Multiples

Fetal /Infant

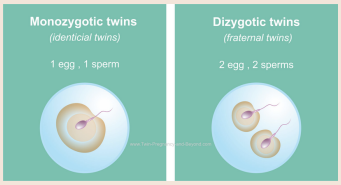
- 5-fold inc risk of stillbirth; 7-fold inc risk of neonatal death (assoc w/ complications of prematurity)
  - Preterm birth: 6x more likely to give birth preterm
- 2x inc risk IVH + periventricular leukomalacia (inc risk of cerebral palsy)

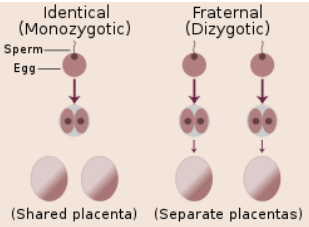
Mother

- Hyperemesis, GDM, HTN disorders of pregnancy, anemia, hemorrhage, cesarean delivery, and post-partum depression
- Inc use of ART -> Inc incidence of multifetal births
  - ART pregnancies -> higher risk of PreE even after controlling for maternal age and parity

Zygosity

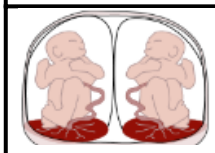
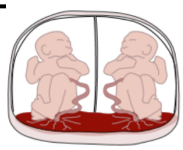
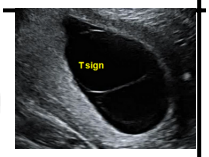
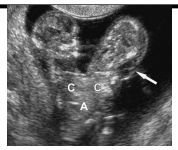
Monozygotic Twins: (1 egg + 1 sperm (20%)
Dizygotic Twins: 2 eggs + 2 sperms (80%)





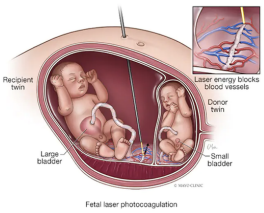
Chorionicity

Generally speaking, all dizygotic twins are dichorionic and diamniotic
***SVD/TOLAC okay if: VTX presenting, <20% discordance, >1500g, no other contraindications**

Dichorionic Diamniotic	Monochorionic Diamniotic	Monochorionic Monoamniotic	Conjoined
0-3 days, 25-30%	4-8 days, 70-75%	9-12 days, 1%	>13 days, <1%
 	 	 	 
• Lambda sign • Del: 38w-38w6d ◦ SVD* or C/S	• T-sign, TTS: 15% • Del: 34w-37w6d • SVD* or C/S	• Tangled ball of cord • Del: 32w-34w • C/S only	

TTTS

- Vein-artery connections between shared placenta → imbalanced blood flow (~16 weeks)
- Surviving fetus: necrotic embolism from dead fetus, low blood volume d/t pooling in dead fetus or velamenteous cord insertion



Fetal laser photocoagulation

TABLE 1
Staging of twin-twin transfusion syndrome[2]

Stage	Ultrasound parameter	Categorical criteria
I	MVP of amniotic fluid	MVP <2 cm in donor sac; MVP >8 cm in recipient sac
II	Fetal bladder	Nonvisualization of fetal bladder in donor twin over 60 min of observation (Figure 2)
III	Umbilical artery, ductus venosus, and umbilical vein Doppler waveforms	Absent or reversed umbilical artery diastolic flow, reversed ductus venosus a-wave flow, pulsatile umbilical vein flow (Figure 3)
IV	Fetal hydrops	Hydrops in one or both twins
V	Absent fetal cardiac activity	Fetal demise in one or both twins

Laser ablation: endoscopically interrupt vessels that exchange of blood between fetuses (85% survival of at least one twin)
Twin anemia-polycythemia sequence = complication of ablation (presence of few, miniscule AV placental anastomosis --> highly discordant Hb levels)

Reduction/ Termination

- Multifetal Reduction (10-12 wks, usually for higher order preg)-> lower freq of preg loss, antenatal complications, PTB, LBW, C/S, neonatal deaths
  - Chosen based on technicalities (more accessible + chorionicity - rec both monochorionic fetuses be reduced)
- Selective termination (18-22 wks): reduction of abnormal fetus
  - Inc risk because of later GA