

Video Legends:

Videoclip S1: STICLoop of fetal heart. Once a STIC volume has been obtained, it is automatically converted into a two-dimensional cine loop that scrolls in a continuous fashion. The image on the screen begins with the initial frame that was obtained by the transducer, and automatic scrolling through all the frames occurs until the last frame acquired in the sweep is reached. To evaluate whether STIC volumes are appropriate for Fetal Intelligent Navigation Echocardiography (FINE), first the sonologist should observe the scrolling frames on the screen to see if STICLoop criteria 1 through 8 have been met (see text for details). Next, after freezing the image, one should click on the cross-section of the aorta. A sagittal plane of the heart will appear, and this should be evaluated for motion artifacts (STICLoop criteria 9). In this example, the STIC volume is appropriate, because it has met all of the criteria.

Videoclip S2: Spatiotemporal image correlation (STIC) volume dataset of the fetal heart showing nine cardiac diagnostic planes displayed automatically in a single template through Fetal Intelligent Navigation Echocardiography (FINE) (also see Figure 1). There is automatic labeling (through intelligent navigation) of each echocardiography view (i.e. diagnostic plane), anatomical structures, fetal left and right sides, and cranial and caudal ends (also see Figure 1). *A, transverse aortic arch; Ao, aorta; Desc., descending; IVC, inferior vena cava; LA, left atrium; LV, left ventricle; P, pulmonary artery; PA, pulmonary artery; RA, right atrium; RV, right ventricle; RVOT, right ventricular outflow tract; S, superior vena cava; Stom., stomach; SVC, superior vena cava; Tr., transverse; Vent., ventricular.*

Videoclip S3: Left ventricular outflow tract view in a spatiotemporal image correlation (STIC) volume dataset of the fetal heart. In this case, the left ventricular outflow tract was not successfully obtained using the diagnostic plane (left image). Virtual Intelligent Sonographer Assistance (VIS-Assistance®) was then activated, and through automatic navigational movements (labeled as “Part 1 Series of rotations”), the left ventricular outflow tract was successfully obtained (right image). Also see Figure 2.