INTRODUCTION

Many thyroid diseases can present clinically with one or more thyroid nodules. Such nodules represent common clinical problems *(Rojeski &Gharib, 1985)*.

Palpable thyroid nodules occur in 4 to 7 percent of the population, but nodules found incidentally on ultrasonography suggest a prevalence of 19 to 67 percent. The majority of thyroid nodules are asymptomatic. Because about 5 percent of all palpable nodules are found to be malignant, the main objective of evaluating thyroid nodules is to exclude malignancy.

Nodules are more likely to be malignant in men, particularly men aged over 70 *(Belfiore, 1992)*. A history of neck irradiation, rapid tumor growth, or a family history of thyroid cancer increases risk. Physical signs associated with increased risk include firm, non-tender nodules, local lymphadenopathy, and recurrent laryngeal nerve palsy in the absence of previous surgery. The incidence of cancer in those with clinical features strongly suggestive of malignancy is high, *(Hamming, 1990)*, but most patients do not have these features.

Because of the superficial location of the thyroid gland, high resolution gray scale and color Doppler sonography can demonstrate normal thyroid anatomy and pathologic conditions with remarkable clarity. As a result, this technique has come to play an increasingly important role in the diagnostic evaluation of thyroid diseases.

Sonography however is one of several diagnostic methods currently available for use in evaluation of the thyroid. In order to use it effectively and economically, it is important to understand its current capabilities and limitations.

Although FNA has become the primary diagnostic method for evaluating clinically palpable thyroid nodule. High resolution sonography has three primary applications: detection of thyroid and other cervical masses before and after thyroidectomy, differentiation of benign from malignant masses on the bases of their sonographic appearance; and FNA guidance *(James & Charbonean, 1985).*