

# Fixed Dose Radioactive Iodine Treatment for Hyperthyroidism- Experience of a District General Hospital

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## Background

- The short-term and long-term clinical outcome of patients receiving radioactive iodine (RAI) treatment for thyrotoxicosis differs in various studies.
- There is little consensus regarding the most appropriate dose of RAI to be administered.
- The range of activities currently prescribed varies between 200–800 MBq, with majority of patients receiving 400–600 MBq.
- In our centre, all patients receive a standard fixed dose of 400 MBq. Treatment is considered to have failed, if patients remain hyperthyroid at 12 months and a repeat 400 MBq is considered.

## Aim

To determine:

- The number of patients who remained hyperthyroid one year post RAI treatment
- The number of patients who required a second dose of RAI
- The cure rate with a dose of 400MBq at the end of one year

## Method

- We did a retrospective study of all patients treated with RAI at our hospital over a 3 year period.
- All patients received a fixed 400 MBq dose.
- TSH and FT4 levels were recorded at diagnosis, the time of RAI, 6 months and one year post-RAI.
- Anti-thyroid medication was discontinued for 10 days prior to RAI therapy.
- Failure rate in terms of persistence of hyperthyroidism at the end of one year was calculated.

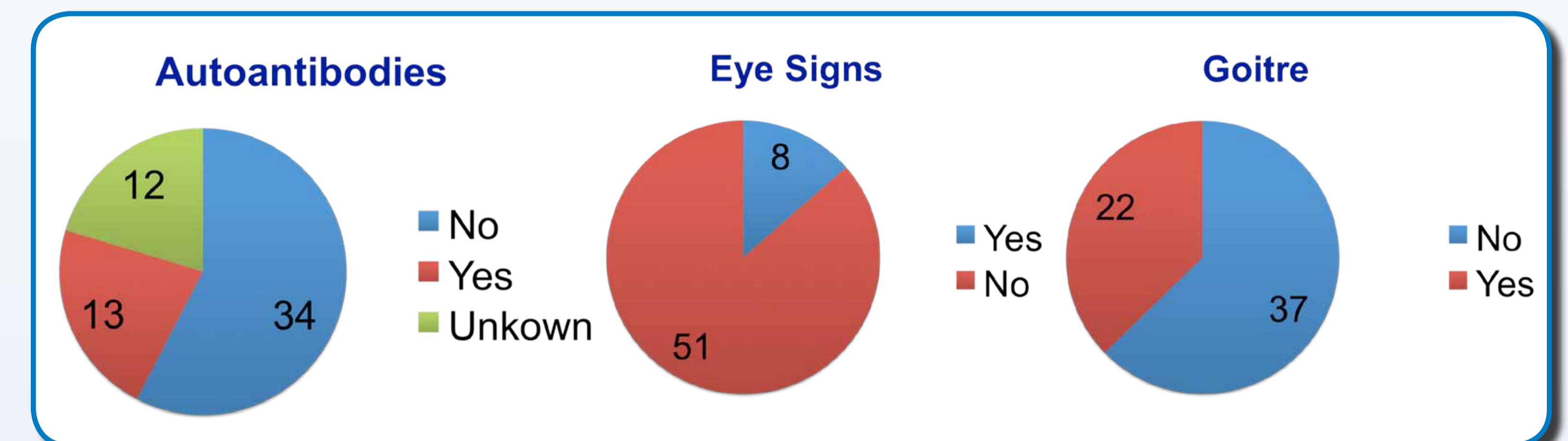
## Results

- 59 patients were included in the audit.
- 16 patients were male
- 43 patients were female
- Average age: 59.14 yrs (ranging from 25-88 years)

Diagnosis	Number of patients
Multinodular	15
Grave's Disease	19
Thyrotoxicosis (not clinically classified)	25
<b>Total</b>	<b>59</b>

At the time of diagnosis:

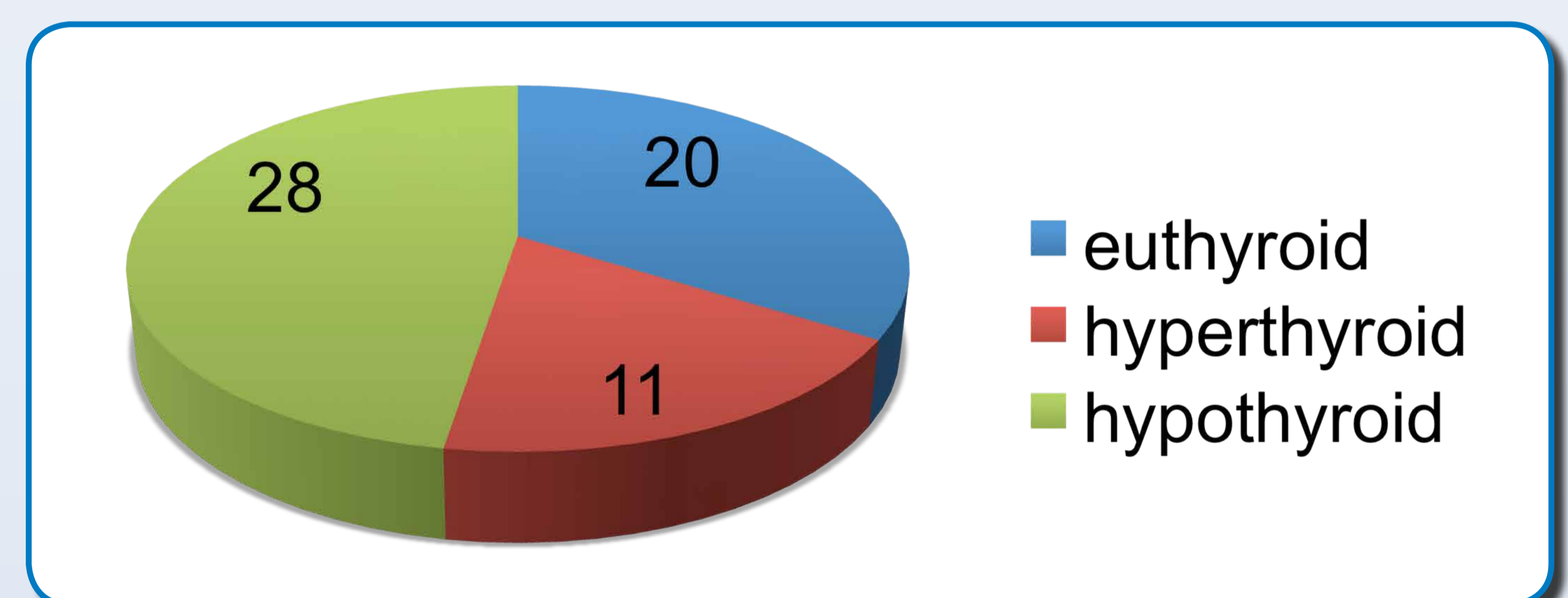
- 37%(22 patients) had goitre
- 14%(8 patients) had thyroid ophthalmopathy
- 22%(13 patients) were positive for antiTPO antibody
- 94.91%(56 patients) were pre-treated with anti-thyroid drugs



**Thyroid Status Post-RAI:**

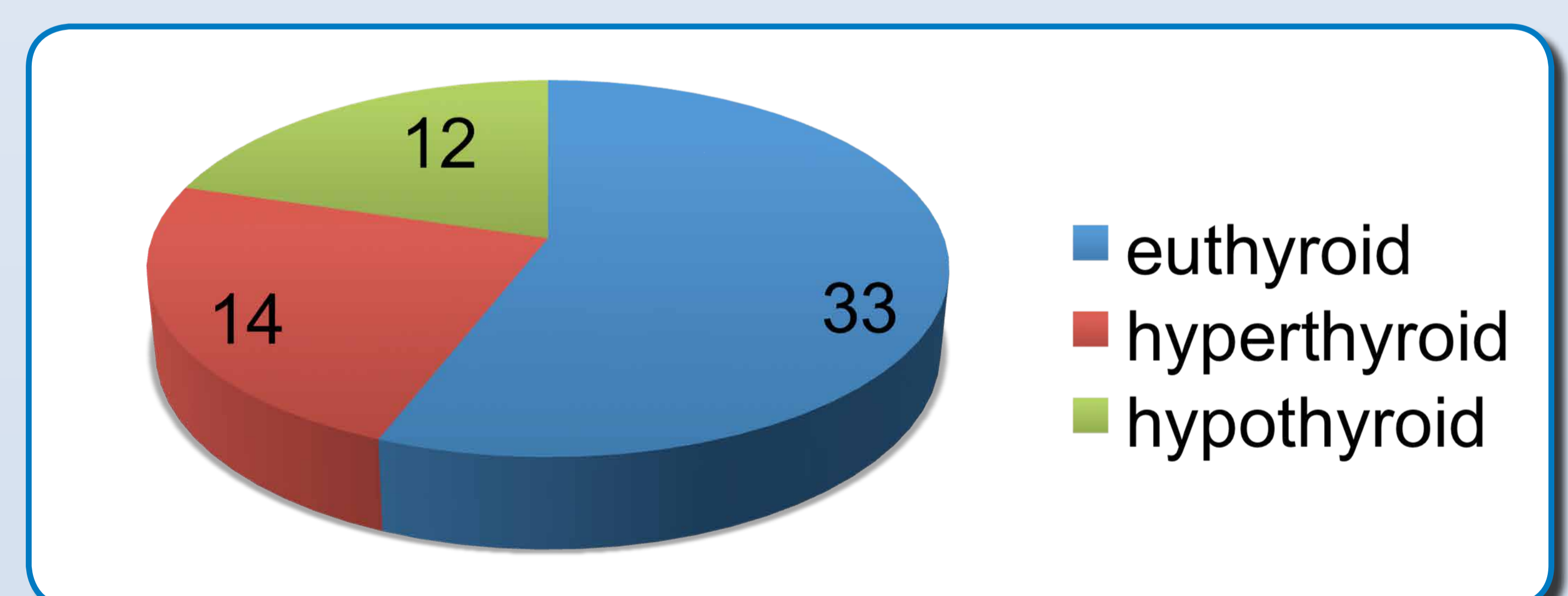
**6 Months**

Hypothyroid/ Euthyroid= **81.36%** (48 patients)



**12 Months**

Hypothyroid/ Euthyroid = **76.27%** (45 patients)



**Multiple Doses of RAI:**

Of 59 patients investigated **6** patients required multiple doses of RAI:

**2** had previous doses of RAI

**4** received future doses of RAI

## Conclusion

In our centre, a standard 400MBq dose of RAI has a cure rate of 81.36% at 6 months and 76.27% at 12 months, which is in line with the figures quoted in the literature.