Reference Number: UHBOBS376 Version Number: 3	Date of Next Review: 30th Sept 2028 Previous Trust/LHB Reference Number:

Placenta Praevia and Placenta Accreta Spectrum Antenatal Standard Operating Procedure

Introduction and Aim

Placenta praevia (PP) and placenta accreta spectrum (PAS) are serious pregnancy complications associated with high maternal and neonatal risks, primarily due to bleeding before and during birth and the risk of preterm birth. Their incidence is rising, driven by increasing caesarean birth rates and use of assisted reproductive technologies such as IVF. When both conditions occur together and go undiagnosed until birth, the risks to both mother and baby are highest. Accurate diagnosis—particularly through ultrasound—plays a critical role in managing these conditions. This Standard Operating Procedure (SOP) outlines current best practices for the identification, classification, and management of PP and PAS to improve maternal and neonatal outcomes.

Objectives

The purpose of this SOP is to establish a standardized approach for the identification, diagnosis, and management of Placenta Praevia (PP) and Placenta Accreta Spectrum (PAS) in pregnant women, in accordance with the latest evidence-based guidelines, specifically the RCOG Green Top Guideline 27a Placenta Praevia and Placenta Accreta: Diagnosis and Management. This document will outline the roles, responsibilities, and protocols for PAS management, including antenatal diagnosis and management within the University Hospital of Wales, Cardiff and Vale UHB.

Scope

This SOP applies to all obstetric healthcare professionals involved in the care of patients with suspected or diagnosed PAS, including obstetricians, radiologists, anaesthetists, and theatre staff at University Hospital of Wales, Cardiff.

Equality Health Impact Assessment	*An Equality Health Impact Assessment (EHIA) has not been completed.*
Documents to read alongside this Procedure	RCOG Green Top Guideline 27a Placenta Praevia and Placenta Accreta: Diagnosis and Management
Approved by	*Maternity Professional Forum*

Accountable Executive or Clinical Board Director	
Author(s)	Dr Annabel Creeth, Dr Anna Denereaz, Dr Cerys Scarr

Disclaimer

If the review date of this document has passed, please ensure that the version you are using is the most up to date either by contacting the document author or the Governance Directorate.

Contents

National Guidance

Care will be provided in accordance with the most recent version of the following National Guidance, with the exception of the variations outlined below:

Title and details of relevant national guidelines

Placenta Praevia and Placenta Accreta | RCOG Guideline 2018 | GTG 27a
https://obgyn.onlinelibrary.wiley.com/doi/full/10.1111/1471-0528.15306

Variations from National Guidance

Specify any particular sections or recommendations from the national guidance that will NOT be used locally.

- ***RCOG GTG 27a* - Delivery timing should be tailored according to antenatal symptoms and, for women presenting with uncomplicated placenta praevia, delivery should be considered between 36^{+0} and 37^{+0} weeks of gestation.** Timing of birth should be individualised but if the patient is asymptomatic, caesarean birth should take place between 37+0 and 38+0 weeks of gestation.
- ***RCOG GTG 27a* - If pharmacological measures fail to control haemorrhage, initiate intrauterine tamponade and/or surgical haemostatic techniques sooner rather than later. Interventional radiological techniques should also be urgently employed where possible.** Early decision for hysterectomy is in preference to interventional radiology, following discussion with the patient and their preferences.

CAV Specific Guidance

This section will include specific guidance for Cardiff and Vale that is not contained in the relevant National Guidance. This may include Standard Operating Procedures (SOPs), Pathways etc.

Ultrasound Diagnosis

Fetal anomaly scan:

- The placenta site must be reported at the fetal anomaly scan between 18+6 to 21+6 weeks gestation as per the All-Wales fetal anomaly screening standard checklist.
- If the placenta edge cannot be clearly seen on TA scan, then a TV scan should be performed. TVUS is safe even in the context of placenta praevia or a short funnelling cervix and is recommended in some situations over TA views. A TVUS can be performed without medical review.

Reporting of PP/LLP (*guidance for sonographers*):

- It is the responsibility of the sonographer to inform the woman of the presence of a PP/LLP at the time of the anomaly scan or at the time of any other obstetric scan from 16 weeks of pregnancy.
- The women should be directed to the Day Assessment Unit to be seen by a midwife who will review the woman's history and tailor follow up depending on whether she has had previous uterine surgery.
- If there are any incidental findings suggestive of abnormally invasive placenta at the fetal anatomy scan the patient should be referred to DAU on the same day for discussion with a midwife and onward referral to the lead clinicians for Abnormally Invasive Placenta (AED/CES).

Management of anomaly scan in DAU (*guidance for DAU midwife*):
Management of PP/LLP at fetal anomaly scan (no additional risk factors):

- If no additional risk factors identified (see flow chart in appendix), request a rescan for placental localisation at 32 weeks gestation with the Midwife sonographers MIDWPLAC clinic.
- Communicate the results to the patient. Provide the patient with the RCOG information leaflet on *'Placenta praevia, placenta accreta and vasa praevia'* highlighting the relevant parts and explaining why the rescan is required.
- Refer to routine ANC for review at 33/40.

Management of PP/LLP at fetal anomaly scan (with additional risk factors):

- If the placental leading edge measures <20mm from the internal os and additional risk factors identified, refer the patient to AED ANC UHL alternative Tuesday pm or CES ANC UHW Wednesday am at 24/40.
- Communicate the results to the patient. Provide the patient with the RCOG information leaflet on *'Placenta praevia, placenta accreta and vasa praevia'* highlighting the relevant parts and explaining why the rescan and review is required.
- When seen in AED/CES ANC at 24/40 and if felt high risk for Placenta Accreta Spectrum after discussion with the consultant, requesting clinician should complete a paper radiology form to deliver to the ultrasound reception. The form should specify *"TAS and TVS: Placental ultrasound scan ?Placental Accreta Spectrum. FAO of Consultant Sonographer)"*

Management at 28 week placental localisation scan – patients with additional risk factors (*guidance for Consultant Sonographer*)

- Patient must attend with a full urinary bladder.
- The relationship between the leading edge of the placenta and the internal os should be assessed. The measurement must then be recorded on the report.
- Assess and comment on the presence of any features of PAS using the ISUOG proforma for AIP. Upload the proforma to Radiology Informatic System and document the probability of clinically significant AIP (high,

intermediate or low) in report. It is the role of the Consultant Obstetrician to determine the index of suspicion for an AIP using the scan report and clinical picture.

- If the placenta remains low (<20mm from the internal os), covering the internal or demonstrates any of the ultrasound features of PAS, a MRI scan is required with a 2 week follow up appointment in ANC.
- To do this, the sonographer should email the lead obstetrician Dr Anna Denereaz (anna.denereaz@wales.nhs.uk) or Dr Cerys Scarr (cerys.scarr@wales.nhs.uk) to inform of results and they will arrange MRI.
- If the placenta is no longer low lying >20mm from the internal os and there are no ultrasound features of PAS, the patient can be seen in their routine ANC.

Management at 32-week placental localisation scan with midwife sonographers (no additional risk factors)

- The relationship between the leading edge of the placenta and the internal os should be determined.
- If this cannot be done transabdominally, the patient should be offered a transvaginal scan.
- If the placental edge measures >20mm from the internal os, the patient can be discharged.
- If the placental edge measures <20mm from the internal os, the midwife sonographers will arrange to rescan the patient at 36/40 alongside a consultant ANC appointment.

MRI (Optional)

In cases of equivocal ultrasound findings, an MRI may be used to better assess the extent of placental invasion. The decision for MRI should be a MDT discussion with the lead obstetrician, senior radiographer, and radiologist with a special interest in placentas.

Main features of PAS on MRI:

- Abnormal uterine bulge
- Dark intraplacental bands on T2 weighted imaging
- Tenting of the bladder
- Heterogenous signal intensity within the placenta
- Disorganised vasculature of the placenta
- Focal interruption of the myometrium

Timing and Mode of birth

Timing and mode of birth should be tailored according to antenatal symptoms and woman's preferences if low lying.

- **Uncomplicated placenta praevia in asymptomatic patients**: 37+0-37+6
    -

    - The RCOG recommend birth between 36+0 and 37+0 however on balance with neonatal admissions and if asymptomatic, the local guidance is to deliver between 37+0 and 37+6.
- **Symptomatic placenta praevia or low-lying placenta**: 34+0 to 36+6 weeks gestation
    - If continued bleeding or risk of preterm labour, expedite birth. Consider Periprem bundle depending on gestation at birth.
- In women with asymptomatic LLP, the mode of birth should be based on the clinical background, the woman's preference, and supplemented US findings, including the distance between the placental edge and the fetal head position relative to the leading edge of the placenta on TVUS.
- **Placenta accretra spectrum**: 35+0-36+6
    - Consider early birth if symptomatic or risk of preterm birth.
    - AED or CES to arrange MDT at 33/40 before date of surgery to identify team members and complete checklist.

Placenta Accreta Spectrum Antenatal Pathway

Bwrdd Iechyd Prifysgol Caerdydd a'r Fro
Cardiff and Vale University Health Board

Patient Addressograph

Additional Risk Factors:

- ❑ Previous caesarean birth
- ❑ Previous uterine surgery:
  - ❑ Myomectomy
  - ❑ Uterine Perforation
  - ❑ Endometrial ablation
  - ❑ >1 surgical mx of miscarriage or TOP
  - ❑ Uterine Artery Embolisation

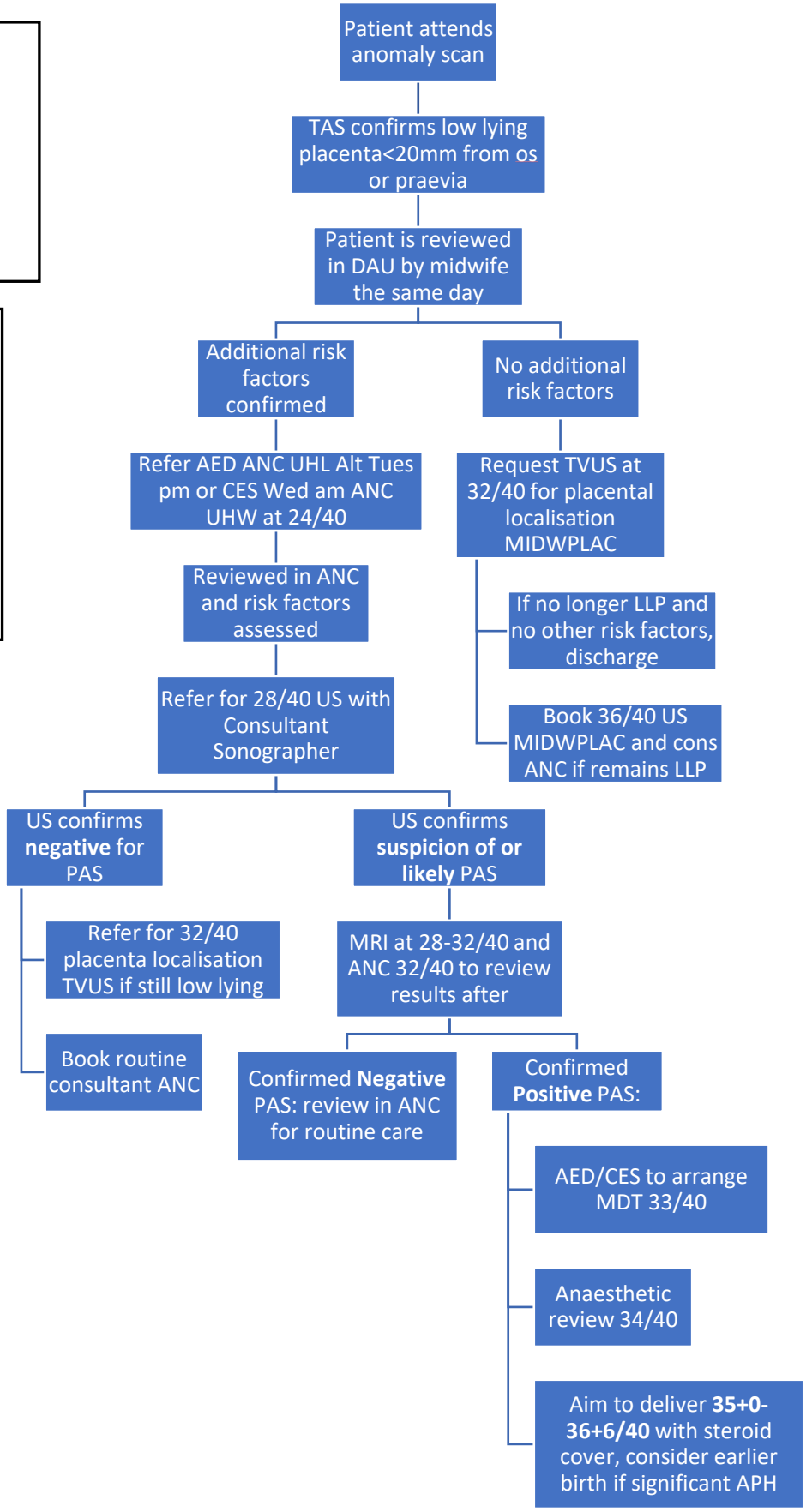
Pathway if suspicion or likely PAS at 28/40:

Sonographer to:

- ❑ Complete ISUOG template
- ❑ Upload template to RIS
- ❑ If likely PAS, sonographer to email lead obstetrician results

Lead obstetrician to:

- ❑ Request MRI
- ❑ Arrange ANC FU
- ❑ Check Hb and Ferritin at 28/40, aim Hb >130



Appendices

Appendix 1: ISUOG proforma for suspected abnormally invasive placenta

SUSPECTED ABNORMALLY INVASIVE PLACENTA (AIP)

Ultrasound report

Demographics and Risk Factors

Date: _ _/_ _/ _ _ _ _ Gestational age: _ _ weeks _ days

Parity ☐ Mode of conception: Spontaneous ☐ IVF ☐

Number of previous CS ☐ Number of classical CS ☐

Number of previous surgical evacuations (including TOP) ☐

Was Cesarean scar pregnancy suspected/diagnosed in first trimester?	Yes ☐	No ☐	Not known ☐
Previous uterine surgery (e.g. myomectomy, endometrial ablation)	Yes ☐	No ☐	Not known ☐
History of AIP	Yes ☐	No ☐	Not known ☐
Placenta previa on ultrasound	Yes ☐	No ☐	Not known ☐
If yes: Anterior placenta previa	< 2 cm from internal os ☐		Covering internal os ☐
Posterior placenta previa	< 2 cm from internal os ☐		Covering internal os ☐

Ultrasound Signs

Cervical length (without funnel or placental tissue)			**mm**
Grayscale ultrasound parameters and definition	**Yes**	**No**	**Unsure**
Loss of 'clear zone' *- Loss, or irregularity, of hypoechoic plane in myometrium underneath placental bed ('clear zone')*			
Myometrial thinning *- Thinning of myometrium overlying placenta to <1mm or undetectable*			
Abnormal placental lacunae *- Presence of numerous lacunae including some that are large and irregular, often containing turbulent flow visible on grayscale imaging*			
Bladder wall interruption *- Loss or interruption of bright bladder wall (hyperechoic band or 'line' between uterine serosa and bladder lumen)*			
Placental bulge *- Deviation of uterine serosa away from expected plane, caused by abnormal bulge of placental tissue into neighboring organ, typically bladder; uterine serosa appears intact but outline shape is distorted*			
Focal exophytic mass *- Placental tissue seen breaking through uterine serosa and extending beyond it; most often seen inside filled urinary bladder*			
Color Doppler ultrasound parameters and definition	**Yes**	**No**	**Unsure**
Uterovesical hypervascularity *- Striking amount of color Doppler signal seen between myometrium and posterior wall of bladder; this sign probably indicates numerous, closely packed, tortuous vessels in that region (demonstrating multidirectional flow and aliasing artifact)*			
Subplacental hypervascularity *- Striking amount of color Doppler signal seen in placental bed; this sign probably indicates numerous, closely packed, tortuous vessels in that region (demonstrating multidirectional flow and aliasing artifact)*			
Bridging vessels *- Vessels appearing to extend from placenta, across myometrium and beyond serosa into bladder or other organs; often running perpendicular to myometrium*			
Placental lacunae feeder vessels *- Vessels with high-velocity blood flow leading from myometrium into placental lacunae, causing turbulence upon entry*			
Parametrial involvement	**Yes**	**No**	**Unsure**
- Suspicion of invasion into parametrium			

Clinical Significance of Ultrasound Findings

Probability of clinically significant AIP High ☐ Intermediate ☐ Low ☐

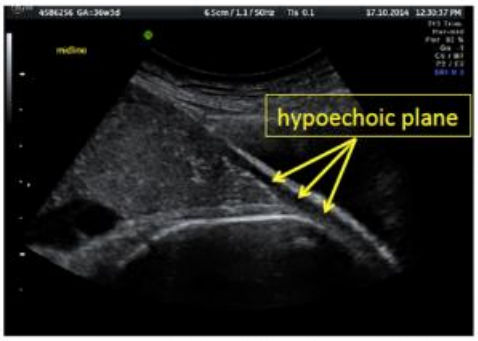
Extent of AIP Focal ☐ Diffuse ☐

Appendix 2: ISUOG: Ultrasound signs for Placenta Accreta Spectrum Disorder

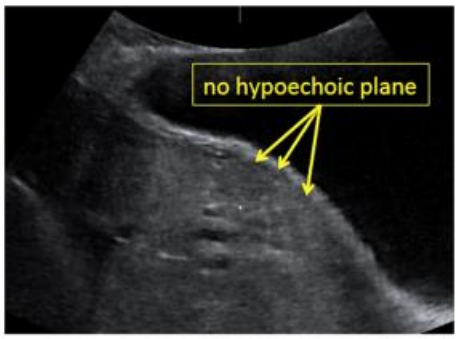
Placenta Accreta Spectrum Disorders (PAS) Ultrasound signs

- Loss of the "clear zone "

Normal



Abnormal



Loss or irregularity of the hypoechoic plane in the myometrium underneath the placental bed (the "clear zone")

Images by Collins et al.

Placenta Accreta Spectrum Disorders (PAS) Ultrasound signs

- Abnormal placental lacunae

Normal

Abnormal

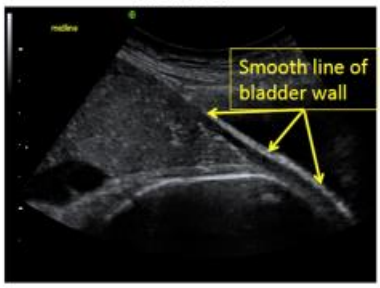
Presence of numerous lacunae including some that are large and irregular, often containing turbulent flow visible in grey-scale imaging.

Images by Collins et al.

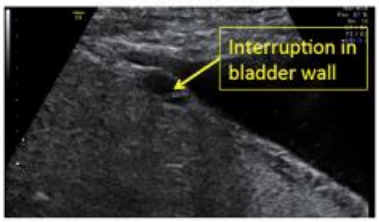
Placenta Accreta Spectrum Disorders (PAS) Ultrasound signs

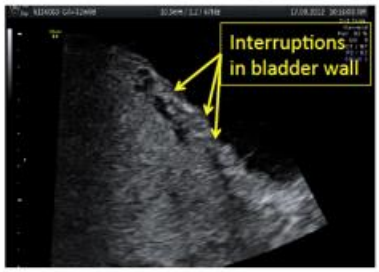
- Bladder wall interruption

Normal



Abnormal





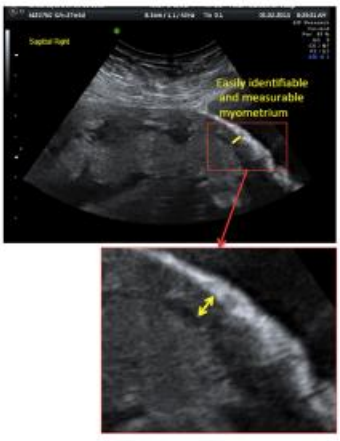
Loss or interruption of the bright bladder wall (the hyperechoic band or line between the uterine serosa and the bladder lumen.)

Images by Collins et al.

Placenta Accreta Spectrum Disorders (PAS) Ultrasound signs

- Myometrial thinning

Normal



Abnormal

Thinning of the myometrium overlying the placenta to <1mm or undetectable

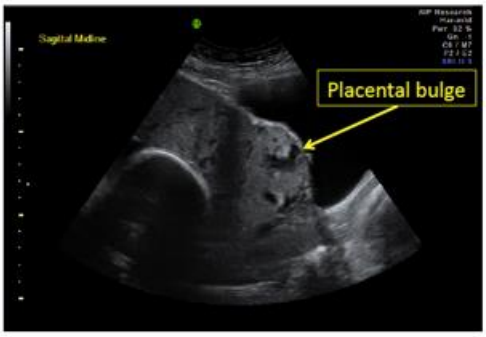
mages by Collins et al.

Placenta Accreta Spectrum Disorders (PAS) Ultrasound signs

- Placental bulge

Normal

Abnormal



Deviation of the uterine serosa away from the expected plane, caused by an abnormal bulge of placental tissue into a neighboring organ, typically the bladder.

Images by Collins et al.

Placenta Accreta Spectrum Disorders (PAS) Ultrasound signs

- Focal ecophytic mass

Normal

Abnormal

Placental tissue seen breaking through the uterine serosa and extending beyond it. Most often seen inside a filled urinary bladder.

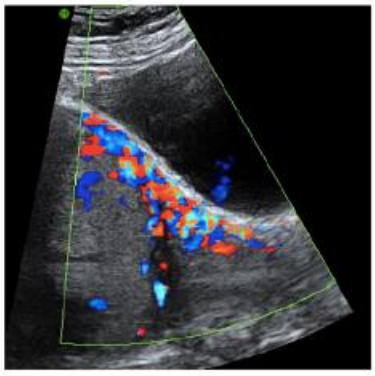
Images by Collins et al.

Placenta Accreta Spectrum Disorders (PAS)
Ultrasound signs

- Uterovesical hypervascularity

Normal

Abnormal

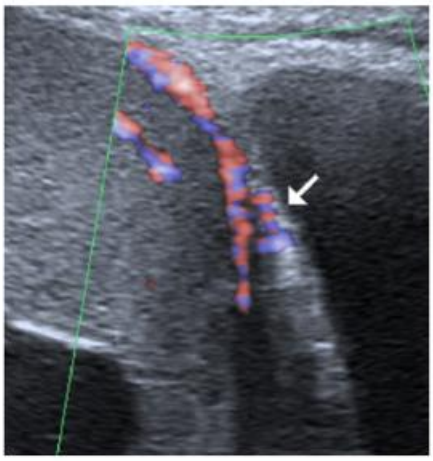


Striking amount of colour Doppler signal seen between the myometrium and the posterior wall of the bladder. This sign probably indicates numerous, closely packed, tortuous vessels in that region.

Images by Collins et al.

Placenta Accreta Spectrum Disorders (PAS)
Ultrasound signs

- Bridging vessel

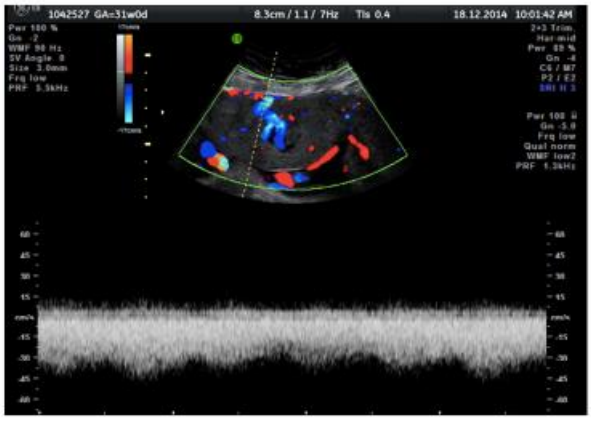


Vessels appearing to extend from the placenta across the myometrium and beyond the serosa into the bladder or other organs. Often running perpendicular to the myometrium.

Images by Collins et al.

Placenta Accreta Spectrum Disorders (PAS)
Ultrasound signs

- Placenta lacunae feeder vessels



Vessels with high velocity blood flow leading from the myometrium into the placental lacunae, causing turbulence upon entry.

Images by Collins et al.

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