

ISUOG statement on the safe use of Doppler in the 11 to 13 + 6-week fetal ultrasound examination

Bioeffects and Safety Committee (K. SALVESEN, C. LEES, J. ABRAMOWICZ, C. BREZINKA, G. TER HAAR and K. MARŠÁL) on behalf of the Board of the International Society of Ultrasound in Obstetrics and Gynecology (ISUOG)

1. Pulsed Doppler (spectral, power and color flow imaging) ultrasound should not be used routinely.
2. Pulsed Doppler ultrasound may be used for clinical indications such as to refine risks for trisomies.
3. When performing Doppler ultrasound, the displayed thermal index (TI) should be ≤ 1.0 and exposure time should be kept as short as possible (usually no longer than 5–10 min) and should not exceed 60 min.
4. When using Doppler ultrasound for research, teaching and training purposes, the displayed TI should be ≤ 1.0 and exposure time should be kept as short as possible (usually no longer than 5–10 min) and should not exceed 60 min. Informed consent should be obtained.
5. In educational settings, discussion of first-trimester pulsed or color Doppler should be accompanied by information on safety and bioeffects (e.g. TI, exposure times and how to reduce output power).
6. When scanning maternal uterine arteries in the first trimester, there are unlikely to be any fetal safety implications as long as the embryo/fetus lies outside the Doppler ultrasound beam.