

# MALIGNANT STRUMA OVARIII CAUSING THYROTOXICOSIS

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## Introduction

- Struma ovarii (SO) is a specialized monodermal teratoma predominantly composed of mature thyroid tissue (>50%). It accounts for approximately 5% of all ovarian teratomas.
- Thyrotoxicosis is seen in about 8% of patients with SO.
- Most struma ovarii are benign with only 5-10% being malignant. Malignant SO causing thyrotoxicosis is very uncommon.

## Case Presentation

- ✓ A 64-year-old woman had been diagnosed with thyrotoxicosis 2 years ago. The thyroid gland is palpable with micronodular texture and the patient is euthyroid under carbimazole. She presents abdominal pain and progressive enlargement of the abdomen over a two-month period. An abdominal ultrasonography (U/S) revealed a pelvic mass and a large fluid collection. Subsequently, Computed Tomography (CT) of the abdomen and Magnetic Resonance Imaging (MRI) of the pelvis confirmed the presence of a complex right ovarian mass measuring 13cm.
- ✓ The patient underwent total abdominal hysterectomy and bilateral salpingo-oophorectomy, omentectomy and appendectomy. Histological examination of multiple sections from the excised tumor revealed the presence of **"follicular thyroid-type carcinoma arising in struma ovarii of the right ovary. Metastatic infiltration was seen in the tissue fragments submitted from the pouch of Douglas.** The immunohistochemical analysis showed positivity for TTF1, TH6, HMBE1, focally positive for NSE and negative for panCK and CK19".
- ✓ Anti-thyroid treatment was discontinued one month post-surgery, in light of the pathology result. The Thyroglobulin (TG) level at that time was 132.7 ng/ml [3.5-77] and thyrotropin-receptor antibodies (TR-Abs) were within normal range (<1.58 U/l). During the four-year follow-up the patient remains euthyroid, with stable TG levels (139.3 ng/ml).
- ✓ Our patient's thyrotoxicosis is due to ectopic ovarian thyroid tissue.

## Conclusions

- There is controversy about the management of malignant SO which is a very rare entity. Even more uncommon is malignant SO causing thyrotoxicosis and as clinical signs are non specific other causes of thyrotoxicosis must be considered. Our case is one of the very few cases ever reported.
- The diagnosis of SO, especially the differential one between benign and malignant SO, is challenging for specialists involved. Although its prognosis is favorable, its clinical course is unpredictable and consensus on its optimal treatment has not yet been reached.

Fig 1. Struma ovarii with follicular carcinoma (clear cell variant), magnification x40

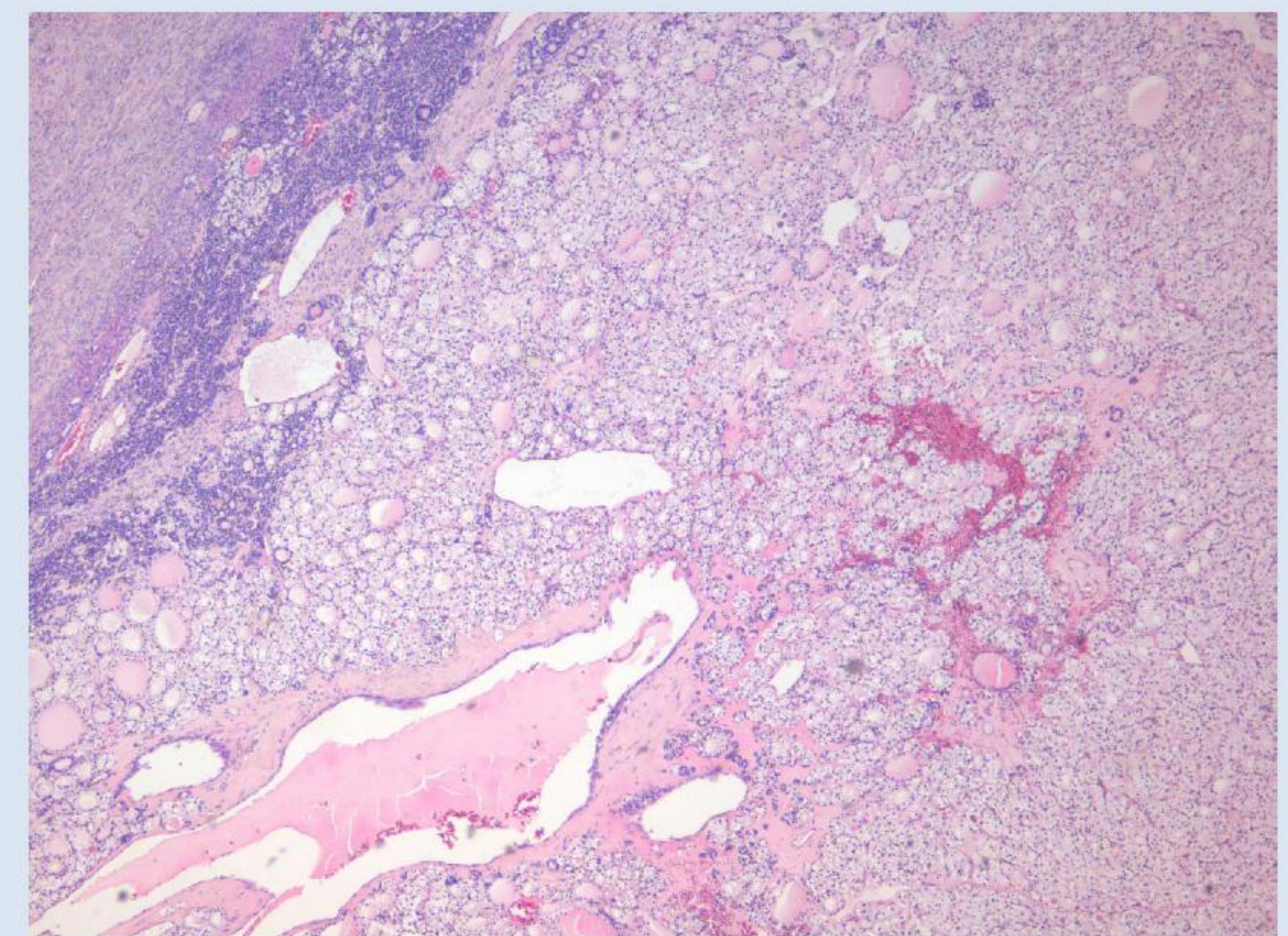
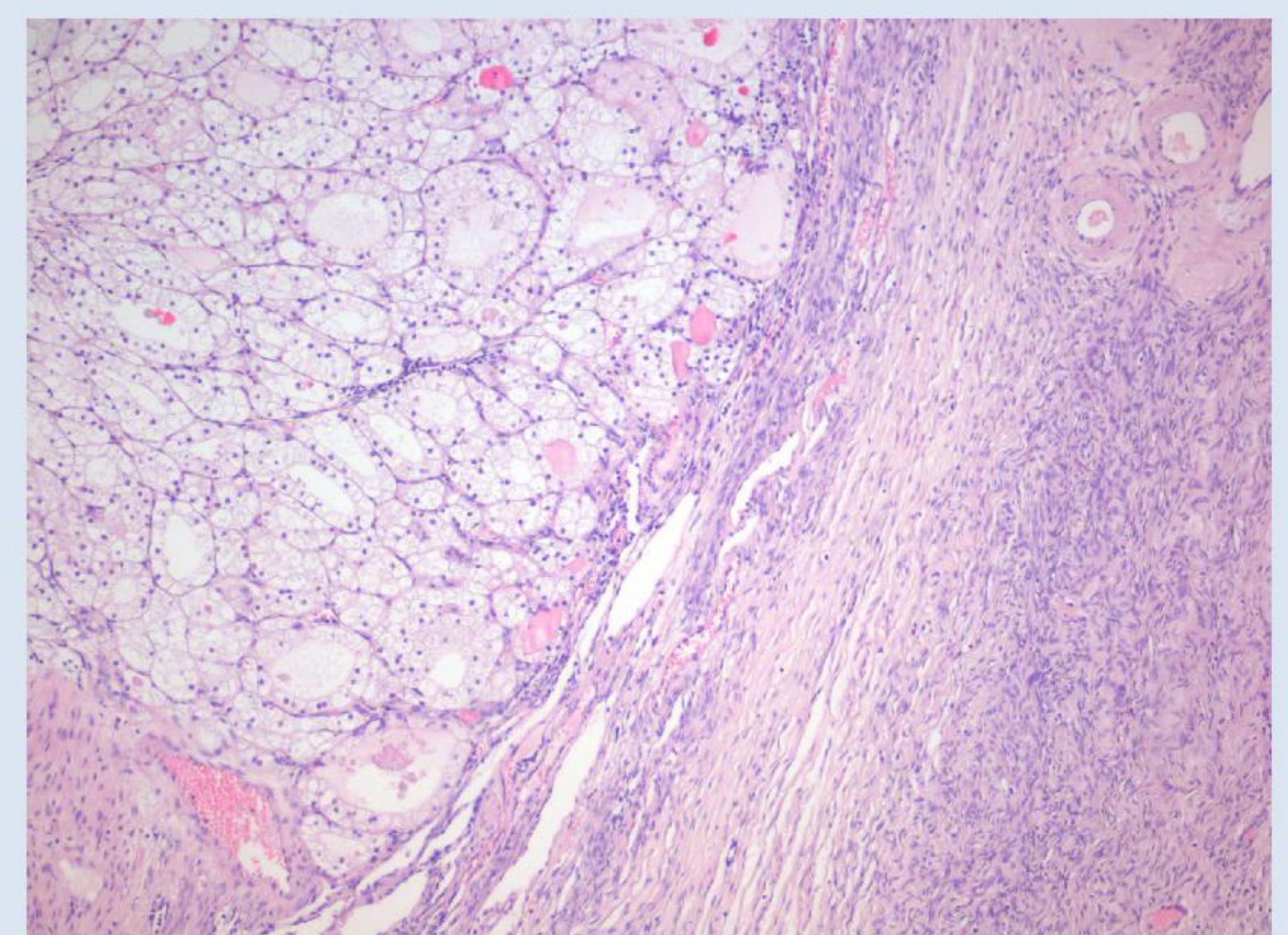


Fig 2. Struma ovarii with follicular carcinoma (clear cell variant), magnification x100



## References/Bibliography

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