Introduction

Nasopharyngeal carcinoma (NPC) is unique and distinct from other malignant tumors arising from head and neck because of its epidemiology ,histopathological spectrum, clinical characheristics and biological behavior ***(Erkl HS ,2001).***

In Egypt, nasopharyngeal carcinoma represent about 0.39% of all tumors and about 6.08% of respiratory tumors *(**Mokhtar N , et al 2007**).*

In the western world ,nasopharyngeal carcinoma is an uncommon type of tumor ,representing <1% of all cancers in the USA and the annual incidence in the USA and Europe varies between 0.22 and 0.5 per 100.000 population ***(Cooper JS ,2000).***

However ,it is more common among the southern Chinese ,Southeasr asian ,Northern African and Eskimo population ***(Al- Saraf M ,1998).***

The world health organization has developed a classification system that divides nasopharyngeal carcinoma into three types bases on light microscopy finding .Type I or squamous cell carcinoma are characterized by moderate to well differentiated cells that produce keratin and have intracellular bridges and other findings similar to typical squamous cell carcinoma .Twenty five percent of nasopharyngeal carcinoma are of this type .Type II lesions ,non keratinizing carcinomas ,have cells that vary from mature to anaplastic in appearance but produce minimal keration .These carcinomas often resembele transitional cell

carcinoma of the bladder .Approximately tweleve percent of nasopharyngeal carcinomas are of this type .Type III , often described as undifferentiated carcinomas .Included in this group are lymphoepitheliomas ,anaplastic ,clear cell and spindle cell variant .Sixty percent of all nasopharyngeal carcinoma and nearly all of those found in young patients are of this type ***(Wei WI et al ,1996).***

The most significant prognostic factors in nasopharyngeal carcinoma were patient age ,stage of the primary tumor ,presence of cervical lymphadenopathy and cumulative radiation dose of primary tumor Likewise ,it was suggested that T stage ,N stage and the dose to the primary site were prognostic indicators for local and regional control ***(Sanguine eti G et al ,1997).***

Survivin is a structurally and functionally unique member of the inhibitors of apoptosis (IAP) gene family ,it semms to be multifunctional protein playing important roles in both mitotic regulation and apoptosis inhibition. In terminally differentiated normal tissues .survivin expression is undetectable .Survivin is required for normal cll division and is involved in chromosomal segregation and cytokinesis .In tumor cells , however ,increased survivin expression can perturb normal cell cycle control and may therefore allow cells with spindle defects or aberrant chromosome assembly to proceed through cell division . Furthermore , a pool of surviving that localizes to the mitochondria can block apoptosis in a cell cycle independent manner ***(Ambrosini G et al , 1997).***

Morphometry is the process of measuring cellular ant tissue archeticture features with regards to size, shape and chromatin pattern ***(Millot and Dufer 2000).***

The measurement of nuclear shape descriptors has several advantage over visual assessment . Nuclear morphometric features of malignant cells differ from that observed in non malignant cell nuclei .This difference is observed in histologically normal appearing cells in areas that are peripheral to a malignant lesion .This observation has lead to the hypothesis that such changes occur prior to the emergence of clinically detectable disease and the nuclear morphometry can be used as a biomarker for estimating an individual 's risk for cancer ***(Nativ 1998, Pamela Wolfe 2004).***

Also ,there is increasing evidence of the value of the nuclear morphometry as a marker of tumor behavior. This is known to be accurate ,reproducible and efficient and has been used to predict the prognosis in bladder and prostate cancer ***(Nativ 1998, Ozer 2002).***