UC DAVIS HEALTH | Department of Pathology and Laboratory Medicine

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Mesonephric-like adenocarcinoma: Two cases of a rare entity and review of literature

Introduction

Mesonephric-like adenocarcinoma (MLA) is a very rare gynecologic malignancy occurring in the uterus and ovary that is morphologic and immunohistochemically similar to cervical mesonephric adenocarcinoma. Recent molecular studies have demonstrated that these entities have similar genetics, including frequent mutations in KRAS.

We present two recent cases of mesonephric-like adenocarcinoma of the ovary.

Clinical History

Case #1: A 72-year-old female presented with abdominal pain and bloating. Abdominal CT scan showed a 7.4 x 6.3 x 6.1 cm heterogenous right adnexal mass.

Case #2: A 66-year-old female with history of heavy bleeding and endometriosis, status post total abdominal hysterectomy with bilateral salpingo-oophorectomy 20 years ago. Abdominal CT scan demonstrated a 5.3 cm right pelvic mass and 12.5 cm right pelvic sidewall lymph node.

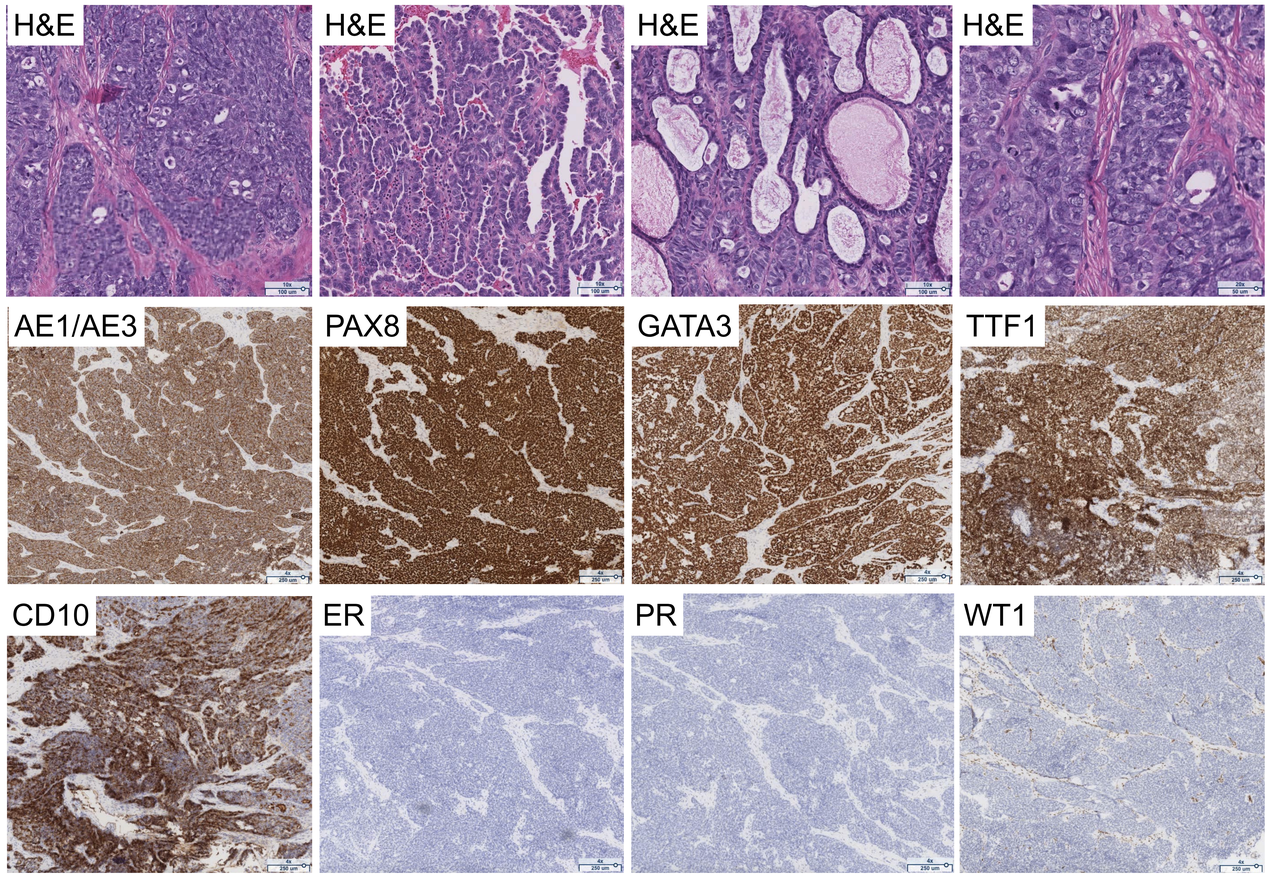
Microscopic Examination

Both tumors have characteristic architectural patterns including ductal, tubular, retiform, papillary, solid and infiltrative patterns. Cytologic atypia is mild to moderate. The histological features can raise a broad differential diagnosis including primary tubo-ovarian carcinomas, sex cord-stromal tumors, and metastatic carcinomas.

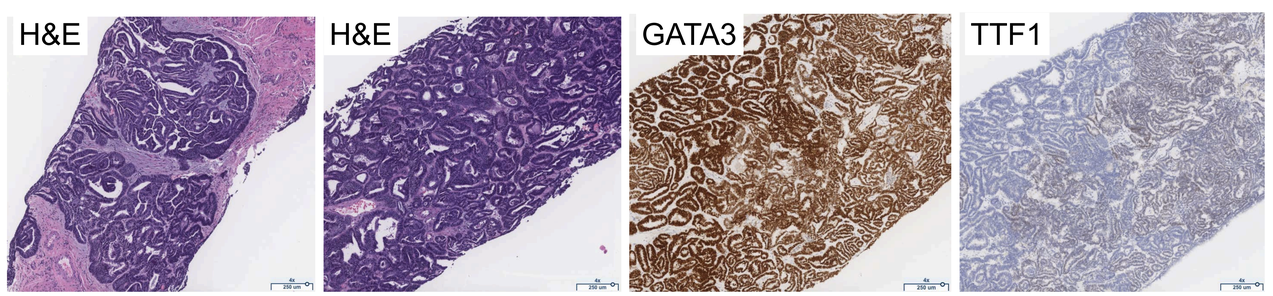
In Case 1, a small incidental FIGO grade 1 endometrial carcinoma arising from an endometrial polyp was also identified (not shown). It is morphologically and immunohistochemically distinct from the ovarian mesonephric-like adenocarcinoma.

The authors have nothing to disclose

Case 1



Case 2



Immunohistochemistry

Both tumors show the prototypical staining profile: positive for PAX8, GATA3, TTF1, CD10, and negative for ER, PR and WT1.

Genomic Profiling

Case 1:

KRAS-G12V

BRAF-G464R

ERBB2 amplification

AURKB amplification

FAM123B-G348fs*16

SOX9-K242fs*10

Case 2:

KRAS G12C

U2AF1 R156H

Summary

Both tumors show classical morphological, immunohistochemical, and molecular features described in MLA, including KRAS mutations. One tumor has a dual KRAS and non-V600E BRAF mutation. Neither tumor harbors a PIK3CA mutation, which has been reported in 43% of MLA.

Due to their rarity, the clinical outcome of these tumors is poorly characterized. Both patients described here are from 2020, so the clinical outcomes remain to be determined.

Key References

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