

# Concomitant Thyroid Nodules in Primary Hyperparathyroidism

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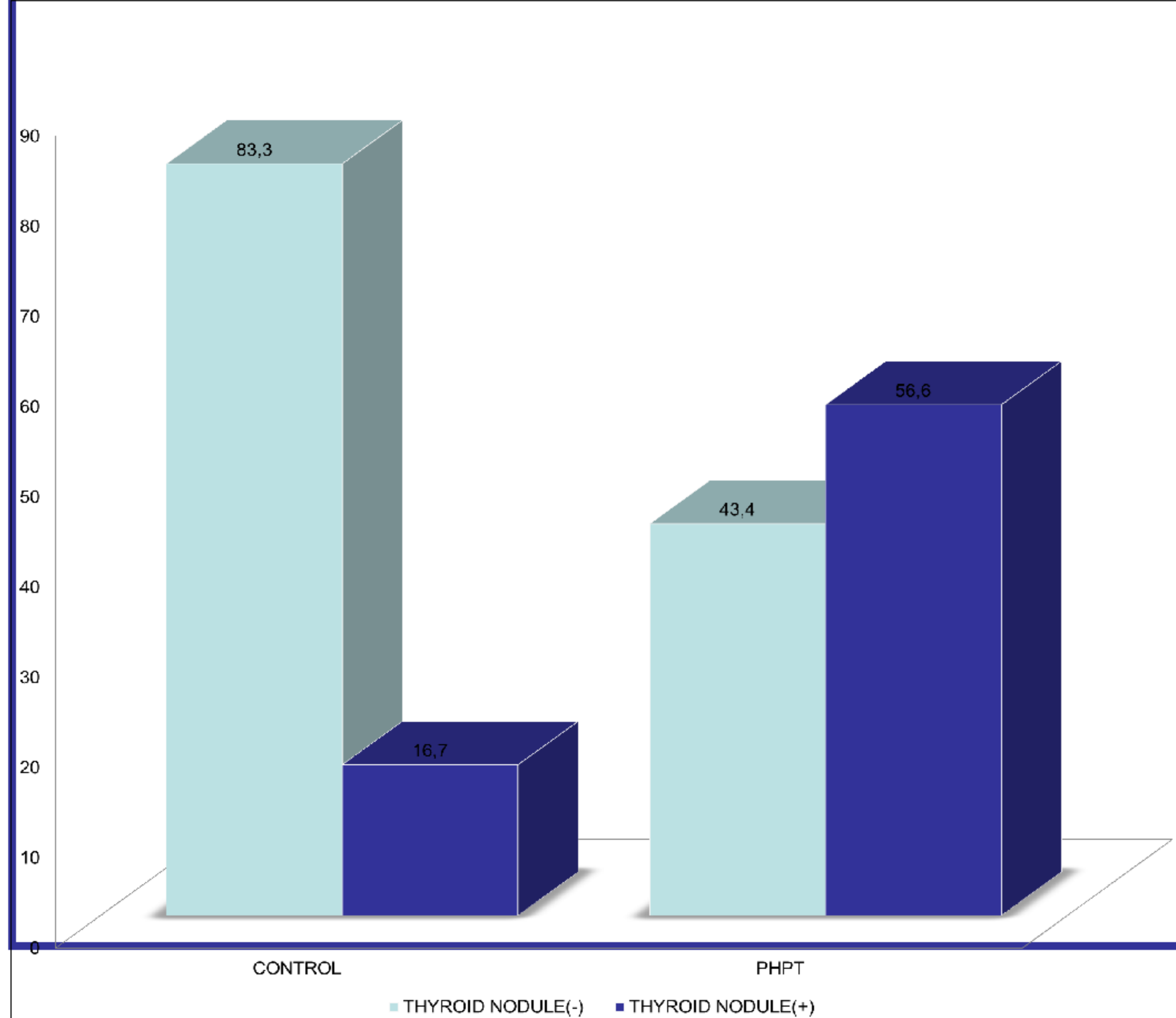
## OBJECTIVES

Coexisting thyroid nodules affect the treatment choice for PHPT. We aimed to evaluate the incidence of concomitant thyroid nodules in patients with primary hyperparathyroidism and to investigate the relationship between thyroid nodule volume, thyroid gland volume and thyroid nodules with clinical and laboratory parameters.

## METHODS

This study was carried out at Ankara University Endocrinology and Metabolism Department. 183 patients with biochemically confirmed primary hyperparathyroidism and 30 patients with no any other co morbidities, as a control group, were evaluated. USG images, FNAB results, clinic and laboratory parameters of patients were reviewed from medical data.

Figure 1. Thyroid nodule incidence in PHPT



## RESULTS

Thyroid nodules were higher in the PHPT patients ( $p < 0.001$ ). Six of the patients had papillary thyroid carcinoma and one had follicular neoplasia. Patients with thyroid nodules had higher 25-OH vitamin D levels ( $p = 0.026$ ). Thyroid volume was positively correlated with BMI ( $p = 0.001$ ,  $r = 0.272$ ), fasting glucose ( $p = 0.022$ ,  $r = 0.173$ ) and negatively correlated with TSH ( $p = 0.01$ ,  $r = -0.194$ ). Number of nodules and nodule volume were positively correlated with creatinine ( $p = 0.036$ ,  $r = 0.158$ ) and negatively with GFR ( $p = 0.018$ ,  $r = -0.179$ ). Also nodule volume was positively correlated with 25-OH vitamin D level ( $p = 0.04$ ,  $r = 0.154$ ). In regression analyses thyroid volume was found to be in relation with creatinine, HDL, 24 hour urinary calcium and phosphorus; number of nodules with age, creatinine, GFR, BMI, HDL, 25-OH vitamin D, albumin and 24 hour urinary calcium. The patients with malignancy had higher T4 lower TSH and better lumbar T scores. But we couldn't find any relationship between 25 OH D levels, glucose levels and malignancy.

## CONCLUSIONS

Thyroid nodules are more common in patients with primary hyperparathyroidism compared to normal group and considerable number of patients with nodules has thyroid cancer. Decreased GFR seems to be related with this increased incidence. Preoperative evaluation of thyroid gland with USG prevents missing thyroid disease especially a malignancy and unnecessary re-operative surgery.

## References

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