

# Occult Thyroid Malignancy in Graves' disease and Nodular Goiter patients underwent Total Thyroidectomy; A single center study at an Endocrine Surgical Unit in Sri Lanka.

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## Introduction

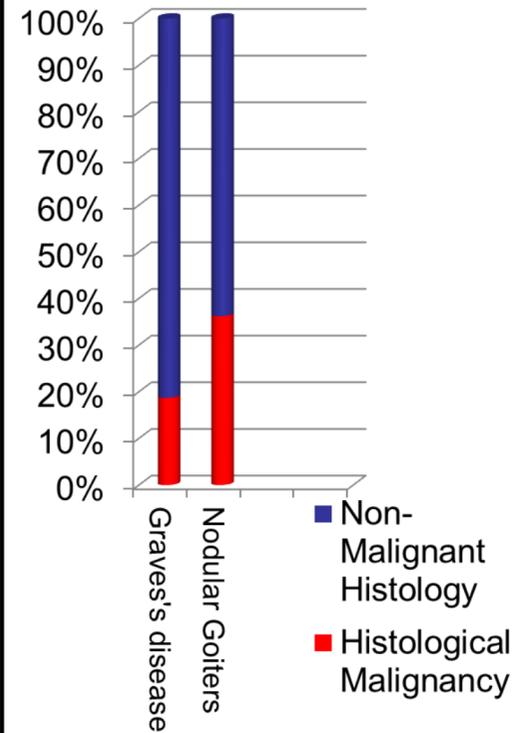
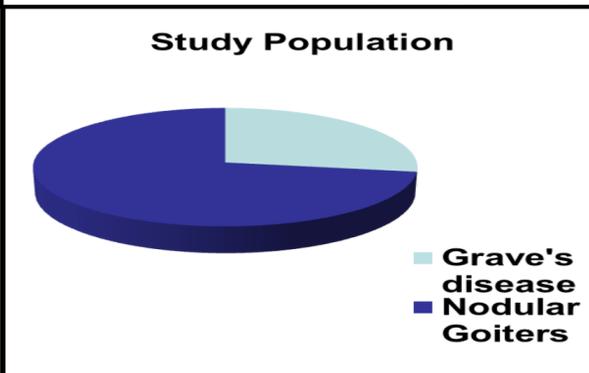
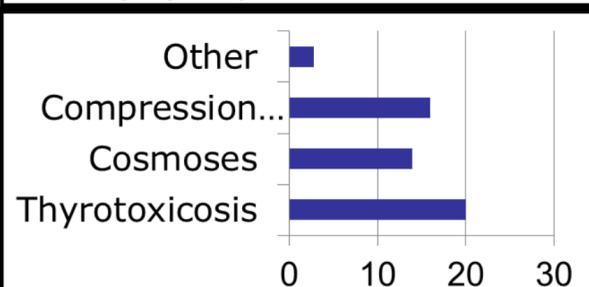
Thyroid carcinomas show multifactorial aetiology. Clinically benign nodular goiters has low risk of malignancy. Pathogenesis of thyroid cancers in Graves' disease is debated. Studies on incidence of occult thyroid malignancies in Graves' disease and other nodular goiters in Sri Lanka are lack. This study assess the incidence of clinically occult thyroid malignancies in adult patients who underwent total thyroidectomy for clinically benign conditions.

## Materials and methods

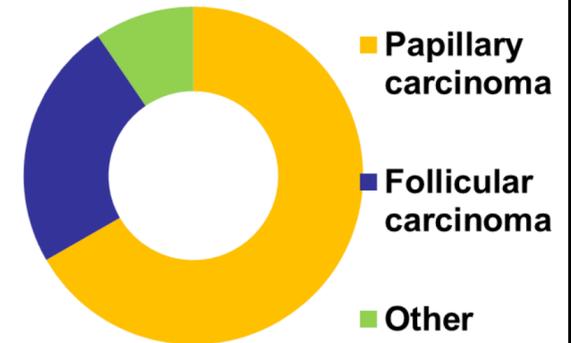
A retrospective descriptive study conducted among patients of age >16 years, who underwent total thyroidectomy for radiological or cytologically benign nodular goiters and poorly controlled Graves' thyrotoxicosis over 6 months period from June to December 2023 at University Surgical unit of Teaching Hospital Anuradhapura. Patient databases were analyzed and appropriate diagnostic criterias depending on their clinical presentations, radiological and cytological findings of benign nodular goiters. Indications for thyroidectomy in nodular goiter patients were mainly cosmoeses-related and compressive symptoms. Patients with poorly controlled Grave's thyrotoxicosis referred from endocrine clinics for Total thyroidectomy as definitive therapy were included for this study. Post-operative thyroidectomy specimen histological diagnosis were considered in the outcome.

## Results

58 patients who underwent total thyroidectomy were considered in this study. 91.3%(n=53) of total population were females and 8.7% (n=5) were males. Mean age of females was 46.9±7.5 years and 53.8±4.8 years for males. Out of all, 27.5% (n=16) had poorly controlled Grave's disease as the indication for surgery and 72.5% (n=42) had clinically benign goiters with compression symptoms or cosmoeses as the primary indication for surgery. 36.2% of all (n=21) who underwent total thyroidectomy had histologically proven thyroid malignancy. Among the patients diagnosed having histologically proven malignancy, 61.9%(n=14) had Papillary carcinomas, 23.8%(n=5) had Follicular carcinomas and 9.5%(n=2) had other histological types of malignancies. 9.5%(n=2) had multifocal papillary carcinoma involving both lobes of thyroid gland. Majority (37.5%) had micro-papillary carcinoma with pathological stage pT1. 18.7% (n=3) of patients referred from endocrinology clinics who underwent thyroidectomy as a definitive treatment for Graves' disease had histologically proven thyroid carcinoma. All of above had histology proven micropapillary carcinomas.



## Histological Diagnosis



## Conclusion

**Observed Incidence of Thyroid malignancy in Graves' disease and clinically benign nodular goiters are considerably high in this local study conducted in Sri Lanka compared to global rates. This study highlights the importance of Graves' disease patients be properly screened for occult thyroid malignancy with proper imaging and cytological assessment**

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