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POSTER

Perceptions about breast cancer in high school students in Mexico City

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Background: Breast cancer is the second most frequent neoplasia in women in Mexico, behind cervical cancer. Many studies exist that show that unknowledge of risk factors and early detection measures are some of the most important factors in the delayed diagnosis of breast cancer. In the last 5 years Mexico have had a huge campaign of information on media on charge of central government, NGOs and the own media, which apparently has increased the knowledge of general population in regard to early detection of breast cancer. Tomas Alva Edison School is a private high school attempting to increase the interest of the students in science since their early ages, creating deals with different centers to develop research that will give some help to the populations. This project has been created and developed for a team of high school students with support of a teacher and researchers of the Instituto Nacional de Cancerología (National Cancerology Institute-Mexico) in Mexico City to evaluate the knowledge and perceptions of breast cancer in urban high school students.

Material and Methods: We applied questionnaires face-to-face to 11th- and 12th-grade high school students from public and private schools. Our perspective was that private school students would have a better perspective of breast cancer than public school students, allowing us to find opportunity areas to teach about cancer.

Results: We interviewed 330 students from private schools and 348 from public schools, 36% male, 64% female (without statistic difference), mean age 17.8 y-os (14 to 25 years-old). Statistical differences are listed in the table.

	Public schools (%)	Private schools (%)	p value (χ^2)
Family history of cancer in general	35	60.6	<0.001
Perception of high breast cancer incidence in Mexico	95.1	85.7	<0.001
Knowledge of breast cancer risk factors	72.4	57.5	<0.001
Monthly self-examination (male/female)	39.3	22.7	<0.001
Monthly self-examination (only female)	56.3	29.4	<0.001
Knowledge of mammography indications	29.8	48.4	<0.001
Desire to know more about this issue	92.5	76	<0.001

As additional data we found that 68% in both groups have familiar open communication about sex and health issues like cancer, 74% know that exist breast cancer in male and 95% read routinely newspapers and magazines.

Conclusions: According to our results, high school teenagers have a medium level of knowledge about breast cancer, so we need to encourage the publication of cancer and other health issues in media in general. We plan to develop a pamphlet to enhance knowledge about the topic since 7th grade and apply the questionnaire in county population of the same education level to develop a national program.

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Radiodermatitis affects more than a half of cancer patients submitted to radiotherapy, hence skin support measures mainly with urea are now widely recommended. The ESPI project

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Background: To assess the profile of the patient submitted to radiotherapy (RT) for cancer in Spain.

Materials and Methods: Epidemiological survey in patients treated with RT for cancer in Spain, recruited by 110 investigators from 54 centers covering nearly all the country.

Results: A total of 1798 patients were registered; 56.4% [CI95%: 54.1–58.7] women and 43.6% [CI95%: 41.3–45.9] men. Mean age was greater in men (63.5 [CI95%: 62.6–64.4] years vs 57.0 [CI95%: 56.2–57.8]

years; $p < 0.001$). Among men, cancer types most frequently seen were ORL (28.9%), prostate (27.2%) and lung (10.0%) tumors; whereas in women, breast cancer was the most frequent (77.4%). A 67.1% of patients had been submitted to surgery, most (96.6%) prior to RT. A 57.2% received chemotherapy (CT), 56.4% of them prior to RT, 34.0% simultaneously to RT, 1.6% after RT and 8.1% in several therapy phases. Hormone-therapy was only given in some types of cancer, 67.7% of breast cancers and 61.2% of prostate cancers. Globally, 52.1% of patients showed radiodermatitis (26.0% grade 1; 16.2% grade 2; 5.5% grade 3 and 1.3% grade 4). This proportion varied notably if patients who had also been submitted to CT (60.7% vs 39.3%, $p = 0.001$; O.R.: 1.37 [CI95%: 1.13–1.66]). Skin support measures were recommended to most patients: primary prophylaxis (40.2%), both primary and secondary prophylaxis (41.8%) or secondary prophylaxis (10.8%) whereas only a 7.7% of patients were submitted to RT without skin support measures. Prescribed products were mainly skin creams specific for RT, most containing urea.

Conclusions: Main cancers submitted to RT are ORL and prostate tumors in men and breast cancer in women. More than a half of patients submitted to RT suffer radiodermatitis being this risk even greater if chemotherapy is also given. 92% of patients are prescribed with skin support measures as primary and/or secondary prophylaxis in Spain. The products used are specific for RT, being Urea the must prescribed principal ingredient

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Recent Czech study on lung cancer risk from radon and smoking

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Background: For a number of countries, including the Czech Republic, environmental exposure to radon is the second most important cause of lung cancer in the general population after cigarette smoking, the aim of the study is to quantify the risk from radon in Czech houses and to assess combined effect from radon and smoking.

Materials and Methods: The presentation is based on two studies. One among patients of a major Prague hospital (77 cases, 155 hospital controls) and the other among inhabitants of a radon prone area of central Bohemia (218 cases, 870 population controls). Radon measurements in these studies were based on passive alpha track detectors exposed for 4 and 12 months in the current home, respectively. The statistical assessment of the study was based on logistic regression and allowance was made for potential confounders (like age, gender, or smoking).

Results: The analysis is based on a total of 295 cases of lung cancer and 1025 control subjects. As expected, mean radon levels among cases and controls are significantly different in both studies (hospital based study: 115 and 84 Bq/m³, central Bohemia study: 519 and 493 Bq/m³). The relative risk of lung cancer by exposure categories shows significant trend overall ($p = 0.008$) and in each study ($p = 0.028$ and $p = 0.046$). The excess relative risk per unit exposure to radon is not substantially changed when additional adjustment for pack-years of smoking is included in the risk model.

Conclusions: The combined effect from radon and smoking is less than multiplicative, but more than additive. Supported by the Internal Grant Agency of the Czech Ministry of Health (NR 8411–3).

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POSTER

Treatment costs of skeletal-related events (SRE) in patients with metastatic breast or prostate cancer

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Background: Pathologic fractures, spinal cord compression, surgery or radiation therapy to bone and tumour-induced hypercalcemia are common skeletal-related events (SRE) from breast (BC) and prostate (PrC) cancer metastases. SRE have major impact on patient's morbidity and mortality and are responsible for extensive health resource utilization (HRU). This study was designed to evaluate SRE-related direct hospital costs in Portuguese patients (pts) with BC or PrC and bone metastases.

Materials and Methods: We conducted a retrospective hospital clinical chart review cost analysis in pts with BC or PrC cancer and at least one SRE within 12 months prior to study entry. SRE treatment costs were calculated by multiplying resource utilization frequency (hospitalization, diagnostic tests, clinic visits, drugs) by the corresponding unit costs from the Portuguese Ministry of Health costs database. Generalized linear models with gamma distribution and log link were used to explain costs variability.

Results: A total of 152 pts (121 BC, 31 PrC) from nine hospitals were included. Radiotherapy (73.2%) and pathological fractures (13.7%) were

the most common SRE. Others were spinal cord compression (6.0%), surgery to bone (1.6%), and tumour induced hypercalcemia (5.5%). The estimated 12 months SRE-related cost per patient was 5,963€ (SD 3,646€) for breast and 5,711€ (SD 4,345€) for prostate cancer. Hospitalization and drugs account for more than 70% of the total SRE costs for both cancers. Cost per type of SRE was: spinal cord compression (13,203€), pathologic fracture (8,730€), tumour induced hypercalcemia (3,008€) and radiation therapy to bone (1,485€). Modelling SRE total costs controlling for pts clinical characteristics showed no differences by age, cancer type or performance status. Excluding the costs of bisphosphonates, SRE costs for BC pts treated with pamidronate were 1.8 [95% CI: 1.3–2.7] times higher than for BC pts treated with zoledronic acid.

Conclusions: The costs of SREs in pts with BC and PrC and bone metastases are substantial. Overall, SRE costs were lower for zoledronic acid treated BC patients.

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Cancer registry in Iran

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Background: In order to undertake any cancer control program, it is necessary to understand the incidence and burden of cancer in a community. For this purpose it is essential to collect and classify information on all cancer cases, and to provide a framework for assessing and controlling the impact of cancer on the community. Cancer registry program in Iran was based on three resources of information including pathological report, hospital records and death certifications. This study aimed to set up a registry system for all cancer cases in Iran based on laboratory data (which seems to contain at least seventy percent of total cancer cases) and death registry system.

Materials and Method: A comprehensive search was undertaken to survey and register all cases of cancer during a year (2003–2004) among the indigenous population of Iran including subject's specimens and death certifications in the 39 states. From all 625 pathology centers, 584 reported us their cancer cases according to ICD-0. Registries collected information on every new diagnosis of cancer from laboratory based cancer registry and death certifications. Collected data from all states was referred to Center for Disease Control (Cancer Control Office) and reclassified according to ICD-0.

Results: A total of 38468 cancers were found during the study. Of these 21619 (56.2%) were in males. The top 6 cancers in both sexes were skin (15.7%), stomach (11%), breast (10.5%), colorectal (7.2%), bladder (7%) and esophagus (5.9%). Excluding skin cancer, gastric cancer was the commonest cancer except two states. Gastric cancer is 2nd and 4th common cancers in male and female respectively. ASR (age-specific incidence rates) for gastric cancer in Iran was 11.4 for male and 5.2 for females. According to our findings there were not any significant differences in distribution of both Gastric and colorectal cancer in states. But the rate of esophageal cancer in the North of Iran was higher. R Breast cancer was the most common cancer among females and its ASR was equal to 15.9. Regarding to causes of death in this period of time, gastric cancer was the most common cause of cancer related death. Colorectal and esophageal cancers were 6th and 7th causes respectively.

Conclusion: That Age-specific incidence rates rise continuously in both males and females and regarding to improvement of life expectancy and life style in Iranian population, further consideration about the data collection, prevention and public education is needed. Furthermore after adding other resources of information (including hospital records) to our samples, we can estimate true incidence of all types of cancer in Iran.

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Inheritance patterns and clinico-pathological features in syndromic and non syndromic familial cancers in ethnic Indians

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Background: The true burden and spectrum of familial cancers and associated syndromes is largely unknown outside North America and Europe. We report the Inheritance patterns and Clinico-pathological features in Syndromic and Non Syndromic Familial Cancers (FC) seen in Ethnic Indian families registered in the cancer genetics clinics (CGC) at Tata Memorial Hospital, one of the largest cancer referral centre in Asia.

Methodology: A total of 295 families with a significant family history of cancer or a known cancer syndrome were seen at the CGC from January 2003 to March 2007. Significant family history was defined among cancer

affected probands (n=234) as one or more first degree relatives with cancer and in healthy consultands (n=61) as two or more cancer affected relatives with at least one being a first degree relative. Details of geo-ethnic background, consanguinity and reproductive history were recorded. After proper counseling and consenting, DNA from peripheral blood lymphocytes was banked for mutation analysis.

Results: The pattern of inheritance was considered to be autosomal dominant in 167 families (Hereditary breast/breast ovarian cancer – 127, hereditary colorectal cancers [HNPCC/FAP] – 4, Li-Fraumeni Like – 15, Neurofibromatosis – 12, Tuberous Sclerosis – 5, VHL – 2, Retinoblastoma – 2); autosomal recessive in 14 families (XP – 11; Oculocutaneous albinism – 3), non-syndromic miscellaneous familial cancers in 90 and various other rare syndromes such as Gorlin's, MEN, familial Wilms' or testicular cancer in 6 families. In the remaining families it was not possible to ascertain the mode of inheritance due to insufficient details. Among primary tumours seen in probands, 52% had carcinoma breast, 2% had ovarian, 11% had head and neck carcinoma while 35% had tumors at other sites. HNPCC/FAP seem to be under reported due to simultaneous registry maintained separately in the hospital. Mutation analysis of BRCA1/2 and XP has been recently initiated and the results would be presented.

Conclusion: The study highlights the burden of hereditary cancers in ethnic Indian population and the need for specialized genetic services. With almost 20,000 new cancer cases being registered in our hospital, this modest number of cancer families registered in CGC suggests gross under reporting and under referral. It underscores the need for increasing awareness among clinicians and high risk population, developing pragmatic screening policies for high risk individuals and providing quality assured and affordable mutation analysis.

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POSTER

Types of tobacco usage in oral cancer patients- hospital based cohort from south India

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Background: Tobacco is the most common addiction all over the world, and the leading member in the list of carcinogens. The global scenario is complicated by the dependency of people, both addiction as well as a part of their revenue and the panorama of its ill effects. Tobacco generates about 7,964 crores annually but spends for treatment of tobacco-related diseases is about 27,661 crores annually (WHO)!. Since its entry, till World War I, cigarette represented a small proportion, but from then over next five decades, it became the dominant form of tobacco. From 1995, cigarette consumption declined dramatically. Though it is a good sign, the other side of coin that is worrying is an increased trend in other forms as well as higher numbers of females and young population joining the list of consumers.

Methods: It is a hospital based cohort study where a standard questionnaire was used to enquire regarding the methods of tobacco usage in patients with oral cancers. The Kidwai Memorial Institute of Oncology is a tertiary care cancer center with an approximate attendance of 15,000 new cases and referral center having catchments area of four major states in India.

Results: The dominant form of tobacco usage in oral malignancies is Bidi (popular form of smoking in low socio economic population; 75% alone as well as in combination), followed by chewable tobacco (55% alone as well as in combination) and cigarettes (35% alone as well as in combination). Majority of the population (40%) used more than one form of tobacco. Majority of the patients belong to lower (70%) and middle (15%) economic groups. The literacy rates are low (50% illiterates, 25% only primary education). The average income spent on tobacco by each family is Rs 450/month in low socioeconomic group (average per capita income of <1,000) and is in similar proportions in middle income group also.

Conclusion: Tobacco is still the leading carcinogen in our population. Cancer patients tend to consume more than one form of tobacco. The amount spend on tobacco is alarming as well as the burden to treat cancers caused by it also.