



# Pattern of Childhood Thyroid Malignancy Referred to INMAS, Dhaka for Radioiodine Ablation for the Period of 10 years.

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## Background

- Thyroid cancer is the third most common cancer in children. It represents 1% to 1.5% of all pediatric cancers.
- Malignant lesions are usually papillary and follicular carcinomas.
- Papillary thyroid cancer (PCT) is by far the common thyroid malignancy in children, constituting 83% of all pediatric thyroid malignancies.
- Thyroid carcinoma in pediatric patients usually manifests as an asymptomatic neck mass.
- Solitary thyroid nodule in children have a 20-73% incidence of malignancy.
- A painless non inflammatory metastatic cervical mass is the presenting symptom in 40-80% of pediatric patients.

## Objectives

This study was done to see the (1) pattern of carcinoma thyroid present in our study population, (2) Treatment efficacy including radioiodine therapy in children.

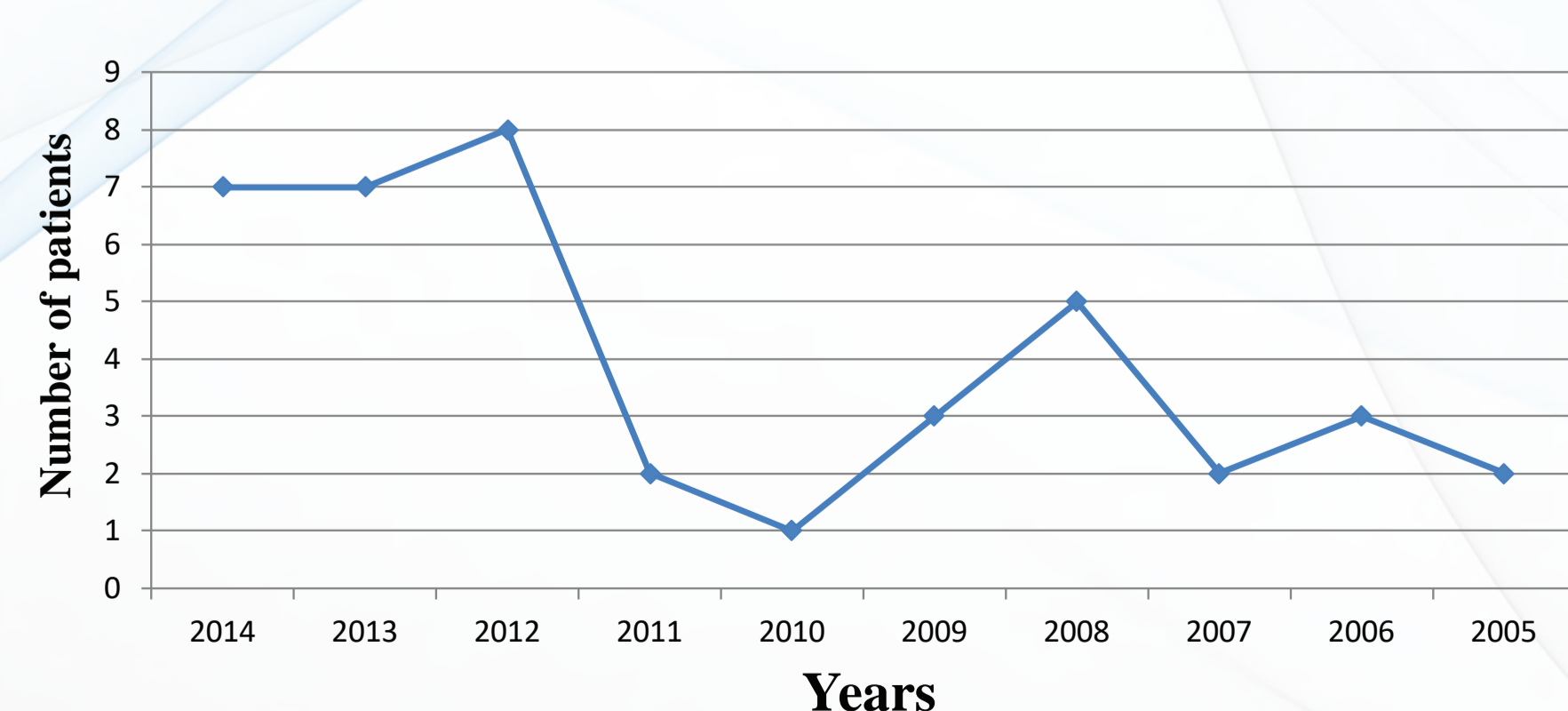
## Materials and Methods

- This retrospective study was carried out in INMAS, Dhaka, from January 2005 to December 2014. Data taken from case files of thyroid cancer patients of pediatric age group were recorded.

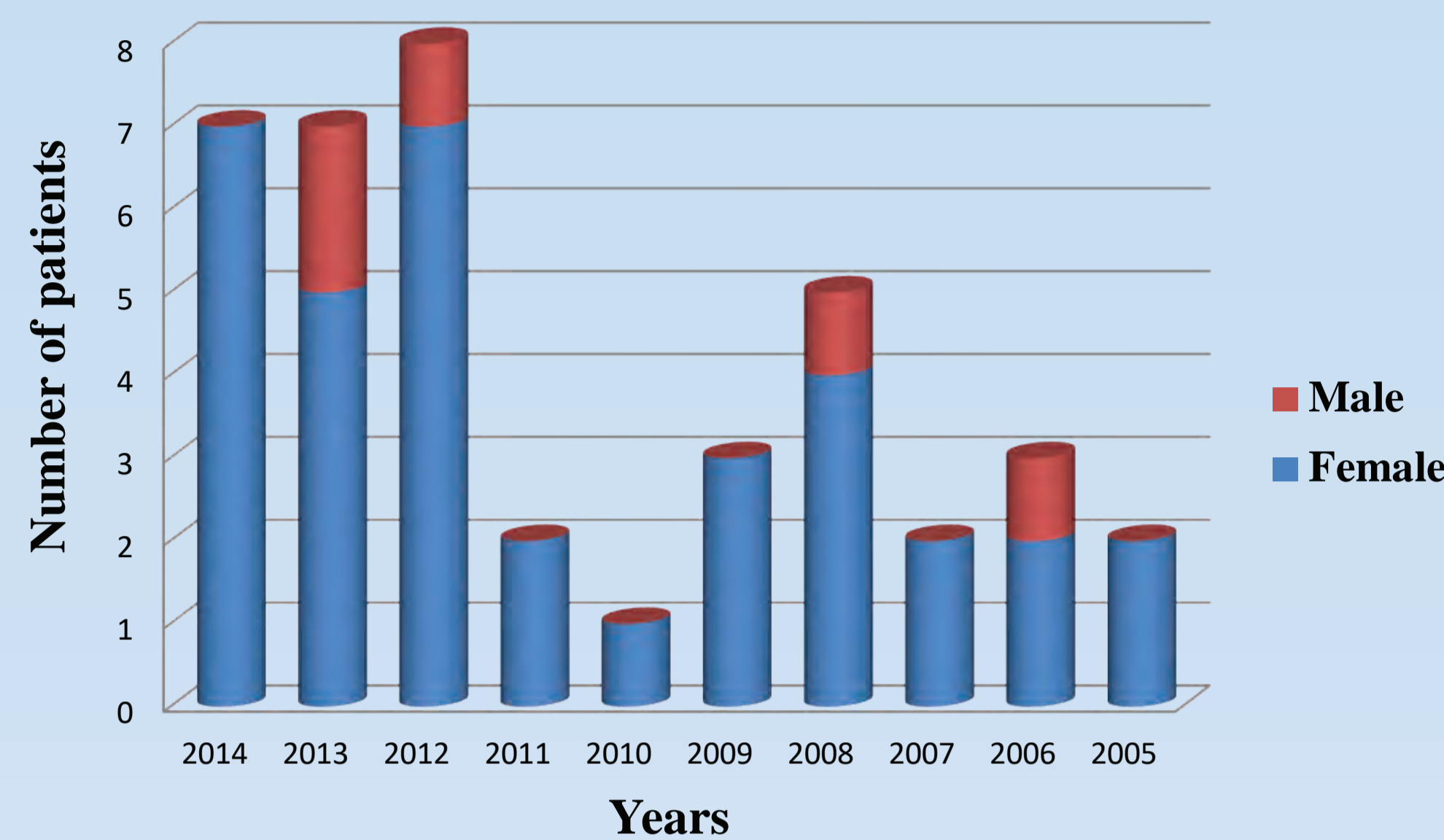
## Results

- Total 40 pediatric patients studied, 35 females and 5 males (F: M: 7:1, age 13±1years)
- Patients were referred after total thyroidectomy
- 24 patients (F-21,M-3,60%) had papillary thyroid carcinoma (PCT).
- 3 patients (F-2 M-1, 7.5%) had follicular thyroid carcinoma (FCT).
- 11 patients (F-10, M-1, 27.5%) had PCT with lymph node metastasis (others).
- 1 patient had PCT with hashimoto's thyroiditis.
- 1 patient had medullary carcinoma.
- 150 mCi radio-iodine was given to 5 patients (13%), 100 mCi was given to 13 patients (33%), 75 mCi was given to 10 patients (26%) and 50 mCi was given to 11 patients (28%). 2nd dose therapy was given to 6 patients.
- Association of other malignancy or any other diseases was not found

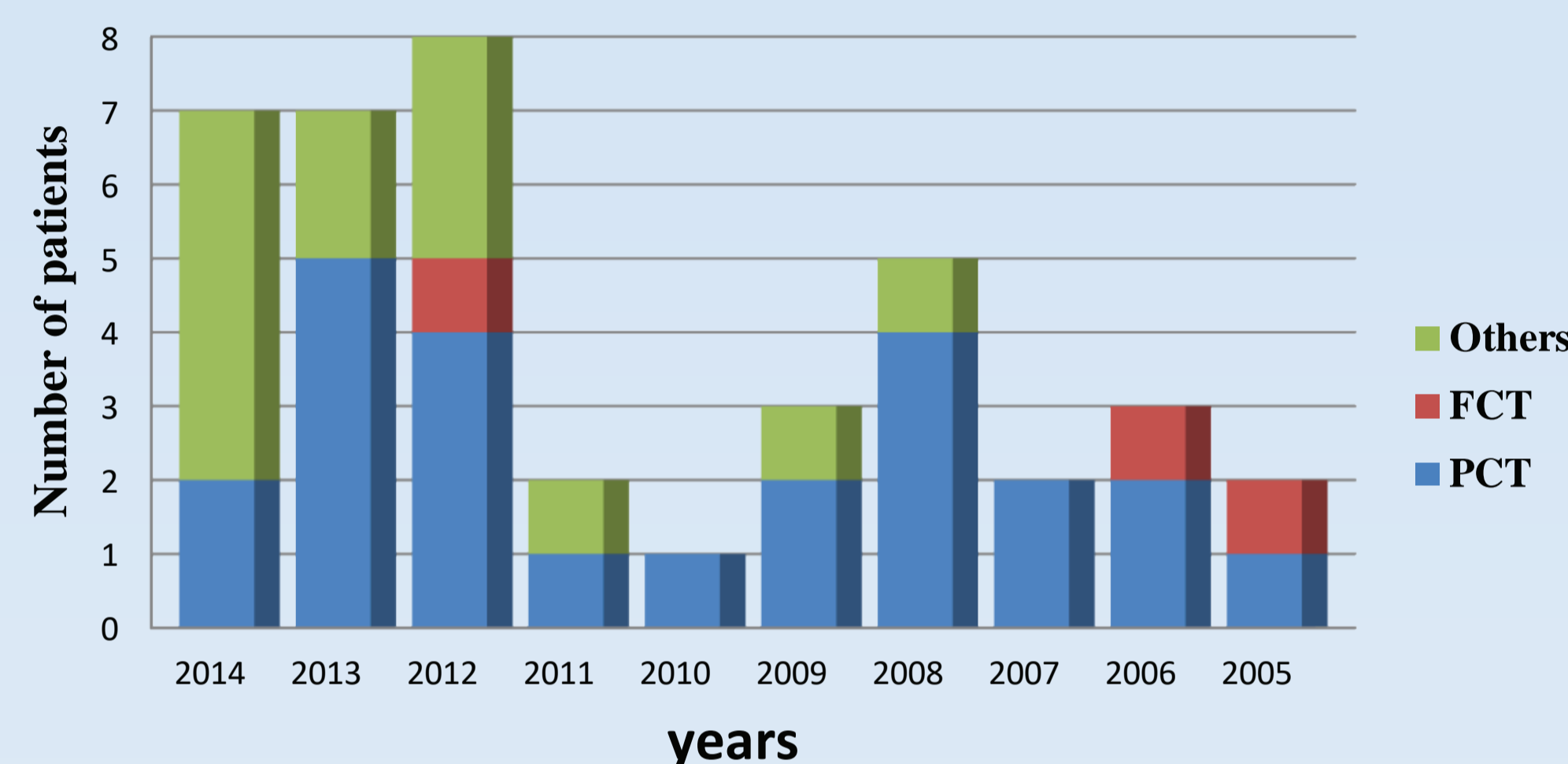
Status of yearly number of pediatric cancer patients



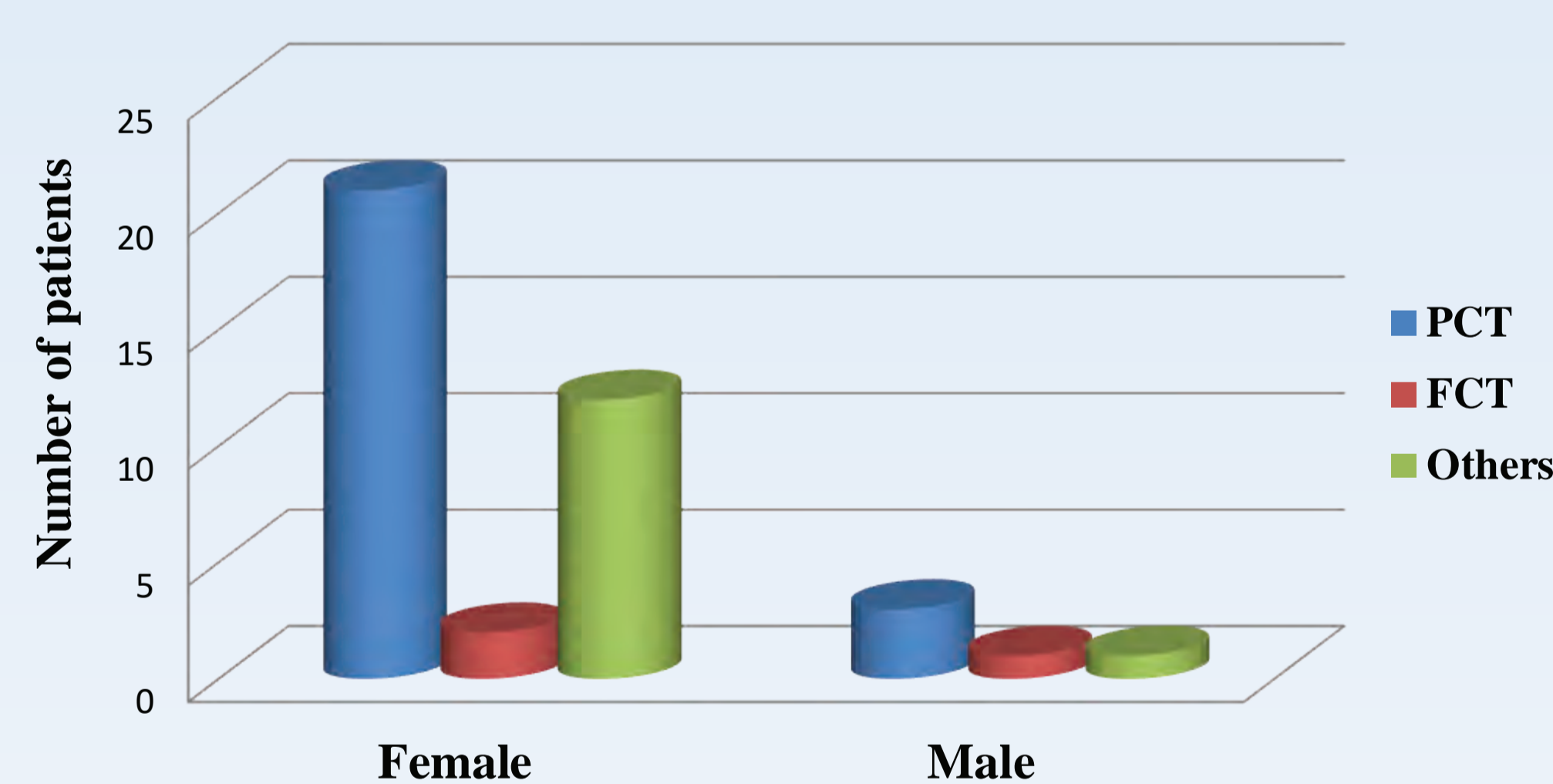
Status of yearly number of patients according to sex



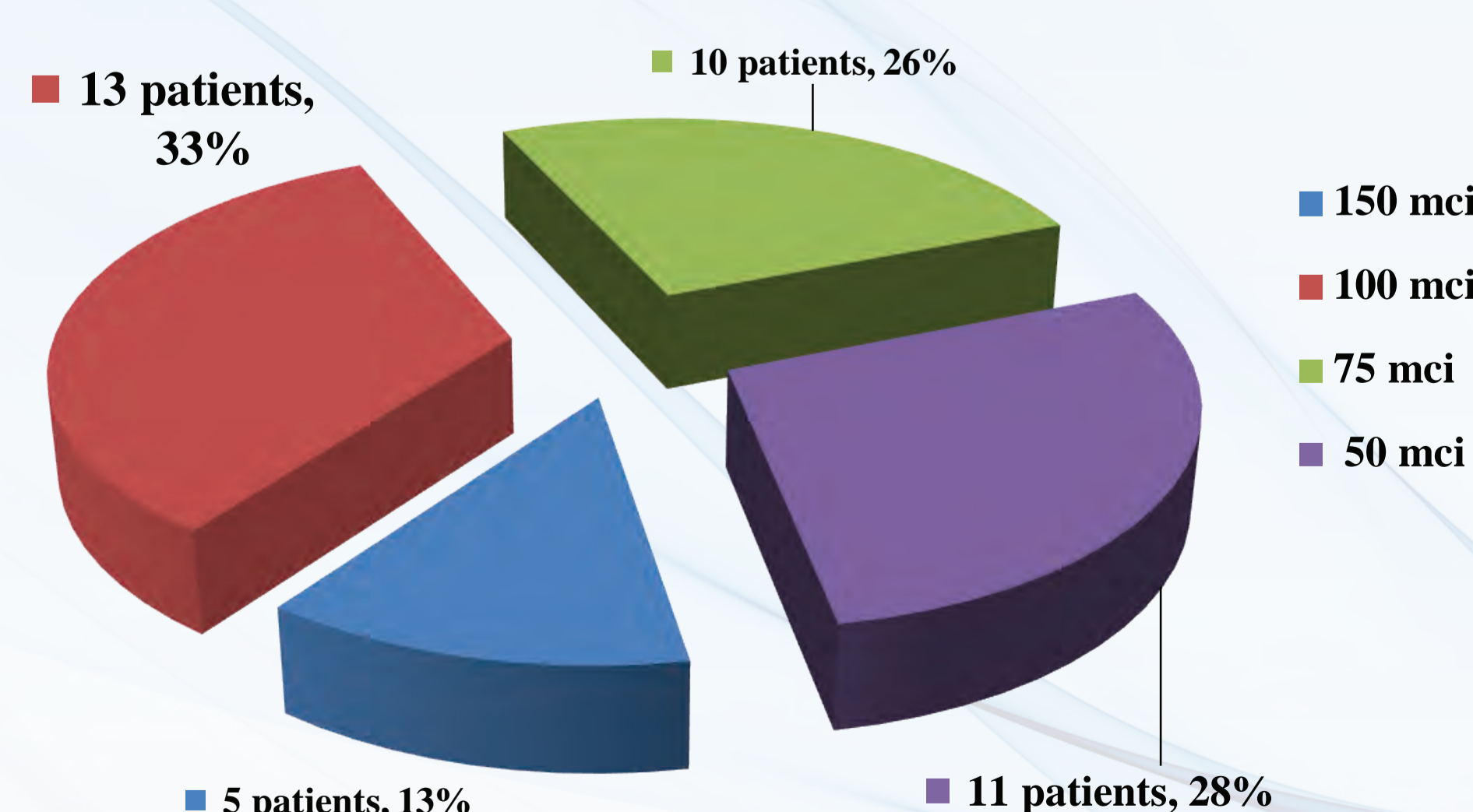
Status of yearly number of patients according to type of thyroid carcinoma



Status of number of patients according to sex and type of thyroid carcinoma

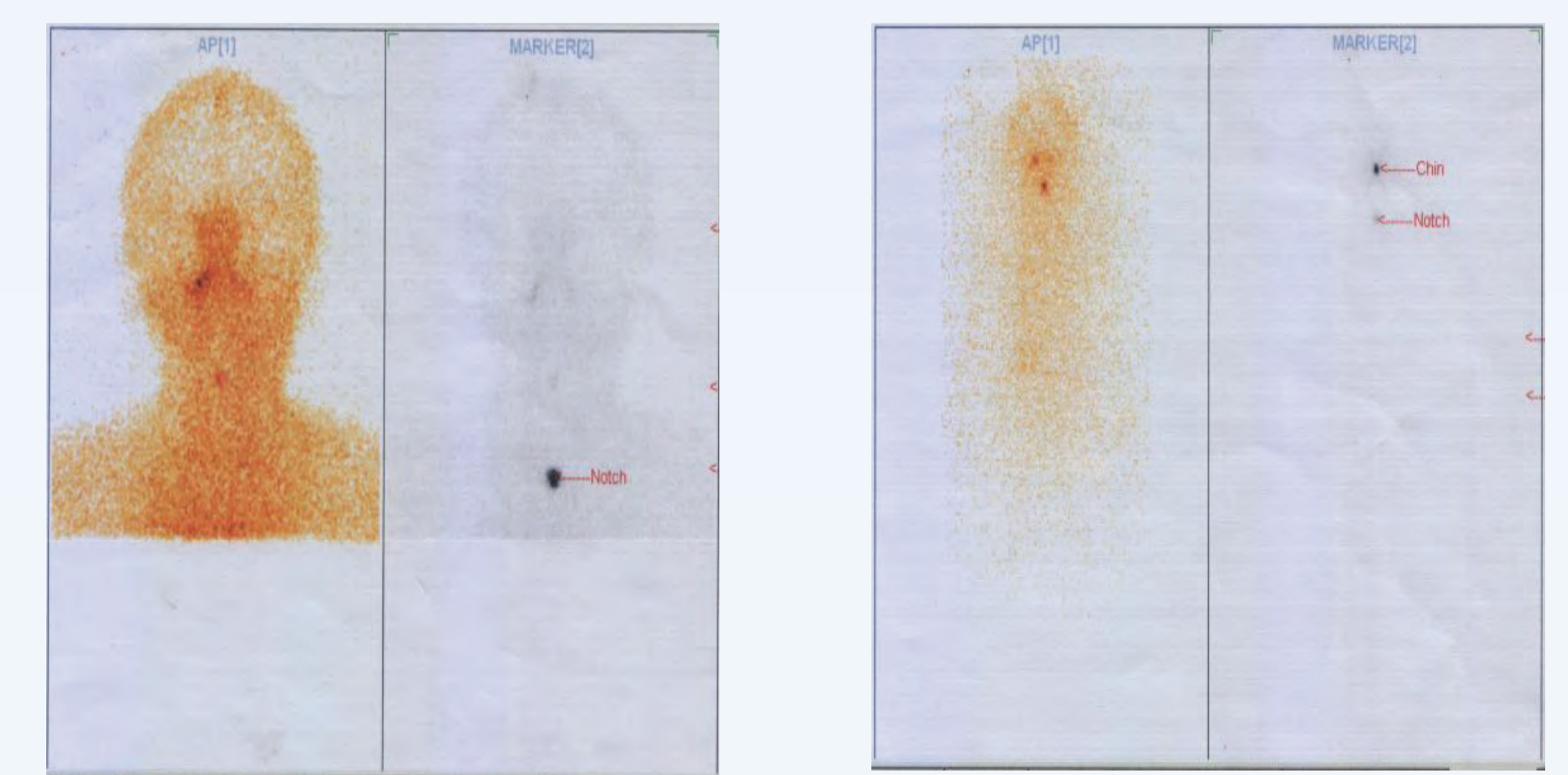


Status of radioiodine dose distribution among the patients



## A Case Presentation

- A 16 years old girl came to INMAS, Dhaka in June, 2014 with the complaints of neck swelling. On examination, thyroid gland was normal in size with multiple enlarged lymph nodes
- Ultrasonogram of her neck showed normal sized thyroid gland with multiple enlarged cervical lymph nodes.
- FNAC of lymph node showed metastatic papillary carcinoma. Then patient was referred for thyroid surgery.
- After total thyroidectomy she was referred to our Institute for radioiodine ablation.
- Her histopathology report showed papillary micro carcinoma with lymph node metastasis.
- She was ablated by 100 mCi radio iodine on 27/07/2014 and then treated with thyroid hormone replacement drug.
- Usually we advised 150 mCi radio iodine for carcinoma thyroid with lymph node metastasis but considering her age, we gave her 100 mCi radio iodine.



Post surgery thyroid scan

Post therapy whole body scan

## Discussion

- In this study, PCT is dominant in pediatric thyroid malignancy (60%). It also shows female predominance (87.5%).
- Only 11 patients (27.5%) showed PCT with lymph node metastasis.
- No other associated pediatric malignancy or no development of any secondary malignancy after radio iodine ablation therapy is found in the study group.
- 2<sup>nd</sup> dose of radio iodine was given to 15% patients due to positive whole body scan after 1 year of first dose.
- No baby is passed away during follow up period.

## Conclusion

- Thyroid cancer is not uncommon in pediatric patients. Proper treatment and regular follow up is mandatory for its excellent prognosis.

## References

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