

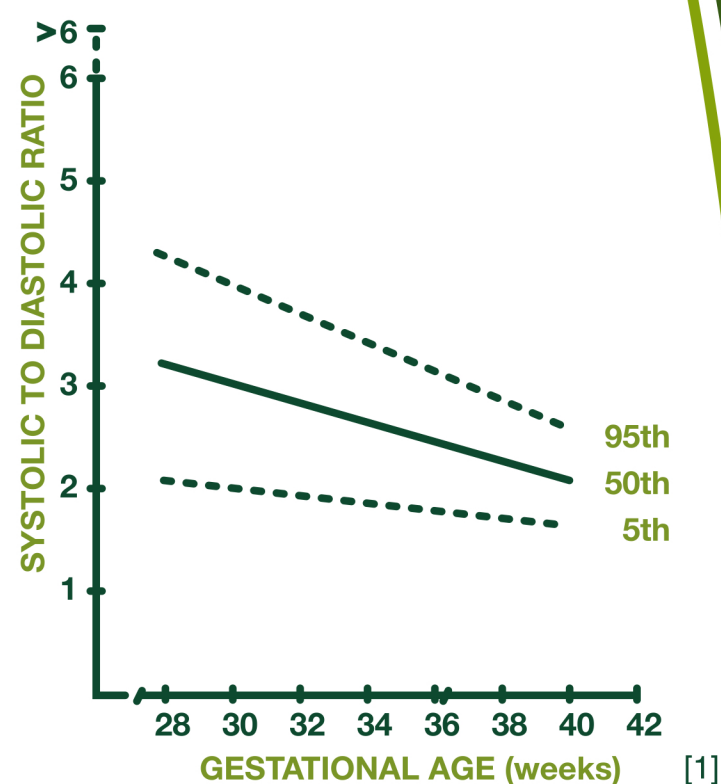
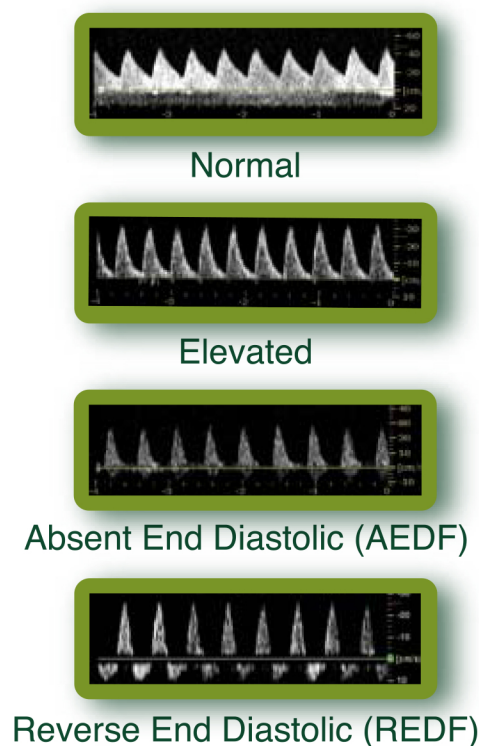
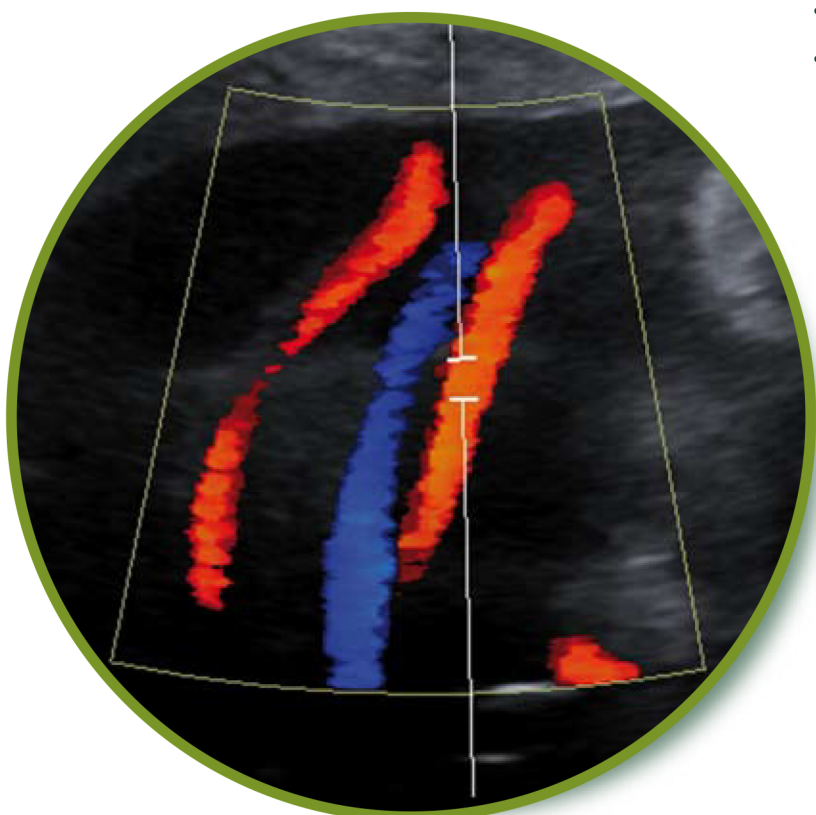
THE SONOGRAPHER'S

QUICK REFERENCE GUIDE TO DOPPLER WAVEFORMS IN THIRD TRIMESTER EXAMINATIONS

Doppler assessment of third trimester fetuses is not conducted routinely. The aim of this resource is to provide a guide when this assessment is required. It is acknowledged that there is a range of data available for these assessments therefore workplace protocols should be consulted. Tertiary referral centres may use additional Doppler parameters.

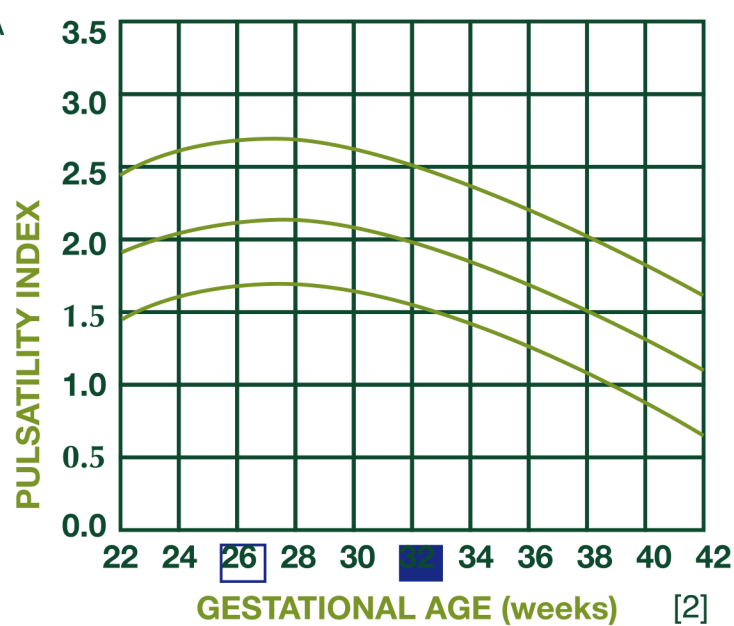
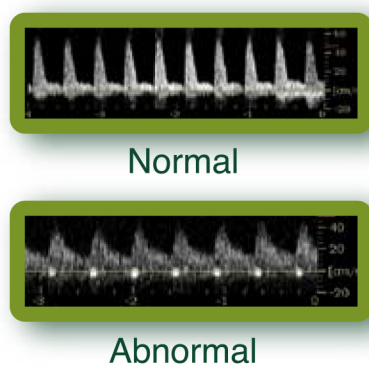
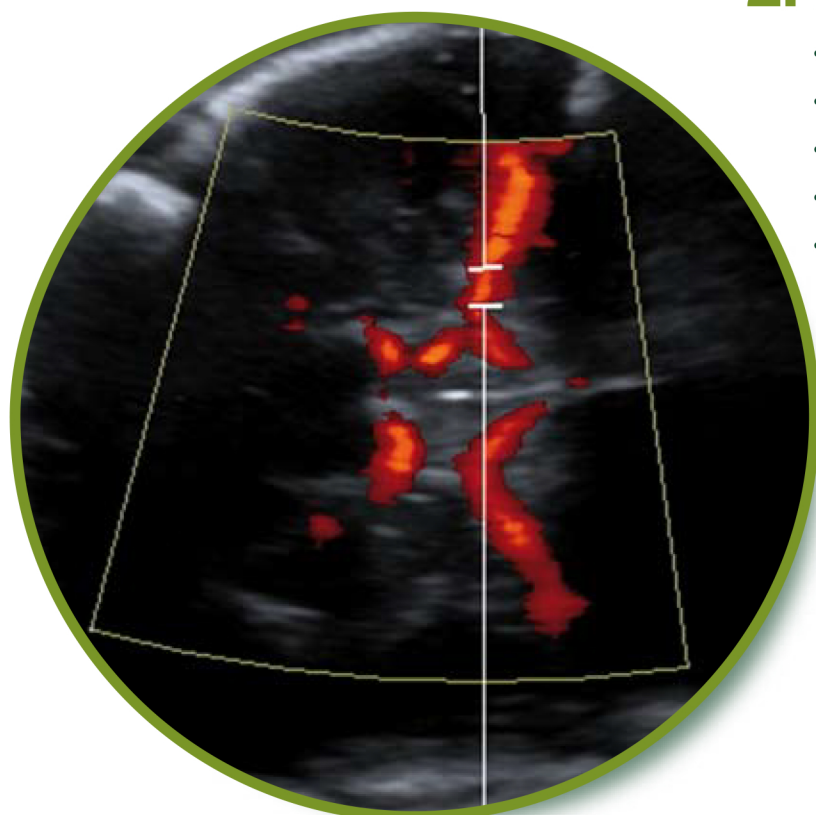
1. UMBILICAL ARTERY DOPPLER

- Reflects the resistance of the placenta to the blood coming from the fetus
- Low resistance flow is normal
- Absent or reverse end diastolic flow is abnormal
- Best sampled when artery is in a vertical position
- Best sampled away from both umbilical and placental insertion



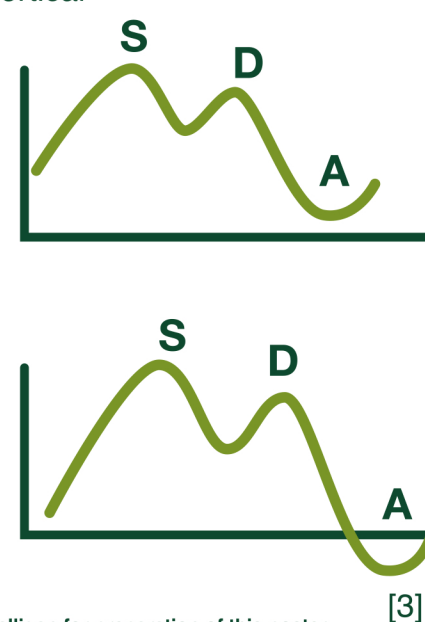
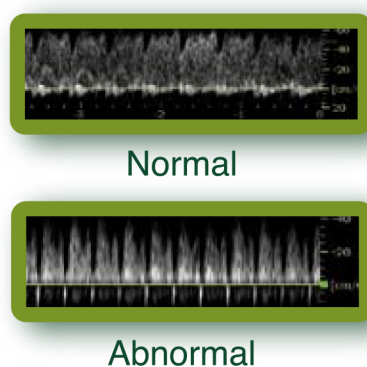
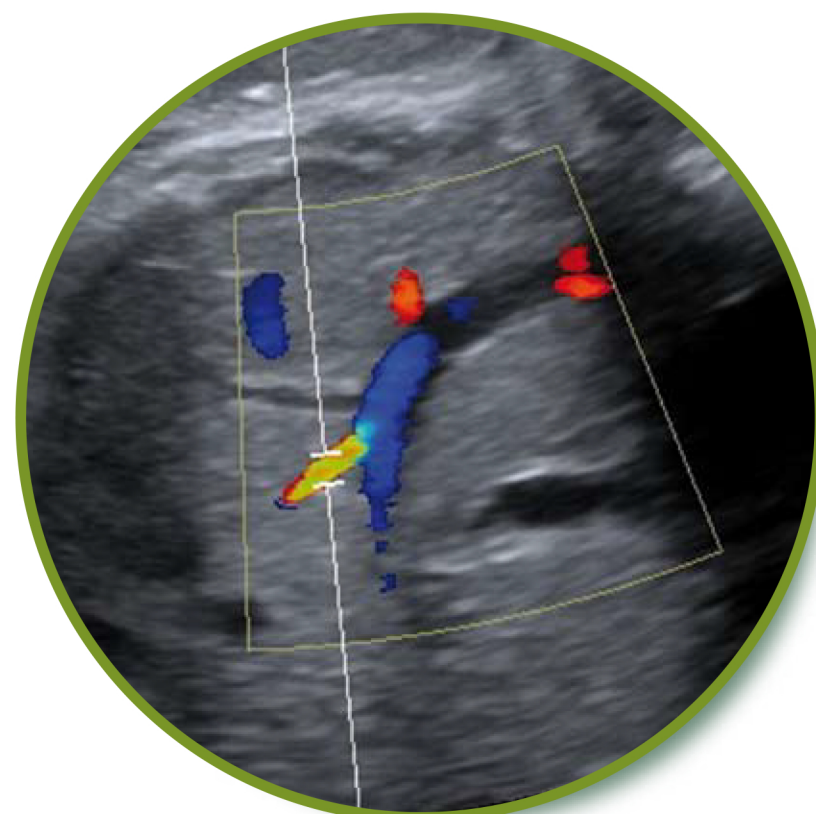
2. MIDDLE CEREBRAL ARTERY DOPPLER

- Can indicate the presence of brain sparing in the fetus
- High resistance flow is normal
- Low resistance flow is abnormal
- Best sampled at the proximal part of MCA
- If MCA is not vertical gate may be angled



3. DUCTUS VENOSUS WAVEFORM

- Reflection of the right side of the heart
- Saw tooth waveform is normal
- Pulsatile waveform that touches or is reversed beyond the baseline is abnormal
- Best sampled at distal end of umbilical vein where aliasing occurs
- Best results when umbilical vein is vertical



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Reference [1] Nyberg DM, McGahan JP, Pretorius DH, Pilu G. Diagnostic Imaging of Fetal Anomalies. Philadelphia, Lippincott Williams & Wilkins, 2003:pg.41.
Reference [2] Nyberg DM et al., pg.43.
Reference [3] Nyberg DM et al., pg.43.

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