Table I. Recommendation for management of intrauterine growth restriction

	Recommendation	Recommended by (Level)
Detection	• Symphyseal fundal height measurement has limited diagnostic accuracy to predict an SGA fetus.	RCOG (Level B_D)
	• Abdominal palpation has limited diagnostic accuracy to predict an SGA fetus.	RCOG (Level C_D)
	• Use of a customized fundal height chart improves accuracy to predict an SGA fetus	RCOG (Level B_D)
	• Use abdominal circumference and estimated fetal weight to diagnose SGA.	RCOG (Level B_D)
	• Use below 10th percentile threshold for both estimated fetal weight and abdominal circumference	RCOG (Level B_D)
	• Use customized ultrasound charts (BD).	RCOG (Level B_D)
	• Use growth velocity in addition to size (BD).	RCOG (Level B_D)
	• Uterine artery Doppler has limited use in predicting fetal growth restriction (AD).	RCOG (Level A_D)
	• At present Doppler of any vessel is not recommended as a screening tool for identifying pregnancies that will subsequently be complicated by IUGR.	SMFM (Level C)
	• Routine screening for IUGR in low-risk patients should comprise classical clinical monitoring techniques. Ultrasound evaluation of the fetus is appropriate in patients determined to be at high risk.	ACOG (Level C)
Antepartum surveillance	• Antepartum surveillance should be instituted once the possibility of extrauterine survival of the growth-restricted fetus has been determined. This may include Doppler velocimetry, contraction stress test, non-stress test with amniotic fluid volume assessment, and biophysical profile.	ACOG (Level C)
		ACOG (Level A)
	• The use of Doppler ultrasonography to measure umbilical artery waveforms in the management of IUGR is associated with reduction in perinatal death and may be considered a part of fetal evaluation once IUGR is suspected.	RCOG (Level A_E)
	• Antepartum surveillance of a viable fetus with suspected IUGR should include Doppler of the umbilical artery, as its use is associated with a significant decrease in perinatal mortality.	SMFM (Level A)

	• Use umbilical artery Doppler as the primary surveillance tool. • Once IUGR is suspected, umbilical artery Doppler studies should be performed usually every 1-2 weeks to assess for deterioration; if normal, they can be extended to less frequent intervals • Use biophysical profile and cardiotocography infrequently. • Antenatal corticosteroids should be administered if absent or reversed end-diastolic flow is noted< 34 weeks in a pregnancy with suspected IUGR. • Administer steroids if gestation is below 36 wks.	RCOG (Level A_E) SMFM (Level C) RCOG (Level A_E) SMFM (Level A) RCOG (Level A_E)
Treatment	• Nutrient treatment or supplementation, zinc or calcium supplementation, plasma volume expansion, maternal oxygen therapy, antihypertensive therapy, heparin, and aspirin therapy have not been shown to be effective for prevention or treatment of IUGR	ACOG (Level A)
Intrapartum management	• Deliver at 38-39 weeks, if otherwise uncomplicated and no concurrent findings. • Deliver at 34-37 weeks if concurrent conditions like oligohydramnios, abnormal Doppler studies, maternal risk factors, co-morbidity. • When end diastolic flow is present, delay delivery until at least 37 weeks, provided other surveillance findings are normal. • When end diastolic flow is absent or reversed, admission, close surveillance, and administration of steroids are required. If other surveillance results (biophysical profile, venous Doppler) are abnormal, delivery is indicated. If gestation is over 34 weeks, even if other results are normal, delivery may be considered. • As long as fetal surveillance remains reassuring, women with suspected IUGR and absent umbilical artery end-diastolic flow may be managed expectantly until delivery at 34 weeks. • As long as fetal surveillance remains reassuring, women with suspected IUGR and reversed umbilical artery end-diastolic flow may be managed expectantly until delivery at 32 weeks. • Use gestation- and birth weight-specific charts to determine the likelihood of survival	Spong et al (Level B) Spong et al (Level B) RCOG (Level C_E) RCOG (Level C_E) SMFM (Level C) SMFM (Level C) RCOG (Level C_E)

	if early delivery is required. • Deliver in a unit in which optimal neonatal expertise and facilities are available. • Intrapartum monitoring with continuous cardiotocography is recommended.	RCOG (Level C_E) RCOG (Level C_E)

SGA, small-for-gestational age; RCOG, Royal College of Obstetricians and Gynecologists; SMFM, Society of Maternal-Fetal Medicine; IUGR, intrauterine growth restriction

RCOG draws a distinction between effectiveness versus diagnostic accuracy studies. Based on the grading devised by National Health Service Center for Reviews and Dissemination, diagnostic studies are classified differently from effectiveness reports. Thus, for RCOG recommendations are A_E, B_E, or C_E for effectiveness studies and A_D, B_D, or C_D for diagnostic reports