

RESEARCH COMMUNICATION

Cancer Mortality Pattern in Viet Nam

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Abstract

Background: Health information in general and cancer information in particular in Viet Nam is an basic data for decisions related to health planning prevent against cancer. However, very limited database of cancer information has been available to date. The aim of the present study was to examine cancer mortality pattern nationwide in Viet Nam. **Methods:** Descriptive cancer epidemiology was designed for the present study. Both demographic data and list of all deaths during the two years period, 2005-06, were obtained from all 10,769 commune health stations. Five indicators included name, age, sex, date of death and cause of death was collected for each case. A guideline to report demographic data of each commune and information of each case who has been lived at least 6 months in their commune was prepared in the designed form and sent by express mail service to all the heads of 10,769 commune health stations throughout country. The data comprises all cancer mortality records at the commune-level for the period 2005-06. All obtained data of cancer deaths as well as demographic information was computed using Excel software. The Excel data was exported to STATA 8.0 for cancer analysis. Cancer case was coded following ICD-10. **Results:** To date, 94.6% of the 10,769 communes (from the 638 of 671 districts within the 64 provinces) have forwarded the required data and we currently have approximately 93,719 cancer deaths for the 2 years period. Number of person-year was 76,726,873 in 2005 and 77,902,688 in 2006. Number of cancer deaths was 45,413 (29,189 males and 16,224 females) in 2005 and 48,306 (31,447 males and 16,859 females) in 2006. Male to female ratios were 1.8 and 1.9 in 2005 and 2006, respectively. Three most common cancer sites numbered of 61,079 (65% of all 93,719 cancer deaths) included 25,410 liver cancer; 22,209 lung cancer; and 13,460 stomach cancer. Among both males and females, liver cancer was ranked in the first most common (31.04% and 19.91%), followed by lung cancer (26.69% and 18.21%) and stomach (14.42% and 14.26%). Among females, cervix and other female genital cancers were ranked in the four most common (9.13%) and breast cancer was about 5.69%. **Conclusions:** Participated proportion of nationwide administration units and population was over 90% to report about 93,719 deaths from cancer that suggested that cancer has been highly concerned by social as well as people due to a number of thousand life lost. This condition will accept well primary cancer prevention at commune level in Viet Nam to eliminate the ancient disease of cancer in human.

Key Words: Cancer mortality - statistics - population-based-routine-death registration - Viet Nam

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Introduction

The identification of cancer as an preventable disease was highlighted in 1981 by Sir Richard Doll (Doll and Peto, 1981). That is, proportion of cancer risks could be avoidable as much as 80% of all cancer worldwide as well as in Viet Nam. The estimated cancer incidence in Viet Nam in 2002 was numbered of about 75,000 cases. Cancer has been reported as an important contributor to the burden of death in Viet Nam. Cancer information included data of incidence, survival and mortality is basic database in controlling cancer nationwide as well as worldwide. Our earlier studies on cancer mortality have been published for the results of pilot populations in the Hanoi and Ho Chi Minh city, Nam Dinh – Bac Kan – Phu Tho provinces (Ngoan, 2006a; Ngoan, 2006b; Ngoan et al., 2002). These primary findings promoted us to expand our study to cover

all regions of Viet Nam to improve cancer prevention.

Health information in general and cancer information in particular in Viet Nam is an essential facet of basic data for decisions related to health planning prevent against cancer. However, very few database of cancer information in eight regions of Viet Nam has been available to date. The aim of the present study was to examine cancer mortality pattern nationwide in Viet Nam.

Materials and Methods

The socialist Republic of Viet Nam introduced a national mortality system in 1992. This unique system relied on commune-level officials providing basic demographic data and information on the cause of death.

The information collected is recorded in an official book referred to as the A6. The data from the A6 was

Table 1. Covered Areas in Viet Nam

Administration unit	Number	Participants	%
Province/cities	64	64	100
Districts	671	638	95.1
Communes	10,769	10,184	94.6
Population in 2005	83,164,447	76,726,873	92.3
Population in 2006	84,312,116	77,902,688	92.4

collated by the District-level Health Service who in turn forward the information to the Provincial and Central-level governments. This registration process was monthly reviewed for each fatal case regarding the name, age, sex, address, occupation, date - place - cause of death, and information concerning to pre - death medical care. The process of this unique system in collecting cancer data has been introduced elsewhere (Ngoan, 2006a; Ngoan, 2006b). Descriptive cancer epidemiology was designed for the present study. Both demographic data and list of all deaths during the two year period, 2005-06, were obtained from all 10,769 commune health stations. Five indicators included name, age, sex, date of death and the cause of death was collected for each case. A guideline to report demographic data of each commune and information for each case living at least 6 months in their commune was prepared in the designed form and sent by express mail service to all the heads of commune health stations throughout the country in January 2007.

In 2004, Viet Nam population was numbered of 82,032,400 living at 10,769 communes of 671 districts within all 64 provinces/cities. There was 67.8% of all 10,769 commune health stations employed physician (Ministry of Health Vietnam, 2004). Therefore, this existing advantage official grass-root health system network provided an favorable environment to report the cause of death in general as well as cancer in particular for the present study. Average population number of each commune in Viet Nam was about 7,617 residents. According to the estimated crude death rate of 500 per 100,000 per year, estimated number of deaths per month at one commune was 3 cases. Therefore, the head of commune health station can registry into the A6 book actively as requirement by the ministry of health.

We collected the completed-designed forms made by the heads of commune health stations from January to June 2007. We also collected the address, name and telephone number of head of commune health station for further telephone interview to validate obtained information of accuracy and completeness if necessary. The data comprises all cancer mortality records which have been extracted from the A6 records at the commune-level for the period 2005-2006. All obtained data of cancer deaths as well as demographic information were computed using Excel software and exported to STATA 8.0 for cancer analysis. Cancer case was coded following ICD-10.

Table 1. Number of Cases by Site and by Year

Site	ICD-10	2005			2006			2005-06
		Male	Female	Both genders	Male	Female	Both genders	
Oral, Tongue	C00-10	232	109	341	263	118	381	722
Nasopharynx	C11	1,135	500	1,635	1,300	524	1,824	3,459
Pharynx	C12-14	187	59	246	183	53	236	482
Esophagus	C15	508	154	662	543	176	719	1,381
Stomach	C16	4,253	2,318	6,571	4,491	2,398	6,889	13,460
Anus, Colon,								
Rectal	C18-20	1,172	1,091	2,263	1,278	1,105	2,383	4,646
Liver	C22	9,063	3,249	12,312	9,760	3,338	13,098	25,410
Gallbladder	C23-24	22	20	42	15	31	46	88
Pancreas	C25	151	111	262	181	143	324	586
Nasal	C30-31	37	23	60	45	21	66	126
Lung	C33-34	7,803	2,997	10,800	8,383	3,026	11,409	22,209
Heart, Thoracic,								
Thymus	C37-38	79	19	98	96	27	123	221
Bone	C40-41	442	347	789	525	362	887	1,676
Skin	C43-44	77	85	162	82	73	155	317
Mesothelioma	C45	73	70	143	80	77	157	300
Soft	C46-49	28	28	56	40	34	74	130
Breast	C50	18	908	926	19	974	993	1,919
Female genital	C51-58	0	1,470	1,470	0	1,551	1,551	3,021
Ovary	C56	0	132	132	0	131	131	263
Male genital	C60-63	512	0	512	515	0	515	1,027
Kidney	C64-68	144	120	264	170	142	312	576
Bladder	C67	145	58	203	132	62	194	397
Eye	C69-72	20	11	31	18	18	36	67
Brain	C71	899	554	1,453	942	591	1,533	2,986
Endocrine	C73-75	31	46	77	38	60	98	175
Leukemia,								
Lymphoma	C81-96	1,415	1,201	2,616	1,550	1,205	2,755	5,371
Un-specified	US	743	544	1,287	798	619	1,417	2,704
Total		29,189	16,224	45,413	31,447	16,859	48,306	93,719

Results

To date, 94.6% of the 10,769 communes (from the 638 of 671 districts within the 64 provinces) have forwarded the required data and we currently have approximately 93,719 cancer deaths occurred at all 638 districts for the 2 years period. Number of person-year was 76,726,873 in 2005 and 77,902,688 in 2006. There were over 90% administration units and population nationwide that have been participated into the present study (Table 1).

Cancer was coded into 26 individual or group of cancer sites following ICD-10. Number of cancer deaths was 45,413 (29,189 males and 16,224 females) in 2005 and 48,306 (31,447 males and 16,859 females) in 2006. Male to female ratios were 1.8 and 1.9 in 2005 and 2006, respectively. Three most common cancer sites numbered of 61,079 (65% of all 93,719 cancer deaths) included 25,410 liver cancer; 22,209 lung cancer; and 13,460 stomach cancer (Table 2).

Among males, liver cancer was ranked in the first most common (31.04%), followed by lung cancer (26.69%) and stomach (14.42%) (Figure 1a). Among females, the most common cancer was also liver (19.91%), followed by lung (18.21%) and stomach (14.26%). Cervix and other female genital cancers were ranked in the four most common (9.13%). Breast cancer was about 5.69% (Figure 1b).

Discussion

The designed form was made to collect five indicators

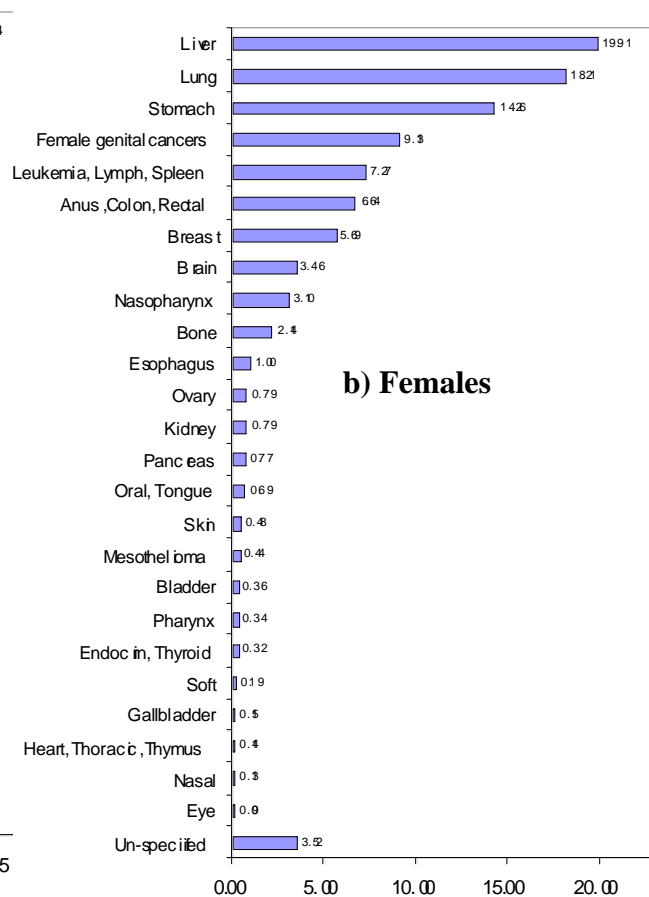
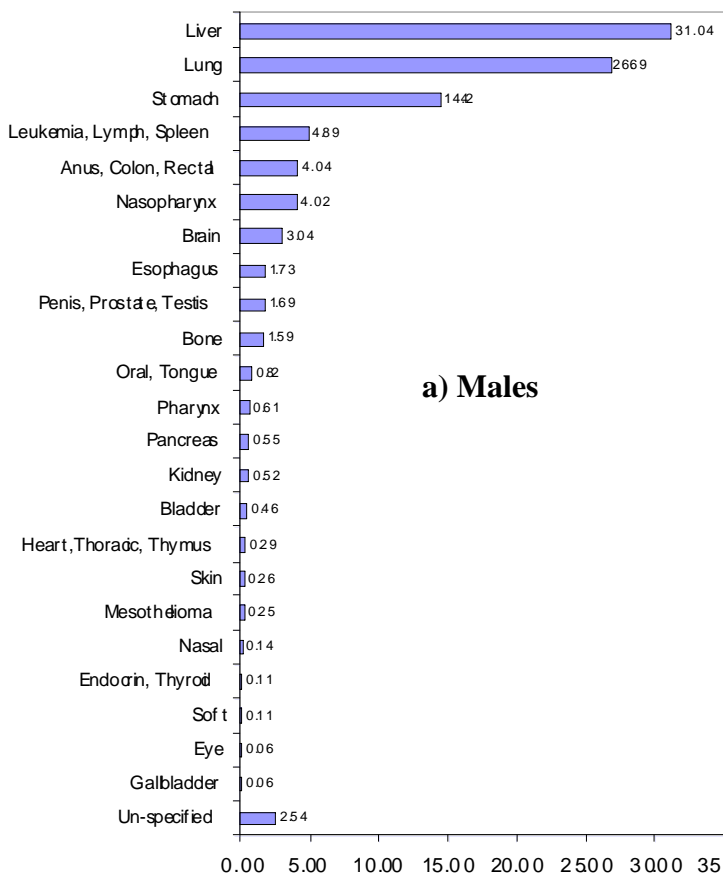


Figure 1. Percentage Mortality Data from 10,769 Commune Health Stations in Viet Nam

regarding the name, age, sex, date of death and the cause of death that have been well reported by the head of commune health station to provide data for the present study. These simple five indicators allowed us to collect data from the 10,184 commune health stations covered about 77 million population. Among 93,719 deaths from cancer, over 95% of them was coded following ICD-10 into 26 cancer sites. This advantage environment indicated cancer mortality pattern in Viet Nam.

The present findings confirmed again cancer pattern in Viet Nam similarly cancer pattern at developing countries, that is, cancer related infectious factors of liver and stomach was the leading cause of death from cancer. The most common liver cancer death could be explained due to hepatitis B virus (HBV) prevalence as high as about 15% of Vietnamese with HBsAg(+) and there was about over 90% of liver cancer due to HBV infection (Cordier et al., 1993; Duc et al., 1997; Tuan, 1986). Application of HBV vaccination for new born nationwide would be a high priority in promoting primary prevention of liver cancer in Viet Nam. To explain a huge number of stomach cancer death in Viet Nam, a major causality of this cancer form might be a high prevalence infection of Helicobacter pylori (Hp) as much as about 75% of adult people (Megraud et al., 1989). Therefore, to promote primary prevention of stomach cancer, an program of Hp control would be highly supported.

The present study identified 300 cases in both males and females of mesothelioma that has been related to asbestos fiber exposed at working and living environment. Asbestos has been widely used at communities as cement-

slate at the roof of Vietnamese house that could be explained why both males and females suffered from mesothelioma because they have been exposed to asbestos fiber at living environment.

The present database will be used to estimate cancer mortality rate for various populations in Viet Nam to promote cancer epidemiology study in our country. In spite of the good results, the present study certainly faced some limitations regarding a lack of histo-pathological confirmation of cancer diagnosis. The other limitation was that Viet Nam has not yet provided death certificate to each case made by a licensed physician. Therefore, accuracy of cancer death report might be differed from each other among 10,184 commune health stations from remote areas to urban areas.

In conclusion, in spite of some limitations, the present study results were the first database of cancer statistics in Viet Nam. The new database of 93,719 cases of cancer deaths help us in thinking seriously about cancer problem and cancer prevention in Viet Nam and worldwide.

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