

**Spatial Dimensions of Cancer in Saudi Arabia:  
A Study in Medical Geography**

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## **Abstract**

The current study is aims to identify the spatial dimensions of Cancer in Kingdom of Saudi Arabia, geographical distribution of the disease according to the Administrative Regions, the development of the registered cases of cancer during the period 1994 – 2008, the extent of the variation in cases, and the rate of incidence between males and females, Saudi and non-Saudis, and between age groups, in addition to identifying the most prevalent types of Cancer in general, and among males and females at the Kingdom of Saudi Arabia and at the level of the Administrative Regions.

The study consist of five chapters, the first three chapters covered the introduction of study and its aims, theoretical frame and previous studies, procedures and study methodology, the fourth chapter includes data analysis, and the fifth chapter includes the study results and recommendations.

The study depends on a comprehensive inventory method that includes all registered cases in the Kingdom of Saudi Arabia, from unpublished row data were obtained from Saudi Cancer Registry (SCR), and covers 15 years (1994 – 2008).

The study used maps, graphs, frequency tables, percentages, change rates, average, and Pearson Correlation coefficient .

The study identified several findings here are some of them: the registered cases of cancer in Kingdom of Saudi Arabia through 15 years reached more than (135 thousand cases), an average of more than nine thousand cases per year, and increasing the registered cases from (7581 cases) in 1994 to (12347 cases) in 2008, and its distribution variation between the administrative regions.

The study also showed increasing of Incidence rate of the disease from (43/100 thousand inhabitants) in 1994 to (48/ 100 thousand inhabitants) in 2008.

Out of the total cases registered in Kingdom of Saudi Arabia during the period, the study showed that the percent of male (51 %) slightly higher than female (51 %) and (48%) respectively. And the registered cases of Saudi (74.6 %) against (23.6 %) for non-Saudi .

The findings showed that (44.1 %) of the cases form the age group (40-64 years), and (26.7 %) for elderly (65 years and above), followed by the age group (15-39 years) at a rate of (21.3 %), for young people (less than 15 years), they represents rate of (7.7%).

The study results revealed that breast cancer is comes in the first place in the ranking of the most spread ten types of cancer among the two sexes (male and female) (12.2 %), followed respectively by: blood cancer (leukemia), colon and rectum, lymph nodes, thyroid, liver, skin,

bronchus, stomach, and bladder. For males blood cancer (leukemia) comes in the first (9.6%) followed respectively by: Colon and Rectum, lymph nodes, liver, lung cancer bronchus, skin, bladder, prostate, Stomach, and brain. while among females breast cancer is comes in the first place (24.6 %), followed respectively by: thyroid cancer, colon and rectum, lymph nodes, cervix, skin, ovary, uterus, and liver. The study find there is a variation between the administrative regions at the incidence rates, in the order of most spread ten types between the two sexes or each sex separately.

The study ends with several recommendations, such as, the need to expand the geographical area of exam and treatment centers to cover all regions of Kingdom of Saudi Arabia, and more research is needed on the most spread types of cancer at the level of Kingdom, and the administrative regions.

**Key Words:** Cancer, Incidence rate, Spatial dimensions, Geographical distribution, Medical Geography, Saudi Arabia.