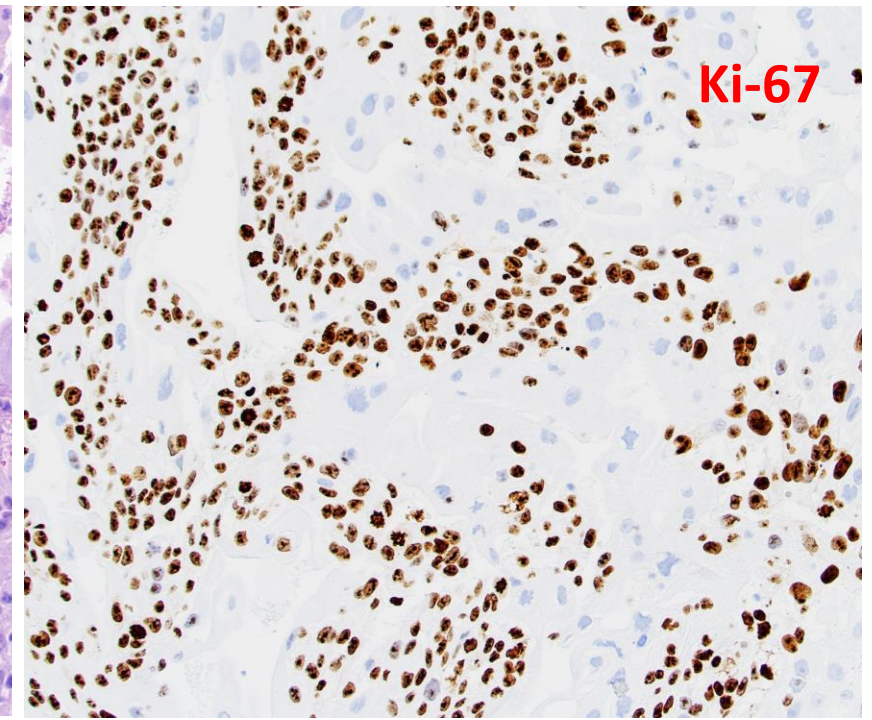
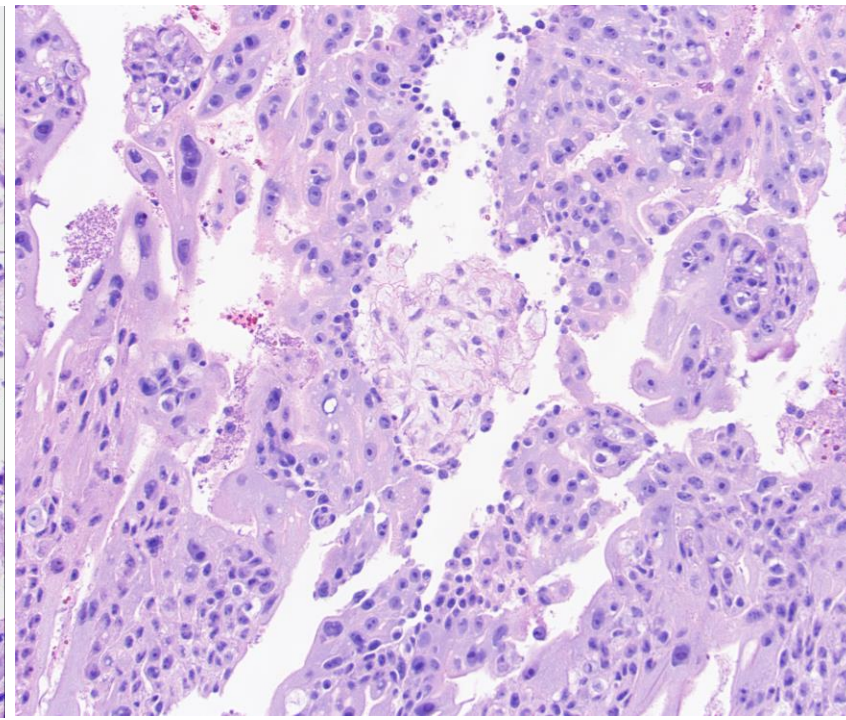
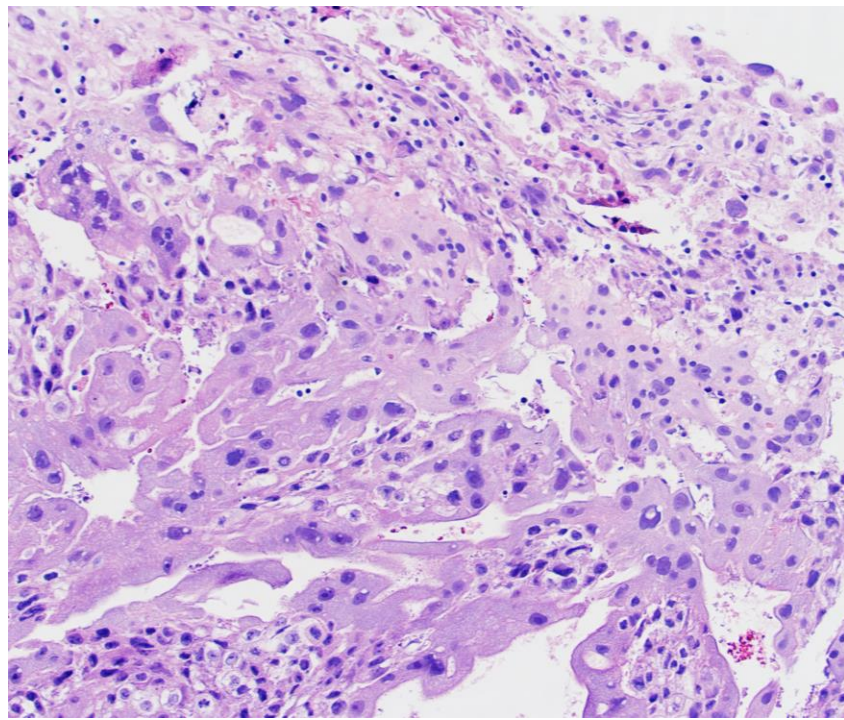
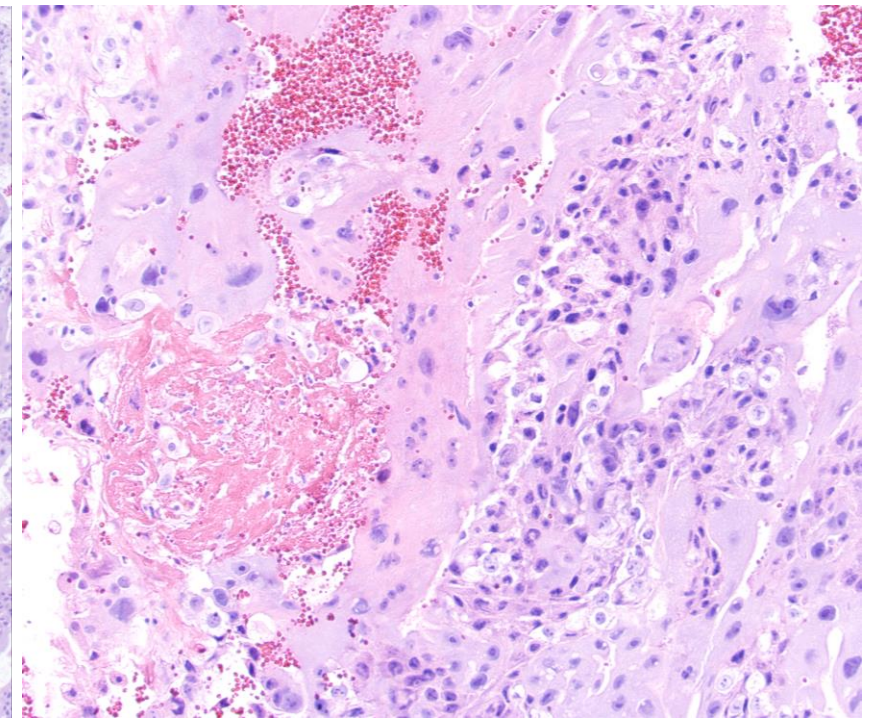
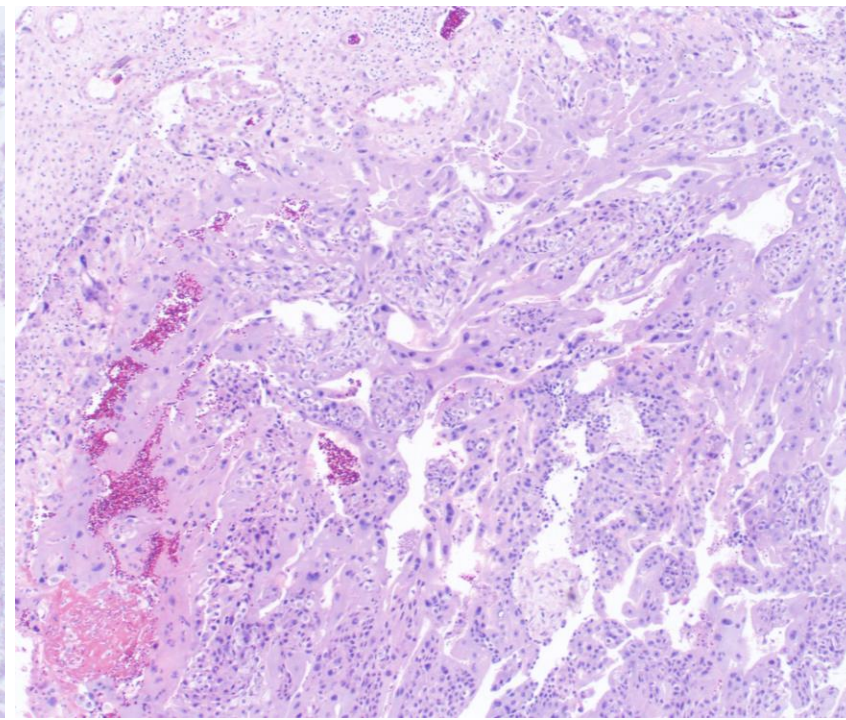
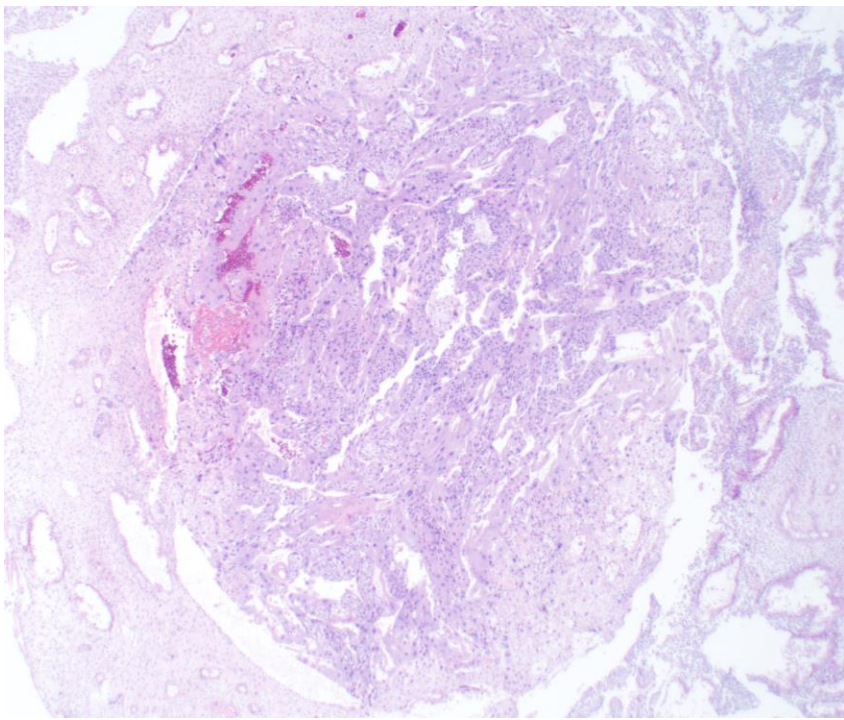




Patient under 20 years of age, G1P0, at 5 weeks by LMP, underwent uterine D&C for undesired pregnancy.



Diagnostic Options

A: Primary chorionic villi

B: Gestational choriocarcinoma

C: Germ cell Choriocarcinoma

Discussion

After implantation, primitive trophoblast is referred to as the *previllous trophoblast* that consists of an outer mantle of syncytiotrophoblasts and an inner layer of cytotrophoblasts lining the blastocyst cavity (blastocoele). By day 13 post-fertilization, lacunae begin to form within the syncytiotrophoblast mantle, accompanied by cytotrophoblast extension. This process gives rise to the primary chorionic villi, characterized by formation of core of cytotrophoblasts rimmed by an outer layer of syncytiotrophoblasts without a mesenchymal component. The outer syncytiotrophoblastic mantle, punctuated by blood-filled lacunae, demarcates the primary villi from the surrounding endometrium.

Microscopic recognition of primary villous formation is based on a small, well-circumscribed focus composed of an outer syncytiotrophoblast mantle, punctuated by blood-filled spaces, encircling aggregates of a biphasic arrangement of mononuclear cytotrophoblasts and multinuclear syncytiotrophoblasts. In this case, an early secondary villus is also identifiable, characterized by a primitive villous mesenchymal core bordered by cytotrophoblasts (lower mid panel). The estimated gestational age of 5 weeks based on LMP is also consistent with the expected timing of primary villous formation. Early implantation trophoblasts are highly proliferative, as evidenced by a high Ki-67 labeling index in the mononuclear cytotrophoblasts. When viewed in isolation, the histological features of primary chorionic villi may closely mimic a focus of choriocarcinoma.

Final Diagnosis: Primary villous formation,
early implantation