

Cancer Trends in Lebanon & Projections to 2020



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Cancer Studies in Lebanon

The first national cancer surveillance study conducted by Abou Daoud et al in 1966 revealed that male cancer incidence for all sites was 102.8 and 104.1 for females per 100,000 population (2). The next study done by Shamseddine et al, gathering national cancer data showed that the cancer incidence rates by 1998 have increased by a third since Abou Daoud's study, recording 154.2 and 143.8 for males and females per 100,000 respectively (3). National Cancer Registry activity in Lebanon started in 2003 and reported rates of 179.3 and 190.3 for males and females respectively (4). Major findings showed that breast is the leading cancer in females, while bladder, prostate and lung were the leading cancers in males. Smoking related cancers were on the rise for both genders throughout the previous decade onwards.

Cancer Projections till 2020

To further investigate cancer incidence trends in Lebanon, Shamseddine et al used the National cancer Registry data from 2003-2008, used its trend to predict cancer incidence rates for the next decade (5-6). Data from the actual period was stratified by site, age and gender were collected for each year, and incidence rates were calculated and standardized at the World standard population. Using the trend pattern of the actual period, a best-fitting logarithmic model was used to predict site-specific cancer incidence rates till 2020. Annual percentage change was calculated to estimate the

Introduction

More than 12 million people are affected by cancer worldwide. The burden also reaches families of patients, their quality of life, economic burden and high cost treatment. Following stroke and heart disease, cancer is the second leading cause of death with 13% of worldwide mortalities (1)

A recent commitment from the Ministry of Public health and the Lebanese Cancer Epidemiology group back in 1998 initiated Cancer surveillance plans. A National Cancer Registry was established recording cancer incidence by site, morphology age and gender. As a result, there were emerging opportunities to assume predicting factors affecting the onset of cancer in the Lebanese population. This resulted in helpful prevention programs and strategies were introduced by the Ministry of Public Health and other Health organizations.

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change in incidence rates and their significance over the projection time, as shown in Table 1 and Table 2.

Estimates from this study predict that overall cancer for males will reach 361 and 312 cancer cases per 100,000

for males and females respectively by 2020. An increase is expected for both males and females, knowing that by 2025 the elderly population aged over 60 years will constitute around 10% of the total population.

Table 1: Cancer incidence projection in males 2020

| Site | 1998 | | 2008 | | 2020 | |
|-------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|
| | Incidence per 100,000 | % from all cancers | Incidence per 100,000 | % from all cancers | Incidence per 100,000 | % from all cancers |
| Prostate | 21.5 | 14.2% | 39.2 | 20.3% | 69.2 | 22.1% |
| Bladder | 28.7 | 18.5% | 34.0 | 17.0% | 43.1 | 13.8% |
| Lung | 22.2 | 14.1% | 31.8 | 15.6% | 33.4 | 10.7% |
| Colon | 7.4 | 4.8% | 15.3 | 7.8% | 17.5 | 5.6% |
| NHL | 4.2 | 2.7% | 14.1 | 7.2% | 23.4 | 7.5% |
| Stomach | 7.9 | 5.1% | 8.1 | 4.0% | 9.8 | 3.1% |
| Brain & NS | 6.1 | 3.9% | 6.7 | 3.3% | 7.4 | 2.4% |
| Larynx | 7.7 | 4.8% | 5.7 | 2.7% | 8.3 | 2.6% |
| Kidney & UT | 4.2 | 2.7% | 5.6 | 2.7% | 10.2 | 3.2% |
| Pancreas | 1.8 | 1.2% | 4.7 | 2.2% | 6.4 | 2.0% |

Lung Cancer

Smoking related cancers will continue to rise with the prevalent smoking rates among the middle aged and young population in both sexes. A recent WHO report revealed that 35% of males and 20% of females under age 15 have ever smoked; in addition the majority is exposed to smoking inside and outside of their homes (7). Lung cancer incidence rates are among the highest in the region for both males and females; these are consistent with the smoking habits in the Lebanese population compared to neighboring countries. A notable increase in smoking related cancers is mimicking previous smoking habits among females. The significant increase in these rates is expected since recent figures show that smoking habits between males and females in Lebanon are now nearly comparable with 45% for males and 30% for females (8).



Table 2: Cancer incidence projection in females 2020

| Site | 1998 | | 2008 | | 2020 | |
|---------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|--------------------|
| | Incidence per 100,000 | % from all cancers | Incidence per 100,000 | % from all cancers | Incidence per 100,000 | % from all cancers |
| Breast | 46.7 | 33.4% | 95.7 | 43.2% | 146.1 | 40.4% |
| Colon | 7.8 | 5.8% | 14.1 | 6.9% | 10.6 | 2.9% |
| Lung | 5.8 | 4.3% | 9.4 | 4.3% | 14.8 | 4.1% |
| Non-Hodgkin's | 4.2 | 2.6% | 11.6 | 4.7% | 21.3 | 5.9% |
| Ovary | 5.9 | 4.3% | 11.6 | 5.8% | 24.4 | 6.7% |
| Corpus Uteri | 6.5 | 4.8% | 13.7 | 6.4% | 17.5 | 4.8% |
| Bladder | 5.7 | 4.3% | 9.0 | 4.2% | 14.5 | 4.0% |
| Thyroid | 4.3 | 3.3% | 5.6 | 2.6% | 16.1 | 4.4% |
| Stomach | 4.9 | 3.6% | 8.2 | 4.1% | 8.1 | 2.2% |
| Cervix Uteri | 5.6 | 4.2% | 9.0 | 4.2% | 6.0 | 1.7% |

Breast Cancer

A steady and notable increase in breast cancer incidence was observed in Lebanon since 1998, this number exceeds all rates shown in the neighboring Arab countries. However, mean age at diagnosis is 50 years compared to 63 for industrialized countries. Westernized lifestyle habits, including a sedentary lifestyle, coupled with unhealthy diet can partly explain this increase over the previous decade. In addition, decrease in fertility rates and increased screening campaigns have led to an increase breast cancer diagnosis in Lebanon (9-10).

Prostate Cancer

Prostate cancer incidence is expected to reach 69 cases per 100,000 by 2020, the highest prevalence in the region. The rates have nearly doubled from 1998. Prostate cancer is expected to become the most common cancer in males in 2020. The screening campaign launched in 1994 led to an increased diagnosis, with a steady increase reported since (5).

Bladder Cancer

Bladder cancer in males is nearly double the incidence rates reported in neighboring countries. Hospital based and



national cancer registry figures consistently showed high rates of bladder cancer since the first study in 1966. By 2020 it is expected to reach 43 per 100,000 and remain the highest in the region by then. Smoking remains the main culprit in driving these rates up, specifically black tobacco and Nargileh (11). These rates are comparable to the ones reported in industrialized countries in Europe and the US.

Strengths and Limitations

The study period extends over a relatively short period, which could lead to inaccurate annual percentage changes, especially in rare cancers. In addition, the absence of death certificates in the analysis of National registries can reduce the quality and accuracy of data.

A major improvement can be achieved through a systematic and timely program to ensure accuracy of data. Death certificates can be integrated as part of data collection to increase data coverage. Consistency in data reporting in addition to validity and comparability are essential for successful reporting. This data plays a major role for public health interventions such as smoking ban, screening and other related awareness campaign activities.

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Infos

Cholestérol Trop élevé: Faut-il s'inquiéter?

Réhabilitons le cholestérol car c'est une substance indispensable à la vie. En effet, à dose normale, il participe à la fabrication des cellules du cerveau, du cœur, de la peau, etc., de certaines hormones dont les hormones sexuelles, à la synthèse de la vitamine D nécessaire à la fixation du calcium sur les os. Mais attention: il y a cholestérol et cholestérol. Le cholestérol total dans le sang, qui est transporté sous forme de lipoprotéines, est la somme du cholestérol HDL (High Density Lipoprotein) ou «bon cholestérol», et du cholestérol LDL (Low Density Lipoprotein) ou «mauvais cholestérol». Les lipoprotéines LDL assurent le transport et la distribution du cholestérol à toutes les cellules de l'organisme. En excès, elles favorisent la formation de la plaque d'athérome (athérosclérose). Quant aux HDL, elles sont bénéfiques car elles font le chemin inverse en prenant en charge le trop plein de cholestérol dans les cellules vers le foie. Les lipoprotéines HDL protègent par conséquent la santé cardio-vasculaire.

Un taux de cholestérol HDL trop bas ou un taux de cholestérol LDL trop élevé expose à une maladie coronarienne (= du coeur).

Qu'est-ce qui influence la cholestérolémie?

- Les facteurs génétiques comme l'hypercholestérolémie familiale (cas assez rare);
- Une alimentation déséquilibrée affichant un excès d'apport en acides gras saturés;
- Les apports alimentaires en cholestérol. Cependant, il faut savoir que la majeure partie du cholestérol de notre organisme est fabriqué par le foie;
- Les variations individuelles. Si pour certains, une alimentation riche en cholestérol induit des mécanismes régulateurs pour lutter contre l'augmentation excessive du taux de cholestérol sanguin, pour d'autres, il est beaucoup plus difficile d'équilibrer spontanément la synthèse de cholestérol au niveau du foie et les apports alimentaires.