPC was located at 3p25.1, which showed decreased expression. In addition, DLCE1, PPARG and TIMP4 were located at 3p22~25. However, copy number alteration on 3p25.1 was not significantly associated with smoking, alcohol drinking, sex, age, or tumor progress. In conclusion, I found that the Korean SCCHN had condensed losses on 3p22~26 and XPC is located there. Thus, the present study genome- widely confirmed the involvement of XPC in occurring of the Korean SCCHN.

O-105 IMPACT OF SOCIO-ECONOMIC CLASS ON COLORECTAL CANCER PATIENT OUTCOMES**C. Kong*, A. Roslani*, C. Law*, D. Law**** **University of Malaya Medical Center, Kuala Lumpur, **Sarawak General Hospital, Kuching, Malaysia*

Abstract OBJECTIVE: Research over the past several decades has indicated that low socio-economic class has a direct effect on health outcomes. The objective of this study is to compare the presentation and survival of colorectal cancer patients in two such dissimilar cities, Kuala Lumpur and Kuching. METHOD: All patients diagnosed with colorectal cancer at Kuching and Kuala Lumpur from 1st Jan 2000 – 31st Dec 2006 were recruited. Data on presentation, socio-economic class and survival was obtained. The survival duration was categorized into more than three years or less than three years. No external funding received. RESULTS: A total of 565 patients admitted to Kuala Lumpur and 642 patients to Kuching had a new diagnosis of colorectal carcinoma. However, complete hospital records could be collected and analyzed in only 412 at Kuala Lumpur and 419 at Kuching. None of the patients in our sample were asymptomatic at presentation or diagnosed from screening. Patients at Kuching had longer duration of symptoms and more advanced stage at presentation. Lower socio-economic class was also a significant factor for late and more advanced stage at diagnosis. Three-year survival rate was lower for patients at Kuching and those from lower socio-economic class. CONCLUSION: There is near-zero awareness of colorectal cancer screening in Malaysia. However, poorer survival of patients from Kuching and from lower socio-economic classes is multi-factorial and warrants further detailed research. These findings support reaching out to communities of lower socioeconomic backgrounds to improve the colorectal survival rates.

O-106 COMBINED EXPRESSION OF P27 AND P53 IN HUMAN GASTRIC CARCINOMA**N. Abbas*, S. El-Sharkawy*, M. Fadel**, M. El-Shaer*, M. Badawi*, W. Abd El-Aal*** **Pathology Department, National Research Center, **Pathology Department, Specialized Ain-Shams Hospital*

Abstract Purpose: Disregulation of the cell cycle is required for the formation of various malignant tumors including gastric carcinoma. This study aimed to evaluate cell-cycle-regulators, p27 and p53, expression in gastric carcinoma by immunohistochemistry and to correlate their expression with other clinicopathological findings. Material and Methods: Eighty-four cases of gastric carcinoma were included in this study. They were classified into intestinal and diffuse types according to Lauren's classification. P27 and P53 expression were correlated with patient's age, histologic type, pathologic grade, lymph node metastasis and tumor tissue invasion. Results: There was non significant correlation between p27 and p53 expression with patient's age or histologic type of the tumor. Loss of expression of p27 was significantly correlated with pathologic grade, lymph node metastasis and tumor tissue invasion. P53 over-expression was more frequently detected in high grade tumors, tumors with lymph node metastasis and high t-stage, but the correlations were statistically non-significance. A significant inverse correlation was detected between p27 and p53 expression. Conclusion: Reduced expression of p27 may influence the progression and metastases to lymph node in gastric tumors. In addition, combined expression of cell-cycle regulators, p27 and p53, may play an important role in the biological behavior of human gastric carcinoma.

O-107 ASSESSMENT OF PATIENTS WITH THE EWING SARCOMA FAMILY OF TUMORS FOLLOWED IN THE DR. ABDURRAHMAN YURTARSLAN ONCOLOGY TRAINING AND RESEARCH HOSPITAL, 2ND MEDICAL ONCOLOGY DEPARTMENT

U. Uyeturk, K. Helvaci, I. Turker, B. Budakoglu, B. Oksuzolu, N. Zengin *Dr. Abdurrahman Yurtarслан Oncology Training and Research Hospital, 2nd Medical Oncology Department, Ankara, Turkey*

Abstract INTRODUCTION: The Ewing sarcoma family of tumors including Ewing sarcoma, primitive neuroectodermal tumor are rarely seen in young adults. The annual incidence is 1,5 cases per million population. They are mostly found in humerus, femur, fibula and unusually in ribs, scapula, pelvis of the skeletal system, and extraosseous location. Twenty to thirty percent of patients present with metastatic disease most often to the lungs. MATERIAL AND METHOD: We screened the patients with the Ewing sarcoma family of tumors who were treated and followed between February 2009 and February 2010, retrospectively and recorded the treatment and demographic characteristics. RESULTS: In this time period totally 7 patients' files were investigated. Mean age of the patients was 23 (18–31). Five of the patients were men (%71) and 2 were women (%29). All had localized disease at the time of application. The treatment was started with NCI protocol (vincristine, adriamycin, cyclophosphamide, ifosfamide, etoposide). Management of the primary tumor site was made by surgery in 4 patients (chest wall resection in two patients, total abdominal hysterectomy in one patient, axillary dissection in one patient) and by radiation therapy in 3 patients (concurrent with the chemotherapy in two patients, before chemotherapy in one patient). CONCLUSION: Early diagnosis and treatment of Ewing sarcoma family of tumors is necessary. Patients should be evaluated and treated with a multidisciplinary approach including surgery, chemotherapy, and radiation therapy. Patients should also be followed closely for early diagnosis of distant metastasis and locally recurrences.

O-108 TUMOR SUPPRESSOR HUMAN SPROUTY2 INHIBITS ONCOGENIC TRANSFORMATION MEDIATED BY ENV ONCOGENE FROM JAAGSIEKTE SHEEP RETROVIRUS

E. Fabian, Y. Chow *National Health Research Institutes*

Abstract Introduction and Objective: Invasion and metastatic potential are properties of malignant cancers that pose severe problems in cancer health care. The envelope gene (Env) of Jaagsiekte sheep retrovirus (JSRV) is an oncogene capable of transforming target cells in vivo and in vitro. In vitro, Env transforms target cells causing anchorage-independent foci formation, while its expression in vivo can cause lung tumors in transgenic mice. Sprouty2 is a tumor suppressor protein and is known to be an inhibitor of many cancers. The objective was to study the ability of tumor suppressor protein human Sprouty2 to inhibit oncogenesis mediated by Env. Methods: Lung adenocarcinoma cell line A549 and lung epithelial cell line BEAS 2B were transfected with plasmids expressing Env gene and human Sprouty2 gene. Stable transformants were selected and evaluated by in vivo and in vitro functional and biochemical assays. Results: Env-mediated transformation induced rapid proliferation and prevented invasion in the transformed cells. The transformants were used to study the tumorigenesis and invasion and the role of intracellular signaling intermediates in promoting or inhibiting oncogenesis. Env transformation of A549 increased the activation of PI3K/Akt pathway and STAT3 leading to increased proliferation, tumor formation and anchorage-independence; suppressed ERK pathway and abolished TWIST expression leading to inhibition of cell migration. Conclusions: We have discovered a negative inhibitory relationship between Env and Sprouty2, both acting by modulation of signaling molecules with functional manifestations. Our studies confirm the role of Sprouty2 in suppression of tumor growth and invasion thereby validating its potential for therapy.

O-109 LOW NK AND CD4 CELL COUNTS IN THE PERIPHERAL BLOOD PREDICT INFERIOR OVERALL SURVIVAL IN FOLLICULAR LYMPHOMA PATIENTS

D. Shafer, M. Smith, H. Borghaei, T. Li, S. Litwin, T. Al-Saleem *Fox Chase Cancer Center*

Abstract Evidence that host immune responses influence follicular lymphoma (FL) patient outcome led us to hypothesize that the immune cell components of the blood may provide a readily accessible assessment of that response. Peripheral blood flow cytometry (PBFCM) data of 82 untreated, mostly newly diagnosed FL patients were retrospectively reviewed. Overall survival (OS) from the time of PBFCM was related to stage, follicular lymphoma international prognostic index and to the absolute counts in blood of: lymphocytes (ALC), CD4+T cells (ACD4C), CD8+T (ACD8C) and natural killer (ANKC) cells. Patients were separated into 1) below or 2) at and above lower limits of normal in our laboratory: ACD4C 500/_1, ACD8C 300/_1, ANKC 150/_1 and ALC 1500/_1, as well as testing ALC cutoff of 1000/_1 suggested by other reports. Lower than normal ACD4 and ANKC were the only variables associated with inferior OS by univariate analysis ($p=0.03$ and 0.02 respectively). By stepwise selection, $ANKC<150/_1$ was the most significant predictor of inferior OS ($p=0.05$). Conclusions: Baseline evaluation of blood ANKC and, to a lesser extent, ACD4C significantly predicts OS in previously untreated patients with FL. Whether improving overall immunity helps control or event prevent FL is an open question for further research.

O-110 PSEUDOPROGRESSION IN PATIENTS WITH GLIOBLASTOME MULTIFORME FOLLOWING CONCURRENT RADIOTHERAPY AND TEMOZOLOMIDE

B. Pehlivan, O. Yuksel, S. Akkaneren, E. Topkan *Baskent University Medical Faculty, Adana Medical and Research Center, Department of Radiation Oncology*

Abstract Background: We aimed to evaluate the incidence of pseudoprogression in glioblastoma multiforme (GBM) patients treated with postoperative radiotherapy (RT) and concurrent temozolomide (TMZ), followed by 6 months of TMZ maintenance therapy. Materials and Methods: A cohort of 54 patients with histologically proven of GBM underwent 60 Gy (2Gy/fr, 5 days a week) of partial brain RT concurrent with continuous 75 mg/m²/d TMZ, followed by 6 months of maintenance TMZ (150 mg/m²/d) for 5 days every 28 days. Response assessment was performed by magnetic resonance imaging (MRI) with first at 2 months after completion of concurrent RT+TMZ. Results: All 54 patients had surgical tumor resection. Gross total, subtotal resection and biopsy were performed in 19 (35.2%), 32 (59.3%), and 3 (5.5%) patients, respectively. Lesion enlargement on first follow-up MRI evidenced in 24 cases and all underwent salvage surgery. Pathologic examination revealed true tumor progression in 15/24 (62.5%), and pseudoprogression with tumor necrosis in remaining 9 (37.5%). Analysis revealed that 6 of 9 (66.6%) patients with pseudoprogression and only 10 of 45 (22.2%) remaining patients were alive at 2 years. Conclusions: Results of current study impacts the clinical importance of pseudoprogression after concurrent TMZ followed by maintenance TMZ therapy in GBM patients. Our results support the idea which suggests pseudoprogression as a sign of subacute radiation killing effect on tumor tissue. Although evident from analysis, due to limited number of patients with pseudoprogression it is difficult to conclude whether it has a real survival enhancing effect in GBM.

O-111 ORAL GLUTAMINE SUPPLEMENTATION FOR AMELIORATION OF ACUTE RADIATION INDUCED ESOPHAGITIS HAS NO NEGATIVE IMPACT ON SURVIVAL OUTCOME IN LOCALLY ADVANCED NSCLCs

B. Pehlivan, E. Oymak, S. Akkaneren, A. Kotek, E. Topkan *Baskent University Medical Faculty, Adana Medical and Research Center, Department of Radiation Oncology*

Abstract BACKGROUND: We aimed to retrospectively evaluate the survival outcome of 92 patients with stage III non-small cell lung carcinoma (NSCLC) treated with thoracic irradiation (TRT) up to their status of oral glutamine supplementation, which was used for evaluation of its efficacy in prevention of acute radiation-induced esophagitis. PATIENTS AND METHODS: Survival outcome of 92 patients with stage III lung carcinoma treated with TRT were retrospectively analyzed regarding their glutamine supplementation status. Forty-eight patients (52.1%) received prophylactic powdered glutamine orally in doses of 10g/8h, while remaining 44 patients did not and served as controls. Prescribed radiation dose to planning target volume was 60-66Gy, in 30-33 fractions, 5 days/week. The primary endpoint included the progression free survival (PFS), overall survival (OS), and their correlation with status of glutamine supplementation. RESULTS: Oral glutamine was well tolerated, except for mild nausea in 13 (27.1%) patients. Median follow-up time was 24.2 months (range: 9.2-34.4 months. Median PFS and OS times for glutamine supplemented vs. no supplement cohorts were 15.3 vs. 17.2 months (p=0.34) and 20.3 vs.25.2 months (p=0.11), respectively. CONCLUSION: Current results suggested no tumor cell protective action for oral glutamine, in the dose and schedule utilized here. The insignificant 4.9 month survival benefit achieved with glutamine may be related either with unpredictable selection bias due to retrospective nature, or limited size of study population. However, regarding the possible selective radiosensitizing effect of glutamine it may worth to address validity these results in future prospectively randomized study.

O-112 SURVIVAL IN UNRESECTABLE LOCALLY ADVANCED PANCREATIC CARCINOMA PATIENTS TREATED WITH CO-REGISTERED PET-CT BASED RADIATION THERAPY

B. Pehlivan, A. Kotek, S. Akkaneren, E. Topkan *Baskent University Medical Faculty, Adana Medical and Research Center, Department of Radiation Oncology, Adana, Turkey*

Abstract Background We aimed to analyze the survival outcome of 24 consecutive patients with locally advanced pancreatic cancer (LAPC) treated with concurrent chemoradiotherapy without elective nodal irradiation (ENRT) by utilizing co-registered PET-CT based radiation therapy planning. Methods Twenty-four patients with histological evidence of unresectable LAPC, those who received 3D- conformal radiotherapy (3D-CRT) concurrent with continuous 5-FU were included. In all patients, 3D-CRT plans were created by utilizing PET-CT fusion data. Gross Tumor volume (GTV) included the metabolically active tumor and lymph nodes, and clinical target volume (CTV) and planning target volume (PTV) were defined as CTV= GTV+1.5cm, and PTV= CTV+0.5cm at any margin, respectively. ENRT for uninvolved nodal basins was not permitted. Response assessment was performed with PET-CT every 2 months in the first year, and every 4 months thereafter. Results Median follow-up time was 17.1 months (4.7- 27.3 months). Infield failures were evident in 14 (58.3%) patients. Median progression-free survival (PFS) and overall survival (OS) for all study population were 8.9 mo and 16.3 mo, respectively. At 2-years 11 patients (45.3%) were alive. Cause for death for 13 patients were; liver metastasis (N=4), peritoneal seeding (N=4), and widespread multiorgan metastasis in remaining. Analysis revealed that patients with $\geq 72\%$ SUVmax reduction had longer PFS (6.8 mo vs 15.1 mo; p=0.002) and OS (11.3 mo vs 22.9 mo; p=0.01) than those with $< 72\%$. Conclusion Change in metabolic tumor activity after concurrent chemoradiotherapy may predict outcome in LAPC. However, this needs confirmation with larger study populations.

O-113 CHARACTERISTICS OF BREAST CANCER PATIENTS UNDER 35 YEARS OLD

F. Erozen, Y. Ersoy, M. Akaydin, N. Memmi, A. Simsek Celik, D. Guzey, F. Celebi, S. Birol, R. Kaplan *Vakif Gureba Training and Research Hospital, 2. General Surgery Clinic*

Abstract Purpose:Early age breast cancers are different from other breast cancers on behalf of their aggressivity and serious psychological problems related to young age.Method:Among 318 patients who admitted to our Breast Diseases Outpatient Clinic between March 2005-June 2009 and diagnosed with breast cancer, 24 (7.54%) were under 35 years old. Medical records were investigated retrospectively.Results:Main complaint was breast mass.Pregnancy,family history, axillary mass and nipple discharge were established in 1, 2, 2 and 2 patients, respectively. Two patients did not have a child and 22 had mean 2.4 children (range 1-5). Mean age of the patients was 29.5 years (range 19-35),and mean tumor diameter was 3.4 cm (ranging from non-palpable to 10 cm). Tumors were localized in the left breast in 14 patients and right breast in 10. Four patients received neoadjuvant chemotherapy because of advanced breast carcinoma. Breast conserving surgery was performed in 8 patients, on the other hand 16 had modified radical mastectomy. Pathological results were reported as lobular carcinoma in 2 cases and invasive ductal carcinoma in 22. Estrogen, progesterone and cerb2 receptors were positive in 5, 4 and 6 patients, respectively and 10 patients were triple negative.Three patients had metastatic disease.Conclusion:In our series breast carcinomas under 35 years old composed 7.54% of all breast carcinomas. Mean rate reported worldwide is 2.7%.Our higher rates and larger tumor sizes distinguished our series from the others. We believe that in young patients also,palpable lesions should closely be followed and pathological verifications should be obtained.

O-115 PREDICTORS OF ADHERENCE TO LONG TERM FOLLOW UP CARE IN CHILDHOOD CANCER SURVIVORS

M. Okcu*, L. May*, L. Laufman*, S. Holm*, K. Kamdar*, L. Harris*, T. Harris*, C. Provenzala*, S. Unal, G. Oktay***, R. Bryant*, Z. Dreyer*, E. Fruge*** **Baylor College of Medicine, **Haccettepe University, ***Cerrahpasa University*

Abstract Adherence to cancer-related follow up care after cancer therapy is an understudied area. Lack of adherence in this setting is common and the reasons are yet unknown. Objective: To identify variables associated with adherence to follow-up after therapy completion in pediatric patients diagnosed with cancer. Methods: A retrospective chart review of all patients diagnosed between 1998 and 2001 at Texas Children's Cancer Center (n=488) was conducted. Medical records were reviewed and selected variables were compared between the patients who continued to attend appointments and those who were lost to follow-up. Results: Notably 258 (52.8%) were lost to follow-up. Those who attended were on average, 1.6 years younger at diagnosis compared to the lost to follow-up group (5.9 years vs. 7.5 years, respectively, p=0.001). In univariate analyses African American race , brain or solid tumor diagnosis, surgery as the sole therapy, single-parent household, living in an apartment, mobile home or a trailer were associated with a greater likelihood of being lost to follow-up (p<0.05). In multivariable analyses, having surgery as the sole therapy (OR 1.9, 95%CI 1.1-3.1), and single parent household (OR 2.8, 95%CI 1.7-4.6) were independently associated with being lost to follow up. Conclusion: In this pilot study a variety of patient and clinical characteristics were associated with non-adherence to follow-up care. Future research goals include validation of this study and designing intervention strategies to improve the quality of long term care and adherence for survivors of pediatric cancer.

O-116 FACTORS INFLUENCING QUALITY OF LIFE FOR WOMEN WITH BREAST CANCER IN PALESTINE

M. Samara-Awad, H. Saca-Hazboun *BETHLEHEM UNIVERSITY, mawad@bethehem.edu*

Abstract Quality of life (QOL) is a crucial issue throughout the cancer continuum and it is affected by the multifaceted outcomes experienced by the person, such as physical health, psychological state, level of independence, social relationships and relationship to the environment (WHO Quality of Life Group, 1995). Quality of life differs from culture to culture, where each culture assigns different importance to various aspects of life. The research is a descriptive study that investigates the four domains of quality life: physical, psychological and spiritual well being as well as social concerns (Ferrell, et al, 1996) among women with breast cancer in Palestine. The sample included 108 women with breast cancer who were attending oncology clinics. The questionnaire has two parts: the first part included demographic data as well as data related to health in general whereas the second was developed by Ferrell, et al (1996). Data collection was conducted through face to face interview to decrease bias as there might be illiterate women. The results showed that 32.4% of women were below 40 years of age, and 56.5% live in the city, also, 39.8% of women were diagnosed in stage 2 and stage 3 respectively. Quality of life domains was assessed and women had moderate quality of life in three of the domains: physical well being (mean = 2.37), psychological well-being (mean = 2.63) and social concern (mean = 2.29) while the spiritual wellbeing domain is the highest (mean = 3.03).

O-117 THE EFFECT OF HYPNOTHERAPY ON SURGERY COMPLICATION OF BREAST CANCER

S. Najafi, Z. Mohebi, K. Nejatbakhsh *Yasuj Medical Science University, Iran*

Abstract Introduction: About 56.0 million death have been occurred in the year 2000 throughout the world out of which 12.0% resulted from cancer. In this year ,5.3 million men , 4.7 million women suffered from cancer and 6.2 million persons died due to the cancer. The most prevalent cancer in the world is breast cancer in such a way that ,it is allocated 17.9% of total cancers and now a days is one of the biggest health intricacies of present societies .The creating cause of this disease is unknown although some risk factors like HRT, genic mutation, age increment, radiotherapy, positive familial history, etc. may interfere in it's occurrence. Treatment of breast cancer: One of the methods which can have diagnostic or treatmental aspects is surgery which it self is accompanied with some complication like pain ,nausea and vomiting ,fatigue ,etc. These complication increase the hospitalization period of the patients and their need to the medicinal treatments resulted in increment of hospitalizing expenses. For this reason ,researches have been interested in using such methods that , can minimize the surgery complication and one of the considered method is hypnotherapy .This is a type of treatment in which person is affected by positive inductions .This method of treatment was approved by medical association of America in the year 1958 and was introduced as one of the legal treatmental methods. Hypnotherapy is among the methods which can affect both physical as physical as well as psychological diseases. The result of a study carried out in USA on 200 women nominated for bypass or chest surgery showed that ,pain score and nausea in those who received hypnotherapy before surgery was 22.4 and 6.5 while ,this rate in control group was 47.8 and 25.4 respectively. In addition ,the rate of fatigue and physical disorders ,etc in hypnotherapy receiving group have been less than that of control group .In total ,estimations showed that, on an average the expenses of hypnotherapy groups was 770 Dollars less than that of control groups which resulted from decrement of their hospitalization and their need to use other medicines. Conclusion: This method of treatment decreases the preoperation stress and therefore the need rate of patients to use sedatives will be less resulting in less time of patient presence in operation room. Therefore ,we can say that, hypnotherapy can be used for patients who are going under breast cancer operation with the aim to minimize expenses and complication.

O-118 COPING STRATEGIES AND QUALITY OF LIFE ADOPTED BY LUNG CANCER PATIENTS

N. Agarwal*, B. Yeole, U. Ram*** **International Institute for Population Sciences, **Bombay Cancer Registry, Indian Cancer Society*

Abstract Introduction: Cancer outcomes are usually measured in terms of overall survival rates. Although these outcomes remain essential, but there is a need to assess the impact of cancer and its treatment on patients health related quality of life. In developing countries where 85% patients are detected in advance stages undergoing aggressive treatment which duly interfere with their general health related parameters and affect their social life. Objective: To examine the coping strategies and quality of life adopted by lung cancer patients in Greater Mumbai. Methods: Lung cancer has a very poor prognosis hence; newly diagnosed patients registered at different hospitals were contacted for the present study. Quality of life was measured using standard instruments; the Medical Outcomes Study- Short Form Survey Instrument (MOS-SF-36), depression scale, social support scale were studied by interviewing patients at their residence after taking their informed consent. Results: A total of 42 patients confirmed for their illness with primary site as lung registered in the year 2008 were interviewed. Strong family support, positive thinking and purpose of life played a key role in fighting with the disease. An appropriate health seeking behaviour, good general medication and emotional support from family and friends were revealed to be very important factors for coping. The quality of life was also found to be not only the outcome of the disease and its treatment, but is also highly dependent on each patient's socioeconomic characteristics. Conclusion: Despite the small sample size, the findings broadly provide a base for large-scale future studies and suggest intervention.

O-119 THE EFFECT OF WHEY PROTEIN AND A HYDROLIZATE AGAINST AOM- AND DEXTRAN SODIUM SULFATE-INDUCED COLON TUMORS IN RATS

W. Attaallah*, N. Erdogan, S. Ergun**, A. Yilmaz***, A. Yalcin***, A. Aktan***** **Marmara University Faculty of Medicine, **Taksim Training and Research Hospital*

Abstract In this study we examined the protective effect of dietary whey protein (WP) and whey protein hydrolysate (WPH) against colorectal cancer development in rats. Wistar albino male rats (13 weeks) received AOM once a week for 2 weeks (s.c., 15mg/kg). Seven days later, 2%DSS was added to the drinking water over 5 days, followed by 15 days of regular water. This cycle was repeated 4 times. Tumor group (n = 11) received only AOM and DSS, while tumor + WP group (n = 11) and tumor + WPH group (n = 9) additionally received in order WP and WPH 2cc/rat by gavaj 2times/week, along 15 weeks. At the end of 15 weeks macroscopic and microscopic tumors were identified. Biochemical analysis performed by measure lipid peroxidation (MDA), protein oxidation (PCO) and glutathione (GSH) levels in both of removed colon and liver tissues. In Tumor and tumor + WP groups macroscopic tumor development was 91.9% while in tumor+WPH group it was 33% (p = 0.004). Early adenoma in tumor group was 90.9%, in tumor+WP group; %45.5 and statistically non significant (p=0.06) while in tumor+WPH group this rate failed to 33% (p = 0.02). Widespread dysplasia in tumor group was 91% , in tumor +WP group 82%, in tumor+WPH (% 0) (p <0.001). There was no significant differences between the groups in the biochemical values. Conclusion, the method applied for colorectal cancer model was successful and colon tumor development is not prevented by WP while WPH found to be useful in preventing tumor development.

O-120 HUMAN MENA+11A ISOFORM AS POTENTIAL MARKER OF EPITHELIAL PHENOTYPE AND SENSITIVITY TO EPIDERMAL GROWTH FACTOR RECEPTOR INHIBITION IN HUMAN PANCREATIC CANCER

M. Pino*, **M. Balsamo****, **F. Di Modugno*****, **M. Mottolese******, **M. Alessio*******, **E. Melucci******, **M. Milella***, **P. Natali****, **P. Nisticò**** **Division of Medical Oncology, **Laboratory of Immunology, ***Experimental Chemotherapy, ****Laboratory of Pathology, Regina Elena Cancer Institute, Rome, *****Proteome Biochemistry, Dibat, San Raffaele Scientific Institute, Milan, Italy*

Abstract Amplification and/or overexpression of the EGF receptor and its ligands characterize a variety of human malignancies including pancreatic cancer. Receptor engagement activates signalling networks controlling tumor cell proliferation and mobility through rearrangement of cell cytoskeleton. hMena member of the enabled/vasodilator-stimulated phosphoprotein family, is a cytoskeletal protein involved in the regulation of cell motility and adhesion, thus its potential role in modulating sensitivity to EGFR tyrosine kinase inhibitors could be exploited clinically as targeted treatment. To explore this issue human pancreatic adenocarcinoma cell lines were characterized for in vitro sensitivity to erlotinib, expression of HER family receptors, markers of epithelial to mesenchymal transition and expression of hMena and its hMena+11a isoform. The effects of epidermal growth factor (EGF) and erlotinib on hMena expression as well as the effect of hMena knockdown on cell proliferation were also analyzed. hMena was detected in all of the pancreatic tumor cell lines as well as in primary (92%) and metastatic (86%) tumor samples. In vitro, hMena+11a characterized the tumor epithelial phenotype, EGFR dependency, and sensitivity to erlotinib. Epidermal growth factor up-regulated hMena/hMena+11a and erlotinib down-regulated its expression. hMena knockdown reduced cell proliferation and mitogen-activated protein kinase and AKT activation cells, and promoted the growth inhibitory effects of erlotinib. Collectively, these findings demonstrate that the hMena+11a isoform is associated with an epithelial phenotype and identifies EGFR-dependent cell lines sensitive to the EGFR inhibitor erlotinib. The availability of anti-hMena+11a-specific probes may offer a new tool in pancreatic cancer management which is currently validated prospectively.

O-121 THE CORRELATION OF LOWER UTERINE SEGMENT INVOLVEMENT WITH LYMPH NODE METASTASIS IN ENDOMETRIAL CARCINOMA

G. Fabul Amparo, L. T. Cole *Jose R. Reyes Memorial Medical Center*

Abstract Objective: To determine the relationship between lower uterine segment involvement (LUSI) and lymph node metastasis in surgically staged endometrial carcinoma patients. Study Design: A retrospective analysis was done on all patients diagnosed with endometrial carcinoma from April 1999 to February 2008. Patients who underwent complete surgical staging and found to have lower uterine segment involvement were included. Slides were reviewed by a single pathologist. The primary endpoint is the presence of nodal involvement. Comparison/association of the different variables under study was done using the following test statistics: Chi-square test, Fisher Exact test and logistic regression. Odds ratios (OR) with 95% confidence interval were calculated. Results: One hundred and ninety-nine patients (199) were included in the review. Forty-five (45) were found to have lower uterine segment involvement, sixteen (35%) of which had nodal metastasis. Out of the 154 patients without LUSI, sixteen (10%) were found to have nodal metastasis ($p=0.0001$). Both for univariate and multivariate analysis, lower uterine segment involvement, lymphovascular space invasion and deep myometrial invasion were found to be predictive of nodal spread. Conclusion: Lower uterine segment involvement may be an important predictive factor of lymph node metastasis for endometrial cancer patients with epithelial type of endometrial cancer.

O-122 PALLIATION OF EXTRAHEPATIC BILIARY MALIGNANCIES WITH SEMS

M. Akaydin, Y. Ersoy, F. Eroozen, F. Celebi, N. Memmi, E. Ferlengöz, R. Kaplan *Vakif Gureba Training and Research Hospital, 2. General Surgery Clinic, Istanbul, Turkey*

Abstract Introduction and Objectives: Self-expandable metallic stent (SEMS) placement is an effective method for palliation of unresectable malignant extrahepatic biliary tumors (MEHBT) that usually are preterminal situations and often receive palliative care only. In this study we present our experience with the use of SEMS for MEHBT. Methods: We performed a retrospective review of all patients undergoing Covered Nitinol SEMS placement between April 2003 and January 2010 for MEHBT. Results: We identified 46 patients (26 men, 20 women) whose mean age was 70.3 years (range 41-85 years). 61 ERCP (endoscopic retrograde cholangiopancreatography) procedures were performed in 46 patients and 48 SEMS were placed for recurrent jaundice and cholangitis. 6 patients initially had plastic biliary stents placed for MEHBT and in 2 patients cannulation of the papilla was unsuccessful. No procedural complications were encountered. Recurrent jaundice and cholangitis developed secondary to incrustation of bile sludge in 6 patients and tumor overgrowth in 1 patient. Second SEMS was placed in one of the patients with bile sludge and in the patient with tumor overgrowth. Among the remaining 5 patients, occluded stent was recanalized with balloon in one, plastic stents were placed in two and medical therapy was started after stent control with ERCP in two. Conclusions: SEMS for palliation of MEHBT effectively relieves jaundice, prevents cholangitis and improves quality of life. It provides a safe, less invasive alternative to surgical palliation with an acceptable clinical outcome for patients who are poor candidates for curative resections because of inoperability or unresectability.

O-123 DEMOGRAPHIC AND CLINICAL FEATURES IN UPPER URINARY TRACT TRANSITIONAL CC SERIES; WHAT HAVE WE LEARNED IN 22 YEARS?

L. Gunay, B. Akdogan, A. Koni, A. Dikmen, C. Bilen, H. Ozen *Hacettepe University, School of Medicine, Department of Urology*

Abstract Purpose: We have analyzed our database for demographic and clinical course of the upper urinary tract transitional cell carcinoma (UUTTCC). Material-Method: The records of patients who were treated for UUTTCC since 1987 in Hacettepe Hospital were reviewed. Results: From 1987 to 2009, 92 patients were treated surgically for UUTTCC. Eighty eight patients' records were eligible for analysis (male: 75, 85.2%; female: 13, 14.8%). Mean age was 60.4 ± 1.25 years (median: 62 years, range: 30-82). 40.9% of the patients were younger than 60 years old. The rate of UUTTCC diagnosis in three time intervals for 22 years was 24%, 29%, 35%. Most frequent complaints at diagnosis were hematuria and pain (73.9% and 13.6% respectively). Eighteen patients (20.5%) were diagnosed during none muscle invasive bladder cancer follow up (median time to diagnosis was 24 months). The rate of anemia, nonfunctional kidney, smoking and urolithiasis history were 30.7%, 21.6%, 68.2% and 31.8% respectively. Primary tumor was located in the renal pelvis in 71.6% and in the ureter in 28.4%. 76 open, 10 laparoscopic nephroureterectomies and 2 segmental ureterectomies were performed. Preoperative and postoperative median Hb and serum creatinine values were $13.2/11.6$ gr/dl and $0.9/1.3$ mg/dl respectively. Mean postoperative hospitalization time was 7 days. The invasive and high grade tumor rates were 52.3% and 45.5%. Bladder recurrence, local recurrence and distant metastasis were detected in 38.6%, 12.5% and 17%, respectively. Time to local or distant metastasis was 12 months (2-48). Five years survival was 63.02%. The distant metastasis sites were lungs, liver, bones and brain. Conclusion: UUTTCC incidence is increasing. Demographic specialties should be considered in diagnosis. Due to frequent recurrences UUTTCC patients should be followed up closely.

O-124 MITOXANTRONE IN DOCETAXEL RESISTANT PROSTATE CANCER, IS IT A FEASIBLE ALTERNATIVE?

B. Akdogan, L. Gunay, Y. Tahir, Y. Kirdal, O. Kara, H. Ozen *Hacettepe University, School of Medicine, Department of Urology*

Abstract Purpose: Docetaxel treatment causes a better survival than mitoxantrone in castration-resistant prostate cancer (CRPC). The aim of the study was to analyze mitoxantrone response in case of progression under docetaxel. Method: Eighteen patients whose disease progressed under docetaxel (18/83) and treated with three-weekly 12 mg/m² mitoxantrone from December 2004 through December 2008 were included in the study. Results: Mean age at diagnosis and mean time to CRPC status were 63.4±1.7 years and 42.3±7.4 months, respectively. Mean PSA levels before docetaxel and before mitoxantrone treatment were 168.7±43.4 and 1063.6±448 ng/ml, respectively. Mean cycle for docetaxel and mitoxantrone were 8.4±0.9 and 4.6±0.6. PSA response rates in 4 and 8 cycle of docetaxel and 4 cycle of mitoxantrone treatment were 44.4% and 36.1% and 33.3%, respectively. Mean survival of patients with mitoxantrone after docetaxel was 10.17±1.38 (%95CI=7.46-12.88) months. Conclusions: Mitoxantrone is an important salvage chemotherapeutic for CRPC patients with reasonable survival and PSA response rates, even following docetaxel resistance.

O-125 THE EFFECTS OF ALOPECIA ON BODY IMAGE AND QUALITY OF LIFE OF THE TURKISH WOMEN WITH CANCER

G. Can*, Ö. Erol, A. Aydiner***** **Istanbul University, Florence Nightingale School of Nursing, Istanbul, **Trakya University, Faculty of Health Science, Edirne, ***Istanbul University, Institute of Oncology, Istanbul, Turkey*

Abstract Introduction and objectives: Alopecia is a common side effect of chemotherapy regimens. This study aimed to determine the effects of chemotherapy induced alopecia on body image and quality of life of the women with cancer. Methods: A total of 204 women who received chemotherapy in Istanbul University Institute of Oncology Clinic in Turkey were randomly selected. Data were collected by using personal information form, Body Image Scale for assessing body image changes and Nightingale Symptom Assessment Scale for assessing quality of life of the patients. Data were obtained by using percentage, mean, Mann-Whitney U and Kruskal Wallis tests and Spearman's correlations. p< 0.05 was considered statistically significant. Results: Average age of the women was 49,51±13,59. Of the group 81% were married, 68% were housewife, 86% had middle level of income. It was determined that women who had an operation were disturbed because of the operation sign. As the age decreased, women's feeling of themselves sexually less attractive increased. In comparison to women not using head cover, women using head cover got in difficulty to look at their body when they are naked and also look at the sign of the operation. As the chemotherapy induced symptoms increased, quality of life decreased and the body image disturbance increased. Conclusions: Health professionals should be educated about the effects of chemotherapy induced alopecia which has the potential to affect various aspects of patient's life, but the extent of impact and available methods used to decrease alopecia need to be prospectively studied.

Notes

O-126 EVALUATION OF VISUAL INSPECTION WITH ACETIC ACID AND LUGOL'S IODINE AS PRIMARY SCREENING TESTS: A POOLED ANALYSIS OF 18 POPULATION-BASED STUDIES IN CHINA

M. Lin*, **F. Zhao****, **R. Zhang****, **S. Hu****, **W. Zhang****, **X. Zhang***, **Y. Qiao*** *Cancer Institute and Hospital, Chinese Academy of Medical Sciences, **Fogarty International Clinical Research Scholars Program; Washington University in St. Louis, School of Medicine

Abstract Introduction/Objectives: Cervical cancer is the most common cancer among women in developing countries. These areas often lack the infrastructure required for conventional cytology screening programs. Visual inspection with acetic acid (VIA) and with Lugol's iodine (VILI) have been recommended in low-resource settings because of affordability and ease of implementation. In this study, we assessed the performance of VIA and VIA with VILI (VIA/VILI) as primary screening tools in various urban and rural areas in China. Methods: We pooled data from 18 population-based studies conducted from 1999-2008 in various parts of China. All women received visual inspection by trained physicians, human papillomavirus DNA testing (HC2), and liquid-based cytology. Women received colposcopy and directed biopsy if positive for any of these tests. In some studies, women received random biopsy. Results: In total, 30,031 women aged 17-59 years were screened with VIA and 8,729 with VIA/VILI. There were 949 cases of CIN2+, with 52 cervical cancer cases found in all. The positive rate for VIA was 10.9%. The sensitivity and specificity for VIA using CIN2+ and CIN3+ as cutoffs were 48.9% and 90.2%, and 56.1% and 89.7%, respectively. Among the population which received both VIA/VILI, the sensitivity increased by 13.0% when VILI was added to VIA at the CIN2+ cutoff. Conclusions: Visual inspection is a viable option to screen for high-grade cervical lesions in low-resource areas. The addition of VILI to VIA can increase the sensitivity of visual inspection to detect cervical precancer and cancer.

O-127 A STUDY OF CERVICAL CANCER SCREENING ALGORITHMS IN CHINA

F. Zhao*, **W. Zhang***, **Q. Pan***, **L. Li***, **W. Chen***, **B. Liu***, **J. Ma****, **S. Hu***, **Y. Qiao*** *Cancer Institute/Hospital of Chinese Academy of Medical Sciences, Peking Union Medical College **Women and Children hospital, Xiangyuan county, Shanxi Province

Abstract Objective To study cervical cancer screening algorithms which are suitable to regions with different health-resource settings, and promote the prevention and control of cervical cancer in China. Methods 1997 women aged 35-45 from a rural area in Shanxi Province in China were screened for cervical intraepithelial neoplasm by six screening tests, which included ThinPrep Pap, Fluorescence Spectroscopy, visual inspection with 5% Acetic acid (VIA), Colposcopy, Self-sampled HPV DNA and clinician-sampled HPV DNA, and each woman had the histopathology diagnosis. Different screening algorithms were developed by combining the screening tests in parallel or in serial, and the performance index of the algorithms for detecting the high grade lesions (CIN 2+) were compared. Results In total, there were ten algorithms generated. The sensitivity, specificity and colposcopy referral rates were reported for the main four algorithms as the following, 93.0%, 89.9%, and 13.7% for cytology as the primary screening test with ASC-US women triage by HPV DNA testing; 69.0%, 95.2%, and 7.5% for VIA as primary screening test with VIA positive women triage by HPV; 65.9%, 95.2% and 7.4% for HPV as primary screening test with HPV positive women triage by VIA. Conclusion Considering health-resource settings, the two combinations of cytology and HPV DNA testing are suitable for the urban areas, and the two combination of VIA and HPV DNA testing would be useful and feasible in the rural areas if the affordable HPV test is available in the developing countries.

O-128 POPULATION BASED ESOPHAGEAL CANCER SCREENING PROGRAM IN HIGH RISK REGIONS IN RURAL AREA IN CHINA

W. Wei, **G. Wang**, **Y. Qiao**, **Z. Dong** Department of Cancer Epidemiology Cancer Institute/Hospital, Chinese Academy of Medical Sciences & Peking Union Medical College

Abstract Background: Based on previous studies from high risk area, The China central government launched a population based esophageal cancer screening program since year 2005. Objective: To explore the feasibility of endoscopic screening technology and further decrease the mortality, increase the early detection and treatment rate as well as the five-year survival rate for esophageal cancer in high risk area. Method: Endoscopic examination with iodine staining as well as questionnaire was conducted in residents aged 40-69 years from local village. Endoscopic Mucosal Resection or Argon Plasma Coagulation was performed for any detected high grade dysplasia, esophageal cancer in situ and intramucosal carcinoma, while routine therapy was for advanced carcinoma. Result: The program was conducted in eleven high risk areas of esophageal cancer. By the end of year 2009, 56,594 subjects have been screened by endoscopy. 1086 cancer cases have been detected. Especially, 1082(84%) cases are early stage of cancer. 860(67%) residents who were detected as precancerous lesions and carcinomas have been treated. The program will be expanded to 53 screening rural areas in year 2010. Conclusion: Endoscopy with iodine staining screening technology is feasible in high risk area in China. It was well acceptable by residents and supported by governments. Precancerous lesions and early stage of esophageal cancer can be detected by local doctors after training. This program provides practicable experience of esophageal cancer screening in rural area in other developing countries.

O-129 A CROSS SECTIONAL STUDY: THE INVESTIGATION OF CERVICAL CANCER AND HPV PREVALENCE IN UYGUR WOMEN OF XINJIANG

M. Niyazi*, **L. Li***, **Y. Qiao**** *Department of Gynecology, Xinjiang Autonomous People's Hospital, **Department of Cancer Epidemiology, Cancer Institute, Chinese Academy of Medical Sciences/Beijing Union University

Abstract Objectives: To study the prevalence of cervical cancer and HPV infection in Uygur women in Xinjiang. Methods: There are 883 Uygur healthy women selected in Yutian county in Xinjiang in randomly for cervical cancer screening. All women accepted HPV test .The women with HPV positive result accepted the biopsy in the direction of colposcopy. Results: The total HPV prevalence is 8.23% in Uygur women in Xinjiang. Among them, the prevalence of high-risk HPV Ålow-risk HPVÅÅ high-risk HPV combined with low-risk HPV are 6.68%, 1.02% and 0.57% respectively. The prevalence of high grade cervical intraepithelial neoplasm and cervical cancer in Yutian Uygur women are 1.70% and 0.23% respectively. The prevalence of high-risk HPV infection(7.25%) is higher than low risk HPV infection(1.59%) and high risk HPV infection combined with low risk HPV (0.57%).The highest HPV prevalence of CIN2 or above CIN2 are 30-34 years old and 45-49 years old. The prevalence of high risk HPV infection has a tight correlation with cervical cancer(r=0.989). Conclusions: The prevalence of cervical cancer of Xinjiang Uygur women is higher than other reports in han races in China.The prevalence HPV infection has its characteristic related to race. For the Uygur women above 30 years old, the more inspection and notice should be given.

O-130 MAIN CONCEPT OF THE JAPAN MULTI-INSTITUTIONAL COLLABORATIVE COHORT STUDY (J-MICC STUDY): CONFIRMATION AND DETECTION OF GENE-ENVIRONMENTAL INTERACTIONS FOR CANCER

K. Wakai, N. Hamajima *Nagoya University Graduate School of Medicine*

Abstract Information on genotypes interacting environmental factors would be useful to identify high-risk individuals for lifestyle-related diseases. The Japan Multi-Institutional Collaborative Cohort (J-MICC) Study launched in 2005, supported by a grant from the Ministry of Education, Culture, Sports, Science and Technology of Japan. Although it mainly aims to detect and confirm gene-environmental interactions in cancer and other lifestyle-related diseases through the cohort study, it includes cross-sectional analyses and screening of biomarkers for early diagnosis of cancer. Ten research groups throughout Japan are recruiting participants aged 35 to 69 years from general populations, health check-up examinees, or patients at a cancer hospital, with a target number of 100,000. The participants complete a questionnaire on medical and lifestyle factors, donate blood samples (serum, plasma, and buffy coat), and provide detailed written informed consent. They are to be followed through 2025 for incidence of cancer and death of all causes, using population- or hospital-based cancer registries, medical records, and death certificates, etc. The data and blood samples are anonymized at each study center with an identification number (J-MICC ID) and sent to the J-MICC Central Office at Nagoya University Graduate School of Medicine. As of September 2009, about 56,000 men and women participated in the study. We are now conducting a cross-sectional study to elucidate the association of genotypes of 108 polymorphisms with obesity, hypertension, glucose intolerance, dyslipidemia, chronic inflammation, and drinking and smoking habits, etc. The cohort study is expected to produce many fruits for cancer prevention.

O-131 BREAST CANCER SCREENING AMONG RURAL WOMEN IN MALAYSIA

P. Parsa*, M. Kandiah, HA Rahman**, NA Zuklefli** N. Parsa**** **Hamedan University of Medical Sciences, **University Putra Malaysia*

Abstract This study aimed to examine the utility of the health belief model in enhancing rural Malaysian women's breast cancer beliefs and screening behaviours. 130 women from randomly selected rural areas in the state of Kedah were interviewed face to face. Results showed a low level of knowledge on breast cancer, particularly on symptoms and risk factors of breast cancer and screening techniques among the women. Only 12.3% of them have ever performed breast self examination (BSE) on a regular basis. Clinical breast exam (CBE) was performed by 23% of eligible participants. In women over the age of 40 years (n=78), only 5.1% reported ever having at least one mammography. There were significant correlations among knowledge, belief and practice (p<0.05). Women's belief was the mediator variable of correlation between knowledge and practices. Multiple Linear Regression analysis showed that high perceived benefits of BSE, confidence to do BSE and knowledge on breast cancer screening significantly predicted increase in BSE performance (p<0.05). Higher education level and lower seriousness of perception about breast cancer were significant predictors for increase in CBE performance. There was no association between age, marital status, households' income, work status, frequency of visit with a physician, family history of breast cancer with BCS behaviors (p>0.05). This study implies the need for improving knowledge on benefits of breast cancer screening behaviors with appropriate strategies for prevention of breast cancer in Malaysia. In addition, this information could be used to plan breast cancer prevention educational programs for the rural community.

O-132 ENCOURAGING AND SUPPORTING COMMUNITY WOMEN TO ACCESS CERVICAL SCREENING

S. Angus *Health Department*

Abstract Cancer of the cervix is the second leading cause of death and burden of illness disproportion for Australia's (Indigenous) Aboriginal and Torres Strait Islander women. In Australia's geographical State Queensland, the Aboriginal mortality rate is 13.3 times higher than Australia's non-Indigenous community and in the Torres Strait Islander community the morbidity rate is 21.5 times higher. Evidence confirms limited participation of Indigenous women in screening, treatment, compliance and follow-up care. As a strategic wholistic commitment, Australia's Indigenous Health Workers, key community women and key partners are continuously encouraged and supported by an Aboriginal Senior Project Officer who is guided by a State-wide Steering Committee to expand the community's human social capacity. By recruiting female Indigenous Health Workers, some of whom are Pap smear providers' participation has increased. Involving these key practitioners, various innovative community-specific culturally effective, culturally safe health promotion material resources, including the first nationally accredited Community Education Screening Kit and complementary practical Tool Box have been designed to support and encourage women to participate in all phases of the screening pathway. Indigenous Health Workers recruited in the designated Women's Health positions are financially supported to complete a twelve month Certificate IV in Primary Health and Community Care providing health promotion and clinical curriculum to confirm and enhance the Health Workers' screening knowledge and skill. The Health Workers then apply flexible frameworks to provide health promoting education sessions to community women, living and working in urban, rural and remote (or traditional) isolated Australian communities further improving participation in screening.

O-133 RISK OF COLORECTAL CANCER AND EARLY DETECTION PRACTICE IN A SAMPLE OF PEOPLE IN IZMIR, TURKEY

F. Ogce, D. Sari, F. Okcin, G. Mermer, E. Ceber, G. Ozenturk *Ege University Ataturk School of Health*

Abstract Introduction and objectives: Incidence of colorectal cancer ranks seventh in both sexes, with about 5 thousand new cases occurring every year in Turkey. Higher intake of total energy, red/processed meats and alcohol as well as physical inactivity are all associated with increased risk of colorectal cancer. These factors may strongly modify for cancer prevention. Nonetheless, early detection of precancerous lesions and rapid, effective treatment of early colorectal tumors with regular screening appear to be key points of prevention strategies. The aim of the study was to find out of colorectal cancer risk, with men and women, who 50 years of age or over, who resided in Izmir, Turkey. Methods: During 2007–2009, we conducted a cross-sectional study of colorectal cancer among people in Izmir County and successfully interviewed 2497 subjects. Detailed information on dietary habits and other lifestyle factors as well as family history of colorectal cancer was collected. In addition the colorectal risk of participants was calculated by the Harvard University Colorectal Risk Assessment 8.41 years and 4.7% had±Tool. Results: The mean age of participants was 60.36 a family history of cancer. It was determined that 22.7% of respondents have a below average risk, 12.3% of respondents have an average risk and 65% of them have an above average risk according to risk assessment. Conclusions: Lack of health awareness and lack of cancer knowledge are the most commonly reported barriers to undergoing screening. We suggest that continued efforts are needed to educate adults for screening options.

O-134 ROLES OF MAMMOGRAPHY AND FINE NEEDLE ASPIRATION CYTOLOGY FOR THE DIFFERENTIAL DIAGNOSIS OF BREAST CANCER IN YOUNG WOMEN

A. Hakobyan *Armenian-American Wellness Center*

Abstract Brief outline of the article: Increasing diagnostic accuracy for breast cancer in women less than 35 years of age. Introduction: Breast cancer is one of the most widespread malignant tumors among women in Armenia. It is uncommon for women under the age of 35, accounting for 5-7% of reported cases. Delay in diagnosis is attributable to a clinically low index of suspicion, difficulty in examining dense and nodular breasts in younger women. Objective: Breast cancer incidence depends on age, more frequently occurring after the age of 45. According to ACS guidelines, baseline mammography should be done from 35 until 40 years of age. Currently, breast cancer is also a serious problem for women under 35. Thus, the objective of our investigation is to process of observation techniques for women up to 35 years. Methods: Retrospective analysis of the examination results of 125 women less than 35 years of age. Results: All cases were examined by BU. 112 of the 125 patients were observed by mammography. 76 of the 125 patients underwent ultrasound-guided FNA with cytological examination. Conclusion: Our results indicate that if women find an abnormality, she should seek a specialist's help, first undergoing BU. If the BU shows suspicious lesions, further investigation by mammography and FNA should be done. This step-by-step approach helps us to increase diagnostic accuracy among women up to age 35, to differentiate between benign and malignant processes and to determine the appropriate treatment and follow-up, if indicated.

O-135 PREVALENCE OF HELICOBACTER PYLORI AMONG STOMACH CANCER PATIENTS AND ESTIMATE OTHER RISK FACTORS IN GEORGIA

N. Mebonia*, **N. Chakvetadze**** **Tbilisi State Medical University, **National Center for Disease Control and Public Health*

Abstract According to WHO, 55% of stomach cancer cases are attributable to Helicobacter pylori worldwide. In Georgia, incidence of stomach cancer is at the third place after breast and lung cancer. Goal of this study was to identify prevalence of Helicobacter pylori among stomach cancer patients and risk-factors associated with stomach cancer among the patients with or without Helicobacter pylori infection. Endoscopy was conducted and blood samples were collected from all patients admitted with gastro-enteric symptoms in four hospitals of Tbilisi in 2007-2008. Hospitals were selected based on availability of the endoscopy. Patients were interviewed using structured questionnaire. Serological testing by ELISA was conducted for identification of Helicobacter pylori. Odds ratio was calculated to estimate risk-factors. Out of total 504 patients enrolled in the study. 13% of the patients had stomach cancer, 37% - ulcer, 17% - gastritis and 33% had none of above listed condition. 49% among stomach cancer patients were tested positive for Helicobacter pylori, 19% had indefinite results. Among those with Helicobacter pylori infection, having a stomach cancer was associated with smoking (odds ratio=5). Among those without Helicobacter pylori infection smoking was associated with having cancer (odds ratio=1.6). Prevalence of Helicobacter pylori among patients with stomach cancer is not high compared to other developing countries. Having Helicobacter pylori infection increases negative effect of smoking on stomach cancer.

O-136 THE ROLE OF CANCER INFORMATION SERVICES IN CANCER CONTROL

M. Preszly *German Cancer Research Center*

Abstract Throughout the world, there is growing interest in people taking more responsibility and involvement in their own health and having information that will enable them to maintain a healthy lifestyle, manage disease, and achieve quality of life during illness. The International Alliance of Patient Organizations stated that "accurate, relevant and comprehensive information for patients and their caregivers to help them make informed decisions" is essential. Cancer Information Services (CIS) provide this information free of charge via telephone, e-mail, Internet and media. CIS programs are important components in cancer control. They disseminate information and learn about users' needs and gaps in prevention, treatment, and care. This information contributes to health care policies, national cancer plans, and public health action. The International Cancer Information Service Group (ICISG) is a network that promotes collaborations and quality service, assists organizations to develop a CIS, and is a forum for exchange of best practice. ICISG has 70 member organizations in 45 countries, including the Asian Pacific area with 23 members in 12 countries, and Europe with 27 CIS programs in 25 countries. In 2009, the German CIS surveyed the cancer information and communication needs of Europeans and how CISs meet these needs. Results (from more than 250,000 inquiries answered in 2008) show the need for trustworthy, evidence-based, personalized information. ICISG developed an action plan to improve cancer knowledge for the public, cancer patients and their families - it is adaptable to other regions of the world, and ICISG can provide technical assistance.

O-137 ANTITUMOR ACTIVITY OF RHEUM RIBES AND THYMUS SYRIACUS IN MALE ALBINO MICE

B. Mohammed*, **K. Karem**** **University of Duhok, **University of Salahadden*

Abstract To search for possible chemo preventive agents from natural resources, the aqueous extracts of Rhaum ribes (Rhubarb) and Thymus syriacus (Thyme) with the concentrations 1%, 5%, and 5%, 7.5% respectively were used via drinking water for 25 weeks to test its inhibitory role on skin tumors of male Swiss albino mice initiated with applied 7,12-dimethylbenz(a)anthracene (DMBA) on the dorsal skin, mice were promoted by twice weekly application of benzoyl peroxide for 25 weeks. At the end of the experiment the animals were sacrificed and sections of skin were histologically studied. The result revealed that both plant extracts showed significant reduction in the number of mouse with tumors (incidence) and the number of tumors per mouse (multiplicity) induced by DMBA. Histological investigations indicated that rhubarb extract reduced squamous papillomas and stimulated hair follicle proliferation. Thyme extracts also reduced squamous papillomas. These results suggest that rhubarb root and thyme leaves extract might be valuable as chemo preventive agent for chemical carcinogenesis.

O-138 PROFILE OF MICROSATELLITE INSTABILITY IN SPORADIC COLORECTAL CANCER: TUMOR VERSUS POLYP

M. Montazer Haghighi, A. Irani Shemirani, S. Milanizadeh, S. Fatemi, S. Mohebbi, F. Jabbarian, M. Zali *Research Center for Gastroenterology and Liver Diseases, Taleghani Hospital, Shaheed Beheshti Medical University, Tehran, Iran*

Abstract Colorectal cancer (CRC) is the second leading cause of cancer related deaths in the world. Moreover, CRC incidence is dramatically increasing in Iran. Microsatellite instability (MSI), instability of short tandem repeats, is regarded as reflecting defective DNA mismatch repair (MMR). MSI can occur in tumors of many organs, but it is mainly the hallmark of colorectal cancer. The purpose of this study was to compare MSI status in sporadic colorectal tumors and colorectal polyps. Using a pentaplex (NR27, NR24, NR21, Bat25 and Bat26) polymerase chain reaction assay, MSI status was determined prospectively for 30 patients with carcinoma and 30 polyps. Our finding showed that 5 (5/30=16.6%) of colorectal carcinomas were MSI-Low (just one marker is instable) while 4 (4/30=13.3%) polyps revealed MSI including 3 MSI-Low in addition one MSI-high (more than one marker is stable). In conclusion, although more microsatellite instability was determined in carcinomas nevertheless, there is no significant different between MSI tumors and polyps status. It seems that microsatellite instability is raised in primary stage of colorectal cancer. Thereby, microsatellite instability could be use as a biomarker to determine susceptibility individuals with polyp turning to carcinoma.

O-139 BREAST CANCER RESEARCH IN IRAN; ESSENTIAL DATA TO ORGANIZE RESEARCH

A. Kaviani, F. Ghadiri, N. Iranpour, Z. Shad-Loo *Tehran University of Medical Sciences*

Abstract Background: Considering breast cancer as one of the most burdensome diseases, besides our lack of knowledge in this field, it is required to strategize research policies by identifying defects of a research system in each country. Methods: In this descriptive study, Pubmed searches were performed to find the articles published on the title of breast "cancer", "tumor", "malignancy" and "Iran" to date. Results: Based on the available evidence the majority of articles have focused on molecular science (21%) and genetics (19%), while remaining are in categories like quality of life (9%), screening protocols (8%), epidemiology (7%), risk factor studies (6%), pathology (6%), patient knowledge and behavior (5%) and other field e.g. clinical researches (19%). The most used methodologies are cross-sectional (39%) and case-control (25%). The other articles are designed in formats such as experimental (8%), cohort (6%), case-report (6%), review article (4%) and others methodologies (12%). Conclusion: Despite increasing the body of the literature since 2000, still there is limited knowledge in some important categories with stronger evidence in the breast cancer research field in Iran which calls for extra efforts to reassess the research system policies and budgeting standards.

O-140 ORBITAL GRANULOCYTIC SARCOMA AS EXTRAMEDULLARY LEUKEMIA ASSOCIATED WITH ACUTE MYELOCYTIC LEUKEMIA IN TURKISH CHILDREN

A. Cavdar*, N. Tacyildiz, E. Unal**, G. Yavuz**, S. Gozdasoglu**, E. Babacan**** **Cancer Group of Turkish Academy of Sciences (TUBA) and **Department of Pediatric Oncology, Medical School of Ankara University*

Abstract Orbital Granulocytic Sarcoma (OGS) associated with AML as an extramedullary leukemia (EML) is an uncommon findings in the Western world. However, 27% of Turkish Children with AML showed orbital tumor in our previous series and classified as "high risk" subgroup of AML (Acta Hemat. 1989). Etiology of EML as OGS still remains obscure. In order to clarify underlying mechanism, we have performed certain studies on eleven cases of AML with OGS. Cytogenetic Immunophenotypic analyses and tissue adhesion molecules (CD44, CD56, CD11) with some cytokins in serum (IL-2, IL-2R and TNF- α) multidrug resistance (MDR) by p-gp expression were also determined. Results: The mean age was 6.8 yrs with a sex ratio (M/F) of 0.7. OGS was a presenting sign, associated with exophthalmos, chemosis and orbital masses in this series. Analysis of "Hematological" findings didn't show any difference between the AML cases with and without OGS (EML). FAB-M4 type AML predominated in the OGS associated group. Immunophenotyping analysis revealed presence of "stem cells" markers: CD-34 and HL-DRA more frequently (50%, 90%) in OGS group than control AML. Cytogenetic study revealed the common presence of t(8:21). (q22; q22) in OGS group. In addition, double Ph chromosome, t(1:11) (p36; q23) karyotypic abnormality have been observed in only OGS (+) AML group. MDR expression, Serum Cytokins (TNF- α and IL-2R) levels and tissue adhesion molecules (CD44, CD56) were commonly positive in OGS (+) group. These findings represent a biologically different subtype of AML associated with OGS in Turkish Children.

Notes

O-141 DO WE NEED TO MAXIMISE THE BREAST CANCER SCREENING AWARENESS?: AN ENDOGMOUS SOCIETY WITH HIGH FERTILITY

A. Bener*, **H. El-Ayoubi****, **B. Basha*****, **S. Joseph*****, **L. Chouchane***** *Dept. of Medical Statistics & Epidemiology, Hamad Medical Corporation, Hamad General Hospital, **Dept. of Medical Education, Weill Cornell Medical College, Dept. of Oncology & Hematology, Al Amal Hospital, Hamad Medical Corporation, ***Dept. of Medical Education, Weill Cornell Medical College, Qatar*

Abstract Aim: The aim of this study was to explore knowledge, attitude and practice about breast cancer and to identify potential barriers to screening procedures among women. Design: This is a cross sectional survey. Setting: Primary Health Care Centers, Qatar. Subjects : A sample of 1200 Qatari women aged between 30 to 55 years of age were surveyed during the period from December 2008 to April 2009. 1002 subjects (83.5%) expressed their consent. Results: 70.3% of the studied Qatari women agreed that breast cancer is the most common cancer in women. A good proportion of Qatari women knew that nipple retraction (81.2%) and discharge of blood (74.6%) are warning signs of breast cancer. Of the studied Qatari women, 24.9% identified breast self examination, 23.3% with clinical breast examination and 22.5% with mammography as a method for detection of breast cancer. The frequently reported barriers among the Qatari women was that women did not ask any doctor/nurse how to perform breast self examination (57.3%), embarrassment for the screening of CBE (53.3%) and fear of mammography results (54.9%) thinking it is positive. Logistic regression analysis showed that family history, level of education, living in urban area and had medical check up when healthy were significant predictors for CBE and mammography. The screening rates of BSE, CBE and mammography were low in women for early detection of cancer.

O-142 A STUDY ON KNOWLEDGE AND AWARENESS ABOUT CANCER AND ITS PREVENTION, RIYADH, SAUDI ARABIA

K. Ravichandran*, **G. Mohamed****, **N. Al Hamdan***** **King Faisal Specialist Hospital & Research Center, **Liverpool School of Tropical Medicine, ***King Fahad Medical City*

Abstract Introduction: This study examines the knowledge on cancer among Saudis to address health education issues. Subjects and Methods: Saudi nationals, aged 15 years or more, attending to one of the randomly selected Primary Health Care (PHC) Unit or private hospital in Riyadh were interviewed for this study. Chi square test and multiple logistic regression analysis were done. Results: Total study population consisted of 1407 individuals aged 15-87 years with a male to female ratio of 1:1.04. The mean age of respondent was 38.5 (S.D. 14.4) years. The total knowledge score, maximum of 24, was computed by adding the score on knowledge of cancer, risk factor and screening. The total mean knowledge score was 14.3 (S.D. 3.6) with a range of 2-23. Statistically significant difference in the total knowledge level across age groups ($p < 0.01$), educational levels ($p < 0.01$) and marital status ($p = 0.01$) was observed. Females ($p = 0.04$), knowing anyone with cancer ($p = 0.03$) and having undergone any of the (breast self examination, mammography, occult blood, PAP smear) test ($p < 0.01$) are associated with high level knowledge. Regression analysis indicated that the odds of having high level knowledge about cancer was 78% lower among those who undergone any of the above mentioned test compared to those who had no test (95%CI: 0.07-0.66, $p = 0.01$). Those who heard about any cancer warning signal were more knowledgeable (OR=0.43; 95%CI: 0.24-0.76; $p = 0.004$) than who have not heard anything. Conclusion: This survey provided baseline information's on community level knowledge that are necessary for guidance towards better cancer awareness programme in this region.

O-143 THE USE OF THE INTERNET IN CANCER MANAGEMENT IN THE INDIAN CONTEXT

S. Maudgal, A. Bapat *Cancer Patients Aid Association*

Abstract Cancer Patients Aid Association (CPAA) is a 40 year old NGO working towards the "Total Management of Cancer" as a disease including: -Raising awareness through lectures -Early detection through screening -Covering the cost of treatment through insurance -Providing total care for cancer patients -Rehabilitating cancer patients and family members CPAA was among the first NGOs to launch a website, cancer.org.in as early as 1999. The aim was to meet a recognised need for information and a non-threatening platform where patients and healthy individuals alike could ask questions. The website has reached out to over 10,000 regular readers who are sent updates on our activities. Every year over 100,000 unique visitors, make 136,000 visits, 2,500,000 hits to read 300,000 pages. Over 3000 emails are received from 35 countries and remote corners of 21 out of 25 Indian states. Last year we received queries seeking Financial Help (20.5%); Volunteering opportunities (15.9%); Second Opinions (13.9%); Anti Gutka (Smokeless tobacco) Sticker (12.6%); Offer to make donations in kind (8.9%); Organising awareness Camps (7.9%); Information on different kinds of cancer (7.3%); Sponsorships (4.2%); Information on BSE (3.4%); Cancer Insurance Policy (3%); Blood Donation (1.4%) and CPAA's Breast prosthesis (1%). We raised over Rs. 10 million through online donations. The success of the website proves that the initial apprehension that uneducated Indians, living in remote villages would not benefit was unfounded. Readers from all over the world demonstrated that the cancer experience is universal and which can be borne better by sharing experiences.

O-144 FACTORS ASSOCIATED WITH BREAST SELF-EXAMINATION AMONG MALAYSIAN WOMEN TEACHERS

P. Parsa*, **M. Kandiah****, **HA Rahman****, **NA Zukleflii**** **Hamadan University of Medical Sciences, *Universiti Putra Malaysia*

Abstract Introduction: Breast cancer is the leading cancer among Malaysian women. However, participants' rate in breast cancer screening is low in Malaysian women. The purpose of this study was to examine health beliefs factors related to breast self examination (BSE) among female teachers in Selangor, Malaysia. Methods: A cross-sectional study was conducted among 425 female teachers in 24 randomly selected schools in Selangor, Malaysia. A self-administered, validated questionnaire was used. Data were analyzed using SPSS version 14. Results: The mean age was 37.17±7.16 years. Only 19% of the women performed BSE on a regular basis. The mean scores of perceived benefits, health motivation and confidence were noticeably higher in performers whereas perceived barriers were less in BSE performers. Higher knowledge on breast cancer, greater confidence in performing BSE and regular visit with a physician were significant predictors for doing BSE ($p < 0.05$). No relationship were found between BSE practice and factors such as age, marital status, education, ethnicity, family history of breast cancer and health insurance coverage. Conclusion: Low rate of BSE behavior was a concern to this sample of Malaysian women. Women who had more confidence in their ability to perform BSE, had regular visit with a physician and were informed about breast cancer were more likely to practice BSE. These findings suggest a need for improving awareness of breast cancer screening methods, their importance and practice.

O-145 THE JORDAN EXPERIENCE – ENGAGING PEOPLE: CREATING CHANGE**S. Jaouni** *Jordan Breast Cancer Program*

Abstract The Jordan Experience – Engaging People: Creating Change The Jordan Breast Cancer Program puts forth its model of public engagement in taking breast cancer from a taboo subject to a clarion call for action. The Middle East has witnessed many projects in health promotion; most have not had the impact envisaged on behavior or service provision. JBCP adopts a new approach: building on existing networks to maximize reach while mobilizing grassroots and advocating strongly with government. JBCP was established to alleviate the burden of breast cancer, which inflicts women at the peak of their productivity (median age: 45). Until recently, Jordan struggled with late detection of breast cancer (70% of cases). JBCP's needs analysis highlighted lack of screening services and guidelines, non-existent quality control, deficiency in trained health providers and low understanding of the importance of early detection. JBCP set a strategy to address these challenges and orchestrate the work of all stakeholders. After ONLY two years, statistics show a tangible shift in the bulk of cases to early stages. JBCP relies on a multi-stakeholder approach mobilizing MoH healthcare centers, building on NGO networks, engaging international donors and private sector to develop screening services and raise awareness while institutionalizing policy. It is unprecedented for a non-for-profit program to infiltrate and mobilize government while getting WHO, USAID and competing CBOs, government institutions and academia to work together towards one goal. JBCP presents this approach as a model, believing that with a multiplicity of players, it is the best way forward for tackling the plight of breast cancer.

O-146 KNOWLEDGE AND ATTITUDE ON CERVICAL CANCER PREVENTION IN HUSBANDS**B. Norsahadah***, **N. Ilyana**** **Unit of Biostatistics & Research Methodology, School of Medical Sciences, Universiti Sains Malaysia, Kelantan, **Faculty of Information Technology & Quantitative Sciences, Universiti Teknologi Mara, Selangor, Malaysia*

Abstract Background: The utilization of Pap smear in Malaysia was still low compared to developed countries. Previous study showed that husbands had major roles in women's decision in taking the test. This study was conducted to determine the level of knowledge and attitude on cervical cancer prevention in husbands. Methods: A cross-sectional study was conducted in Hospital Universiti Sains Malaysia among Family Health Clinic attendees. We included married and excluded illiterate men. Self-administered questionnaires in Malay language was used. Multiple logistic regression was used for analyses. Results: A total 148 respondents were interviewed. The mean (SD) age was 41.2 (8.3) years with 85.8% Malay ethnic, 77.7% had high school or higher education and 74.3% in middle socio-economic status. Majority 95.9% ever heard about cervical cancer and 60.8% knew Pap smear. Only 31.1% agreed that cervical cancer is preventable by vaccination, 33.8-50% correctly answered questions about risk factors, 39.2-41.9% about symptoms and 33.1-44.6% about Pap smear. Exactly 71.6% objected male doctor performing Pap smear, 26.4% did not consented wives to have the test, 42.6% agreed that Pap smear causing embarrassment and 26.4% causing pain. The percentage of satisfactory knowledge and attitude was 44.6% and 45.9% respectively. Factors associated with knowledge were ethnicity and number of children. Factors associated with poor attitude were education level and having only one partner. Conclusions: Level of knowledge and attitude among husbands were not satisfactory and need improvement. Awareness campaign of cervical cancer and its preventive measure should be conducted among husbands as well as women.

O-147 CIVIL SOCIETY AND CANCER CONTROL PROGRAMS IN ASIA**S. Nagavajara** *American Cancer Society*

Abstract Tobacco is the leading of the proved sources of carcinogens in the present human population. The smoking prevalence in Russia is one of the highest in the world, 63% of men and 14% of women are current smokers. Consequently about 50% of total male cancer deaths in the country attributed to smoking. The purpose of the study is to explore possibilities for cancer prevention through smoking cessation implementation. The special survey in Moscow covered more than 1000 adult current smokers shown that 85% of them knew that smoking can increase cancer risk. 60% of all interviewed current smokers, in age group over 40 years even 80%, want to quit smoking. In view of the told above the smoking cessation group session (SCS) method was implemented and evaluated. About 1650 smokers visited SCS. Results of these smokers follow-up show that 41% of them stopped smoking for different periods and 15% remained abstinent more than 12 months. 18% of the smokers had reduced their daily consumption of cigarettes by more than 50% and 95% of the smokers who could not to quit or were after relapse of smoking continued to keep motivation to quit smoking. The main determinants of long term quitting are past quitting experience, high level of motivation to quit smoking and using complex smoking cessation therapy. It is concluded that smoking cessation assistance is feasible and effective way of cancer prevention. These findings have implications for intervention strategies in public health projections.

O-148 WHY MALAYSIAN WOMEN PRESENT WITH ADVANCED BREAST CANCER: A QUALITATIVE ENQUIRY**N. Aishah Taib, C. Yip, W. Low** *University Malaya Medical Centre*

Abstract Introduction: Advanced presentation of cancer has a negative impact on survival. Understanding this phenomenon give opportunity for interventional strategies. This study explores why women present with advanced breast cancer. Method: Purposive sampling of 19 breast cancer patients presenting with delayed treatment and/or advanced cancer diagnosed within two years at the University Malaya Medical Centre, Kuala Lumpur, participated. In-depth interviews were conducted using a self-devised interview guideline. The audio-recordings were transcribed verbatim and NVivo 8 qualitative software was utilised for data management and analysis. Results: Major themes that emerged were the importance of evaluation of threat, fatalism, fear of surgery and chemotherapy were featured prominently. A background of low breast health literacy was found with many discovering large breast lumps and seeking treatment quickly. In women who knowingly delay diagnosis and treatment, maladapted coping mechanisms like denial and avoidance contributed to the phenomenon. Importance of significant others in decision making and adoption of treatment was seen. Lack of individualistic and autonomous decision making, with women playing the role of a dutiful wife and daughter was observed. Belief in alternative therapy as an active form of treatment and a more acceptable option of treatment was discovered. Conclusions: Education must target family members and significant others. Increasing breast health literacy in the community in symptoms recognition and subsequent actions are warranted.

O-149 THE ASSESSMENT KNOWLEDGE, ATTITUDE AND BEHAVIOR OF WOMEN IN IRAN TOWARD BREAST CANCER SCREENING METHODS 2009

Z. Karimian, N. Mehran, E. Jafarbeglo *Qom University*

Abstract Introduction: Breast cancer is the most common cancer among women and screening of this cancer is one of the best method for early diagnosis. Due to this study was not performed in Qom, this research is necessary. Our aim was to determine the knowledge, attitude and behavior of women in Qom toward breast cancer screening methods 2009. Materials & Methods: This study was a descriptive – analytic. The samples consisted of 400 women, they were selected using convenient sampling method and exclusion criteria were history of breast cancer in women and their family. Data were gathered by a questionnaire and were analyzed by SPSS software. Results: The mean of age in this women was 30.25 years, and the most of them were hoomy, married and diploma education. Their knowledge regarding the screening methods were moderate (61/9%), The attitudes regarding the implementation of screening methods were favorable (98%), BSE was not performed in 248 cases of upper than 20 years (64/9%), 311 cases (81/4%) had never referred for a CBE and 33 cases of upper than 40 years (78/5%) of them had no history of mammography. Conclusions: Our results indicate a moderate level of knowledge about screening methods and a positive attitude but low usage.

O-150 HEALTH LITERACY IN PRE-OPERATIVE DIGESTIVE CANCER PATIENTS STARTING FROM INITIAL DETECTION OF SYMPTOMS TO CANCER DIAGNOSIS

K. Nakagami*, K. Akashi** **YOKKAICHI NURSING AND MEDICAL CARE UNIVERSITY.*

***NAGOYA CITY UNIVERSITY, SCHOOL OF NURSING*

Abstract Purpose: The purpose of this report is to convey the results of a study conducted to investigate the constitution and process by which digestive cancer patients utilized their health literacy awareness, starting from initial detection of symptoms to cancer diagnosis. Method: Participant observation and semi-structured interview data from 10 pre-operative digestive cancer patients were analyzed using the grounded theory approach. Result: Core category is "self-examination." Results indicated that digestive cancer patients noticed the symptoms and guessed the cause of disease by managing the prior medical experiential knowledge, and new medical information they collected. The patients were diagnosed with cancer after they consulted with the doctor for digestive system-related conditions or follow-up without further consultation. However, patients with no symptoms were diagnosed with digestive tract cancer after they had access to a family doctor or had a regular medical examination. Conclusion: Pre-operative digestive cancer patients examined themselves based on prior medical experiential knowledge, new medical information, and opinions of other people from initial onset of symptoms. These observations explained the need for patients to be able to obtain new medical information. The observations suggested that providing appropriate medical information was essential for health literacy in pre-operative digestive cancer patients. Furthermore, patients predicted the cause of symptoms and then decided to consult a doctor. Therefore, recognizing the symptoms might be the trigger for preoperative digestive patients to seek and use new medical information. Digestive cancer patients' health literacy is therefore important.

O-151 HOW TO STRENGTHEN THE COMMUNITY FOR CANCER CONTROL? BREAST CANCER SCREENING AWARENESS PROGRAM

A. Bener *Weill Cornell Medical College & Hamad Medical Corporation, Qatar*

Abstract Introduction: Breast cancer appears to be a major global health problem of both the developing and developed countries. In western and Arab countries, breast cancer is the most commonly diagnosed cancer in women. Aim: The aim of this study was to explore knowledge, attitude and practice about breast cancer and to identify potential barriers to screening procedures among women for preventive measures. Subjects and Methods: This study based on the primary health care centers and Women's hospital was conducted among Qatari women aged 30–55 years from December 2008 to April 2009. A multistage sampling design was used and a representative sample of 1200 Qatari women aged between 30 to 55 years of age were surveyed. Among them, 1002 subjects (83.5%) expressed their consent to participate in this study. Results: The study findings revealed that despite of having a sufficient level of knowledge about breast cancer, a low breast cancer screening was confirmed in Qatari women; 24.9% with breast self examination, 23.3% with clinical breast examination and 22.5% with mammography. Qatari women were not very keen in practicing screening procedures especially the older Qatari women. Qatari women with higher education had better knowledge about breast cancer and a significant difference was noted in every knowledge response between the less educated and more educated women. A good proportion of Qatari women knew that nipple retraction (81.2%) and discharge of blood (74.6%) are warning signs of breast cancer. Their attitude towards having mammogram test was mostly negative for being afraid (63.5%) and embarrassed (49.4%). Also fear and worries were the general potential barriers towards breast cancer screening (46.5%). Conclusion: The present study revealed that the screening rates of BSE, CBE and mammography were low in Qatari women for early detection of cancer. Fear and worries were the general potential barriers towards breast cancer screening. The study emphasizes the fact that women should be knowledgeable about the high cancer risks involved for not having screening methods for early detection of breast cancer. If the community is not aware about risk factors of breast cancer, they cannot change their life style risk factors and decrease modifiable risk factors. Minimizing barriers to screening behaviours may be effective in convincing women for early detection of breast cancer.

O-152 COMMUNITY BREAST HEALTH EDUCATION

R. De Souza *Prashanti Cancer Care Mission*

Abstract Introduction and Objectives Breast Cancer is a leading cancer in Urban India. Aggressive with early age onset and short disease free interval, it has changed trends to affect women across all socio economic barriers. Our undertaking in Cancer Control is through preventive programs to facilitate change in health behavior through information. Information is knowledge about the disease, diagnosis and treatment and to train women on Breast Self Examination. Methods Strategies included targeting organizations, clubs, institutions and condominiums. Women oriented, culturally appropriate breast health information was presented through audio-visuals in multilingual mode. Factors affecting implementation of awareness Interviews with organizational stakeholders showed that disease stigma, lack of health initiatives and time constraints are barriers towards acceptance of such program. Results Major indicators Need for practical health seeking skills (HSS): Knowledge alone cannot sustain programs. HSS mean a) Practical skills to reach facilities. b) Self help group of savings towards screening. c) Creating data of appropriate screening facilities. d) Maintaining personal and family history records. e) Practical Nutrition. Need for accessible service and infrastructure To enable Health centers through training Volunteer, health workers, ANMs, TBAs and women leaders in disease management. Need for economically viable and reliable diagnostic tools. Use of mobile breast ultrasound as a screening tool and revival of thermograph as a Standard of Care in breast cancer. Gender, Male involvement and Wellness Including men as beneficiaries in a predominantly male conservative society. Conclusion Our Outreach Services proposes to increase the scope of preventive programs by addressing the above issues.

O-153 CERVICAL CANCER AWARENESS IN KENYA

A. Maina *Aga Khan University **Dow University of Health Sciences

Abstract THE PINK RIBBON INITIATIVE IN COLLABORATION WITH THE AGA KHAN UNIVERSITY HOSPITAL, NAIROBI, Kenya. **METHOD:** Announcements were made through the media 2 weeks prior to the event date. Women were encouraged to attend in large numbers as there were educative sessions and the pap smear tests would be offered at a subsidized costs. The doctor gave talks on cervical cancer, its causes, mode of screening and about the available preventive vaccines in Kenya. I gave my testimony as a cervical cancer survivor to demystify the myths and the misconceptions. Questions from the participants were taken by the doctor. These educative sessions started at 10:00am and ended at 5:00pm. Pap smear tests were offered at a subsidized cost. Pamphlets with cervical cancer information were given to participants. **RESULTS:** 1014 women attended the sessions and the results are listed. 867 women took the Pap smear test. 114 were to come back the following day due to a shortage in testing kits. 33 could not afford the costs of the pap smear. **SUMMARY OF THE ABSTRACT:** Consistent cervical cancer campaigns, screening and HPV education needed in Kenya. With subsidized or free screening programs in place, many women would get tested thus helping in early detection and better prognosis. A lot of myths and misconception surrounding cervical cancer would be demystified with more awareness

O-154 SUPPORT GROUP FOR PALESTINIAN WOMEN LIVING WITH CANCER

C El Jabari *Patient's Friends Society-Jerusalem*

Abstract EEstablished in 2000 by a non profit organization, the only support group for women newly diagnosed and /or living with cancer works hard to overcome many barriers- social, political, economic and psychological. Starting with a handful of survivors the group has grown and expanded to include women with different types of cancer and from all socio-economic and geographic backgrounds. Professionally facilitated but peer led, this group of women have become empowered through information, capacity building and a solid sisterhood. Women in the group are support givers visiting women in their homes, hospitals and taking phone calls. They are also educators and advocates. Training and professional support have been essential to the vibrancy and sustainability of this project despite the many difficulties in reaching women, either from political, economic or numerous other factors.

O-155 ACCESS TO CANCER TREATMENT: A QUALITATIVE STUDY IN SIX ASIAN COUNTRIES

A. Reeler, M. Bizé, J. Saba *Axios International*

Abstract Introduction A qualitative field study on access to cancer therapy was carried out in China, India, Indonesia, Malaysia, Philippines and Thailand to inform the design of future access program strategies for these countries. **Methods** The study targeted key opinion leaders such as oncologists, urologists and surgeons in tertiary care facilities (public and private) as well as other stakeholders such as cancer foundations, governments, medical oncology societies, pharmacists and social workers. The study used a mixed methodology of individual interviews and focus group discussions. It took place between November 2007 and June 2008. **Results** In all countries KOLs confirmed that cancer therapy was expensive and inaccessible for most people. KOLs in five out of six countries stated that there was no access to cancer diagnosis or treatment in rural areas. In Malaysia access to treatment is limited to the essential drugs, which does not contain cancer drugs. KOLs in Philippines and Thailand stated that clinical trials were the sole source of access to targeted therapy. However, KOLs in China, India and Thailand also mentioned that other types of cancer therapy access programs exist in their countries. Patients' approach to cancer care differed between the countries. **Conclusions** The study confirms that access to cancer targeted therapy in developing countries is unstructured and extremely limited, especially in rural areas. Cancer drugs are not on most governments' essential drugs lists and they are unaffordable for the majority of the populations. Special access programs are helping to improve access to treatment. More detailed results will be presented at the conference.

O-156 'VOICES FROM THE GRASSROOTS'

R. Biyani *HIGH WAYS INFINITE, Founder Director and Managing Trustee*

Abstract Background: The voices from the grassroots is presented to bring about the required bridging for true cancer control The author is a Breast Cancer Survivor and professionally a dental surgeon. Her pioneering projects HIGH>>>WAYS... INFINITE, Project HIGH>>>WAYS... 2006, and HIGH>>>WAYS... BEYOND CANCER - are directed towards educating various communities on cancer awareness, education, preventive and supportive measures across India. **Objectives:** Empowering people and Impacting lives across the continuum of cancer thus Bridging grass root and enabling them become ambassadors on cancer control. peripheral areas to the experts and resources, to enable prevention, early detection and thereby save lives. **Methods:** A borderless movement is designed to reach out to people: from tribals to technos, pan India, and connect those in need to those who can solve. **Results:** o Traversing through the myriad geographical, cultural and complex socio-economical web of India, over 60,000 people are educated o through 380 cancer awareness workshops. o Driving across 66,000kms, has resulted in reaching out to the hard-to reach audience from tribal belts, villages and small towns even in many tough to communicate areas. **Conclusion:** o Such projects serve the dual purposes of providing much needed info to remote populations about different types of cancer, and to highlight the importance of increasing support for cancer prevention to end of life care and supportive care. o An eerie imbalance is felt between the rate of awareness and the subsequent next steps eg. screening, treatment, trainings and updating o Bridging the vast grassroots to the resources, technologies, and expertise.
