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# Table of Contents

## Original Articles

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pattern of Karyotypic Aberrations in Pakistani Patients with De Novo Acute Myeloid Leukemia</td>
<td>Syeda Alia Abbas, Sadia Sultan, Sana Ashar, Syed Muhammad Irfan</td>
<td>06</td>
</tr>
<tr>
<td>Tinospora Cordifolia Induces Cell Cycle Arrest in Human Oral Squamous Cell Carcinoma Cells</td>
<td>Parveen Bansal, Manzoor Ahmad Malik, Satya N Das, Jasbir Kaur</td>
<td>10</td>
</tr>
<tr>
<td>Detection Mutations of JAK2 exon 12 in Patients with JAK2 (V617F)−negative Myeloproliferative Disorders</td>
<td>S. Z. Makani, N. Parsamanesh, S. Mirzazahmadi, M. Hashemi, F. Shaveisi–Zadeh, N. Mansouri, M. Ghazi, A. Movafagh</td>
<td>15</td>
</tr>
<tr>
<td>Hepatocellular Carcinoma Peritoneal Metastasis: Role of Cytoreductive Surgery and Hyperthermic Intraperitoneal Chemotherapy (HIPEC)</td>
<td>John Spiliotis, Georgios Nikolaou, Nikolaos Kopanakis, Dimitra Vassiliadou, Alexis Terra, Elias Efthathiou</td>
<td>20</td>
</tr>
<tr>
<td>The Effect of Dose–Volume Parameters on Central Nervous System Relapse in Pediatric Patients with Acute Leukemia Receiving Prophylactic Cranial Irradiation</td>
<td>Zeliha Guzeloz, Ayse Nur Demiral, Fatma Eren, Mehmet Adigul, Ahmet Ergin Capar, Handan Cakmakci, Sebnem Yilmaz, Ozlem Tufekci, Hale Oren, Riza Çetingoz</td>
<td>24</td>
</tr>
<tr>
<td>Long–term Results of Post–operative Pelvic Image guided Intensity Modulated Radiotherapy in Gynecological Malignancies</td>
<td>Rashi Agrawal, Sowmya Prithiviraj, Dinesh Singh, Vaishali Zambre, Sandeep Agrawal, Arun Kumar Goel, Kanika Gupta, Bala Subramanian</td>
<td>30</td>
</tr>
</tbody>
</table>

## Case Reports

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Giant Primary Sinonasal Mucosal Melanoma: A Rare Malignancy</td>
<td>Mehtab Atam, Mohd Aslam, Piyush Kant Singh, Shahab Farkhund Hashmi, Syed Abrar Hasan</td>
<td>43</td>
</tr>
<tr>
<td>Sarcomatoid Carcinoma of the Maxilla: A Case Report with Literature Review</td>
<td>Lahcen Khalfi, Yasmin Ziani, Mouna Kairouani, Odry Agbessi, Mohammed Kamal Fiqhi, Alee Guerrouani, Karim El Khatib</td>
<td>48</td>
</tr>
<tr>
<td>Neuroendocrine Carcinoma of Gall Bladder: A Rare Presentation with Review of Literature</td>
<td>Amit Gupta, Parvez Ahmed, Prashant Durgapal, Pooja Kala, Shalinee Rao, Rajesh Panichua, Sanjeev Misra</td>
<td>51</td>
</tr>
<tr>
<td>Clear Cell Variant of Calcifying Epithelial Odontogenic Tumor: A Rare Clinical Entity</td>
<td>Husain Sabir, Subhash Kumbhare, Saurabh Redjhi, Namrata Gajbhiye</td>
<td>55</td>
</tr>
<tr>
<td>Breast Adenoid Cystic Carcinoma: A Rare Case</td>
<td>Lamiae El Amarti</td>
<td>66</td>
</tr>
</tbody>
</table>

## Review Articles

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial Pollutants and Nasopharyngeal Cancer: An Open Question</td>
<td>Roberto Menicagli, Gianni Bolla, Laura Menicagli, Anastassia Esseiridou</td>
<td>70</td>
</tr>
</tbody>
</table>

## Conference Highlights/Scientific Contributions

- Highlights of the 1st Combined Gulf Cancer Conference, Cancer Awareness: Reality and Ambition, 2–3 April 2017, Kuwait | 75   |
- News Notes                                                                                                         | 84   |
- Advertisements                                                                                                      | 88   |
- Scientific events in the GCC and the Arab World for 2017                                                          | 89   |
DAY 1 – SESSION 1
2 APRIL 2017 | 10:00 AM–11:20 AM

Role of Early Cancer Detection in Cancer Control in EMRO
Dr. Asmus Hammerich, WHO–EMRO

- Cancer constitutes a huge public health problem in the Region and cancer incidence is increasing. By 2030, EMRO will have the highest relative increase among all WHO regions.
- Six risk factors (smoking, alcohol, BMI, salt consumption, infections, air pollution) account for about 30% of cancer burden in EMRO.
- Cancer survival rates in the region are relatively low; early detection strategies would improve these; treatments are more effective when detected at an early stage. There are challenges for early detection in EMRO due to low participation and lack of awareness.
- WHO–EMRO has developed a framework for cancer control with recommended interventions and monitoring indicators in the areas of governance, prevention, early detection, treatment, palliative care and surveillance.
- While screening programmes have considerable resource and health systems requirements, early diagnosis programmes can be implemented by all countries within the region.
- WHO–EMRO is monitoring country progress on prevention and early detection.

Cancer Awareness Campaign in the GCC countries
Dr. Saleh Al Othman, KSA

- Cancer prevalence in GCC from 1998 to 2012 was 83 per 100,000 and expected to double by 2030. The age specific incidence revealed that higher incidence is around the age of 50 years.
- In males, colorectal cancer has the highest incidence rate followed by lymphoma while in female breast ca was the first followed by thyroid.
- Unfortunately, 56% of cancer cases in the GCC are diagnosed at later stages in spite of improving the health facilities over the last 15 years. In 2013, the risk factors were estimated with aging in addition to life style and smoking was the most prevalent factor. Smoking prevalence in GCC was higher than worldwide rate. Kuwait had the highest level followed by KSA. Obesity had similar values.
- To solve the problem, in 2014, the cancer awareness campaign in the GCC gave recommendations through adopting increasing public awareness, encouraging healthy life style and screening tests.

Profile of Cancer in Kuwait
Dr. Amany Al Basmi, Kuwait

- Kuwait Cancer Registry is one of the most well established cancer registries in the area and worldwide. Kuwait Cancer Registry was established in 1971 in the Radiotherapy Department at the Al–Sabah hospital. The initial purpose of the registry was to a) study the incidence and morphology
of cancers in the Kuwaiti population b) use this information as the basis for establishing a comprehensive cancer center for diagnosis, treatment, follow-up and care of cancer patients.

• Subsequently, the Kuwait Cancer Control Centre (KCCC) was established in 1982 and the registry became a separate department of the hospital.
• Between 2009 and 2013 cancer was responsible for 40/100,000 cause specific mortality.
• In Kuwaiti males, lung cancer prevalence was highest from 1974 to 2003; then prostate started to be the highest due to improvement of screening programs. While in female, breast cancer was the highest followed by thyroid and colorectal cancer.
• In Kuwaiti males, cancer related mortality rates were higher due to lung cancer followed liver and colorectal cancer. In females cancer related mortality was higher for breast cancer followed by female genital cancers and colorectal.
• In 2013, 2,233 new cancer cases were recorded in the Kuwait cancer registry database. 1069 cases occurred among Kuwaiti (Male: Female ratio was 73: 100). 1164 cases occurred among Non–Kuwaiti (Male: Female ratio was 100: 94). Four percent (4%) of new cases in 2013 were children. Cancer is the second cause of death in Kuwait after cardiovascular diseases
• Breast cancer (women), prostate cancer (men) and colorectal cancer (men and women) are the main cancers diagnosed in Kuwait
• Breast cancer represented ¼ of all cancer cases
• Breast, colorectal, hematologic, thyroid, LN, lung and prostate malignancies account for 62% of all cancer cases
• Kuwait ranked the first among gulf countries in breast, colorectal cancer and leukemia
• Kuwait cancer registry is expecting the number of cancer cases in 2029 to be 520 and 750 for males and females respectively
• The ASIR in 2029 is expected to be 140 cases/100,000 population
• 75% of Kuwaitis (world survey study) had BMI above normal limits. The most frequent cancers in Kuwait are largely preventable.

Changing Pattern of Cancer in Oman

Dr. Bassim Al Bahrani, Oman

• There was an increase of 50.4% in the total cancer incidence cases in 2012 (n=1212) compared to 1996 (n=806). When comparing the most common cancers among female, female breast cancer has increased significantly (n=341) in 1998–2002, (n=457) 2003–2007 and (n=671) 2008–2012.
• There was an increase of 50.4% in the total cancer incidence cases in 2012 (n=1212) compared to 1996 (n=806). Colorectal cancer (CRC) has shown an increasing incidence among both males and females, which now became the second common cancer in men and third in women in the period 2008–2012.
• There was an increase of gastric cancer incidence during 1998 – 2002 period but has been decreasing. There was an increase of 35% in 2012 compared to 1996.
• Numerous environmental risk factors, principally changes in diet and lifestyle, are expected to trigger the rise of CRC in Oman. The information from these studies may have important implications on the screening, prevention, and diagnostic and management strategies of CRC in Oman.

DAY 1 – SESSION 2

2 APRIL 2017 | 12:20 PM –1:30 PM

NGO experience in awareness field

• Participation of NGO representatives from Kuwait, UAE, Qatar, KSA, Bahrain and Yemen.
• The participants mentioned their activities in the field of awareness, patients and family, psychic, social and financial support. In addition, special aspects to support children with cancer.
• Their most important activities include a) the establishment of Palliative Care Centre in Kuwait by CAN campaign b) Zahra screening program for breast cancer and Sanad campaign for support of children with cancer in KSA c) Bahrain Cancer Society supporting early detection and cancer prevention in Bahrain d) Fun car for children with cancer in UAE e) Qatar cancer society and its role in colorectal screening in Qatar f) Oman Cancer Association for supporting cancer patients, cancer awareness and early detection in Oman.
Public Awareness Level and Response to Breast Cancer Screening
Dr. Ibtihal Fadhil, New Zealand

- Breast cancer is the most commonly diagnosed malignancy in women and second leading cause of death among EMRO women. It is also responsible for rising incidences of morbidity and mortality in EMRO. By 2030, the annual number of breast cancer cases and deaths are projected to be around 169,100 and 74,200 respectively in the region. It is essential that the basic underpinning of breast cancer early detection in the Region should be public and professional.
- Countries that have introduced mammography screening seem to have made little impact upon this picture, largely because their attempts at education on the curability of breast cancer and prevalent myths on breast cancer have not been sufficiently addressed. There are knowledge gaps in the population about the relative importance of breast cancer early detection.
- National Programs: Limited national breast screening programs in many countries of the EMRO. Even where these programs have been initiated, there is a need to have standard criteria for success of screening and documentation on participation of asymptomatic cases in screening programs.
- In several countries in EMRO screening is recommended at far younger ages than would normally be recommended in the West resulted to waste of overstretched resources and jeopardize the success of screening programs.
- Given the significant role of national NGOs in early detection and breast cancer screening, it is essential to galvanize on this role and establish a better coordination between MOH and other national NGOs.

Environment and Cancer Prevention
Dr. Harri Vainio, Kuwait

- Ambient air pollution contributes substantially to the disease burden that has increased during the past 25 years. This increase reflects both the trends in population aging and NCD rates and increasing levels of air pollution. Air pollution is either due to indoor and outdoor causes.
- Particulate matter (PM) is described as a wide variety of airborne material. PM pollution consists of materials (including dust, smoke, and soot), that are directly emitted into the air or result from the transformation of gaseous pollutants. Particles come from natural sources (e.g., volcanic eruptions) and human activities such as burning fossil fuels, incinerating wastes, and smelting metals. PM causes inflammation of lung tissue, resulting in the release of chemicals that impact heart function. It can also cause changes in blood chemistry that results in clots that can cause heart attacks. Many sources of outdoor air pollution are diesel engine exhaust, coal smoke emissions, wood smoke emissions, polycyclic aromatic hydrocarbons (PAH) environmental tobacco smoke and benzene.
- Smoking is considered as an avoidable deadly indoor pollutant that contains 7000 chemicals; 70 of them are known carcinogenic in addition to its relation to other diseases as cardiovascular and other respiratory diseases.
- There is a potential for considerable health benefits because reductions in exposure affect the entire populations.

Cancer Awareness in the Age of Social Media: Let’s take a selfie!
Dr. Dana Mansour, Qatar

- The increasing rates of cancer cases is a serious public health challenge. Improving the public awareness about risk factors, warning signs, preventive measures, screening options, and treatment modalities are considered as essential elements in encouraging individuals to adapt a healthy life—style as a first step to fight cancer.
- In 2015, the Arab Social Media Report stated that social media had exhibited an exponential penetration into the daily lives of individuals, the operations of businesses, and the interaction between governments and their people. Social media services, are now frequently utilized on a large adoption rate by the public to address health—related issues especially in Gulf Cooperation Council (GCC).
- This paper aims to provide an overview on the available evidence concerning the use of social
media platforms in cancer awareness campaigns in GCC.

- A literature search was conducted between 2010 and December 2016. The keywords and the search were limited to articles in English and Arabic describing the use of social media platforms in cancer awareness campaigns in GCC. Reference list of the reviewed articles has been searched for additional eligible references.
- About 500 studies have been identified in the initial search. Thirteen articles have been deemed eligible, four from Qatar, two from Saudi Arabia, four from Oman, Kuwait, UAE, and Bahrain.
- The majority of these studies discussed the importance of different media channels to increase public awareness regarding breast cancer. Few clearly identified the positive role of social media tools for raising public awareness about cancer.
- Apparently, social media networks have positively influenced the transfer of knowledge in GCC. However, Inaccurate and misleading information remains a significant disadvantage.
- The use of various social media platforms is variable across age, educational, and socioeconomic groups; therefore, cancer awareness campaigns utilizing social media should consider disparities of the targeted population to ensure the intended audience receive right messages.
- Moreover, further studies need to be done in GCC to investigate the uses, benefits, and limitations of social media in health promoting activities including cancer.

**DAY 1 – SESSION 4**

2 APRIL 2017 | 5:30 PM–7:00 PM

The Surgeon’s Role in Cancer Prevention

**Dr. Ibrahim Al Sheneber, KSA**

- Cancer is the second most common cause of death in developed countries. Annually, 1/3 of men and ¼ of women in developed countries will be diagnosed of cancer. Surgery can be a preventive tool to cancer development. It could be primary (preventing cancer development), secondary (diagnose cancer before symptoms and signs) or tertiary (through improving survival and quality of life of known cancer patients).
- Surgery can work on risk reduction (as in cases of bariatric surgery with the general outcome of low CRC, esophageal, renal and endometrial cancer). It could also prevent cancer through removal of premalignant lesions. In addition to prevention of hereditary cancer as in prophylactic mastectomy in BRCA mutation and prophylactic thyroidectomy for MEN syndrome. Liver transplant for cirrhotic liver (80% of HCC are known to have cirrhotic liver).
- Prophylactic colectomy in persons with FAP (they have about 100% risk of development cancer colon). Also testicular excision for undescended testis is a preventive tool for development of testicular carcinoma later in life.

Mind the Gap in Primary Health Care Services to Prevent and Control Cancer in GCC Countries.

**Dr. Amin Bawazir, Yemen**

- Primary health care is the first level of contact between individuals, families and communities with the health care system. Greater access to care will be reflected on better quality of health services, a greater focus on prevention than treatment, early detection and prompt intervention role of PHC in reducing unnecessary harmful specialist care.
- In spite of the important role of PHC, studies on PHC services showed the poor involvement of the PHC centers in activities related to prevention, early detection or palliative care. Most of the activities related to prevention were given to the non–governmental organization with no clear integration with the ministry of health activities and plan.
- Despite the growing burden of cancer in GCC countries, the given attention to primary health care role is still far from what should be done, if strategic achievements in cancer control and prevention were needed to be achieved in the near future.
- The lecturer finally recommended to: Empower the role of PHC services in early detection and prevention. To integrate patient–centred approach between primary, secondary, and tertiary healthcare services and to ensure efficiency and maximal use of PHC resources.
- Bridging the gaps is needed to achieve high quality PHC services.
Impact of Body Mass Index, Fast Food on Clinical Outcome of CRC in Oman
Dr. Bassim Al Bahrani, Oman

- The incidence of colorectal cancer (CRC) is increasing in Oman. CRC is the second most predominant cancer among men and fourth most cancer among women in Oman according to 2013 epidemiologic data.
- Increasing prevalence of obesity and its association with cancer risk and prognosis have vital importance in public health. Large prospective studies have identified obesity as a risk factor for developing CRC.
- The growing burden of CRC is attributed to dietary factors. Fast food chains are linked with a higher body mass index (BMI), less effective weight loss efforts and unwanted weight gain.
- The aim of this study is to assess the impact of fast food, high meat and poultry consumption and subsequent obesity on the Clinical Outcomes CRC in Oman. CRC patients treated at the Royal Hospital were retrieved from electronic medical records and Oman cancer registry between 2000 and 2013. BMI was used as measure of obesity.
- Correlation of number of cases was done in relation to residency areas. Area with no fast food chains has low obesity rate and low CRC Incidence. 57.3% of CRC patients were young and middle age obese and overweight with Mean BMI of 26.3.

Role of Social Work on Awareness Programs in the Cancer Field
Dr. Hanaa Faize, Egypt

- Cancer is one of the leading causes of death in developed countries and the second leading cause of death in developing countries. Awareness and knowledge of the dangers of cancer, cancer screening and early detection can reduce the risk of cancer–related deaths. Awareness is the ability to directly know and perceive, to feel, or to realize events. More broadly, it is the state or quality of being conscious of something.
- Social workers can take the lead in development of clear protocols for care transitions that will ensure continuity of care and positive quality of life outcomes. Cancer challenges not only the body, but also the mind and spirit. That’s why we partner with patients during each stage of their care process—from diagnosis through treatment, and beyond—to provide them with excellent, comprehensive, integrated care.
- The role of the oncology social worker is to help patients, families, and caregivers deal with the experience of facing cancer. Social workers are educated and skilled to assist with the psychological, social, emotional, and spiritual issues that people have to deal within oncology. They are there to help people with practical needs, like finding resources in the institution and the community, and with such complex needs such as adjusting to an illness, dealing with transitions and decision—making, navigating cultural issues, and communicating with family members, friends, and health care providers.
- Oncology social workers are becoming more involved in research, designing, conducting, and leading studies that aim to advance knowledge that ultimately will help improve people’s quality of life.
- The goals of oncology social work are to facilitate patient and family adjustment to the diagnosis and treatment of the disease; to promote psychosocial recovery and rehabilitation for both patient and family; and to facilitate utilization of health–care resources. Increasingly, oncology social workers are expanding their role into the non–pharmacologic management of cancer pain by collaborating with psychiatrists, clinical nurse specialists, and resort to spirituality.

DAY 2 – SESSION 1
3 April 2017 | 9:00 AM – 10:40 AM
Cancer Prevention: What works and what should be done in Kuwait?
Prof. Elisabete Weiderpass, Finland

- In 2012, 14.1 million new cancer cases were diagnosed and 8.2 million cancer deaths worldwide and 32.6 million people living with cancer.
- 57% of new cancer cases and 65% of the cancer deaths were in the less developed regions. The most commonly diagnosed cancers worldwide lung (1.8 million), breast (1.7 million) and colorectal cancers (1.4 million).
- In Kuwait in 2012, for men: Most common incident cases were diagnosed with colorectal (13%), prostate (13%), NH (10%), leukemia (9%) and lung (9%). For women: Most common incident cases
Highlights of the Conference

were diagnosed with breast (39%), colorectal (11%), thyroid (7%) Leukemia (6%).

- Cancer rates increased dramatically during the last 33 years. Colorectal cancer increased by 5 fold in men and 4 fold in women. Breast cancer in women increased by 3 fold. Prostate cancer increased by 3 fold. NHL and leukemia increased by 2 fold. Some of the differences in cancer rates over the last 33 years are likely to be attributable to the variation in exposure to specific etiologic factors that are caused by differences in lifestyle and habits, such as dietary, physical activity and obesity.

- To solve this problem, the author advised for the big 7 of cancer prevention in Kuwait: 1) Don’t smoke or chew tobacco in any form 2) Keep your weight in the healthy range 3) Be physically active 4) Drink little or no alcohol. 5) Eat a healthy and varied food 6) Avoid chronic infections/ use of vaccines. 7) Get regular screening for breast and colorectal cancers.

Circulating Long Non–Coding RNAs
Act as Molecular Biomarkers for Colorectal Cancer

Dr. Halima Siddiqui, KSA

- Colorectal cancer (CRC) recorded the third most common cancer and the fourth cancer leading to death globally. In KSA, CRC represents the first and the third most common cancers among males and females, respectively.

- Mostly CRC diagnosed at late stage, when metastasis takes place and spreads in other part of body. Discoveries of new biomarkers will fuel the development of novel drug targets and new treatment strategies. Recent studies suggest that alterations in CRC by epigenetic factors occur more frequently than genetic alterations.

- Recently, Long Non–Coding RNAs (lncRNAs) become a potentially new layer of biological regulation since several of them were involved in diseases most notably cancers. In tumor cells, lncRNAs have role in regulating gene expression at the epigenetic level, as well as in differentiation, proliferation, invasiveness and apoptosis.

- The study aimed to measure the expression of selective oncogenic lncRNAs (PANDAR, MALAT1, PCAT6, CCAT1, UCA1, MEG3, CCAT2 and BCAR4) in the blood of CRC patients. Then to correlate the tested lncRNAs, which showed significant expression if any, with the tumorigenesis of CRC such as stages, chemo–resistance, and survival rates.

- This study was performed on 100 male and female volunteers (40–70) years including 50 patients of CRC and 50 healthy persons. The study revealed that PANDAR and MALAT1 were significantly up–regulated in the blood of CRC patients and therefore, it might be used as a potential molecular biomarker for CRC diagnosis.

Breast Cancer: To screen or not to screen?

Prof. Elisabete Weiderpass, Finland

- Breast cancer prevention is difficult and most cases appear in women without obvious risk factors. Thus detecting and treating breast cancer earlier is advisable.

- Out of 10 breast lumps discovered by primary health care 9 are not cancer. However, still we advise for some preventive measures as: avoiding obesity after menopause, avoiding alcohol and smoking, having children earlier, avoid taking hormones at or after menopause.

- For successful early detection of breast cancer we need: Breast health awareness education, Reducing barriers to accessing care, Clinical breast examination (CBE) performed by primary care providers, Timely diagnosis of women with abnormal findings and stage–appropriate treatment to women with breast cancer proven by tissue diagnosis, If appropriate and feasible: screening of at risk population with CBE (clinical breast examination) or mammography.

- Breast cancer screening programs are promising for early detection and are affecting survival. On 2015, The International Agency for Research on Cancer published that there is evidence for the efficacy of screening in women: 10–35% mortality reduction among invited women aged 39–74 years at entry; 23% among invited women aged 50–69 years based on meta–analyses. The current recommendation on most of European countries is to start screening mammography by the age of 50.
Screening for Colorectal Cancer
Dr. Samar Alhomoud, KSA

- Colorectal cancer is having progressive increase of incidence and mortality in GCC. There was a 3.4 fold increase of incidence in males and a 2.1 fold increase in females between 1998 and 2009. By 2030 incidence is expected to be higher due to higher life expectancy, better detection and changes of life style.
- CRC is preventable so screening is important. Screening can be done through multiple tests as fecal DNA, occult blood in stool, virtual colonoscopy, colonoscopy and flexible sigmoidoscopy. Screening can lead to reduction of mortality by 43% and can decrease incidence by 33%. It is also cost effective as it can decrease the burden of morbidity and mortality of CRC.
- Still there are many barriers to screening such as ignorance, fear of painful procedure, family stigma of cancer, in addition to some challenges as limited resources, lack of awareness, lack of screening programs, and lack of clear guidelines.
- We need comprehensive strategies for CRC control program with cooperation of primary health care professionals, gastroenterologists, surgeons and radiologists.
- Primary prevention still an important milestone that needs public awareness towards adopting health lifestyle.
- National screening program is under implementation. We need to have regional guidelines based on the disease incidence and on our cultural aspects. We need to adopt integrated approach balancing prevention, early detection and cost effectiveness.

Cancer screening vs Primary prevention: Optimizing resources utilization
Dr. Mustafa Al Sherify, Kuwait

- According to the WHO, there were 14 million new cancer diagnoses in 2012 and it is expecting 22 million/year in the next two decades.
- Disease prevention could be achieved by reducing exposure of individuals to risk factors or by increasing their resistance to them, and thus avoiding the occurrence of disease. 30% of all cancers are PREVENTABLE by modification of the predominant risk factors.
- Primary prevention methods includes (but not only): Smoking cessation, Diet and lifestyle modification, Sun avoidance, Chemoprevention and Surgical prevention. There are many successful preventive programs that targeted smoking in France, Brazil, Mexico, India and Philippines.
- Primary prevention is ore beneficial, as it can: Prevent both cancerous and precancerous diseases; needs no investigations (invasive or non—invasive); may promote healthy life and prevent non—cancerous conditions (COPD, HTN, and IHD). But it is not attractive to MEDIA (no early detection of cancer cases to announce about).
- SCREENING (Early Detection): Prevent only Cancer but may treat non—cancerous lesions when detected. Based on investigation (some may be invasive in suspected cases as colonoscopy for CRC screening).
- In conclusion: Many screening programs are utilizing resources and cost. So we need to weigh the benefits to the resources. We need also to give more attention to primary prevention as an effective strategy for disease prevention.

The Role of Nutrition in Cancer Prevention: Separating facts from fiction
Dr. Mariam Abdulrahman, Kuwait

- Four major NCDs, including cancer, are responsible for 80% of all deaths worldwide, despite the clear link to lifestyle. There is evidence that cancer is rising internationally and nationally and will continue to rise in upcoming years. Global research shows that a 3rd of the most common cancers can be prevented through lifestyle modification, i.e. diet, regular physical activity, and maintaining a healthy weight.
- Through the food we eat, we can be exposed to some carcinogenic components such as aflatoxin (a fungus that could be found in milk and grains which is proven to be carcinogenic). In addition to arsenic, acrylamide that could be found in carbohydrate rich diet and having carcinogenic potential. High carbohydrate and sugar will be transformed into fat which increase the risk of cancers related to obesity. There is also proven relationship between consumption of processed
meat and development of colorectal cancer.

- Recommendation: Keep weight low within the healthy range, be physically active for at least 30 minutes every day, and sit less; Avoid high-calorie foods and sugary drinks which promote weight gain, eat more of a variety of vegetables, fruits, whole grains and legumes such as beans. Limit consumption of red meats (such as beef, pork and lamb) and avoid processed meats.

DAY 2 – SESSION 3

3 APRIL 2017 | 12:20 PM–3:00 PM

Breast Screening: Bahrain experience
Dr. Abdulrahman Fakhro, Bahrain

- The statistics confirmed that breast cancer is a major health problem in Bahrain. Hence, the MOH in Bahrain conducted a pilot study in the late 90s on 800 women of age > 40 years. The pilot study found that breast cancer is very common in the community, and this justified the implementation of Bahrain Cancer Society (BCS) National Breast Screening campaign. In June 2005 BCS has invited WHO experts to assess and review the Breast Screening Program in Bahrain.
- The Bahrain National Screening Program was launched in August 2005. The aim was for early detection and management of breast cancer for women aged 40 year and above, enabling earlier diagnoses for better treatment outcome and to reduce deaths from breast cancer through early detection. Only female personnel has been assigned to serve in the screening. Invitation letters has been mailed to each woman above the age of 40 years to do the screening mammography which is free of charge.
- Upon the completion of the Mammogram, two consultants/experts in breast mammography has to read the mammogram separately. If dispute is raised in image reading a third external consultant reading is done for final decision. Total sent invitations were 52,961 of them 24,880 women underwent screening. From this number 863 female were discovered to have breast cancer.
- Still there is need for more awareness and health education in addition to the need for more cooperation between the ministry of health and NGO to achieve the best results and goals of early detection.

Breast Cancer Screening: Kuwait experience
Dr. Hanaa Alkhawari, Kuwait

- In Kuwait, breast cancer is the most common female malignancy. In 2012, 420 breast cancer cases were recorded by Kuwait cancer registry which account for about 21.0 % of all cancers and 38.0% of cancers among females.
- One in seven Kuwaiti women will develop cancer by the age 75, which is attributed to the need for mammography screening program in Kuwait. It is a nation-wide, organized breast screening program that provides high quality breast screening services for women aged 40 and older. Launched in 2014 and provided in the 5 governorates of Kuwait. Program was held with support from Memorial Sloan Kettering Cancer Center (MSKCC) as part of a 2–year agreement with Ministry of Health, Kuwait.
- The program aim was to provide high quality services to meet international standards for early detection of small invasive breast cancer in asymptomatic women. The program targets women aged 40–69 yrs. screening services are delivered at 5 polyclinics, one in each of the 5 Kuwait medical health regions. These breast units, staff and equipment are monitored on ongoing basis by the main center which is situated in Al–Sabah medical health region.
- For screening, a strict role of age 40 years and above, Asymptomatic, No personal history of breast cancer and did not have a mammogram in the last 12 months.
- Coverage: participation rate: 10,277 screened which account to 6.2% of the total eligible Kuwaiti population.
- Positive Predictive Value: 8.2% of screened women with abnormal findings and 39.0 % after invasive workup were diagnosed with screen detected breast cancer after completion of diagnostic work up.
- Sensitivity: 98.5%, which is the proportion of women diagnosed with a screen detected DCIS and/or invasive breast cancer following completion of diagnostic assessment who had a positive screening test for breast cancer.
- Specificity: 99.9 % which is the proportion of screened women without a diagnosis of DCIS and/or invasive breast cancer who had a negative screening test for breast cancer.
Results of 2014–2016: DCIS detection rate was 1.6 per 1,000 screened women. For invasive breast cancer, the detection rate was 11.0 per 1,000 women screened. Stage I invasive breast cancer detection rate was 28.9%, stage 2 was detected in 41.0%, stage 3 in 13.3%, and stage 4 in 6.0%. Most of the screened females were of high education level and this will guide to make more effort to reach the women with lower educational level to implement screening programs in the near future.

Breast Screening: Saudi Experience
Dr. Fatima Al Tahan, KSA

- According to Saudi cancer registry on 2013, breast cancer is most common in Saudi females with incidence of 29%. It was responsible for 18% mortality among all cancer-related death. About 49% of the diagnosed patients were premenopausal. 60% of the diagnosed cases were at advanced stage.

- National Breast cancer Early Detection Program was implemented on 2013 and was aimed to reduce mortality related to cancer, improve quality of life and to reduce the economic burden of disease in KSA.

- The program adopted a strategy depending on education of the first line health care professionals so they can have a role in early detection by performing CBE, detecting early signs of BC and communication skills, Public/mass awareness, providing high quality early detection by MG & CBE screening mobile/fixed clinics.

- At the end of 2016, 45,000 women were screened with about 285 lives potentially saved with 90% chance of survival through early diagnosis.

- The short–term aim of the program (2016–2018) was to leverage underutilized mammography systems in MOH hospitals and female technicians across KSA, brought together by national comprehensive dedicated breast screening IT solution to enable Mammo–radiology (Radiologists).

- The long–term target of the program is to scale up the service in PCC and hospitals to cover the entire KSA along with the expected available referral centers in all regions.

Breast Screening: Qatar Experience
Dr. Shaikha S. Abushaikha, Qatar

- The State of Qatar has defined a long–term strategy known as Qatar National Vision 2022. The vision is based on 4 main pillars. One of the most critical pillars is the Human Development pillar. The health of the population and advancing their healthcare represent an integral part of Human Development.

- These elements are among the most important parts of life. Having a healthy population whose wellness is enhanced through an accessible, effective, and safe healthcare system is critical to the future success of Qatar.

- In Qatar in 2015, 248 new cases were diagnosed with malignant breast cancer, 6 of which were in males and 242 cases in females. Female breast cancer was ranked first among female malignant cancers with percentage of 39.41%. The cumulative risk is 7.4% that relates to the chance of a female to get malignant breast cancer during the age of 0–74.

- As the incidence was high, the primary Health Care Corporation (PHCC) was given the authority, under Qatar’s National Cancer Program, to implement the Breast and Bowel Cancer Screening Program nationwide.

- Screening Guidelines: Women 45–69 will be invited to screening. Screening will be performed every 3 years. If women have a normal screening mammogram, they are re–entered into the invitation system automatically to prompt new invitation in three years. If a women has an abnormal screening mammogram, they are referred to HMC (Hamad Medical Center) for assessment as appropriate. If HMC assessment is normal, the woman is returned to screening cycle.

- The targeted females are informed about the screening by direct invitation, direct referral from their physicians or through self–requesting. The program cooperates with cancer survivors. Their experience and sharing has a very positive effect, as they are a living example that early detection saves lives. In 2015–2016, 20,964 invitations were sent of which 6,504 females were screened. 744 female were discovered to have breast cancer and were referred for treatment. Further improvement on awareness and enrolling the targeted females in the screening program is in need to reach target in the near future.