CLINICAL GUIDELINE

Fetal Anomaly Screening (FAS) Scan

A guideline is intended to assist healthcare professionals in the choice of disease-specific treatments.

Clinical judgement should be exercised on the applicability of any guideline, influenced by individual patient characteristics. Clinicians should be mindful of the potential for harmful polypharmacy and increased susceptibility to adverse drug reactions in patients with multiple morbidities or frailty.

If, after discussion with the patient or carer, there are good reasons for not following a guideline, it is good practice to record these and communicate them to others involved in the care of the patient.

Version Number:	4
Are there changes to the clinical advice in this version?	Yes
Date Approved:	11th April 2024
Date of Next Review:	18th November 2027
Lead Author:	Donna Bean & Julie Murphy
Approval Group:	Maternity Clinical Governance Group

Important Note:

The Intranet version of this document is the only version that is maintained.
Any printed copies should therefore be viewed as 'Uncontrolled' and as such, may not necessarily contain the latest updates and amendments.

Fetal Anomaly Screening (FAS) Scan

All women should be offered a Fetal Anomaly Scan

The purpose of the 20-week screening scan is to identify specified conditions that:

- benefit from treatment before or after birth
- need treatment in a specialist setting after birth to improve health outcomes
- could mean the baby may die shortly after birth
- lead to a discussion about the options of continuing or terminating the pregnancy

A routine singleton fetal anomaly screening appointment scan should be at least 30 minutes which should include 'on and off the couch time' as well as time to complete the report.

The equipment used, should be machines preferably no more than 5 years old to adhere to the screening programme.

The FAS scan will be completed between 18+0–20+6 weeks gestation but will be targeted at a gestation of 20 weeks. This allows time for referral and intervention before 24 weeks if required.

Consent

Ensure that formal consent has been obtained and documented on Badgernet. Prior to beginning the scan, give an explanation of the purpose of the scan and its limitations. Obtain verbal consent to continue.

Process

Patients will be given up to two attempts to obtain the entire checklist, unless an abnormality is suspected.
Please note on the report the reason for a second attempt, e.g. poor fetal lie, increased maternal BMI etc.
The repeat scan should be offered and completed by 23+0 weeks
The sonographer carrying out the repeat scan only needs to check the areas that have not been seen on the initial scan (and will only be responsible for this/these structure(s)). It is at the Sonographers discretion if they wish to examine the fetus fully again, however they have to bear in mind the ALARA Principle. (As Low as Reasonably Achievable – avoidance of radiation which does not have a direct benefit).

If after two attempts the scan still remains incomplete give an explanation to the patient and reiterate the limitations of scanning. This should then be documented on the scan report, with the reasons for incompletion and that it has been

discussed with the patient.

All measurements are required to be in millimeters.

Where structures are indicated in the plural, there is only one tick box to indicate both were seen, or in the case of limbs that all three long bones were seen, for each side. If there is a unilateral anomaly, do not tick the box. Use the additional comments box to say what side is seen and normal and then give an explanation of the other sided anomaly

If any anomaly is seen, use the additional comments box to explain your findings in full.

Fetal biometry

- FL <3rd centile, with no abnormal features such as bowing or fractures, repeat in 2 weeks. If remains < 3rd centile refer to medical sonographer within 3 working days *
- HC < 3rd centile refer to medical sonographer for detailed history and to consider CMV and Zika testing within 3 working days *
- If EFW/AC <10th centile perform MUAD. If MUAD is normal, make 22 week consultant ANC appointment. If MUAD is abnormal, for medical review after scan.

* IRH and Vale of Leven sonographers can refer to RAH if no availability within their department.

Structures

The following structures **must** be identified and assessed

Structure

Head - shape
mineralization
brain – review all intra cranial anatomy

Face - lips and nostrils

Heart - position
size
4 chamber view
right outflow tract
left outflow tract
three vessel view (3VV)
three vessel trachea view (3VT)

Diaphragm - integrity

Abdomen - stomach position and size
bowel – echogenic; double bubble
abdominal wall integrity

Kidneys - number
position
echogenicity
absent
dilated/ pyelectasis etc.

Bladder - must be seen
absent
Dilated

Spine - whole spine, including sacrum – integrity/ossification etc.
sagittal
coronal
transverse
skin line

Upper Limbs - 3 long bones each limb

Hands – both hands, metacarpals present; not counting fingers

Lower Limbs - 3 long bones each limb

Feet – both feet, metatarsals present; not counting toes

Amniotic Fluid – subjective assessment. Only report and refer if abnormal. Remember to check stomach, kidneys and bladder.

Placenta - size and location

If placenta appears low follow GGC 'Placenta Assessment Protocol – Ultrasound Guideline' and reappoint appropriately.

All women with a previous Caesarean birth and an anterior placenta must have a scan arranged for placentography to exclude placenta praevia and accreta as per GGC 'Placenta Assessment Protocol – Ultrasound Guideline'

- **Echogenic Bowel**

  Only comment if density equivalent to bone and refer to medical staff as per new FGR guideline.

- **Normal Variants**

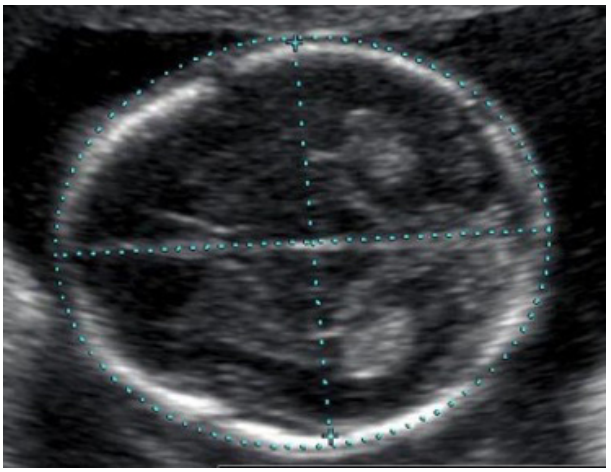
  Do not comment on a placenta shelf or amniotic sheets.

  Do not comment on presence of choroid plexus cysts.

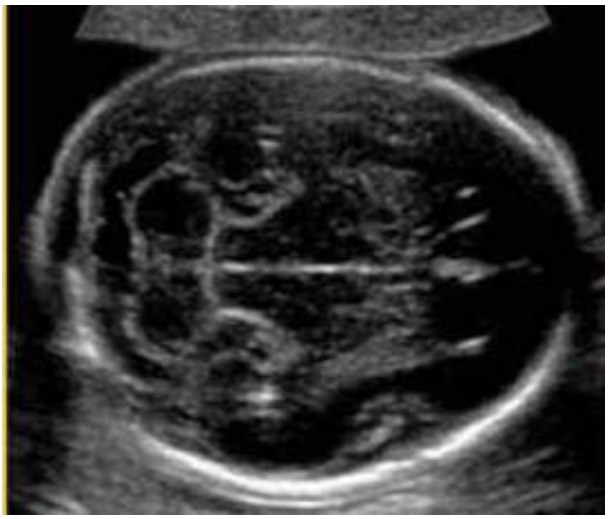
  Do not comment on cardiac echogenic foci (Golf Balls).

Measurements Required

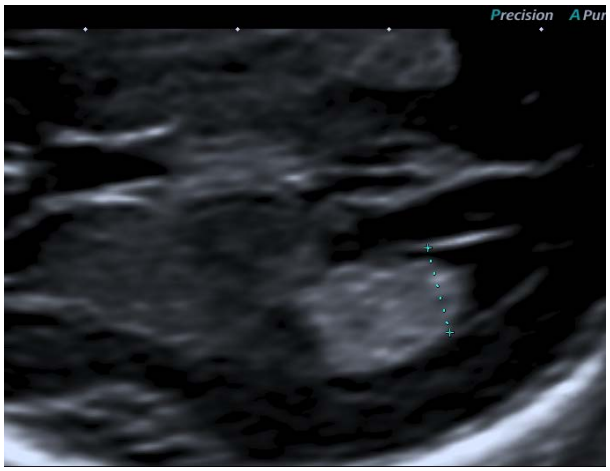
Head Circumference



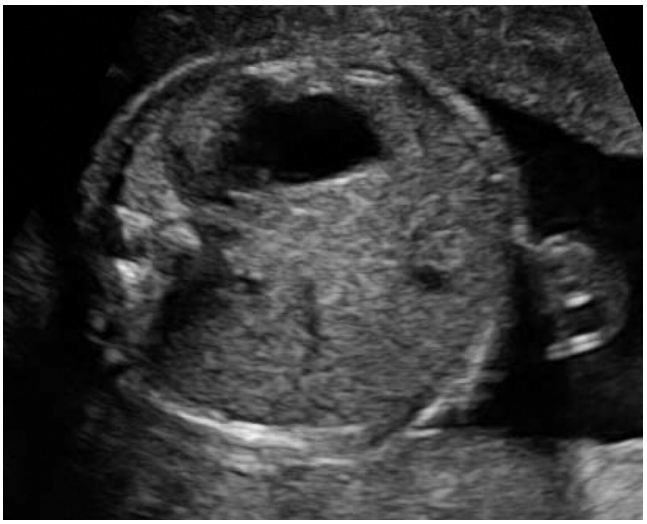
Transcerebellar Diameter



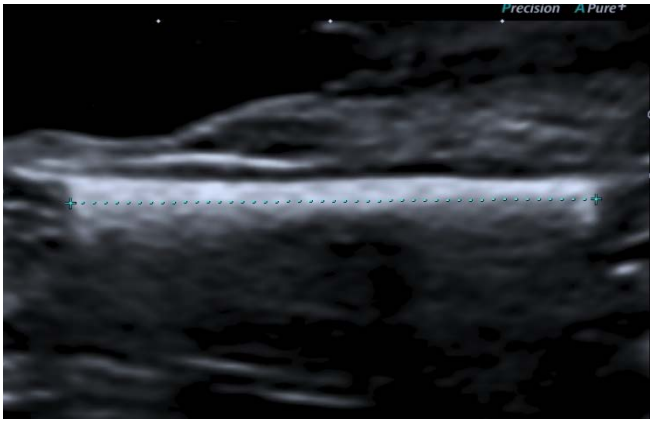
Ventricular Atrium



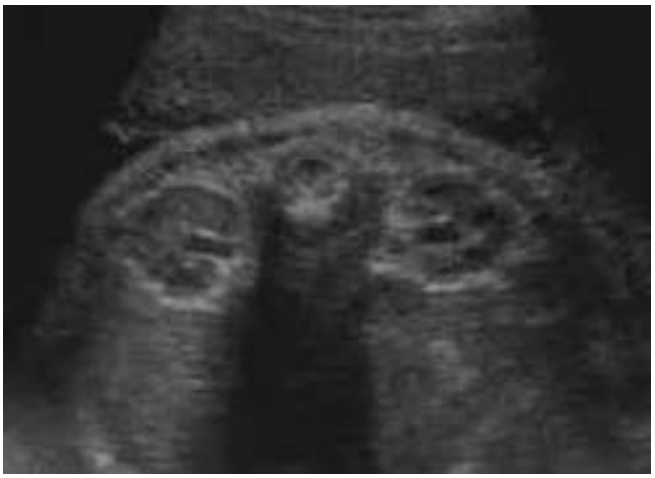
Abdominal Circumference



Femur length



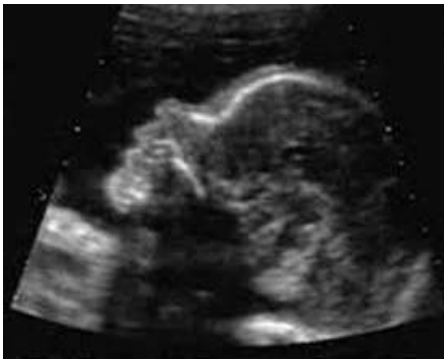
Kidneys

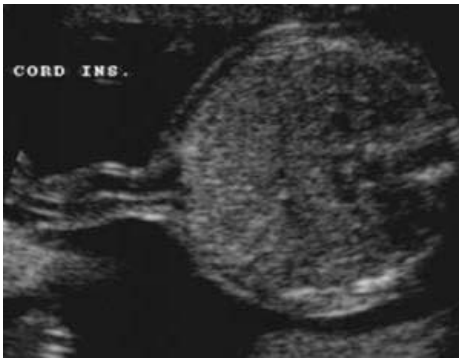


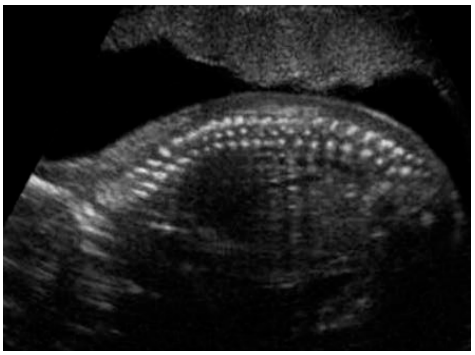
Renal Pelvis – AP diameter inner to inner. Renal Pyelectasis - >7mm follow GGC 'Management of Antenatally Detected Renal Tract Abnormalities' protocol and reappoint appropriately.

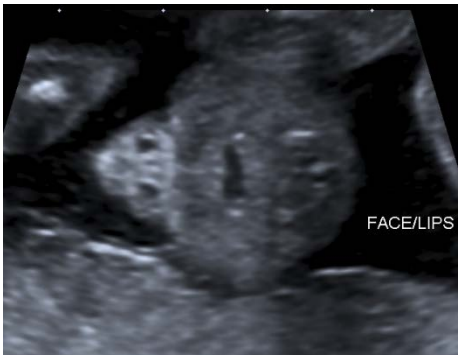
Images to beTaken

Head Circumference
Atrium of the lateral ventricle including measurement
Transcerebellar Diameter
Coronal view of lips with nasal tip
Cord insertion
Abdominal Circumference (which incorporates stomach)
Kidneys (Transverse section)
Femur Length
Spine – sagittal view to include sacrum and skin covering
Profile









Any anomaly, suspected anomaly or low lying placenta must be imaged.

CLYDE, PRM and QEUH – All images to be inserted into the brown image envelope within the hospital case notes.

Referral Pathway

It is good practice for the sonographer to seek a second opinion. In the first instance, a senior member of staff (≥ 5 years qualified) must be consulted before referring to medical staff.

If a fetal anomaly is suspected during an anomaly screening scan then the woman should be informed at the time of the scan or shortly afterwards. This should occur in privacy and ideally, if the woman wishes, in the company of a partner, friend or relative.

Badgernet

Enter your report on Badgernet under FAS care pathway.
Complete all sections.
In the comments box provided, if it is a normal scan, write 'no obvious fetal abnormality seen'.
If the scan is incomplete, tick relevant box and record in comments box - incomplete scan with the reason, i.e. fetal spine not seen, poor view due to fetal lie etc. Also record "review 1-2/52" and update track care accordingly.
.
Remember to record placental location.

Remember to check whether Maternal Uterine Artery Doppler is required- there should be a referral completed on Badgernet, if patient has been screened as High Risk for FGR under the FGR Risk Level section in Badgernet then a MUAD will be required https://rightdecisions.scot.nhs.uk/media/1835/1004-fgr.pdf

References

NHS Fetal Anomaly Screening Programme Nov 23 www.gov.uk
ISUOG Practice Guidelines: performance of the routine mid-trimester fetal ultrasound scan 2022 ISUOG.org

Authors

Donna Bean, Lead Sonographer, Glasgow
Revised March 2024 Dr Julie Murphy Consultant Obstetrician, RAH

Title

Fetal Anomaly Screening_FAS_Scan Guideline Glasgow_Obstetrics version 3

Implementation / review Dates

Implementation 27/1/10

Revised 18/11/22 Review date 18/11/27

Approval

Maternity Guidelines Group 19/03/2024
Maternity Governance Group 11/04/2024