INTRODUCTION

Thyroid nodules are one of the most common causes of well defined anterior neck masses in adults. Thus when a lump is felt it is obviousely important to decide if it is of thyroidal origin. The most important aspect of physical exam is its movement on swallowing ***(Siminosky, 1994)*** . The topic of thyroid nodules has aroused the interest of clinicians and pathologists out of proportion to the incidence of thyroid cancer . Whereas thyroid nodules are found in as many as 1% - 10% of the population, malignant thyroid diseases account for about 1% of all cancers and only 0.4% of cancer-related deaths. Nevertheless, thyroid cancer is the most common malignant endocrine tumor .***(Rubin and Farber, 1994).*** Discrete thyroid swellings are present in 3 - 4% of adult population in UK and USA. Such swellings are three to four times more common in women than in men. A discrete swelling in an , otherwise impalpable gland is termed isolated or solitary. A discrete swelling is termed dominant , if it is associated with generalized gland abnormality. The importance of discrete swellings lies in the risk of neoplasia. Some 10 - 20% of the clinically isolated swellings turn out to be malignant, an additional 30% are follicular adenoma, the remainder are benign and the large majority being areas of colloid degeneration . ***(Charles and Russell 1992).*** The majority of nodules are benign, but even if they are cancerous, most tumors are well - differentiated and potentially curable. In most countries the annual incidence of thyroid cancer is about 5/100.000 population and women are more frequently affected than men . Overall 80 - 90% of thyroid cancer are well - differntiated ***(Grebe and Hay , 1995)*** . A thyroid nodule is more likely to be a cancer in a man than in a woman and in a young than in old one. Thyroid cancer has been described in families with , multiple endocrine neoplasia MEN type II (medullary thyroid carcinoma, MTC) , cowden's disease and Gardner's disease ***(Clark, 1991)*** . There is general agreement that fine - needle aspiration and cytology (FNAC) should be the first test in the work - up of a patient with a solitary nodule (provided that serum TSH is not suppressed which would suggest an autonomous adenoma). The outcome of cytological readings in a large series is as follows :

- Malignant or positive 4%.

- Suspicious or indeterminate 11%.

- Benign or negative 74%.

- Inadequate sample 11%. **(Wiersinga, 1995).**

Thyroid scanning can be helpful to distinguish between follicular adenoma and carcinomas , a "warm" nodule is always virtually benign , wheress a "cold" one has 30% malignancy rate . Adjunctive tests include T4c (Corrected T4) , I^{123} scan , antimicrosomal and antithyroglobulin antibody tests that help in diagnosis of autoimmune thyroid states and thyroid ultrasonography that can be useful to confirm physical exam, size a nodule, rule out mutinodularity and to determine whether or not a mass is intrathyroidal . Technitium thyroid scan does not provide as much information as I scan ***(Einhorn , 1991).*** The ability of FNAC to make a definitive diagnosis has markedly reduced the need for unnecessary diagnostic thyroid surgery ***(Hall, 1989)*** . Recurrent nerve palsy with vocal paralysis after thyroid operation makes unnecessary surgical intervention inappropiate ***(Jatzko , 1994)*** . However,injury to superior laryngal nerve is less documented perhaps due to the difficulty in recognizing its manifestations ***(Teitelbaum and Wenig1955).*** Towards understanding of molecular basis of thyroid cancer, the study of oncogenes and tumor suppressor genes in the pathogenesis of thyroid cancer is in its infancy, however, rapid progess is being made in identfying genes participating in malignant thyroid cell transformation ***(Farid, 1995).***

Aim of the work:

This study aims at early detection, differential diagnosis, differentiation of malignant from nonmalignant thyroid nodules with suggestion of appropriate theraputic modalities (surgical or non surgical) and adequate follow up and prognostic features taking in consideration any markers denoting thyroid destruction processes if any interlukin - 6.