

The Most Common Cancers in Iranian Women

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Abstract

Cancer is the third main cause of death in Iran. This report was provided for explaining most common cancers in Iranian Women. The National Cancer Registry reports from 2003 to 2006, pathologic based cancer registry reports from all of provinces of Iran. The age-standardized incidence rate of cancers was 56.80, 75.15, 6.18, 102.43 per 100 000 among females in 2003, 2004, 2005, 2006, respectively. The male to female standard ratio was 1.12. The most common cancer among women was breast cancer. The cancer registration system, is the main tool of management and control of cancers and such important information source is not only necessary for epidemiologic studies of the illness, but also for planning and forecasting the events, measuring the accuracy of the studies, and the effects of medical interventions. Without a cancer registry with defined standards, we may not be able to formulate, execute, and observe any cancer control plan. According to the results, breast cancer is the most common cancer in Iranian females. Therefore, breast cancer screening should be start in Iran.

Key words: *Cancer, Women, Iran*

Introduction

Cancer is the third cause of death in Iran after coronary heart disease, accidents and other phenomena. This article is the first report, which explains the cancer incidence according to the National Cancer Registry (NCR) reports from 2003 to 2006, population-based cancer registry reports from all of provinces in 2006 in Iran.

History of National Cancer Registration in Iran

The first cancer registry was established in 1967 in Babol City (North of Iran). Later, other activities started in Shiraz (in the center of Iran) and Cancer Institute of Tehran University has gathered paraffin blocks at least during 50 yr, and a bank of these blocks has been saved in this Institute. Many specimens were not recruited because there was no sufficient pathology

Centers and the diagnosis were based on clinical or surgical tests. Therefore, the law of obligatory cancer registry and report was approved by The Islamic Consultative Assembly of Iran in October 1984. Accordingly, all physicians and related cancer clinical agencies (Pathology and medical diagnosis laboratories) are obliged to complete the histology exam form with clinical iden-

tity and demographic data. The executive plan of this law was designed by The Organization for Fighting Cancer in July 1986 and the first report of cancer registration in Iran was reported in 1986 (1). In 1989, this organization was merged into Center for Disease Control and Prevention (CDC) and the responsibility for collecting and registering cancer cases was allotted to the Genetic and Cancer Bureau of CDC. In January 2000, the second report of cancer registry could register 17 765 cases in Iran (2). The NCR is just a pathology center report (3). The program, the method of registration and the cooperation of pathologists have been revised; the first standard report was provided in 2004 (4); 38 468 cases were registered, this report registered 60% of new cancer cases. The second scientific report in 2005 (5) shows 47 217 cancer cases (70% of cases were registered) and the last report on 2006 (6) registered 55 855 new cases (81% of cases were registered). These completeness were estimated according to the reports on Cancer Incidence in Five Continents database which published by International Agency for Research on Cancer IARC) (7).

Material and Methods

Methods for National Cancer Registration

One registrar has been selected and trained from each deputy for health to register cancer cases. There are 41 Medical Universities in Iran. Deputy for health of each university is responsible for health issues of the population and all health activities are managed by these deputies. All deputies for health have been included in the NCR. Registrar would apply the national registration software, which was developed by CNCDC. For pathologic centers, without software, the cancer records were gathered manually. The Cancer Office of CNCDC should provide techniques and funding supports. The data are transmitted every 3 months, by electronic file and hard copy of Cancer Registry Data Collection Form. This form is comprised of three parts: part I, regarding patients identity characteristics in addition to the name of biopsy-taker physician, name of hospital, location of which the biopsy is taken, clinical diagnosis and date of biopsy sent to histological laboratory and demographic information of the patients includes race and residence. Part II includes the most important findings of patient's clinical history. Part III includes paraclinical findings. The information includes primary location of tumor, date of cancer diagnosis, morphology and histology and its behavior and diagnosis method. Physicians fill the form of clinical data and the official personnel fill the identity and Demographic informations. Quality control has been coordinated in five main areas by Cancer Office of CDC: (i) regarding completeness of coverage; (ii) completeness of details; (iii) accuracy of data; (iv) accuracy of reports; (v) accuracy of interpretation and (vi) repeated cases are deleted from national data. Surveillance of pathology is based on the cancer record in several selected provinces to compare it with the present pathology cancer record for a general and complete evaluation and for the accuracy of the collected data. IARC software (IARCCRG-TOOLS_203) provides a way to identify inaccuracies in data coding. Accordance of the Interna-

tional Classification of Diseases for Oncology (ICD-OC: topography with ICD-OM: morphology) is done manually and also by considering age and sex groups (pathology file of fatal error has been revised by the Scientific Society of Pathology of Iran and by two masters in pathology).

Capture-recapture of data was carried out only for the national registry report in 2006. Since this process was the first experience on NCR, therefore it was restricted to the provinces with lower than 50% completeness of cancer registry report. The registrars from 11 provinces were re-trained for this process, and then the data were captured again.

Some pretreatment training workshops have been established for cancer registry experts of the above provinces too. Then, some pathology centers reporting the most cases of cancers in above provinces were selected; all electronic files, sunken and books have been considered and its cancer cases were recounted according to idioms equal cancer. While reconsidering pathology reports for cancer cases extracts, all reports consisted one of the words or phrases related to cancer were registered as cancer cases.

Method for deleting repeated cases: for the lack of any classified National Identification Numbers, the process for deleting the repeated cases was completed by a manual review of the record. After editing data of each province and considering in mind that for deleting of repeated cases, similar cases should also be the same as morphology, topography, identity and demographic information; deletion of the repeated cases would be done separately in each province and finally in all over country by experienced manual reviewers. Direct adjustment method was used for computing the ASR. World population has been used as standard one.

Geographic Information System (GIS) plan (Geographic map of current cancers): the ASR of all cancers and 10 most common cancers have been mapped by using a GIS Arc View GIS 3.2a.

Population based cancer registry: Five provinces have been selected according to the facilities for developing population-based cancer registry in 2006.

Results

Tables 1-3 show data on Most Common Cancers in Iranian Women.

Table 1: Cancer registration procedure in Iran from 1986 to 2006

	Year of report					
	1986	1997	2000	2004	2005	2006
No. of total pathologic centre/no. of pathologic center which the cancer records were adhered (coverage)	NA	NA	NA	625/584(93.4%)	742/643(86.8%)	779/769(98.7%)
Total registered cancer cases/reported cancer cases after deletion of repeated cases and correction of data	18435 [*]	11025	17765	43014/38468	51518/47217	61031/55855
Percentage of total new cancer cases registered per total estimated cancer new cases	NA	18%	29%	60%	70%	81%
Percentage of flaws in coding forwarded cases from health deputies of medical universities of the country	NA	NA	44.3%	32.8%	31.6%	39.5%
Percentage of flaws in addresses	NA	NA	66.5%	39%	26.9%	22.1%
Percentage of flaws in names	NA	NA	0.1%	0%	0.01%	0.1%
Percentage of flaws in father names	NA	NA	55%	47.3%	32.6%	28.3%
Percentage of flaws in age	NA	NA	5.8%	4.1%	3.2%	2.9%

*Repeated cases were not defined in this annual report.
 NA, not available

Table 2: ASR of the 10 most common cancers among Iranian women

Site of cancers	Year			
	2003	2004	2005	2006
Breast	12.40	16.40	23.16	25.06
Skin	8.77	11	13.16	13.85
Stomach	4.53	5.65	6.74	6.65
Colon & rectum	4.22	5.93	7.40	8.17
Esophagus	4.25	4.84	6.12	6.07
Hematopoietic system	1.85	3.01	3.68	4.44
Ovary	1.79	2.55	2.98	3.18
Thyroid	1.59	2.49	3.47	3.76
Bladder	1.81	2.25	2.86	2.99
Lymph node	1.17	1.77	2.26	2.29
Total	56.80	75.15	96.18	102.43

Table 3: Number of the 10 most common cancers among Iranian women

Site of cancers	Year			
	2003	2004	2005	2006
Breast	3250	4238	5981	6456
Skin	2112	2633	3162	3290
Stomach	1073	1439	1801	1967
Colon & rectum	1044	1316	1624	1603
Esophagus	999	1103	1429	1403
Hematopoietic system	534	904	1068	1263
Ovary	478	735	1004	1135
Thyroid	475	673	793	838
Bladder	427	557	725	722
Lymph node	373	538	689	705
Total	14495	19095	24498	26016

Discussion

Cancer is the third main cause of death and breast cancer is the most common cancer in women in the worldwide. According to our data the ten most common cancers of Iranian women

are cancer of breast, skin, stomach, colon& rectum, esophagus, hematopoietic system, ovary, thyroid, bladder and lymph node as shown in tables (1-7). So the breast cancer is the most common cancer of the Iranian women as Breast

cancer is the commonest cancer in most countries in Asia.(8) The most frequent cancer site among women is breast in French as well(9). Dakar study has showed that of all 786 cancers in women, 507 were gynecological or breast cancers. Cancer of the uterine cervix accounted for 240 cases (47.3%), followed by 213 cancers of the breast (42%), 35 of the ovaries (6.9%), 10 of the corpus uteri (2%) and 7 of the vulva (1.4%), (10). In addition, the most common cancer in women in Lebanon has been breast cancer (11). According to the literature, breast cancer is the most common cancer in women in the worldwide and potentially is a preventable cancer if infra structures of public health system have been reformed.

In Iran, high mortality of breast cancer may be due to lack of early detection and screening system. Therefore, the most cases have been diagnosed in advanced stages (stage: 111&1V) that, treatment modalities are not completely curative.

In conclusion, based on the result of this report, means that, high incidence of breast cancer and lose of human, economical resources and others nonaccountable outcome, all, indicate that we must be recruit our health system for fighting against breast cancer.

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References

1. National Cancer Registry Report 1986_1987. Tehran, Iran: Ministry of Health, deputy for Health Directory, CDC Cancer Office, unpublished data 1990 (Persian).
2. National Cancer Registry Report 2000_2001. Tehran, Iran: Ministry of Health, Dep-

- uty for Health Directory, CDC Cancer Office, unpublished data 2002 (Persian).
3. National Cancer Registry Report 2003_2004. Tehran, Iran: Ministry of Health, Deputy for Health Directory, CDC Cancer Office 2004 (Persian).
4. Mousavi SM, Goya MM, Ramazani R et al. National Cancer Registry Report 2004_2005. Tehran, Iran: Ministry of Health, Deputy for Health Directory, CDC Cancer Office 2007 (Persian).
5. Mousavi SM, Ramazani R, Davanloo M, et al (2008). National Cancer Registry Report 2005_2006. Tehran, Iran: Ministry of Health, Deputy for Health Directory, CDC Cancer Office (Persian).
6. Naghavi M, Jafari N (2007). Mortality views in 23 Provinces of Iran in 2004. Tehran, Iran: Ministry of Health, Deputy for Health Directory, Research and Development Office (Persian).
7. Parkin DM, Whelan SL, Ferlay J et al. (2002). Cancer Incidence in Five Continents. Vol. VIII. Lyon, France: IARC Scientific Publications No. 143.
8. Yip CH (2009). Breast cancer in Asia. *Methods Mol Biol*, 471: 51-64.
9. Colonna M, Danzon A, Delafosse P, Mitton N, Bara S, Bouvier AM, Ganry O, Guizard AV, Launoy G, Molinie F, Sauleau EA, Schvartz C, Velten M, Grosclaude P, Tretarre B (2008). Cancer prevalence in France: time trend, situation in 2002 and extrapolation to 2012. *Eur J Cancer*, 44(1): 115-22.
10. Dem A, TraorÃ B, Dieng MM, Diop PS, Ouajdi T, Lalami MT, Diop M, Dangou JM, TourÃ P (2008). Gynaecological and breast cancers at the Dakar Cancer Institute. *Sante*, 18(1): 25-9.
11. el Saghir NS, Adib S, Mufarrij A, Kahwaji S, Taher A, Issa P, Shamseddine AI (1998). Cancer in Lebanon: analysis of 10,220 cases from the American University of Beirut Medical Center. *J Med Liban*, 46(1):4-11.