

### **Types of Multigestational Pregnancies Presentation Outline**

- Objectives: difference in fertilization, placentation, combinations of placentation, amnionicity, chorionicity, embryology, sonographic appearance
- Incidence of multigestational pregnancies
  - ❑ North America 1.5%
  - ❑ Twin births Increased by 70%
  - ❑ Triplets and higher-order multiple pregnancies increased 404%, then declined
- Reason for increased incidence
  - ❑ Delayed child bearing
  - ❑ Increased use of ART
- Key terms
  - ❑ Zygosity: Dizygotic, monozygotic
  - ❑ Zygote: Ovum + sperm (46 chromosomes)
  - ❑ Chorionicity = # chorionic membranes
  - ❑ Amnionicity = # amniotic membranes
  - ❑ Placental membranes = chorion + amnion
  - ❑ Placentation = Combination of placental membranes
- Dizygotic Twin Embryology (Fraternal) 70% (most common)
  - 2 ova + 2 sperm = 2 zygotes
  - 2 morulas
  - 2 blastocysts implant independently
  - 2 placentas, 2 chorions, 2 amnions (Dichorionic/Diamniotic)
  - Possible placental disc
  - Same sex or opposite
- Dizygotic Twin Risk factors
  - ❑ Advanced maternal age, maternal family history, advanced parity, ART, ovulation induction agents, IVF, ethnicity
- Monozygotic Twin Embryology (30% (Not as common))
  - ❑ 1 ovum + 1 sperm = 1 zygote
  - ❑ If zygote splits = 2 equal “identical” twins.
  - ❑ Stage n which zygote splits determines chorionicity & amnionicity
  - ❑ DC/DA = 1st 3 days (25%)
  - ❑ MC/DA = 4-8 days (75%)
  - ❑ MC/MA = after 8 days (1%)
  - ❑ Conjoined = after 13 days (1/50k-1/100k)
- Conjoined twin types:
  - ❑ Classified by the conjoined shared body area
  - ❑ Thoracopagus, Omphalopagus, Craniopagus, Pyopagus, Ischiopagus, Cephalothoracopagus
- Risk factors for monozygotic pregnancy

- ☐ Appears to be random. Unrelated to maternal age, family history, ethnicity.
- Multigestational complications
  - ☐ High risk pregnancies
  - ☐ Increased stillbirth rates
  - ☐ Increased risk for Preterm birth, IUGR (intrauterine growth restriction), fetal anomalies, low birth weight, delivery before 37 weeks, preeclampsia, placental abruption, hypertension, placenta previa, postpartum hemorrhage
  - ☐ Increased risk: TTTS (Twin to Twin Transfusion Syndrome), TRAP (Twin Reversed Arterial Perfusion), conjoined twinning
- Multigestational sonography
  - ☐ Best way to determine chorionicity by sonography is 6-14 weeks gestation
  - ☐ Twin peak sign: Di-Di
  - ☐ T-Sign: Mono-Di