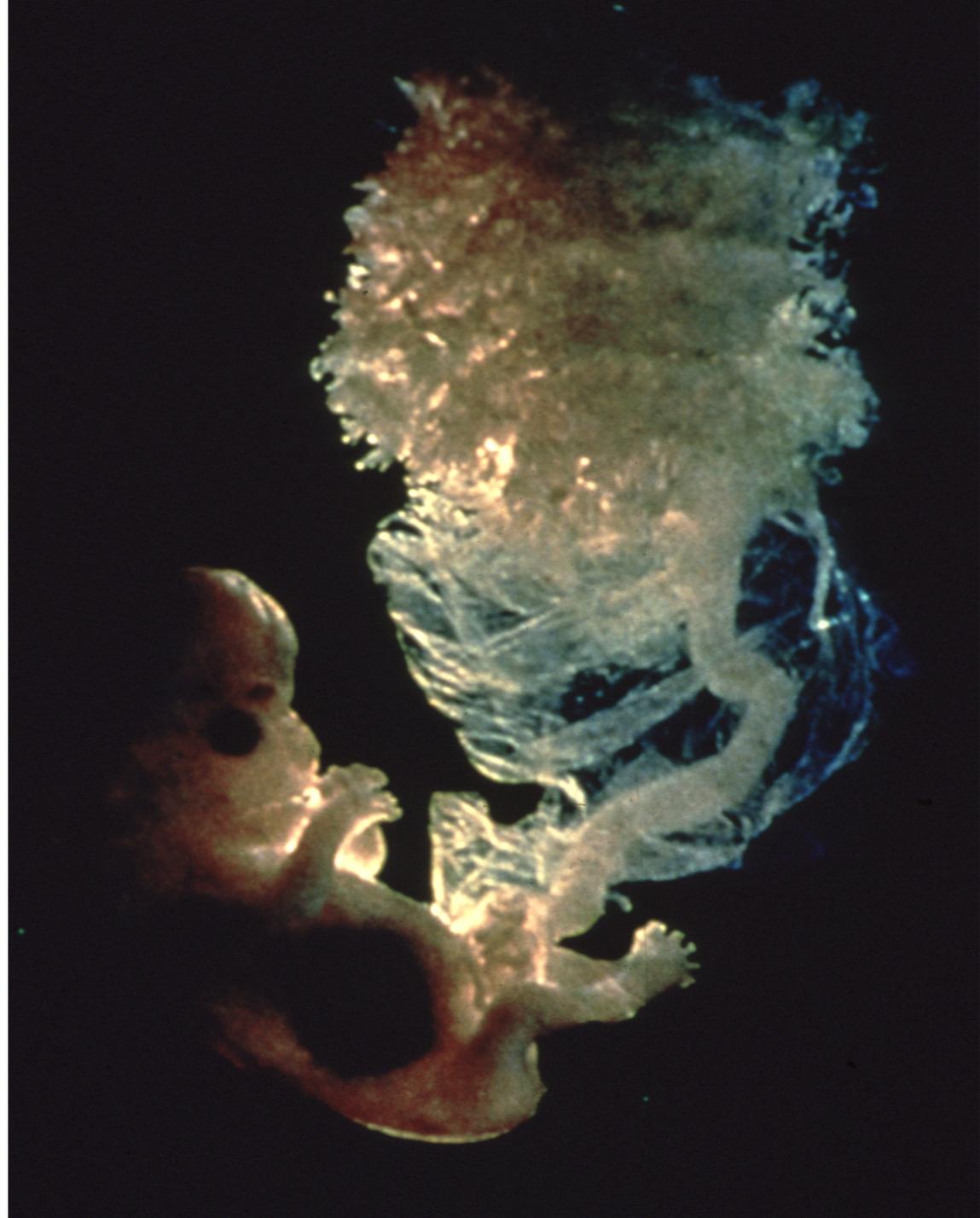
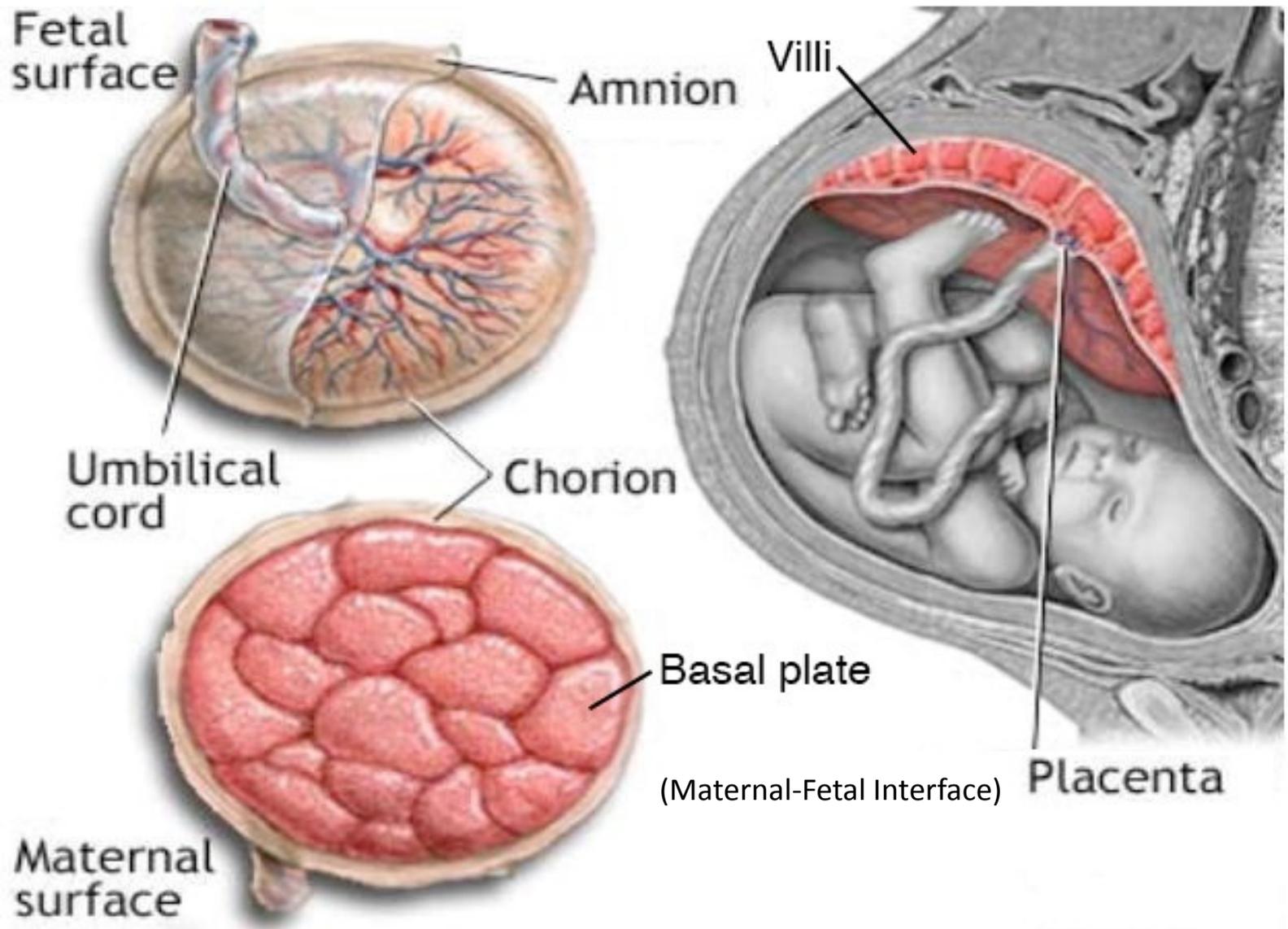


The Human Placenta Project: Anatomy and Tissue Structure

Susan Fisher





Fetal surface

Amnion

Villi

Umbilical cord

Chorion

Basal plate

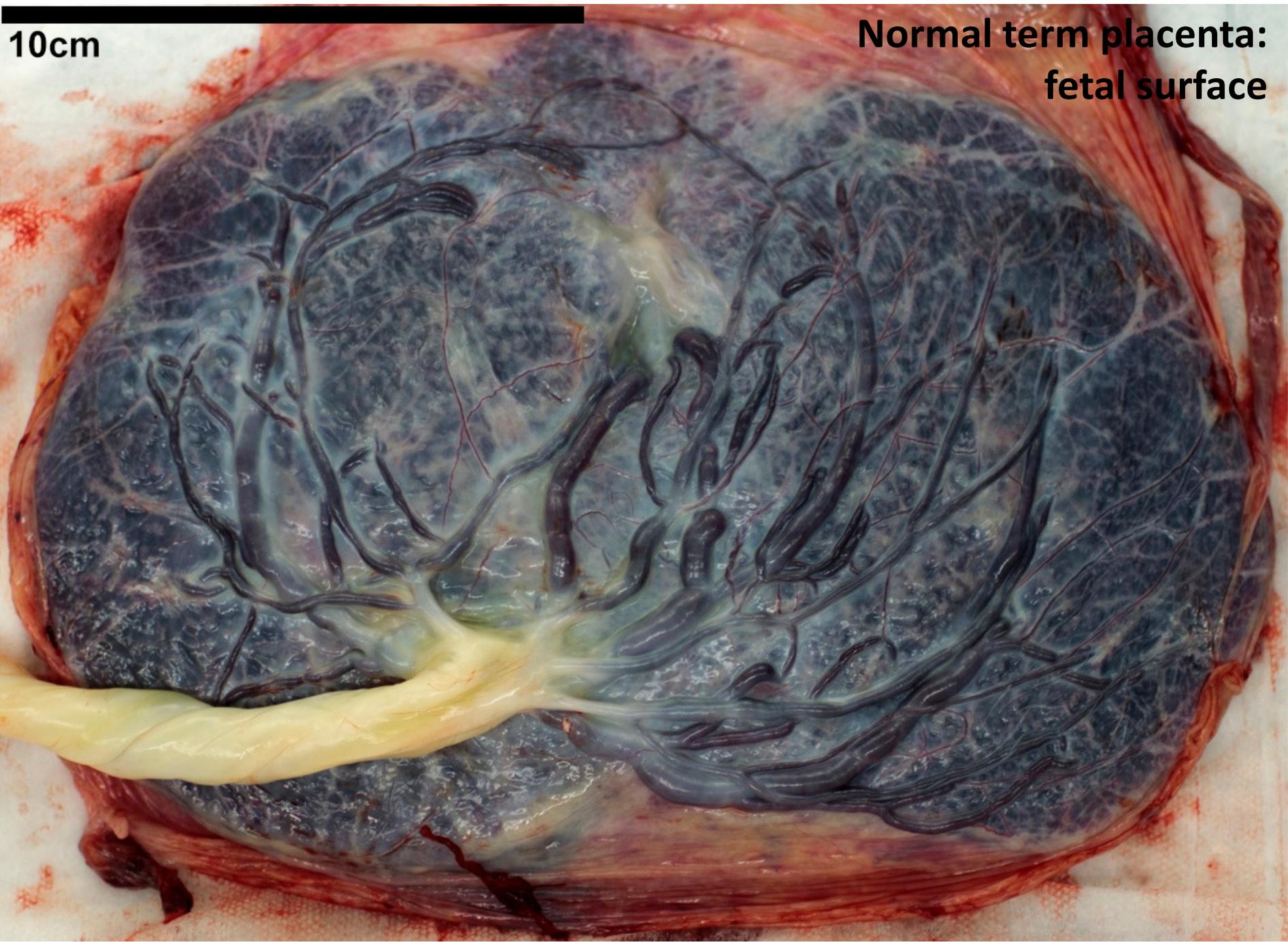
Maternal surface

(Maternal-Fetal Interface)

Placenta

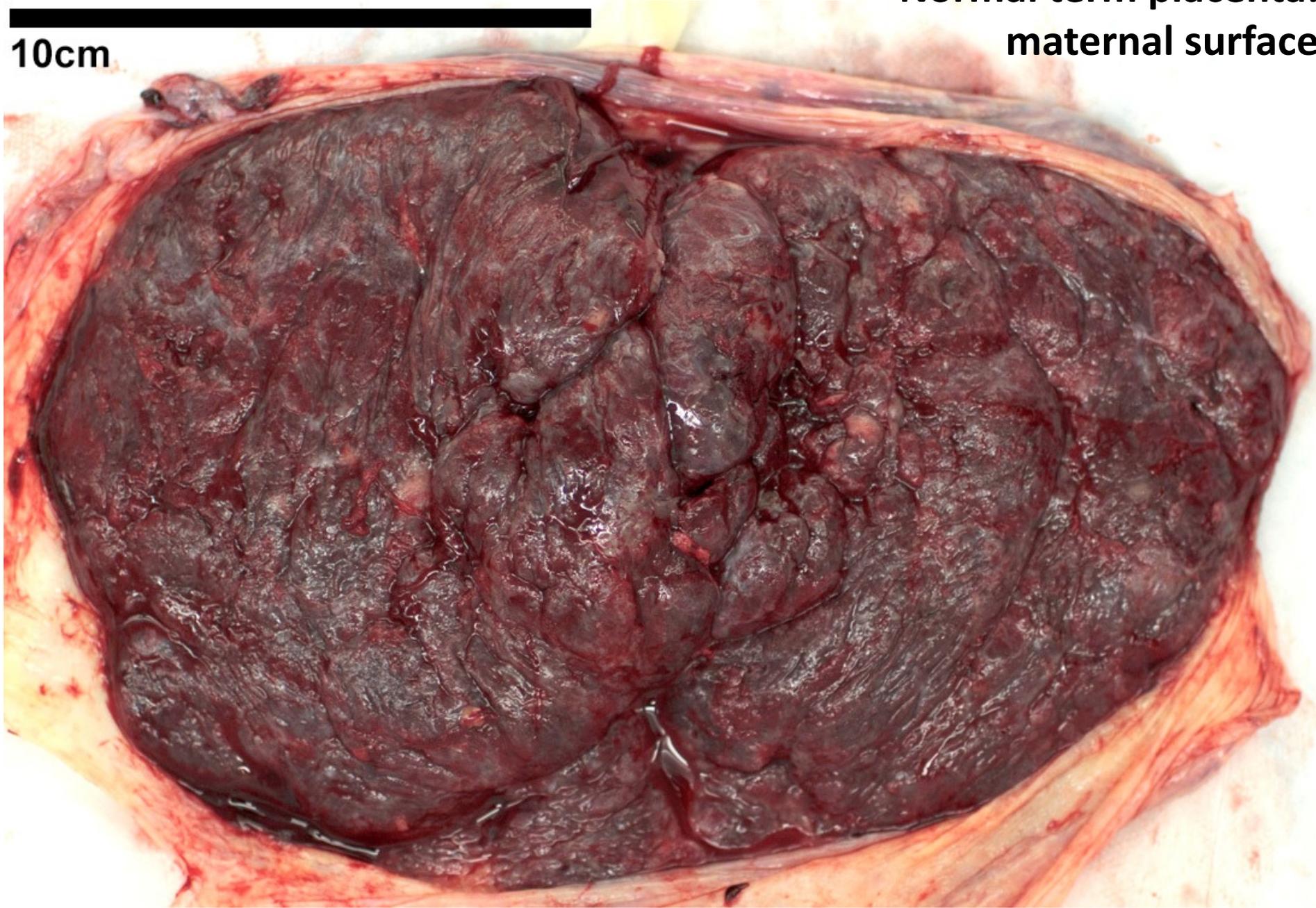
10cm

Normal term placenta:
fetal surface

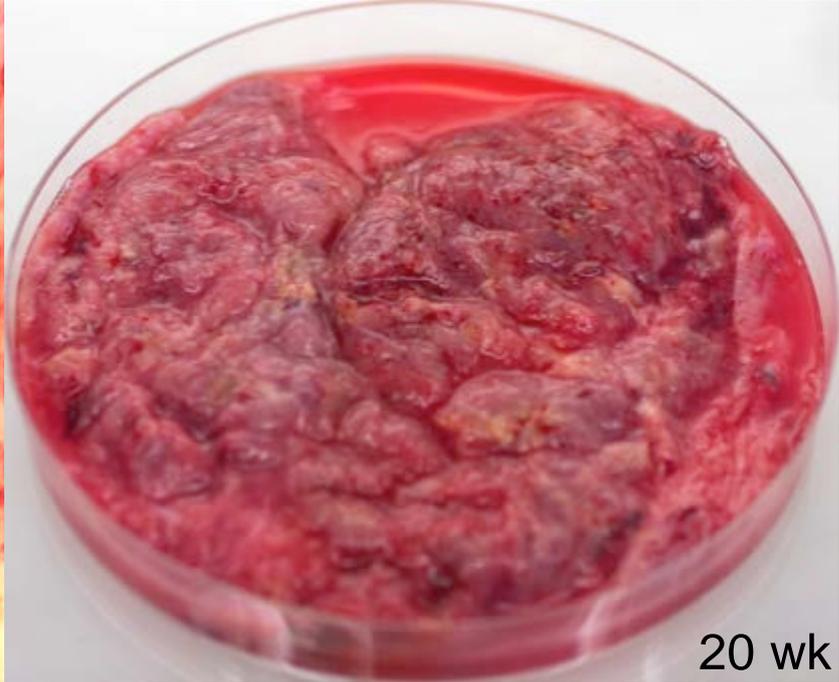


**Normal term placenta:
maternal surface**

10cm

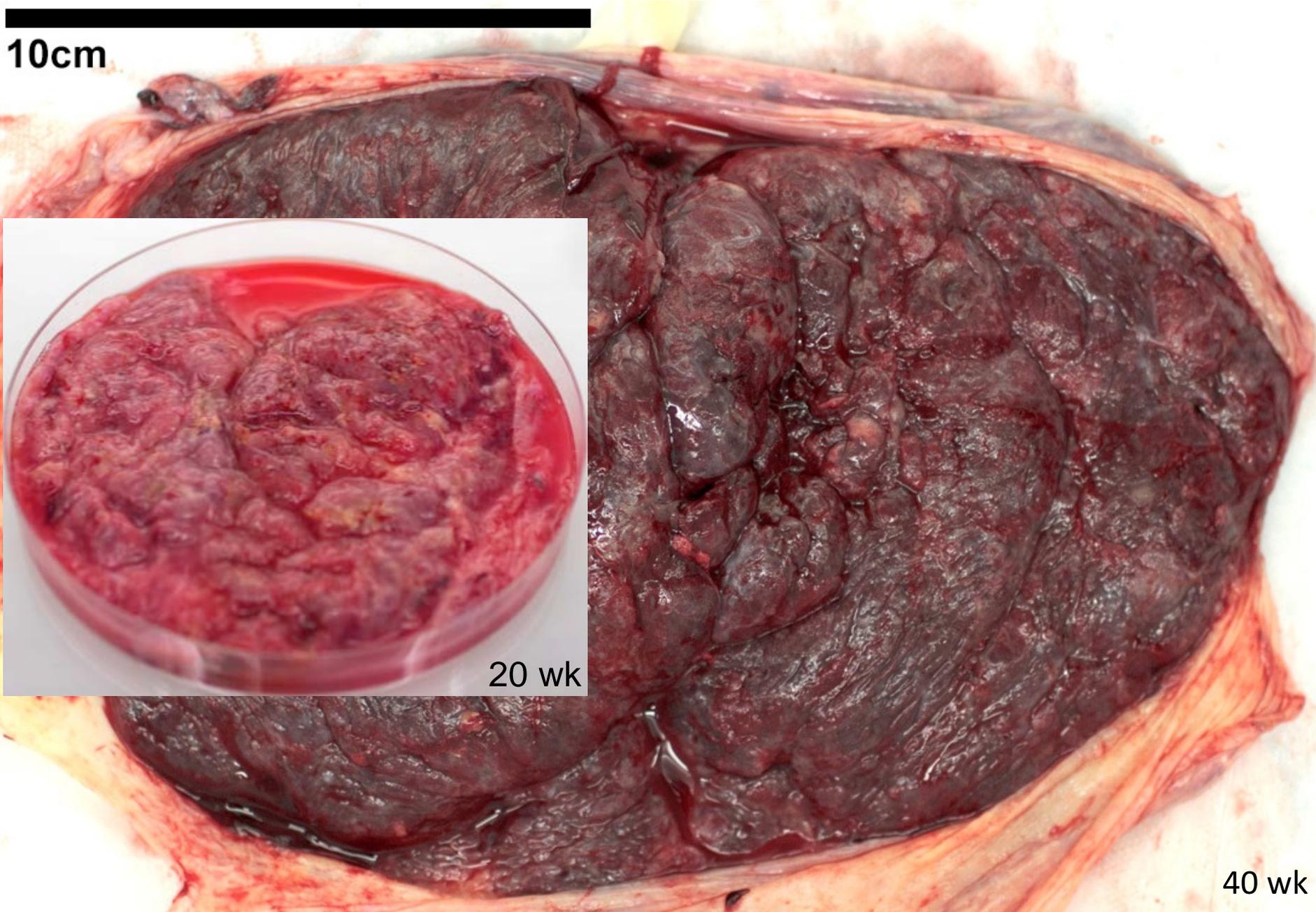


10cm



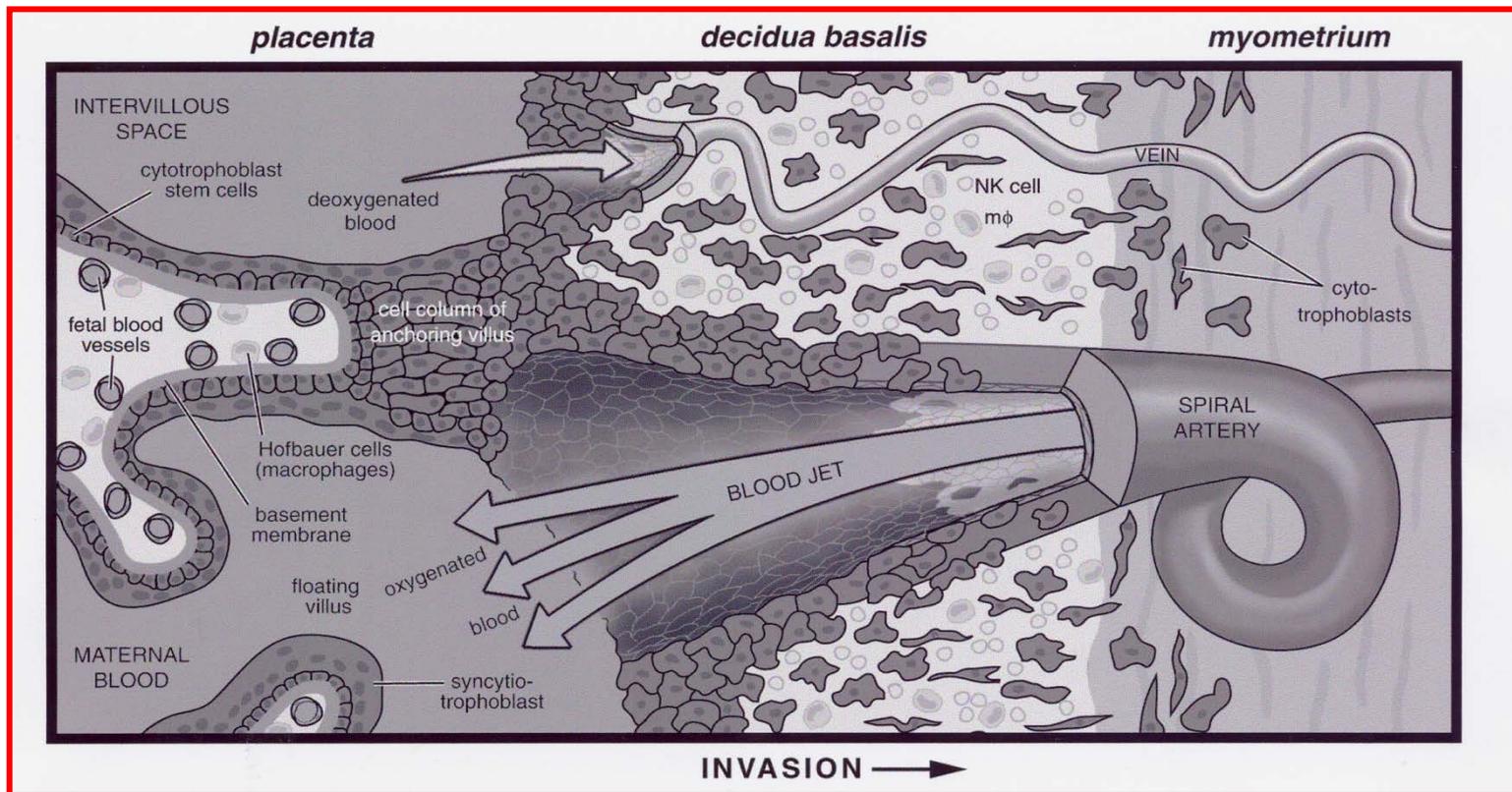
20 wk

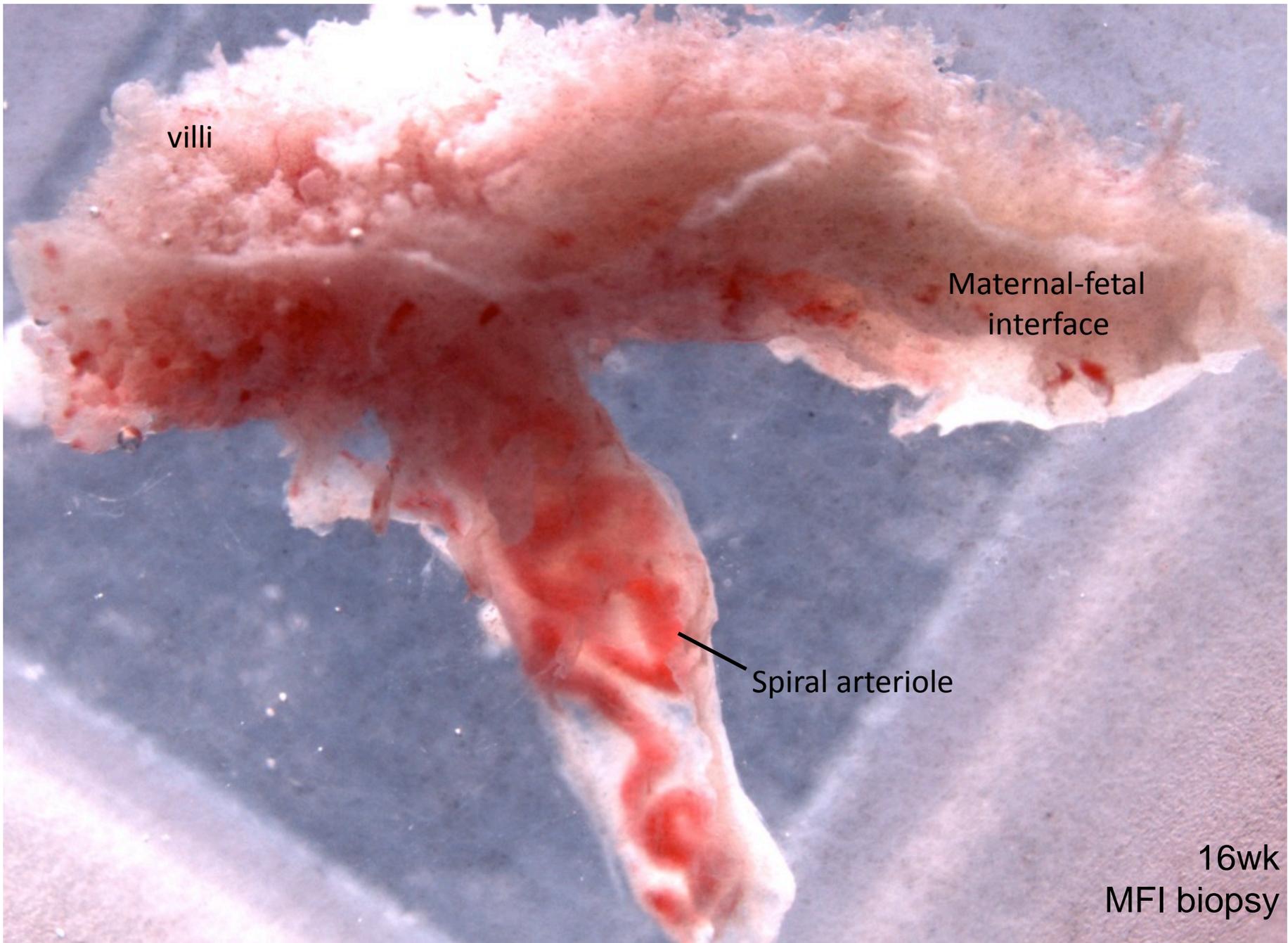
40 wk



The placenta is composed of floating and anchoring chorionic villi

Chorionic villi: stromal cores containing fetal blood vessels covered by a layer of cytotrophoblasts and syncytiotrophoblasts (first and second trimester)





villi

Maternal-fetal
interface

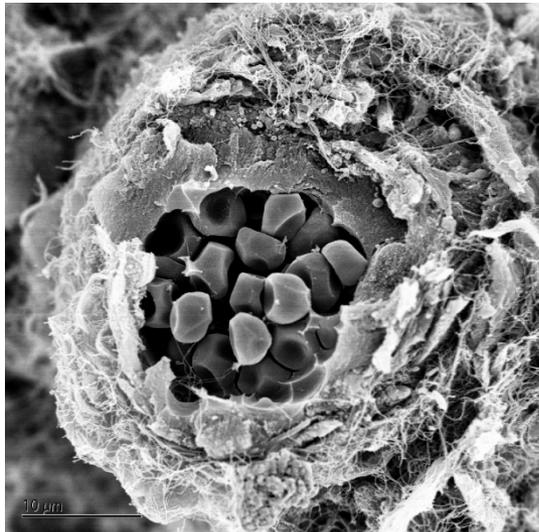
Spiral arteriole

16wk
MFI biopsy

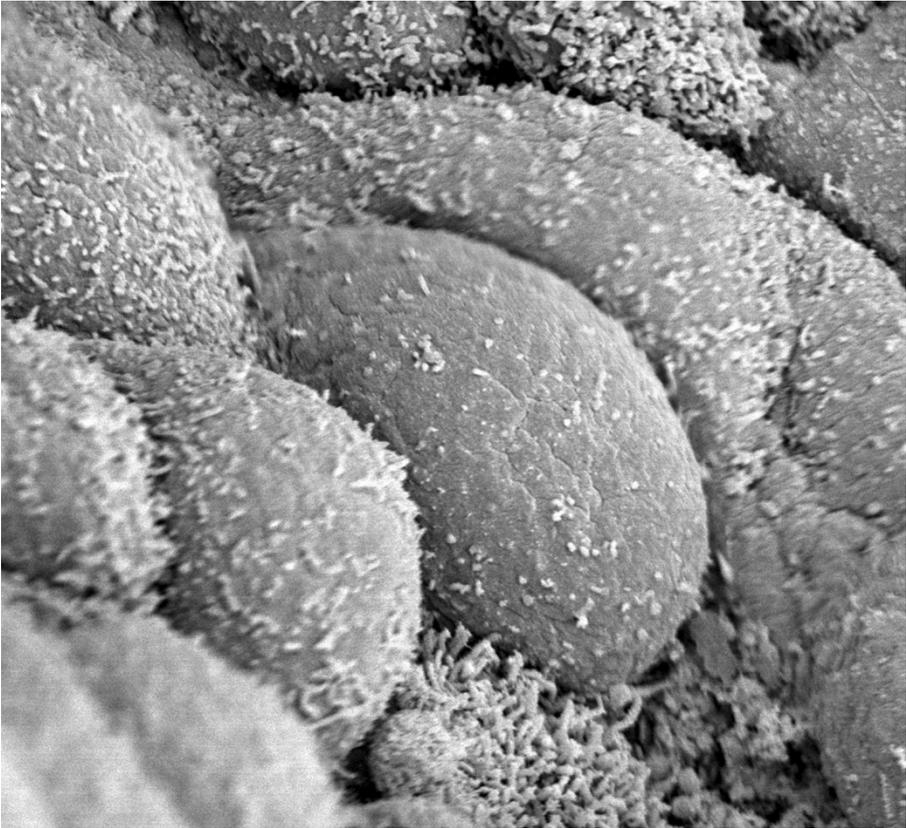
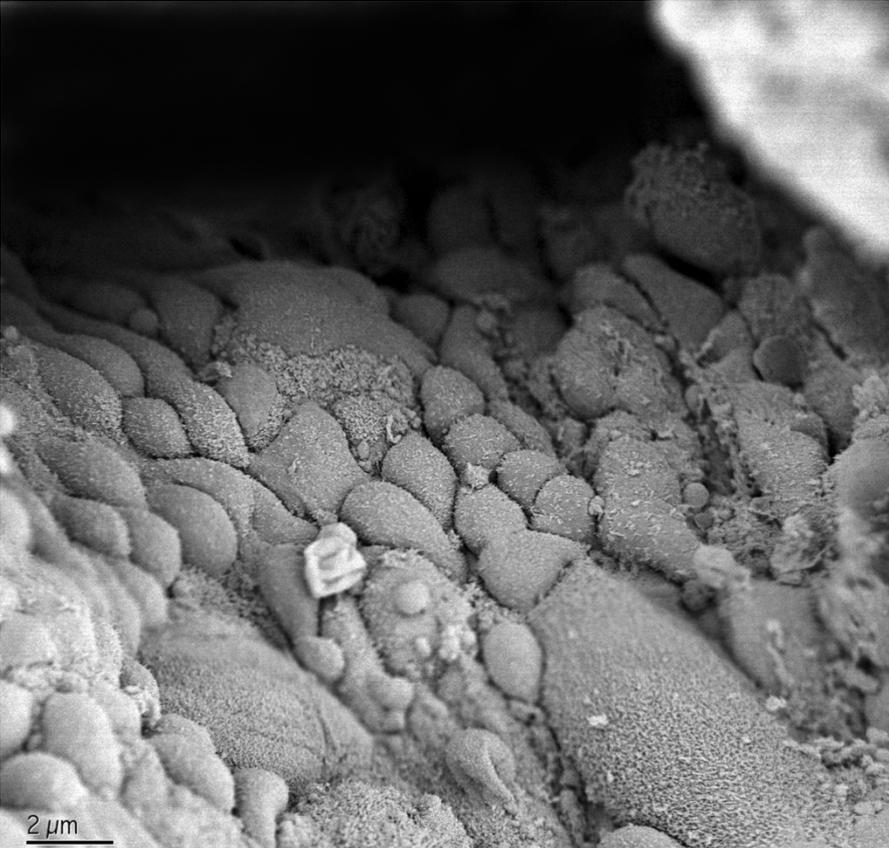


Cytotrophoblasts remodel the uterine vasculature

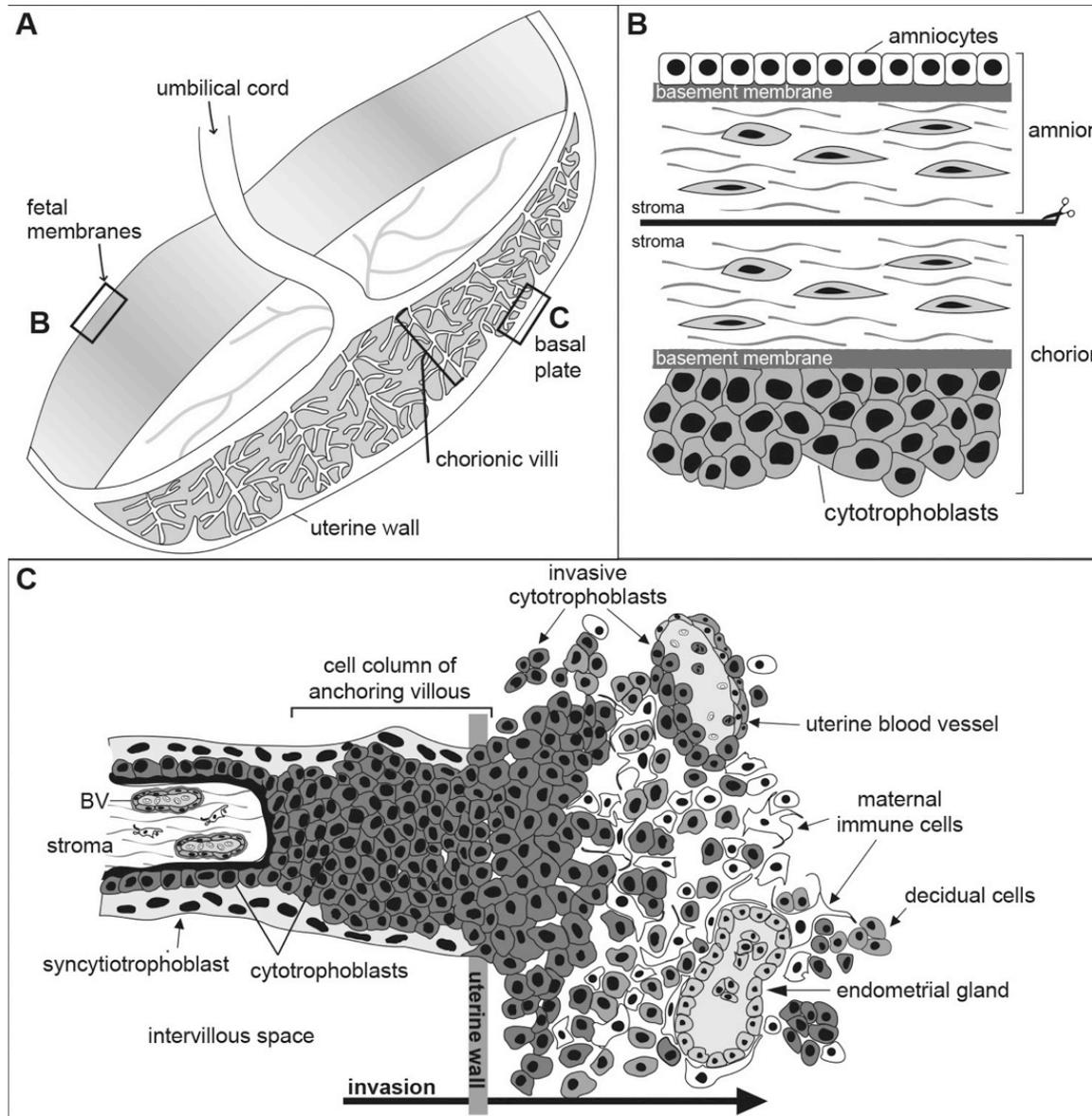
1. Direct blood flow to the placenta
2. Vastly increase blood flow to the intervillous space
3. Integrate while preserving the integrity of the entire maternal systemic circulation



Placental cytotrophoblasts lining modified vessel in 21 wk decidua



The placenta is integrated with the other extraembryonic structures.



A close-up photograph of a man with a young child on his shoulders. The man is wearing a light-colored t-shirt and a wide-brimmed hat with a green mesh top and a tan band. He is smiling broadly at the camera. The child, wearing a white shirt, is looking down at the hat. The background is a blurred fairground with colorful lights and structures.

Photography credits

Matthew Gormley