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ECG	Graphic measure of electrical activity of heart
Holter monitor	24-hour continuous ECG recording used to assess dysrhythmias
Echocardiography	Use of high-frequency sound waves obtained by a transducer to produce an image of cardiac structures
Transthoracic	Done with transducer on chest
M-mode	One-dimensional graphic view used to estimate ventricular size and function
Two-dimensional	Real-time, cross-sectional views of heart used to identify cardiac structures and cardiac anatomy
Doppler	Identifies blood flow patterns and pressure gradients across structures
Fetal	Imaging fetal heart in utero
TEE	Transducer placed in esophagus behind heart to obtain images of posterior heart structures or in patients with poor images from chest approach
Cardiac catheterization	Imaging study using radiopaque catheters placed in a peripheral blood vessel and advanced into heart to measure pressures and oxygen levels in heart chambers and visualize heart structures and blood flow patterns
Hemodynamics	Measures pressures and oxygen saturations in heart chambers
Angiography	Use of contrast material to illuminate heart structures and blood flow patterns
Biopsy	Use of special catheter to remove tiny samples of heart muscle for microscopic evaluation; used in assessing infection, inflammation, or muscle dysfunction disorders; also to evaluate for rejection after heart transplant
EPS	Special catheters with electrodes employed to record electrical activity from within heart; used to diagnose rhythm disturbances
Exercise stress test	Monitoring of heart rate, BP, ECG, and oxygen consumption at rest and during progressive exercise on a treadmill or bicycle
Cardiac MRI	Noninvasive imaging technique; used in evaluation of vascular anatomy outside of heart (e.g., COA, vascular rings), estimates of ventricular mass and volume; uses for MRI are expanding

BP, Blood pressure; *COA*, coarctation of the aorta; *ECG*, electrocardiography; *EPS*, electrophysiology; *MRI*, magnetic resonance imaging; *TEE*, transesophageal echocardiography.

Electrocardiogram

Electrocardiography (ECG or EKG) measures the electrical activity of the heart, provides a graphic display and supplies information on heart rate and rhythm, abnormal rhythms or conduction, ischemic changes, and other information. A standard ECG uses 12 leads to get different views of the heart. An ECG takes about 15 minutes to perform, infants and young children may be fussy with lead placement.

Bedside cardiac monitoring with a single lead of the ECG is commonly used in pediatrics, especially in the care of children with heart disease. An alarm can be set with parameters for individual patient requirements and will sound if the heart rate is above or below the set parameters. Gelfoam electrodes are commonly used