

FETAL ECHOCARDIOGRAM

BILLING CODE:

UOBEC2 – Fetal Echo Complete w/ Color and Spectral Doppler Imaging
Code - Fetal Echo Follow Up w/ Color and Spectral Doppler Imaging

GESTATIONAL AGE: Ideal GA age for fetal echo is 22-24 weeks, however, can be performed before or after as necessary.

PREP: No prep

FETAL ECHO	76825 - fetal echo 76826 - fetal echo, follow up or repeat 76827 - fetal doppler complete 76828 - fetal doppler, follow up or repeat 93325 - doppler echo color flow velocity mapping	US OB FETAL ECHO 2D	UOBEC2	04020040 - 76825
		US OB FETAL ECHO F/U	UOBECF	04020041 - 76826
		US OB FETAL ECHO COMPLETE	UOBEC2	04020040 - 76825 04020042 - 76827 04830012 - 93325
		US OB FETAL ECHO COMPLETE	???	04020040 - 76826 04020042 - 76828 04830012 - 93325

IMAGES TO OBTAIN

GENERAL IMAGING:

FETAL HEART RATE:

- Measure fetal heart rate with M-Mode

FETAL POSITION

- 2D image showing fetal lie

VISCERAL AND ABDOMINAL SITUS:

- Cine sweep from stomach through the 3VT to assess position of stomach, portal vein, aorta, and IVC.

SINUS RHYTHM

- M-mode through RA and LV

ASSESS CARDIAC SIZE, AXIS AND POSITION

- 2D image for global view showing fetal chest and heart

CALCULATE CARDIOTHORACIC RATIO:

- Chest Circumference
- Cardiac Circumference

4CH VIEWS:

4 CHAMBER - APICAL VIEW

- Cine clip of 4CH through systole and diastole
- 2D/Color compare cine showing valves throughout systole and diastole

ATRIA

- Qualitative assessment of atrial size
- Look for coronary sinus

4CH VIEWS continued:

INTERATRIAL SEPTUM

- Assess the atrial septum from multiple imaging planes
- Document the position of the foramen ovale flap
- Color Doppler cine clip to assess the direction of shunting across the atrial septum

VENTRICULAR MORPHOLOGY

- Qualitative assessment of ventricular size
- Determine morphology of ventricular chambers and identify moderator band
- 2D image of ventricles in short axis
- Short axis sweep from the cardiac base at level of the AV, to the apex
- Measure myocardial thickness if warranted

INTERVENTRICULAR SEPTUM

- Interrogate IVS from multiple views (4 chamber, short axis and LVOT)
- 2D still image
- 2D cine clip through
- Color Doppler image
- Color Doppler cine clip
- Use spectral Doppler when applicable

OUTFLOW TRACTS

- Cine clip from ventricles through great vessels to document relationship of outflow

SVC/IVC

- 2D still image of bicaval view
- Color Doppler image of bicaval view

RIGHT HEART:

RVOT

- 2D still image
- Color Doppler image
- Color Doppler cine clip

THREE VESSEL VIEW

- 2D still image
- Cine clip sweeping through 3VV and 3VT

THREE VESSEL TRACHEA VIEW

- 2D still image
- Color Doppler image

TRICUSPID VALVE

- 2D still image with measurement of TV annulus at end diastole
- Color Doppler cine clip to assess for stenosis or regurgitation
- Spectral Doppler to assess for stenosis or regurgitation
- 2D still image short axis en face view of tricuspid valve

PULMONARY ARTERIES:

MAIN PULMONARY ARTERY

- 2D still image with measurement of diameter at the semilunar valve during systole at the level of the 3VV
- Color Doppler image
- Color Doppler cine clip
- Spectral Doppler at the semilunar valve

RIGHT & LEFT PULMONARY ARTERIES

- 2D still image
- Color Doppler image
- Color Doppler cine clip

LEFT HEART:

PULMONARY VEINS

- 2D still image documenting at least one right and one left pulmonary vein entering left atrium.
- Color Doppler image documenting at least one right and one left pulmonary vein
- Spectral Doppler waveform of each vein.

MITRAL VALVE

- 2D still image with measurement of MV annulus at end diastole
- Color Doppler cine clip to assess for stenosis or regurgitation
- Spectral Doppler to assess for stenosis or regurgitation
- 2D short axis en face view of tricuspid valve
- *Measure PR interval if indicated, see [Fetal Arrhythmia Protocol](#) for more requirements*

LVOT

- 2D still image
- Color Doppler image
- Color Doppler cine clip

AORTIC VALVE (long axis 5 chamber view)

- 2D still image with measurement of diameter at the semilunar valve during systole
- 2D cine clip
- Color Doppler cine clip
- Spectral Doppler at the semilunar valve

AORTIC ARCH:

- 2D still image showing all 3 branches
- Measure the diameter of ascending, transverse and isthmus of aorta
- Color Doppler image
- Color Doppler cine clip
- Spectral Doppler waveform of aortic arch

DUCTAL ARCH :

- 2D still image
- Color Doppler image
- Color Doppler cine clip
- Spectral Doppler of the ductus arteriosus

DUCTUS VENOSUS:

- Color Doppler image
- Spectral Doppler waveform

OTHER FETAL DOPPLERS:

- Umbilical vein Doppler
- Umbilical artery Doppler of both arteries
- *These are included in a Fetal Echo billing code and do not need to be added on separately.*

Z-SCORES

- The Z-score describes how many standard deviations above or below the mean a given measurement lies based on a size or age-specific population
- Z scores can be calculated on Perinatology.com:
<https://www.perinatology.com/calculators/Fetal%20Echocardiogram%20Z%20Score%20Calculator.html>

REFERENCES

https://www.aium.org/docs/default-source/accreditation/case-study-requirements/fetalecho.pdf?sfvrsn=afcd1842_8

https://www.aium.org/docs/default-source/resources/image-libraries/fetal_echo.pdf?sfvrsn=65fd1d3f_1

(2020), AIUM Practice Parameter for the Performance of Fetal Echocardiography. J Ultrasound Med, 39: E5-E16. <https://doi.org/10.1002/jum.15188>

SMFM Required Components <https://www.smfm.org/news/required-components-for-coding-fetal-echocardiograms>

FETAL ECHOCARDIOGRAM PROTOCOL IMAGE LIST

Image	Mode	Mode	Mode	Mode
GENERAL				
FHR	M-mode			
Fetal position	2D			
Situs	2D Cine			
Sinus Rhythm	M-mode			
Cardiac axis, size & position	2D			
Cardiothoracic ratio	2D+			
4 CHAMBER				
4CH apical view	2D cine	2D+	Color cine	
Atria/FO flap	2D	Color cine		
Ventricular Morphology	2D			
Short axis ventricles	2D	2D cine		
IVS	2D	2D cine	Color	Color Cine
Outflows	2D cine			
SVC/IVC	2D	Color		
RIGHT HEART				
RVOT	2D	Color	Color cine	
3VV	2D	Cine		
3VT	2D	Color		
Tricuspid Valve	2D+	Color cine	Spectral	
Tricuspid Valve short axis	2D			
PULMONARY ARTERIES				
Main PA	2D+	Color	Color cine	Spectral
Branch PA – R & L	2D	Color	Color cine	
LEFT HEART				
Pulmonary Veins – R & L	2D	Color	Spectral	
Mitral Valve	2D+	Color cine	Spectral	
Mitral Valve short axis	2D			
LVOT	2D	Color	Color cine	
Aortic Valve	2D+	2D cine	Color cine	Spectral
GREAT VESSELS				
Aortic Arch	2D 2D+	Color	Color Cine	Spectral
Ductal Arch	2D	Color	Color Cine	Spectral
OTHER DOPPLERS				
Ductus Venosus	Color	Spectral		
Umbilical Artery 1	Spectral			
Umbilical Artery 2	Spectral			
Umbilical Vein	Spectral			

AIUM Fetal Echo Imaging Checklist

Normal Fetal Echo
Video Clips (required) – may be submitted as a single comprehensive clip of an axial sweep from stomach to 3VTV, or as 4 separate clips as listed below:
<input type="checkbox"/> 1. Short, labeled <u>video clip</u> of visceral / abdominal situs <input type="checkbox"/> 2. Short, labeled <u>video clip</u> of atrioventricular junction <input type="checkbox"/> 3. Short, labeled <u>video clip</u> of ventriculoarterial junction between the ventricles and the great arteries <input type="checkbox"/> 4. Short, labeled <u>video clip</u> of the 3VV and 3VTV
Labeled, still images of the following:
<input type="checkbox"/> 5. Four chamber <input type="checkbox"/> 6. Left ventricular outflow tract <input type="checkbox"/> 7. Right ventricular outflow tract <input type="checkbox"/> 8. Branch pulmonary artery bifurcation <input type="checkbox"/> 9. Three-vessel and trachea <input type="checkbox"/> 10. Short axis views of ventricles <input type="checkbox"/> 11. Short axis views of outflow tracts <input type="checkbox"/> 12. Aortic arch (sagittal view) <input type="checkbox"/> 13. Ductal arch (sagittal view) <input type="checkbox"/> 14. SVC and IVC entering RA (bicaval view)
M-Mode
<input type="checkbox"/> 15. M-mode assessment of rhythm
Doppler
<input type="checkbox"/> 16. Color <u>and</u> spectral Doppler of the pulmonary veins (right and left) <input type="checkbox"/> 17. Color Doppler of the foramen ovale <input type="checkbox"/> 18. Color <u>and</u> spectral Doppler of the tricuspid valve <input type="checkbox"/> 19. Color <u>and</u> spectral Doppler of the mitral valve <input type="checkbox"/> 20. Color <u>and</u> spectral Doppler of the pulmonary valve <input type="checkbox"/> 21. Color <u>and</u> spectral Doppler of the aortic valve <input type="checkbox"/> 22. Color Doppler of the aortic arch <input type="checkbox"/> 23. Color Doppler of the ductal arch <input type="checkbox"/> 24. Color Doppler of the SVC and IVC <input type="checkbox"/> 25. Color <u>and</u> spectral Doppler of the ductus venosus
Cardiac Biometry – <u>26, 27, 28 are REQUIRED.</u> 29-38** MUST also be demonstrated in at least ONE of your normal case submissions.
<input type="checkbox"/> 26. Aortic artery diameter at the level of the valve annulus in systole (REQUIRED) <input type="checkbox"/> 27. Pulmonary artery diameter at the level of the valve annulus in systole (REQUIRED) <input type="checkbox"/> 28. Dimensions of tricuspid and mitral valve annulus in diastole (REQUIRED) <input type="checkbox"/> 29. Aortic and/or isthmus diameter** <input type="checkbox"/> 30. Main pulmonary artery and/or ductus arteriosus diameter** <input type="checkbox"/> 31. Right and left ventricular lengths** <input type="checkbox"/> 32. End-diastolic ventricular dimensions just inferior to the AV valve leaflets** <input type="checkbox"/> 33. Thickness of ventricular free walls** <input type="checkbox"/> 34. Interventricular septum just inferior to the AV valves** <input type="checkbox"/> 35. Systolic dimensions of the ventricles** <input type="checkbox"/> 36. Transverse diameters of the atria** <input type="checkbox"/> 37. Diameter of the branch pulmonary arteries** <input type="checkbox"/> 38. Cardiothoracic ratio**

FETAL ECHOCARDIOGRAM PROTOCOL HISTORY

	Date	Changes made	By whom
Created	4/24/2025	Created from AIUM standards and SMFM Required Components	Amie Hollard, Renee Betit Fitzgerald, Annie Sauvage