

Second Week of Development

Bilaminar Germ Disc

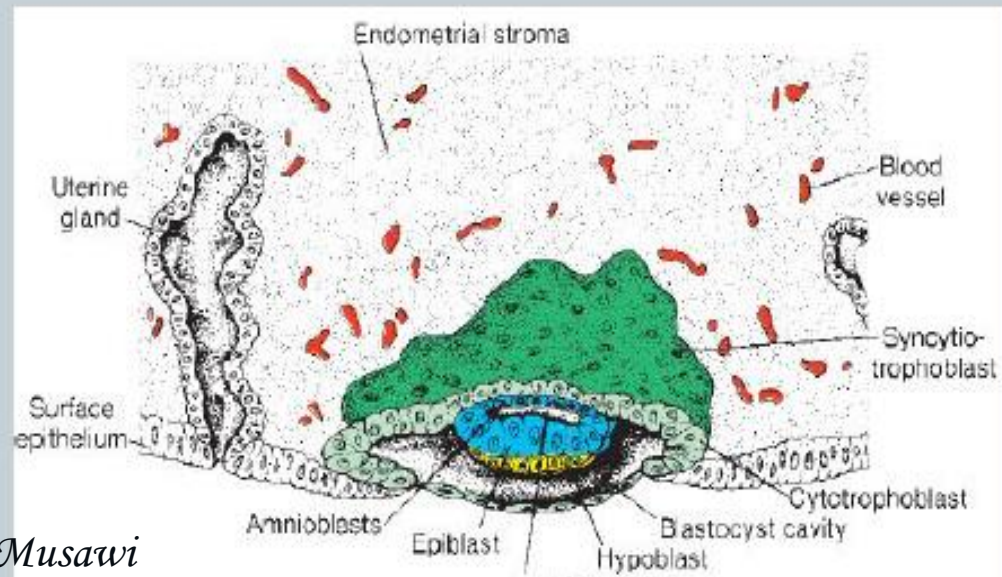


a day-by-day
The major events of the second
week of Development

8th day



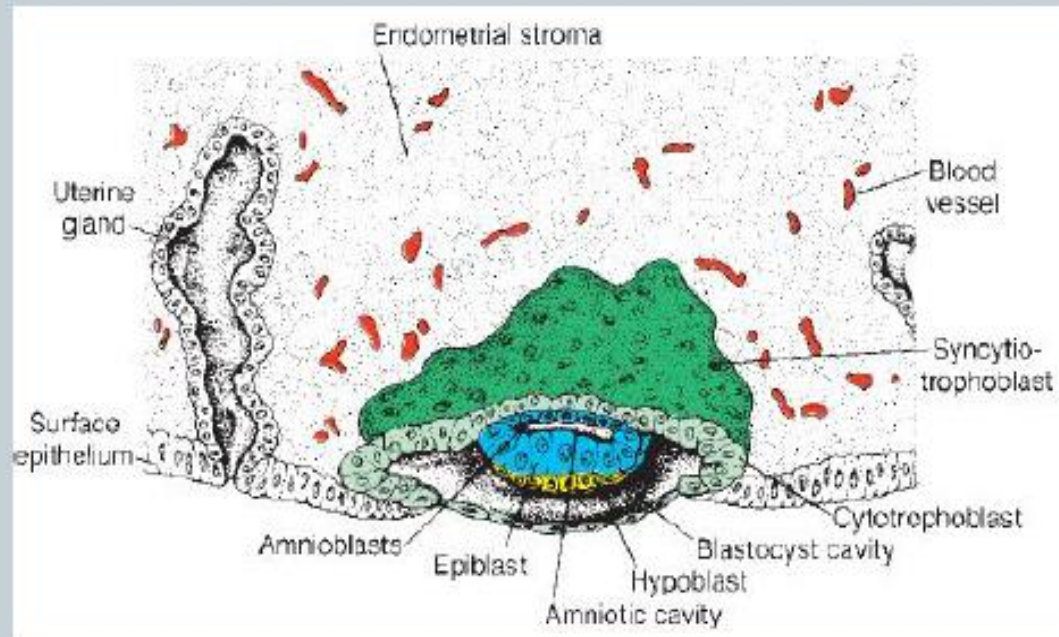
- the blastocyst is partially embedded in the endometrial stroma.
- the area over the embryoblast, the trophoblast has differentiated into two layers:
 - (1) **cytotrophoblast** (a mononucleated cells inner layer)
 - (2) **syncytiotrophoblast** (an outer multinucleated zone without distinct cell boundaries)
- Mitotic figures are only found in the cytotrophoblast



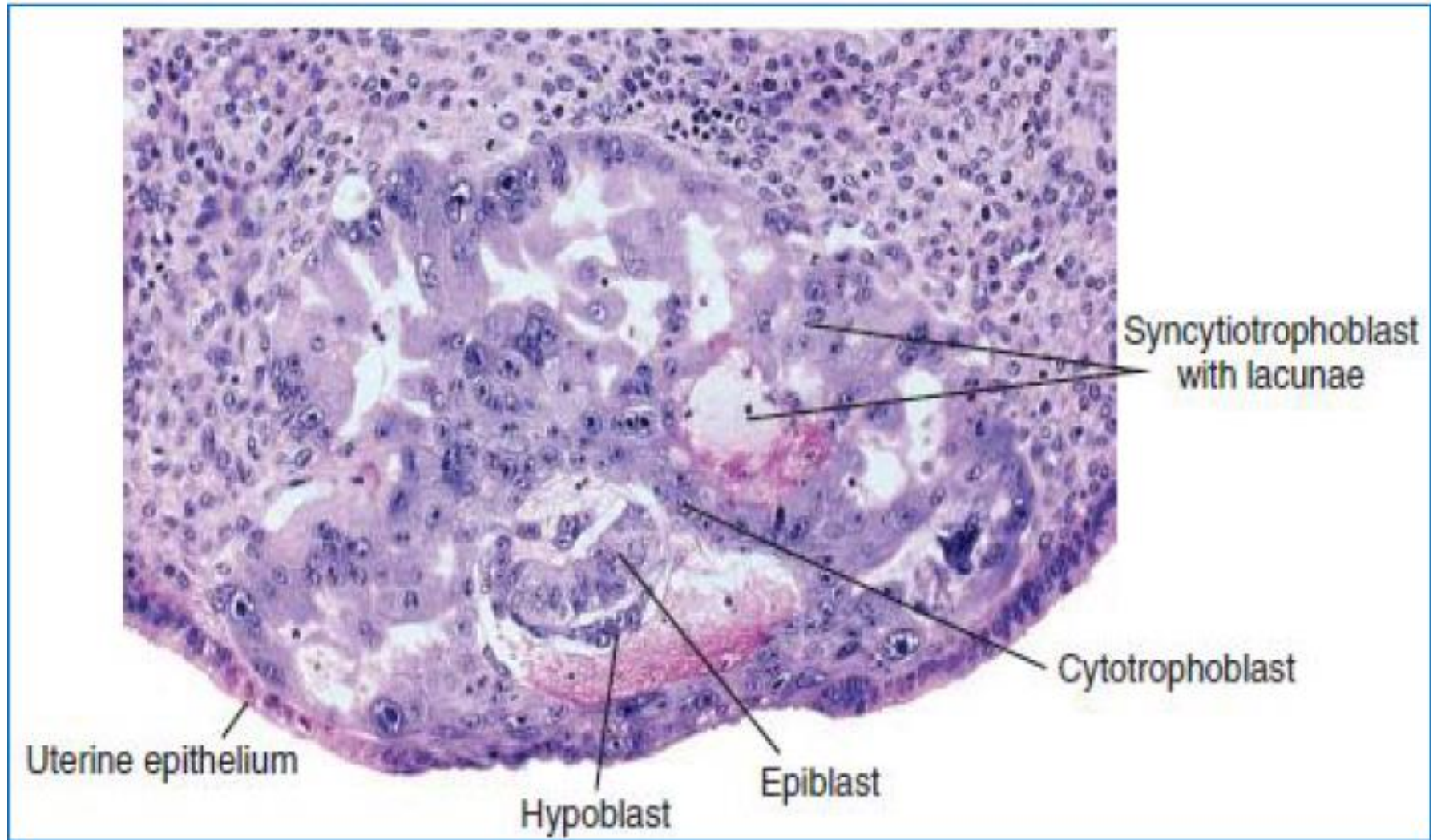
8th day



- Cells in the inner cell mass or embryoblast differentiate into two layers:
- (1) **hypoblast layer** (a layer of small cuboidal cells adjacent to the blastocyst cavity)
- (2) **epiblast layer** (a layer of high columnar cells adjacent to the amniotic cavity)
- form a flat disc
- **Amniotic Cavity**
- **Amnioblasts**



- edematous and highly vascular endometrial stroma
- abundant glycogen & mucus secrete by large & tortuous glands



9th day



- The blastocyst is more deeply embedded in endometrium (a fibrin coagulum)

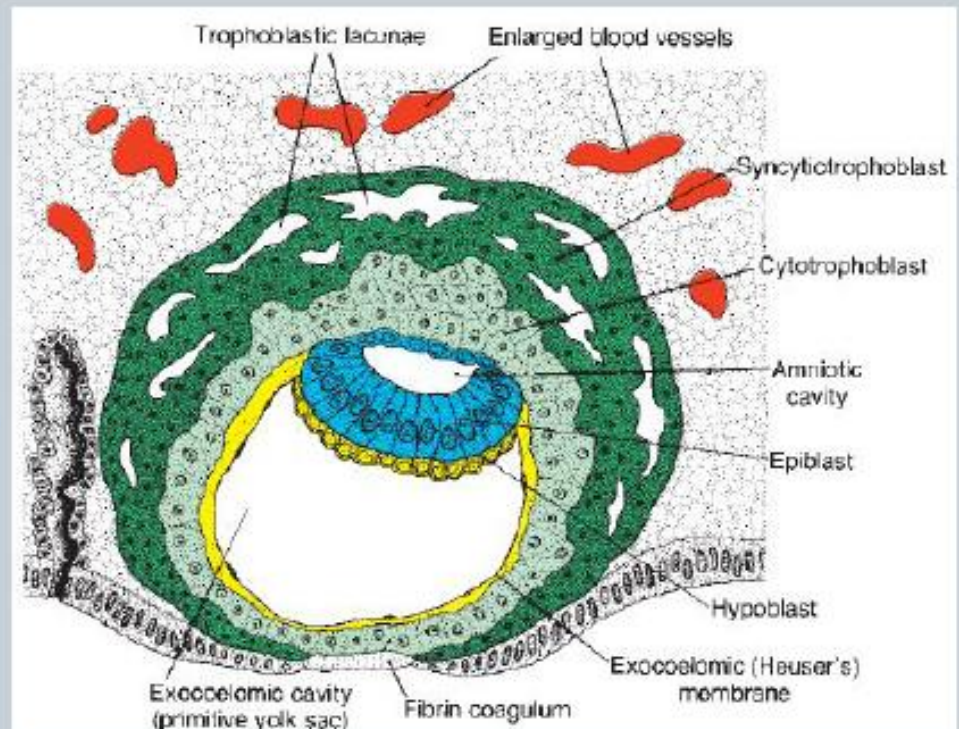
The trophoblast development, (particularly at the embryonic pole)

- vacuoles appear in the syncytium
- vacuoles fusion & large lacunae formation

lacunar stage

At the abembryonic pole

- the exocoelomic (Heuser's) membrane (hypoblast flattened cells)
- **exocoelomic cavity (primitive yolk sac)**



11th & 12th days

- blastocyst is completely embedded in the endometrial stroma
- slight protrusion into the lumen of the uterus

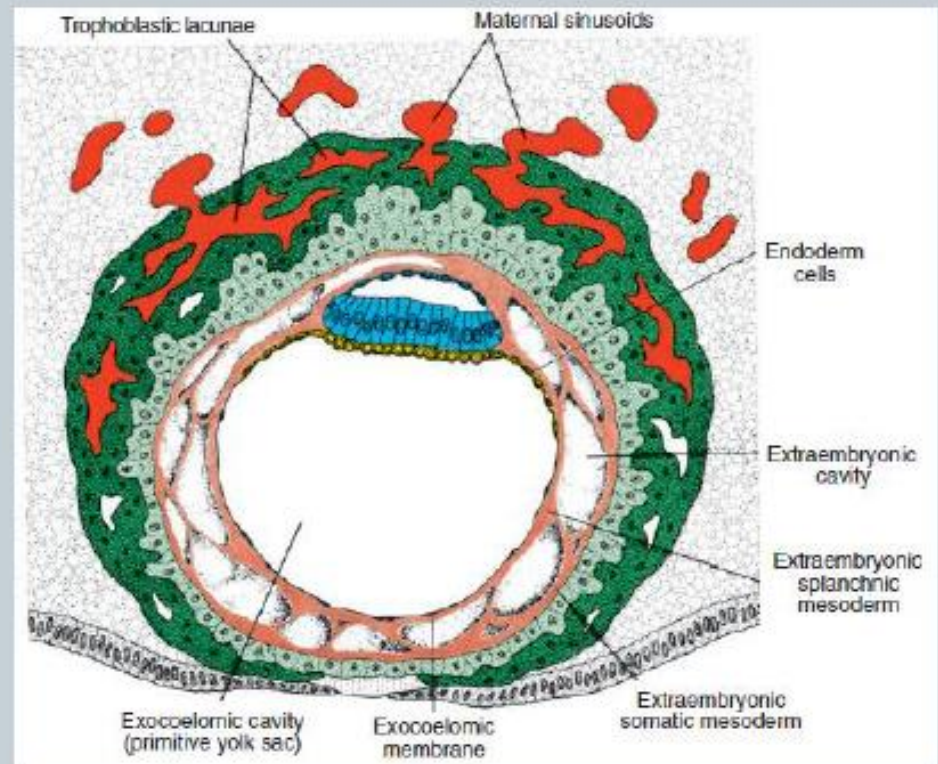
Sinusoids

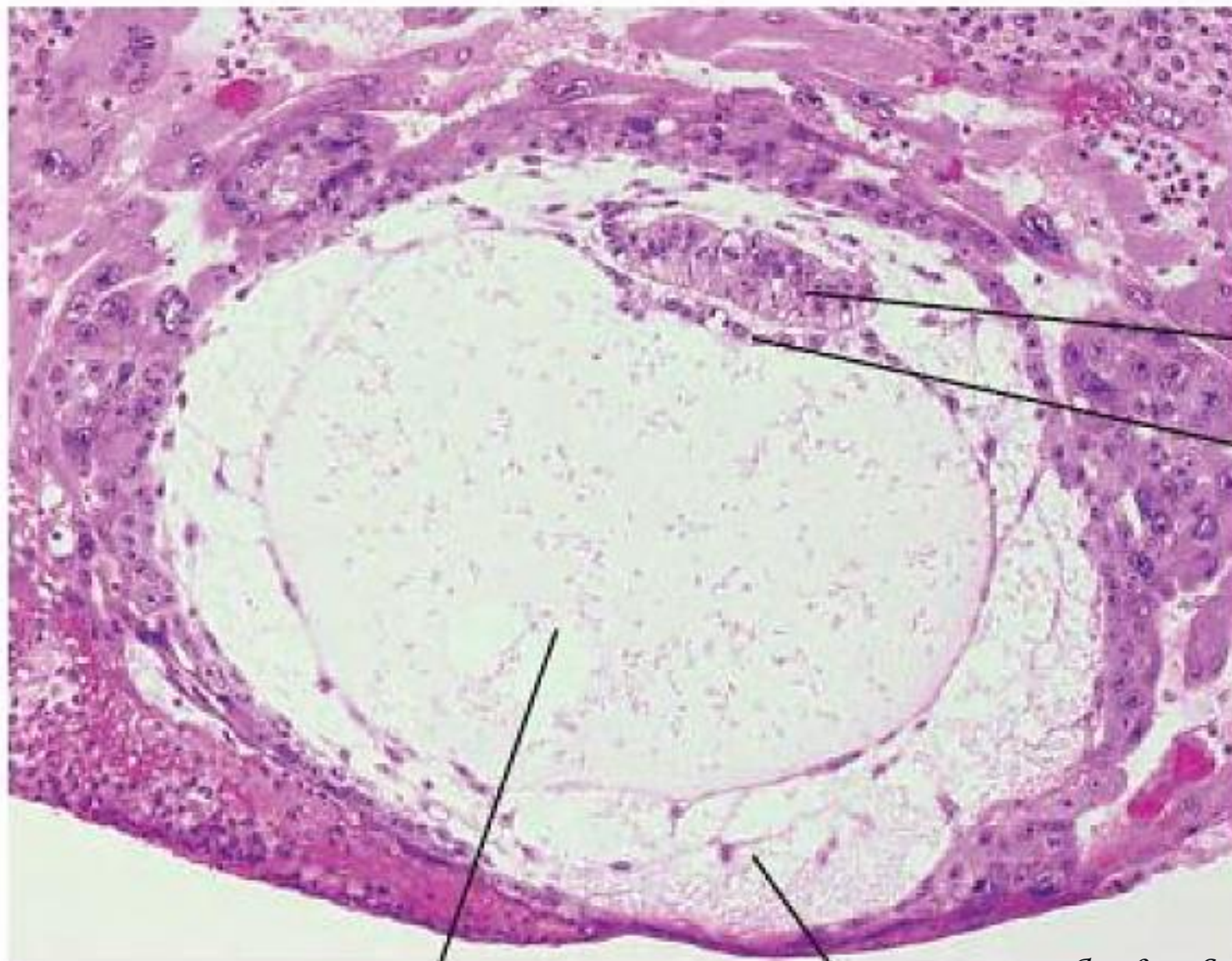
uteroplacental circulation

- exocoelomic cavity

Extraembryonic mesoderm

- extraembryonic cavity (chorionic cavity)
- connecting stalk
- extraembryonic somatic mesoderm
- extraembryonic splanchnic mesoderm
- decidua reaction





Epiblast

Hypoblast

Primitive yolk sac

Extraembryonic mesoderm

Ass.Lec. Sada AL_Musawi

- Connective stalk form umbilical cord



