

ENDOCRINE MANIFESTATIONS OF PAEDIATRIC INTRACRANIAL GERM CELL TUMOUR: FROM DIAGNOSIS TO LONG-TERM FOLLOW-UP

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INTRODUCTION

Endocrinopathies are common features of intracranial germ cell tumours (IC-GCTs), either as presenting symptoms caused by tumour itself or as side effects of treatments.

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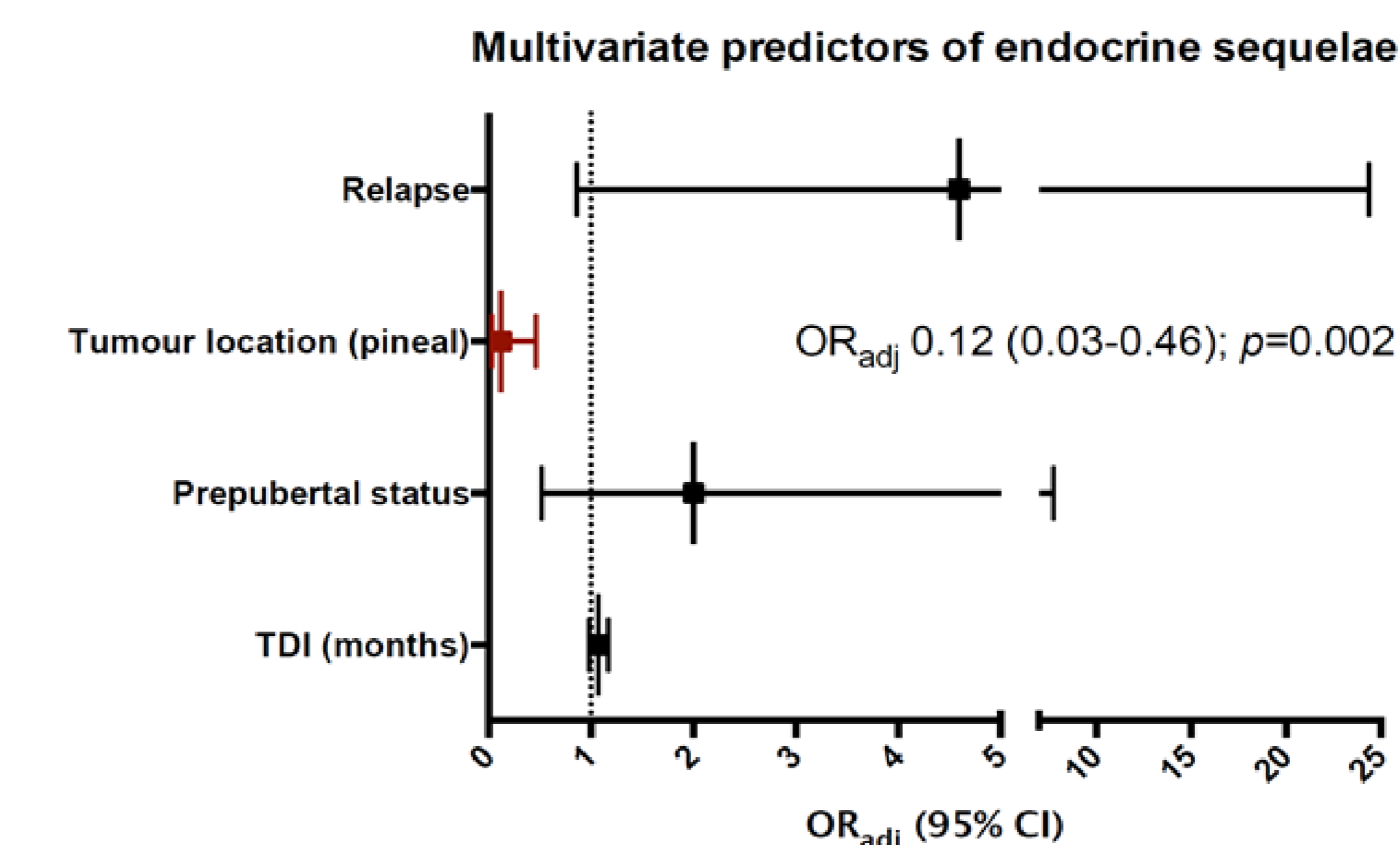
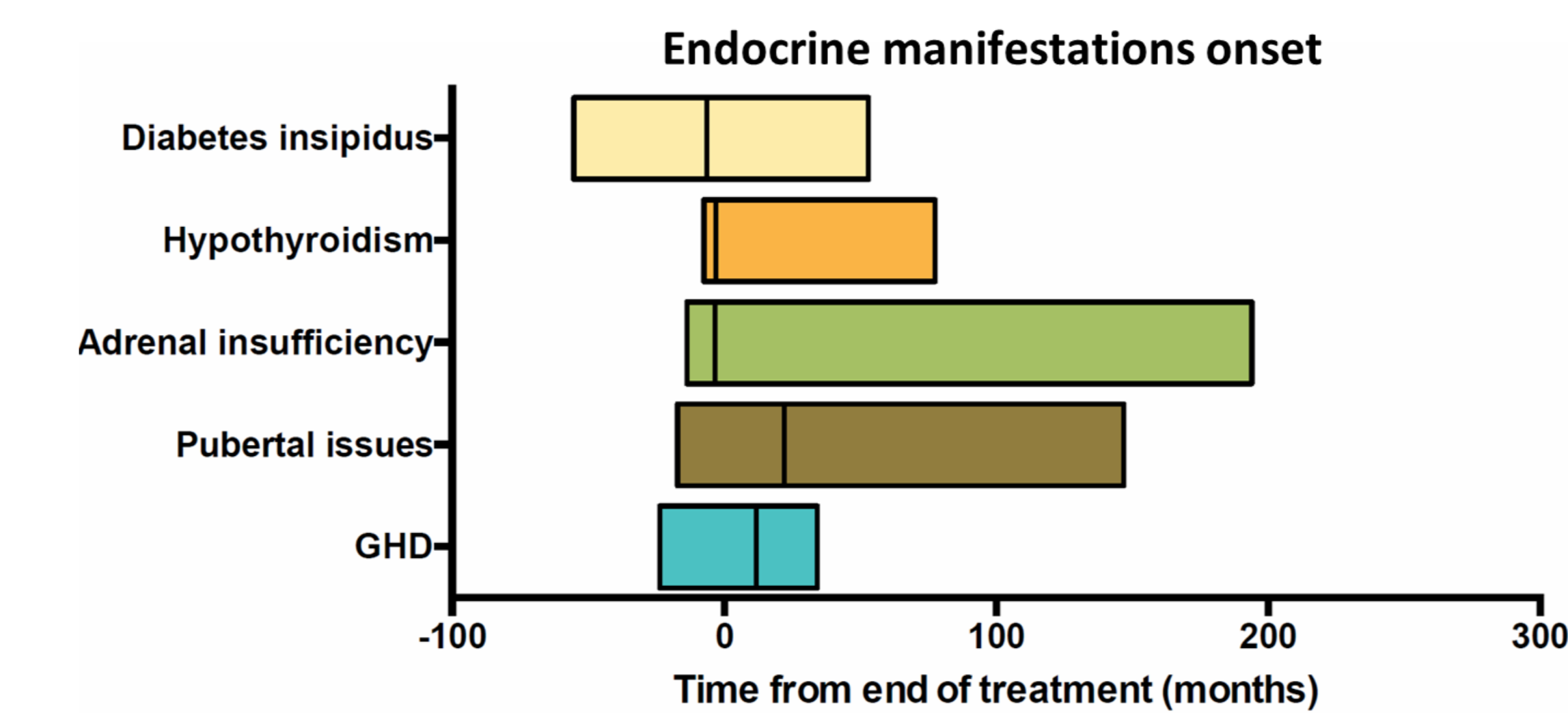
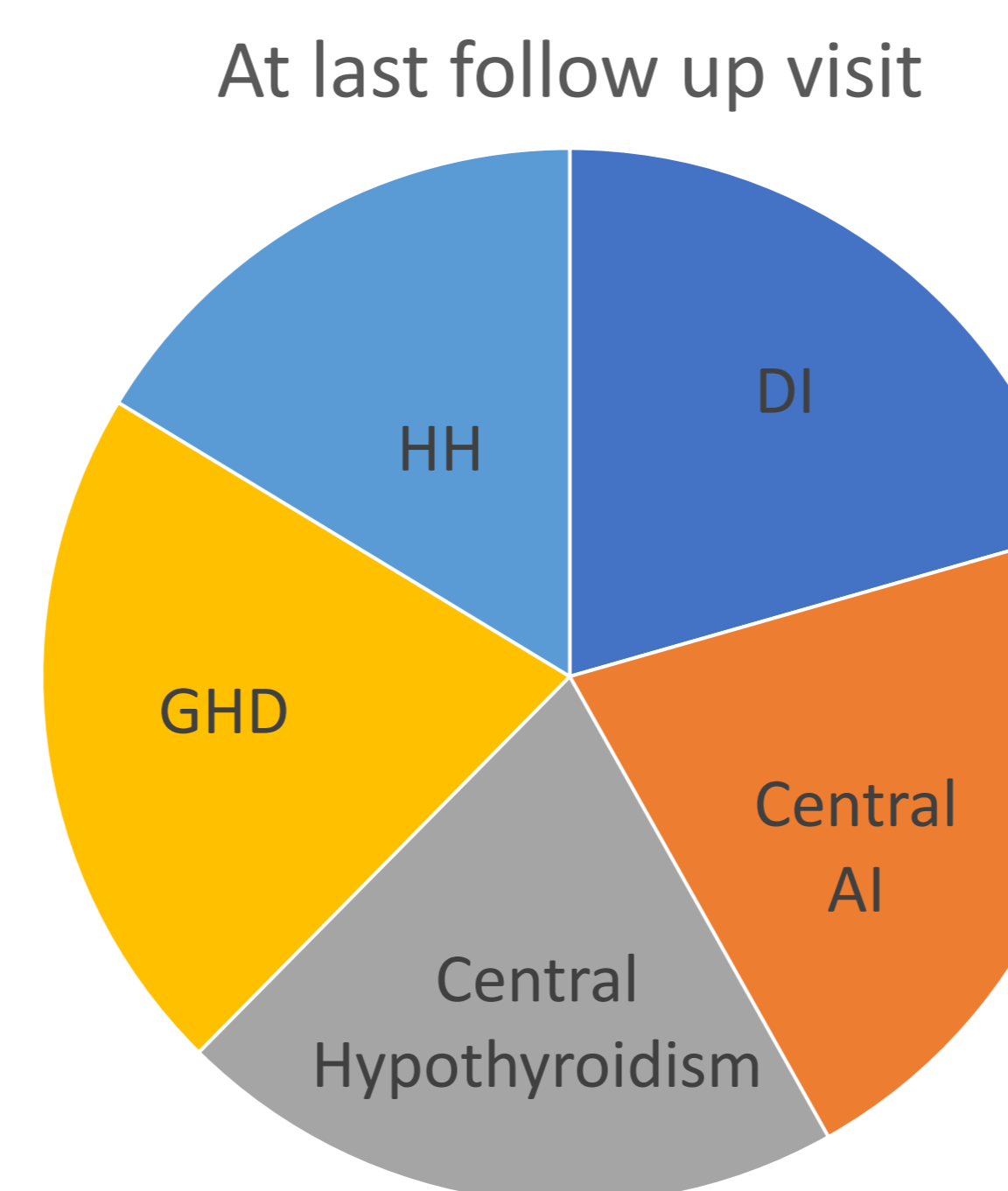
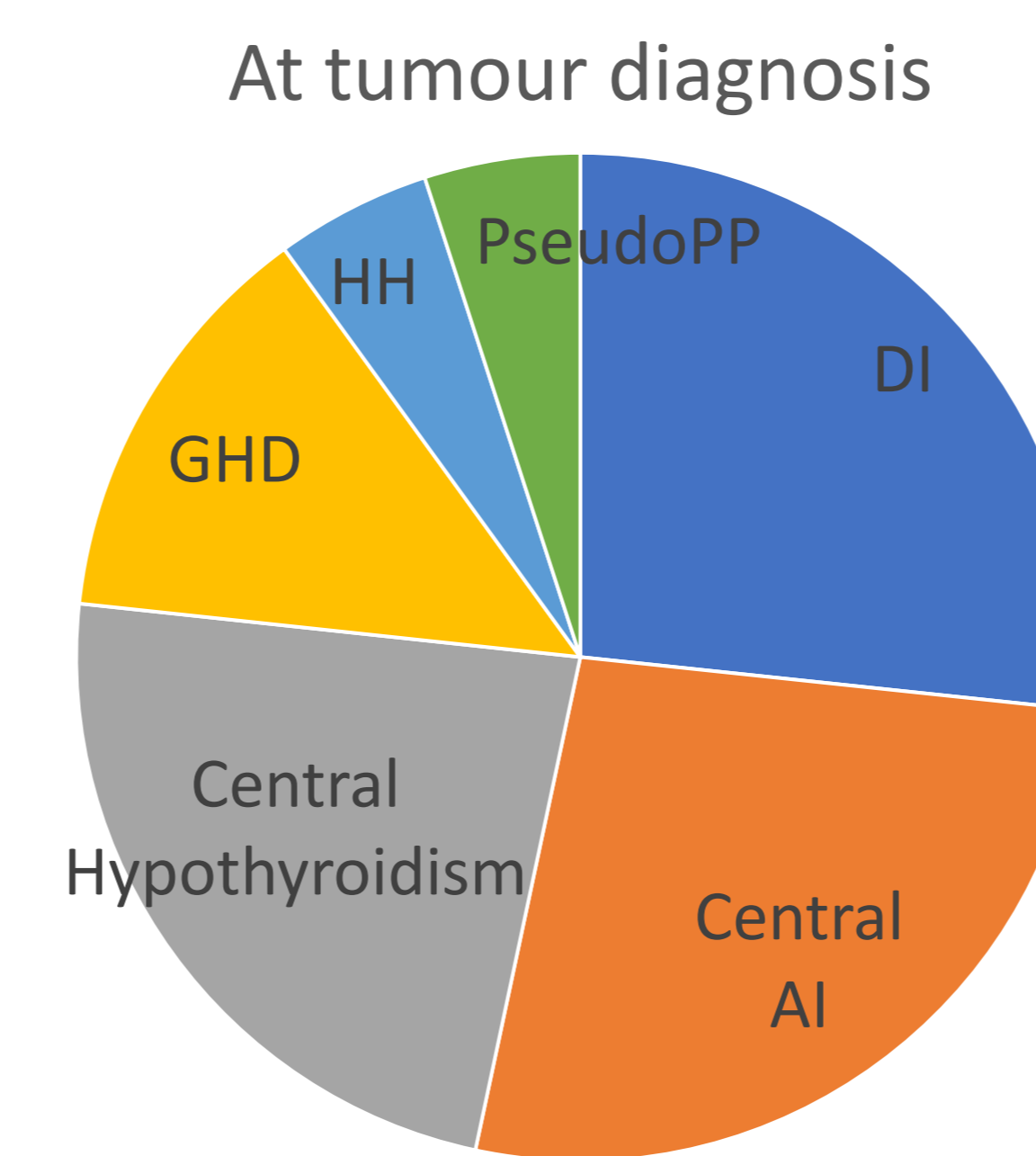
Examine the development of endocrine dysfunctions in a cohort of paediatric patients with IC-GCTs at diagnosis and during follow up.

METHOD

- 55 patients from two European tertiary centres followed in the last 25 years
- Diabetes insipidus (DI), growth hormone deficiency (GHD), central hypothyroidism, adrenal insufficiency (AI), precocious puberty (PP), hypogonadotrophic hypogonadism (HH)
- The prevalence of endocrine sequelae was compared to survival rates.

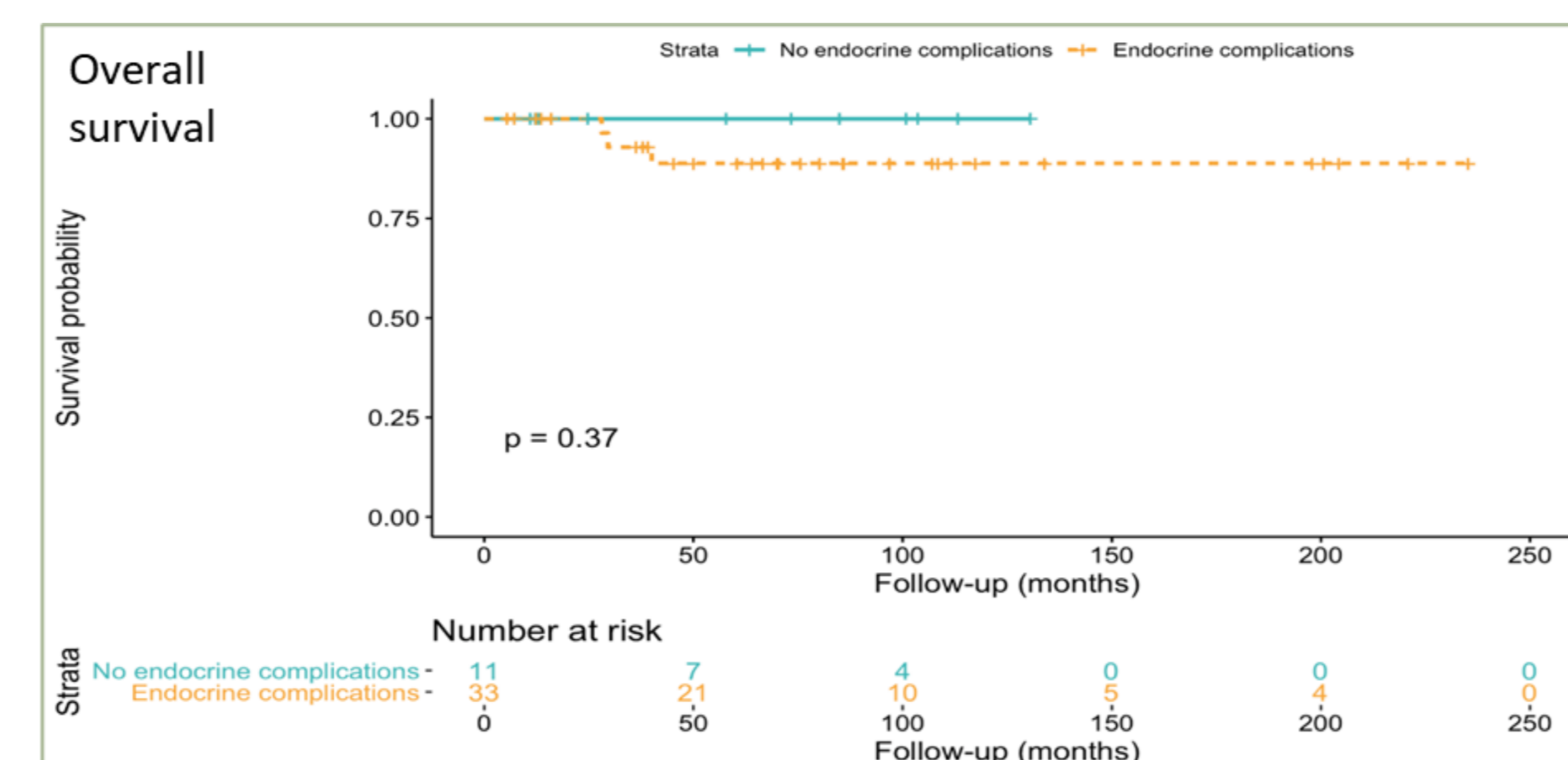
RESULTS

- 67.3% males
- Median age: 12 years (range 1–17.9)
- Median follow-up from diagnosis: 78.9 months (range 0.5-249.9)
- Patients underwent biopsy (83.6%), gross tumour resection (14.5%), chemotherapy (76.4%) and radiotherapy (90.9%).
- 63.6% were germinomas. 10.9% were metastatic at diagnosis
- At tumour diagnosis, 28/55 patients (50.9%) displayed endocrine dysfunctions. At the last follow up visit, 37/55 patients (67.3%) displayed endocrine dysfunctions.



- The new endocrine disorders arose at a median of 15.15 months (range 1.3-204.2 months) after the end of treatment.
- Development of DI, central hypothyroidism and GHD frequently preceded tumour diagnosis.

Among baseline characteristics only pineal tumour location was significantly negatively associated with the development of long-term endocrine complications.



Overall survival (OS) rate was 80%. No statistical difference in OS was found between patients with and without endocrine sequelae (p= 0.37).

CONCLUSIONS

- Endocrine disorders were frequent in patients with IC-GCTs at diagnosis.
- Additional endocrinopathies can occur decades after completion of treatments.
- Although survival rate was not affected by the presence of endocrinopathies in our cohort, close lifelong surveillance is mandatory.

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