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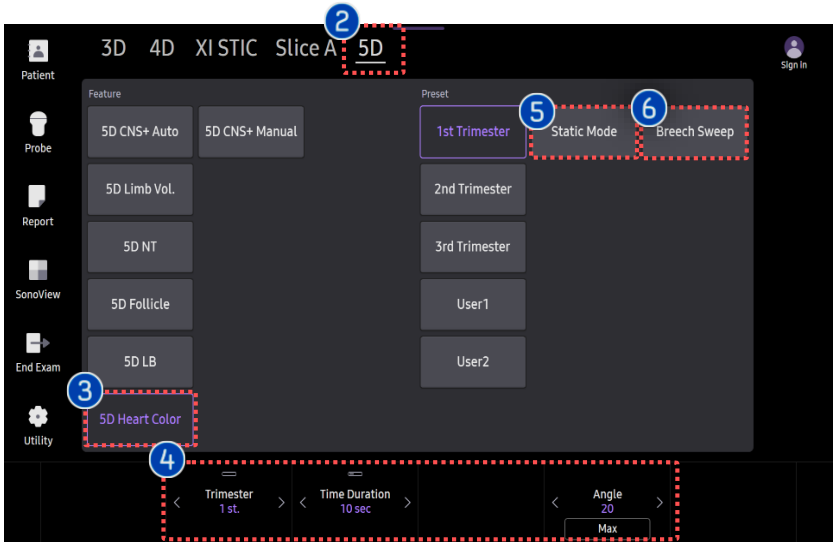
5D Heart Color™

HERA Z20 **Quick Guide**

Produced by Clinical Training Center / SAMSUNG MEDISON CO.,LTD

1. Activate 5D Heart Color - 3D Button



1	3D Button	Press [3D] button on the control panel.
2	5D Ready	Tap [5D Ready] on the touch screen.
3	5D Heart Color	Tap [5D Heart Color] on the touch screen to activate 5D Heart color.
4	Parameters	3D [Angle], [Trimester] and [Time Duration] are adjustable.
5	Static Mode	To take lesser acquisition time, you may use [Static Mode] which provides a static image of 5D Heart views. *(Static mode is available only 5D Heart. Can not use in 5D Heart Color.)*
6	Breech Sweep	For a breech baby, it allows a scan to be taken from the head to abdomen without changing the probe direction.

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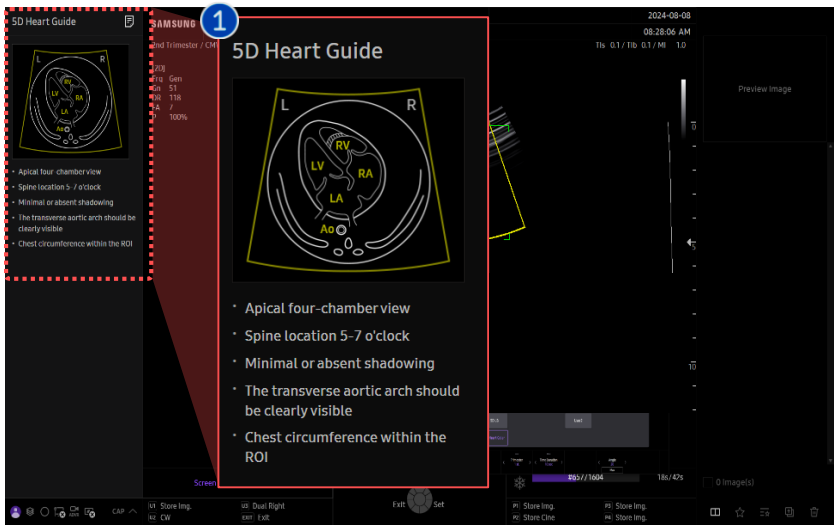
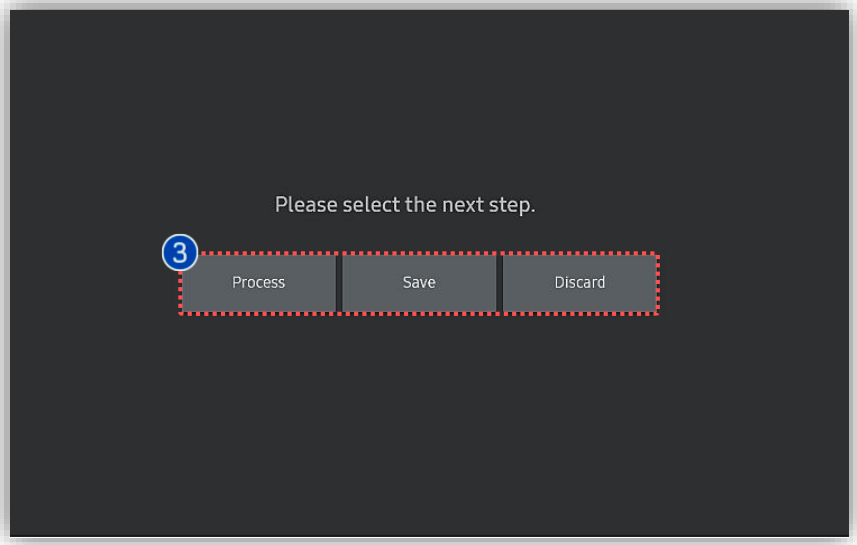
2. Acquire 3D Volume data

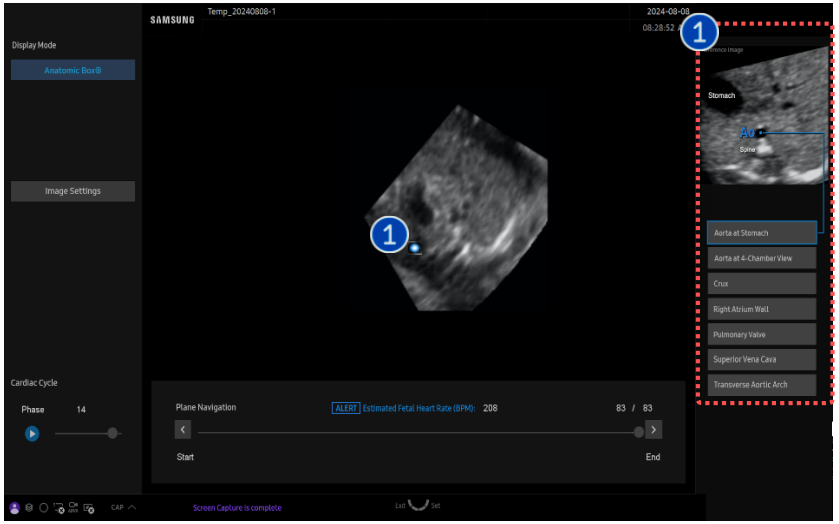


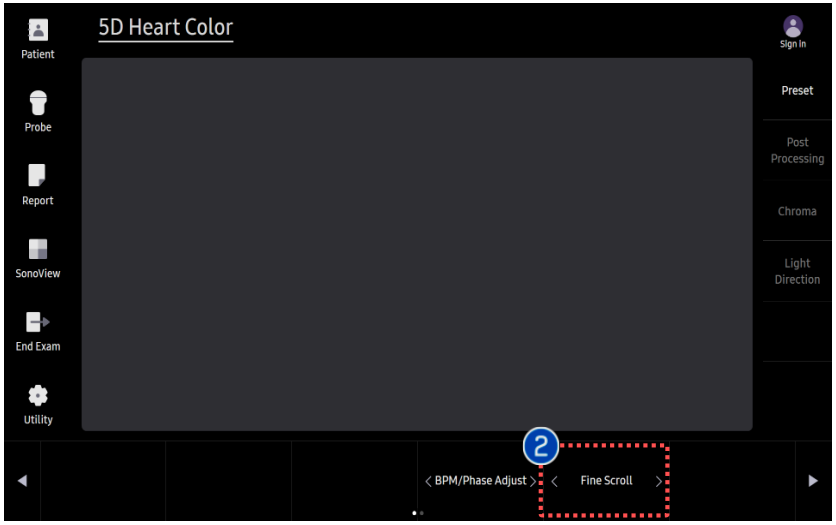


❶ Scan	For more accurate result, try to get the image as guide. ▪ Apical 4 chamber view ▪ Spine location between 5-7 o'clock ▪ Minimal or absent shadowing ▪ Transverse aortic arch should be clearly visible. ▪ Chest circumference within the ROI
❷ Acquisition of 3D images	Press [Freeze] or [Set] on the control panel to start acquisition of 3D images.
❸ 5D heart Acquisition type	Select one of the 5D Heart acquisition type on the touch screen.

Process	After saving acquisition data, enter 5D Heart mode with the scanned data.
Save	Store acquisition data and go back to 3D standby mode.
Discard	Go to 3D Standby mode without saving the data if the scanned data is incomplete due to the fetus movement.

3. Specify marking points (1)





① Mark	To get 9 standard views of fetal heart, you should select 7 landmarks. On the right side, it provides guide image. Place the cursor on the point area and press set button and then system automatically display next image to select next point.
② Fine Scroll	Scroll exact frame manually.

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3. Specify marking points (2)

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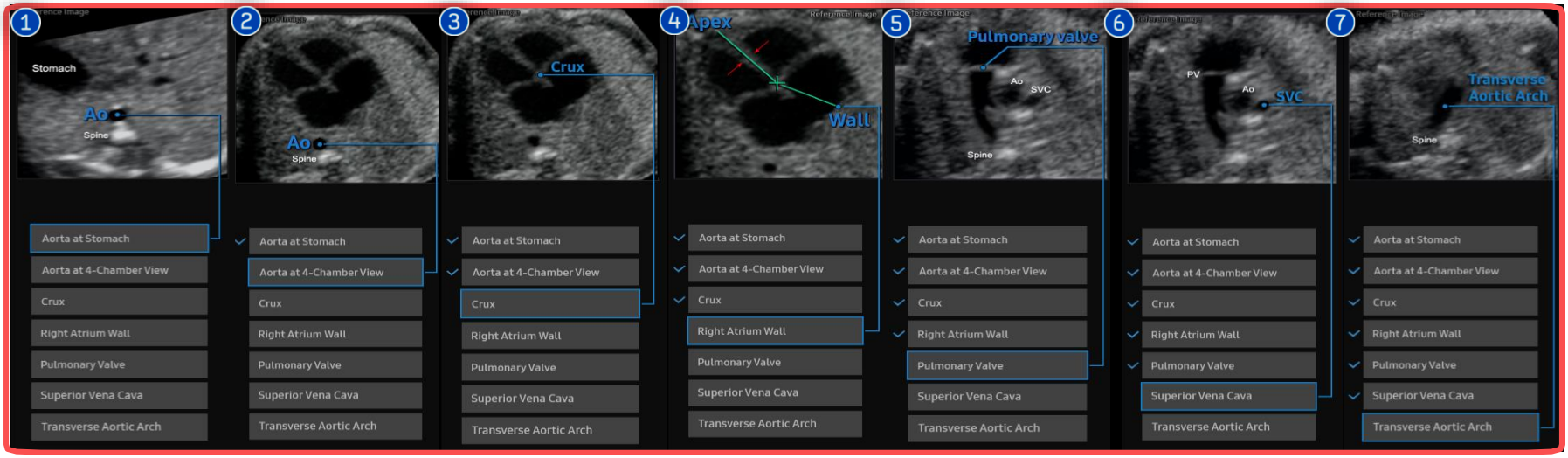
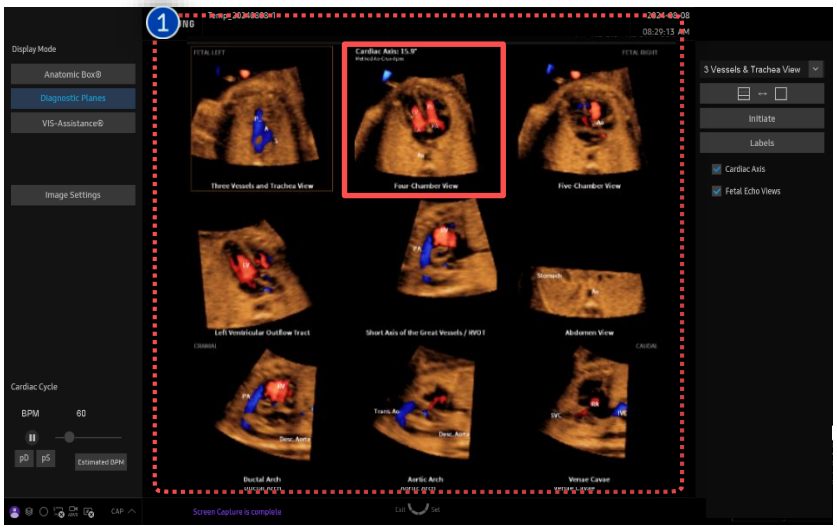


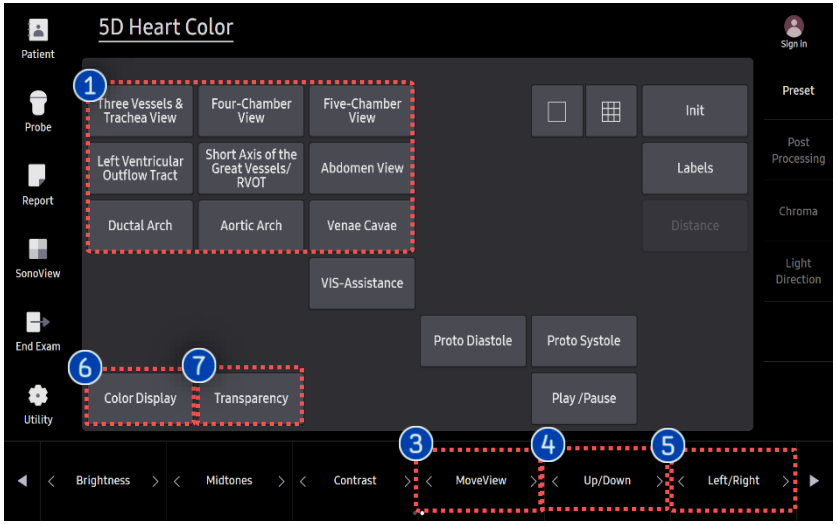
7 Points

You should specify 7 landmarks of anatomical structures to get 9 standard views of fetal heart.

1. Aorta at Stomach
2. Aorta at 4-Chamber View
3. Crux
4. Right Atrium Wall
5. Pulmonary Valve
6. Superior Vena Cava
7. Transverse Aortic Arch

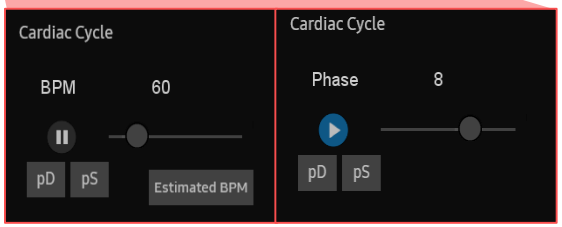
4. Diagnostic Planes (1)

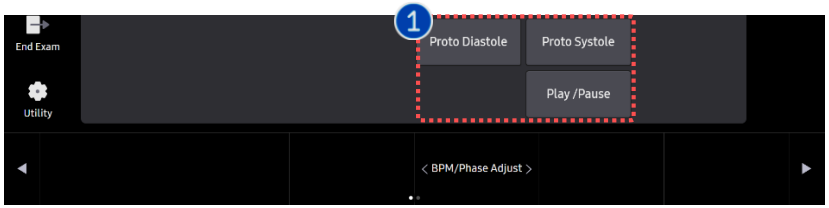




❶ View Select	Select one of the 9 standard views to rotate the image or move its reference slice.
❷ Rotation	You can rotate the selected image around the X, Y and Z axis by using the [X], [Y] and [Z] dial-button on the control panel.
❸ MoreView	Adjust the reference slice of the selected view.
❹ Up/Down	Move all the images up and down by using the dial-button.
❺ Left/Right	Move all the images left and right by using the dial-button.
❻ Color Display	When it is selected, blood flow is displayed.
❼ Transparency	Adjust the transparency of the color of the fetal heart.

4. Diagnostic Planes (2)





① Cardiac Cycle

- pD/pS (Proto Diastole/ Proto Systole)

Press [pD] or [pS] button to move the cine position to diastolic phase or systolic phase.

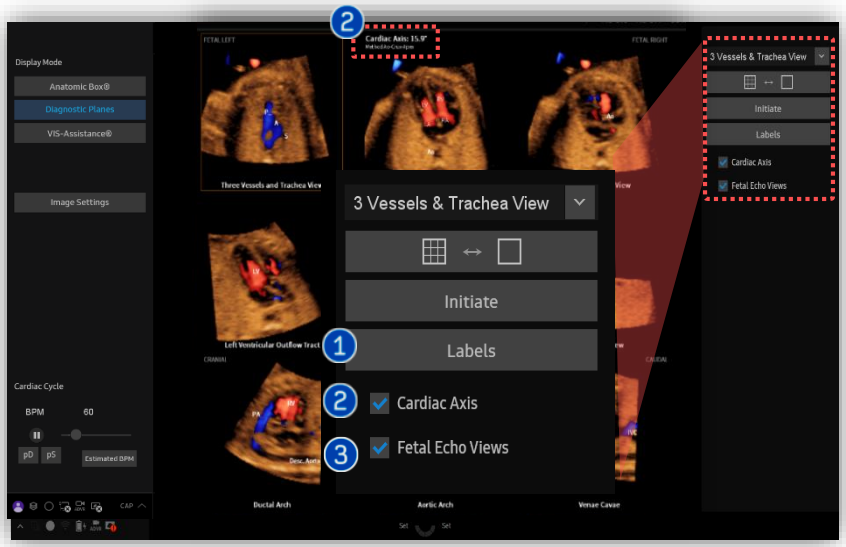
pD	Cine Position moves to diastolic phase.
pS	Cine Position moves to systolic phase.

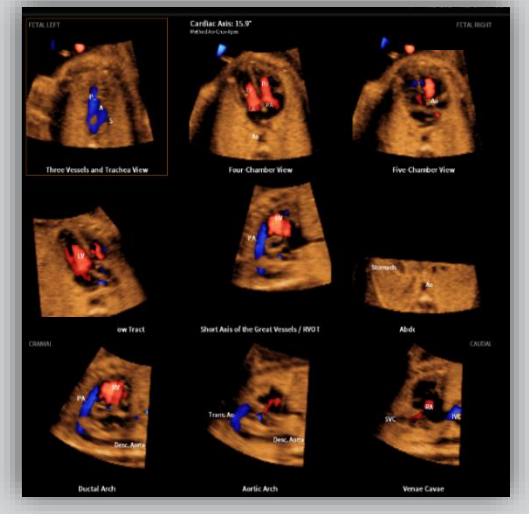
- BPM/Phase adjust

Adjust the speed of playback with [BPM] button and review the entire cardiac cycle with [Phase] button. Press button to switch [BPM] mode to [Phase] mode.

BPM	The heart rate shown is not the original cardiac frequency of the fetus. It is the cycling frequency of the display that purposely is set at 60 BPM(Beats per Minute).
Phase	It is to browse the entire cardiac cycle (Systole-Diastole).
BPM (Estimated)	The system is played a cine as estimated BPM by acquired STIC data.

4. Diagnostic Planes (3)



❶ Label	When it is turned 'On', the anatomical labels will be displayed at the anatomical structure.
❷ Cardiac Axis	Display 'Cardiac Axis' angle of Aorta-crux and apex. 
❸ Fetal Echo Views	Selecting the check box, the name of all fetal echocardiography views, Left/Right sides of the fetus and Cranial/Caudal direction will be displayed at the respective location. 

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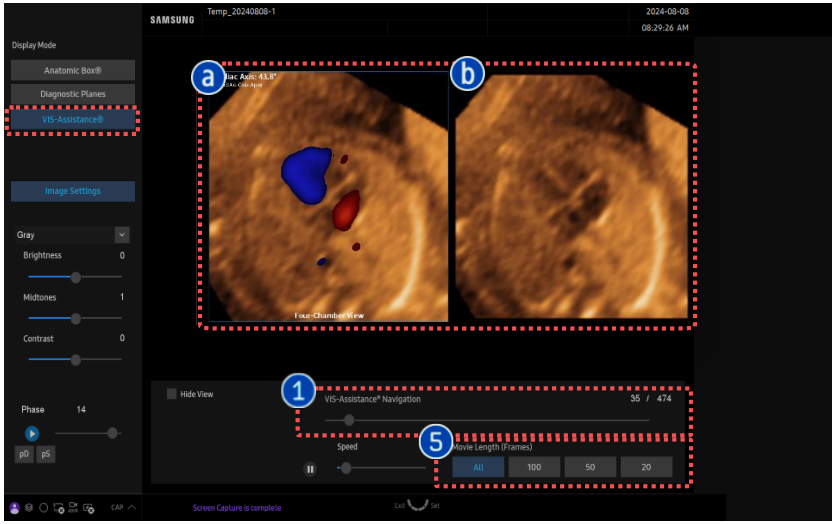
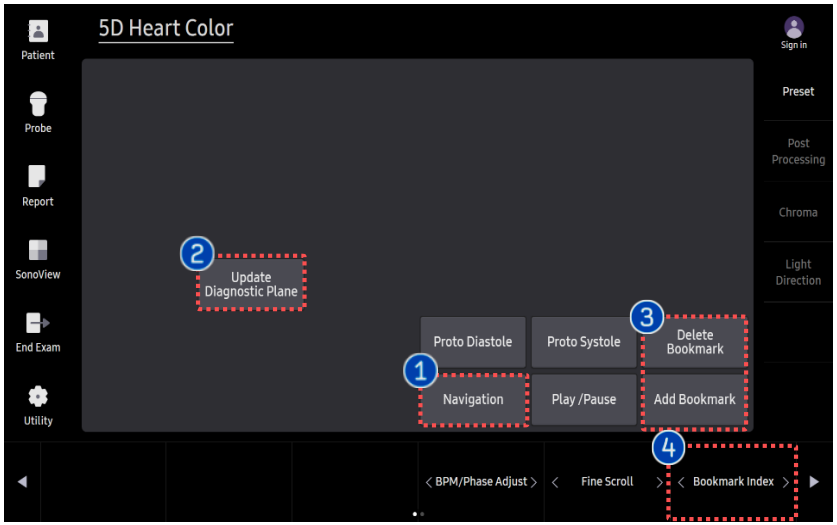
5. VIS-Assistance®





VIS-Assistance®(Virtual Intelligent Sonography Assistance)

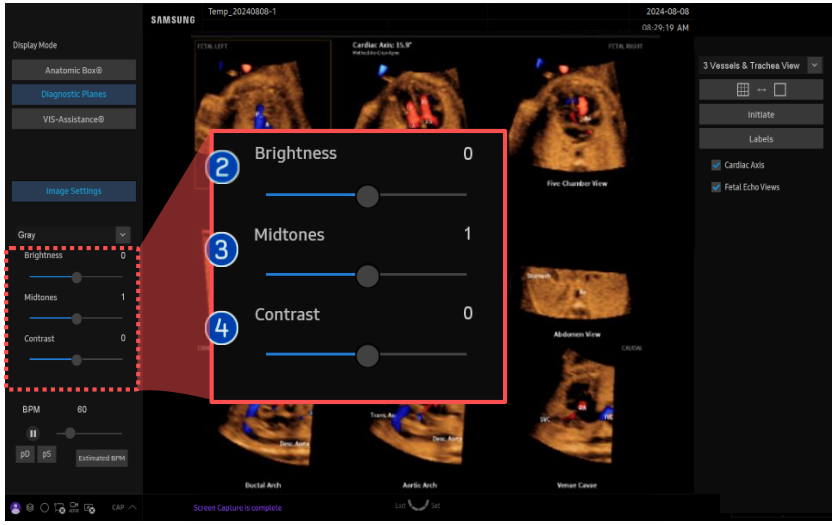
Virtual Intelligent Sonographer Assistance (VIS-Assistance®) is an operator independent tool that allows to provide more appropriate images of each of the nine cardiac Diagnostic Planes.

ⓐ Left image: Selected view among nine cardiac Diagnostic plane

ⓑ Right image: Navigation views of surrounding structure

① Navigation	Find more appropriate view within entire cine on the Right image(ⓑ) by using scroll button.
② Update Diagnostic Plane	Press the selected plane on the Diagnostic Planes template to replace extracted plane. (※ This function is only available when Cine Play is paused.)
③ Add/Delete Bookmark	Bookmark a plane to supplant or delete your Bookmark. (※ This function is only available when Cine Play is paused.)
④ Bookmark index	You can put the Bookmark on a view up to 4 as candidates of extracted view.
⑤ Movie Length (Frames)	Select the number of Cine frames for movie length.

6. Image Setting



1 Image Setting	The selected item will be applied to the image color.
2 Brightness	Adjust the brightness of the image.
3 Midtones	The left side of the slide indicates the most emphasized soft tissues and enhances the representation of the diaphragm.
4 Contrast	Adjust the contrast of the image.

- The features, options may not be commercially available in some countries.
- Sales and shipments are effective only after the approval by the regulatory affairs. Please contact your local sales representative for further details.
- This Quick guide does not include all of the details of instruction, fore more detail, please refer to HERA Z20 User Manual.
- Do not distribute this document to customers unless relevant regulatory and legal affairs officers approve such distribution.
- This User Quick Guide is based on HERA Z20 V1.00.
- Disclaimer: Some Images in this content were obtained from other system.

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