



# Epidemiology of cancer in Egypt and the Arab region

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Population of Egypt:

69.000.000

Population of Cairo:

8.000.000



# Cairo University Oncology Department:

- **Chemotherapy service**

Clinical pharmacy unit

Out-patient chemotherapy service

In-patient chemotherapy service

Medical ICU

- **Radiotherapy service**

2 simulators

2 Linac (one with 3 D conformal, stereotaxy & IMRT facility)

2 Cobalt-60 machine (mainly for palliation)

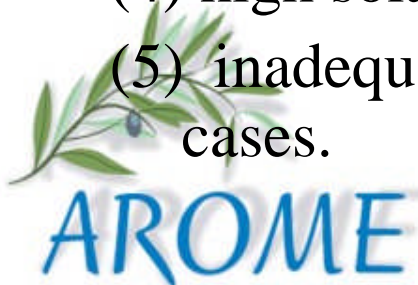
- **BMT unit**



# THE REGIONAL CANCER PROBLEM

The Arab world includes 21 countries with a total population of about 236 million. The urban/rural population split is about 49.7/50.3%. The Arab world has the following common epidemiological features which contribute to the profile of cancer problem:

- (1) high incidence of infections and malnutrition
- (2) young age of the population
- (3) increasing industrialization and urbanization un-accompanied by protective measures
- (4) high solar exposure
- (5) inadequate public education leading to late presentation of cases.



The profile of cancer among Arab population is characterized by: a high frequency of breast, bladder, lymphoma, nasopharynx, esophagus, larynx, oral cavity and liver cancer, and a low frequency of the prostate, lung, and colorectal cancer. Relatively high frequency figures of lung cancer were reported only from Kuwait and Palestine (14% and 15% respectively).



- Breast cancer is the most common malignant tumor affecting Arab females with a relative frequency of 34% in Egyptian and Palestinian females and about 20% in reports from Tunisia and Saudi Arabia.
- Bladder cancer is frequent where *shistosoma haematobium* is endemic, namely: Egypt, Iraq, Sudan, Southern Saudi Arabia (Jizan region) and Yemen. The relative frequency of bladder cancer is about 20% in Egypt, 10% in Iraq and 6% in jizan region.



Malignant lymphoma is a relatively common malignancy with reported frequency of 14% in Saudi Arabia and about 10% in Egypt, Iraq and Palestine. There is also a high frequency of gastrointestinal localization of non- Hodgkin's lymphoma. Immuno-proliferative small intestinal disease (IPSID) is a rare type of small intestinal lymphoma first reported from several countries of the region specially gaze and Tunisia. Nasopharyngeal carcinoma is frequent in Tunisia, contributing about 12% of male cancers and 5% of female cancers, as well as Morocco (about 9% of all cancers). This is probably related to EBV infection.



Esophageal carcinoma is relatively common in Saudi Arabia (5%) particularly Qassim area. This is etiologically linked to consumption of thermally hot food or water contamination with petroleum oil nitrites.

Oral cancer is relatively frequent in Saudi Arabia (5%) particularly Jizan area. This is related to chewing tobacco mixture (Shamma). Liver cancer is relatively common in Sudan (5%) probably related to high prevalence of viral hepatitis.



# THE NATIONAL CANCER PROBLEM

In Egypt, the mean age of cancer patients is 48 years, two decades younger than the mean age of American cancer patients. This is a reflection of the young age structure of the Egyptian population. With about 50% below the age of 20 years.

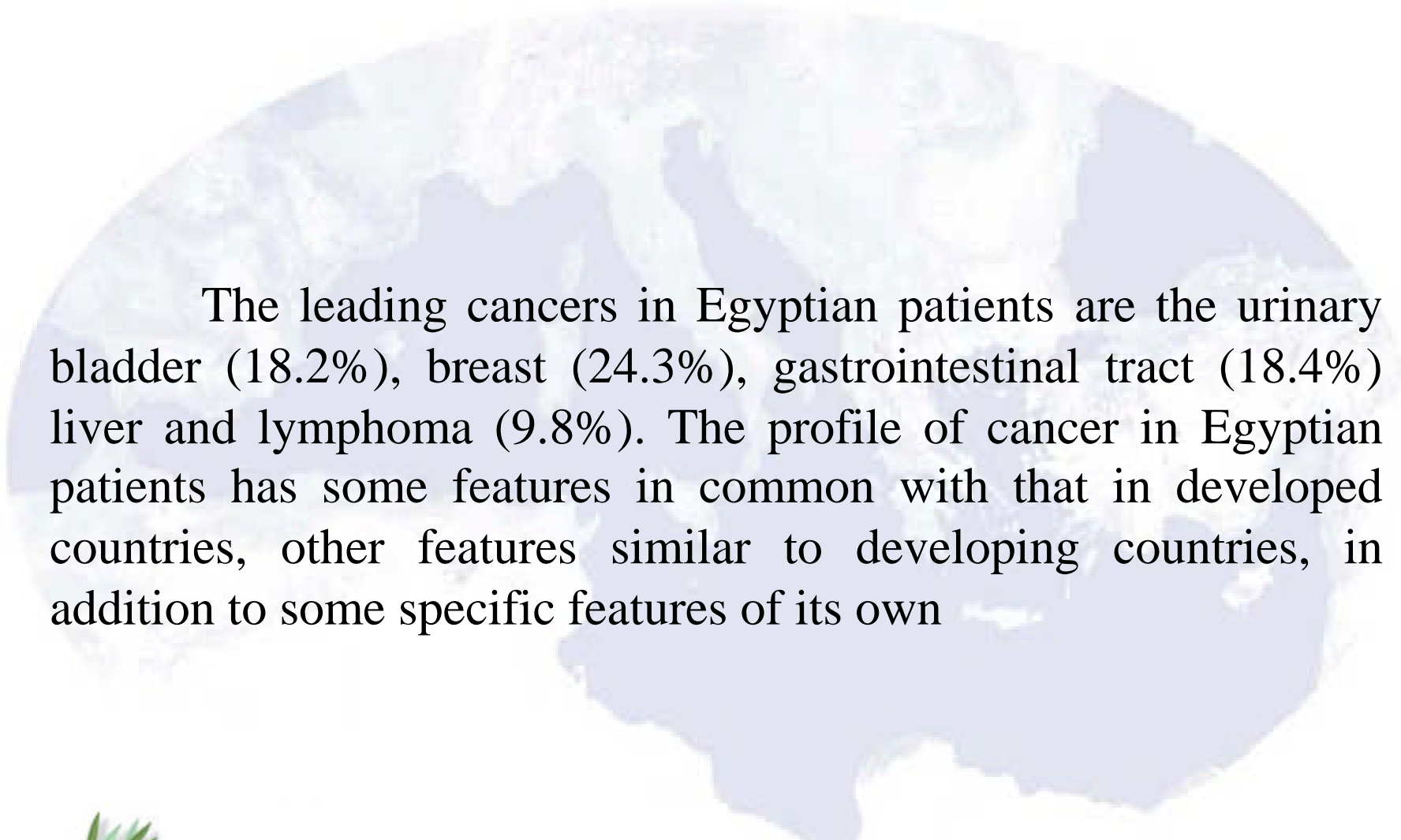


There is a male predominance in cancer incidence with a ratio of 1.4:1. Thus, although males constitute only 51.1% of the Egyptian population. They contribute 58.3% of the cancer population. This denotes that males in general are at a higher risk than females to develop cancer. Conversely, in developed countries, this male predominance is less striking, with a ratio of only 1.1:1 from the USA.



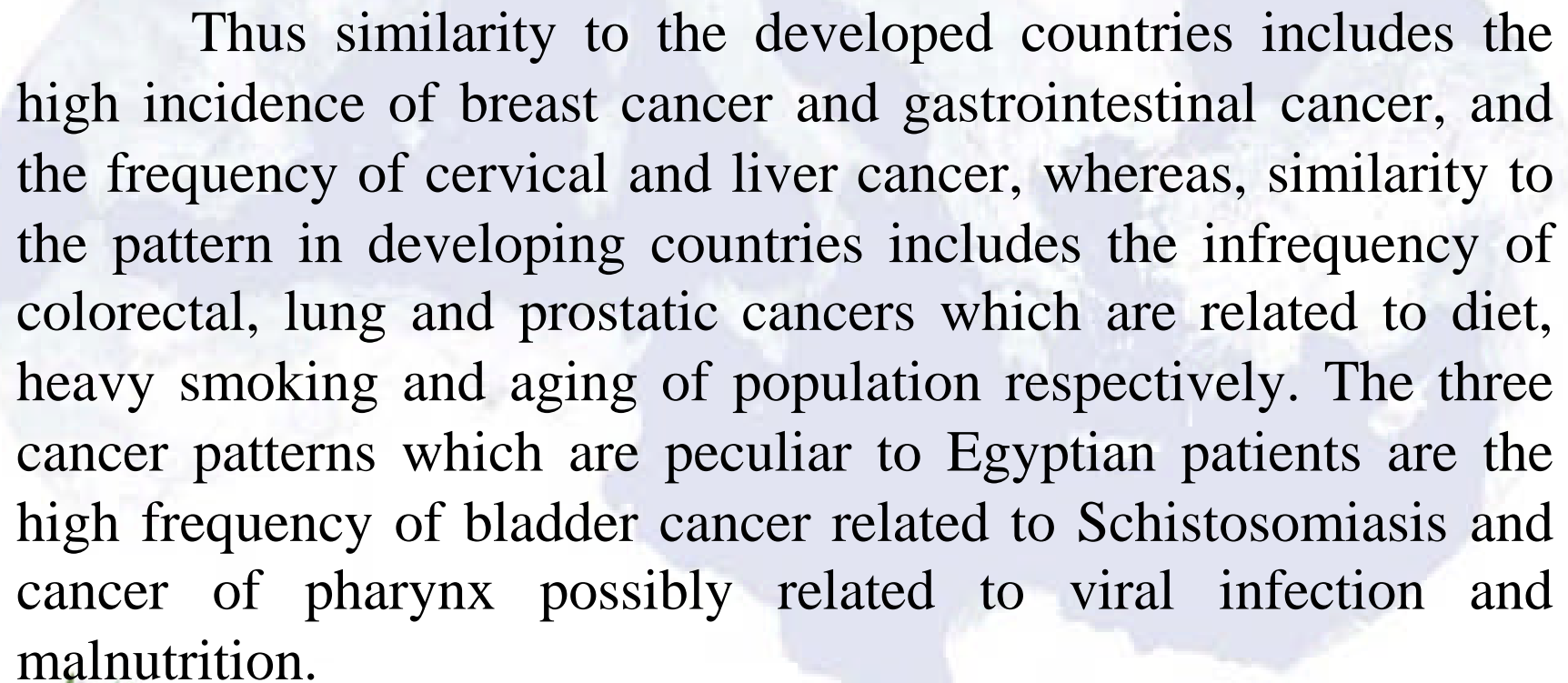
The site distribution of cancer in Egyptian patient is analyzed in two pathology series, a private practice series and National Cancer Institute (NCI) series during the years 1990-2006. Both series included solid tumors only (leukemia is not represented). The private series probably contains a well-balanced represented of the different tumor sites but, a selection bias probably exists in the material of NCI since it is a specialized center in bladder and head and neck cancer, but lacks service departments for chest surgery and neurosurgery.





The leading cancers in Egyptian patients are the urinary bladder (18.2%), breast (24.3%), gastrointestinal tract (18.4%) liver and lymphoma (9.8%). The profile of cancer in Egyptian patients has some features in common with that in developed countries, other features similar to developing countries, in addition to some specific features of its own





Thus similarity to the developed countries includes the high incidence of breast cancer and gastrointestinal cancer, and the frequency of cervical and liver cancer, whereas, similarity to the pattern in developing countries includes the infrequency of colorectal, lung and prostatic cancers which are related to diet, heavy smoking and aging of population respectively. The three cancer patterns which are peculiar to Egyptian patients are the high frequency of bladder cancer related to Schistosomiasis and cancer of pharynx possibly related to viral infection and malnutrition.





*Thank  
you*



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