Placenta

(6.6 Placenta); Updated December 25th, 2018 by Jeremy Deisch, MD; Modified March 13th, 2020 by Jeremy Deisch, MD

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(Labeled:,;) Received (fresh, in formalin) is a single disk placenta and attached
umbilical cord and fetal membranes. The membranes are (tan/green-tinged/slippery), with a point of
membrane tear cm from the placental edge. The fetal membranes show
[normal/circumvallate/circummarginate] peripheral disc insertion (give percentage of disc showing
circumvallate/circummarginate insertion). The (trivascular) umbilical cord measures cm (diameter) x
cm (length), with a [central, peripheral, marginal, velamentous] insertion cm from the nearest disc
edge. There are coils per 10 cm. After trimming the membranes and cord, the disc weighs grams
and measures x x cm. The fetal surface is (steely blue and glistening), with a normal
arborizing vascular distribution. The maternal surface shows (intact, fragmented) cotyledons. The
cut surface of the placental disc shows homogeneous beefy-red parenchyma, without focal lesions.

<u>Major pathologic finding(s)</u>: (describe any focal lesions, including size, number, and what percentage of the parenchyma is involved; if a retroplacental hematoma is present, measure dimensions and give percentage of basal plate covered)

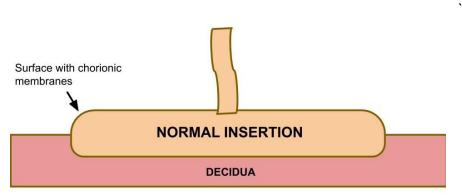
Specimen Handling: (RS, ___ caps)

SUGGESTED SAMPLING

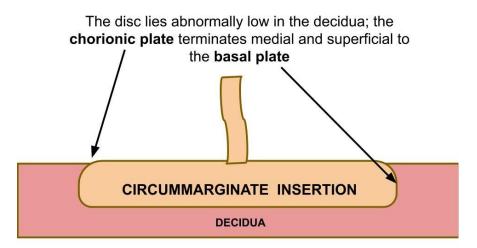
- 1: Two sections of umbilical cord (one mid cord, one close to disc), one membrane roll (membrane roll should be from strip that includes both point of rupture and peripheral disc insertion)
- 2-4: Full thickness parenchyma (if too thick, trim center and retain fetal and maternal aspects); one full thickness section adjacent to cord insertion
- >4: Additional focal lesions within parenchyma

ADDITIONAL CONSIDERATIONS

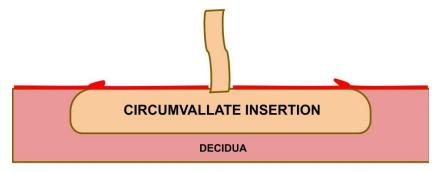
- Cord insertion: Marginal < 1 cm, peripheral < 3 cm from nearest disc edge
- Cord coiling: < 1 coil per 10 cm = hypocoiling, > 3 coils per 10 cm = hypercoiling
- It is critical to give the overall percentage of the placental disc abnormalities when present; an infarct that results in < 5% of the placental volume will have no clinical significance, whereas an infarct involving over half of the disc would be expected to result in significant uteroplacental insufficiency.
- Take care to trim the placental parenchyma sections to a relatively small size. It is better to have a smaller tissue fragment that is evaluable than a larger portion that is under processed and unevaluable.
- Peripheral sections of placental parenchyma are very low yield, with accentuated degenerative changes (interstitial fibrin deposition, calcifications) that make interpretation difficult. Unless there is a very good reason, avoid sampling the periphery of the disc.
- For multiple gestation placentas:
 - Designate and describe the separate/portions of disc as indicated by the requisition or with a
 distinguishing characteristic (e.g. "twin A", "one clamp placenta", "short cord placenta", etc)
 - Sample each individual separate or fused disc as described above (four caps per placenta) and designate appropriately in cap key (e.g. "Umbilical cord and membrane roll, twin A")
 - o Sample dividing membrane (if present) and designate as such



Note the **basal plate** (peripheral edge of placental disc) terminates at the same point as the **chorionic plate** (the chorionic membrane covering the placental disc)



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Similar to circummarginate insertion, basal plate terminates lateral to chorionic plate insertion. Membranes "double up" at termination of chorionic plate, leaving a thick white ring at periphery