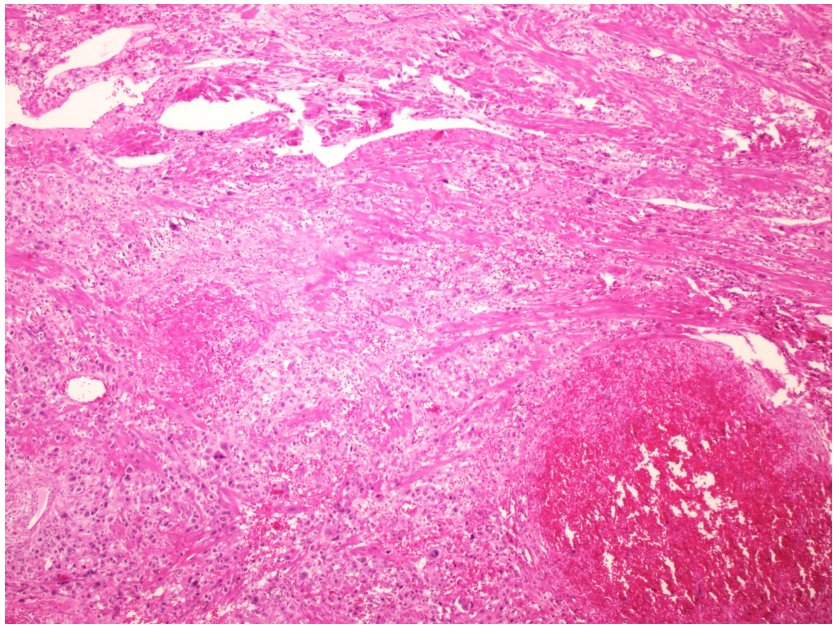
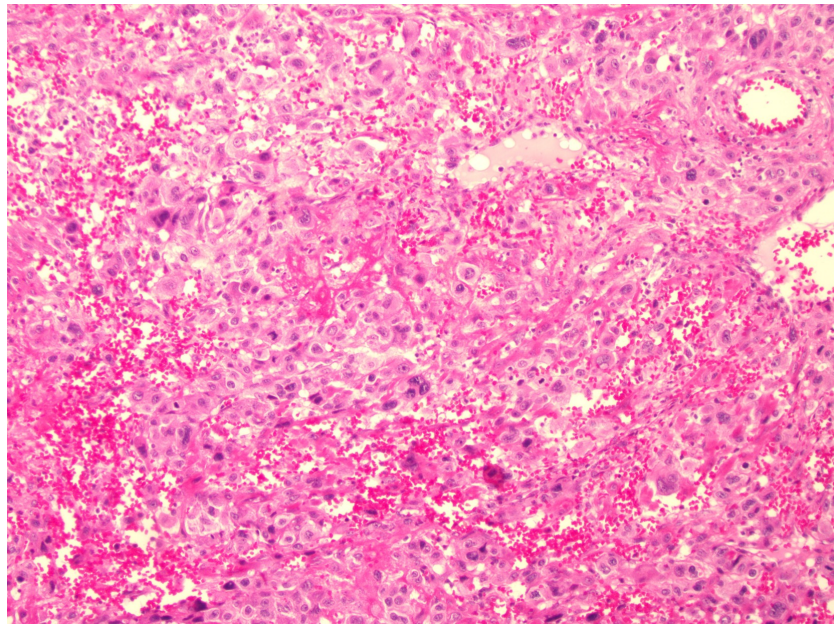
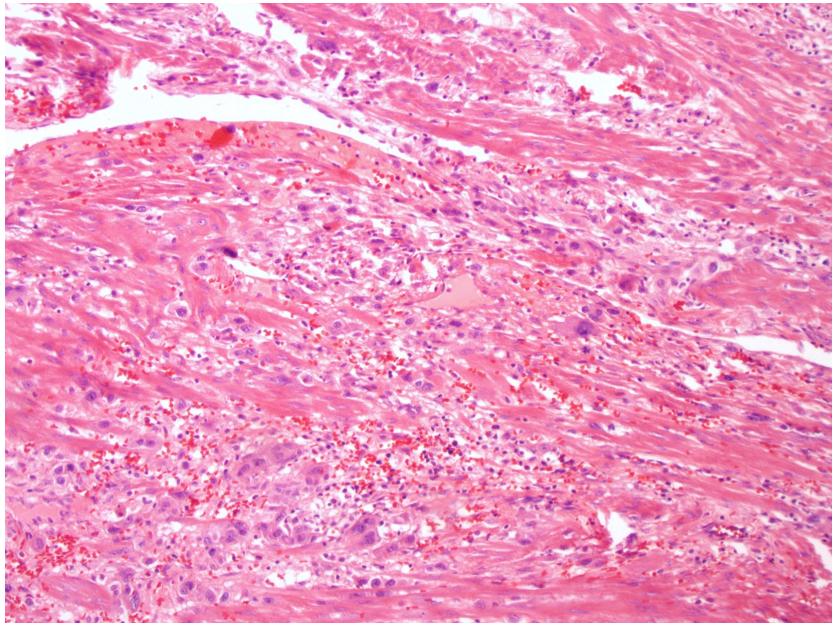
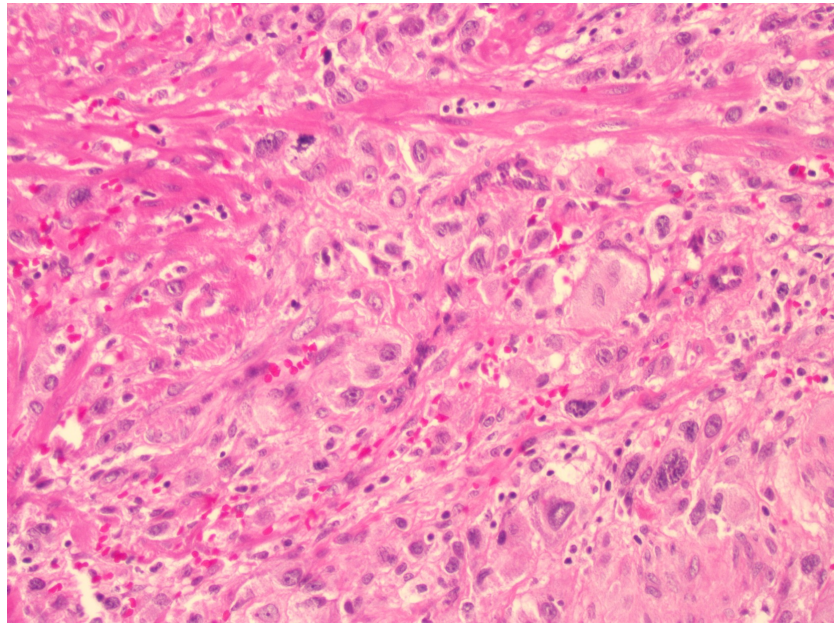
Where Knowledge is Created and Shared
Yale Pathology

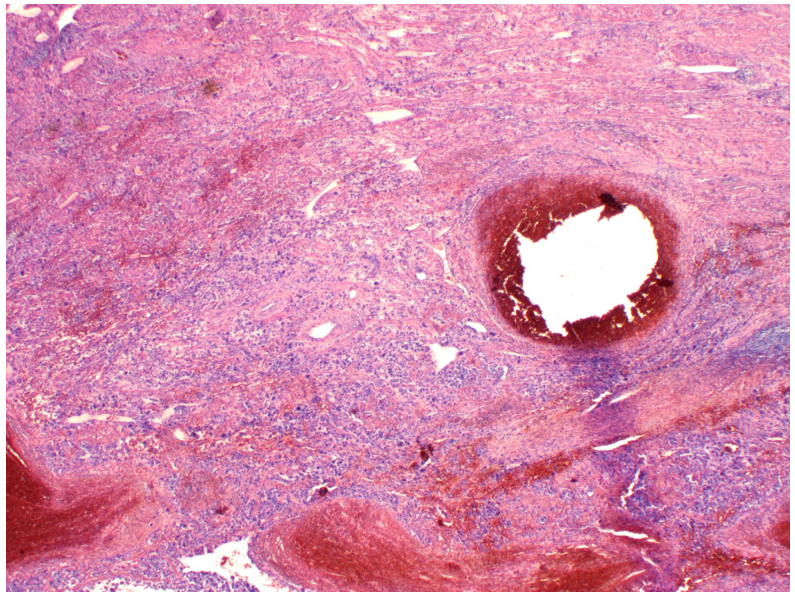
Case Presentation

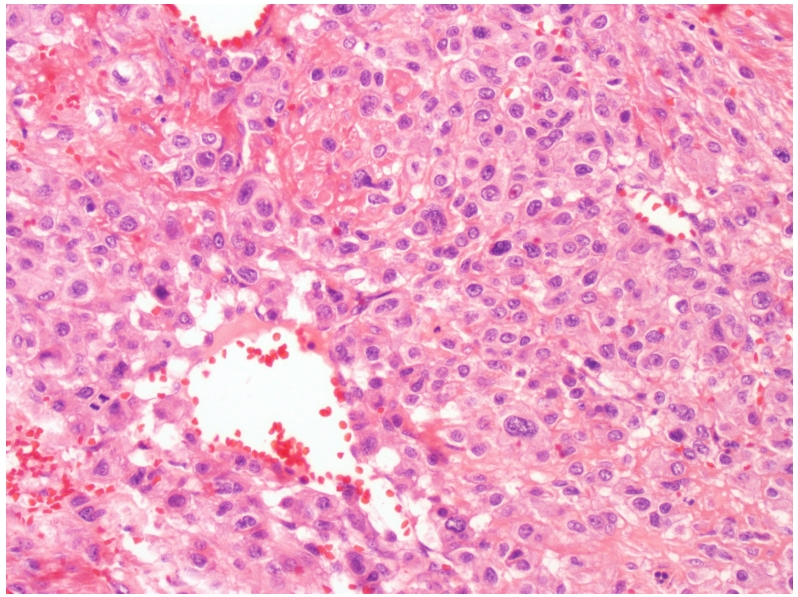
30-year-old woman presenting with uterine mass underwent hysterectomy and bilateral salpingo-oophorectomy. A 4.0 cm hemorrhagic and necrotic mass lesion involving fundus of the uterus was found.

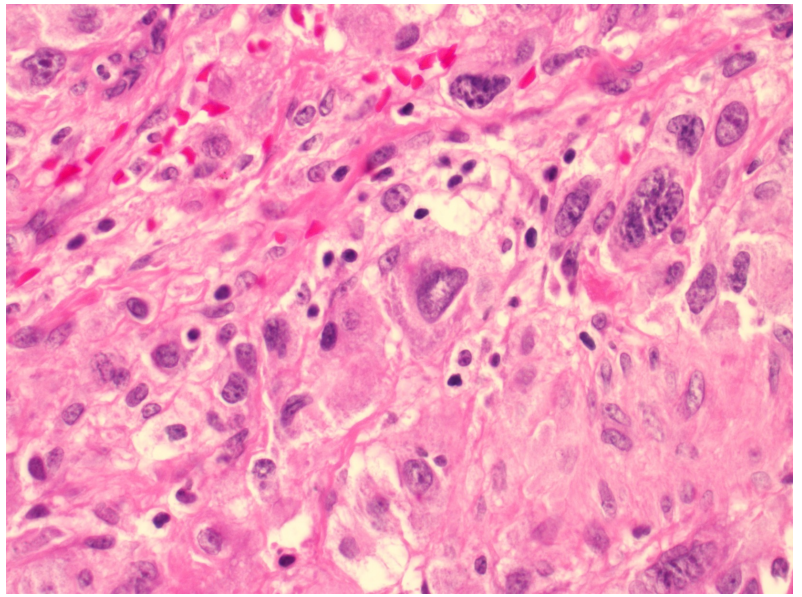





Differential diagnoses

A. Gestational choriocarcinoma
B. Epithelioid trophoblastic tumor (ETT)
C. Placental site trophoblastic tumor (PSTT)
D. Epithelioid leiomyosarcoma







Additional Histological Images

Final Diagnosis: Placental Site Trophoblastic Tumor (PSTT)

PSTT occurs in women of the reproductive age following a full-term pregnancy in 2/3 of the cases with a median latency of 12 to 18 months. Vaginal bleeding is the most common symptom. Mild to moderate elevation of serum hCG of < 1,000 mIU/ml is detectable in 80% of the cases. PSTT generally involves the endomyometrium as nodular, solid masses with deep myometrial invasion. Histologically, the tumor has an infiltrative growth consisting of sheets of large, polyhedral to round, predominately mononuclear intermediate trophoblast. At the periphery, the tumor cells typically infiltrate and separate myometrial smooth muscle fibers. The tumor cells have abundant amphophilic, eosinophilc or clear cytoplasm, and nuclear atypia is generally pronounced with frequent large, convoluted nuclei and marked hyperchromasia. Mitotic activity is often seen. The tumor cells are diffusely positive for hPL, MUC-4, HSD3B1, HLA-G and Mel-CAM (CD146). Expression of hCG and inhibin is limited to the scattered multinucleated cells. Ki-67 is expressed in 10 to 30% of the cells. The differential diagnoses include ETT (Y-GTD case of January 2023), choriocarcinoma (Y-GTD case of March 2023) and epithelioid leiomyosarcoma. Hysterectomy is the treatment of choice. 25 to 30% of the patients develop recurrence and about a half of those die of the tumor.