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## INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI: 10.21474/IJAR01/11388

DOI URL: <http://dx.doi.org/10.21474/IJAR01/11388>



### RESEARCH ARTICLE

#### LUNG CANCER IN MALTA

**Dr. Nawaf M.O.S Ali**

Ministry Of Health, AL-Adan Hospital.

#### Manuscript Info

##### Manuscript History

Received: 25 May 2020

Final Accepted: 28 June 2020

Published: July 2020

##### Key words:-

Lung, Cancer, Malta, Research, Burden, Risk

#### Abstract

Health abnormalities of certain type need a thorough understanding in terms of their prevention and management. Most importantly, their assessment could necessitate a basic understanding of the risk factors, measurement of disease frequency, and other areas related to baseline and demographic characteristics. Such assessment could help in coming-up with a thorough intervention or plan that could be directed towards a targeted population. In such context, the present description deals with highlighting about a topic Lung Cancer. Here, the paper will exclusively describe a status report on the burden of non- Lung Cancer in Malta.

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#### Introduction:-

Briefly, lung cancer constitutes one of the important cancers, globally (Lung Cancer, 2015). It occurs when airway cells of lungs begin to grow abnormally. The cells unite to gradually form a clump which finally leads to the growth of a tumour. Lung cancer begins in the bronchial lining (Lung cancer: The radiology clinic, n.d.).

In countries like United States, it is mainly responsible for cancer deaths. Lung cancer results due to cigarette smoking. The risk of acquiring lung cancer increases with the increase in the number of daily cigarettes being smoked. Other causes of lung cancer are exposure to radiation, asbestos and general environmental pollution. The symptoms of lung cancer include coughing up blood, continuous chest pain, hoarseness, breath shortness, neck and face swelling, fatigue and loss of appetite (Lung Cancer, 2015). The severity of these symptoms could rely on demographic factors and other regional trends. Hence, information about the burden of lung in every nation is of paramount importance. As such, there is a growing body of research interest about the status of lung cancer in countries like Malta.

In Malta, lung cancer was considered as the most frequent male cancer and second most frequent cancer among women. Every year, nearly 140 new case of lung cancer are registered with a male to female prevalence of 4:1 (Lung cancer: The radiology clinic, n.d.).

This source by the radiology clinic appears reliable as it has provided the prevalence rates of lung cancer in the population of Malta. It has focused on the prevalence ratio that is in agreement with the research findings. Say, a research article by Agius, et al (2009) focused on the prevalence, trends and risk factors. This article had noted that the incidence of lung cancer in men is higher than females. But, at the same moment it described about the emerging trends in Malta which in turn imply that a considerable proportion of women had a lung cancer diagnosis. Such occurrence was thought to be due to a rise in the number of female smokers since the past few years. A 2004 study mentioned that since the year 1995, the number of Maltese female smoker have increased from 10.2% to 21% by the

year 2004. Especially, women in the age group 40-45 were more vulnerable to smoking behavior than men (Agius et al., 2009).

Retrospective studies indicated that increasing proportions of female patients were found with bronchial malignant tumours. Experts say that female patients appear to be highly sensitive not only to smoking but also towards inhaled carcinogenic agents present in tobacco smoke driven largely by environmental sources.

This status of women's exposure to lung cancer could also indicate that these individuals are highly vulnerable to DNA damage caused by tobacco-smoke and they possess a low DNA repairing potential in order to withstand such damage. It also tells that females more commonly encounter specific K-Ras mutations, a kind of DNA mutation, than men. This mutation was also observed in non-smoking women (Agius et al., 2009).

However, it is important to note that the female smokers smoke less compared to men.

Some studies offer the data that lung cancer gets precipitated with the rise in pulmonary adenocarcinomas. Adenocarcinomas increase due to increased smoking or inhalation of filter-tip cigarettes compared to non-filtered cigarette. This filter tip contributes to deep inhalation which in turn moves tobacco-associated carcinogens much intensively towards the bronchoalveolar junction. This event finally contributes to the rise of bronchoalveolar Adenocarcinomas (Agius et al. 2009). So, researchers have begun to further characterise lung cancer and diagnose adenocarcinoma by applying innovative bronchoscopic sampling method

Hence, the source by Agius appears professional and trustworthy as it had conveyed to the audience about the rise in the preponderance of bronchial malignant tumours in women. It offered data about the percentage of women who increasingly underwent bronchoscopies. This is a rise from 14.8% to 25% over a ten year period. The source presented that such finding was not observed in women who are smokers and non-smokers as well. However, the proportion of men who underwent bronchoscopies was reported to be stable. This trend was irrespective of non-smokers, smokers, and ex-smokers. So, this source appears to associate lung cancer with the risk factors other than smoking.

Further, a source by Camilleri (2011) offers some recent data about the cancer mortality rates in Malta. It mentioned that Malta had a good hygienic status due to a fall in the average cancer mortality rates. These rates are 125 for females and 200 for males per 100,000. Especially, the source adds that in the year 2008, lung cancer in Malta had claimed the lives of 45 men per 100,000 and 10 women per 100,000. So, the source by Camilleri (2011) had shed light that the incidence rates of lung cancer in Malta have decreased. This indicated that the incidence rates of lung cancer have come under control to some extent. This source also appears different from other sources which indicated about the increased incidence of lung cancer in women and men.

This source is unique in offering significant information that the survival rates in women are significantly higher than men for any given cancer in all age groups. The source mentions that lung cancer in men could be higher because men are more vulnerable to cancer development and death.

So, the study of Camilleri (2011) is unique in highlighting the incidence and the risks of acquiring lung cancer.

Overall, it also proved that Malta has become one of the nations in the EU that had nations to possess a lowest cancer mortality rates where women had better potential to withstand all types of cancer.

Next, a 2012 report on lung cancer statistics from the International agency for Research on Cancer reveals that in men the estimated incidence, mortality & prevalence is 149, 58.0, 116,45.0, 57,104, and 128, respectively (Lung cancer including trachea and bronchus, 2012). These figures are considered per 100,000 individuals.

This data offers a more recent status of lung cancer in the Maltese population. It differs from the other reports in indicating that lung cancer had increased over time in this region in men. This data also reflects that lung cancer in men had outweighed women in the recent period.

This source differs from the report of Agius et al. (2009) that highlighted the increased preponderance of lung cancer in women. On the other hand it supported the report of Camilleri (2011) where men had higher lung cancer

incidence rates than women. This source is unique in offer data on mortality. Finally, WHO mentions that radiation induced lung –cancer, for instance radon induced lung cancer is more frequent among those with smoking behaviour. Radon is found in soil, rocks and is a product of radium. Surveys in Malta revealed the presence of average radon levels of 40 becquerels per cubic meter (Malta Country: Strategic Information and Developments, 2013).

So the lung cancer incidence rates in Maltese men could offer new insights by indicating that men preferably working in radiation prone areas, could be high in number and at risk. However, this needs further investigation. This report from WHO differs from others in assigning the cause of lung cancer to the radiation levels of particular range.

So, the current status of lung cancer in Malta indicates that men are more likely to contract the condition than women and better quality as high risk subjects.

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