CARIS® | GPSai

A Case Study Utilizing Caris GPSai To Ensure Correct Diagnosis Of Primary Tumor Site

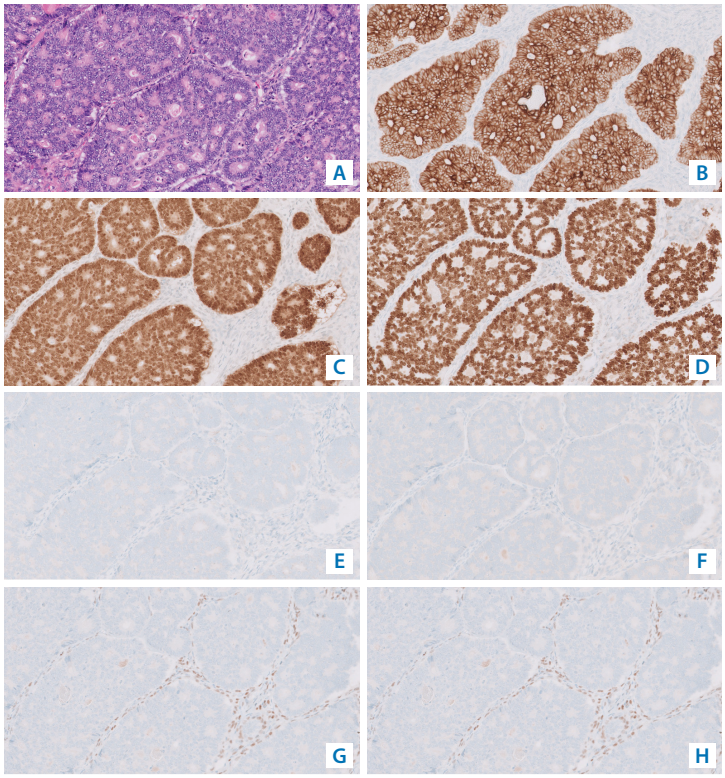
Background:

- **Caris MI Profile™ Tissue testing performed at Caris Life Sciences®** includes Whole Exome Sequencing (WES), Whole Transcriptome Sequencing (WTS) and a panel of Immunohistochemical stains (IHCs). In addition, Caris GPSai™ scores are generated for cases that are successful sequenced for WES and WTS.
- **GPSai is an Artificial Intelligence (AI) algorithm** that compares the WES and WTS data generated to our library of 294,000+ molecular database of comprehensive tumor profile to generate a score predicting the primary tumor site.
- **Clinical utility of GPSai includes:**
  - Identify the tissue of origin for cancer of unknown primary (CUP) patients.
  - Identify patients that are incorrectly diagnosed.

Presented Case

- **Clinical presentation:**
  - 50 Year old female.
  - Presented with bilateral adnexal masses (largest measuring 22cm in greatest dimension).
  - Underwent total abdominal hysterectomy, bilateral salpingo-oophorectomy with pelvic debulking of tumor.
- **The pathological diagnosis:**
  - Ovarian endometrioid adenocarcinoma FIGO grade 1.
  - This was based on morphological examination, no IHCs done.
- **Specimen received and testing performed at Caris.**
  - A representative specimen of the right adnexal lesion was sent to Caris to help decide the best options for therapy.
  - MI Profile Tissue for ovarian tumor was run, which includes WES and WTS and a panel of IHCs including ER, PR and MMR (MLH1, MSH2, MSH6 and PMS2).
  - Based on the sequencing results for WES and WTS, GPSai score was generated. This highly favored colorectal cancer (CRC).
  - Subsequently, a panel of diagnostic IHCs were performed that showed the tumor to be positive for CK20, CDX2 and SATB-2 and negative for CK7, PAX-8 and ER. This immunohistochemical profile also strongly favored CRC.
- **The findings were discussed in detail with ordering oncologist.**

Key Findings: Specimens



(A) Moderately differentiated adenocarcinoma (H&E 20X). Positive staining of CK20 (B), CDX2 (C) and SATB2 (D). Negative staining of CK7 (E), PAX8(F), ER (G) and PR (H).

- **Patient underwent colonoscopy that showed large nearly obstructive colonic lesion.**
- **This case was reviewed at the respective hospital tumor board and there was consensus that this patient is best managed as metastatic colonic adenocarcinoma.**