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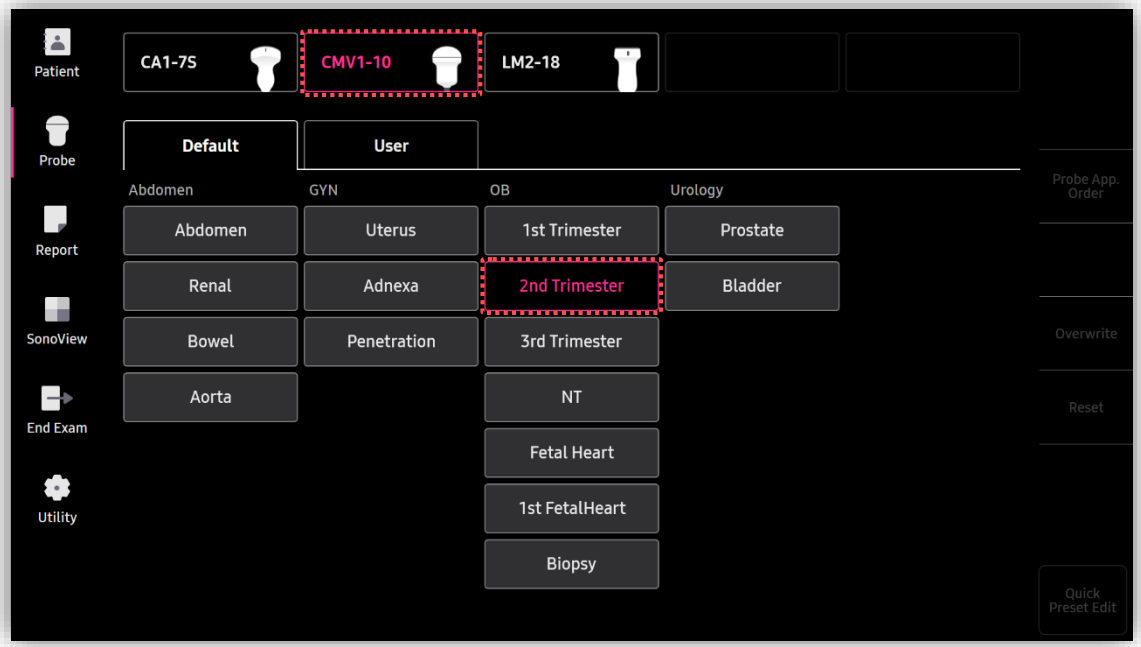
MV-Flow™

HERA Z20 **Quick Guide**

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

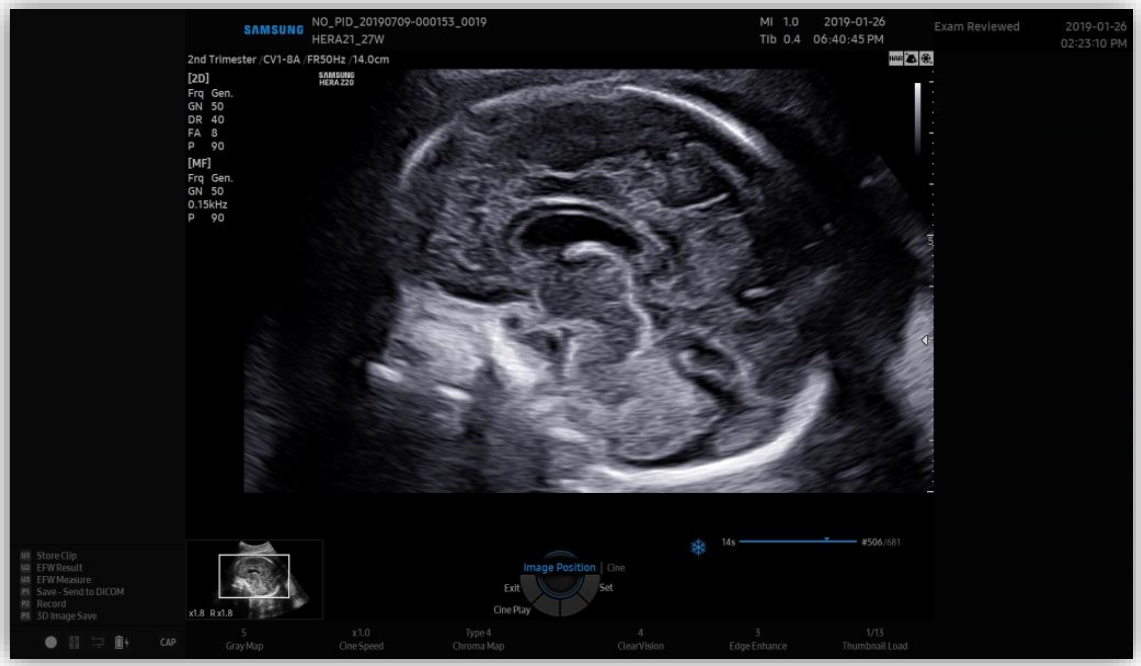
1. Probe and Preset



※ MV-Flow™ can be operated under the following conditions :

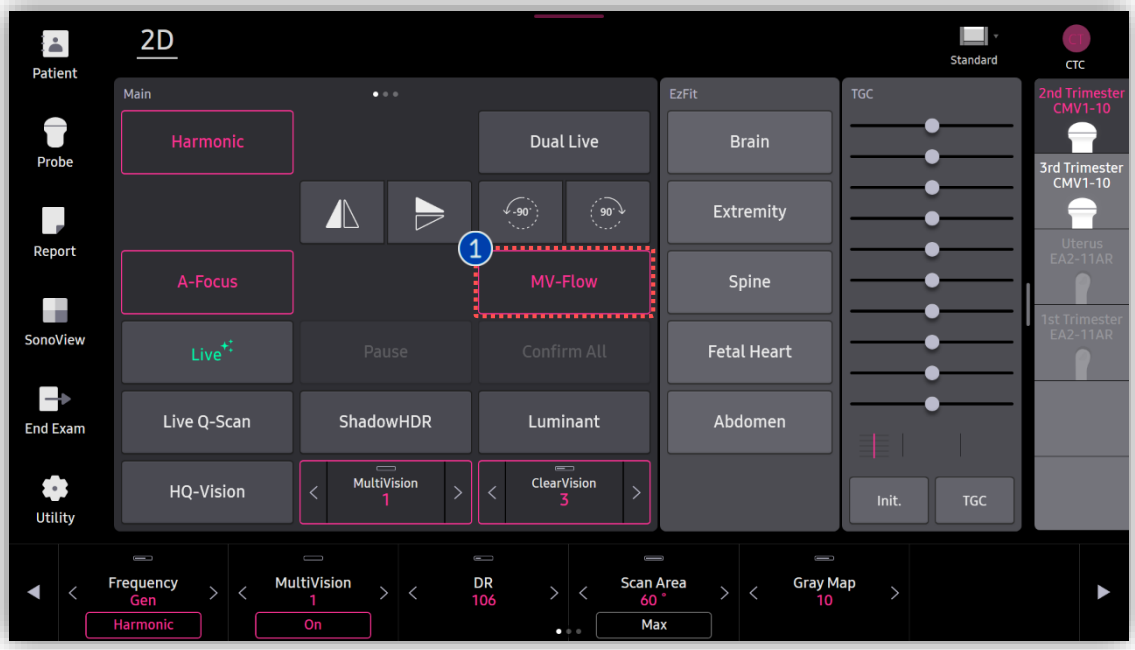
Probe	Application
All Probe	All preset

2. Image acquisition



❶ Image acquisition	Acquire 2D image that you want to apply MV-Flow. To magnify the image, use a Read zoom mode.

3. Activate MV-Flow™



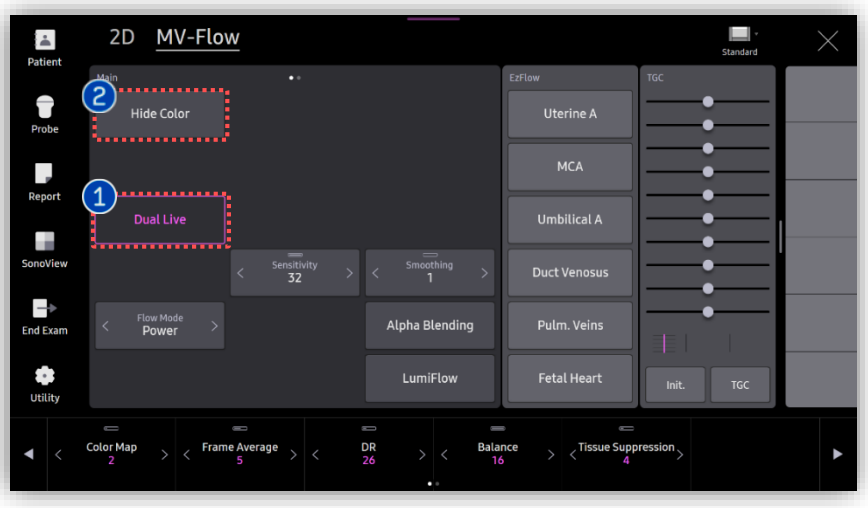
❶ MV-Flow	Tap [MV-Flow] button on the touch screen to activate MV-Flow mode.

4. Adjust ROI and Gain control

❶ ROI Box	Place the ROI box on the area where you want to observe the vascularity.
❷ ROI Position & ROI Size	Adjust the position and size of the ROI box using [Set] button and trackball on the control panel.
❸ MV-Flow Gain	Adjust the MV-Flow gain with [PD] knob button on the control panel. The [PD] knob button is used to adjust both Power Doppler and MV-Flow gain. 

MV-Flow™

5. Display mode in MV-Flow™



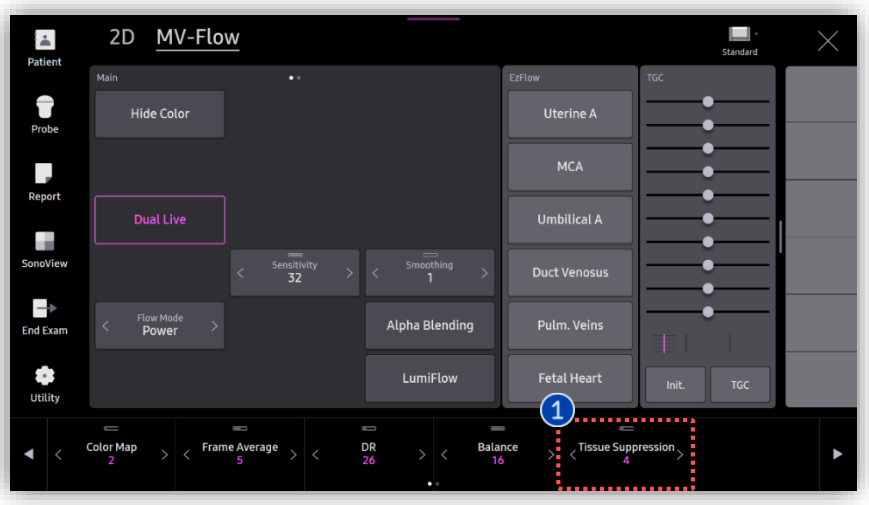
① Dual Live	2D mode and MV-Flow mode are simultaneously displayed in dual mode side by side.
② Hide Color	It can be switched to the below mode. ▪ Hide Color off : Displays both MV-Flow image and BW image simultaneously. ▪ Hide Color on: Displays only BW image without MV-Flow image.

[Dual Live Mode]

[MV-Flow + BW Mode]

[BW Only Mode]

5. MV-Flow™ parameters (1)

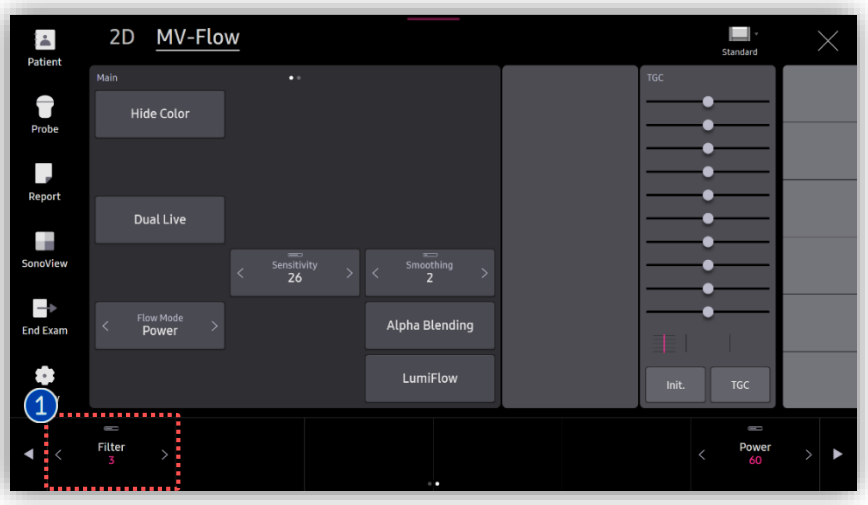


❶ Tissue Suppression	It reduces strong signal from the tissue which appears hyperechoic and helps to detect only micro vascular flow. It can be adjusted by the index as 5 options. The higher index value is, the more noise from the tissue are removed. But, if the value is set too high, the real micro vascular flows could be reduced.

[Tissue Suppression 0]

[Tissue Suppression 5]

5. MV-Flow™ parameters (2)

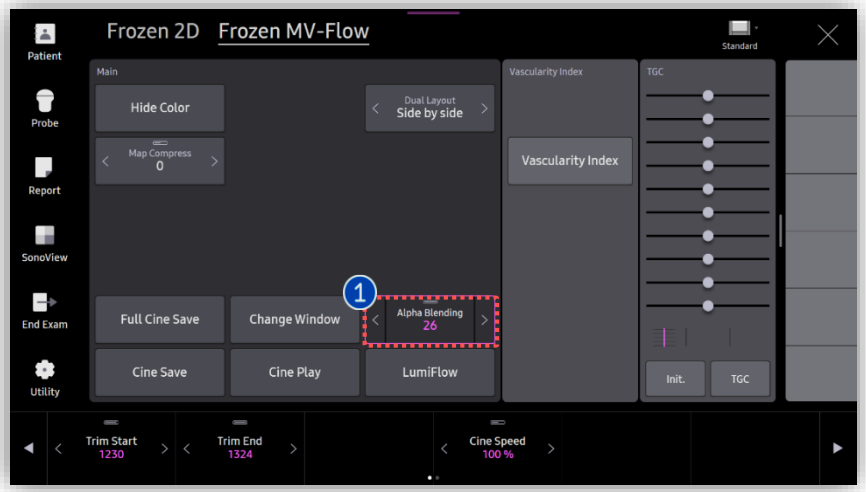


❶ Filter	It filters out low-frequency Doppler signals produced by blood vessel wall movement that it can suppress the flash artifact. It can be adjusted by the index as 5 options. The higher index value is, the more flash artifacts from movement are removed. But, the highest index value can cause the micro vascular signals to be eliminated.

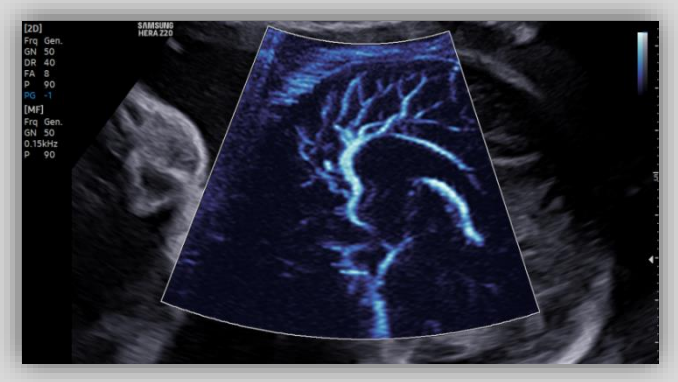
[Filter 0]

[Filter 5]

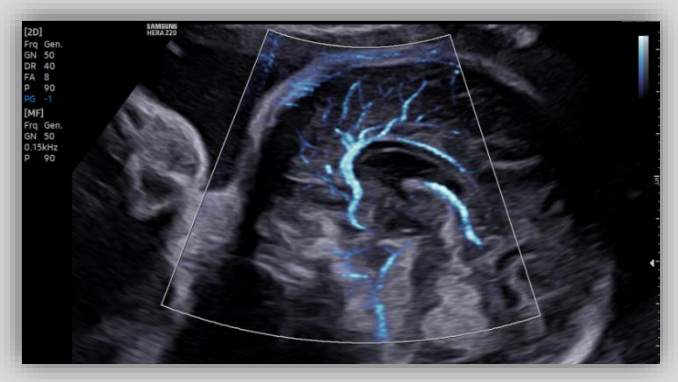
5. MV-Flow™ parameters (3)



❶ Alpha Blending	MV-Flow signals are overlaid over 2D grayscale images. You can adjust the blending ratio between 2D and MV-Flow. It can be adjusted by setting the percentile. As you increase the index value or turn it off, It eliminates the background signals to only focus on the visualization of the vascular structures.



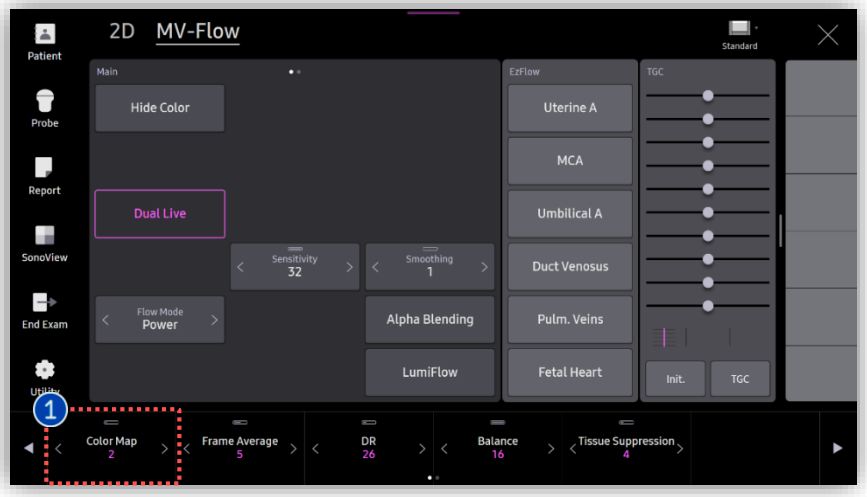
[Alpha Blending Off or 100%]



[Alpha Blending 30%]

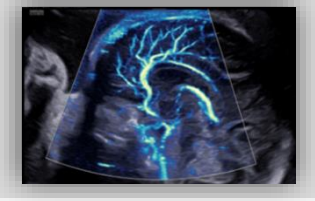
MV-Flow™

6. Color map of MV-Flow™



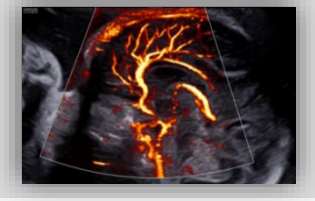
❶ Color Map	Select a color map of MV-Flow among 8 options.

1

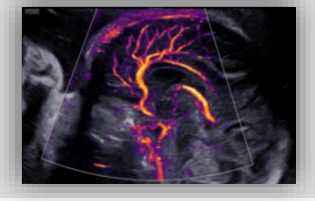


2 (Default)

3



4



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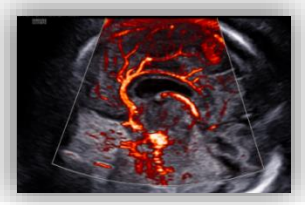

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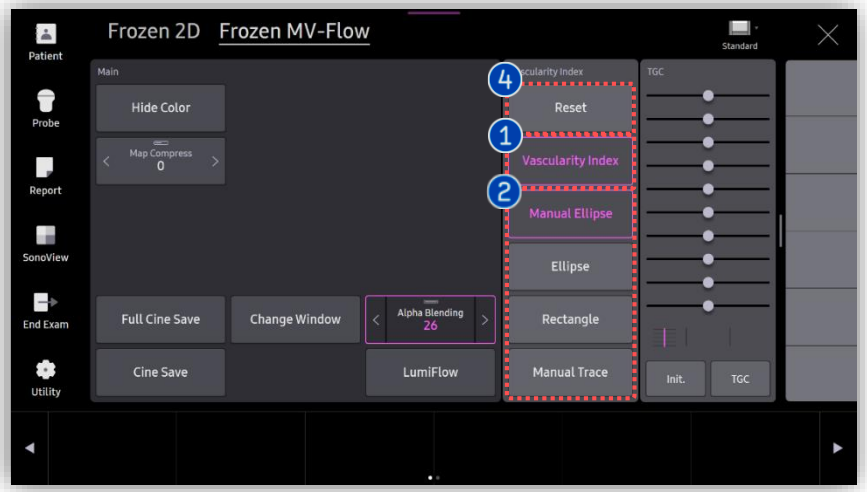
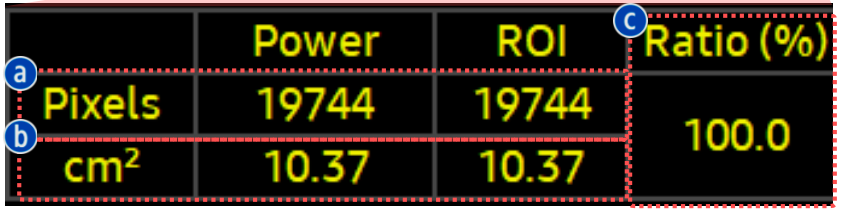
7. Vascularity Index in MV-Flow™ (1)



❶ Vascularity Index	On the frozen MV-Flow image, Tab [Vascularity Index] button on the touch screen.
❷ VI ROI Type	Select the type of VI ROI among Ellipse, Rectangle and Manual Trace. (*VI : Vascularity Index)

❸ Set VI ROI	After pressing [Change] button, adjust the size of VI ROI with trackball and locate it on the region of interest.
❹ Reset	Tap [Reset] on the touch screen to restart drawing a ROI.

7. Vascularity Index in MV-Flow™ (2)



① Result	After ROI is placed on the region of interest, the result box will come up at the bottom right.
ⓐ Pixels	▪ Power : The number of pixels of blood. flow within VI (Vascularity Index) ROI. ▪ ROI : Total number of pixels in VI ROI.
ⓑ Area	▪ Power : Area of blood flow within VI ROI. ▪ ROI : Area of VI ROI.
ⓒ Ratio	Ratio of total pixels to the MV-Flow pixels in VI ROI.

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- Do not distribute this internal document to customers unless relevant regulatory and legal affairs officers approve such distribution.
- This product is a medical device, please read the user manual carefully before use.
- This document is provided to help you understand the feature.
- This User Quick Guide is based on HERA Z20 V1.00
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