# INTRODUCTION

Non -Hodgkin lymphomas (NHLs) are one of the most common malignant diseases worldwide, there are around 287.000 cases of (NHL) in the world per year. More males than females are affected and incidence increase with age.

Geographically NHL is most common in developed countries (52% of the total cases, and the seventh most common cancer in more developed countries), although in the developing world there are areas of moderate to high incidence in some Middle -Eastern countries and in parts of Sub-Saharan Africa, the latter is due to the high incidence of Burkitt lymphoma **(Bernard *et al.*, 2003).**

The rates of NHL in Egypt (13.5/100.000)could be considered one of the highest rates in the world exceeding that of the US SEER (12.9/100.000) **(Samy *et al.*, 2007).**

The non Hodgkin lymphoma makes up around 90% and Hodgkin lymphoma account for the remaining 10% percent of all malignant lymphomas. NHL arises with few exceptions, from two distinct lymphocyte types B or T cells. Non Hodgkin lymphoma is presently classified according to the universally accepted World Health Organization (WHO) classification where 36 subtypes (21 of B-cell and 15 of T- cell type) are recognized **(Karin, 2006).**

The (WHO) classification defines non Hodgkin lymphoma subtypes according to morphology in combination with cell phenotype, genetic features, clinical features, race, geographic distribution and microbiologic features, the relative importance of which depends on availability and subtype **(Turner *et al.*, 2004).**

Patients with HIV/AIDS, or who have received immunosuppressant therapy, have a higher risk of developing NHL. Viral infections such as HIV, HTL-1, HCV and EB Virus also associated with NHL. Infection of the stomach with Helicobacter pylori is associated with gastric lymphoma. Agricultural work with possible exposure to pesticides and occupational exposure to solvents or fertilizers have to be confirmed as causes of NHL. There is an increased risk of NHL among persons with a family history of lymphoma or hematological cancers **(Bairs and Zahm, 2000).**