



## Management of a Twin Pregnancy

May 2026

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### Purpose

To provide guidance on the methods used to determine gestational age (GA), chorionicity, screening for chromosomal and structural abnormalities, and screening for Twin-to-Twin Transfusion Syndrome (TTTS), Twin Anemia Polycythemia Sequence (TAPS), growth abnormalities, and preterm birth in twin pregnancy.

#### 1. Dating

- Dating determined by crown-rump length is 45-84mm (< 13 6/7 weeks); composite biometry if > 14 weeks
- Use the larger of the two twins to date the pregnancy if spontaneous conception
- If IVF pregnancy, use oocyte retrieval date or embryonic age from fertilization

#### 2. Chorionicity and Amnionicity

- Best determined prior to 14 weeks using membrane thickness at site of membrane insertion into placenta, and number of placental masses
- Lambda sign (twin peak sign), 2 placental masses, or discordant sex- dichorionic, T sign- monochorionic
- Single Yolk sac or cord entanglement: monoamniotic; Double yolk sac: diamniotic
- If pregnancy is advanced and chorionicity cannot be determined, manage conservatively as monochorionic and consider Non-Invasive Prenatal Testing (NIPT) with zygosity testing capability.

#### 3. Aneuploidy Screening

- No method of aneuploidy screening that includes a serum sample is as accurate in twin gestations as it is in singleton pregnancies. Serum based screening is not recommended outside specific circumstances.
- Cell-free DNA screening is recommended, specifically utilizing a test that can determine zygosity
- First trimester Nuchal translucency screening can be used with similar cutoffs as singleton pregnancy
- If there is a fetal demise, vanishing twin, or anomaly in one fetus, there is a high risk for inaccurate test result with cell-free DNA. Panorama can be used to determine if the genetic results are from the vanishing twin.
- Diagnostic testing can be offered with Chorionic Villus Sampling (CVS) or amniocentesis: sample both placentas/sacs if dichorionic and single placenta/sac if monochorionic. The procedure associated pregnancy loss rates are similar for both tests and increased compared to singletons, 1-1.8%.

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### 4. Identification of structural anomalies

- All twin pregnancies should undergo Detailed First Trimester Ultrasound 12-13.6 weeks. Early anatomy at 16 weeks and detailed anatomy ultrasound at 20 weeks gestation.
- Monochorionic twin pregnancies are at increased risk, approximately 3%, for cardiac anomalies and fetal echocardiogram should be performed at 22-24 weeks gestation.

### 5. Screening for preterm birth

- Perform cervical length (CL) measurement at anatomy ultrasound for risk assessment for preterm birth
- If cervical length measures  $< 25\text{mm}$ , consider vaginal progesterone after counseling.
- If cervical length is  $< 15\text{mm}$ , then concurrent vaginal exam should be performed to rule out cervical dilation and need for exam-indicated cerclage. Refer to the cervical length screening guideline.
- The use of 17-OHP, cerclage, and pessary in twins with asymptomatic cervical shortening is not recommended. Exam-indicated cerclage should be considered in patients with cervical dilation  $< 23\text{-}24$  weeks gestation.

### 6. Growth Surveillance

- Perform growth every 4 weeks in dichorionic twin pregnancies starting at 24 weeks
- Perform growth every 4 weeks in monochorionic twin pregnancies starting at 24 weeks
- Discordant growth is diagnosed as  $\geq 25\%$
- Dichorionic twin gestations with discordance and fetal growth restriction (FGR) should be managed per FGR algorithm
- Individualize care for Monochorionic twin gestations with discordant growth
- Selective fetal growth restriction (sFGR) which is diagnosed in monochorionic pregnancies, is diagnosed when one fetus has an estimated fetal weight (EFW)  $< 10^{\text{th}}$  percentile and the intertwin discordance is  $> 25\%$ . If one or both twin meets criteria for FGR, individualize care plan based on imaging.

### 7. Antenatal Fetal Surveillance

- Dichorionic twin gestation: Weekly fetal surveillance starting at 36 weeks
- Monochorionic-diamniotic twin gestation: Weekly BPP at 32 weeks

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### 8. Screening for Twin-to-Twin Transfusion Syndrome (TTTS)

- Occurs in 10-15% of monochorionic twin pregnancies
- Screening for TTTS with assessment of deepest vertical pocket (DVP) and presence of bladders: Begin at 16 weeks and continue every 2 weeks.
- Routine use of UA Doppler for screening is not indicated. Weekly UA Doppler should be performed if FGR or growth discordance is diagnosed. If TTTS is suspected or diagnosed, refer to a fetal therapy center.
- If discordant fluid is identified, not yet meeting criteria for diagnosis of TTTS, perform UA Doppler and increase monitoring to weekly.

### 9. Screening for Twin Anemia Polycythemia Sequence (TAPS)

- TAPS occurs spontaneously in up to 2-5% of monochorionic pregnancies, and 13% following selective fetoscopic laser photocoagulation (SFLP) for TTTS
- Screening for TAPS with assessment of middle cerebral artery peak systolic velocity (MCA-PSV) should begin at 20 weeks gestation and continue every 2 weeks
- If TAPS is suspected or diagnosed less than 34 weeks, refer to a fetal therapy center

### 10. Delivery Timing in Twin Gestation

- Dichorionic Twin Gestation: 38 weeks; if FGR then 36-37 6/7 weeks
- Monochorionic-Diamniotic Twin Gestation: 34-37 6/7 weeks
- Monochorionic-Monoamniotic Twin Gestation: individualized, at 32-34 weeks based on shared decision making

### 11. Other Considerations in Twin Pregnancy

- Twin pregnancies are at elevated risk for preeclampsia. Low dose aspirin should be initiated between 12-28 weeks (ideally less than 16 weeks gestation) and continued until delivery for preeclampsia risk reduction.

- Maternal Weight Gain based on 2009 Institute of Medicine Recommendations:

BMI	Recommended Weight Gain
Normal (18.5-24.9)	37-54 lbs.
Overweight (25-29.9)	31-50 lbs.
Obese ( $\geq 30$ )	25-42 lbs.

Nutrition Consultation can be considered. Increase prenatal vitamin supplementation to 2 tablets, if tolerated.

- Preterm labor in twin pregnancy should be treated similarly to singletons, per preterm labor protocol
- Antenatal steroids should be given for same indications as singletons, threatened preterm delivery within 7 days at viability-34 weeks gestation

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- Demise of one twin
  - Conservative management is the most appropriate course of action
  - In monochorionic twin pregnancy, the surviving twin may lose circulating volume to the demised twin, resulting in hypoperfusion and potential brain injury or death. Obtain MCA-PSV to screen for fetal anemia. Biometry, UA Doppler, and MCA Doppler should be obtained every 2 weeks, with twice weekly BPP. Delivery at 34 weeks.
  - Consider obtaining fetal brain MRI at 4-6 weeks post-demise to evaluate for neurological abnormality.
  - Following single twin demise, the following complications are seen:

<b>Complication</b>	<b>Dichorionic</b>	<b>Monochorionic</b>
Death of co-twin	3%	15%
Preterm Delivery	54%	68%
Abnormal postnatal MRI in survivor	16%	34%
Neurodevelopmental impairment of survivor	2%	26%

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### Addendum 1: Diagnosis, Staging and Management of TTTS

#### Quintero Staging

Stage	Classification
I	Polyhydramnios-Oligohydramnios Sequence DVP > 8 cm in Recipient and DVP < 2 cm in Donor
II	Donor with non-visualized bladder
III	Absent or reversed EDF in umbilical artery, reversed ductus venosus a-wave, or pulsatile umbilical venous flow in either twin
IV	Hydrops in one or both twins
V	Death of one or both twins

Some fetal centers consider degree of cardiomyopathy on fetal echo in staging system.

#### Treatment of TTTS:

- Quintero Stage 1: Conservative management or consideration for selective fetoscopic laser ablation (SFLP)
- Quintero Stage 2 or greater: SFLP is treatment of choice

#### Follow-up of Twin Pregnancy after SFLP:

- Weekly fluid assessment and Doppler studies (UA and MCA). Per fetal center recommendations. Risks of recurrent TTTS after SFLP is 5-14%.
- Twice weekly antenatal testing by 32 weeks gestation

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### Addendum 3: Diagnosis, Staging and Management of TAPS

Stage	Classification
1	Donor MCA-PSV > 1.5 MoM and recipient MCA-PSV < 1.0 MoM, without other signs of fetal compromise
2	Donor MCA-PSV > 1.7 MoM and recipient MCA-PSV < 0.8 MoM, without other signs of fetal compromise
3	Stage 1 or 2 and cardiac compromise in donor (UA-AREDF, UV pulsatile flow, or DV increased or reversed flow)
4	Hydrops of donor twin
5	Death of one or both fetuses, preceded by TAPS

- In monochorionic twins complicated by TAPS, the risk for neurodevelopmental delay is 20%
- Consider brain imaging in the 3<sup>rd</sup> trimester and neurodevelopmental assessment neonatally is indicated
- Management depends on GA at diagnosis, parental choice, severity of disease, and technical feasibility of intrauterine transfusion, and therefore should be individualized
- Treatment options include conservative management, early delivery, laser ablation, or intrauterine blood transfusion

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