



EP02.24 An atypical appearance of Mucinous Borderline Ovarian Tumor (MBOT) – a case report

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Introduction

Mucinous borderline ovarian tumors (MBOTs) are a subset of ovarian epithelial tumors that exhibit atypical epithelial proliferation without stromal invasion. They represent a histologic and biological intermediate between benign mucinous cystadenomas and invasive mucinous carcinomas. MBOTs account for approximately 10–15% of all mucinous ovarian neoplasms and are more frequently observed in younger women, often diagnosed at an early stage due to their large size and symptomatic presentation.

Clinical Presentation

A **19-year-old female** was evaluated for a solid ovarian mass measuring **153×113×140 mm**. The lesion appeared solid with **no papillary projections** and showed **acoustic shadowing**. There was **no ascites**, and the **CA-125 level was 22 U/mL**. Color score: **2**, ADNEX risk estimation: **11.8%**.

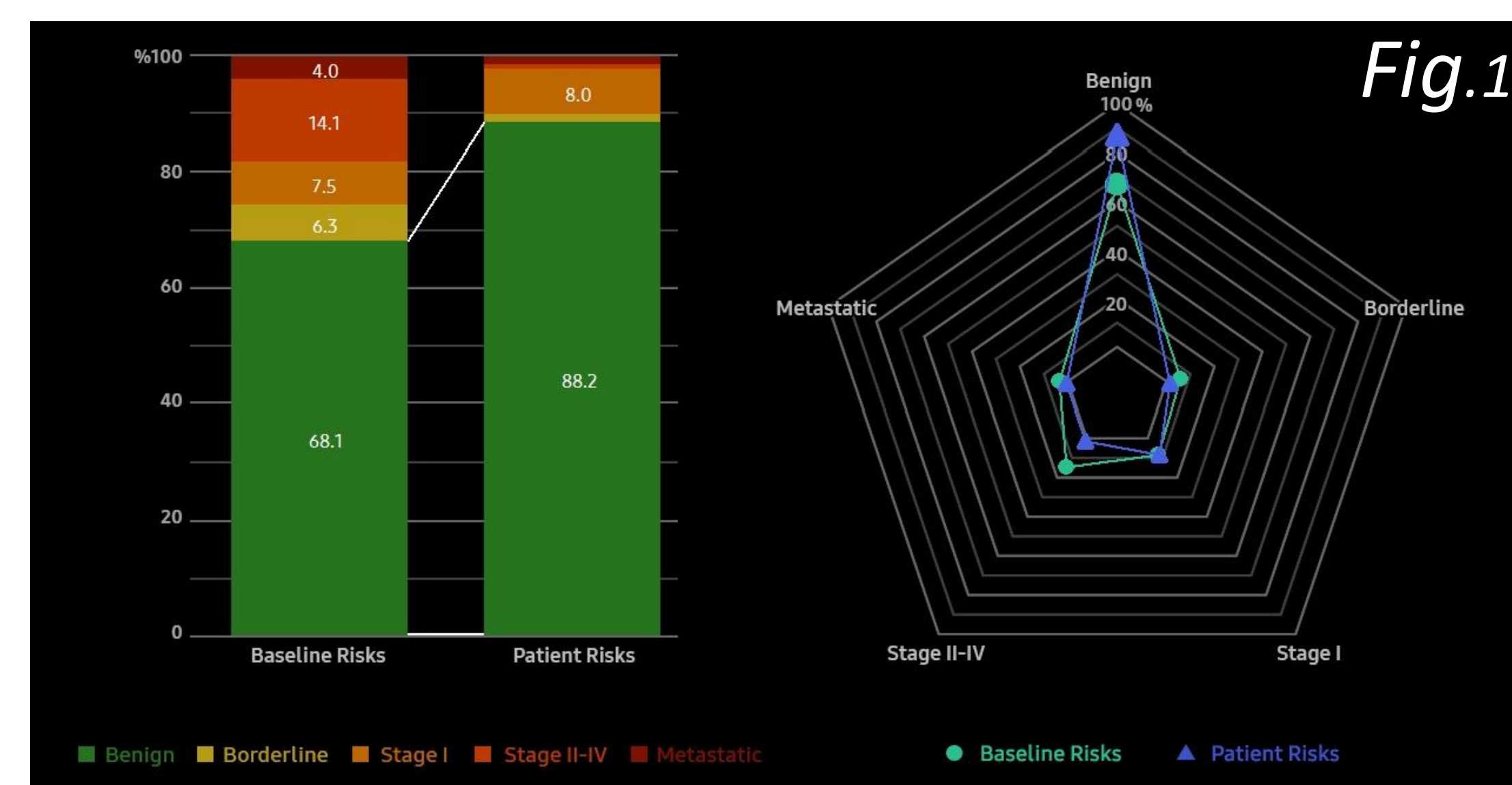
Ultrasound and Pathological Findings

Ultrasound characteristics:

- Solid tumor with **acoustic shadowing**
- **No papillary projections**
- **Low vascularization** (Color score: 2)

Pathology findings:

- Macroscopic evaluation confirmed a **well-circumscribed, smooth-surfaced tumor**
- Histological examination confirmed the diagnosis of **mucinous borderline ovarian tumor (MBOT)**



Discussion and Management

MBOTs require careful differentiation from benign and invasive mucinous tumors. The **IOTA ADNEX model** played a crucial role in preoperative risk assessment, guiding a conservative surgical approach. Given the patient's young age and the absence of invasive features, **fertility-preserving surgery** was performed.

Fig.1.
ADNEX risk
estimation: 11.8%

Fig.2.
Gross section of the
tumor

Fig.3.
Greyscale sweep



Conclusion

IOTA-based classification, particularly the ADNEX model, is valuable in distinguishing MBOTs from other ovarian neoplasms. This case highlights the importance of **preoperative ultrasound evaluation** and risk assessment models in gynecologic oncology. Long-term follow-up remains essential due to the potential for recurrence.