

Cancer Care in the State of Kuwait¹



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Population Structure in Kuwait in 2012

The mid-year population of Kuwait in 2012 reached 3,806,643 individuals (Males 60% and females 40%). The Male to Female ratio was 1.5:1.

On one hand, Kuwaiti population totaled 1,195,806 (31.4%). Males represented 586,892 (15.4%), while

females represented 608,914 (16.0%). Male to female ratio was 1:1. On the other hand; Non Kuwaitis represented 2,610,837 individuals (68.6%) males were 1,696,261 (44.6%), while females totaled 914,576 (24%). Male to female ratio was 1.9: 1.

Cancer Incidence in Kuwait from 1974 to 2012

Cancer is one of the health problems in Kuwait. On average, one in eight Kuwaiti men and one in seven Kuwaiti women will develop cancer by the age of 75 (Kuwait cancer registry annual report 2000-2009, 2011). Furthermore, according to the most recent health statistics, cancer is recognized to be the second cause of death, accounting for one-fifth of all burdens in Kuwait (20.5 per 100,000 population) preceded only by cardiovascular diseases. (Health, Kuwait 2013, 2014).

The ASIR /100,000 population of cancer (all sites) in the year 2012 was 117.1 and 136.9 for Kuwaiti males and females respectively. As for non- Kuwaitis the ASIR /100,000 population of cancer (all sites) in the same duration was 67.6 and 102.9 for males and females respectively.

Table 1: The 10 most commonly diagnosed cancers, Kuwait, 2012 (Kuwaitis)

Males (N=398)			Females (N=592)		
Site	N (%)	ASIR	Site	N (%)	ASIR
Colorectal	57 (14.3)	17.6	Breast	212 (35.8)	48.7
Prostate	50 (12.6)	17.8	Colorectal	58 (9.8)	14.1
Leukemia	32 (8.1)	7.5	Thyroid	56 (9.5)	10.0
Bladder	29 (7.3)	9.3	NHL	36 (6.1)	8.3
NHL	29 (7.3)	7.4	Corpus uteri	25 (4.2)	6.6

¹ This review has been shortened for editorial reasons by Dr Nabil M Kronfol – and approved by Dr Amani

Lung	27 (6.8)	9.4	Leukemia	20 (3.4)	3.9
Hodgkin's Disease	21 (5.3)	4.2	Hodgkin's Disease	17 (2.9)	2.9
Kidney	14 (3.5)	4.0	Ovary	13 (2.2)	3.3
Pancreas	13 (3.3)	4.3	Pancreas	13 (2.2)	3.3
Testis	13 (3.3)	2.0	Cervix uteri	12 (2.0)	2.8

ASIR = Age Standardized Incidence Rate / 100,000

Table 2: The 10 most commonly diagnosed cancers, Kuwait, 2012 (Non-Kuwaitis)

Males (N=548)			Females (N=525)		
Site	N (%)	ASIR	Site	N (%)	ASIR
Colorectal	68 (12.4)	8.8	Breast	205 (39.0)	39.1
Leukemia	61 (11.2)	4.2	Thyroid	62 (11.8)	5.7
NHL	46 (8.4)	3.6	Colorectal	35 (6.7)	8.1
Prostate	41 (7.5)	11.2	Corpus uteri	28 (5.3)	6.8
Lung	39 (7.1)	7	Leukemia	24 (2.5)	3.5
Liver	27 (4.9)	3.5	Cervix uteri	22 (4.2)	2.6
Bladder	23 (4.2)	3.8	NHL	19 (3.6)	3.8
Hodgkin's Disease	21 (3.8)	1.2	Ovary	18 (3.4)	4.7
Thyroid	21 (3.8)	1.7	Lung	15 (2.9)	4.9
Brain & Nervous system	17 (3.1)	1.2	Stomach	10 (1.9)	1.8

ASIR = Age Standardized Incidence Rate / 100,000

Between January and December 2012, a total of 2,063 new cases were collected by Kuwait cancer registry accounting about 4.3% of all cancer cases in the registry. The overall ASIR for Kuwaiti and non-Kuwaiti resident were 133.7 cases /100,000 and 89.7 cases /100,000 population respectively. The disease was equally distributed to both populations. Male to female ratio was 1:1.2. The mean age at diagnosis (95%CI) was 53.2 (52.1 – 54.3) years for Kuwaitis and 48.7 (47.8 – 49.7) years for non-Kuwaiti. Out of all cases about 4% of cases were children (age <18 years) and 32% of cases were aged 60 years or more. Around 85% of cases were married. Majority of cases

were living in Hawalli, Farwaniya and Capital. Breast, colorectal, blood, thyroid, lymph nodes, lung and prostate accounted to 59% of all cases. Infiltrating duct carcinoma was the most frequent cancer morphology accounting to about 18%. About 19% of cases presented with regional metastasis and 15% with distant metastasis. Localized disease was seen in only 9% of cases. Histology of primary was the basis of diagnosis in 83% of cases. About 54% of all cases submitted to surgery, 52% received chemotherapy, 27% received radiotherapy and 19 % of cases were under hormonal treatment. More than eighty percent (84%) of cases are still alive.

Cause specific mortality rate for all cancer types in all population was 20.3/100,000 (39.7 and 11.4 for Kuwaitis and non-Kuwaitis respectively).

The mortality rate among the Kuwaiti population due to female breast cancer was 8.8/100,000 population, while the mortality rate of colorectal and anal cancer was 4.9/100,000 population (Kuwaitis males and females). (Health Kuwait 2013, 2014)

A new Kuwait cancer center is going to be established, with the expected increase of cancer cases. In order to ensure best care of patient a new 618 bed facility will be built with the latest modern health care specification. The 15 storied building includes surgical radiation and clinical oncology departments, alongside with laboratories, pharmacies, physiotherapy and psychology departments. The services are provided through inpatient and outpatient facilities. The design is environment friendly and aims to achieve the silver rating requirements of the US green building council's LEED rating system.

Kuwait Cancer Control Center (KCCC)

It is the only oncology center of the registry area. Located in Al-Sabah health region, the center includes:

1. Hussain Makki Al-Juma'a for Specialized Surgeries.
2. Radiation oncology building.
3. Shiekha Badriyah , Medical Oncology and Bone Marrow Transplantation.
4. Faisal Sultan Center for Radiology & Radiotherapy.
5. Yaqoub Behbhani center for laboratory services and bone marrow transplantation.

Table (3): Load of work in KCCC Clinics Year 2013

	Kuwaiti					Non-Kuwaiti					Grand total
	New		Follow-up		Total	New		Follow-up		Total	
	M	F	M	F		M	F	M	F		
KCCC all clinics	436	1072	8803	20281	30592	554	923	11201	15052	27730	58322
Leukemia	47	25	2934	3217	6223	103	60	3811	1917	5891	12114
Surgical oncology	165	722	566	3511	4964	170	619	1010	2466	4265	9229
Radiotherapy	143	174	3527	7285	11129	199	143	4070	5333	9745	20874
Clinical oncology	70	127	1988	6081	8266	116	118	2257	5200	7691	15957

6. Pediatric oncology and hematology department in National Bank hospital pediatric hospital (NBK).
7. Palliative care center (92 beds hospital).

The oncology services also include the pediatric oncology department at National Bank hospital and palliative care center.

The strategic plan of KCCC was developed in 2012 as one of the main activities of KCCC partnership with University Health Network (UHN) Princess Margaret hospital. Kuwait cancer control center (KCCC) is a 254 beds hospital. The overall number of patients discharged from KCCC in 2013 was 3,423. Discharge from casualty accounted for 4.6%. The average length of stay was 11.9 days, bed occupancy ratio was 56.4%, average length of stay was 11.9 days, turnover rate was 17.2 and turnover interval was 9.3 days. Tables (3) and (4) show the work load in KCCC clinics during year 2013. (Health Kuwait 2013,2014)

The average number of patients discharged per physician was 34.9 discharges/doctor, and the average number of patients discharged per nurse, was 7.0 discharges/nurse. The proportion of doctors from total hospital staff was 2%, the proportion of medical staff from total hospital staff was 0.7, the outpatient visit/ physician ratio was 595.1 outpatient /physician. Table (5) shows KCCC discharges, outpatient visits and operations to clinical staff ratio during 2013. The death rate of KCCC in year 2013 was 85.3/1000. Table (6) shows the death rate of KCCC for years 2009-2013. (Health Kuwait 2013, 2014)

Table (4): Number of Oncology outpatient and casualty visits in MOH hospitals

	2009	2010	2011	2012	2013
Oncology surgery	9008	9419	9749	1062	9229
Radiotherapy	18471	18274	18760	20213	20874
Chemotherapy	14650	15663	16557	22354	15957

Table (5): KCCC discharges, outpatient visits and operations to clinical staff ratio at the MOH, KCCC 2013

	Discharge Average/day (APD)	Discharge/doctors ratio	Discharge / nurses ratio	Outpatient visits/doctors ratio	Outpatient visits / nurse ratio	Operations % of total discharge
KCCC	9.4	34.9	7.0	595.1	119.0	0.4

Table (6): Death rates* in the MOH, KCCC 2009-2013

	2009	2010	2011	2012	2013
KCCC	116.7	104.4	109.0	103.0	85.3

*Rate/1000 discharges in hospital



Administered Services for the Kuwaitis and the non-Kuwaitis

Although most benefits of the Kuwaiti welfare are available only to Kuwaiti nationals, the foreign expatriates living in Kuwait can obtain many of the services. For example, medical care at government-run clinics and hospitals is generally provided free of charge or at a low cost to all residents of Kuwait, including foreigners. Private physicians and hospitals charge a fee for services to Kuwaiti nationals and expatriates alike; these charges

are still relatively low: about half the rate of the average cost for medical care in the United States. Before the Iraqi invasion, comprehensive services were provided for Kuwaitis and non-Kuwaitis relatively equally. However, since 1994, expatriates are being charged for non-emergency procedures; all emergency and outpatient services are still for free, and expatriates are not charged for medications provided by government hospital pharmacies on prescription from doctors in the hospital.

Through a new policy that began in August 1999, expatriates still receive free emergency care and free prescriptions, however, a nominal fee of one Kuwaiti Dinar (about US\$3.34) is charged as a token payment. If the patient needs to see a hospital specialist, the charge is two Kuwaiti Dinars. However, emergency room procedures are still free, and all specialist doctors and hospitals have the right to exempt their patients from all charges if they desire. Other welfare benefits available to foreigners also include subsidized electricity, water, and petrol.

Kuwait Cancer Registry

Kuwait Cancer Registry (KCR) is a population based registry covering more than three million Kuwaiti and non-Kuwaiti residents in Kuwait. The registry was first established in the radiotherapy department at the Al-Sabah hospital. The initial purpose of the registry was to study the incidence and morphology of cancers in Kuwaiti population

and to 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.

KCR is a full member of the International Association of Cancer Registries (IACR) and is the first of Arab and Gulf countries to have its results accepted and published in "Cancer in Five Continents" since its fifth edition in 1990. Notification of cancer is compulsory by ministerial decree 228/2014. The registry collects information on malignant neoplasm according to the recommendations of the International Agency for Research on Cancer (IARC), as well as mortality data from the national center of health information, of the ministry of health, Kuwait. Cancer cases included are defined according to the international Classification of disease for oncology third edition. Cancer registration is comprehensive as almost all cases not initially diagnosed or treated at the Kuwait Cancer Control Centre (KCCC) (including those who receive initial treatment abroad) ultimately referred to the center for further treatment or follow-up. The registry maintains a separate patients' alphabetical and numerical index. Pathology reports as well as death certificates are sorted numerically by year. All new registrations are checked against these indices to avoid duplication. KCR Sources of information include:

(i) Patients' medical records and pathology reports from the KCCC and other hospitals (both governmental and

private),
 (ii) Mortality reports obtained from the department of vital and health statistics division of the ministry of health (including those who died abroad), and active follow-up of registered cases.

Since January 2000, the registry has adopted ICD-O-3 and ICD-10. All coding (topography, morphology, TNM classification...) and computerization of data are done by the registry staff. The data is used for monitoring the trends in incidence, research, planning and evaluation of the cancer care facilities.

The Functions of the Registry

- Defining the Problem.
- Cancer prevention.
- Monitoring Trends.
- Cancer Services and Planning.
- Research.
- Education and Information.

References

1. *Kuwait cancer registry annual report 2000-2009, 2011: Epidemiology and cancer registry unit, Kuwait cancer control center, Ministry of health, Kuwait.*
2. *Health, Kuwait 2013, edition XLX, 2014: Health vital statistics division, department of statistics & medical records, Ministry of health, state of Kuwait. (Viewed 1 May 2015), <http://www.moh.gov.kw/Renderers/ShowPdf.ashx?Id=743523d6-e654-4b95-8640-bcb6879b57e9>*

Infos

5 Astuces Pour Des Dents Blanches et Saines Au Naturel

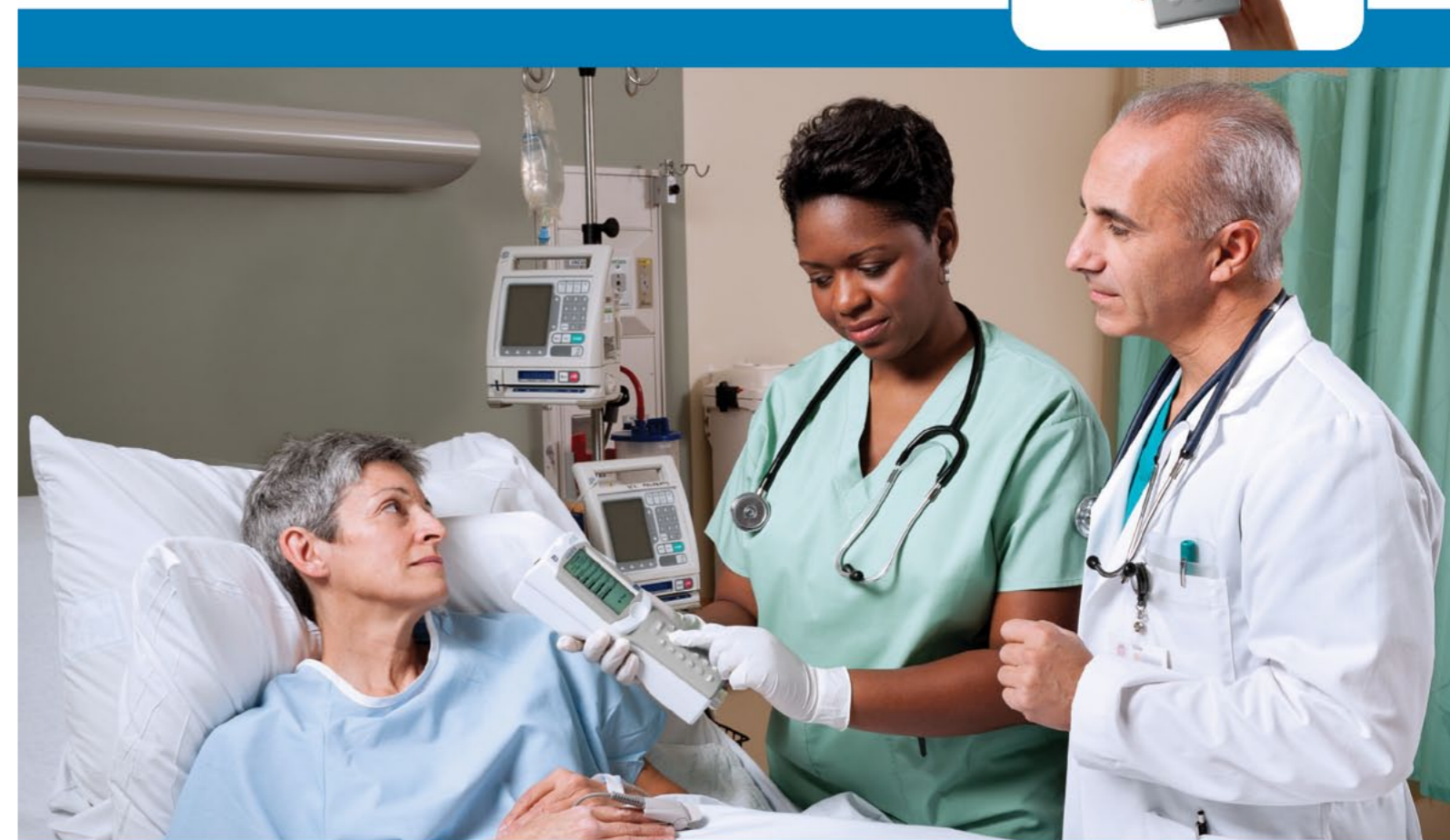
Thé, café, jus de raisin... De nombreux aliments peuvent tacher les dents, les jaunir ou les abîmer. En plus d'avoir de nombreux bienfaits sur la santé, le citron est aussi un allié qui permet d'avoir des dents plus blanches. L'acide citrique qu'il contient aide à lutter contre le tartre, c'est-à-dire à l'épaississement de la plaque dentaire, en partie responsable du jaunissement des dents. De plus, le tartre peut être à l'origine de caries dentaires, de maladies gingivales comme la gingivite ou la parodontite, ainsi que de la mauvaise haleine.

Comment utiliser le citron ?
 Brossez délicatement vos dents avec un peu de jus de citron fraîchement pressé puis rincez abondamment. Attention: ne répétez l'opération qu'une fois par semaine au maximum, car si l'acidité du citron permet d'éliminer le tartre et la plaque dentaire, il peut aussi abîmer l'émail des dents. De la même manière, évitez de consommer des aliments acides comme le café, les sodas ou les produits à base de sucre raffiné ou d'aspartame, par exemple.



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