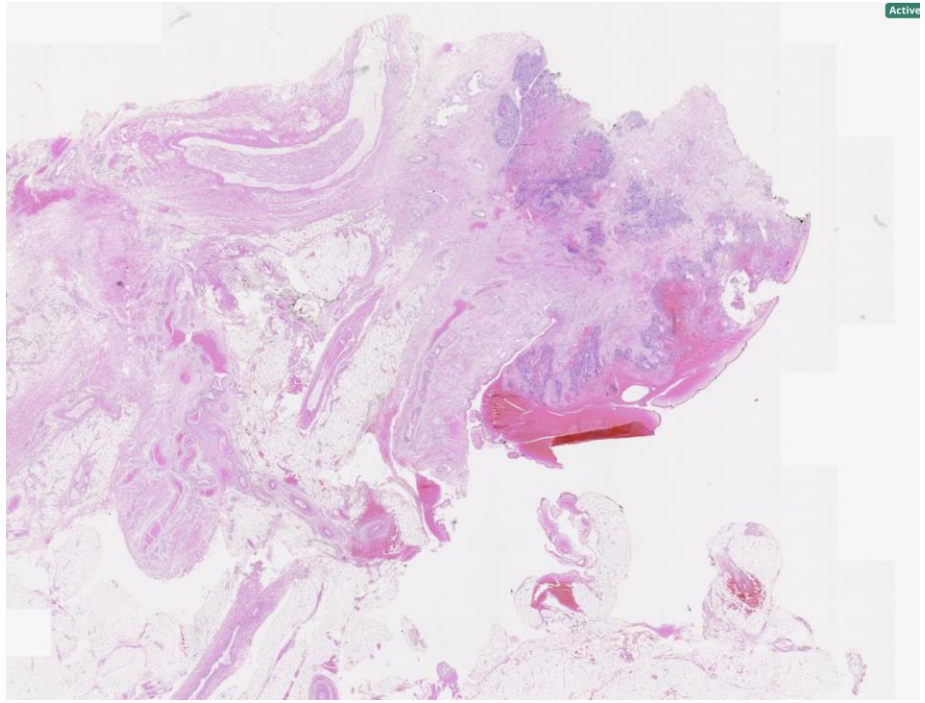
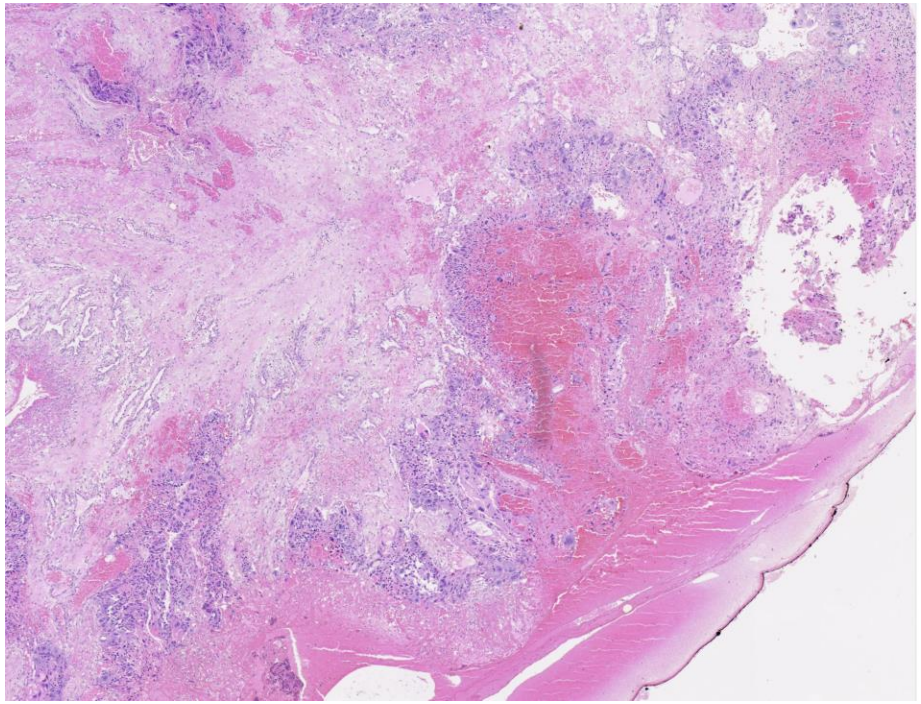
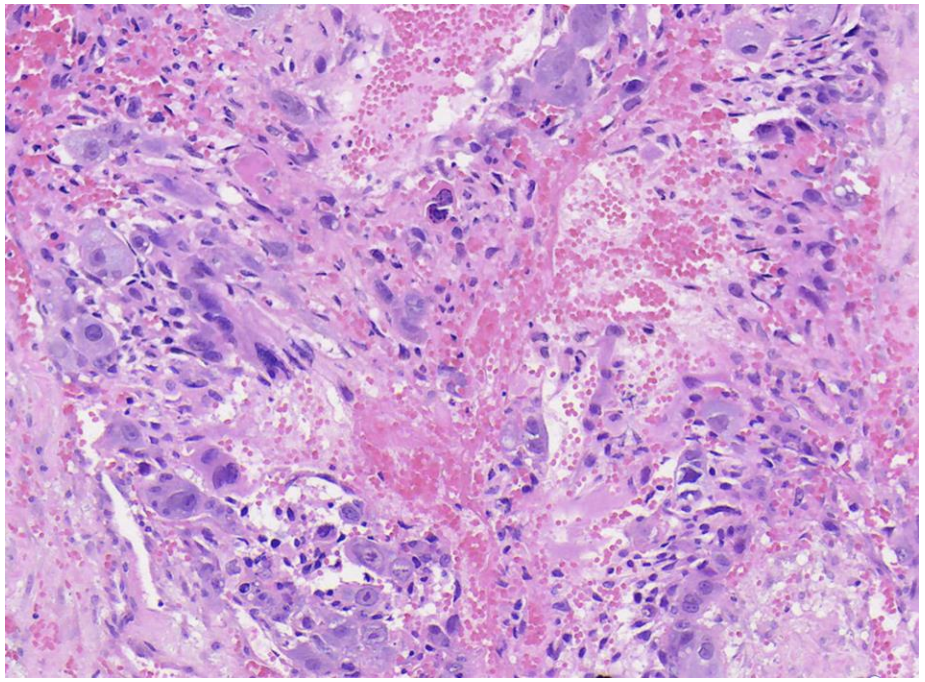
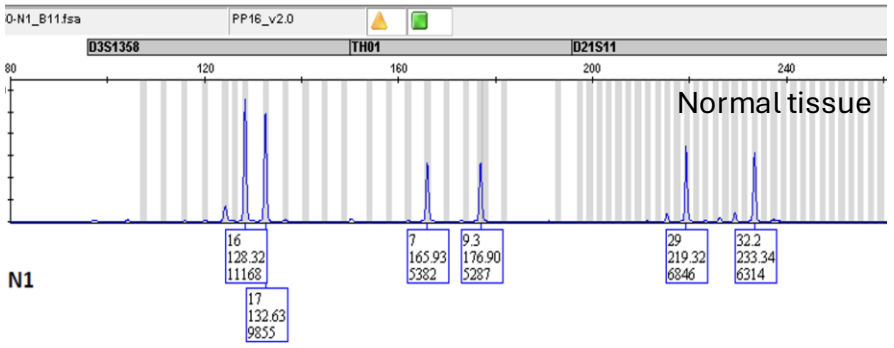
Where Knowledge is Created and Shared
Yale Pathology

A 38-year-old woman presenting with a 6.3 cm mass in the left broad ligament/ovarian hilum underwent hysterectomy and bilateral salpingo-oophorectomy.





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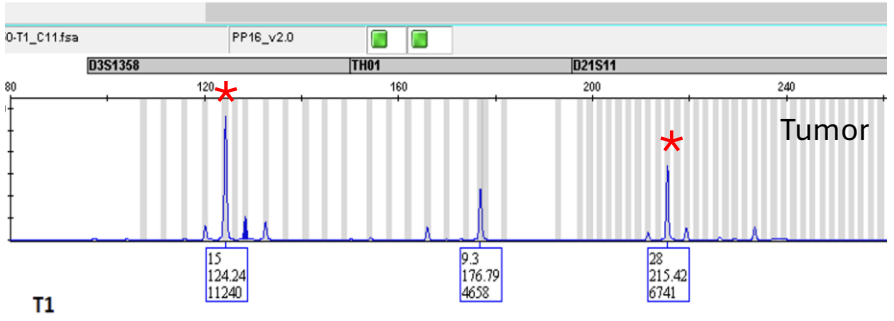
D3S1358
TH01
D21S11
80
120
160
200
240
Normal tissue
16
128.32
11168
17
132.63
9855
7
165.93
5382
9.3
176.90
5287
29
219.32
6846
32.2
233.34
6314
N1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D3S1358
TH01
D21S11
80
120
160
200
240
Tumor
15
124.24
11240
9.3
176.79
4658
28
215.42
6741
T1

Diagnostic Options

A. Choriocarcinoma from ectopic CHM
B. Choriocarcinoma from ectopic pregnancy
C. Choriocarcinoma of germ cell origin
D. Choriocarcinoma of somatic cell origin

Comparative **STR genotyping** is crucial for establishing the correct diagnosis of tumors exhibiting **pure choriocarcinoma morphology** - in the absence of other germ cell tumor elements or high-grade carcinoma components. In this case, the identification of **homozygous paternal alleles** (two distinct paternal alleles, indicated by red asterisks) at three STR loci (lower right panel) confirms a **genetic origin of homonzygous complete hydatidiform mole**.

Final Diagnosis: Gestational choriocarcinoma arising from ectopic homozygous complete mole

Determining the histogenetic origin of an extrauterine choriocarcinoma - **gestational, germ cell, or somatic** - is critical, as each carries distinct prognostic and therapeutic implications. While clinical and pathological features may sometimes suffice, choriocarcinoma arising outside the uterus, especially in a young woman, poses a significant diagnostic challenge. **Short tandem repeat (STR) genotyping** is a powerful tool for distinguishing gestational choriocarcinoma from nongestational tumors with trophoblastic differentiation and for determining whether the antecedent pregnancy was **molar or non-molar** in origin.