

Resona I8 Series

Innovation, in every facet

Diagnostic Ultrasound System

Datasheet

Release 3.1.0

1 System Overview

Thanks to its innovative design and advanced features, Resona I8 offers a completely new experience that empowers you to confidently manage your ever-increasing patient throughput with high efficiency, regardless of the types of patients or clinical challenges you may encounter.

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
- B-Mode/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)
- Contrast Imaging
- Contrast Imaging QA (Quantitative Analysis)
- Volume CEUS
- LVO (Left Ventricular Opacification)
- Low MI Contrast
- STE Imaging (Sound Touch Elastography)
- STQ Imaging (Sound Touch Quantification)
- Strain Elastography
- High frame rate 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)

- Touch gestures
- Q-Path
- iStorage

2

Physical Specification

2.1

Dimension and Weight

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

- Depth: 1026±20 mm
- Width: 550±10 mm
- Height: 1098±20 mm
- Weight: approx. less than 94kg±5kg (net weight, standard configuration but not including the transducer)

2.2

Electrical power

- Voltage: 100-240V~
- Frequency: 50/60 Hz
- Power consumption: Max. 600 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: 178 degrees
- Digital on screen display of brightness and contrast controls
- Automatic LED brightness
- Tilt/Rotate independent adjustment
- Tilt angle range: 105 degrees
- Rotate angle range: 240 degrees

- 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
 - 13.3-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
 - 3.5 Floating control panel
 - Brightness adjustable for the backlight of the whole control panel
 - Full-sized, backlit QWERTY keyboard
 - Console: intelligent control panel for clinical-exam specific layout and adaptive adjustment, 6 programmable keys
 - Independent rotation and up/down adjustment
 - 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 and 1 dedicated pencil transducer holder
 - 3.7 Wheels
 - Diameter: 125mm
 - 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
 - 3.10 Other Features
 - DVD R/W driver
 - Anti-virus software ClamAV
- * Not all items are listed in this part; For more detailed information, please refer to User Manual

- 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
- 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®
- Linux 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 9,257,536 channels
- System Frequency Range: 1 - 24 MHz (adjustable)
- Gray Scale: 256
- Parallel processing of multiple signals
- Line density per frame ≥ 512 lines
- Sound Speed Compensation (SSC)
- ZONE Sonography® Technology

4.2 Transducer specification

- Single crystal and compound crystal etc.
- Multi-frequency≥7 (probe dependent)
- Supported transducer type

- Curved array
- Linear array
- Phased array
- Endocavity
- 4D Volume
- Bi-Plane
- pencil transducer

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 7-level adjustment and up to 9-beam steer
- iClear
Speckle Suppression Imaging, Available in 2D, Contrast, and 3D/4D mode. 10-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+PW mode, the angle and the position of the PW sampling line, SV size, SV angle and SV position are adjusted automatically.

- 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.
 - Available on linear (except for the linear plane of ELC13-4s), C11-3s, SC5-1Ns, and C6-2Gs probes
 - 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) on freeze image. Magnification $\geq 10x$
- 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, 10 steps
- iBeam: Off, 7 steps
- iTouch: -12-12
- Dual Live: image compared by dual display in real time
- Image quality
 - Supports fundamental frequency conversion ≥ 4 segments
 - Fundamental frequency: Pen/Gen/ Res, etc.
 - Supports THI (Tissue Harmonic Imaging) and PSH (Phase Shift Harmonic Imaging), harmonic frequency conversion ≥ 5 segments
 - Harmonic frequency: HPen/HGen/ HRes/HGen-FFR/HRes-FFR (dependent on transducer), etc.
- B steer: 5 levels, available on linear transducers
- ExFOV
 - Available on transducers: convex, linear, endocavity, volume, phased, bi-planar, Laparoscopic.

- Range:
- Phased arrays probe: off,1
- Other: Off, 1-2
- 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
- Supports FCI (Frequency Compound Imaging)
- Frame rate (max): 2976 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): 30-300 (dependent on transducer)
- Gain: 0-100, 1/step
- The Gain of B/M/D mode is visible and independently adjustable, ≥100, 1/step
- FOV Size: continuously adjustable
- FOV Position: continuously adjustable
- 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
- Tint map: off, 8 types
- Smooth: 0-6 levels
- HD Scope: off, 1-3 levels
- SSC (Sound Speed Compensation): on/ off
- Free view: -45°-45°, 5°/step)
- 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)

5.3

- XL View: on/off
- Edge Enhancement: 0-6
- Echo Boost: on/off
- Auto Merge: on/off
- ZoneVue

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: 661 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
- 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
- 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, and Contrast on convex and linear probes.
- 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: 0.7-23.1 kHz
- CW PRF: 0.2-104.0 kHz
- Gain: 0-100, 2/step
- Dynamic range: 24-72, 2/step
- Sweep speed: 6 steps
- Wall filter
 - PW: 14-1000 Hz
 - CW: 5-1200 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: 3175 f/s
 - Tissue Velocity/Energy Imaging (included in TDI option)
 - Available on transducers SC5-1Ns/ SC8-2s/SC9-2s/SP5-1Ns/P7-3Ts
 - 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:

5.14

- 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
- 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
- 5.23 Smart ICV
- Support comment and bodymark on sectional plane
 - 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 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/SC5-1Ns/C11-3s/ SC8-2s/SC9-2s/V11-3Hs/V11-3HBs/L9-3s/L14-Ws /L20-5s/L13-3Ns/SP5-1Ns/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.

- 5.32 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
- 5.33 LVO
 - Only available in cardiac exam mode
 - Dedicated left ventricle contrast imaging tool
- 5.34 Low MI Contrast
 - Only available in cardiac exam mode
 - Enhances echo reflection by using contrast agent to perform myocardial analysis based on echocardiography technique
- 5.35 Volume CEUS
 - Available on DE11-3Ws/SD8-1s
 - Timer1: on/off
 - Timer2: on/off
 - Capture 3D image
- 5.36 STE Imaging (Sound Touch Elastography Imaging)
 - Available on C6-2Gs/SC5-1Ns/SC8-2s/ SC9-2s/L9-3s/L14-3Ws/L20-5s/L13-3Ns
 - 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
- 5.37 High frame rate STE

To increase the frame rate of STE function.
- 5.38 Strain Elastography
 - Available on V11-3Hs/V11-3HBs/L9-3s/L14-3Ws/L20-5s/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
- 5.39 STQ Imaging (Sound Touch Quantification Imaging)
 - Available on C6-2Gs/SC5-1Ns/SC8-2s/ SC9-2s/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
- 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

- 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

5.40

Fatty Liver Lab

Only the SC5-1Ns 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

5.41

Ultrasound Fusion Imaging

- Available on C6-2Gs/SC5-1Ns/SC8-2s/ SC9-2s/L14-3Ws/L13-3Ns/SP5-1Ns 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

- 5.42 Endocavity Fusion Imaging
- Mainly used for endocavity transducer, fusing real-time ultrasound and CT/MR images.
 - Available on ELC13-4s and V11-3Hs
- 5.43 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.
- 5.44 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
- 5.45 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
- 5.46 TT QA
- Available on SP5-1Ns 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

- 5.47 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
- 5.48 Stress Echo
- Available on SP5-1Ns 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
- 5.49 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.
- 5.50 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.
- 5.51 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
- 5.52 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.
- 5.53 Smart Pelvic
- Enter smart pelvic in 2D or 3D/4D scanning mode.
 - Set Rest and Valsalva frame
 - Measure automatically
- 5.54 Smart Fetal HR (Fetal Heart Rate)
- Measure the fetal heart rate automatically on B/M mode

- 5.55 IOTA
- Integrated IOTA-ADNEX model: multiclass risk prediction model for different ovarian neoplasias assessment.
 - 3 clinical indexes and 6 ultrasound indexes
 - Auto input of ultrasound predictors from measurements
 - Auto display of the max data if there are repeated measurements
 - Bar comparison to show the difference between patient specific risk and baseline risk in subclassifications of malignancy
 - The result is visualized in the ultrasound report
- 5.56 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
- 5.57 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
- 5.58 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.
- 5.59 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.
- 5.60 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
- 5.61 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 83575 frames (B storage server) or 310.65s (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: Support manual, semi-automat, automat on Freeze image and CINE clip, and real-time measurements.

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 circumference 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/RTF file
 - Presetable 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 and 128G SSD
- Optional: 1TB SSD
- Direct digital storage of single frame and cine files.
- Export images in BMP/JPG/TIFF/DCM/AVI/MP4 format
- Supports back-end storage, export and backup of image data, real-time exam, without affecting exam operation.
- Supports backup/send to USB devices, DVD+RW, DVD+R, CD-RW, CD-R, DVD-R, 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
- Support for image sharing from ultrasound devices to mobile devices via email

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
- 9.7 **Gallerydrop**
Transfer the ultrasound images or cine files from ultrasound to mobile devices through QR code scanning.
- 10 **Transducers**
- 10.1 **Curved Array**
- C6-2Gs
 - Application: Obstetrics, Gynecology, Abdominal, Urology
 - 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)
- SC5-1Ns (Single Crystal)
 - Application: Obstetrics, Gynecology, Abdominal, Small Organ, Musculo-skeletal, Vascular, Urology, Nerve, Thoracic/pleural
 - Bandwidth: 1.2-6.0 MHz
 - Number of Elements: 192
 - FOV (max): 60°
 - Extended FOV: 73°
 - Convex Radius: 60 mm
 - Depth: 4.0-40.0 cm
 - Physical Footprint: 76.7 mm × 28 mm
 - Footprint: 68 mm × 18 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, 3.5 (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)
- C11-3s
 - Application: Abdominal, Vascular, Cardiac, Small Organ, Pediatric, Cephalic
 - 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
- SC9-2s (Single Crystal)
 - Application: Obstetrics, Gynecology, Abdominal, Urology, Vascular
 - Bandwidth: 1.8 - 8.2 MHz
 - Number of Element: 192
 - FOV (max): 65°
 - Extended FOV: 76°
 - Convex Radius: 43mm
 - Depth: 4-40cm
 - Physical Footprint: 66.1mm× 26.1mm
 - Footprint: 48.8mm × 12.1mm
 - B-mode Frequencies: 1.8~5.4, 2.3~6.8, 2.8~8.2 MHz
 - Harmonic Frequencies: 4.8, 5.4, 6.0, 6.5 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-058, multi angle, reusable
- SC8-2s (Single Crystal)
 - Application: Obstetrics, Gynecology, Abdominal, Urology, Vascular
 - 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
- V11-3Hs
 - Application: Obstetrics, Gynecology, 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
 - 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
- Application: Obstetrics, 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: 4.0-20.0 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 (Single Crystal)
 - Application: Obstetrics, 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

10.2 Volume

- DE11-3Ws

10.3 Linear Array

- L9-3s
 - Application: Abdominal, Pediatric, Small Organ, Musculo-skeletal, Vascular, Nerve, Obstetrics
 - 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
 - Bandwidth: 3.0-18.0 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, 9.0-18.0MHz
 - 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
 - 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
 - L13-3Ns
 - Application: Small Organ, Musculo-skeletal, Vascular, Abdominal, Pediatric, Thoracic/ Pleural, Nerve
 - Bandwidth: 3.0-15.0 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
- SP5-1Ns (Single Crystal)

- Application: Abdominal, Cardiac, Vascular, Cephalic, Thoracic/ Pleural
 - Bandwidth: 1.5-5.0 MHz
 - Number of Elements: 80
 - FOV (max): 90°
 - Extended FOV: 90°
 - Depth: 2.0-38.0 cm
 - Physical Footprint: 38.2 mm × 30.4 mm
 - Footprint: 24 mm × 15.4 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
 - P7-3Ts
 - Application: 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
 - 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: 3.2-7.8, 5.3-9.0, 5.8-10.0, 7.0-12.8 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
- 10.5 Bi-Plane
ELC13-4s (Convex & Linear)
- Application: Urology, Gynecology
 - Bandwidth
 - Convex: 3.5-9.5 MHz
 - Linear: 3.2-12.8 MHz
 - Number of Elements: 192
- 10.6 Pencil transducer
- CW2s
 - Application: Cardiac, Cephalic, Pediatric
 - Number of Elements: 2
 - Biopsy Guide: not available
 - CW5s
 - Application: Vascular, Cephalic, Pediatric
 - 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 CANON TS708
Epson L130
HP 8100 (CM752A)
Epson L805
Epson L3256
Epson L8058
Epson L3218
HP 7000(C9299A)
HP DeskJet 2029
HP DeskJet 1112
Canon G580 Canon
G1830 Canon G2830
- 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)
 - Honeywell HH1800
- Built-in Wireless Adapter
 - Encryption: WPA, WPA2
 - Protocols: IEEE 802.11 ac/a/b/g/n
 - Frequency: 2.4G/5G

12 System Inputs and Outputs

- Audio input/output
Microphone: 1 port
- Video Output
 - S-Video out: 1 port, PAL/NTSC
 - 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 and 1 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 IEC 60601-2-37
 - 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 Regulation (EU) 2017/ 745 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

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

16.2 Clinical option measurement package

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

Post-BL W	Anterior-Posterior
Spleen L	Transverse
Spleen H	IMA
Spleen W	Anterior-Posterior
Spleen Area	Transverse
Skin-L.Capsule Dist.	AAA
Hepatic Lesion1 Elas.	Long
Hepatic Lesion2 Elas.	Anterior-Posterior
Hepatic Lesion3 Elas.	Transverse
LSM	Celiac A Aneurysm Long
Rt DT(Insp) Rt	Anterior-Posterior
DT(Expir) Lt	Transverse
DT(Insp) Lt	SMA Aneurysm
DT(Expir)	Long
Free Fluid	Anterior-Posterior
Smart HRI	Transverse
-----	C Hepatic A Aneurysm
Renal Vol	Long
Pre-BL Vol	Anterior-Posterior
Post-BL Vol	Transverse
Mictur.Vol	Proper Hepatic A Aneurysm Long
-----	Anterior-Posterior
Aorta	Transverse
Anterior-Posterior	Hepatic A Aneurysm Long
Transverse	Anterior-Posterior
Outer Diameter	Transverse
Inner Diameter	Splenic A Aneurysm Long
Outer Area Inner	Anterior-Posterior
Area	Transverse
Celiac Axis	GDA Aneurysm
Anterior-Posterior	Long
Transverse	Anterior-Posterior
SMA	Transverse
Anterior-Posterior	IMA Aneurysm
Transverse	Long
C Hepatic A Anterior-	Anterior-Posterior
Posterior Transverse	Transverse
Proper Hepatic A	EVAR Residual Aneurysm Sac(2D)
Anterior-Posterior	Anterior-Posterior
Transverse	Transverse EVAR
Hepatic A	Inflow(2D)
Anterior-Posterior	Anterior-Posterior
Transverse	Transverse
Splenic A	EVAR Graft Body(2D)
Anterior-Posterior	
Transverse	
GDA	

Anterior-Posterior Transverse	Transverse
EVAR Limb(2D)	Lt Hepatic V(2D)
Anterior-Posterior Transverse	Anterior-Posterior
EVAR Outflow(2D)	Transverse
Anterior-Posterior	M Hepatic V(2D)
Transverse	Anterior-Posterior
Aortic Bypass Graft Anast(2D)	Transverse
Anterior-Posterior Transverse	Rt Hepatic V(2D)
Aortic Bypass Graft Graft(2D)	Anterior-Posterior
Anterior-Posterior Transverse	Transverse
ABD Stenosis 1(2D)	Liver
Anterior-Posterior	L
Transverse	H
Outer Diameter	W
Inner Diameter	R Liver Lobe L
Outer Area Inner	H
Area	W
ABD Stenosis 2(2D)	L Liver Lobe L
Anterior-Posterior	H
Transverse	W
Outer Diameter	Hepatic Lesion 1 d1
Inner Diameter	d2
Outer Area Inner	d3
Area	Hepatic Lesion 2 d1
ABD Stenosis 3(2D)	d2
Anterior-Posterior	d3
Transverse	Hepatic Lesion 3 d1
Outer Diameter	d2
Inner Diameter	d3
Outer Area Inner	Hepatic Cyst 1
Area	d1
ABD Stenosis 4(2D)	d2
Anterior-Posterior	d3
Transverse	Hepatic Cyst 2
Outer Diameter	d1
Inner Diameter	d2
Outer Area Inner	d3
Area	Hepatic Cyst 3
IVC	d1
Anterior-Posterior	d2
Transverse Checklist	d3
Hepatic V(2D)	GB
Anterior-Posterior	GB L

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

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)	HR(2D)
SVC Diam(Expir)	B-P Ellipse
SVC Diam(Insp)	LVIDd(2D)
LCA Diam	LVAd sax MV
RCA Diam	LVIDs(2D)
PEd(2D)	LVAs sax MV
PEs(2D)	LVAd apical
VSD Diam	LVAs apical
ASD Diam	HR(2D)
PDA Diam	Bullet
PFO Diam	LVLd apical
AutoEF	LVLs apical
Rt DT(Insp) Rt	LVAd sax MV
DT(Expir) Lt	LVAs sax MV
DT(Insp) Lt	HR(2D)
DT(Expir)	LV Mass(Cube-2D)
-----	IVSd(2D) LVIDd(2D)
LA/Ao(2D)	LVPWd(2D)
-----	LV Mass(A-L)
-- LV(2D)	LVLd apical
Diastole(2D)	LVAd sax Epi
Systole(2D)	LVAd sax Endo
IVSd(2D)	LV Mass(T-E)
LVIDd(2D)	LVAd sax Epi
LVPWd(2D)	LVAd sax Endo a
IVSs(2D)	d
LVIDs(2D)	LA Vol(Simp)
LVPWs(2D)	LA Vol(A2C)
HR(2D)	LA Vol(A4C)
Simpson	LA Vol(A-L)
A4Cd	LA apical
A4Cs	LAA(A2C)
A2Cd	LAA(A4C)
A2Cs	MVA(VTI)
HR(2D)	LVOT Diam
Mod. Simpson	LVOT VTI MV
LVLd apical	VTI
LVLs apical	AVA(VTI)
LVAd sax MV	LVOT Diam
LVAs sax MV	LVOT VTI
LVAd sax PM	AV VTI
LVAs sax PM	CO(LVOT)
HR(2D)	LVOT Diam
S-P Ellipse	LVOT VTI
LVLd apical	AV HR
LVAd apical	CO(RVOT)
LVLs apical	
LVAs apical	

RVOT Diam	Z-Scores (<18Y) (2D)
RVOT VTI PV	LV Area(d) A4C
HR	LV Area(s) A4C
CO(MV)	LVIDd A4C(2D)
MV Diam	LVIDs A4C(2D) LA
MV VTI	AP Diam A4C LA
MV HR	LL Diam A4C
CO(TV)	LA Area A4C
TV Diam	RA AP Diam A4C RA
TV VTI TV	LL Diam A4C
HR	RA Area A4C RV
PISA MR	Area(d) A4C RV
MR Rad MR	Area(s) A4C RVd
Als. Vel MR	Major A4C RVs
VTI	Major A4C
PISA AR	RVd Minor (basal) A4C
AR Rad AR	RVd Minor (midcavity) A4C LV
Als. Vel AR	Area(d) A2C
VTI	LV Area(s) A2C
PISA TR	LVIDd A2C(2D)
TR Rad	LVIDs A2C(2D)
TR Als. Vel	
TR VTI	
PISA PR	M-Mode
PR Rad	RVAWd(M)
PR Als. Vel	RVAWs(M)
PR VTI	RVDd(M)
	RVDs(M)
Qp/Qs	Ao Arch Diam(M) Ao
LVOT Diam	Asc Diam(M) Ao
LVOT VTI	Desc Diam(M) Ao
RVOT Diam	Diam(M)
RVOT VTI	Ao Isthmus(M)
Z-Scores (= 3Y) (2D)	Ao Sinus Diam(M) Ao
AV Diam	st junct(M) ACS(M)
Ao Sinus Diam Ao	HR(M)
st junct	IVSd(M)
PV Diam	IVSs(M)
Ao Arch IA-LCA Ao	LA Diam(M)
Arch LCA-LSA Ao	LPA Diam(M)
Arch after LSA Ao	Diastole(M)
Isthmus Thoracic Ao	Systole(M)
Diam IVC Diam	LVET(M)
MV Diam	LVIDd(M)
TV Diam	LVIDs(M)
MPA Diam	LVOT Diam
RPA Diam	LVPEP(M)
LPA Diam	LVPWd(M)

LVPWs(M)	MV C-O dur(M)
MCS(M)	LVET(M)
MPA Diam(M)	Z-Scores (= 3Y) (M)
MV A Amp MV	IVSd(M) LVPWd(M)
E Amp MV D-E	Z-Scores (<18Y) (M)
Slope MV D-E	LVIDd(M) LVIDs(M)
Amp	
MV E-F Slope	D-Mode
MV EPSS(M)	MV Aa(lateral)
PEd(M)	MV Aa(medial)
PEs(M)	AAo Vmax
RPA Diam(M)	AV VTI
RVET(M)	AV HR
RVOT Diam	AV Vmax
RVPEP(M)	AR DecT
MAPSE TAPSE	AR Time
MV ALL	AR PHT
IVC Diam(Insp)(M) IVC	AR Ved
Diam(Expir)(M) SVC	AR Vmax
Diam(Insp)(M) SVC	AR VTI
Diam(Expir)(M) Rt	MV ARa(lateral)
DT(Insp M)	MV ARa(medial)
Rt DT(Expir M) Lt	ASD Vmax
DT(Insp M) Lt	AV AccT
DT(Expir M)	AV DecT
RDE(QB)	Coarc Post-Duct
RDE(DB) LDE(QB)	Coarc Pre-Duct
LDE(DB)	DAo Vmax
-----	MV DRa(lateral)
-	MV DRa(medial)
LA/Ao(M)	MV Ea(lateral) MV
-----	Ea(medial) IVC
LV(M)	Vel(Expir) IVC
Diastole(M)	Vel(Insp) IVCT
Systole(M)	LPA Vmax
IVSd(M)	LVET(Doppler)
LVIDd(M)	LVOT AccT
LVPWd(M)	LVOT VTI
IVSs(M)	LVOT Vmax
LVIDs(M)	LVPEP(Doppler)
LVPWs(M)	MPA Vmax dP/dt
HR(M)	Tau(BAI)
LV Mass(Cube-M)	MR VTI
IVSd(M) LVIDd(M)	MR Vmax
LVPWd(M)	
LV Tei Index(M)	

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

Follicle15 W

Follicle15 H

Follicle16 L

Follicle16 W

Follicle16 H

Follicle17 L

Follicle17 W

Follicle17 H

Follicle18 L

Follicle18 W

Follicle18 H

Follicle19 L

Follicle19 W

Follicle19 H

Follicle20 L

Follicle20 W

Follicle20 H

Follicle21 L

Follicle21 W

Follicle21 H

Follicle22 L

Follicle22 W

Follicle22 H

Follicle23 L

Follicle23 W

Follicle23 H

Follicle24 L

Follicle24 W

Follicle24 H

Follicle25 L

Follicle25 W

Follicle25 H

Follicle26 L

Follicle26 W

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	d2
Follicle28	d3
Follicle29	Uterine Finding 6 d1
Follicle30	d2
Mean DWT	d3
BND	Ovary
IAS Damage	Ovary L
EAS Damage	Ovary H
-----	Ovary W
Uterus	Ovarian Cyst 1
UT L	d1
UT H	d2
UT W	d3
Endo Uterine	Ovarian Cyst 2
Cervix	d1
Cervix L	d2
Cervix H	d3
Cervix W	Ovarian Cyst 3
Fibroid 1	d1
d1	d2
d2	d3
d3	Ovarian Finding 1 d1
Fibroid 2 d1	d2
d2	d3
d3	Ovarian Finding 2 d1
Fibroid 3 d1	d2
d2	d3
d3	Ovarian Finding 3 d1
Uterine Finding 1 d1	d2
d2	d3
d3	Ovarian Finding 4 d1
Uterine Finding 2 d1	d2
d2	d3
d3	Ovarian Finding 5 d1
Uterine Finding 3 d1	d2
d2	d3
d3	Ovarian Finding 6 d1
Uterine Finding 4 d1	d2
d2	d3
d3	Follicle1
Uterine Finding 5 d1	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
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Follicle13 L

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Follicle15 H
Follicle16 Follicle16
L Follicle16 W
Follicle16 H
Follicle17 Follicle17
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Follicle17 H
Follicle18 Follicle18
L Follicle18 W
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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	HrtC/TC
RVWd	TCD/AC
RVWs	LVW/HW
AV Diam	LVD/RVD
AV Area	LAD/RAD
PV Area	AoD/MPAD
F-kidney H	LAD/AoD
F-kidney W	UT Vol
Lung	UT SUM
Stomach YS	UT-L/CX-L
H	-----
YS W	- AFI
Amniotic Sac L	AF1
Amniotic Sac H	AF2
Amniotic Sac W	AF3
Ovary Cyst L	AF4
Ovary Cyst H	Uterus
Ovary Cyst W UT	UT L
AW	UT H
UT PW	UT W
CSP	Endo
FMF	
MMF	M-Mode
Lung CCAM L	FHR (M)
Lung CCAM H	LVIDd
Lung CCAM W	LVIDs
AD	RVIDd
Iliac Wing Angle	RVIDs
FAGL	IVSd IVSs
FAG	RVIDd(Z-Score)
Intestinum Crassum	LVIDd(Z-Score)
Liver Length	MVE
Rib Length	TVE
Shoulder Blade	AVE
-----	MAPSE
MAD	TAPSE
Mean Sac Diam	LV ICT
AFI	LV IRT
EFW	LV ET
EFW2	RV ICT
HC/AC(Campbell)	RV IRT
FL/AC	RV ET
FL/BPD	
AXT	D-Mode
CI	Umb A
FL/HC(Hadlock)	Duct Ven
AC(c)	Placenta A
HC(c)	

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	L
Nodule 10	H
Long	W
Anterior-Posterior	Nip. Dist. Skin
Transverse	Dist.
THY Nodule1 Strain Ratio A	Breast Mass 6 L
B	H
THY Nodule2 Strain Ratio A	W
B	Nip. Dist. Skin
THY Nodule3 Strain Ratio A	Dist.
B	Breast Mass 7 L
THY Nodule1 Elas. Ratio A	H
B	W
THY Nodule2 Elas. Ratio A	Nip. Dist. Skin
B	Dist.
THY Nodule3 Elas. Ratio A	Breast Mass 8 L
B	H
Breast Mass 1 L	W
H	Nip. Dist. Skin
W	Dist.
Nip. Dist.	Breast Mass 9 L
Skin Dist.	H
Breast Mass 2 L	W
H	Nip. Dist. Skin
W	Dist.
Nip. Dist.	Breast Mass 10 L
Skin Dist.	H
Breast Mass 3 L	W
H	Nip. Dist. Skin
W	Dist.
Nip. Dist.	Breast Mass1 Strain Ratio A
Skin Dist.	B
Breast Mass 4 L	Breast Mass1 Elas. Ratio A
H	B
W	Breast Mass2 Strain Ratio A
Nip. Dist.	B
Skin Dist.	Breast Mass2 Elas. Ratio A
Breast Mass 5	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	W
d1	Finding 6(Renal Transplant1) L
d2	H
d3	W
Kidney(Superior) H	Renal Transplant 1(2D)
W	Cortex(Renal Transplant1)
Kidney(Mid) H	Renal V Diam(Renal Transplant1) Ureter
W	Diam(Renal Transplant1) Kidney(Renal
Kidney(Inferior) H	Transplant1)
W	L
Renal A	H
Long	W
Anterior-Posterior Transverse	Adrenal(Renal Transplant1) L
Renal A Aneurysm Long	H
Anterior-Posterior Transverse	W
Kidney(Renal Transplant1) L	Finding 1(Renal Transplant1) L
H	H
W	W
Adrenal(Renal Transplant1) L	Finding 2(Renal Transplant1) L
H	H
W	W
Finding 1(Renal Transplant1) L	Finding 3(Renal Transplant1) L
H	H
W	W
Finding 2(Renal Transplant1) L	Finding 4(Renal Transplant1) L
H	H
W	W
Finding 3(Renal Transplant1) L	Finding 5(Renal Transplant1) L
H	H
W	W
Finding 4(Renal Transplant1) L	Finding 6(Renal Transplant1) L
H	H
W	W
Finding 5(Renal Transplant1) L	Kidney(Renal Transplant2) L
H	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	B
Testicular H	Prostate Mass1 Elas. Ratio A
Testicular W	B
Testis Mass 1	Prostate Mass2 Elas. Ratio A
d1	B
d2	Prostate Mass3 Elas. Ratio A
d3	B
Testis Mass 2 d1	
d2	M-Mode
d3	
Testis Mass 3 d1	D-Mode
d2	Renal A
d3	Ren A Org
Epididymis	M Renal A
Epididymis L	Renal A1
Epididymis H	Renal A2
Epididymis W	Hilum
Testicle(Superior) H	Interlobar A
W	Arcuate A
Testicle(Mid) H	Segment A
W	Artery Anast(Renal Transplant1) Artery
Testicle(Inferior) H	Anast 2(Renal Transplant1) Vein
W	Anast(Renal Transplant1) Vein Anast
Epididymal Head L	2(Renal Transplant1) Renal A(Renal
H	Transplant1)
W	Renal A1(Renal Transplant1) Renal
Epididymal Body L	A2(Renal Transplant1) Hilum(Renal
H	Transplant1) Interlobar A(Renal
W	Transplant1) Arcuate A(Renal
Epididymal Tail L	Transplant1) Segmental A(Renal
H	Transplant1) Renal Vein 1(Renal
W	Transplant1) Renal Vein 2(Renal
Prostate Mass1 Strain Ratio A	Transplant1) Artery Anast(Renal
B	Transplant2) Artery Anast 2(Renal
Prostate Mass2 Strain Ratio A	Transplant2) Vein Anast(Renal
B	Transplant2) Vein Anast 2(Renal
Prostate Mass3 Strain Ratio A	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	Transverse Innom
Anterior-Posterior Transverse	A Aneurysm
Outer Diameter	Long
Inner Diameter	Anterior-Posterior
Outer Area Inner	Transverse
Area	Mammary A Aneurysm Long
Innom A	Anterior-Posterior
Anterior-Posterior Transverse	Transverse
Outer Diameter	Carotid Graft 1 Anast Long
Inner Diameter	Anterior-Posterior
Outer Area Inner	Transverse
Area	Carotid Graft 1 Graft Long
Mammary A Anterior-	Anterior-Posterior
Posterior Transverse	Transverse
Outer Diameter	Carotid Graft 2 Anast Long
Inner Diameter	Anterior-Posterior
Outer Area Inner	Transverse
Area	Carotid Graft 2 Graft Long
CCA Aneurysm	Anterior-Posterior
Long	Transverse
Anterior-Posterior Transverse	Carotid Graft 3 Anast Long
Bulb Aneurysm	Anterior-Posterior
Long	Transverse
Anterior-Posterior Transverse	Carotid Graft 3 Graft Long
Carotid Bifurcation Aneurysm	Anterior-Posterior
Long	Transverse
Anterior-Posterior Transverse	Carotid Stent 1
ICA Aneurysm	Long
Long	Anterior-Posterior
Anterior-Posterior Transverse	Transverse
ECA Aneurysm	Carotid Stent 2
Long	Long
Anterior-Posterior Transverse	Anterior-Posterior
Vert A Aneurysm Long	Transverse
Anterior-Posterior Transverse	Carotid Stent 3
Subclav A Aneurysm Long	Long
Anterior-Posterior	Anterior-Posterior
	Transverse
	Carotid Stenosis 1
	Anterior-Posterior
	Transverse

Outer Diameter	Transverse Outer
Inner Diameter	Diameter Inner
Outer Area Inner	Diameter Outer
Area	Area Inner Area
Carotid Stenosis 2	Axill A Aneurysm Long
Anterior-Posterior	Anterior-Posterior
Transverse	Transverse
Outer Diameter	Brachial A Aneurysm Long
Inner Diameter	Anterior-Posterior
Outer Area Inner	Transverse
Area	Radial A Aneurysm
Carotid Stenosis 3	Long
Anterior-Posterior	Anterior-Posterior
Transverse	Transverse
Outer Diameter	Ulnar A Aneurysm
Inner Diameter	Long
Outer Area Inner	Anterior-Posterior
Area	Transverse
Carotid Stenosis 4	UE A Graft 1 Native Inflow
Anterior-Posterior	Anterior-Posterior
Transverse	Transverse
Outer Diameter	UE A Graft 1 Anast
Inner Diameter	Anterior-Posterior
Outer Area Inner	Transverse
Area	UE A Graft 1 Graft
Axill A	Anterior-Posterior
Anterior-Posterior	Transverse
Transverse	UE A Graft 1 Native Outflow
Outer Diameter	Anterior-Posterior Transverse
Inner Diameter	UE A Graft 2 Native Inflow
Outer Area Inner	Anterior-Posterior
Area	Transverse
Brachial A	UE A Graft 2 Anast
Anterior-Posterior	Anterior-Posterior
Transverse	Transverse
Outer Diameter	UE A Graft 2 Graft
Inner Diameter	Anterior-Posterior
Outer Area Inner	Transverse
Area	UE A Graft 2 Native Outflow
Radial A	Anterior-Posterior Transverse
Anterior-Posterior	UE A Graft 3 Native Inflow
Transverse	Anterior-Posterior
Outer Diameter	Transverse
Inner Diameter	
Outer Area Inner	
Area	
Ulnar A	
Anterior-Posterior	

UE A Graft 3 Anast	Inner Area
Anterior-Posterior	C.Iliac A
Transverse	Anterior-Posterior
UE A Graft 3 Graft	Transverse
Anterior-Posterior	Outer Diameter
Transverse	Inner Diameter
UE A Graft 3 Native Outflow	Outer Area Inner
Anterior-Posterior	Area
Transverse	Ex.Iliac A
UE A Stent 1 Long	Anterior-Posterior
Anterior-Posterior	Transverse
Transverse	Outer Diameter
UE A Stent 2 Long	Inner Diameter
Anterior-Posterior	Outer Area Inner
Transverse	Area
UE A Stent 3 Long	IIA
Anterior-Posterior	Anterior-Posterior
Transverse	Transverse
UE A Stenosis 1(2D)	Outer Diameter
Anterior-Posterior	Inner Diameter
Transverse	Outer Area Inner
Outer Diameter	Area
Inner Diameter	CFA
Outer Area Inner	Anterior-Posterior
Area	Transverse
UE A Stenosis 2(2D)	Outer Diameter
Anterior-Posterior	Inner Diameter
Transverse	Outer Area Inner
Outer Diameter	Area
Inner Diameter	DFA
Outer Area Inner	Anterior-Posterior
Area	Transverse
UE A Stenosis 3(2D)	Outer Diameter
Anterior-Posterior	Inner Diameter
Transverse	Outer Area Inner
Outer Diameter	Area
Inner Diameter	SFA
Outer Area Inner	Anterior-Posterior
Area	Transverse
UE A Stenosis 4(2D)	Outer Diameter
Anterior-Posterior	Inner Diameter
Transverse	Outer Area Inner
Outer Diameter	Area
Inner Diameter	Pop A
Outer Area	Anterior-Posterior
	Transverse
	Outer Diameter
	Inner Diameter

Outer Area	Transverse
Inner Area	CFA Aneurysm
TP Trunk A	Long
Anterior-Posterior	Anterior-Posterior
Transverse	Transverse
Outer Diameter	DFA Aneurysm
Inner Diameter	Long
Outer Area Inner	Anterior-Posterior
Area	Transverse
A.Tib A	SFA Aneurysm
Anterior-Posterior	Long
Transverse	Anterior-Posterior
Outer Diameter	Transverse
Inner Diameter	Pop A Aneurysm
Outer Area Inner	Long
Area	Anterior-Posterior
Peroneal A	Transverse
Anterior-Posterior	TP Trunk A Aneurysm Long
Transverse	Anterior-Posterior
Outer Diameter	Transverse
Inner Diameter	A.Tib A Aneurysm Long
Outer Area Inner	Anterior-Posterior
Area	Transverse
P.Tib A	Peroneal A Aneurysm
Anterior-Posterior	Long
Transverse	Anterior-Posterior
Outer Diameter	Transverse
Inner Diameter	P.Tib A Aneurysm
Outer Area Inner	Long
Area	Anterior-Posterior
Dors.Ped. A Anterior-	Transverse
Posterior Transverse	Dors.Ped. A Aneurysm
Outer Diameter	Long
Inner Diameter	Anterior-Posterior
Outer Area Inner	Transverse
Area	LE A Graft 1 Native Inflow
C.Iliac A Aneurysm	Anterior-Posterior
Long	Transverse
Anterior-Posterior	LE A Graft 1 Anast
Transverse	Anterior-Posterior
Ex.Iliac A Aneurysm	Transverse
Long	LE A Graft 1 Graft
Anterior-Posterior	Anterior-Posterior
Transverse	Transverse
IIA Aneurysm	LE A Graft 1 Native Outflow
Long	Anterior-Posterior
Anterior-Posterior	

Transverse	Inner Diameter
LE A Graft 2 Native Inflow	Outer Area Inner
Anterior-Posterior	Area
Transverse	LE A Stenosis 3(2D)
LE A Graft 2 Anast	Anterior-Posterior
Anterior-Posterior	Transverse
Transverse	Outer Diameter
LE A Graft 2 Graft	Inner Diameter
Anterior-Posterior	Outer Area Inner
Transverse	Area
LE A Graft 2 Native Outflow	LE A Stenosis 4(2D)
Anterior-Posterior Transverse	Anterior-Posterior
LE A Graft 3 Native Inflow	Transverse
Anterior-Posterior	Outer Diameter
Transverse	Inner Diameter
LE A Graft 3 Anast	Outer Area Inner
Anterior-Posterior	Area
Transverse	LE A Finding 1
LE A Graft 3 Graft	Long
Anterior-Posterior	Anterior-Posterior
Transverse	Transverse
LE A Graft 3 Native Outflow	LE A Finding 2
Anterior-Posterior Transverse	Long
LE A Stent 1 Long	Anterior-Posterior
Anterior-Posterior Transverse	Transverse
LE A Stent 2 Long	LE A Finding 3
Anterior-Posterior Transverse	Long
LE A Stent 3 Long	Anterior-Posterior
Anterior-Posterior Transverse	Transverse
LE A Stenosis 1(2D)	LE A Finding 4
Anterior-Posterior	Long
Transverse	Anterior-Posterior
Outer Diameter	Transverse
Inner Diameter	LE A Finding 5
Outer Area Inner	Long
Area	Anterior-Posterior
LE A Stenosis 2(2D)	Transverse
Anterior-Posterior	LE A Finding 6
Transverse	Long
Outer Diameter	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
 Ophthalmic 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