Resona I9 Series

Innovation, in every facet

Diagnostic Ultrasound System

Datasheet

Release 02.01.00

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healthcare within reach

1 System Overview

Powered by the most revolutionary ZONE Sonography® Technology, I9's new ZST+ platform brings the ultrasound image quality to a higher level by zone acquisition and channel data processing.

It is intended for use in obstetrics, gynecology, abdominal, pediatric, small organ, musculo-skeletal, cardiac, vascular, urology, nerve, cephalic, thoracic/pleural, Laparoscopic, and Intra-operative exams.

1.1 Imaging Modes

- B-Mode
- THI and PSH (Phase Shift Harmonic Imaging)
- M-Mode/Color M-mode
- Free Xros M (Anatomical M-mode)
- Free Xros CM (Curved Anatomical M-mode)
- Color Doppler Imaging
- Power Doppler Imaging/Directional PDI
- PW (Pulsed Wave) Doppler
- CW (Continuous Wave) Doppler
- TDI (Tissue Doppler Imaging)
- Contrast Imaging
- Smart 3D (Freehand 3D)
- Real-time 4D
- iScape View (Panoramic Imaging)
- STE Imaging (Sound Touch Elastography)
- STQ Imaging (Sound Touch Quantification)
- Strain Elastography

1.2 Features

- B-Mode
- THI and PSH (Phase Shift Harmonic Imaging)
- M-Mode/Color M-mode
- Color Doppler Imaging
- Power Doppler Imaging and Directional PDI
- PW (Pulsed Wave) Doppler
- CW (Continuous Wave) Doppler
- Free Xros M
- Free Xros CM
- Glazing Flow
- iBeam (Spatial Compound Imaging)
- iClear (Speckle Suppression Imaging)
- iClear^{+}
- iTouch (Auto Image Optimization)
- Echo Boost
- Zoom/iZoom (Full Screen Zoom)
- FCI (Frequency Compound Imaging)
- B steer
- ExFOV (Extended Field of View)
- HD Scope
- SSC (Sound Speed Compensation)
- Channel data processing
- Smart 3D
- Color 3D
- Real-time 4D
- STIC (Spatial-Temporal Image Correlation)
- iPage^{+} (Multi-Slice Imaging)
- SCV^{+} (Slice Contrast View)
- iLive
- Niche
- 3D-Print Format
- Smart Planes CNS
- Smart FLC
- Smart Planes FH
- Smart ICV
- Smart Face
- Smart-V (Smart Volume)
- Smart V Trace
- Smart Scene 3D
- Smart ERA
- IOTA
- Clinical Measurement Package
- Smart OB (Auto OB measurement)
- Smart NT (Auto NT measurement)
- Smart Fetal HR (Fetal Heart Rate)
- Smart HRI
- Smart Bladder
- Smart Hip
- Smart Trace
- Smart Calc
- CPP (Color Pixel Percentage)
- Smart Track
- Smart VTI
- Smart IVC
- Smart B-line
- HR Flow (High Resolution Flow)
- UMA (Ultra-Micro Angiography)
- IMT

- RIMT (RF-Data based IMT)
- R-VQS (RF-Data based Quantitative Analysis on Vessel Stiffness)
- Smart Pelvic
- Smart Breast
- Smart Thyroid
- IVF
- iScape View
- iNeedle (Needle Visualization Enhancement)
- V Flow
- Contrast Imaging
- Contrast Imaging QA (Quantitative Analysis)
- Volume CEUS
- LVO (Left Ventricular Opacification)
- Low MI Contrast
- CEUS Chrono-Parametric Mode
- TCMR
- STE Imaging (Sound Touch Elastography)
- STQ Imaging (Sound Touch Quantification)
- Strain Elastography
- High frame rate STE
- Endocavity STE
- USAT
- HRI^{+}
- LTI
- Ultrasound Fusion Imaging
- Endocavity Fusion Imaging
- Fusion RESP
- ECG function
- AutoEF
- TDI (Include TVI, TVD, TVM, TEI)
- TDI QA (TDI Quantitative Analysis)
- TT QA (Tissue Tracking Quantitative Analysis)
- FH Tissue Tracking QA
- Stress Echo
- V-Mapping
- iScanHelper
- iWorks (Auto Workflow Protocol)
- DICOM
- MedSight
- MedTouch
- UltraAssist (Off-line software)
- UltraView (Off-line analysis software)
- Q-Path
- iStorage
- Touch gestures
- iVocal

2 Physical Specification

2.1 Dimension and Weight

The control panel and the monitor are in the lowest position.

- Configured with dual-wing floating arm and 23.8-inch monitor
  - Depth: 1020±20 mm
  - Width: 550±10 mm
  - Height: 1000±20 mm
- Weight: approx. less than 105kg±4kg (net weight, standard configuration but not including the transducer)

2.2 Electrical power

- Voltage: 100-240V~
- Frequency: 50/60 Hz
- Power consumption: Max. 650 VA

2.3 Operating Environment

- Ambient temperature: 0-40°C
- Relative humidity: 20%-85% (no condensation)
- Atmospheric pressure: 700hPa-1060hPa

2.4 Storage & Transportation Environment

- Ambient temperature: -20-55 °C
- Relative humidity: 20%-95% (no condensation)
- Atmospheric pressure: 700hPa-1060hPa

2.5 System Noise

26dB @25°C

3 User Interface

3.1 Monitor

- 23.8-inch high resolution color LED monitor
- Resolution: 1920x1080
- Viewing angle: 176 degrees
- Digital on screen display of brightness and contrast controls

- Automatic LED brightness
- Tilt/Rotate independent adjustment
- Tilt angle range: 20±5° degrees (backward), 85±5° degrees (forward)
- Rotate angle range: 90±5° degrees (to left), 150±5° degrees (to right)

3.2 Multi-directional articulating monitor arm

- From left to right: 300±20mm
- From front to back: arm: 300±20mm
- From bottom to top: 150±20mm

3.3 Touch screen

- 15.6-inch high sensitivity anti-glare color touch screen
- Resolution: 1920*1080
- Digital brightness and contrast adjustment through preset
- Viewing angle: 170 degrees
- Angle adjustable range: 40 degrees
- Support touch screen gestures
- Support either hand writing or with gloves on
- Movable 3D/4D tabs
- Editable touch-screen buttons: long press to add, delete or move the buttons.
- Digital TGC
- Short-cut switch of latest used transducer & exams

3.4 Touch gestures

- Swipe down/up: display/remove projected image on touch screen
- Swipe horizontally: page up/down or review images/cine loops one by one
- Swipe from left edge to right: display hidden menu on projected image.
- Image parameter adjustment.
- Measurement on projected image on touch screen
- Zoom in/out the projected image on touch screen
- Rotate or erase on projected 3D/4D image on touch screen
- 8 user defined gestures using two fingers for more functions, such as freeze, save, print, activate specific imaging modes, measurements, and some other special functions.

3.5 Floating control panel

- Brightness adjustable for the backlight of the whole control panel
- Full-sized, backlit QWERTY keyboard
- iConsole: intelligent control panel for clinical-exam specific layout and adaptive adjustment, 6 programmable E-ink keys for dynamic display of user-defined functions
- Full-space floating control panel adjustment and can be fixed at any position (when centered in the trackball):
  - Left/right rotation:80 degree for both left and right
  - Down/up adjustment: 300±20mm
  - Front/back adjustment: 200±20mm

3.6 Transducer port and holder

- Transducer ports with dust prevention: 5 active ports and 1 pencil transducer port
- Support active transducer with indicator on
- Transducer holder: 5, plus 1 dedicated endocavity transducer holder and1 dedicated pencil transducer holder

3.7 Wheels

- Diameter: 125mm
- When the central brake is configured: 3 castors for total lock, and 1 castor for direction lock and break.
- When the central brake is not configured: 3 castors for total lock and break, and 1 castor for direction lock and break.

3.8 System boot-up

- Boot-up from shut-down: ≤ 30 sec
- Boot-up from stand-by: < 5 sec
- Shut-down: < 30 sec

3.9 Language support

- Support multi-language user interface, keyboard input, and user manuals.
- User interface: English, Chinese, German, Spanish, French, Italian, Portuguese, Russian, Czech, Polish, Turkish, Finnish, Danish, Icelandic,

Norwegian, Swedish, Hungarian, Serbian, Dutch, Lithuanian, Greek, Thai

- Keyboard input: English, Chinese, German, Spanish, French, Italian, Portuguese, Russian, Czech, Polish, Icelandic, Norwegian, Swedish, Finnish, Turkish, Danish, Hungarian, Serbian
- User manual: English, Chinese, German, Spanish, French, Italian, Portuguese, Russian, Polish, Turkish, Serbian, Norwegian, Danish, Swedish, Finnish, Dutch

* Not all items are listed in this part; For more detailed information, please refer to User Manual

3.10 Other Features

- DVD R/W driver
- Probe Container (For LAP13-4Cs)
- Anti-virus software
  - McAfee
  - Windows Defender
- Audio speakers: Stereo audio speakers
- Built-in Battery
  - Replaceable and rechargeable lithium battery.
  - Full battery lasts for no less than 24H in standby mode
  - Battery capacity indicators without powering on the system
  - Battery fully-recharged time: less than 6h
  - Continuous scanning time: more than 120 mins for 2H battery or 240 mins for 4H battery
- Built-in DVR
  - Built-in digital video recorder.
  - Screen display and voice information are recorded and stored in the built-in hard disk
  - Save space and is a useful tool for education and memory
  - Max storage length each time: 60 min

4 Technical Specifications

4.1 Innovative ZST^{+} platform

- Premium and innovative ultrasound platform, evolving with powerful processing architecture and enhanced channel data processing based on ZONE Sonography®
- Windows Operating System
- Powerful Processing Architecture
- Advanced Acoustic Acquisition
- Total Recall Imaging (TRI)
- Enhanced Channel Data Processing
- Dynamic Pixel Focusing (DPF), digital variable aperture and dynamic apodization, A/D≥12 bit
- Up to 8,257,536 channels
- Parallel processing of multiple signals
- Line density per frame ≥ 512 ultrasound lines
- Sound Speed Compensation (SSC)
- ZONE Sonography® Technology

4.2 Transducer specification

- Single crystal and compound crystal etc.
- Supported transducer type
  - Curved array
  - Linear array
  - Phased array
  - Endocavity
  - 4D Volume
  - Bi-Plane
  - pencil transducer
  - Laparoscopic

5 Imaging Parameters

5.1 Advanced imaging technologies

- iBeam

  Spatial Compound Imaging, permits use of multi-angle scanning to form a single image, so as to improve image contrast and resolution. Supports Spatial Compound Imaging with 3-level adjustment and up to 9-beam steer
- iClear

  Speckle Suppression Imaging, Available in 2D, Contrast, and 3D/4D mode. 7-level adjustment.
- iTouch (Auto Image Optimization)

  Automatic image parameters optimization of B, Color, PW, Contrast

modes, to improve the adjustment efficiency. 9-level adjustment.
  - B-mode: gain, TGC, dehaze
  - Color: gain, color box position
  - Power: gain
  - PW: gain, scale, PRF, WF, SV size, SV position, steering angle
  - Contrast imaging: gain
- TSI

  Multiple imaging conditions are available according to different tissue characteristics (general/muscle/fluid/fat)
- Smart Track
  - Available on linear transducers
  - Enable the function under Color/Power mode, the angle and the position of the ROI are adjusted automatically.
  - Enable the function under Color/Power mode. The angle and position of the ROI are automatically adjusted in real time, so as to save time from manual adjustment and improve the scanning efficiency.
- HD scope

  By processing channel data multiply and retrospectively, HD Scope can improve the detail information and image contrast on specific area maximally.
- Echo Boost
  - Available in cardiac exam mode when using a phased array transducer
  - Improve the homogeneity through the whole field of view
  - Better improve the contrast display of the tissue
  - Better noise control in cardiac chambers and muscles
- iNeedle

  It is used in needle-guided biopsy, which dynamically enhance the needle display in ultrasound image. Support dual-screen display of images before and after enhancement in real-time, and adaptive angle correction.
  - Needle direction: left, right
  - B/iNeedle: on/off
  - In-plane biopsy and Out-plane biopsy
- Zoom: Image magnification, supports spot zoom (write zoom) and pan zoom (read zoom). Magnification ≥10x
- iZoom: Full-screen magnification by one click in real time, supports ≥2 magnification modes.
- Glazing Flow
  - An advanced image processing technology to demonstrate the 2D blood flow with 4D visualization for easy definition and clarity.
  - Available in Color/Power mode.
  - To stereoscopically display the blood flow.
- QSave
  - Quick save image parameter settings after image adjustment done
  - Support Save, Create, Restore
  - IP (Image Process): Quickly switch all the image parameters of the same image application by one-click
  - 3D/4D Preset Manager

    The scenarios and subpresets can be renamed, restored, deleted, added, set to active, or moved

    Show scenario and subpreset parameters

    Provide multiple groups of preset 3D/4D parameters based on different application scenarios to quickly obtain expected image effect
- Auto Merge

  Dual B image merge for linear array transducer
- Adjustable Acoustic output power
  - Display TIB, TIC, TIS in real time.
  - Can be adjusted in B, Color/Power, M, PW, CW, TDI modes etc.

5.2 B-mode

- Display formats: Single, Dual, Quad
- iClear/ iClear^{+}: Off, 7 steps
- iBeam: Off, 3 steps
- iTouch: -12-12

- Dual Live: image compared by dual display in real time
- Image quality
  - Supports fundamental frequency conversion ≥ 3 segments
  - Fundamental frequency: Pen/Gen/Res
  - Supports THI (Tissue Harmonic Imaging) and PSH (Phase Shift Harmonic Imaging), harmonic frequency conversion ≥ 3 segments
  - Harmonic frequency: HPen/HGen/HRes/HGen-FFR/HRes-FFR (dependent on transducer)
- B steer: 5 levels, available on linear transducers
- ExFOV
  - Available on transducers: convex, linear, endocavity, volume, phased, bi-planar, Laparoscopic.
  - Range: Off, 1-2 (dependent on transducer)
  - For liner transducer: after ExFOV is enabled, the image is displayed as a trapezoid. The maximum steer angle is 12°
  - For convex transducer: after ExFOV is enabled, the scanning angle will be extended.
- Depth: 30 levels, 1.5-40cm (dependent on transducer)
- Maximum display Depth: ≥40cm
- Maximum detection Depth of the convex transducer: ≥30cm
- Transmitting beam focusing: transmitting ≥ 8 segments
- Supports FCI (Frequency Compound Imaging)
- Frame rate (max): 1488 f/s
- Acoustic output power: dependent on transducer
- TGC: 8 segments on touch screen
- LGC: 8 segments on touch screen
- Dynamic range (visible and adjustable): 30-350 (dependent on probe/preset)
- Gain: 0-100, 1/step
- The Gain of B/M/D mode is visible and independently adjustable, ≥100dB, 1dB/step
- FOV Size: continuously adjustable
- FOV Position: continuously adjustable (CB10-4s is not supported.)
- Line density: L, M, H, UH
- Persistence: 0-7 levels
- Horizontal Scale: on/off
- L/R flip and U/D flip: on/off
- Rotation: 0°, 90°, 180°, 270°
- TSI: general/muscle/fluid/fat
- Gray Map: 8 types, grayscale: 256
- Tint map: off, 8 types
- Smooth: 0-6 levels
- HD Scope: off, 1-3 levels
- SSC (Sound Speed Compensation): on/off
- Free view: adjustable (depends on transducers)
- Dehaze: 0-30 levels
- Ref Lines: on/off (under GYN and Pelvic Floor exam mode when using endocavity transducer)
- V 1:1: on/off (available with linear transducer and under dual-split mode)
- XL View: on/off
- Edge Enhancement: 0-6
- Echo Boost: on/off
- Auto Merge: on/off
- ZoneVue

5.3 THI and PSH

- Patent PSH technology, obtains purer harmonic, better contrast resolution, higher SNR, exceptional high frequency harmonic
- iClear available
- Image quality: HPen/HGen/HRes or HPen/ HPen-FFR/HGen/HRes/HRes-FFR (depends on transducers)
- Echo Boost: on/off

5.4 M-mode

- Display formats: V2:3, V3:2, V3:1, H2:3, FULL (V: vertical, H: horizontal)
- Supports B/M mode dual display and M mode full screen display
- Color M-mode available
- Acoustic output power: same as B
- Depth: same as B
- Dynamic range: 30-180, 5/step

- Gain: 0-100, 1/step
- M sweep speed: 6 steps
- M soften: 0-4, 1/ step
- Tint map: off, 8 types
- Gray Map: 8 types
- Edge enhancement: 0-3, 1/ step

5.5 Color Doppler Imaging

- Dual live
- HR Flow: High Resolution Flow provides better image quality and flow sensitivity
- Image quality: Pen/Gen/Res (color), 1 level (HR Flow)
- Max velocity: 148.5 cm/s
- Steer: available on linear transducers
- Max frame rate: 279 f/s
- Acoustic output power: same as B mode
- Gain: 0-100, 2/step
- ROI size/position: adjustable
- Scale: max. 30 steps
- Baseline: -8 – 8, 1/step
- Wall filter: 8 steps, 5-433 Hz
- PRF: 0.1-15.4 kHz
- Packet size: 0-3, 1/ step
- Flow state: L/M/H
- Smooth: 0-6, 1/ step
- B/C align: on/off
- Priority: 0%-100%, 1%/step
- Color map: V0-V10; VV0-VV9
- Invert: on/off
- Auto Invert: on/off
- Persistence: 0-6, 1/ step
- Velocity tag: on/off
- Line density: L/M/H/UH
- iTouch: on/off
- Smart track: on/off
- ART Flow: Enhance the blood sensitivity and penetrability in time period
- Glazing flow: on/off, L/M/H

5.6 Power Doppler Imaging

- Dual live
- HR Flow: High Resolution Flow provides better image quality and sensitivity
- Support directional power Doppler
- Image quality: Pen/Gen/Res (Power), 1 level (HR Flow)
- Acoustic output power: same as B
- Dynamic range: 10-70, 5/step
- Gain: 0-100, 2/step
- ROI size/position: adjustable
- Steer: available on linear transducers)
- Scale: max. 30 steps
- Wall filter: 8 steps
- PRF: 0.1-15.4 kHz
- Packet size: 0-3, 1/ step
- Flow state: L/M/H
- Smooth: 0-6, 1/ step
- B/C align: on/off
- Priority: 0%-100%, 1%/step
- Color map: P0-P3, dP0-dP3
- Persistence: 0-6, 1/step
- Line density: L/M/H/UH
- Invert: on/off
- iTouch: on/off
- Smart track: on/off
- ART Flow: Enhance the blood sensitivity and penetration in certain time period
- Glazing flow: on/off, L/M/H

5.7 UMA (Ultra-Micro Angiography)

- The breakthrough of traditional Doppler imaging bottleneck. It realizes ultra-high spatial resolution and flow sensitivity for super subtle and slow flow imaging.
- Available under B, Color, Power, Contrast, and 3D mode.
- Supports submodes of cUMA, pUMA, sUMA.
- Supports a set of parameters for quick adjustment predefined for different organs in different scenes

Note: Other parameters are the same as those of the Color/Power modes

5.8 PW/CW Mode

- Display formats: V2:3, V3:2, V3:1, H2:3, FULL, Duplex/Triplex (PW only) (V: vertical, H: horizontal)
- Image quality: Pen/Gen/Res
- PW velocity:
  - max. 868.1 cm/s
  - min. 0.01 cm/s

- CW velocity:
  - max. 3900 cm/s
  - min. 0.01 cm/s
- Sample volume size: 0.5-30mm (PW only)
- Sample gate depth: continuously adjustable
- Baseline: 9 steps
- PW Steer: available on linear transducers
- Volume: 0%-100%, 2%/step
- PW PRF: 1.0-23.1 kHz
- CW PRF: 0.1-104.0 kHz
- Gain: 0-100, 2/step
- Dynamic range: 24-72, 2/step
- Sweep speed: 6 steps
- Wall filter
  - PW: 14-1000 Hz
  - CW: 7-1200 Hz
- Invert: on/off
- Auto invert: on/off
- Angle correction: -89~89 degrees, 1/ step
- Quick angle: 0, -60, 60 degrees
- Gray map: 10 types
- Tint map: Off; 8 types
- Time/frequency resolution: 0-6, 1/ step
- HPRF: On/Off
- Auto calc: on/off
- Auto calc cycle: 1, 2, 3, 4, 5
- Auto Calc Loop: on/off
- Trace Sensitivity: -3~3, 1/step
- Trace Smooth: -2, -1, off, 1, 2
- Trace area: above, below, all

5.9 Free Xros M

- Display formats: V2:3, V3:2, V 3:1, H2:3 (V: vertical, H: horizontal)
- Color Free Xros M available
- Up to 3 lines
- Display all lines
- Sweep speed: 6 steps
- M Tint map: off, 8 types
- Gray Map: 8 types

5.10 Free Xros CM

- Only available in TDI mode
- Display formats: V2:3, V3:2, V 3:1, H2:3 (V: vertical, H: horizontal)
- Sweep speed: 6 steps
- Tint map: off; 8 types
- Gray Map: 8 types
- Edit, undo, delete function for curved line

5.11 TDI Imaging

- Imaging modes: TVI, TEI, TVD, TVM
- Spectral Doppler frequency: ≥5
- Max frame rate: 1587 f/s
- Tissue Velocity/Energy Imaging (included in TDI option)
  - Available on transducers SC6-1s/ SC8-2s/SP5-1s/P10-4s/P8-2s/P7-3Ts/P8-2Ts/P8-3Ts
  - Dual live: side by side displays B and B+TVI
  - PRF: 0.4-14.9 kHz
  - Acoustic output power: same as B mode
  - Gain: 0-100, 2/step
  - Dynamic range: 10-70, 5/step (TEI only)
  - ROI size/position: adjustable
  - Scale: max. 30 steps
  - Baseline: -8 – 8, 1/step (TVI only)
  - Wall filter: 8 steps
  - Packet size: 0-3,1/ step
  - Tissue state: L/M/H
  - Smooth: 0-6, 1/ step
  - B/C wide: on/off
  - Priority: 0%-100%, 1%/step
  - Color map: 10 types (TVI), 8 types (TEI)
  - Invert: on/off
  - Persistence:0-6, 1/ step
  - Velocity tag: on/off (TVI only)
  - Line density: L/M/H/UH
  - Image quality: 2 levels
- Tissue Velocity Doppler (included in TDI option)
  - Display formats: V2:3, V3:2, V3:1, H2:3, FULL, Duplex/Triplex (V: vertical, H: horizontal)
  - Sample volume size: same as PW
  - Sample volume depth: continuously adjustable
  - Scale: 30 levels
  - PRF: 0.7-23.1 kHz

- Baseline: 9 levels
- Gain: 0-100, 2/step
- Dynamic range: 24-72, 2/step
- Sweep speed: 6 steps
- Wall filter: 10 steps
- Invert: on/off
- Angle correction: -89-89 degrees, 1/step
- Quick angle: 0, -60, 60 degrees
- Gray map: 10 types
- Tint map: Off; 8 types
- Image quality: 2 levels
- Time/frequency resolution: 0-6, 1/ step

• Tissue Velocity Motion (included in TDI option)
- Display formats: V2:3, V3:2, V 3:1, H2:3, FULL (V: vertical, H: horizontal)
- Acoustic output power: same as B
- Gain: 0-100, 2/step
- M sweep speed: 6 steps
- Smooth: 0-6, 1/ step
- Color Map: 10 types
- Image quality: 2 levels
- Persistence: 0-6, 1/ step
- Packet size: 0-3, 1/ step
- Priority: 0%-100%, 1%/step
- Velocity tag: on/off
- Tissue state: L/M/H

5.12 3D/4D

• Supports Freehand 3D (linear, convex, phased transducers)
• Supports real-time 4D and Color 3D (abdominal volume and endocavity volume transducers)
• General Imaging modes: Surface, Min, Max, X-ray
• Supports multi virtual light sources: Point, Parallel, Torch etc. and free combination of light sources is supported.
• Supports off-line processing of 3D/4D data, and adjusts imaging before storage of stored data.

5.13 Smart 3D

• Smart 3D
Acquisition preparation:
- 3D/4D Scenario setting: Routine
- Acquisition Methods: Rocked, Linear
- Reset VOI: On/Off
- Flip VOI: On/Off
- Angle: 10-80°
- Distance: 10-200mm
- Acquiring Time: 1.0s-20.0s

VR:
- 3D/4D Scenario: Routine-Surf., iLive Gen., iLive Transp., Skeleton
- Reset: All, Orientation, Curve
- VOI: On/Off/Fixed
- Active quadrant: A, B, C, VR
- VR orientation: 0°, 90°, 180°, 270°
- Flip: flip VR
- Sync: synchronize VR with selected plane
- Orientation Assist: On/Off
- Threshold: 0-100%, 1%/step
- Opacity: 0-100%, 5%/step
- Brightness: 0-100%, 2%/step
- Contrast: 0-100%, 2%/step
- Smooth: 0-10, 1/ step
- Depth VR: Off/Black/Cyan/Blue/ Rose
- Tint: off; 8 types
- Degree: 10-80°
- Distance: 10-200mm

MPR:
- Active quadrant: A, B, C
- Gray Map: 1-8
- Brightness: 0-100%, 2%/step
- Contrast: 0-100%, 2%/step
- iClear: Off; 7 types
- Tint: Off; 8 types
- Thickness: 0-30mm

Adv.:
- Direction: Up/Down, Left/Right, Front/Back, Down/Up, Right/Left, Back/Front
- VR Refine: Off; 7 steps
- Surface enhance: 0-7, 1/step
- MagiClean: Off/Low/Mid/High/ Max
- Inversion: On/Off
- A3:1: On/Off
- Move light: On/Off

- Degree: 10-80°
- Distance: 10-200mm
- Main render: Surface, Max, Min, X Ray, iLive
- Sub render: Surface, Max, Min, X Ray
- Mix: Set the mix ratio of the two render modes

• Tool

Edit:

- Rubber: On/Off
- Eraser Diameter: 8-80, 1/step
- Cut (area selection): Polygon, Contour, Rectangle
- Undo: Undo, Undo All

3D Layout:

- Niche Views: Inner, Outer
- 3Slice
- Active Quadrant: A, B, C, Niche/ 3Slice

Auto rotation:

- Position: Set Start/Set End
- Direction: Left/Right, Up/Down
- Step: 1-15°
- Quick Angle: 30-180°
- Rotation control: play, single loop, loop
- Save AVI to USB

5.14 4D

- Available on all volume transducers
- Static 3D and real time 4D

Acquisition preparation:

- 4D frame rate: max. 80 vps
- 3D/4D Scenario setting: Smart Scene3D (Spine, Brain, Long Bone, Face, Endometrium, Pelvic), Routine, iLive Pro, Bone, Tissue (not all scenarios are listed)
- Refresh: On/Off
- Angle
- Quality: low1, low2, mid, high1, high2

VR:

- 3D/4D Scenario: Smart Scene 3D, Routine, iLive Pro, Bone, Tissue, Routine (not all scenarios are listed)
- 3D iClear: Off; 7 steps
- Face^{+}: Off, 3 steps
- Auto Play: Stop, x1, x2, x3, x1/2, x1/3
- Frame: Select a frame
- Other parameters are the same as Smart 3D

MPR

- 3D iClear: Off; 7 types
- Other parameters are the same as Smart 3D

Adv.:

- Threshold: 0%-100%
- Opacity: 0%-100%
- Brightness: 0%-100%
- Contrast: 0%-100%
- 3D iClear: Off, 1-7
- Smooth: 0-10
- Depth VR: OFF, Black, Cyan, Blue, Rose
- Tint: Off, 1-8
- Shading: 0-10
- Hyaline: 0%-100%
- Grad View
- Other parameters are the same as Smart 3D

Tool

The parameters are the same as Smart 3D

• 3D Reference Point

- Enable the operator to define one or more reference points on MPRs, which are then projected to VR image; helpful for the operator to better understand the corresponding spatial relations of VR image and MPRs
- Display: Point, H line, V line
- Delete All
- Hide All

• 3D Print

- Quality: Low, Mid, High
- Generate Mesh
- File Format: .stl, .obj, .ply, .3mf, .off
- Save mesh to USB
- Threshold: 0%-100%
- 3D iClear: Off, 1-7
- Smooth: 0-10

5.15 Color 3D

Provides more stereoscopic blood flow signals. It is mainly used in blood perfusion tissues in some complex space to make blood flow observation visually. 3D imaging in color and power modes is supported.

5.16 Niche

Compiles the 3 MPRs together according to their relative positions, to provide a much clearer interior anatomical structure for diagnosis

5.17 Smart Scene 3D

An innovative technique of automatic scenario-oriented volume scan for extremely easy, efficient and accurate exams. It is capable of automatically identifying tissue characteristics, such as fetal brain, fetal face, fetal bone, fetal spine

5.18 STIC

Spatio-Temporal Imaging Correlation, based on the movements of the fetus, rebuilt and show the anatomical structure within a physical movement by using the interconnection between the time and the space, for better diagnosis in 4D function.

5.19 iPage+

- Multiple tomographic parallel slices imaging, to display volume image with slices, for better display the spatial relationship of tissue and lesion.
- Displays ≥25 images at different depths on the screen at the same time, and the slice spacing is adjustable (0.5 mm-10 mm).

5.20 SCV+

Slice Contrast View Plus, includes SCV imaging and CMPR functions. SCV imaging can reduce speckle noise and improve contrast resolution as well as enhance signal-noise ratio, which helps in discovering diffuse pathology in organs. CMPR is to obtain a curved sectional image by dissecting the 4D image, so as to observe the curved tissue structure. In clinical application, it is often used to observe the curved anatomy in stretching such as fetal spine.

5.21 iLive

- An advanced rendering mode for realistic volume imaging display
- Brings a better imaging experience by adding lighting rendering effect to the traditional way, allowing human tissue texture to be revealed more clearly.
- Supports Hyaline function.

5.22 Smart Planes CNS

- A professional screening software of the fetal central nervous system. Automatically detect the standard CNS scanning planes, and calculate the anatomical parameters for each planes. It is used to assist doctors in diagnosis of fetal craniocerebral diseases in a more efficient and standardized way.
- Automatically acquire multiple standard cranial sections and acquire ≥4 commonly used measurement indicators
- Automatically display the standard planes: TCP, TTP, MSP and TVP
- Auto comment supported: A(anterior), P(posterior), L(Left), R(Right), U(Up), D(down), CSP, T, CH, CV, CM, LV on TCP, TTP, MSP and TVP
- Auto measurement supported:
  - TCD and Cist Maga (CM) on section TCP;
  - BPD, OFD and HC on section TTP;
  - LVW on section TVP
- Support editing measurement results
- Hide/show measurement results
- Support comment and bodymark on sectional plane

5.23 Smart ICV

- Smart intracranial volume, an advanced tool to detect fetal cranial tissue, provides automatic calculation of fetal intra-cranial volume for advanced fetal CNS study.
- Supports modifying the contour by trace, adaptive trace, control point editing, and recalculate the volume.

5.24 Smart Planes FH

- Detect automatically left ventricular outflow tract view, right ventricular outflow tract view, LAV-DA view, 3VV-T view and stomach bubble view
- Automatically acquire ≥6 standard fetal heart sections.

5.25 Smart Face

Allows to recognize fetal face and remove the shading obstacle data automatically, then display the face in an optimal viewing angle. At the same time, you can adjust the display direction of the fetal face by one click, and support forward/reverse rubber erasing.

5.26 Smart FLC (Smart Follicle)

- Automatically measures and calculate the number and size of follicles in the image area, and evaluate follicles according to the follicle size.
- Automatically segments the anechoic structure is by one click, and displays the anechoic structures at different positions and sizes in different colors.
- Automatically measures the follicle diameter, length at the X-axis, Y-axis, Z-axis, as well as the average value and volume of the three axes.

5.27 Smart-V (Smart Volume)

Fast volume calculation tools to calculate the volume of tissue structure or lesions

- Smart-V ROI: Manual ROI on A, B, C plane separately
- Smart-V Trace: Manual trace on A, B, C plane separately
- Smart-V Vocal/Smart-V Parallel: Trace contours on each slice separately

5.28 Smart ERA

- A fully automated endometrial receptivity analysis tool, Enables endometrium receptivity assessment with automated workflow.
- Supports automatic measurement of the segmented results.

5.29 RIMT (RF-Data based IMT)

- Available in single/dual B carotid exam mode
- Side: left/right
- Calculation of 6 RIMT values, RIMT average value, SD and ROI W
- Report operation:
- Data deleting
- RIMT trend graphic viewing
- Preview

5.30 iScape View

- Acquisition method: B and Power
- Supports speed indicator
- Actual size: on/off
- Fit size: on/off
- Ruler: on/off
- Tint map: off; 8 types
- Rotation: 0~355 degrees, 5/step

5.31 V Flow (Vector Flow)

- A novel approach for vascular hemodynamic analysis, using color coded vector arrows to display flow velocity magnitude and direction,
- Available on L9-3s/L14-3Ws/L13-3Ns in real-time B/Color carotid exam mode
- Quality: 1-8, 1/step
- V Flow map: 4 levels
- Gain: 0-8, 1/step
- Persistence: 0-5, 1/step
- Edge smooth: Low/Mid/High
- Wall filter: 8 steps
- Brightness: 0-100%, 5%/step
- Colorbar scale: 50-100cm/s, 10cm/s/step
- Arrow life time: 10-50, 1/step
- Arrow size: S/M/L/XL/XXL
- Arrow density: 1%-10%,1%/step
- Packet Size: 0-3, 1/step
- Acquire Time: 0.5, 0.6, 0.8, 1.0, 1.2, 1.5s

5.32 Contrast Imaging*

- Contrast imaging technology, which provides exceptional contrast agent detecting capability, not only extracts second harmonic, but also non-linear fundamental signals
- Available on C6-2Gs/C11-3s/SC6-1s/SC8-2s/C4-1s/C9-3Ts/CB10-4s/V11-3Hs/V11-3HBs/L9-3s/L14-3Ws/L20-5s/L16-4Hs/7LT4s/L12-3RCs/L13-3Ns/SP5-1s/LAP13-4Cs/DE11-3Ws/SD8-1s/ELC13-4s

- Micro Flow Enhancement (MFE) available
- Timer1: on/off
- Timer2: on/off
- Pro capture: captures prospective image less than 480s preset table
- Retro capture: captures retrospective image less than 120s preset table
- Dual live: side by side displays tissue image and contrast image
- MFE period: 0.1s, 0.2s, 0.4s, 0.6s, 0.8s, 1.0s, MAX
- Destruct: instantly destroy contrast bubbles
- Destruct AP: -30~0 dB, 0.3/step
- Destruct time: 500-2000 ms,75/step
- iClear: off; 7 steps
- Mix: mix contrast image with tissue image
- Mix map: 7 types, available when Mix mode is active
- Persistence: 8 steps
- Dynamic range: same as B mode
- Gray map: 8 types
- Tint map: off; 8 types
- Supports U/D Flip and L/R Flip
- Rotation: same as B mode
- CEUS Position: on/off
- Line density: L/M/H/UH
- FOV: on/off
- FOV size/position: continuously adjustable
- ExFov: off, 1-2, 1/step
- Gain: 0-100, 1/step
- iTouch: on/off, -8~8, 2/step
- Image quality: 3 levels
- Smooth: 0-6, 1/step
- Enhance: on/off
- Markline: on/off
- LGC: 8 points
- ZoneVue
- Tissue Gain: 0-100,1/step
- *This ultrasound series is designed for compatibility with commercially available ultrasound contrast agents. Because the availability of these agents is subject to government regulation and approval, product features intended for use with these agents may not be commercially marketed nor made available before the contrast agent is cleared for use. Contrast related product features are enabled only on systems for delivery to an authorized country or region of use. Mindray medical systems makes no claims concerning the safety or effectiveness of contrast agents.

5.33 Contrast Imaging QA

- Support Time-Intensity Curve analysis
- Table display: display data in table
- Up to 8 ROIs
- Delete all
- Delete current
- Fit curve
- Raw curve
- Motion tracking: Reduce the effect of tissue movement
- X scale: 1-5, 1/step
- Export: export current data as CSV format file

5.34 LVO

- Only available in cardiac exam mode
- Dedicated left ventricle contrast imaging tool

5.35 Low MI Contrast

- Only available in cardiac exam mode
- Enhances echo reflection by using contrast agent to perform myocardial analysis based on echocardiography technique

5.36 Volume CEUS

- Available on DE11-3Ws/SD8-1s
- Timer1: on/off
- Timer2: on/off
- Capture 3D image

5.37 CEUS Chrono-Parametric Mode

- To intuitively visualize the difference between the target lesion and surrounding tissue, CCPM depicts temporal information as a color coded map superimposed on the CEUS image.
- Available under 2D and 4D mode.
- Background: set the background image for the color coding of arriving time.

- Motion Tracking: enable or disable motion tracking compensation.
- Transparency: adjust the transparency for the color coding of arriving time.
- Threshold: adjust the threshold of the contrast agent arriving time.
- Color Map: used during color coding of the contrast agent arriving time in the contrast image.

5.38 TCMR

Tissue-Contrast Mix Rendering, a mixed rendering mode with both contrast perfusion and tissue information for intuitive display of the spatial relationship and helpful for easy positioning and lesion diagnosis.

5.39 STE Imaging (Sound Touch Elastography Imaging)

- Available on C6-2Gs/SC6-1s/SC8-2s/C4-1s/L9-3s/L14-3Ws/L20-5s/L13-3Ns
- Endocavity STE
  - CB10-4s, V11-3Hs, DE11-3Ws, ELC13-4s
  - 2D real-time STE of the endocavity transducer. Mainly used for urology and gynecology examinations.
- Display Format: V1:1, H1:1, FULL
- Invert: on/off
- HQ Elasto: on/off
- E Quality: Pen, Gen, Res
- Elas.Metric: E, Cs, G
- Scale: 30 levels
- Opacity: 0-5, 1/step
- Map: 3 types
- ROI Width/Height: continuously random adjustable
- ROI Center Depth: continuously adjustable
- Depth: same as B mode
- iLayering: on/off
- Filter: 0, 1
- RLB View: on/off
- M-STB Index: on/off
- M-STB Sensibility: 0~4, 1/step
- Smooth: 0~2, 1/step
- Persistence: 0~2, 1/step
- RLB Map: on/off, RLB, RLB&E, RLB&B&E
- Map Position: 0%~100%, 5%/step
- E bar: Mean, Max, Min, SD
- E Avg: off, 8 levels
- Select/Bad: on/off
- Lesion: off,1~10
- FS Mode: on/off

5.40 High frame rate STE

To increase the frame rate of STE function.

5.41 Strain Elastography

- Available on V11-3Hs/V11-3HBs/L9-3s/L14-3Ws/L20-5s/L16-4Hs/7LT4s/L12-3RCs/L13-3Ns/DE11-3Ws/ELC13-4s
- Support strain, strain ratio and strain histogram measurement
- Unique shell analysis function
- Stress compensation technology reduces deeper tissue artifacts, obtain more uniform stress throughout whole field
- Stress indicator: supports frame by frame stress indication.
- Map: 6 types
- Smooth: 0-5, 1/ step
- Opacity: 0-5, 1/step
- ROI Width/height: continuously adjustable
- Invert: on/off
- Display Format: V1:1, H1:1, FULL
- Strain mode: 0~1, 1/step
- Dynamic Range: 0~5, 1/step
- Map Position: 0%~100%, 5%/step

5.42 STQ Imaging (Sound Touch Quantification Imaging)

- Available on C6-2Gs/SC6-1s/SC8-2s/C4-1s/CB10-4s/V11-3Hs/L9-3s/L14-3Ws/L20-5s/L13-3Ns/DE11-3Ws/ELC13-4s
- ROI Adjustment: adjust the ROI fixed size
- Elas.Metric: E, Cs, G
- The square height of the elasto curve represents the average value of the elasto metric for current frame.
- E bar: Mean, Max, Min, SD
- M-STB Index: On/Off
- M-STB Sensibility: 0-4, 1/step
- Filter: 0, 1
- Smooth: 0-2, 1/step

- Persistence: 0-2, 1/step
- Map Position: 0~100%, 5%/step
- Lesion: off, 1~10
- Scale: 0-9, 1/step
- E Avg: off, 8 levels
- HQElasto: on/off
- FS Mode: on/off

5.43 Fatty Liver Lab

Only the SC6-1s transducer supports this function

- USAT
  UltraSound ATtenuation analysis enables quantitative fatty liver assessment by measuring the attenuation coefficient.
- HRI+
  HepatoRenal Index Plus enables quantitative fatty liver assessment by measuring the echo intensity ratio between the liver parenchyma and the renal cortex based on the RF data.
- LTI
  Liver Texture Index enables quantitative fatty liver assessment by statistically analyzing the size and density of scatters of the liver parenchyma
- Parameters of USAT, HRI+, and LTI
  Note: the parameter items may vary based on the specific fatty liver lab mode selected
  - Scan Time: Single, 1s, 2s, 3s, MAX
  - H-ROI Size: 10mmx10mm~26mmX26mm(2mm/step), 30mmx30mm
  - M-STB Index: On/Off
  - Filter: 0, 1, 2
  - M-STB Sensi.: 0~4,1/step
  - H1:1: On/Off
  - Full: On/Off
  - E bar: Mean, Max, Min, SD (the value may varies based on the specific fatty liver lab mode selected)
  - RLB Map: On/Off
  - RLB View: On/Off
  - Opacity: 0~9, 1/step
  - Map: F1~F4, 1/step
  - Att.Metric: dB/cm/MHz, dB/m/MHz, dB/m
  - Scale: 0~10, 1/step
  - Frame Average: 1, 3, 5, 7, 10 (the value may varies based on the specific fatty liver lab mode selected)
  - Select/Bad: 1~10, 1/step

5.44 Ultrasound Fusion Imaging

- Available on C6-2Gs/SC6-1s/SC8-2s/C4-1s/L14-3Ws/L13-3Ns/SP5-1s in B/ Color/ Power/ contrast imaging mode (non-cardiac)
- Single window display
- Fusing CT/MR/PET/freehand volume data with the ultrasonic image
- CT/MR/PET data reconstruction for 3D displaying
- Tracking system: on/off
- Fusion ratio: -1~1, 0.1/step
- Axis rotation: 0° ~ 360° based on X-axis, Y-axis or z-axis in increment of 2°.
- ROI Offset X: -630~630
- ROI Offset Y: -566~566
- Window W/L: 1/step. Adjust the CT/MR/PET/freehand brightness and the contrast by changing the width and the level.
- Reset Window W/L
- Reset CT/MR
- Display marks
- Respiration curve: on/off
- Respiration Range: 0/1/2
- View Type: Axial, Coronal, Sagittal
- Quick Translation
- Registration
- Mark on Volume Data/Mark on Fusion Image
- Support general measurement
- Support adding comment and bodymark

5.45 Endocavity Fusion Imaging

Mainly used for endocavity transducer, fusing real-time ultrasound and CT/MR images.

5.46 Fusion RESP

By automatically detecting the patient's respiratory motion signal, provide the respiratory motion compensation technology, reduce the fusion distortion caused by the patient's respiration, and provide more accurate fusion imaging.

5.47 AutoEF

- Automatic Ejection Fraction Measurement, it provides an efficient way to detect the left ventricle and calculate the EF.
- Output EDV/ESV/EF/SV/CO by Simpson method
- Activated with or without ECG
- Adjustment for the border of endocardium by single point or multi points
- Adjust Frame
- Layout: Dual/ Single
- Diastole FR
- Systole FR
- Volume curve: on/off

5.48 TDI QA

- Dedicated quantification tool for TDI velocity, strain, strain rate analysis
- Ellipse ROI, Standard ROI
- Up to 8 of ROI
- ROI tracking: tracking ROI along with cardiac movement
- Delete all
- Delete current
- Smooth: 1-7, 1/step
- X scale: 1-5,1/step
- Std.Height: 1.5-50 mm
- Std.Width: 1.5-50 mm
- Std.Angle: -89-90 degrees
- Export: export current data as CSV format file

5.49 TT QA

- Available on SP5-1s/P10-4s/P8-2s in adult cardiac, cardiac-difficult (car-penetration), and pediatric cardiac exam modes.
- Tissue tracking quantitative analysis
- Mandatory ECG connection before TT QA cine acquisition
- Six views for analysis: ALAX, A4C, A2C, PSAXB, PSAXM, PSAXAP
- Reload: reload cine again for new study
- Edit: modify trace points
- Start tracking
- Accept & compute: start tracking myocardium movement when user accept trace result
- Display effect: 0/1; at 0, tracking in dots; at 1, tracking in velocity vector arrow
- Trace method: 3 point or manual for ALAX, A4C, A2C; manual for PSAXB, PSAXM, PSAXAP
- Bull's eye: trace result in bull's eye model
- LGC: available
- Valve's open and close time index: MVC, MVC', AVC, AVO, MVO
- Data export: export data in CSV file
- Cycle: ECG triggered cardiac cycle recognition for analysis; adjustable
- Auto play: stop, X1/10, X1/5, X1/4, X1/3, X1/2, X1, X2, X3
- Thickness: 1-30mm, 1mm/step; adjust trace thickness
- Track point: 20-40, 1/step
- Parameter: Volume, Speed, Displacement, L Strain, L Strain R, T Strain, T Strain R, Area, R Strain, R Strain R, C Strain, C Strain R, C Rotation, C Rotation R
- Smooth: 0-4, 1/step
- Trace method: 3 point, manual
- Tracking cycles: 1, 3
- Blue's Eye view
- Curve Display
- Torsion & Torsion Rate Curve
- LGC adjustment

5.50 Fetal Heart TT QA

- Fetal Heart Tissue Tracking with Quantitative Analysis, Real-time track the continuous motion of fetal myocardium, display the mechanical changes of each segment in the longitudinal, circumferential and radial directions, offering accurate and effective evaluation of myocardial movement of fetal heart

- Available Under Fetal Echo related exam modes

5.51 Stress Echo

- Available on SP5-1s/P10-4s/P8-2s in cardiac mode
- 14 factory protocols
- User-defined protocols
- ECG triggered acquisition, display, selection, comparison, evaluation and archiving of multiple cardiac loops during various stages of a stress echo examination
- Customized stages: up to 7 views per stage, and up to 12 stages per study
- View: standard views (PLAX, SAB, PSAX, SAA, A4C, A2C, ALAX), and customized views
- Image acquisition
  - R-wave trigger
  - Acquire mode: Manual ROI or full screen
  - Ability to acquire frames or clips in B-mode, M-mode, Color, PW and TDI
- Image selection
  Attach the images with view annotation label (PLAX, SAB, PSAX, SAA, A4C, A2C, ALAX, and customized views)
- Review
  Automatically adjust to the number of images user defined
- Wall Motion Scoring
  - ASE 16 (with score 4-7), or ASE 17(with score 4-7)
  - Graphical display of scoring (Normal, Hyperkinetic, Severely Hyperkinetic, Akinetic, Dyskinetic)
- LV volume measurement
  Measurement of LV Volume in all phases of cardiac cycle
- Report
  Reporting for both Wall Motion Scoring and LV volume measurement

5.52 Smart IVC

Automatic Inferior Vena Cava trace and calculation, automatically trace the IVC diameter change, and calculate the CI, DI and IVC Variation, helping for volume status assessment and guide the fluid therapy.

5.53 Smart VTI

Automatic Velocity Time Integral measurement, automatically trace the PW spectrum of LVOT, and obtain VTI, SV, CO and SVV, for rapid assessment of volume responsiveness.

5.54 Smart B-line

- Used to detect B lines of the lung in B mode
- Acquisition method: single B in real-time or freeze mode
- Scanning areas: 6 Zones, 8 Zones, 12 Zones
- Auto Calc
- OverView
- Image and diagnosis comments

5.55 R-VQS

- RF-data Based Quantitative Analysis on Vessel Stiffness
- Track movements of the upper and lower vessel walls automatically
- Displacement and Vessel diameter display in the result window.
- Motion curve of vessel walls display under the image in real time.

5.56 Smart Pelvic

- Enter smart pelvic in 2D or 3D/4D scanning mode.
- Set Rest and Valsalva frame
- Measure automatically

5.57 Smart Fetal HR (Fetal Heart Rate)

Measure the fetal heart rate automatically on B/M mode

5.58 Smart Breast

- Automated breast mass BI-RADs classification and reporting tool, which provides automated breast ultrasound lesion classification and reporting, and it can be used as breast ultrasound quality control solution with high-efficiency.
- Standardized scanning procedure based on the lesions, and Standardized scanning procedure guide

- Automatic lesion identification, detection, measurement, comment, report generation, etc.
- Multi-lesion& multi-plane management and analysis

5.59 Smart Thyroid

- Automated thyroid ultrasound analysis and reporting tool, for efficiency and standardization of thyroid nodule diagnosis.
- Standardized scanning procedure based on the lesions, and Standardized scanning procedure guide
- Automatic lesion identification, detection, measurement, comment, report generation, etc.
- Multi-lesion& multi-plane management and analysis

5.60 IVF

- In Vitro Fertilization, includes dedicated IVF image parameter/ measurement/comment/bodymark / report
- The uterus and follicle growth curve can be displayed in the IVF report.
- Data of IVF history exams can be checked in the IVF report.
- The user-defined analysis model is supported for reproductive function evaluation.

5.61 iScanHelper

- An ultrasonic tutorial and assistant package integrated in ultrasound devices.
- Tutorial function as a guidance to show basic scanning skill with graphic of transducer position, schematic of anatomy and example clinical image
- Supports Abdomen, gynecological, urological, obstetrical, Small Parts and nerve block area.

5.62 iCompare

Allow to compare real-time ultrasound imaging to images from iStation; Helpful to easily evaluate and follow up the progression of disease, treatment effect monitoring

5.63 V-Mapping

- Manually edit the vascular body mark.
- Manually edit the body mark through the touch screen to Intuitively display the lesion position.

6 Cine Review and Raw Data Processing

6.1 Cine review

- Available in 2B, Color, Contrast, 4D modes.
- Supports editing and clipping during cine review. Frame by frame manual cine loop review or auto playback with variable speed
- Save and edit the clipped and edited cine images for many times
- Maximum cine memory up to 44107 frames (B storage server) or 134.05s (M storage server) (depends on the mode)
- Maximum 4D cine memory: 10721 volumes (DE11-3Ws)
- Retrospective storage (1-120s pre-settable) and prospective storage (1-480s pre-settable)
- Frame compare: displays one cine in dual format and allows frame by frame compare side by side
- Cine compare: compare cines which are saved in same imaging mode
- Jump to first and jump to last: one keystroke go to first or last frame in the cine

6.2 Raw data processing

- B-mode
  - TGC
  - Gain
  - Dynamic range
  - Gray map
  - Tint map
  - iClear
  - L/R Flip
  - U/D Flip
  - Rotation
  - iTouch
  - LGC
  - Dual live

- Auto Merge
- H Scale
- Echo Boost
- B/iNeedle
- Smooth
- Zoom
- Ref Lines
- Dehaze
- V1:1
- XL View
- Edge Enhance

• M-mode
- Gain
- Speed
- Dynamic Range
- Gray Map
- Tint Map
- Display format

• Color
- Gain
- Baseline
- Smooth
- Color map
- Priority
- Dual Live
- Invert
- Velocity tag
- Glazing flow

• PW
- Gain
- Baseline
- Volume
- Angle
- Speed
- Dynamic range
- Gray map
- Tint Map
- Display format
- Invert
- WF
- T/F Res

7 Measurement/Analysis and Report*

NOTICE:

For general measurement, automatic measurement, and clinical measurement packages, see the Appendix.

7.1 Automatic Measurement and Analysis

• AutoCalc
- PS
- ED
- MD
- PPG
- TAMAX
- Vol Flow(TAMAX)
- TAMEAN
- Vol Flow(TAMEAN)
- Vas Diam
- Vas Area
- DT
- MPG
- MMPG
- VTI
- AT
- S/D
- D/S
- PI
- RI
- PV
- HR

• IMT (Intima-Media Thickness Measurement)

Automatic detection, measurement and analysis of IMT when ROI is set

• Smart OB
- Auto measurement for OB, a special tool for easy OB scan, and greatly reduce time and increase productivity
- Support BPD, HC, OFD, FL, AC, HUM. More than 6 automatic measurement items are supported.

• Smart NT

Automatic detection and measurement of fetal nuchal translucency, which makes NT evaluation more efficient and accurate.

• Smart HIP

Automatic hip measurements and Graf classification of neonatal and pediatric hip for easy screening of DDH (Developmental Dysplasia of the Hip).

- Smart HRI
  Hepato-Renal Index, which is provided automated liver steatosis assessment by automatically calculating brightness scale ratio between the liver with renal cortex in B mode.
- Smart Trace
  A smart tool for easy and precise boundary trace
  Automatically identify and trace lesions, as well as measure the length, area and circumstance of the long axis and short axis within the defined ROI.
- CPP
  Measure the blood flow signal distribution in the defined ROI under the Color/Power mode, and calculate the color pixel percentage within the defined ROI.
- Smart Bladder
  Auto measure three diameters and calculate the bladder volume
- Smart Calc
  Automatic trace, measurement and calculation tool

7.2 User-defined Measurement

Supports user-defined measurement calculations and studies

7.3 Report

- Specific report template by application
- Editable value in report
- Images selectable
- Able to Export as PDF file
- Presettable hospital information
- Anatomy information for vascular and OB report
- Editing though iReport
- User-defined report template
- Selecting report modules
- Adding/removing measurement items from the report
- Changing report layout
- Load/save comment
- Viewing history reports
- Preview and printing reports

7.4 Comments/Bodymark

- Supports text input and arrow
- Voice annotation: record voice as annotation for images and cine
- Support freehand marking on touch screen
- Adjustable text size and arrow size
- Supports home position
- Covers various application
- More than 250 bodymarks for versatile application
- User customizable Comments/ Bodymark

7.5 iWorks

- Auto workflow protocol, can be combined with a standardized exam protocol to facilitate a more efficient and standard ultrasound exam in the clinic with guidance.
- Automatically add comments, body marks and switch the image mode according to the protocol.
- Templates are user configurable
- Template import and export are available
- Functions: pause, stop, replace, repeat, skip, insert single step, return and continue, steps in thumbnail
- iNSert another template during the iWorks process.
- iWorks setup mode: B; B/B (Dual Live); Dual B/B; Color; B/Color (Dual Live); Power; B/Power (Dual Live); B + PW; Color + PW; Power + PW; B + CW; Color + CW; B+M; B+TVI; TVI+TVD; iScape View.
- iWorks setup annotation: support up to 2 annotations, location and font size are configurable.
- iWorks setup bodymark: select existing library, and transducer indicator is pre-settable
- iWorks setup measurement: select existing measurement library

* Not all measurements are listed in this part; For more detailed information, please refer to User Manual

8 Exam Storage and Management

8.1 Exam Management

- iStation workstation dedicated for patient information management
- Workstation dedicated for image management
- Workstation dedicated for report and report template management
- Workstation dedicated for exam management
  - Patient exam query/retrieve
  - Support review of current and past exam
  - New exam, Activate exam, Continue exam functions, End exam are available
  - Support measurements and calculations on archived exam and images

8.2 Exam Storage

- Supports local hard disk storage: 1TB HDD (Hard Disk Drive) and 128G SSD (Solid State Drive)
- Direct digital storage of single frame and cine files.
- Export images in BMP/JPG/TIFF/DCM/AVI/MP4/WMV format
- Supports back-end storage, export and backup of image data, real-time exam, without affecting exam operation.
- Supports backup/send to USB devices
- Supports backup/send to DVD-RW media
- Supports DICOM 3.0
- Supports network storage (iStorage). Based on the TCP/IP protocol, the ultrasound image and report can be directly transmitted to the PC device.
- Supports print service.

9 Connectivity

9.1 Ethernet Network Connection

- Cable connection
- Wireless connection

9.2 DICOM 3.0

- DICOM Basic
  - Verify (SCU, SCP)
  - Print
  - Store
  - Storage Commitment
  - Media Exchange
- DICOM Worklist
- DICOM Query/Retrieve
- DICOM Modality Performed Procedure Step - MPPS
- DICOM OB/GYN structure report
- DICOM Cardiac structure report
- DICOM Vascular structure report
- DICOM Breast structure report
- DICOM Abdomen structure report
- DICOM Small Parts structure report
- DICOM Pediatric structure report
- DICOM Urology structure report

9.3 UltraView

Off-line analysis workstation, PC-based ultrasound image analysis software. Supports post-processing and more measurement analysis of ultrasound image off-line.

- Components:
  - DICOM Basic
  - DICOM Query/Retrieve
  - DICOM OB/GYN SR
  - DICOM Cardiac SR
  - DICOM Vascular SR
  - DICOM Breast SR
  - TDI QA
  - Contrast Imaging QA
  - Tissue Tracking QA
  - iPage
  - Niche
  - SCV (Slice Contrast View)
  - iLive
  - Smart OB
  - Smart NT
  - IVF
  - AutoEF
  - IMT
  - Stress Echo
  - Ultrasound Fusion Imaging
  - Smart Planes CNS

9.4 UltraAssist

Direct network storage tool between ultrasound system and personal computer

- The ultrasound system supports sending reports or patient information to the PC via iStorage.
- The PC supports import custom report templates and test items to the ultrasound system via iReport and iMeasurement.

9.5 MedSight

- An interactive App that lets you transfer clinical images straight from Mindray Ultrasound system to a smart device, such as mobile phone or tablet PC
- Transfer images or clips from system to mobile terminal through Wi-Fi
- Support both iOS and Android system
  - Android (4.0 and above)
  - iOS (7.0 and above)
  - For iOS powered smart device: DICOM is mandatory
  - For Android powered smart device: DICOM not necessary

9.6 MedTouch

- Connect Ultrasound machine to smart devices based on Android and iOS system, such as tablet PC or mobile phone. Remote control of Ultrasound machine, review of patient information, and tutorial software iScanHelper study on smart devices
- Supports remote control of the Ultrasound machine, to adjust parameter (Gain, Depth, Freeze/ Unfreeze, Image Storage, Zoom, iTouch, mode switching among B, Color, Dual Live).
- Support Android and iOS powered smart devices
  - Android 4.0 and above
  - iOS 7.0 and above
  - DICOM not necessary

10 Transducers

10.1 Curved Array

- C6-2Gs
  - Application: Obstetrics, Gynecology, Abdominal, Urology
  - Advanced Function: iScape View, Free Xros M, Color M, Smart 3D, Contrast Imaging (Gynecology, Abdominal), STE (Abdominal), STQ (Abdominal), Ultrasound Fusion Imaging
  - Bandwidth: 1.2-6.0 MHz
  - Number of Elements: 128
  - FOV (max): 94°
  - Extended FOV: 106°
  - Convex Radius: 20 mm
  - Depth: 4.0-40 cm
  - Physical Footprint: 37.6 mm × 19 mm
  - Footprint: 31.5 mm ×11.2 mm
  - B-mode Frequencies: 1.2-3.8, 1.7-5.2, 2.0-6.0 MHz
  - Harmonic Frequencies: 3.2, 4.0, 5.0 MHz
  - Color Frequencies: 2.0, 2.5, 3.0, 3.5 (HR Flow) MHz
  - PW Frequencies: 2.0, 2.5, 3.0 MHz
  - Biopsy Guide: NGB-024, multi angle, reusable; LPUBKG81 (disposable)
- C11-3s
  - Application: Abdominal, Vascular, Cardiac, Small Organ, Pediatric, Cephalic
  - Advanced Function: iScape View, Free Xros M, Color M, Smart 3D, Contrast Imaging (Abdominal, Vascular)
  - Bandwidth: 2.6-12.8 MHz
  - Number of Elements: 128
  - FOV (max): 101°
  - Extended FOV: 113°
  - Convex Radius: 15 mm
  - Depth: 1.5-35 cm
  - Physical Footprint: 32.8 mm × 25 mm
  - Footprint: 27.4 mm × 8.4 mm

- B-mode Frequencies: 2.6-6.5, 3.2-7.9, 4.7-12.8 MHz
- Harmonic Frequencies: 6.0, 7.0, 8.0 MHz
- Color Frequencies: 4.4, 5.0, 5.7, 5.0 (HR Flow) MHz
- PW Frequencies: 4.4, 5.0, 5.7 MHz
- Biopsy Guide: NGB-018, multi angle, reusable

- SC6-1s
  - Application: Obstetrics, Gynecology, Abdominal, Small Organ, Musculo-skeletal, Vascular, Urology, Nerve, Thoracic/pleural
  - Advanced Function: iScape View, Free Xros M, Color M, Smart 3D, TDI (Obstetrics), Contrast Imaging (Gynecology, Abdominal, Vascular, Urology), STE (Abdominal), STQ (Abdominal), Ultrasound Fusion Imaging
  - Bandwidth: 1.2-6.0 MHz
  - Number of Elements: 192
  - FOV (max): 60°
  - Extended FOV: 72°
  - Convex Radius: 60 mm
  - Depth: 4.0-40.0 cm
  - Physical Footprint: 65.1 mm × 16.4 mm
  - Footprint: 64.9 mm ×16.2 mm
  - B-mode Frequencies: 1.2-3.8, 1.7-5.2, 2.0-6.0 MHz
  - Harmonic Frequencies: 4.0, 5.0, 6.0 MHz
  - Color Frequencies: 2.0, 2.5, 3.0, 3.3 (HR Flow) MHz
  - PW Frequencies: 2.0, 2.5, 3.0 MHz
  - Biopsy Guide: NGB-022, multi angle, reusable; LPUBKG60 (disposable); CIVCO 658-004-1/2/3/4/5 (disposable)
- SC8-2s
  - Application: Obstetrics, Gynecology, Abdominal, Urology, Vascular
  - Advanced Function: iScape View, Free Xros M, Color M, Smart 3D, TDI (Obstetrics), Contrast Imaging (Gynecology, Abdominal, Urology, Vascular), Ultrasound Fusion Imaging, STE (Abdominal), STQ (Abdominal)
  - Bandwidth: 1.8-8.2 MHz
  - Number of Element: 192
  - FOV (max): 76°
  - Extended FOV: 88°
  - Convex Radius: 40 mm
  - Depth: 4.0-40.0 cm
  - Physical Footprint: 26.3 mm × 66.9 mm
  - Footprint: 15 mm × 52 mm
  - B-mode Frequencies: 1.8-5.4, 2.3-6.8, 2.8-8.2 MHz
  - Harmonic Frequencies: 4.0, 5.5, 6.0 MHz
  - Color Frequencies: 3.0, 3.5, 4.0, 3.5 (HR Flow) MHz
  - PW Frequencies: 3.0, 3.5, 3.8 MHz
  - Biopsy Guide: NGB-029, multi angle, reusable
- C4-1s
  - Application: Gynecology, Obstetrics, Abdominal, Small Organ, Vascular, Urology, Thoracic/pleural
  - Advanced Function: iScape View, Free Xros M, Color M, Smart 3D, Contrast Imaging (Gynecology, Abdominal, Vascular, Urology), STE (Abdominal), STQ (Abdominal), Ultrasound Fusion Imaging
  - Bandwidth: 1.0-4.5 MHz
  - Number of Elements: 64
  - FOV (max): 56°
  - Extended FOV: 81°
  - Convex Radius: 30 mm
  - Depth: 4.0-40.0 cm
  - Physical Footprint: 42.4 mm × 25.4 mm
  - Footprint: 34.1 mm × 17.5 mm
  - B-mode Frequencies: 1.0-3.0, 1.6-3.3, 2.3-4.5 MHz
  - Harmonic Frequencies: 2.4, 3.0, 3.4 MHz
  - Color Frequencies: 1.6, 1.9, 2.3, 2.5 (HR Flow) MHz
  - PW Frequencies: 1.6, 1.9, 2.5 MHz
  - Biopsy Guide: NGB-036, multi angle, reusable; CIVCO 698-013

(disposable); CIVCO 698-019 (disposable)

- CB10-4s
  - Application: Urology
  - Advanced Function: iScape View, Free Xros M, Color M, Smart 3D, Endocavity STE, STQ, Contrast Imaging
  - Bandwidth: 2.6-12.8 MHz
  - Number of Elements: 128
  - FOV (max): 165°
  - Extended FOV: 205°
  - Convex Radius: 9 mm
  - Depth: 1.5-28.0 cm
  - Physical Footprint: 22.5 mm × 20.1 mm
  - Footprint: 20.1 mm × 9 mm
  - B-mode Frequencies: 2.6-6.5, 3.2-7.9, 4.7-12.8 MHz
  - Harmonic Frequencies: 7.0, 8.0, 9.0 MHz
  - Color Frequencies: 4.4, 5.0, 5.0, 5.0 (HR Flow) MHz
  - PW Frequencies: 4.4, 5.0, 5.7 MHz
  - Biopsy Guide: NGB-004, single angle, reusable; CIVCO 610-543 (disposable); CIVCO 610-1274 (disposable)
- C9-3Ts
  - Application: Abdominal, Obstetrics, Musculo-skeletal, Vascular, Small Organ, Intra-operative, Pediatric
  - Advanced Function: iScape View, Free Xros M, Color M, Smart 3D, Contrast Imaging (Abdominal)
  - Bandwidth: 2.6-9.0 MHz
  - Number of Elements: 128
  - FOV (max): 68°
  - Extended FOV: 80°
  - Convex Radius: 33 mm
  - Depth: 4.0-40.0 cm
  - Physical Footprint: 46 mm × 37.5 mm
  - Footprint: 42 mm × 10.5 mm
  - B-mode Frequencies: 2.6-4.8, 3.6-6.4, 4.5-7.2, 5.5-9.0 MHz
  - Harmonic Frequencies: 4.5, 5.0, 6.0 MHz
  - Color Frequencies: 3.0, 3.3, 3.5, 3.3 (HR Flow) MHz
  - PW Frequencies: 3.0, 3.3, 3.8 MHz
  - Biopsy Guide: not available
- V11-3Hs
  - Application: Obstetrics, Gynecology, Urology
  - Advanced Function: iScape View, Free Xros M, Color M, Smart 3D, Contrast Imaging (Gynecology, Urology), Strain Elastography (Gynecology, Urology), Endocavity STE (Gynecology, Urology), STQ (Gynecology, Urology), Endocavity Fusion Imaging (Urology)
  - Bandwidth: 3.0-11.0 MHz
  - Number of Elements: 192
  - FOV (max): 170°
  - Extended FOV: 210°
  - Convex Radius: 11 mm
  - Depth: 1.5-28.0 cm
  - Physical Footprint: 24.9 mm × 21.8 mm
  - Footprint: 24 mm × 9 mm
  - B-mode Frequencies: 3.0-7.0, 4.0-9.0, 5.0-11.0 MHz
  - Harmonic Frequencies: 8.0, 9.0, 10.0 MHz
  - Color Frequencies: 4.4, 5.0, 5.7, 5.5 (HR Flow) MHz
  - PW Frequencies: 4.5, 5.0, 5.5 MHz
  - Biopsy Guide: NGB-025, single angle, reusable; CIVCO 610-543 (disposable); CIVCO 610-1274 (disposable)
- V11-3HBs
  - Application: Obstetrics, Gynecology, Urology
  - Advanced Function: iScape View, Free Xros M, Color M, Smart 3D, Contrast Imaging (Gynecology, Urology), Strain Elastography (Gynecology, Urology)
  - Bandwidth: 3.0-11.0 MHz
  - Number of Elements: 192
  - FOV (max): 180°
  - Extended FOV: 240°
  - Convex Radius: 11 mm
  - Depth: 1.5-28.0 cm

- Physical Footprint: 23.4 mm × 19.2 mm
- Footprint: 23.8 mm × 9.1 mm
- B-mode Frequencies: 3.0-7.0, 4.0-9.0, 5.0-11.0 MHz
- Harmonic Frequencies: 8.0, 9.0, 10 MHz
- Color Frequencies: 4.4, 5.0, 5.7, 5.5 (HR Flow) MHz
- PW Frequencies: 4.5, 5.0, 5.5 MHz
- Biopsy Guide: NGB-048, single angle, reusable

10.2 Volume

- DE11-3Ws
  - Application: Obstetrics, Gynecology, Urology
  - Advanced Function: iScape View, Free Xros M, Color M, 3D/4D, Contrast Imaging (Gynecology, Urology), Volume CEUS (Gynecology, Urology), Strain Elastography (Gynecology, Urology), Endocavity STE (Gynecology, Urology), STQ (Gynecology, Urology)
  - Bandwidth: 2.0-9.0 MHz
  - Number of Elements: 192
  - FOV (max): 162°
  - Extended FOV: 187°
  - Volume Sweep Angle (max): 120°
  - Convex Radius: 10 mm
  - Depth: 4.0-40.0 cm
  - Physical Footprint: 24 mm × 24 mm
  - Footprint: 24 mm × 24 mm
  - B-mode Frequencies: 2.0-6.0, 2.8-8.2, 3.0-9.0 MHz
  - Harmonic Frequencies: 4.0, 5.0, 6.0 MHz
  - Color Frequencies: 4.4, 5.0, 5.7, 5.0 (HR Flow) MHz
  - PW Frequencies: 4.4, 5.0, 5.7 MHz
  - Biopsy Guide: NGB-047, single angle, reusable
- SD8-1s
  - Application: Obstetrics, Gynecology, Abdominal
  - Advanced Function: iScape View, Free Xros M, Color M, 3D/4D, Contrast Imaging (Gynecology, Abdominal), Volume CEUS (Gynecology, Abdominal)
  - Bandwidth: 1.8-8.2 MHz
  - Number of Elements: 192
  - FOV (max): 66°
  - Extended FOV: 91°
  - Volume Sweep Angle (max): 85°
  - Convex Radius: 45 mm
  - Depth: 4.0-40.0 cm
  - Physical Footprint: 75.7 mm × 52.6 mm
  - Footprint: 54.5 mm × 14.9 mm
  - B-mode Frequencies: 1.8-5.4, 2..3-6.8, 2.8-8.2 MHz
  - Harmonic Frequencies: 4.0, 5.0, 5.5, 6.0, 6.3 MHz
  - Color Frequencies: 3.0, 3.5, 4.0, 3.5 (HR Flow) MHz
  - PW Frequencies: 3.0, 3.5, 3.8 MHz
  - Biopsy Guide: NGB-039, multi angle, reusable

10.3 Linear Array

- L9-3s
  - Application: Abdominal, Pediatric, Small Organ, Musculo-skeletal, Vascular, Nerve, Obstetrics
  - Advanced Function: CW, iScape View, Free Xros M, Smart 3D, V Flow (Vascular), Contrast Imaging (Abdominal, Pediatric, Small Organ, Musculo-skeletal, Vascular), Strain Elastography (Small Organ, Musculo-skeletal, Vascular), STE (Small Organ, Musculo-skeletal, Abdominal, Vascular), STQ (Small Organ, Musculo-skeletal, Abdominal, Vascular)
  - Bandwidth: 2.5-9.0 MHz
  - Number of Elements: 192
  - FOV (max): 4.37 cm
  - Extended FOV
    Ohter: 20°
    OB1, NT: 30°
  - Steered Angle
    B: -12°, -6°, 0°, 6°, 12°
    C/PW: -30°-30°
  - Depth: 1.5-35.0 cm
  - Physical Footprint: 62 mm × 22 mm

- Footprint: 48 mm × 11 mm
- B-mode Frequencies: 2.5-7.0, 3.4-8.2, 3.6-9.0 MHz
- Harmonic Frequencies: 5.0, 6.0, 7.0 MHz
- Color Frequencies: 3.0, 3.6, 5.0, 4.0 (HR Flow) MHz
- PW Frequencies: 3.0, 3.6, 5.0 MHz
- Biopsy Guide: NGB-034, multi angle, reusable

• L14-3Ws
- Application: Small Organ, Musculo-skeletal, Vascular, Abdominal, Pediatric, Thoracic/ Pleural, Nerve
- Advanced Function: iScape View, Free Xros M, Smart 3D, V Flow (Vascular), Strain Elastography (Small Organ, Musculo-skeletal, Vascular), STE (Small Organ, Musculo-skeletal, Vascular), STQ (Small Organ, Musculo-skeletal, Vascular), Contrast Imaging (Small Organ, Musculo-skeletal, Vascular, Abdominal, Pediatric), Ultrasound Fusion Imaging
- Bandwidth: 3.0-14.0 MHz
- Number of Elements: 256
- FOV (max): 5.08 cm
- Extended FOV: 20°
- Steered Angle
  B: -12°, -6°, 0°, 6°, 12°
  C/PW: -30°-30°
- Depth: 1.5-35.0 cm
- Physical Footprint: 66.8 mm × 25.5 mm
- Footprint: 55.5 mm × 8.2 mm
- B-mode Frequencies: 3.0-9.0, 5.0-12.0, 6.0-14.0 MHz
- Harmonic Frequencies: 10.0, 11.0, 12.0 MHz
- Color Frequencies: 5.0, 6.2, 7.2, 8.3 (HR Flow) MHz
- PW Frequencies: 5.0, 6.2, 7.2 MHz
- Biopsy Guide: NGB-054, multi angle, reusable

• L20-5s
- Application: Abdominal, Small Organ, Musculo-skeletal, Vascular, Nerve
- Advanced Function: CW, iScape View, Free Xros M, Smart 3D, Strain Elastography (Small Organ, Musculo-skeletal), STE (Small Organ, Musculo-skeletal, Vascular), STQ (Small Organ, Musculo-skeletal, Vascular), Contrast Imaging (Small Organ)
- Bandwidth: 6.0-23.0 MHz
- Number of Elements: 192
- FOV (max): 2.85cm
- Extended FOV: 20°
- Steered Angle
  B: -12°, -6°, 0°, 6°, 12°
  C/PW: -20°-20°
- Depth: 1.5-29.0 cm
- Physical Footprint: 42.23 mm × 22.10 mm
- Footprint: 31.5 mm × 4.5 mm
- B-mode Frequencies: 6.0-13.0, 9.0-16.6, 12.5-23.0 MHz
- Harmonic Frequencies: 14.0, 16.0, 18.0 MHz
- Color Frequencies: 9.0, 11.0, 13.0, 13.0 (HR Flow) MHz
- PW Frequencies: 8.3, 10.0, 12.5 MHz
- CW: 10.0 MHz
- Biopsy Guide: not available

• L16-4Hs
- Application: Musculo-skeletal, Nerve, Small Organ, Vascular, Pediatric, Intra-operative
- Advanced Function: iScape View, Free Xros M, Smart 3D, Strain Elastography (Small Organ, Musculo-skeletal, Vascular), Contrast Imaging (Small Organ, Musculo-skeletal, Vascular)
- Bandwidth: 3.5-16.0 MHz
- Number of Elements: 128
- FOV (max): 2.53 cm
- Extended FOV: 20°
- Steered Angle
  B: -12°, -6°, 0°, 6°, 12°
  C/PW: -30°-30°
- Depth: 1.5-35.0 cm

- Physical Footprint: 11.5 mm x 38 mm (slant width)/34.8 mm (straight width)
- Footprint: 28.7 mm × 5.5 mm
- B-mode Frequencies: 3.5-9.2, 7.6-12.8, 9.6-16.0 MHz
- Harmonic Frequencies: 10.0, 12.0, 14.0 MHz
- Color Frequencies: 6.2, 7.2, 8.3, 4.0 (HR Flow) MHz
- PW Frequencies: 5.0, 6.2, 8.3 MHz
- Biopsy Guide: not available

• 7LT4s
- Application: Small Organ, Musculo-skeletal, Vascular, Abdominal, Pediatric, Intra-operative, Thoracic/Pleural
- Advanced Function: iScape View, Free Xros M, Smart 3D, Strain Elastography (Small Organ, Musculo-skeletal, Vascular), Contrast Imaging (Abdominal)
- Bandwidth: 3.5-13.5 MHz
- Number of Elements128
- FOV (max): 3.98 cm
- Extended FOV: 10°
- Steered Angle
  B: -12°, -6°, 0°, 6°, 12°
  C: -15°-15°
  PW: -30°-30°
- Depth: 1.5-35.0 cm
- Physical Footprint: 49.5 mm × 14.4 mm
- Footprint: 45 mm × 9.0 mm
- B-mode Frequencies: 3.5-8.3, 4.4-9.2, 5.6-13.5 MHz
- Harmonic Frequencies: 8.0, 9.0, 10.0 MHz
- Color Frequencies: 5.0, 6.5, 8.0, 8.0 (HR Flow) MHz
- PW Frequencies: 5.0, 6.5, 8.0 MHz
- Biopsy Guide: NGB-010, multi angle, reusable

• L12-3RCs
- Application: Small Organ, Vascular, Musculo-skeletal, Abdominal, Pediatric, Thoracic/Pleural, Nerve
- Advanced Function: iScape View, Free Xros M, Smart 3D, Contrast Imaging (Small Organ), Strain Elastography (Small Organ)
- Bandwidth: 3.0-11.0 MHz
- Number of Elements: 192
- FOV (max): 3.80cm
- Extended FOV: 20°
- Steered Angle
  B: -12°, -6°, 0°, 6°, 12°
  C/PW: -30°-30°
- Depth: 1.5-35.0 cm
- Physical Footprint: 55.6 mm × 22 mm
- Footprint: 43.5 mm × 8.2 mm
- B-mode Frequencies: 3.0-8.3, 4.4-9.2, 5.6-11.0 MHz
- Harmonic Frequencies: 7.0, 8.0, 9.0 MHz
- Color Frequencies: 4.4, 5.0, 7.2, 6.0 (HR Flow) MHz
- PW Frequencies: 4.2, 5.0, 7.2 MHz
- Biopsy Guide: NGB-043 (within the plane), multi angle, reusable; NGB-044 (outside the plane), multi angle, reusable

• L13-3Ns
- Application: Small Organ, Musculo-skeletal, Vascular, Abdominal, Pediatric, Thoracic/Pleural, Nerve
- Advanced Function: iScape View, Free Xros M, Smart 3D, V Flow (Vascular), Strain Elastography (Small Organ, Musculo-skeletal, Vascular), STE (Small Organ, Musculo-skeletal, Vascular), STQ (Small Organ, Musculo-skeletal, Vascular), Contrast Imaging (Small Organ, Musculo-skeletal, Vascular, Abdominal, Pediatric), Ultrasound Fusion Imaging
- Bandwidth: 3.0-13.0 MHz
- Number of Elements:192
- FOV (max): 3.80 cm
- Extended FOV: 20°
- Steered Angle
  B: -12°, -6°, 0°, 6°, 12°
  C/PW: -30°-30°
- Depth: 1.5-35.0 cm

- Physical Footprint: 56.8 mm × 21.2 mm
- Footprint: 43.5 mm × 8.2 mm
- B-mode Frequencies: 3.0-9.6, 5.4-11.5, 6.6-13.0 MHz
- Harmonic Frequencies: 9.0, 10.0, 10.5, 11.0 MHz
- Color Frequencies: 4.2, 5.0, 6.2, 7.2 (R Flow) MHz
- PW Frequencies: 4.2, 5.0, 6.2 MHz
- Biopsy Guide: NGB-053, multi angle, reusable

10.4 Phased Array

- SP5-1s
  - Application: Abdominal, Cardiac, Vascular, Cephalic, Thoracic/ Pleural
  - Advanced Function: CW, iScape View, Free Xros M, Free Xros CM, Color M, Smart 3D, TDI (Cardiac), LVO (Cardiac), Low MI Contrast (Cardiac), Stress Echo (Cardiac), Tissue Tracking QA (Cardiac), Ultrasound Fusion Imaging
  - Bandwidth: 1.5-4.5 MHz
  - Number of Elements: 80
  - FOV (max): 90°
  - Extended FOV: 90°
  - Depth: 2.0-38.0 cm
  - Physical Footprint: 38.2 mm × 30.5 mm
  - Footprint: 23.4 mm × 15.2 mm
  - B-mode Frequencies: 1.5-2.5, 2.5-3.5, 3.5-4.5 MHz
  - Harmonic Frequencies: 3.0, 3.5, 4.0 MHz
  - Color Frequencies: 2.0, 2.3, 2.5, 2.5 (HR Flow) MHz
    TDI: 3.0, 3.8 MHz
  - PW Frequencies: 2.0, 2.3, 2.5 MHz
    TDI: 2.5, 4.0 MHz
  - CW: 2.0 MHz
  - Biopsy Guide: NGB-011, multi angle, reusable
- P10-4s
  - Application: Abdominal, Cardiac, Pediatric, Nerve, Cephalic
  - Advanced Function: CW, iScape View, Free Xros M, Free Xros CM, Color M, Smart 3D, TDI (Cardiac), Stress Echo (Cardiac), Tissue Tracking QA (Cardiac)
  - Bandwidth: 3.0-11.4 MHz
  - Number of Elements: 128
  - FOV (max): 90°
  - Extended FOV: 90°
  - Depth: 2.0-16.5 cm
  - Physical Footprint: 15.1 mm × 10.2 mm
  - Footprint: 15 mm × 9.1 mm
  - B-mode Frequencies: 3.0-6.8, 3.8-10.2, 4.6-11.4 MHz
  - Harmonic Frequencies: 7.5, 8.0, 9.0 MHz
  - Color Frequencies: 4.0, 5.0, 5.7, 6.3 (HR Flow) MHz
    TDI: 5.7, 6.2 MHz
  - PW Frequencies: 4.0, 5.0, 5.7 MHz
    TDI: 5.0, 5.7 MHz
  - CW: 5.0 MHz
  - Biopsy Guide: not available
- P8-2s
  - Application: Abdominal, Cardiac, Nerve, Pediatric, Cephalic
  - Advanced Function: CW, iScape View, Free Xros M, Free Xros CM, Color M, Smart 3D, TDI (Cardiac), Stress Echo (Cardiac), Tissue Tracking QA (Cardiac)
  - Bandwidth: 2.3-8.0 MHz
  - Number of Elements: 96
  - FOV (max): 90°
  - Extended FOV: 90°
  - Depth: 2.0-38.0 cm
  - Physical Footprint: 30.5 mm × 23.2 mm
  - Footprint: 19.5 mm × 11 mm
  - B-mode Frequencies: 2.3-5.4, 2.8-7.4, 4.2-8.0 MHz
  - Harmonic Frequencies: 5.0, 6.0, 7.0 MHz
  - Color Frequencies: 2.7, 3.3, 4.0, 4.0 (HR Flow) MHz
    TDI: 5.0, 6.2 MHz
  - PW Frequencies: 2.7, 3.3, 4.0 MHz
    TDI: 5.0, 6.2 MHz
  - CW: 2.5 MHz
  - Biopsy Guide: not available

- P7-3Ts
  - Application: Cardiac
  - Advanced Function: CW, Free Xros M, Free Xros CM, Color M, TDI (Cardiac)
  - Bandwidth: 2.3-7.2 MHz
  - Number of Elements: 64
  - FOV (max): 90°
  - Extended FOV: 90°
  - Depth: 2.0-38.0 cm
  - Physical Footprint: 14 mm × 12 mm
  - Footprint: 12.2 mm × 12.2 mm
  - B-mode Frequencies: 2.3-5.4, 2.8-6.4, 3.3-7.2 MHz
  - Harmonic Frequencies: 5.0, 6.0, 7.0 MHz
  - Color Frequencies: 2.7, 3.3, 4.0, 4.0 (HR Flow) MHz
    TDI: 5.0, 6.2 MHz
  - PW Frequencies: 2.7, 3.3, 4.0 MHz
  - Biopsy Guide: not available
- P8-2Ts
  - Application: Cardiac
  - Advanced Function: CW, Free Xros M, Free Xros CM, Color M, TDI (Cardiac)
  - Bandwidth: 2.3-7.2 MHz
  - Number of Elements: 64
  - FOV (max): 90°
  - Extended FOV: 90°
  - Depth: 2.0-38.0 cm
  - Physical Footprint: 14 mm × 12 mm
  - Footprint: 10.6 mm × 10.6 mm
  - B-mode Frequencies: 2.3-5.4, 2.8-6.4, 3.3-7.2 MHz
  - Harmonic Frequencies: 5.0, 6.0, 7.0 MHz
  - Color Frequencies: 2.7, 3.3, 4.0, 4.0 (HR Flow) MHz
    TDI: 5.0, 6.2 MHz
  - PW Frequencies: 2.7, 3.3, 4.0 MHz
    TDI: 2.7, 5.0 MHz
  - CW: 2.5 MHz
  - Biopsy Guide: not available
- P8-3Ts
  - Application: Cardiac
  - Advanced Function: CW, Free Xros M, Free Xros CM, Color M, TDI (Cardiac)
  - Bandwidth: 2.3-7.2 MHz
  - Number of Elements: 48
  - FOV (max): 90°
  - Extended FOV: 90°
  - Depth: 2.0-38.0 cm
  - Physical Footprint: 10.7 mm × 7.9 mm
  - B-mode Frequencies: 2.3-5.4, 2.8-6.4, 3.3-7.2 MHz
  - Harmonic Frequencies: 6.0, 6.5, 7.0 MHz
  - Color Frequencies: 3.3, 3.8, 4.4, 4.0 (HR Flow) MHz
    TDI: 5.0, 6.2 MHz
  - PW Frequencies: 3.3, 3.8, 4.4 MHz
    TDI: 5.0, 6.2 MHz
  - CW: 2.5 MHz
  - Biopsy Guide: not available

10.5 Bi-Plane

ELC13-4s (Convex & Linear)

- Application: Urology, Gynecology
- Advanced Function: iScape View, Free Xros M, Color M, Smart 3D, Strain Elastography, Endocavity STE, STQ, Contrast Imaging, Endocavity Fusion Imaging
- Bandwidth
  - Convex: 3.5-9.5 MHz
  - Linear: 4.8-11.0 MHz
- Number of Elements: 192
- FOV (max)
  - Convex: 177°
  - Linear: 6.48 cm
- Extended FOV
  - Convex: 217°
  - Linear: 40°
- Convex Radius: 10 mm (Convex)
- Steered Angle
  - B: -12°, -6°, 0°, 6°, 12°
  - C/PW: -15°-15°
- Depth
  - Convex: 1.5-28.0 cm
  - Linear: 1.5-35.0 cm
- Physical Footprint
  - Convex: 20 mm × 20 mm
  - Linear: 19.5 mm × 19.5 mm
- Footprint
  - Convex: 20mm × 9mm

- Linear: 71.4mm × 9mm
- B-mode Frequencies
  - Convex: 3.5-6.0, 4.5-7.5, 5.5-8.8, 6.5-9.5 MHz
  - Linear: 4.8-7.8, 5.3-9.0, 5.8-10.0, 7.0-11.0 MHz
- Harmonic Frequencies
  - Convex: 8.0, 9.0, 10.0 MHz
  - Linear: 10.0, 11.0, 12.0 MHz
- Color Frequencies
  - Convex: 4.4, 5.0, 5.2, 5.5 (HR Flow) MHz
  - Linear: 6.0, 7.2, 8.3, 9.0 (HR Flow) MHz
- PW Frequencies
  - Convex: 4.5, 5.0, 5.5 MHz
  - Linear: 5.0, 6.3, 7.1, 8.3 MHz
- Biopsy Guide: NGB-051, multi angle, reusable; CIVCO 658-007 EX3, Biopsy Grid

10.6 Laparoscopic

LAP13-4Cs

- Application: Laparoscopic
- Advanced Function: Free Xros M, Color M, Contrast Imaging
- Bandwidth: 3.0-11.0 MHz
- Number of Elements: 128
- FOV (max): 30°
- Extended FOV: 70°
- Convex Radius: 50 mm
- Depth: 1.5-28.0 cm
- Physical Footprint: 10 mm × 10 mm
- Footprint: 31 mm × 6.5 mm
- B-mode Frequencies: 3.0-7.0, 4.0-9.0, 5.0-11.0 MHz
- Harmonic Frequencies: 8.0, 9.0, 10.0 MHz
- Color Frequencies: 4.4, 5.0, 5.7, 5.5 (HR Flow) MHz
- PW Frequencies: 4.4, 5.0, 5.7 MHz
- Biopsy Guide: not available

10.7 Pencil transducer

- CW2s
  - Application: Cardiac, Cephalic, Pediatric
  - Advanced Function: CW
  - Number of Elements: 2
  - Biopsy Guide: not available
- CW5s
  - Application: Vascular, Cephalic, Pediatric
  - Advanced Function: CW
  - Number of Elements: 2
  - Biopsy Guide: not available

11 Peripheral Devices and Accessories

- Black/White Video Printer
  - Digital: MITSUBISHI P95DW-N
  - Digital& Analog: SONY UP-X898MD
- Color Digital Printer
  SONY UP-D25MD
- Graph/Text Printer
  HP OFFICEJET PRO 8100
  Epson L130
  Epson L805
  Epson L3256
  Epson L8058
  Epson L3218
  HP M283
  HP 203dn
  HP M208DW
  HP P1108
  HP 181 fw
  HP M404DN
  HP 7000(C9299A)
  HP DeskJet 2029
  HP LaserJet 1020 plus
  HP Color Laserjet Pro M154a
  HP DeskJet 1112
  Canon G580
  Canon G1830
  Canon G2830
  Canon TS708
  Lexmark 2236
  PANTUM P2550
- Gel Warmer
  - Support gel warming with 3 angle position: 15, 45, 90 degrees
  - Easily be disassembled off system for cleaning
  - Temperature with 4 levels: off/ 34°C/37°C/40°C, with deviation of ±2°C

  - Light indicator for temperature protecting
  - Dimension: 78mm (Width)*82mm (Depth)*119mm (Height)
  - Weight: approx. 240g (net)
  - Continuous operation time: >12H
- Footswitch
  - USB port: FS-81-SP-2(single pedal), 971-SWNOM (2/3 pedal)
  - Support user-definable functions (Freeze, Save, Print)
- ECG
  - 6-pin, AHA/IEC, for 3-lead wires
  - ECG wave display: on/off
  - ECG source: Lead/External
  - Position: 0 - 100%, 5%/step
  - Trig mode: off/single/dual/timer
  - Gain: 0-30, 1/step
  - Sweep speed: 1-6, 1/step
  - Invert: on/off
- PCG (not for sale in EU countries)
  - PCG wave display: on/off
  - Gain: 0-30, 1/step
  - Speed: 6 steps
  - Smooth: 1-4, 1/step
- Barcode Reader
  - SYMBOL LS2208 (1D)
  - SYMBOL DS4308 (2D)
- Built-in Wireless Adapter
  - Encryption: WPA, WPA2
  - Protocols: IEEE 802.11 ac/a/b/g/n
  - Frequency: 2.4G/5G
- iVocal Microphone

  SAMSON XPD2

12 System Inputs and Outputs

- Audio input/output

  Microphone: 1 port
- Video Output
  - S-Video out: 1 port
  - HDMI: 1 Port
  - VGA out: 1 port
- Physio Input
  - Support ECG/PCG signal
  - ECG: 1 port
  - PCG: 1 port
- Other Input/Output
  - USB: 6 ports (5 USB 3.0 and1 Type-C)
  - Ethernet: 1 port

13 Safety and Conformance

- Quality Standards
  - ISO 9001
  - ISO 13485
- Design Standards
  - CSA C22.2 No. 601-1
  - EN 60601-1 and IEC 60601-1
  - EN 60601-1-2 and IEC 60601-1-2
  - EN 60601-1-6 and IEC 60601-1-6
  - EN 60601-2-37 and IEC60601-2-37
  - EN 62304 and IEC 62304
  - EN 62366 and IEC 62366
  - EN ISO 17664 and ISO 17664

14 CE Declaration

The ultrasound system is fully in conformance with the Council Directive 93/42/EEC Concerning Medical Devices. The number adjacent to the CE marking (0123) is the code of the EU-notified body that certified meeting the requirements of Annex II excluding (4). of the Directive.

15 NOTICE

Not all features or specifications described in this document may be available in all transducers and/or modes.

Mindray reserves the right to make changes in specifications and features shown herein, or discontinue the product at any time without notice or obligation. Contact Mindray Representative for the most current information.

16 Appendix

16.1 Generic measurements

- Summarized items:
  - B-Mode: Distance, Angle, Circumference, Area, Volume, etc.
  - M-Mode: Slope, Heart Rate, Distance, Time, Velocity etc.

- D-Mode: PS/ED, Velocity, Heart Rate, Time, Acceleration, Velocity Ratio etc.

• Detailed items:

- B-Mode

Depth
Distance
Distance L-L
Shuttle
Ellipse
Trace
Spline
Cross
Angle (2-Lines)
Angle (3-Points)
Double Dist
Trace Len
Trace Len(Spline)
Parallel
Distance P-L
IMT
B-Profile
B-Hist(Ellipse)
B-Hist(Trace)
B-Hist(Spline)
B-Hist(Rectangle)
Color Vel
Strain Hist
Elas. Hist
Color Vel Profile
Elas.
Strain
TSM
Color Pixel Percent(Ellipse)
Color Pixel Percent(Trace)
Color Pixel Percent(Rectangle)
Color Pixel Percent(Recall)
Smart Calc
Smart Trace
Att.
Att. Hist

Volume
Volume (Ellipse)
Volume (E+Dist.)
Ratio(D)
B Ratio

Volume
  Volume
  Volume (Ellipse)
  Volume (E+Dist.)
Ratio(A)
  Area1
  Area2
Directional Ratio
  D1
  D2
RAC
  Sag
  XS
Volume Flow
  Vas Area
  TAMEAN
  TAMAX
Elas. Ratio
  A
  B
Strain Ratio
  A
  B
Att. Ratio
  Att A
  Att B

- M-Mode

HR
HR(R-R)
Slope
Distance
Depth
Time
Velocity

- D-Mode

PS
ED
PS/ED
Vel
HR
HR(R-R)
Time
Auto Trace
Manual Trace
Spline Trace
Acceleration

Ratio(Vel)
Ratio(VTI)

Volume Flow
Vas Area
TAMEAN
TAMAX

16.2 Clinical option measurement package

- Abdomen

Summarized items:
Provide measurements of abdominal artery, abdominal vein, hepatic vein, liver, gallbladder, pancreas, appendix, pylorus, kidney, ureter, bladder, spleen, inferior vena cava, etc.

Detailed items:
B-Mode
Aorta Bif
AAA Status
Shunt Diam
Portal V Diam
M Portal V Diam
Splenic V Diam
PS Conflnc Diam
Renal V Diam
SMV Diam
IMV Diam
CHD
GB L
GB H
GB W
GB wall th
Cystic Duct
CBD
Panc duct
Panc head
Panc neck
Panc body
Panc tail
Appendix
Appendix Wall
Pylorus
Pylorus Wall
Renal L
Renal H
Renal W
Cortex
Adrenal L
Adrenal H
Adrenal W
Ureter
Cortex(Renal Transplant1)
Renal V Diam(Renal Transplant1)
Ureter Diam(Renal Transplant1)
Cortex(Renal Transplant2)
Renal V Diam(Renal Transplant2)
Ureter Diam(Renal Transplant2)
Smart Bladder Dual
Pre-BL L
Pre-BL H
Pre-BL W
Post-BL L
Post-BL H
Post-BL W
Spleen L
Spleen H
Spleen W
Spleen Area
Skin-L.Capsule Dist.
Hepatic Lesion1 Elas.
Hepatic Lesion2 Elas.
Hepatic Lesion3 Elas.
LSM
Rt DT(Insp)
Rt DT(Expir)
Lt DT(Insp)
Lt DT(Expir)
Free Fluid
Smart HRI

Renal Vol
Pre-BL Vol
Post-BL Vol
Mictur.Vol

Aorta
Anterior-Posterior
Transverse
Outer Diameter
Inner Diameter
Outer Area
Inner Area
Celiac Axis

- Anterior-Posterior
- Transverse

SMA
- Anterior-Posterior
- Transverse

C Hepatic A
- Anterior-Posterior
- Transverse

Proper Hepatic A
- Anterior-Posterior
- Transverse

Hepatic A
- Anterior-Posterior
- Transverse

Splenic A
- Anterior-Posterior
- Transverse

GDA
- Anterior-Posterior
- Transverse

IMA
- Anterior-Posterior
- Transverse

AAA
- Long
- Anterior-Posterior
- Transverse

Celiac A Aneurysm
- Long
- Anterior-Posterior
- Transverse

SMA Aneurysm
- Long
- Anterior-Posterior
- Transverse

C Hepatic A Aneurysm
- Long
- Anterior-Posterior
- Transverse

Proper Hepatic A Aneurysm
- Long
- Anterior-Posterior
- Transverse

Hepatic A Aneurysm
- Long
- Anterior-Posterior
- Transverse

Splenic A Aneurysm
- Long
- Anterior-Posterior
- Transverse

GDA Aneurysm
- Long
- Anterior-Posterior
- Transverse

IMA Aneurysm
- Long
- Anterior-Posterior
- Transverse

EVAR Residual Aneurysm Sac(2D)
- Anterior-Posterior
- Transverse

EVAR Inflow(2D)
- Anterior-Posterior
- Transverse

EVAR Graft Body(2D)
- Anterior-Posterior
- Transverse

EVAR Limb(2D)
- Anterior-Posterior
- Transverse

EVAR Outflow(2D)
- Anterior-Posterior
- Transverse

Aortic Bypass Graft Anast(2D)
- Anterior-Posterior
- Transverse

Aortic Bypass Graft Graft(2D)
- Anterior-Posterior
- Transverse

ABD Stenosis 1(2D)
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

ABD Stenosis 2(2D)
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

ABD Stenosis 3(2D)
- Anterior-Posterior

- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

ABD Stenosis 4(2D)
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

IVC
- Anterior-Posterior
- Transverse
- Checklist

Hepatic V(2D)
- Anterior-Posterior
- Transverse

Lt Hepatic V(2D)
- Anterior-Posterior
- Transverse

M Hepatic V(2D)
- Anterior-Posterior
- Transverse

Rt Hepatic V(2D)
- Anterior-Posterior
- Transverse

Liver
- L
- H
- W

R Liver Lobe
- L
- H
- W

L Liver Lobe
- L
- H
- W

Hepatic Lesion 1
- d1
- d2
- d3

Hepatic Lesion 2
- d1
- d2
- d3

Hepatic Lesion 3
- d1
- d2
- d3

Hepatic Cyst 1
- d1
- d2
- d3

Hepatic Cyst 2
- d1
- d2
- d3

Hepatic Cyst 3
- d1
- d2
- d3

GB
- GB L
- GB H
- GB W
- GB wall th

GB Finding 1
- d1
- d2
- d3

GB Finding 2
- d1
- d2
- d3

GB Finding 3
- d1
- d2
- d3

GB Finding 4
- d1
- d2
- d3

GB Finding 5
- d1
- d2
- d3

Panc Finding 1
- d1
- d2
- d3

Panc Finding 2
- d1
- d2

- d3
- Panc Finding 3
  - d1
  - d2
  - d3
- Panc Finding 4
  - d1
  - d2
  - d3
- Panc Finding 5
  - d1
  - d2
  - d3
- Kidney
  - Renal L
  - Renal H
  - Renal W
  - Cortex
- Adrenal
  - Adrenal L
  - Adrenal H
  - Adrenal W
- Renal Lesion 1
  - d1
  - d2
  - d3
- Renal Lesion 2
  - d1
  - d2
  - d3
- Renal Lesion 3
  - d1
  - d2
  - d3
- Renal Cyst 1
  - d1
  - d2
  - d3
- Renal Cyst 2
  - d1
  - d2
  - d3
- Renal Cyst 3
  - d1
  - d2
  - d3
- Kidney(Superior)
  - H
  - W
- Kidney(Mid)
  - H
  - W
- Kidney(Inferior)
  - H
  - W
- Renal A
  - Long
  - Anterior-Posterior
  - Transverse
- Renal A Aneurysm
  - Long
  - Anterior-Posterior
  - Transverse
- Kidney(Renal Transplant1)
  - L
  - H
  - W
- Adrenal(Renal Transplant1)
  - L
  - H
  - W
- Finding 1(Renal Transplant1)
  - L
  - H
  - W
- Finding 2(Renal Transplant1)
  - L
  - H
  - W
- Finding 3(Renal Transplant1)
  - L
  - H
  - W
- Finding 4(Renal Transplant1)
  - L
  - H
  - W
- Finding 5(Renal Transplant1)
  - L
  - H
  - W
- Finding 6(Renal Transplant1)
  - L
  - H
  - W
- Renal Transplant 1(2D)

Cortex(Renal Transplant1)
Renal V Diam(Renal Transplant1)
Ureter Diam(Renal Transplant1)
Kidney(Renal Transplant1)
L
H
W
Adrenal(Renal Transplant1)
L
H
W
Finding 1(Renal Transplant1)
L
H
W
Finding 2(Renal Transplant1)
L
H
W
Finding 3(Renal Transplant1)
L
H
W
Finding 4(Renal Transplant1)
L
H
W
Finding 5(Renal Transplant1)
L
H
W
Finding 6(Renal Transplant1)
L
H
W
Kidney(Renal Transplant2)
L
H
W
Adrenal(Renal Transplant2)
L
H
W
Finding 1(Renal Transplant2)
L
H
W
Finding 2(Renal Transplant2)
L
H
W
Finding 3(Renal Transplant2)
L
H
W
Finding 4(Renal Transplant2)
L
H
W
Finding 5(Renal Transplant2)
L
H
W
Finding 6(Renal Transplant2)
L
H
W
Renal Transplant 2(2D)
Cortex(Renal Transplant2)
Renal V Diam(Renal Transplant2)
Ureter Diam(Renal Transplant2)
Kidney(Renal Transplant2)
L
H
W
Adrenal(Renal Transplant2)
L
H
W
Finding 1(Renal Transplant2)
L
H
W
Finding 2(Renal Transplant2)
L
H
W
Finding 3(Renal Transplant2)
L
H
W
Finding 4(Renal Transplant2)
L
H
W
Finding 5(Renal Transplant2)

- L
- H
- W
- Finding 6(Renal Transplant2)
  - L
  - H
  - W
- Bladder
  - Pre-BL L
  - Pre-BL H
  - Pre-BL W
  - Post-BL L
  - Post-BL H
  - Post-BL W
- Smart Bladder
  - XS Bladder
  - Sag Bladder
- Spleen
  - Spleen L
  - Spleen H
  - Spleen W
  - Spleen Area
- Hepatic Lesion1 ElasRatio
  - A
  - B
- Hepatic Lesion2 ElasRatio
  - A
  - B
- Hepatic Lesion3 ElasRatio
  - A
  - B

- M-Mode
- Rt DT(Insp M)
- Rt DT(Expir M)
- Lt DT(Insp M)
- Lt DT(Expir M)
- RDE(QB)
- RDE(DB)
- LDE(QB)
- LDE(DB)

- D-Mode
- Aorta
- Celiac Axis
- SMA
- C Hepatic A
- Proper Hepatic A
- Hepatic A
- Splenic A
- GDA
- IMA
- Aorta(Post)
- Celiac Axis(Post)
- SMA(Post)
- C Hepatic A(Post)
- Proper Hepatic A(Post)
- Hepatic A(Post)
- Splenic Artery(Post)
- GDA(Post)
- IMA(Post)
- EVAR Residual Aneurysm Sac
- EVAR Inflow
- EVAR Graft Body
- EVAR Limb
- EVAR Outflow
- Aortic Bypass Graft Anast
- Aortic Bypass Graft Graft
- IVC Reflux
- IVC
- Hepatic V
- Lt Hepatic V
- M Hepatic V
- Rt Hepatic V
- Portal V
- M Portal V
- Splenic V
- Renal V
- SMV
- IMV
- Hepatic A Anast(Liver Transplant)
- Hepatic V Anast(Liver Transplant)
- Portal V Anast(Liver Transplant)
- IVC(Liver Transplant)
- Hep V Confl(Liver Transplant)
- Donor IVC(Liver Transplant)
- Renal A
- Ren A Org
- M Renal A
- Renal A1
- Renal A2
- Hilum
- Interlobar A
- Arcuate A
- Segment A
- Artery Anast(Renal Transplant1)

Artery Anast 2(Renal Transplant1)
Vein Anast(Renal Transplant1)
Vein Anast 2(Renal Transplant1)
Renal A(Renal Transplant1)
Renal A1(Renal Transplant1)
Renal A2(Renal Transplant1)
Hilum(Renal Transplant1)
Interlobar A(Renal Transplant1)
Arcuate A(Renal Transplant1)
Segmental A(Renal Transplant1)
Renal Vein 1(Renal Transplant1)
Renal Vein 2(Renal Transplant1)
Artery Anast(Renal Transplant2)
Artery Anast 2(Renal Transplant2)
Vein Anast(Renal Transplant2)
Vein Anast 2(Renal Transplant2)
Renal A(Renal Transplant2)
Renal A1(Renal Transplant2)
Renal A2(Renal Transplant2)
Hilum(Renal Transplant2)
Interlobar A(Renal Transplant2)
Arcuate A(Renal Transplant2)
Segmental A(Renal Transplant2)
Renal Vein 1(Renal Transplant2)
Renal Vein 2(Renal Transplant2)
TIPS

SMA/Ao
CA/Ao

ABD Stenosis 1
Pre Sten
Sten
Post Sten
ABD Stenosis 2
Pre Sten
Sten
Post Sten
ABD Stenosis 3
Pre Sten
Sten
Post Sten
ABD Stenosis 4
Pre Sten
Sten
Post Sten
Renal Transplant 1(Doppler)
Artery Anast(Renal Transplant1)
Artery Anast 2(Renal Transplant1)
Vein Anast(Renal Transplant1)
Vein Anast 2(Renal Transplant1)
Renal A(Renal Transplant1)
Renal A1(Renal Transplant1)
Renal A2(Renal Transplant1)
Hilum(Renal Transplant1)
Interlobar A(Renal Transplant1)
Arcuate A(Renal Transplant1)
Segmental A(Renal Transplant1)
Renal Vein 1(Renal Transplant1)
Renal Vein 2(Renal Transplant1)
Renal Transplant 2(Doppler)
Artery Anast(Renal Transplant2)
Artery Anast 2(Renal Transplant2)
Vein Anast(Renal Transplant2)
Vein Anast 2(Renal Transplant2)
Renal A(Renal Transplant2)
Renal A1(Renal Transplant2)
Renal A2(Renal Transplant2)
Hilum(Renal Transplant2)
Interlobar A(Renal Transplant2)
Arcuate A(Renal Transplant2)
Segmental A(Renal Transplant2)
Renal Vein 1(Renal Transplant2)
Renal Vein 2(Renal Transplant2)

- Cardiology

Summarized items:

- Left ventricular function measurement:
- Left ventricular function measurement method: Simpson, Mod.Simpson, S-P Ellipse, B-P Ellipse, Bullet, Teichholz, Cube, Gibson
- LV Mass (Cube-2D), (A-L), (T-E)
- LA Vol (Simp), (A-L)
- MVA VTI, AVA (VTI)
- Cardiac output: LVOT, RVOT, MV, TV
- Quantitative Analysis of PISA MR, PISA AR, PISA TR, and PISA PR
- Qp/Qs
- LV TEI Index
- RV TEI Index
- Z score (3 years and younger)
- Z score (Under 18)

Detailed items:
B-Mode
RVAWd(2D)
RVAWs(2D)
RVDd(2D)
RVDs(2D)
IVSd(2D)
IVSs(2D)
LVIDd(2D)
LVIDs(2D)
LVPWd(2D)
LVPWs(2D)
Diastole(2D)
Systole(2D)
LVLd apical
LVLs apical
LVAd apical
LVAs apical
LVAd sax MV
LVAs sax MV
LVAd sax Endo
LVAd sax Epi
LV Major
LV Minor
LV Area(d)
LV Area(s)
HR(2D)
RA Major
RA Minor
RA Area
RA Vol(A4C)
RAP
RV Area(d)
RV Area(s)
RV Major
RV Minor
LA Diam(2D)
LA Major
LA Minor
LA Area
LVOT Diam
Ao Diam(2D)
ACS(2D)
AV Diam
Ao Isthmus(2D)
Ao Sinus Diam(2D)
Ao st junct(2D)
AVA
Ao Arch Diam(2D)
Ao Asc Diam(2D)
Ao Desc Diam(2D)
Duct Art Diam
Post Ductal
Pre Ductal
MCS(2D)
MV Diam
MV EPSS(2D)
MVA
TV Diam
TVA
PV Diam
RVOT Diam
MPA Diam(2D)
RPA Diam(2D)
LPA Diam(2D)
IVC Diam(Expir)
IVC Diam(Insp)
SVC Diam(Expir)
SVC Diam(Insp)
LCA Diam
RCA Diam
PEd(2D)
PEs(2D)
VSD Diam
ASD Diam
PDA Diam
PFO Diam
AutoEF
Rt DT(Insp)
Rt DT(Expir)
Lt DT(Insp)
Lt DT(Expir)

LA/Ao(2D)

LV(2D)
  Diastole(2D)
  Systole(2D)
  IVSd(2D)
  LVIDd(2D)
  LVPWd(2D)
  IVSs(2D)
  LVIDs(2D)
  LVPWs(2D)
  HR(2D)
Simpson

- A4Cd
- A4Cs
- A2Cd
- A2Cs
- HR(2D)

Mod. Simpson
- LVLd apical
- LVLs apical
- LVAd sax MV
- LVAs sax MV
- LVAd sax PM
- LVAs sax PM
- HR(2D)

S-P Ellipse
- LVLd apical
- LVAd apical
- LVLs apical
- LVAs apical
- HR(2D)

B-P Ellipse
- LVIDd(2D)
- LVAd sax MV
- LVIDs(2D)
- LVAs sax MV
- LVAd apical
- LVAs apical
- HR(2D)

Bullet
- LVLd apical
- LVLs apical
- LVAd sax MV
- LVAs sax MV
- HR(2D)

LV Mass(Cube-2D)
- IVSd(2D)
- LVIDd(2D)
- LVPWd(2D)

LV Mass(A-L)
- LVLd apical
- LVAd sax Epi
- LVAd sax Endo

LV Mass(T-E)
- LVAd sax Epi
- LVAd sax Endo
- a
- d

LA Vol(Simp)
- LA Vol(A2C)
- LA Vol(A4C)

LA Vol(A-L)
- LA apical
- LAA(A2C)
- LAA(A4C)

MVA(VTI)
- LVOT Diam
- LVOT VTI
- MV VTI

AVA(VTI)
- LVOT Diam
- LVOT VTI
- AV VTI

CO(LVOT)
- LVOT Diam
- LVOT VTI
- AV HR

CO(RVOT)
- RVOT Diam
- RVOT VTI
- PV HR

CO(MV)
- MV Diam
- MV VTI
- MV HR

CO(TV)
- TV Diam
- TV VTI
- TV HR

PISA MR
- MR Rad
- MR Als. Vel
- MR VTI

PISA AR
- AR Rad
- AR Als. Vel
- AR VTI

PISA TR
- TR Rad
- TR Als. Vel
- TR VTI

PISA PR
- PR Rad
- PR Als. Vel
- PR VTI

Qp/Qs
- LVOT Diam
- LVOT VTI

- RVOT Diam
- RVOT VTI

Z-Scores (= 3Y) (2D)
- AV Diam
- Ao Sinus Diam
- Ao st junct
- PV Diam
- Ao Arch IA-LCA
- Ao Arch LCA-LSA
- Ao Arch after LSA
- Ao Isthmus
- Thoracic Ao Diam
- IVC Diam
- MV Diam
- TV Diam
- MPA Diam
- RPA Diam
- LPA Diam

Z-Scores (<18Y) (2D)
- LV Area(d) A4C
- LV Area(s) A4C
- LVIDd A4C(2D)
- LVIDs A4C(2D)
- LA AP Diam A4C
- LA LL Diam A4C
- LA Area A4C
- RA AP Diam A4C
- RA LL Diam A4C
- RA Area A4C
- RV Area(d) A4C
- RV Area(s) A4C
- RVd Major A4C
- RVs Major A4C
- RVd Minor (basal) A4C
- RVd Minor (midcavity) A4C
- LV Area(d) A2C
- LV Area(s) A2C
- LVIDd A2C(2D)
- LVIDs A2C(2D)

M-Mode
- RVAWd(M)
- RVAWs(M)
- RVDd(M)
- RVDs(M)
- Ao Arch Diam(M)
- Ao Asc Diam(M)
- Ao Desc Diam(M)
- Ao Diam(M)
- Ao Isthmus(M)
- Ao Sinus Diam(M)
- Ao st junct(M)
- ACS(M)
- HR(M)
- IVSd(M)
- IVSs(M)
- LA Diam(M)
- LPA Diam(M)
- Diastole(M)
- Systole(M)
- LVET(M)
- LVIDd(M)
- LVIDs(M)
- LVOT Diam
- LVPEP(M)
- LVPWd(M)
- LVPWs(M)
- MCS(M)
- MPA Diam(M)
- MV A Amp
- MV E Amp
- MV D-E Slope
- MV D-E Amp
- MV E-F Slope
- MV EPSS(M)
- PEd(M)
- PEs(M)
- RPA Diam(M)
- RVET(M)
- RVOT Diam
- RVPEP(M)
- MAPSE
- TAPSE
- MV ALL
- IVC Diam(Insp)(M)
- IVC Diam(Expir)(M)
- SVC Diam(Insp)(M)
- SVC Diam(Expir)(M)
- Rt DT(Insp M)
- Rt DT(Expir M)
- Lt DT(Insp M)
- Lt DT(Expir M)
- RDE(QB)
- RDE(DB)
- LDE(QB)
- LDE(DB)

LA/Ao(M)

LV(M)
  Diastole(M)
  Systole(M)
  IVSd(M)
  LVIDd(M)
  LVPWd(M)
  IVSs(M)
  LVIDs(M)
  LVPWs(M)
  HR(M)
LV Mass(Cube-M)
  IVSd(M)
  LVIDd(M)
  LVPWd(M)
LV Tei Index(M)
  MV C-O dur(M)
  LVET(M)
Z-Scores (= 3Y) (M)
  IVSd(M)
  LVPWd(M)
Z-Scores (<18Y) (M)
  LVIDd(M)
  LVIDs(M)

D-Mode
MV Aa(lateral)
MV Aa(medial)
AAo Vmax
AV VTI
AV HR
AV Vmax
AR DecT
AR Time
AR PHT
AR Ved
AR Vmax
AR VTI
MV ARa(lateral)
MV ARa(medial)
ASD Vmax
AV AccT
AV DecT
Coarc Post-Duct
Coarc Pre-Duct
DAo Vmax
MV DRa(lateral)
MV DRa(medial)
MV Ea(lateral)
MV Ea(medial)
IVC Vel(Expir)
IVC Vel(Insp)
IVCT
LPA Vmax
LVET(Doppler)
LVOT AccT
LVOT VTI
LVOT Vmax
LVPEP(Doppler)
MPA Vmax
dP/dt
Tau(BAI)
MR VTI
MR Vmax
MS Vmax
MV A Dur
MV A Vel
MV A VTI
MV AccT
MV DecT
MV E Dur
MV E Vel
MV E VTI
IVRT
MV VTI
MV HR
MV Vmax
PVein A Dur
PVein A Vel
PVein D Vel
PVein D VTI
PVein DecT
PVein S Vel
PVein S VTI
PDA Vel(d)
PDA Vel(s)
PR PHT
PR VTI
PR Ved
PR Vmax
PR DecT
PV AccT
PV VTI
PV HR

PV Vmax
RAP
RPA Vmax
RVET(Doppler)
RVOT Vmax
RVOT VTI
RVPEP(Doppler)
MV Sa(lateral)
MV Sa(medial)
SVC Vel(Expir)
SVC Vel(Insp)
TR VTI
TR Vmax
TV A Dur
TV A Vel
TV AccT
TV DecT
TV E Vel
TV VTI
TV HR
TV Vmax
VSD Vmax
Hepatic V S Vel
Hepatic V D Vel

MV E/A
MVA(PHT)
TV E/A
TVA(PHT)

LV Tei Index(Doppler)
  MV C-O dur(Doppler)
  LVET(Doppler)
RVSP
  TR Vmax
  RAP
PAEDP
  PR Ved
  RAP
MVA(VTI)
  LVOT Diam
  LVOT VTI
  MV VTI
AVA(VTI)
  LVOT Diam
  LVOT VTI
  AV VTI
CO(LVOT)
  LVOT Diam
  LVOT VTI
  AV HR
CO(RVOT)
  RVOT Diam
  RVOT VTI
  PV HR
CO(MV)
  MV Diam
  MV VTI
  MV HR
CO(TV)
  TV Diam
  TV VTI
  TV HR
RV Tei Index
  TV C-O dur
  RVET(Doppler)
PISA MR
  MR Rad
  MR Als. Vel
  MR VTI
PISA AR
  AR Rad
  AR Als. Vel
  AR VTI
PISA TR
  TR Rad
  TR Als. Vel
  TR VTI
PISA PR
  PR Rad
  PR Als. Vel
  PR VTI
Qp/Qs
  LVOT Diam
  LVOT VTI
  RVOT Diam
  RVOT VTI

- Emergency

  Summarized items: Provides application measurement related to emergency

  Detailed items:
  Renal L
  Renal H
  Renal W

CBD
Portal V Diam
CHD
GB wall th
Aorta Bif
Ureter
Pre-BL L
Pre-BL H
Pre-BL W
Post-BL L
Post-BL H
Post-BL W
Smart Bladder Dual
GS
YS L
CRL
BPD
UT L
UT H
UT W
Endo
Ovary L
Ovary H
Ovary W

Renal Vol
Pre-BL Vol
Post-BL Vol
Mictur.Vol
Ovary Vol
UT Vol
UT SUM

Smart Bladder
  XS Bladder
  Sag Bladder
Uterus
  UT L
  UT H
  UT W
  Endo
Ovary
  Ovary L
  Ovary H
  Ovary W
Kidney
  Renal L
  Renal H
  Renal W
  Cortex
Bladder
  Pre-BL L
  Pre-BL H
  Pre-BL W
  Post-BL L
  Post-BL H
  Post-BL W

M-Mode
FHR (M)

D-Mode
FHR (Doppler)

- Gynecology

Summarized items:
Provides measurements of uterus, cervix, ovary, follicle, urethra, rectum, levator ani muscle and sphincter.

Detailed items:
B-Mode
UT L
UT H
UT W
Endo
Cervix L
Cervix H
Cervix W
Ovary L
Ovary H
Ovary W
Follicle1 L
Follicle1 W
Follicle1 H
Follicle2 L
Follicle2 W
Follicle2 H
Follicle3 L
Follicle3 W
Follicle3 H
Follicle4 L
Follicle4 W
Follicle4 H
Follicle5 L
Follicle5 W
Follicle5 H

Follicle6 L
Follicle6 W
Follicle6 H
Follicle7 L
Follicle7 W
Follicle7 H
Follicle8 L
Follicle8 W
Follicle8 H
Follicle9 L
Follicle9 W
Follicle9 H
Follicle10 L
Follicle10 W
Follicle10 H
Follicle11 L
Follicle11 W
Follicle11 H
Follicle12 L
Follicle12 W
Follicle12 H
Follicle13 L
Follicle13 W
Follicle13 H
Follicle14 L
Follicle14 W
Follicle14 H
Follicle15 L
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Follicle16 L
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Follicle26 H
Follicle27 L
Follicle27 W
Follicle27 H
Follicle28 L
Follicle28 W
Follicle28 H
Follicle29 L
Follicle29 W
Follicle29 H
Follicle30 L
Follicle30 W
Follicle30 H
DWT
BSD(R)
BSD(Va)
RVA(R)
RVA(Va)
UTA(R)
UTA(Va)
URA
PVA(R)
PVA(Va)
PUA(R)
PUA(Va)
BPW-SP Dist.(R)
BPW-SP Dist.(Va)
Cx-SP Dist.(R)
Cx-SP Dist.(Va)
RA-SP Dist.(R)
RA-SP Dist.(Va)
Shuttle(R)
Shuttle(Va)
Rectocele Depth

Intus. Depth
ARA(R)
ARA(Va)
ARA(C)
LH AP Diam(R)
LH AP Diam(Va)
LH AP Diam(C)
LH Lateral Diam(R)
LH Lateral Diam(Va)
LH Lateral Diam(C)
LH Area(R)
LH Area(Va)
LH Area(C)
LA Angle(R)
LA Angle(Va)
LA Angle(C)
LA Thickness(R)
LA Thickness(Va)
LA Thickness(C)
LUG(R)
LUG(Va)
LUG(C)
GYN Lesion1 Strain
GYN Lesion2 Strain
GYN Lesion3 Strain
Lesion1 Elas.
Lesion2 Elas.
Lesion3 Elas.
Fibroid1 Strain
Fibroid2 Strain
Fibroid3 Strain
Fibroid1 Elas.
Fibroid2 Elas.
Fibroid3 Elas.

UT Vol
UT SUM
UT-L/CX-L
Ovary Vol
Follicle1
Follicle2
Follicle3
Follicle4
Follicle5
Follicle6
Follicle7
Follicle8
Follicle9
Follicle10
Follicle11
Follicle12
Follicle13
Follicle14
Follicle15
Follicle16
Follicle17
Follicle18
Follicle19
Follicle20
Follicle21
Follicle22
Follicle23
Follicle24
Follicle25
Follicle26
Follicle27
Follicle28
Follicle29
Follicle30
Mean DWT
BND
IAS Damage
EAS Damage

Uterus
  UT L
  UT H
  UT W
  Endo
Uterine Cervix
  Cervix L
  Cervix H
  Cervix W
Fibroid 1
  d1
  d2
  d3
Fibroid 2
  d1
  d2
  d3
Fibroid 3
  d1
  d2
  d3
Uterine Finding 1

- d1
- d2
- d3

Uterine Finding 2
- d1
- d2
- d3

Uterine Finding 3
- d1
- d2
- d3

Uterine Finding 4
- d1
- d2
- d3

Uterine Finding 5
- d1
- d2
- d3

Uterine Finding 6
- d1
- d2
- d3

Ovary
- Ovary L
- Ovary H
- Ovary W

Ovarian Cyst 1
- d1
- d2
- d3

Ovarian Cyst 2
- d1
- d2
- d3

Ovarian Cyst 3
- d1
- d2
- d3

Ovarian Finding 1
- d1
- d2
- d3

Ovarian Finding 2
- d1
- d2
- d3

Ovarian Finding 3
- d1
- d2
- d3

Ovarian Finding 4
- d1
- d2
- d3

Ovarian Finding 5
- d1
- d2
- d3

Ovarian Finding 6
- d1
- d2
- d3

Follicle1
- Follicle1 L
- Follicle1 W
- Follicle1 H

Follicle2
- Follicle2 L
- Follicle2 W
- Follicle2 H

Follicle3
- Follicle3 L
- Follicle3 W
- Follicle3 H

Follicle4
- Follicle4 L
- Follicle4 W
- Follicle4 H

Follicle5
- Follicle5 L
- Follicle5 W
- Follicle5 H

Follicle6
- Follicle6 L
- Follicle6 W
- Follicle6 H

Follicle7
- Follicle7 L
- Follicle7 W
- Follicle7 H

Follicle8
- Follicle8 L
- Follicle8 W
- Follicle8 H

Follicle9

- Follicle9 L
- Follicle9 W
- Follicle9 H

Follicle10
- Follicle10 L
- Follicle10 W
- Follicle10 H

Follicle11
- Follicle11 L
- Follicle11 W
- Follicle11 H

Follicle12
- Follicle12 L
- Follicle12 W
- Follicle12 H

Follicle13
- Follicle13 L
- Follicle13 W
- Follicle13 H

Follicle14
- Follicle14 L
- Follicle14 W
- Follicle14 H

Follicle15
- Follicle15 L
- Follicle15 W
- Follicle15 H

Follicle16
- Follicle16 L
- Follicle16 W
- Follicle16 H

Follicle17
- Follicle17 L
- Follicle17 W
- Follicle17 H

Follicle18
- Follicle18 L
- Follicle18 W
- Follicle18 H

Follicle19
- Follicle19 L
- Follicle19 W
- Follicle19 H

Follicle20
- Follicle20 L
- Follicle20 W
- Follicle20 H

Follicle21
- Follicle21 L
- Follicle21 W
- Follicle21 H

Follicle22
- Follicle22 L
- Follicle22 W
- Follicle22 H

Follicle23
- Follicle23 L
- Follicle23 W
- Follicle23 H

Follicle24
- Follicle24 L
- Follicle24 W
- Follicle24 H

Follicle25
- Follicle25 L
- Follicle25 W
- Follicle25 H

Follicle26
- Follicle26 L
- Follicle26 W
- Follicle26 H

Follicle27
- Follicle27 L
- Follicle27 W
- Follicle27 H

Follicle28
- Follicle28 L
- Follicle28 W
- Follicle28 H

Follicle29
- Follicle29 L
- Follicle29 W
- Follicle29 H

Follicle30
- Follicle30 L
- Follicle30 W
- Follicle30 H

GYN Lesion 1
- d1
- d2
- d3

GYN Lesion 2
- d1
- d2
- d3

GYN Lesion 3

d1
d2
d3
Residual Urine
BL Height
BL Depth
GYN Lesion1 Strain Ratio
A
B
GYN Lesion2 Strain Ratio
A
B
GYN Lesion3 Strain Ratio
A
B
Lesion1 Elas. Ratio
A
B
Lesion2 Elas. Ratio
A
B
Lesion3 Elas. Ratio
A
B
Fibroid1 Strain Ratio
A
B
Fibroid2 Strain Ratio
A
B
Fibroid3 Strain Ratio
A
B
Fibroid1 Elas. Ratio
A
B
Fibroid2 Elas. Ratio
A
B
Fibroid3 Elas. Ratio
A
B

- Obstetric

Summarized items:

- Multiple fetuses, maximum number of fetuses: 4
- Fetal physiology score
- Z score
- Fetal GA
- Fetal growth curve
- EFW

Detailed items:

B-Mode
GS
YS L
CRL
NT
BPD
OFD
HC
AC
FL
TAD
APAD
TCD
CM
IT
LVW
HW
OOD
IOD
HUM
Ulna
RAD
Tibia
FIB
CLAV
Vertebrae
MP
Foot
NBL
Ear
APTD
TTD
FTA
THD
HrtC
TC
Umb VD
F-kidney L
Mat Kidney
Cervix L
AF
NF
Orbit
PL Thickness

Sac Diam1
Sac Diam2
Sac Diam3
AF1
AF2
AF3
AF4
LVIDd
LVIDs
LV Diam
LA Diam
RVIDd
RVIDs
RV Diam
RA Diam
IVSd
IVSs
IVS
LV Area
LA Area
RV Area
RA Area
Ao Diam
MPA Diam
LVOT Diam
RVOT Diam
Facial Angle
HrtA
MV Diam(Z-Score)
PV Diam(Z-Score)
Ao Asc Diam(Z-Score)
Ao Desc Diam(Z-Score)
Duct Art Diam(Z-Score)
TV Diam(Z-Score)
LPA Diam(Z-Score)
RPA Diam(Z-Score)
IVC Diam(Z-Score)
AV Diam(Z-Score)
MPA Diam(Z-Score)
RV Diam(Z-Score)
LV Diam(Z-Score)
RV Area(Z-Score)
LV Area(Z-Score)
RVIDd(Z-Score)
LVIDd(Z-Score)
UT L
UT H
UT W

Endo
AH
PH
3th Ventricle
NT Above Cord
NT Below Cord
Mandible
Prenasal th
Heart AP
Heart T
LV Width
LV Length
RV Width
RV Length
LA Width
RA Width
LVWd
LVWs
RVWd
RVWs
AV Diam
AV Area
PV Area
F-kidney H
F-kidney W
Lung
Stomach
YS H
YS W
Amniotic Sac L
Amniotic Sac H
Amniotic Sac W
Ovary Cyst L
Ovary Cyst H
Ovary Cyst W
UT AW
UT PW
CSP
FMF
MMF
Lung CCAM L
Lung CCAM H
Lung CCAM W
AD
Iliac Wing Angle
FAGL
FAG
Intestinum Crassum

Liver Length
Rib Length
Shoulder Blade

MAD
Mean Sac Diam
AFI
EFW
EFW2
HC/AC(Campbell)
FL/AC
FL/BPD
AXT
CI
FL/HC(Hadlock)
AC(c)
HC(c)
HrtC/TC
TCD/AC
LVW/HW
LVD/RVD
LAD/RAD
AoD/MPAD
LAD/AoD
UT Vol
UT SUM
UT-L/CX-L

AFI
  AF1
  AF2
  AF3
  AF4
Uterus
  UT L
  UT H
  UT W
  Endo

M-Mode
FHR (M)
LVIDd
LVIDs
RVIDd
RVIDs
IVSd
IVSs
RVIDd(Z-Score)
LVIDd(Z-Score)
MVE
TVE
AVE
MAPSE
TAPSE
LV ICT
LV IRT
LV ET
RV ICT
RV IRT
RV ET

D-Mode
Umb A
Duct Veno
Placenta A
MCA
Fetal Ao
Desc Aorta
Ut A
Ovarian A
FHR (Doppler)
Asc Aorta
RVOT
LVOT
MV E
MV A
TV E
TV A
MV E'
MV A'
MV S'
TV E'
TV A'
TV S'
AV PV
AV VTI
PV PV
PV VTI
Duct Art PV
Duct Art VTI
AV TPV
PV TPV
Duct Art TPV
Thoracic Aorta
Hepatic Vein
IVC

Umb V
Ovary
Endometrium
Cervical Cancer
Fibroid
Duct Art
ICA
Celiac A

MV E/A
TV E/A
MV E/E'
TV E/E'

- Pediatrics
  Summarized items: provides application measurement related to pediatrics

  Detailed items:
  B-Mode
  HIP
  HIP-Graft
  HIP(α)
  HIP(β)
  d/D
- SmallPart
  Summarized items:
  Provides measurements of thyroid, parotid gland, lymph nodes, testis, epididymis, thyroid nodules, breast, etc.

  Detailed items:
  B-Mode
  Thyroid L
  Thyroid H
  Thyroid W
  Isthmus H
  THY Nodule1 Strain
  THY Nodule2 Strain
  THY Nodule3 Strain
  THY Nodule1 Elas.
  THY Nodule2 Elas.
  THY Nodule3 Elas.
  Breast Mass1 Strain
  Breast Mass1 Elas.
  Breast Mass2 Strain
  Breast Mass2 Elas.
  Breast Mass3 Strain
  Breast Mass3 Elas.
  Breast Mass4 Strain
  Breast Mass4 Elas.
  Breast Mass5 Strain
  Breast Mass5 Elas.
  Breast Mass6 Strain
  Breast Mass6 Elas.
  Breast Mass7 Strain
  Breast Mass7 Elas.
  Breast Mass8 Strain
  Breast Mass8 Elas.
  Breast Mass9 Strain
  Breast Mass9 Elas.
  Breast Mass10 Strain
  Breast Mass10 Elas.
  Testicular L
  Testicular H
  Testicular W
  Epididymis L
  Epididymis H
  Epididymis W
  Scrotal Wall
  Testis V(2D)
  Testis V(Valsalva 2D)

  Thyroid Vol
  Testicular Vol

  Thyroid(Superior)
    Anterior-Posterior
    Transverse
  Thyroid(Mid)
    Anterior-Posterior
    Transverse
  Thyroid(Inferior)
    Anterior-Posterior
    Transverse
  Parathyroid 1
    Long
    Anterior-Posterior
    Transverse
  Parathyroid 2
    Long
    Anterior-Posterior
    Transverse
  Parotid
    Long

- Anterior-Posterior
- Transverse

Lymph Node 1
- Long
- Anterior-Posterior
- Transverse

Lymph Node 2
- Long
- Anterior-Posterior
- Transverse

Lymph Node 3
- Long
- Anterior-Posterior
- Transverse

Lymph Node 4
- Long
- Anterior-Posterior
- Transverse

Lymph Node 5
- Long
- Anterior-Posterior
- Transverse

Lymph Node 6
- Long
- Anterior-Posterior
- Transverse

Thyroid
- Thyroid L
- Thyroid H
- Thyroid W

Thyroid Nodule 1
- Long
- Anterior-Posterior
- Transverse

Thyroid Nodule 2
- Long
- Anterior-Posterior
- Transverse

Thyroid Nodule 3
- Long
- Anterior-Posterior
- Transverse

Thyroid Nodule 4
- Long
- Anterior-Posterior
- Transverse

Thyroid Nodule 5
- Long
- Anterior-Posterior
- Transverse

Thyroid Nodule 6
- Long
- Anterior-Posterior
- Transverse

Thyroid Nodule 7
- Long
- Anterior-Posterior
- Transverse

Thyroid Nodule 8
- Long
- Anterior-Posterior
- Transverse

Thyroid Nodule 9
- Long
- Anterior-Posterior
- Transverse

Thyroid Nodule 10
- Long
- Anterior-Posterior
- Transverse

THY Nodule1 Strain Ratio
- A
- B

THY Nodule2 Strain Ratio
- A
- B

THY Nodule3 Strain Ratio
- A
- B

THY Nodule1 Elas. Ratio
- A
- B

THY Nodule2 Elas. Ratio
- A
- B

THY Nodule3 Elas. Ratio
- A
- B

Breast Mass 1
- L
- H
- W
- Nip. Dist.
- Skin Dist.

Breast Mass 2
- L

H
W
Nip. Dist.
Skin Dist.
Breast Mass 3
L
H
W
Nip. Dist.
Skin Dist.
Breast Mass 4
L
H
W
Nip. Dist.
Skin Dist.
Breast Mass 5
L
H
W
Nip. Dist.
Skin Dist.
Breast Mass 6
L
H
W
Nip. Dist.
Skin Dist.
Breast Mass 7
L
H
W
Nip. Dist.
Skin Dist.
Breast Mass 8
L
H
W
Nip. Dist.
Skin Dist.
Breast Mass 9
L
H
W
Nip. Dist.
Skin Dist.
Breast Mass 10
L
H
W
Nip. Dist.
Skin Dist.
Breast Mass1 Strain Ratio
A
B
Breast Mass1 Elas. Ratio
A
B
Breast Mass2 Strain Ratio
A
B
Breast Mass2 Elas. Ratio
A
B
Breast Mass3 Strain Ratio
A
B
Breast Mass3 Elas. Ratio
A
B
Breast Mass4 Strain Ratio
A
B
Breast Mass4 Elas. Ratio
A
B
Breast Mass5 Strain Ratio
A
B
Breast Mass5 Elas. Ratio
A
B
Breast Mass6 Strain Ratio
A
B
Breast Mass6 Elas. Ratio
A
B
Breast Mass7 Strain Ratio
A
B
Breast Mass7 Elas. Ratio
A
B
Breast Mass8 Strain Ratio
A

B
Breast Mass8 Elas. Ratio
A
B
Breast Mass9 Strain Ratio
A
B
Breast Mass9 Elas. Ratio
A
B
Breast Mass10 Strain Ratio
A
B
Breast Mass10 Elas. Ratio
A
B
Testicular
Testicular L
Testicular H
Testicular W
Testis Mass 1
d1
d2
d3
Testis Mass 2
d1
d2
d3
Testis Mass 3
d1
d2
d3
Epididymis
Epididymis L
Epididymis H
Epididymis W
Testicle(Superior)
H
W
Testicle(Mid)
H
W
Testicle(Inferior)
H
W
Epididymal Head
L
H
W
Epididymal Body
L
H
W
Epididymal Tail
L
H
W

M-Mode

D-Mode
STA
ITA
Isthmus
Parathyroid 1
Parathyroid 2
Testis A
Testis V
Testis V(Valsalva)
Epididymis A
Epididymis V

- Urology

Summarized items:
Provides measurement of kidney, kidney cortex, adrenal gland, prostate gland, seminal vesicle, bladder, testis, epididymis, scrotal wall, and urine output.

Detailed items:
B-Mode
Renal L
Renal H
Renal W
Cortex
Adrenal L
Adrenal H
Adrenal W
Ureter
Cortex(Renal Transplant1)
Renal V Diam(Renal Transplant1)
Ureter Diam(Renal Transplant1)
Cortex(Renal Transplant2)
Renal V Diam(Renal Transplant2)
Ureter Diam(Renal Transplant2)
Prostate L

Prostate H
Prostate W
Seminal L
Seminal H
Seminal W
Urethra
Smart Bladder Dual
Pre-BL L
Pre-BL H
Pre-BL W
Post-BL L
Post-BL H
Post-BL W
Testicular L
Testicular H
Testicular W
Epididymis L
Epididymis H
Epididymis W
Scrotal Wall
Testis V(2D)
Testis V(Valsalva 2D)
Prostate Mass1 Strain
Prostate Mass2 Strain
Prostate Mass3 Strain
Prostate Mass1 Elas.
Prostate Mass2 Elas.
Prostate Mass3 Elas.

Renal Vol
Prostate Vol
Pre-BL Vol
Post-BL Vol
Mictur.Vol
Testicular Vol

Kidney
  Renal L
  Renal H
  Renal W
  Cortex
Adrenal
  Adrenal L
  Adrenal H
  Adrenal W
Renal Lesion 1
  d1
  d2
  d3
Renal Lesion 2
  d1
  d2
  d3
Renal Lesion 3
  d1
  d2
  d3
Renal Cyst 1
  d1
  d2
  d3
Renal Cyst 2
  d1
  d2
  d3
Renal Cyst 3
  d1
  d2
  d3
Kidney(Superior)
  H
  W
Kidney(Mid)
  H
  W
Kidney(Inferior)
  H
  W
Renal A
  Long
  Anterior-Posterior
  Transverse
Renal A Aneurysm
  Long
  Anterior-Posterior
  Transverse
Kidney(Renal Transplant1)
  L
  H
  W
Adrenal(Renal Transplant1)
  L
  H
  W
Finding 1(Renal Transplant1)
  L

- H
- W

Finding 2(Renal Transplant1)
- L
- H
- W

Finding 3(Renal Transplant1)
- L
- H
- W

Finding 4(Renal Transplant1)
- L
- H
- W

Finding 5(Renal Transplant1)
- L
- H
- W

Finding 6(Renal Transplant1)
- L
- H
- W

Renal Transplant 1(2D)
- Cortex(Renal Transplant1)
- Renal V Diam(Renal Transplant1)
- Ureter Diam(Renal Transplant1)
- Kidney(Renal Transplant1)
  - L
  - H
  - W
- Adrenal(Renal Transplant1)
  - L
  - H
  - W
- Finding 1(Renal Transplant1)
  - L
  - H
  - W
- Finding 2(Renal Transplant1)
  - L
  - H
  - W
- Finding 3(Renal Transplant1)
  - L
  - H
  - W
- Finding 4(Renal Transplant1)
  - L
  - H
  - W
- Finding 5(Renal Transplant1)
  - L
  - H
  - W
- Finding 6(Renal Transplant1)
  - L
  - H
  - W

Kidney(Renal Transplant2)
- L
- H
- W

Adrenal(Renal Transplant2)
- L
- H
- W

Finding 1(Renal Transplant2)
- L
- H
- W

Finding 2(Renal Transplant2)
- L
- H
- W

Finding 3(Renal Transplant2)
- L
- H
- W

Finding 4(Renal Transplant2)
- L
- H
- W

Finding 5(Renal Transplant2)
- L
- H
- W

Finding 6(Renal Transplant2)
- L
- H
- W

Renal Transplant 2(2D)
- Cortex(Renal Transplant2)
- Renal V Diam(Renal Transplant2)
- Ureter Diam(Renal Transplant2)
- Kidney(Renal Transplant2)
  - L

- H
- W

Adrenal(Renal Transplant2)
- L
- H
- W

Finding 1(Renal Transplant2)
- L
- H
- W

Finding 2(Renal Transplant2)
- L
- H
- W

Finding 3(Renal Transplant2)
- L
- H
- W

Finding 4(Renal Transplant2)
- L
- H
- W

Finding 5(Renal Transplant2)
- L
- H
- W

Finding 6(Renal Transplant2)
- L
- H
- W

Prostate
- Prostate L
- Prostate H
- Prostate W

Prostate2
- Long
- Anterior-Posterior
- Coronal

Seminal Vesicle
- Seminal L
- Seminal H
- Seminal W

Prostate Mass 1
- d1
- d2
- d3

Prostate Mass 2
- d1
- d2
- d3

Prostate Mass 3
- d1
- d2
- d3

Bladder
- Pre-BL L
- Pre-BL H
- Pre-BL W
- Post-BL L
- Post-BL H
- Post-BL W

Smart Bladder
- XS Bladder
- Sag Bladder

Testicular
- Testicular L
- Testicular H
- Testicular W

Testis Mass 1
- d1
- d2
- d3

Testis Mass 2
- d1
- d2
- d3

Testis Mass 3
- d1
- d2
- d3

Epididymis
- Epididymis L
- Epididymis H
- Epididymis W

Testicle(Superior)
- H
- W

Testicle(Mid)
- H
- W

Testicle(Inferior)
- H
- W

Epididymal Head
- L
- H

W
Epididymal Body
L
H
W
Epididymal Tail
L
H
W
Prostate Mass1 Strain Ratio
A
B
Prostate Mass2 Strain Ratio
A
B
Prostate Mass3 Strain Ratio
A
B
Prostate Mass1 Elas. Ratio
A
B
Prostate Mass2 Elas. Ratio
A
B
Prostate Mass3 Elas. Ratio
A
B

M-Mode

D-Mode
Renal A
Ren A Org
M Renal A
Renal A1
Renal A2
Hilum
Interlobar A
Arcuate A
Segment A
Artery Anast(Renal Transplant1)
Artery Anast 2(Renal Transplant1)
Vein Anast(Renal Transplant1)
Vein Anast 2(Renal Transplant1)
Renal A(Renal Transplant1)
Renal A1(Renal Transplant1)
Renal A2(Renal Transplant1)
Hilum(Renal Transplant1)
Interlobar A(Renal Transplant1)
Arcuate A(Renal Transplant1)
Segmental A(Renal Transplant1)
Renal Vein 1(Renal Transplant1)
Renal Vein 2(Renal Transplant1)
Artery Anast(Renal Transplant2)
Artery Anast 2(Renal Transplant2)
Vein Anast(Renal Transplant2)
Vein Anast 2(Renal Transplant2)
Renal A(Renal Transplant2)
Renal A1(Renal Transplant2)
Renal A2(Renal Transplant2)
Hilum(Renal Transplant2)
Interlobar A(Renal Transplant2)
Arcuate A(Renal Transplant2)
Segmental A(Renal Transplant2)
Renal Vein 1(Renal Transplant2)
Renal Vein 2(Renal Transplant2)
Testis A
Testis V
Testis V(Valsalva)
Epididymis A
Epididymis V

Renal Transplant 1(Doppler)
Artery Anast(Renal Transplant1)
Artery Anast 2(Renal Transplant1)
Vein Anast(Renal Transplant1)
Vein Anast 2(Renal Transplant1)
Renal A(Renal Transplant1)
Renal A1(Renal Transplant1)
Renal A2(Renal Transplant1)
Hilum(Renal Transplant1)
Interlobar A(Renal Transplant1)
Arcuate A(Renal Transplant1)
Segmental A(Renal Transplant1)
Renal Vein 1(Renal Transplant1)
Renal Vein 2(Renal Transplant1)
Renal Transplant 2(Doppler)
Artery Anast(Renal Transplant2)
Artery Anast 2(Renal Transplant2)
Vein Anast(Renal Transplant2)
Vein Anast 2(Renal Transplant2)
Renal A(Renal Transplant2)
Renal A1(Renal Transplant2)
Renal A2(Renal Transplant2)
Hilum(Renal Transplant2)
Interlobar A(Renal Transplant2)

Arcuate A(Renal Transplant2)
Segmental A(Renal Transplant2)
Renal Vein 1(Renal Transplant2)
Renal Vein 2(Renal Transplant2)

- Vascular

Summarized items:

Provides measurement of carotid artery, jugular vein, upper limb artery, lower limb artery, upper limb vein and lower limb vein.

Detailed items:

B-Mode
CCA IMT
Bulb IMT
ICA IMT
ECA IMT

IMT
CCA IMT
Bulb IMT
ICA IMT
ECA IMT
CCA
Anterior-Posterior
Transverse
Outer Diameter
Inner Diameter
Outer Area
Inner Area
Bulb
Anterior-Posterior
Transverse
Outer Diameter
Inner Diameter
Outer Area
Inner Area
Carotid Bifurcation
Anterior-Posterior
Transverse
Outer Diameter
Inner Diameter
Outer Area
Inner Area
ICA
Anterior-Posterior
Transverse
Outer Diameter
Inner Diameter
Outer Area
Inner Area
ECA
Anterior-Posterior
Transverse
Outer Diameter
Inner Diameter
Outer Area
Inner Area
Vert A
Anterior-Posterior
Transverse
Outer Diameter
Inner Diameter
Outer Area
Inner Area
Subclav A
Anterior-Posterior
Transverse
Outer Diameter
Inner Diameter
Outer Area
Inner Area
Innom A
Anterior-Posterior
Transverse
Outer Diameter
Inner Diameter
Outer Area
Inner Area
Mammary A
Anterior-Posterior
Transverse
Outer Diameter
Inner Diameter
Outer Area
Inner Area
CCA Aneurysm
Long
Anterior-Posterior
Transverse
Bulb Aneurysm
Long
Anterior-Posterior
Transverse
Carotid Bifurcation Aneurysm
Long

- Anterior-Posterior
- Transverse

ICA Aneurysm
- Long
- Anterior-Posterior
- Transverse

ECA Aneurysm
- Long
- Anterior-Posterior
- Transverse

Vert A Aneurysm
- Long
- Anterior-Posterior
- Transverse

Subclav A Aneurysm
- Long
- Anterior-Posterior
- Transverse

Innom A Aneurysm
- Long
- Anterior-Posterior
- Transverse

Mammary A Aneurysm
- Long
- Anterior-Posterior
- Transverse

Carotid Graft 1 Anast
- Long
- Anterior-Posterior
- Transverse

Carotid Graft 1 Graft
- Long
- Anterior-Posterior
- Transverse

Carotid Graft 2 Anast
- Long
- Anterior-Posterior
- Transverse

Carotid Graft 2 Graft
- Long
- Anterior-Posterior
- Transverse

Carotid Graft 3 Anast
- Long
- Anterior-Posterior
- Transverse

Carotid Graft 3 Graft
- Long
- Anterior-Posterior
- Transverse

Carotid Stent 1
- Long
- Anterior-Posterior
- Transverse

Carotid Stent 2
- Long
- Anterior-Posterior
- Transverse

Carotid Stent 3
- Long
- Anterior-Posterior
- Transverse

Carotid Stenosis 1
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

Carotid Stenosis 2
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

Carotid Stenosis 3
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

Carotid Stenosis 4
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

Axill A
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area

- Inner Area
- Brachial A
  - Anterior-Posterior
  - Transverse
  - Outer Diameter
  - Inner Diameter
  - Outer Area
  - Inner Area
- Radial A
  - Anterior-Posterior
  - Transverse
  - Outer Diameter
  - Inner Diameter
  - Outer Area
  - Inner Area
- Ulnar A
  - Anterior-Posterior
  - Transverse
  - Outer Diameter
  - Inner Diameter
  - Outer Area
  - Inner Area
- Axill A Aneurysm
  - Long
  - Anterior-Posterior
  - Transverse
- Brachial A Aneurysm
  - Long
  - Anterior-Posterior
  - Transverse
- Radial A Aneurysm
  - Long
  - Anterior-Posterior
  - Transverse
- Ulnar A Aneurysm
  - Long
  - Anterior-Posterior
  - Transverse
- UE A Graft 1 Native Inflow
  - Anterior-Posterior
  - Transverse
- UE A Graft 1 Anast
  - Anterior-Posterior
  - Transverse
- UE A Graft 1 Graft
  - Anterior-Posterior
  - Transverse
- UE A Graft 1 Native Outflow
  - Anterior-Posterior
  - Transverse
- UE A Graft 2 Native Inflow
  - Anterior-Posterior
  - Transverse
- UE A Graft 2 Anast
  - Anterior-Posterior
  - Transverse
- UE A Graft 2 Graft
  - Anterior-Posterior
  - Transverse
- UE A Graft 2 Native Outflow
  - Anterior-Posterior
  - Transverse
- UE A Graft 3 Native Inflow
  - Anterior-Posterior
  - Transverse
- UE A Graft 3 Anast
  - Anterior-Posterior
  - Transverse
- UE A Graft 3 Graft
  - Anterior-Posterior
  - Transverse
- UE A Graft 3 Native Outflow
  - Anterior-Posterior
  - Transverse
- UE A Stent 1
  - Long
  - Anterior-Posterior
  - Transverse
- UE A Stent 2
  - Long
  - Anterior-Posterior
  - Transverse
- UE A Stent 3
  - Long
  - Anterior-Posterior
  - Transverse
- UE A Stenosis 1(2D)
  - Anterior-Posterior
  - Transverse
  - Outer Diameter
  - Inner Diameter
  - Outer Area
  - Inner Area
- UE A Stenosis 2(2D)
  - Anterior-Posterior
  - Transverse

- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

UE A Stenosis 3(2D)
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

UE A Stenosis 4(2D)
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

C.Iliac A
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

Ex.Iliac A
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

IIA
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

CFA
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

DFA
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

SFA
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

Pop A
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

TP Trunk A
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

A.Tib A
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

Peroneal A
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

P.Tib A
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

Dors.Ped. A

- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

C.Iliac A Aneurysm
- Long
- Anterior-Posterior
- Transverse

Ex.Iliac A Aneurysm
- Long
- Anterior-Posterior
- Transverse

IIA Aneurysm
- Long
- Anterior-Posterior
- Transverse

CFA Aneurysm
- Long
- Anterior-Posterior
- Transverse

DFA Aneurysm
- Long
- Anterior-Posterior
- Transverse

SFA Aneurysm
- Long
- Anterior-Posterior
- Transverse

Pop A Aneurysm
- Long
- Anterior-Posterior
- Transverse

TP Trunk A Aneurysm
- Long
- Anterior-Posterior
- Transverse

A.Tib A Aneurysm
- Long
- Anterior-Posterior
- Transverse

Peroneal A Aneurysm
- Long
- Anterior-Posterior
- Transverse

P.Tib A Aneurysm
- Long
- Anterior-Posterior
- Transverse

Dors.Ped. A Aneurysm
- Long
- Anterior-Posterior
- Transverse

LE A Graft 1 Native Inflow
- Anterior-Posterior
- Transverse

LE A Graft 1 Anast
- Anterior-Posterior
- Transverse

LE A Graft 1 Graft
- Anterior-Posterior
- Transverse

LE A Graft 1 Native Outflow
- Anterior-Posterior
- Transverse

LE A Graft 2 Native Inflow
- Anterior-Posterior
- Transverse

LE A Graft 2 Anast
- Anterior-Posterior
- Transverse

LE A Graft 2 Graft
- Anterior-Posterior
- Transverse

LE A Graft 2 Native Outflow
- Anterior-Posterior
- Transverse

LE A Graft 3 Native Inflow
- Anterior-Posterior
- Transverse

LE A Graft 3 Anast
- Anterior-Posterior
- Transverse

LE A Graft 3 Graft
- Anterior-Posterior
- Transverse

LE A Graft 3 Native Outflow
- Anterior-Posterior
- Transverse

LE A Stent 1
- Long
- Anterior-Posterior
- Transverse

LE A Stent 2
- Long

- Anterior-Posterior
- Transverse

LE A Stent 3
- Long
- Anterior-Posterior
- Transverse

LE A Stenosis 1(2D)
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

LE A Stenosis 2(2D)
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

LE A Stenosis 3(2D)
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

LE A Stenosis 4(2D)
- Anterior-Posterior
- Transverse
- Outer Diameter
- Inner Diameter
- Outer Area
- Inner Area

LE A Finding 1
- Long
- Anterior-Posterior
- Transverse

LE A Finding 2
- Long
- Anterior-Posterior
- Transverse

LE A Finding 3
- Long
- Anterior-Posterior
- Transverse

LE A Finding 4
- Long
- Anterior-Posterior
- Transverse

LE A Finding 5
- Long
- Anterior-Posterior
- Transverse

LE A Finding 6
- Long
- Anterior-Posterior
- Transverse

Int Jug V
- Anterior-Posterior
- Transverse
- Checklist

Innom V
- Anterior-Posterior
- Transverse
- Checklist

Subclav V
- Anterior-Posterior
- Transverse
- Checklist

Ax V
- Anterior-Posterior
- Transverse
- Checklist

Brachial V
- Anterior-Posterior
- Transverse
- Checklist

Radial V
- Anterior-Posterior
- Transverse
- Checklist

Ulnar V
- Anterior-Posterior
- Transverse
- Checklist

Volar V
- Anterior-Posterior
- Transverse
- Checklist

Cephalic V
- Anterior-Posterior
- Transverse
- Checklist

Basilic V
- Anterior-Posterior

- Transverse
- Checklist

CA Junction
- Anterior-Posterior
- Transverse
- Checklist

Upper Arm Cephalic V
- Anterior-Posterior
- Transverse
- Checklist

Cephalic-Antecubital V
- Anterior-Posterior
- Transverse
- Checklist

Forearm Cephalic V
- Anterior-Posterior
- Transverse
- Checklist

BA Junction
- Anterior-Posterior
- Transverse
- Checklist

Upper Arm Basilic V
- Anterior-Posterior
- Transverse
- Checklist

Basilic-Antecubital V
- Anterior-Posterior
- Transverse
- Checklist

Forearm Basilic V
- Anterior-Posterior
- Transverse
- Checklist

Digital V
- Anterior-Posterior
- Transverse
- Checklist

Median Cubital V
- Anterior-Posterior
- Transverse
- Checklist

AVF-Inflow Artery
- Anterior-Posterior
- Transverse

AVF-Anast
- Anterior-Posterior
- Transverse

AVF-Outflow Vein Level 1
- Anterior-Posterior
- Transverse

AVF-Outflow Vein Level 2
- Anterior-Posterior
- Transverse

AVF-Outflow Vein Level 3
- Anterior-Posterior
- Transverse

AVF-Outflow Vein Level 4
- Anterior-Posterior
- Transverse

AVF-Outflow Vein Level 5
- Anterior-Posterior
- Transverse

AVF-Outflow Vein Level 6
- Anterior-Posterior
- Transverse

AVF-Stenosis 1
- Anterior-Posterior
- Transverse

AVF-Stenosis 2
- Anterior-Posterior
- Transverse

AVF-Stenosis 3
- Anterior-Posterior
- Transverse

AVF-Aneurysm 1
- Anterior-Posterior
- Transverse

AVF-Aneurysm 2
- Anterior-Posterior
- Transverse

AVF-Aneurysm 3
- Anterior-Posterior
- Transverse

AV Graft-Inflow Artery
- Anterior-Posterior
- Transverse

AV Graft-Arterial Anast
- Anterior-Posterior
- Transverse

AV Graft-Graft
- Anterior-Posterior
- Transverse

AV Graft-Venous Anast
- Anterior-Posterior
- Transverse

- AV Graft-Outflow Vein Level 1
  - Anterior-Posterior
  - Transverse
- AV Graft-Outflow Vein Level 2
  - Anterior-Posterior
  - Transverse
- AV Graft-Outflow Vein Level 3
  - Anterior-Posterior
  - Transverse
- AV Graft-Outflow Vein Level 4
  - Anterior-Posterior
  - Transverse
- AV Graft-Outflow Vein Level 5
  - Anterior-Posterior
  - Transverse
- AV Graft-Outflow Vein Level 6
  - Anterior-Posterior
  - Transverse
- C.Iliac V
  - Anterior-Posterior
  - Transverse
  - Checklist
- Ex.Iliac V
  - Anterior-Posterior
  - Transverse
  - Checklist
- IIV
  - Anterior-Posterior
  - Transverse
  - Checklist
- CFV
  - Anterior-Posterior
  - Transverse
  - Checklist
- Femoral V
  - Anterior-Posterior
  - Transverse
  - Checklist
- DFV
  - Anterior-Posterior
  - Transverse
  - Checklist
- Pop V
  - Anterior-Posterior
  - Transverse
  - Checklist
- P.Tib V
  - Anterior-Posterior
  - Transverse
  - Checklist
- Peroneal V
  - Anterior-Posterior
  - Transverse
  - Checklist
- Sural V
  - Anterior-Posterior
  - Transverse
  - Checklist
- Soleal V
  - Anterior-Posterior
  - Transverse
  - Checklist
- A.Tib V
  - Anterior-Posterior
  - Transverse
  - Checklist
- TP Trunk V
  - Anterior-Posterior
  - Transverse
  - Checklist
- Saph V
  - Anterior-Posterior
  - Transverse
  - Checklist
- SSV
  - Anterior-Posterior
  - Transverse
  - Checklist
- SF Junction
  - Anterior-Posterior
  - Transverse
  - Checklist
- GSV Thigh
  - Anterior-Posterior
  - Transverse
  - Checklist
- GSV Knee
  - Anterior-Posterior
  - Transverse
  - Checklist
- GSV Calf
  - Anterior-Posterior
  - Transverse
  - Checklist
- SP Junction
  - Anterior-Posterior

- Transverse
- Checklist

SSV Thigh Extension
- Anterior-Posterior
- Transverse
- Checklist

AASV
- Anterior-Posterior
- Transverse
- Checklist

PASV
- Anterior-Posterior
- Transverse
- Checklist

Thigh Perf
- Anterior-Posterior
- Transverse
- Checklist

Prox Calf Perf
- Anterior-Posterior
- Transverse
- Checklist

Mid Calf Perf
- Anterior-Posterior
- Transverse
- Checklist

Dist Calf Perf
- Anterior-Posterior
- Transverse
- Checklist

Pseudoaneurysm
- Long
- Anterior-Posterior
- Transverse
- Neck

M-Mode

D-Mode

ACA

A1 ACA

MCA

M1 MCA

M2 MCA

AComA

Terminal ICA

PComA

PCA

P1 PCA

P2 PCA

Opthalmic A

ICA Siphon

Terminal Vert A

BA

Ba V

CCA

ICA

ECA

Bulb

Carotid Bifurcation

Vert A

Subclav A

Innom A

Mammary A

Subclav V

CCA Aneurysm

ICA Aneurysm

ECA Aneurysm

Bulb Aneurysm

Carotid Bifurcation Aneurysm

Vert A Aneurysm

Subclav A Aneurysm

Innom A Aneurysm

Mammary A Aneurysm

Carotid Graft 1 Native Inflow

Carotid Graft 1 Anast Pre

Carotid Graft 1 Anast Max

Carotid Graft 1 Anast Post

Carotid Graft 1 Graft

Carotid Graft 1 Native Outflow

Carotid Graft 2 Native Inflow

Carotid Graft 2 Anast Pre

Carotid Graft 2 Anast Max

Carotid Graft 2 Anast Post

Carotid Graft 2 Graft

Carotid Graft 2 Native Outflow

Carotid Graft 3 Native Inflow

Carotid Graft 3 Anast Pre

Carotid Graft 3 Anast Max

Carotid Graft 3 Anast Post

Carotid Graft 3 Graft

Carotid Graft 3 Native Outflow

Carotid Stent 1

Carotid Stent 2

Carotid Stent 3

Axill A

Brachial A
Ulnar A
Radial A
UE A Graft 1 Native Inflow
UE A Graft 1 Anast
UE A Graft 1 Graft
UE A Graft 1 Native Outflow
UE A Graft 2 Native Inflow
UE A Graft 2 Anast
UE A Graft 2 Graft
UE A Graft 2 Native Outflow
UE A Graft 3 Native Inflow
UE A Graft 3 Anast
UE A Graft 3 Graft
UE A Graft 3 Native Outflow
UE A Stent 1
UE A Stent 2
UE A Stent 3
C.Iliac A
Ex.Iliac A
IIA
CFA
DFA
SFA
Pop A
TP Trunk A
A.Tib A
Peroneal A
P.Tib A
Dors.Ped. A
LE A Graft 1 Native Inflow
LE A Graft 1 Anast Pre
LE A Graft 1 Anast Max
LE A Graft 1 Anast Post
LE A Graft 1 Graft
LE A Graft 1 Native Outflow
LE A Graft 2 Native Inflow
LE A Graft 2 Anast Pre
LE A Graft 2 Anast Max
LE A Graft 2 Anast Post
LE A Graft 2 Graft
LE A Graft 2 Native Outflow
LE A Graft 3 Native Inflow
LE A Graft 3 Anast Pre
LE A Graft 3 Anast Max
LE A Graft 3 Anast Post
LE A Graft 3 Graft
LE A Graft 3 Native Outflow
LE A Stent 1
LE A Stent 2
LE A Stent 3
Axill V
Brachial V
Radial V
Ulnar V
Cephalic V
Basilic V
AVF-Inflow Artery
AVF-Anast
AVF-Outflow Vein Level 1
AVF-Outflow Vein Level 2
AVF-Outflow Vein Level 3
AVF-Outflow Vein Level 4
AVF-Outflow Vein Level 5
AVF-Outflow Vein Level 6
AVF-Stenosis 1
AVF-Stenosis 2
AVF-Stenosis 3
AV Graft-Inflow Artery
AV Graft-Arterial Anast
AV Graft-Graft
AV Graft-Venous Anast
AV Graft-Outflow Vein Level 1
AV Graft-Outflow Vein Level 2
AV Graft-Outflow Vein Level 3
AV Graft-Outflow Vein Level 4
AV Graft-Outflow Vein Level 5
AV Graft-Outflow Vein Level 6
ASP
BSP

CCA(Sten)
  Pre Sten
  Sten
  Post Sten
ICA(Sten)
  Pre Sten
  Sten
  Post Sten
ECA(Sten)
  Pre Sten
  Sten
  Post Sten
Bulb(Sten)
  Pre Sten
  Sten

Post Sten
Carotid Bifurcation(Sten)
Pre Sten
Sten
Post Sten
Vert A(Sten)
Pre Sten
Sten
Post Sten
Subclav A(Sten)
Pre Sten
Sten
Post Sten
Innom A(Sten)
Pre Sten
Sten
Post Sten
Mammary A(Sten)
Pre Sten
Sten
Post Sten
Carotid Stenosis 1
Pre Sten
Sten
Post Sten
Carotid Stenosis 2
Pre Sten
Sten
Post Sten
Carotid Stenosis 3
Pre Sten
Sten
Post Sten
Carotid Stenosis 4
Pre Sten
Sten
Post Sten
Axill A(Sten)
Pre Sten
Sten
Post Sten
Brachial A(Sten)
Pre Sten
Sten
Post Sten
Ulnar A(Sten)
Pre Sten
Sten
Post Sten
Radial A(Sten)
Pre Sten
Sten
Post Sten
UE A Stenosis 1
Pre Sten
Sten
Post Sten
UE A Stenosis 2
Pre Sten
Sten
Post Sten
UE A Stenosis 3
Pre Sten
Sten
Post Sten
UE A Stenosis 4
Pre Sten
Sten
Post Sten
C.Iliac A(Sten)
Pre Sten
Sten
Post Sten
Ex.Iliac A(Sten)
Pre Sten
Sten
Post Sten
IIA(Sten)
Pre Sten
Sten
Post Sten
CFA(Sten)
Pre Sten
Sten
Post Sten
DFA(Sten)
Pre Sten
Sten
Post Sten
SFA(Sten)
Pre Sten
Sten
Post Sten
Pop A(Sten)
Pre Sten
Sten

- Post Sten
- TP Trunk A(Sten)
  - Pre Sten
  - Sten
  - Post Sten
- A.Tib A(Sten)
  - Pre Sten
  - Sten
  - Post Sten
- Peroneal A(Sten)
  - Pre Sten
  - Sten
  - Post Sten
- P.Tib A(Sten)
  - Pre Sten
  - Sten
  - Post Sten
- Dors.Ped. A(Sten)
  - Pre Sten
  - Sten
  - Post Sten
- LE A Stenosis 1
  - Pre Sten
  - Sten
  - Post Sten
- LE A Stenosis 2
  - Pre Sten
  - Sten
  - Post Sten
- LE A Stenosis 3
  - Pre Sten
  - Sten
  - Post Sten
- LE A Stenosis 4
  - Pre Sten
  - Sten
  - Post Sten
- C.Iliac V
  - PV
  - Reflux
  - Checklist
- Ex.Iliac V
  - PV
  - Reflux
  - Checklist
- IIV
  - PV
  - Reflux
  - Checklist
- CFV
  - PV
  - Reflux
  - Checklist
- Femoral V
  - PV
  - Reflux
  - Checklist
- DFV
  - PV
  - Reflux
  - Checklist
- Pop V
  - PV
  - Reflux
  - Checklist
- P.Tib V
  - PV
  - Reflux
  - Checklist
- Peroneal V
  - PV
  - Reflux
  - Checklist
- Sural V
  - PV
  - Reflux
  - Checklist
- Soleal V
  - PV
  - Reflux
  - Checklist
- A.Tib V
  - PV
  - Reflux
  - Checklist
- TP Trunk V
  - PV
  - Reflux
  - Checklist
- Saph V
  - PV
  - Reflux
  - Checklist
- SSV
  - PV
  - Reflux

- Checklist
- SF Junction
  - PV
  - Reflux
  - Checklist
- GSV Thigh
  - PV
  - Reflux
  - Checklist
- GSV Knee
  - PV
  - Reflux
  - Checklist
- GSV Calf
  - PV
  - Reflux
  - Checklist
- SP Junction
  - PV
  - Reflux
  - Checklist
- SSV Thigh Extension
  - PV
  - Reflux
  - Checklist
- AASV
  - PV
  - Reflux
  - Checklist
- PASV
  - PV
  - Reflux
  - Checklist
- Thigh Perf
  - PV
  - Reflux
  - Checklist
- Prox Calf Perf
  - PV
  - Reflux
  - Checklist
- Mid Calf Perf
  - PV
  - Reflux
  - Checklist
- Dist Calf Perf
  - PV
  - Reflux
- Checklist
- ABI
  - ASP
  - BSP