

**mindray**  
healthcare within reach



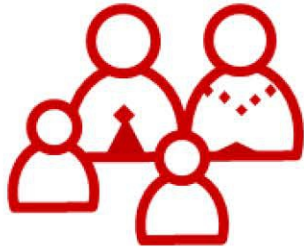
**Tiara Medical**  
МЕДИЦИНСКОЕ ОБОРУДОВАНИЕ



**DC-60**

**Product  
introduction**

# Global healthcare trend



## Booming population Ageing people

- 2013-2050, >60 year proportion: 11.7%-21.2%
- 2013-2050, global population: 7.2B-9.6B



## Emerging markets

- India: free treatment
- Russia: free basic medical care
- China: number of private hospital is growing



## Medical policy

- USA: ACA (Affordable Care Act) implementation



## Innovative technology

- Improved image quality
- Versatile application fields

Growing demand of high quality healthcare service

Limited healthcare resource, busy daily work



**DC-60**



**Tiara Medical**<sup>®</sup>  
медицинское оборудование

Designed as part of cost-effective and efficient healthcare to enhance diagnostic confidence and reduce daily work burden .





# DC-60

## Quality Exams at Your Fingertips

**mindray**  
healthcare within reach



# Quality Exams

- Reliable image quality
- Versatile transducer solution
- Comprehensive application

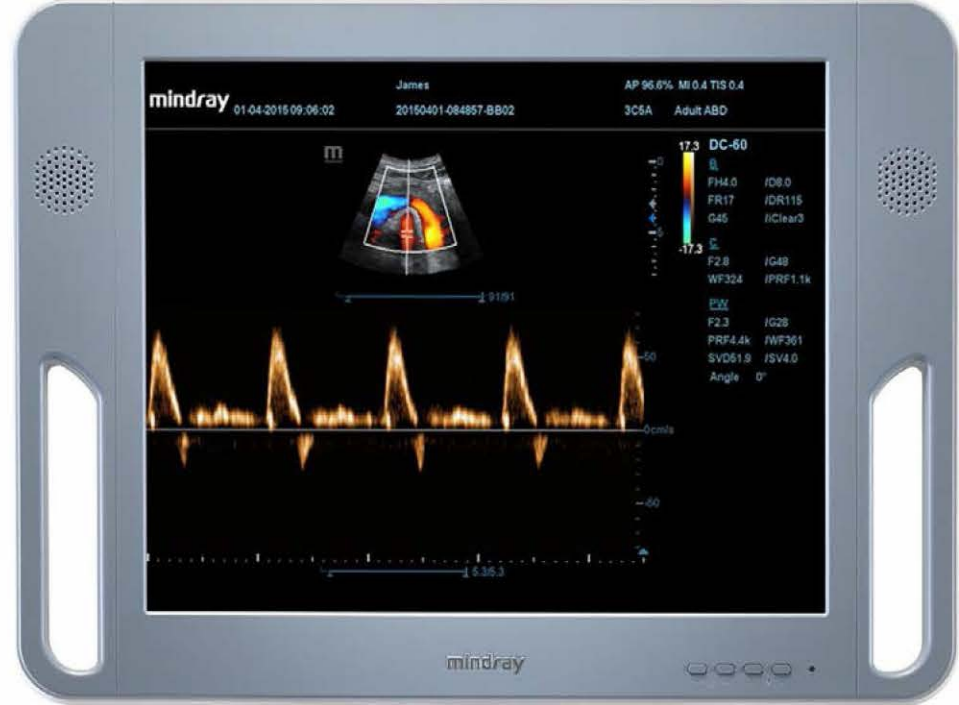
# Comfortable User Experience

- Gesture sensitive touch screen
- Streamlined workflow
- Powerful data management
- Smart design



# Quality Exams

- **Reliable image quality**
- Versatile transducer solution
- Comprehensive application



# Reliable image quality

## Image optimization technology

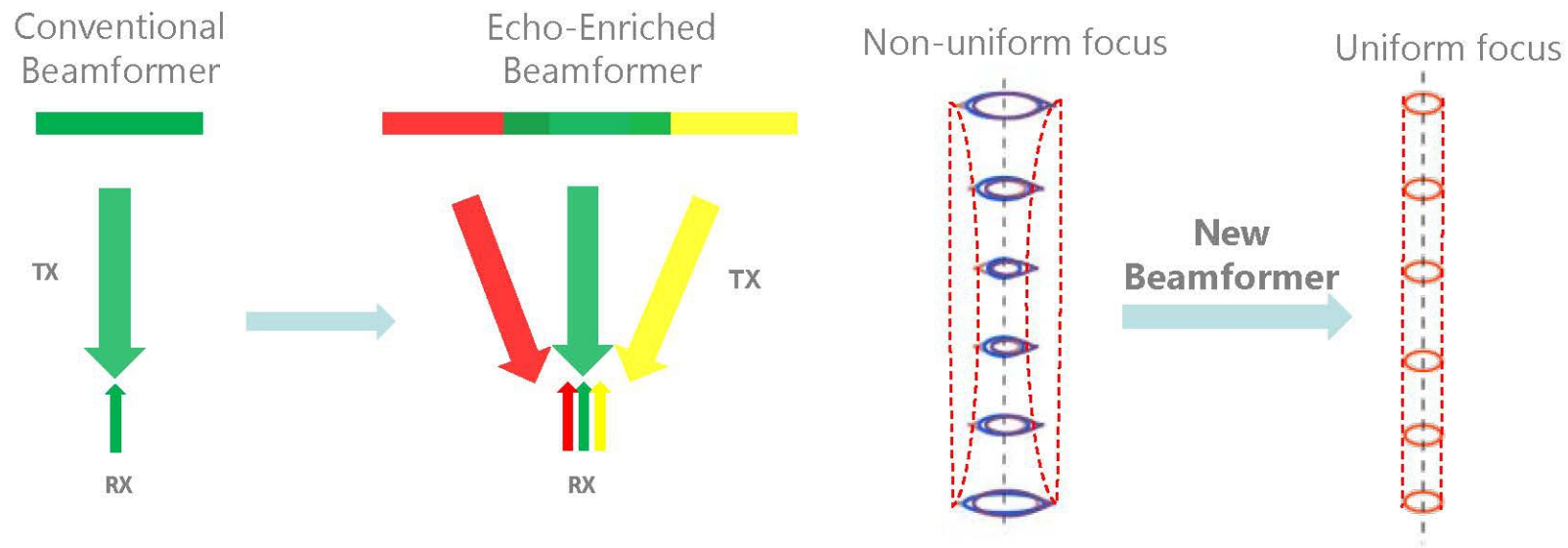
- Echo-enriched beamformer
- PSH, iClear, iBeam

## Advanced technology for dedicated application

- HR Flow
- Echo Boost



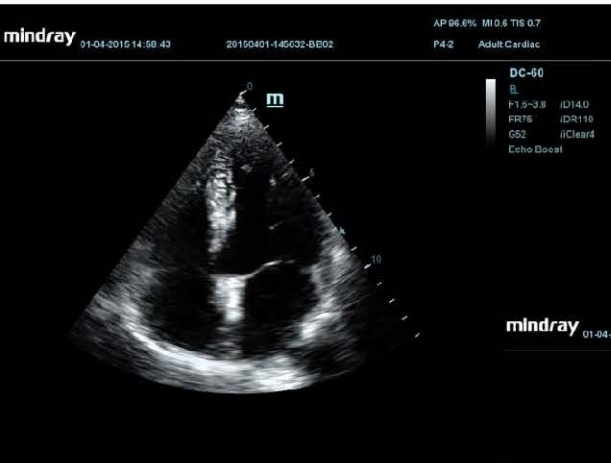
# Echo-enriched beamformer



Utilizing traditionally neglected echo of adjacent transmit beams to form one finer and stronger imaging beam

- Providing better out-of-focus image resolution and deeper penetration

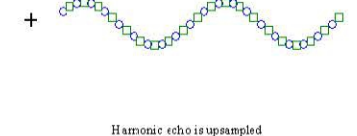
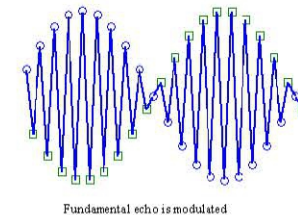
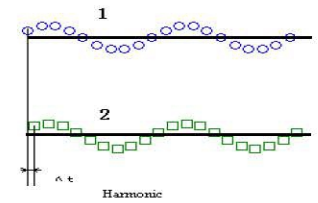
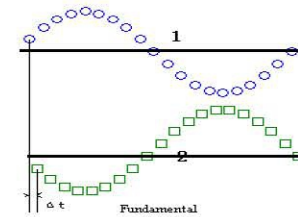
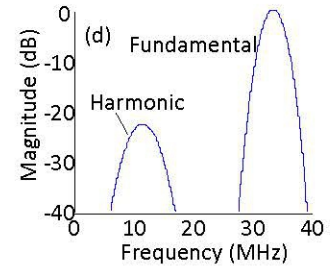
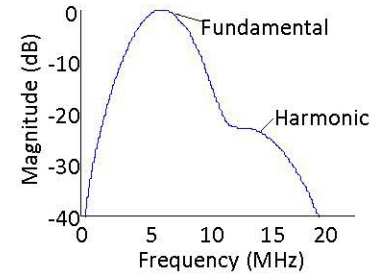
# Phase Shift Harmonic Imaging(PSH)



**PSH Off**

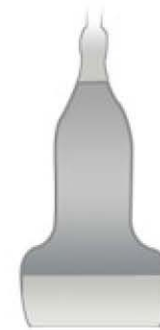


**PSH On**



- Purified harmonic imaging for better contrast resolution
- High S/N ratio to get better noise suppression

# iBeam



Conventional imaging



Spatial Compound imaging

Traditional

With iBeam

- Combine multiple angle-steered images into one, no frame rate drop
- Better contrast resolution
- Less shadow for more information



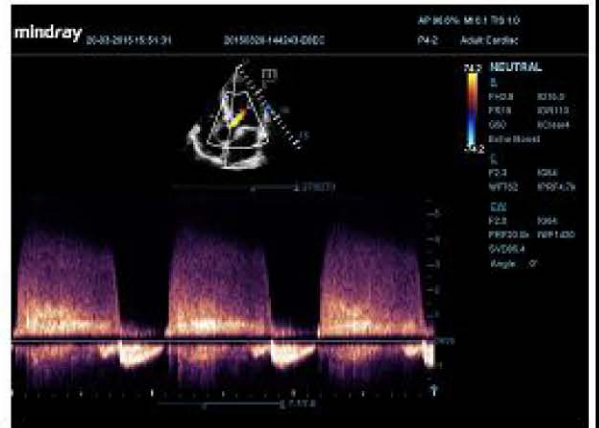
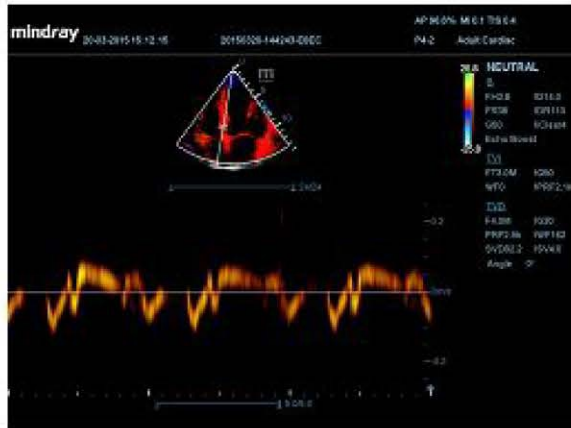
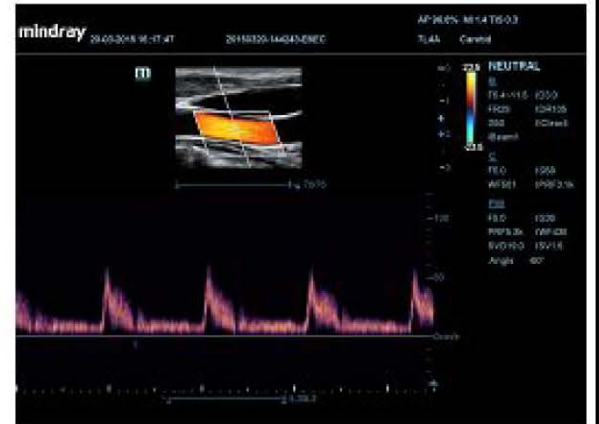
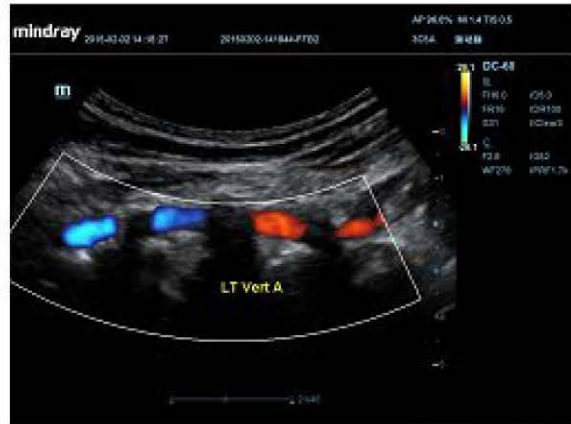
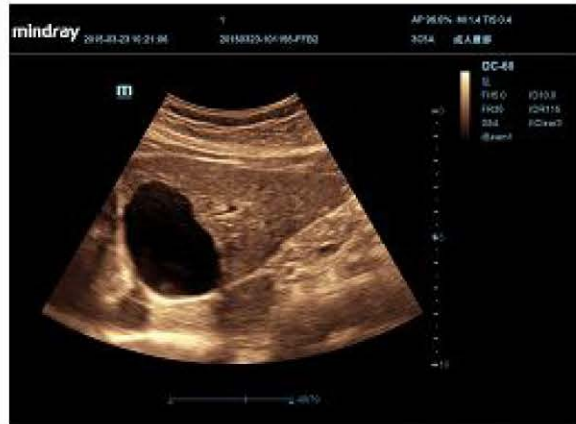
# iClear



- Detect different structures then separate them into 3 categories:
  - Edge: Sharpen it and make it more continuous
  - Uniform tissue: Smooth it
  - No echo area: Clean the noise
- Better contrast resolution
- Clearer and sharper tissue border definition

# Quality Exams

# Comfortable User Experience



# Versatile transducer solution

- Total 11 transducers
- High density transducer L14-6NE
- Up to 16MHz (L14-6NE)

A convex ultrasound transducer with a curved probe head.

**Convex**

3C5A  
6C2

A linear ultrasound transducer with a flat probe head.

**Linear**

7L4A  
L14-6NE

A sector ultrasound transducer with a fan-shaped probe head.

**Sector**

P4-2  
P7-3

An endo-cavity ultrasound transducer with a long, thin probe head.

**Endo-  
cavity**

V11-3  
V11-3B

A volume ultrasound transducer with a rectangular probe head.

**Volume**

D7-2E

A pedoff ultrasound transducer with a cross-shaped probe head.

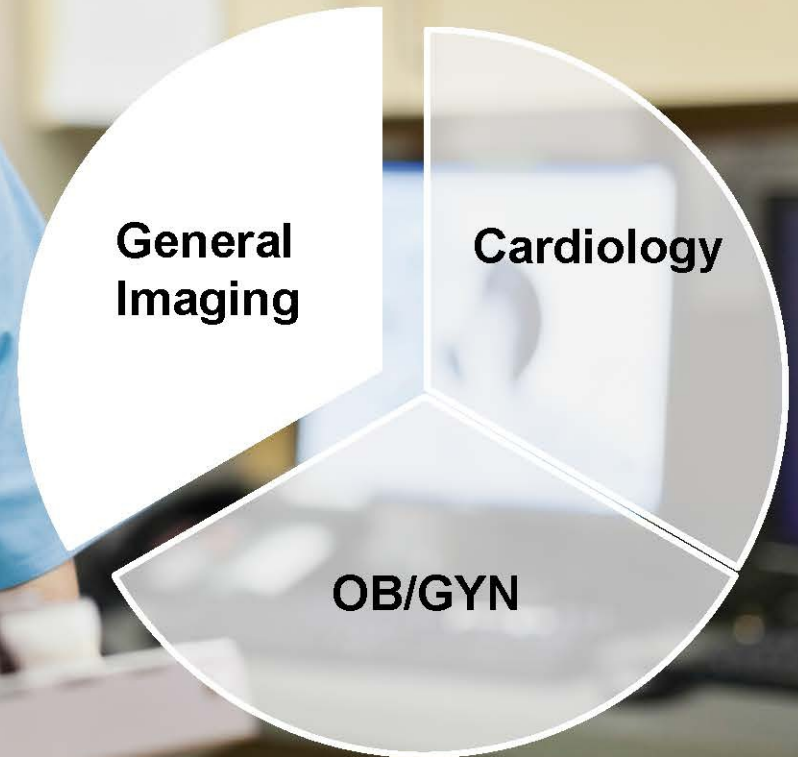
**Pedoff**

CW2s  
CW5s





# Comprehensive application



# General Imaging

## Versatile Transducer

- 1.3-16MHz wideband frequency
- 192 elements high density linear probe



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## Enhanced confidence

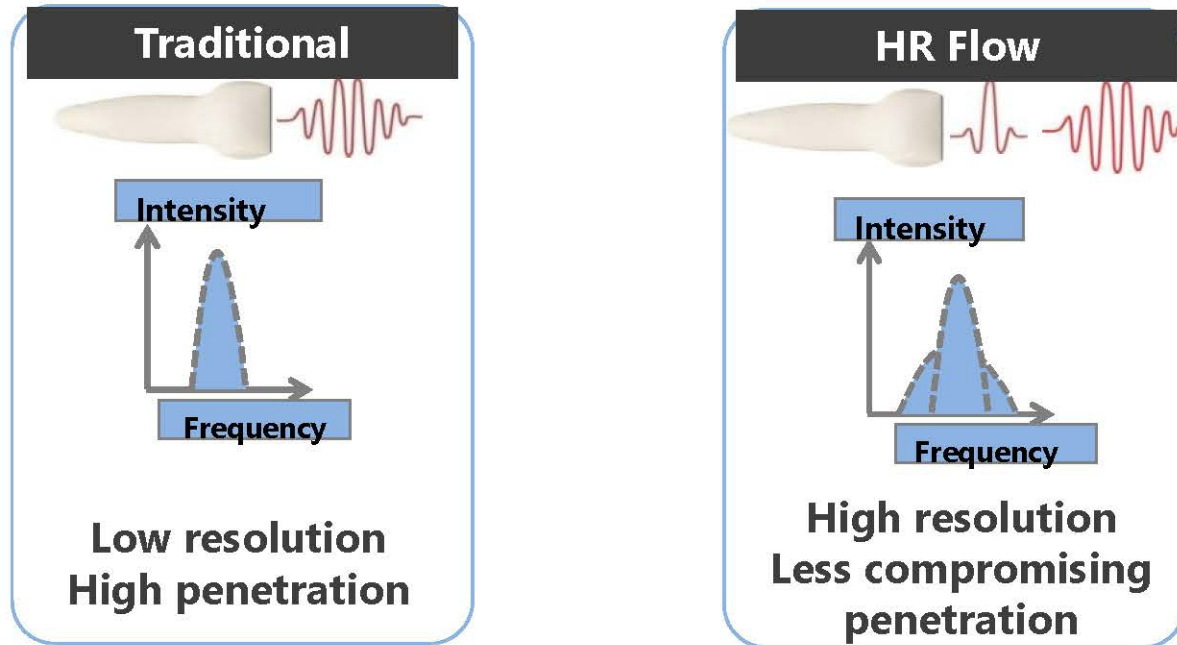
- HR Flow: for accurate profile and less overflow
- iScape: real time panoramic imaging for B & Power
- iNeedle: needle visualization enhancement

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## Intelligent assistance

- Auto IMT
- Auto focus position
- Auto PW trace and calculation

# HR Flow

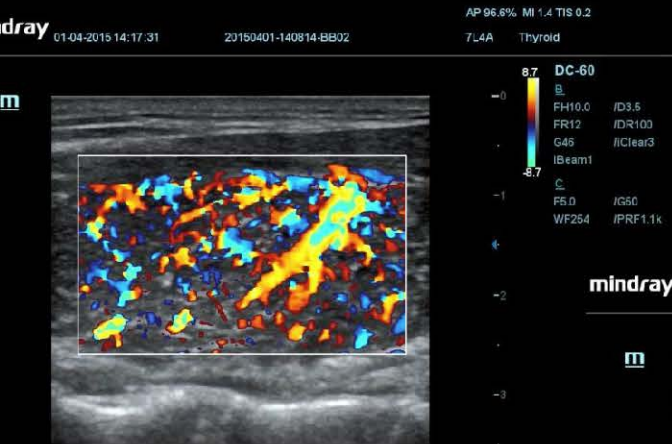


High resolution flow with better spatial resolution for accurate vessel profile and less overflow

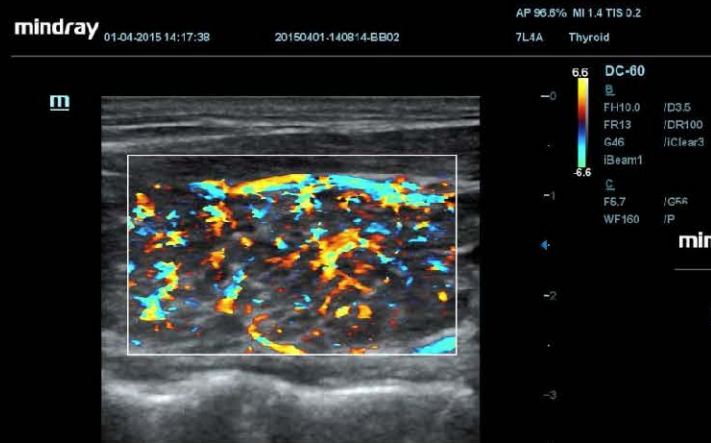
- Support both Color and Power



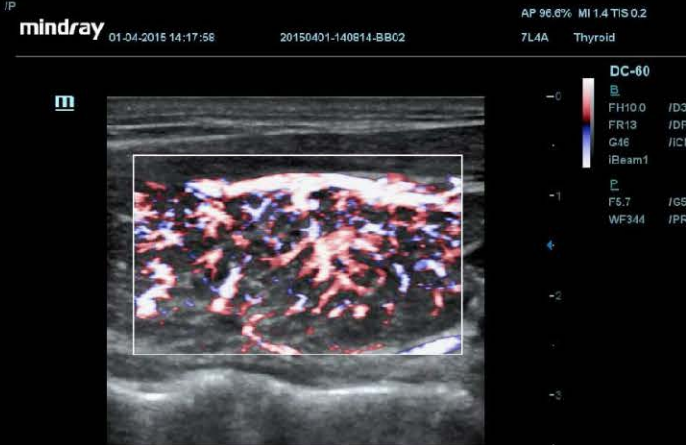
# HR Flow



Traditional

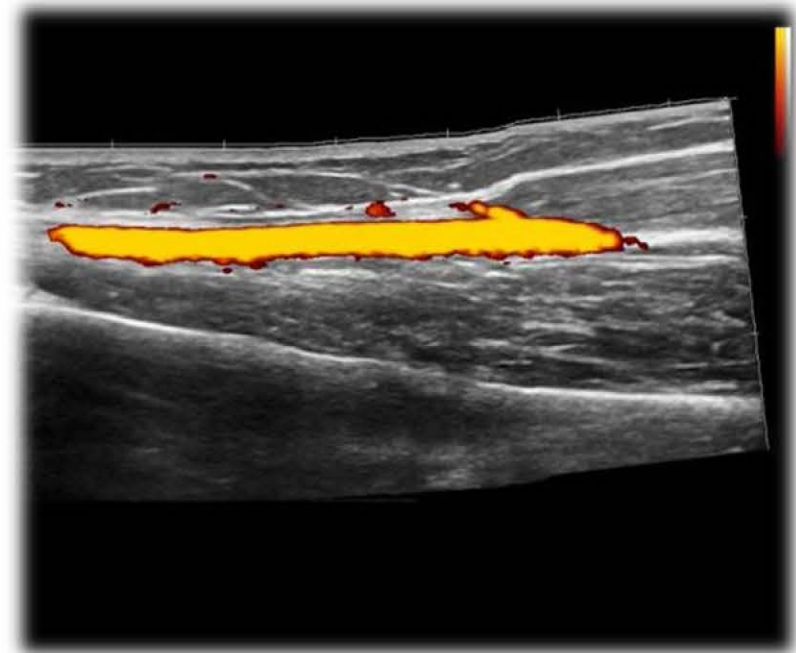
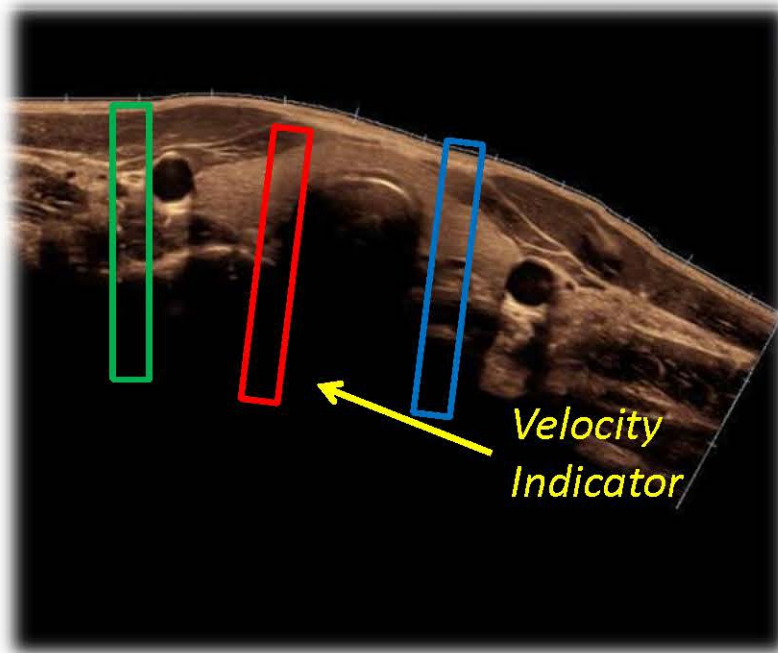


HR Flow Color



HR Flow Power  
**mindray**

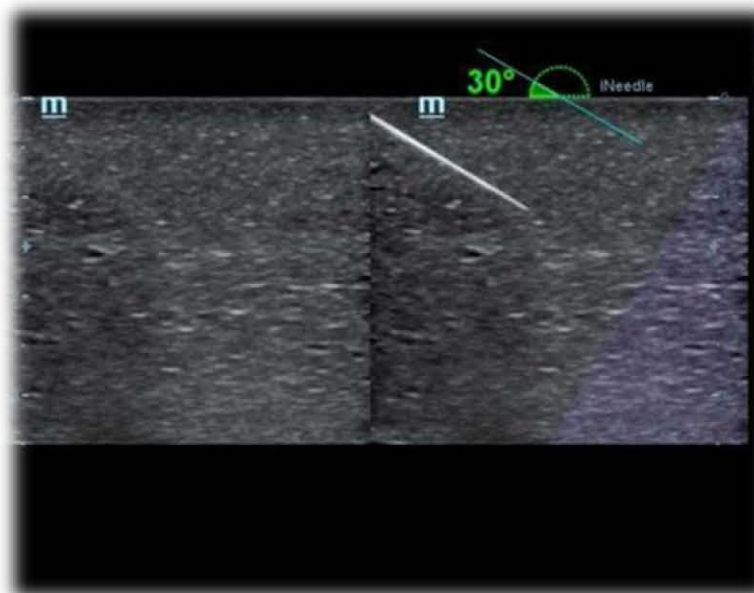
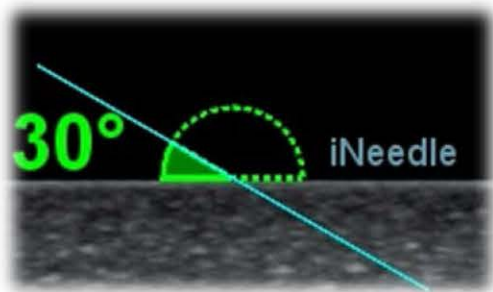
# iScape



Real time panoramic imaging to better understand whole anatomical structures

- Velocity indicators make your scan much easier and controllable
- Support Power panoramic imaging

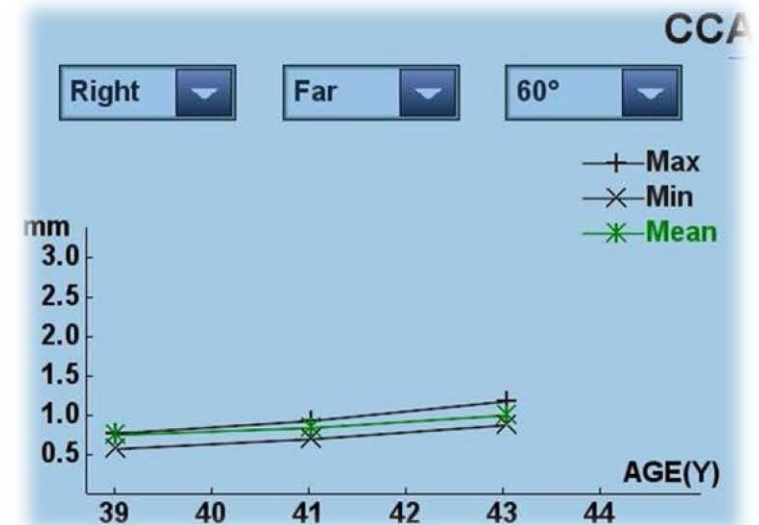
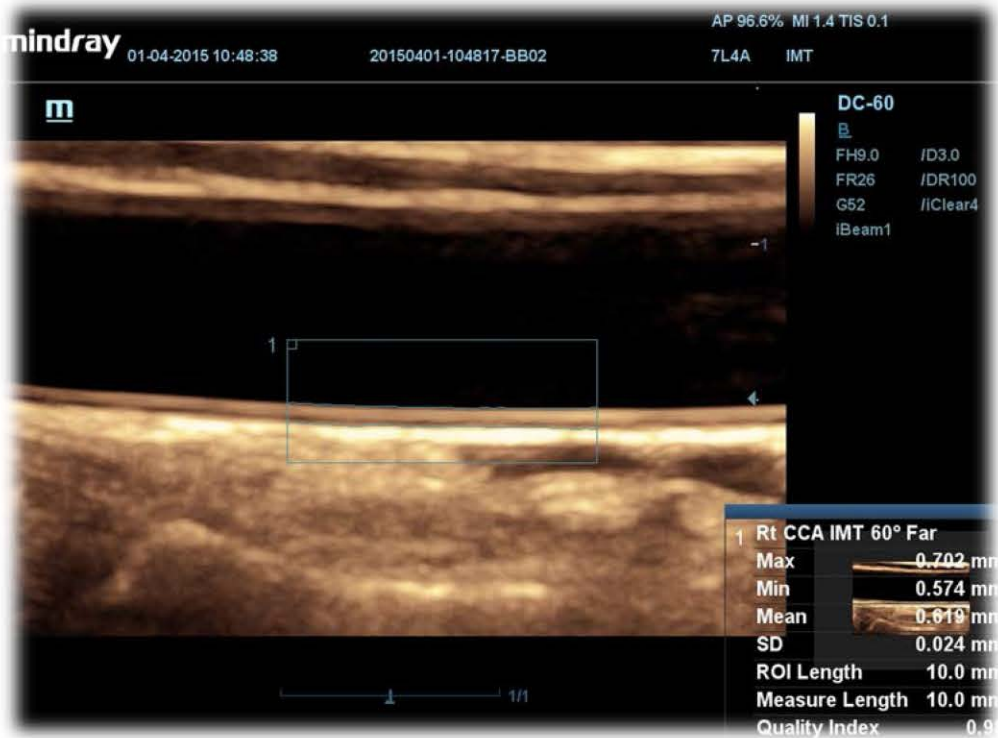
# iNeedle-Needle visualization enhancement



High quality ultrasound guided biopsy for clear visualization of actual needle tips and shaft, easy needle approach to target and enhanced accuracy for guided procedures.

- Big adjustable steer angle to be as vertical as possible to the needle for optimal needle enhancement
- Max 30° angle adjustment (-20° ~ -50° , 20° ~ 50° )

# Auto IMT



- Automatically detect and calculate IMT for cardiovascular risk assessment
- IMT trend graph for IMT progression analysis



# Comprehensive application



**General  
Imaging**

**Cardiology**

**OB/GYN**

# Cardiology



## Dedicated technology

- 1.3-8MHz wideband frequency phased array
  - Programmable LGC: for different cardiac planes for short cut optimization
  - Echo Boost: for better homogeneity, contrast resolution and noise control of cardiac image
- 

## Confident diagnosis

- TDI & TDI QA: for myocardial movement and synchronization evaluation
  - Strain & strain rate: for further quantitative analysis of myocardium motion
  - Stress echo: to evaluate segmental myocardium movement with increased workload
- 

## Intelligent assistance

- Auto LV
- Auto PW trace and calculation

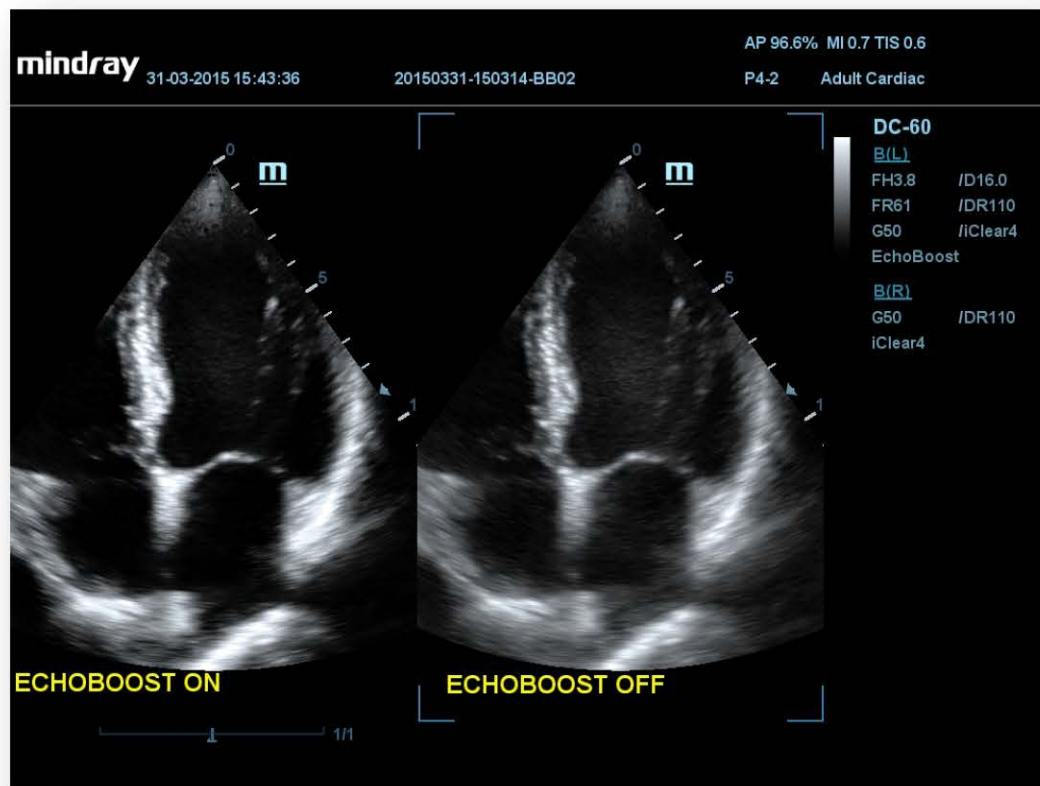
# Echo Boost-Endocardium enhance technology



## Principle:

- Precise recognition by zones on RE level based on Mindray unique echo technology
- Adaptive image optimization
- Intelligent image fusion

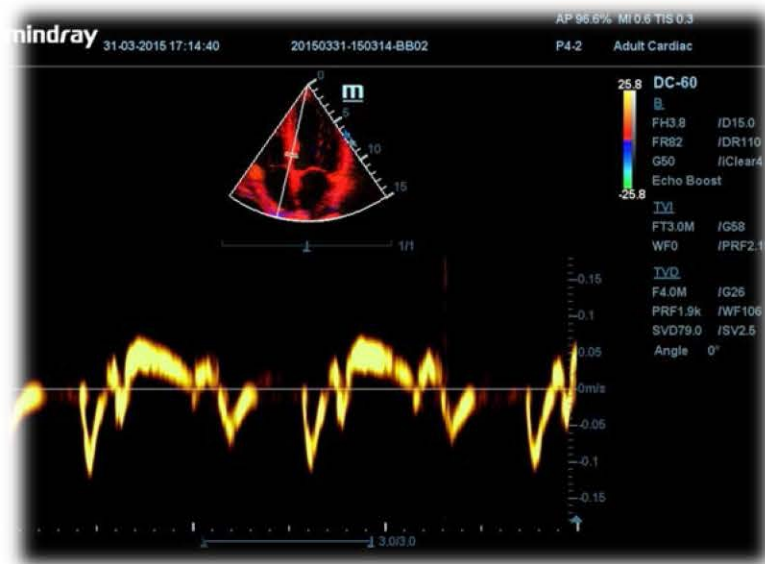
# Echo Boost



- To improve the homogeneity of cardiac images through the whole field of view
- Better contrast resolution of myocardium tissue layers
- Better noise control in cardiac chambers and muscles



# TDI & TDI QA with strain/strain rate



**TVD**



**TDI QA**

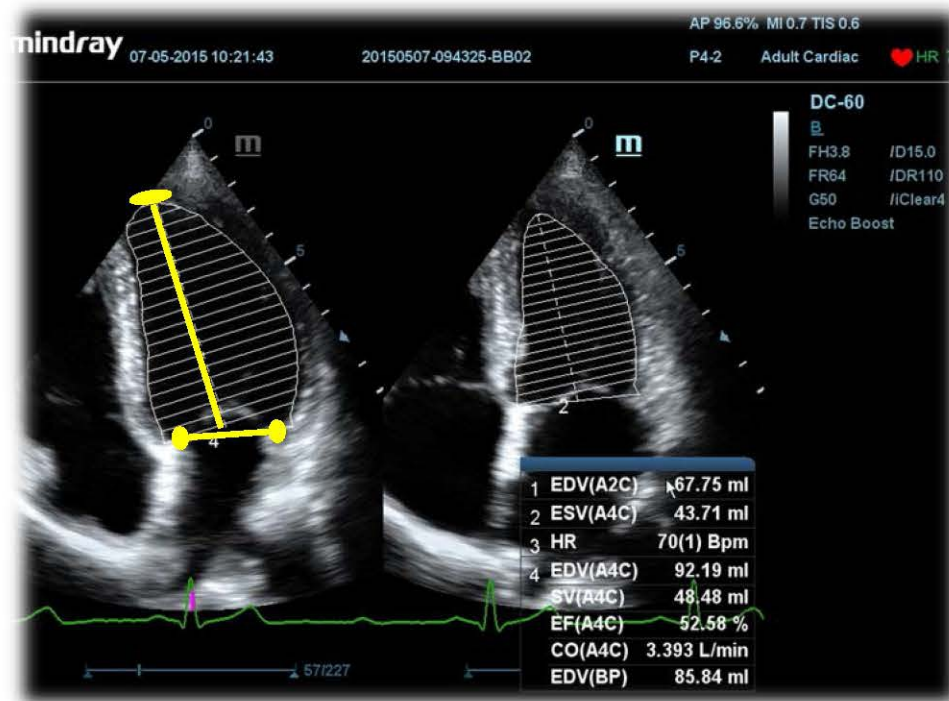
- Complete TDI modes (TVI/TVD/TVM/TEI)
- Quantitatively evaluate myocardial movement and synchronization  
Analysis for up to 8 ROI  
ROI tracking tissue movement for accurate analysis
- Support strain & strain rate

# Stress echo



- Provides exercise and pharmacologic stress protocols
- User configurable template editor/creator
- Multi loops selectable with one store
- Dual timer display
- Wall motion scoring
- Stress echo report

# Auto LV



- Auto trace and calculation for LV function
- Easy manual correction is available

# Comprehensive application



**General  
Imaging**

**Cardiology**

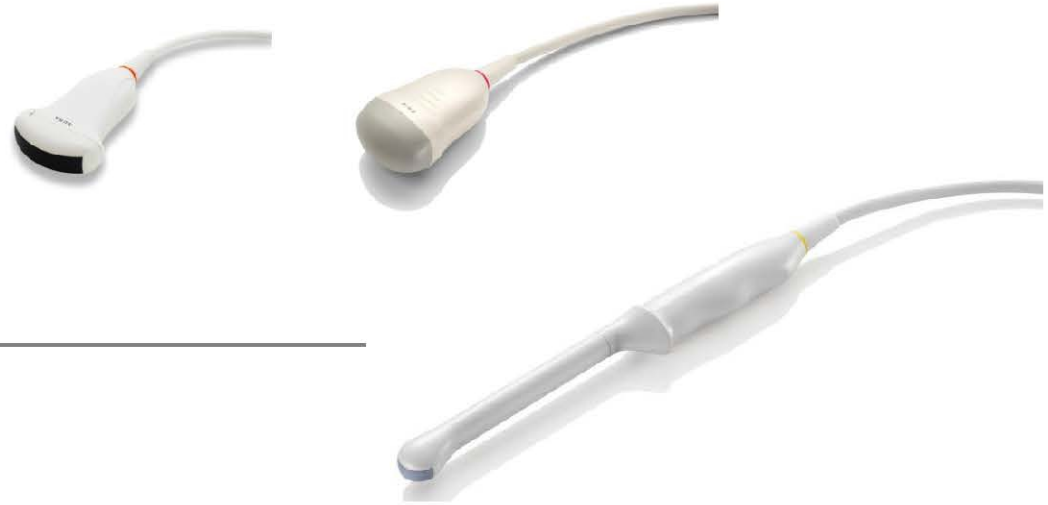
**OB/GYN**



# OB/GYN

## Full range of transducers

- Convex, endo-cavity, volume



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## Powerful 3D/4D

- iClear: speckle reduction for better & smoother 3D/4D image
- iPage: help to detect difficult structure

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## Intelligent assistance

- Smart OB: auto measure of most frequently used items BPD/HC/FL/AC/OFD
- Smart NT: auto measure of NT

# Powerful 3D/4D



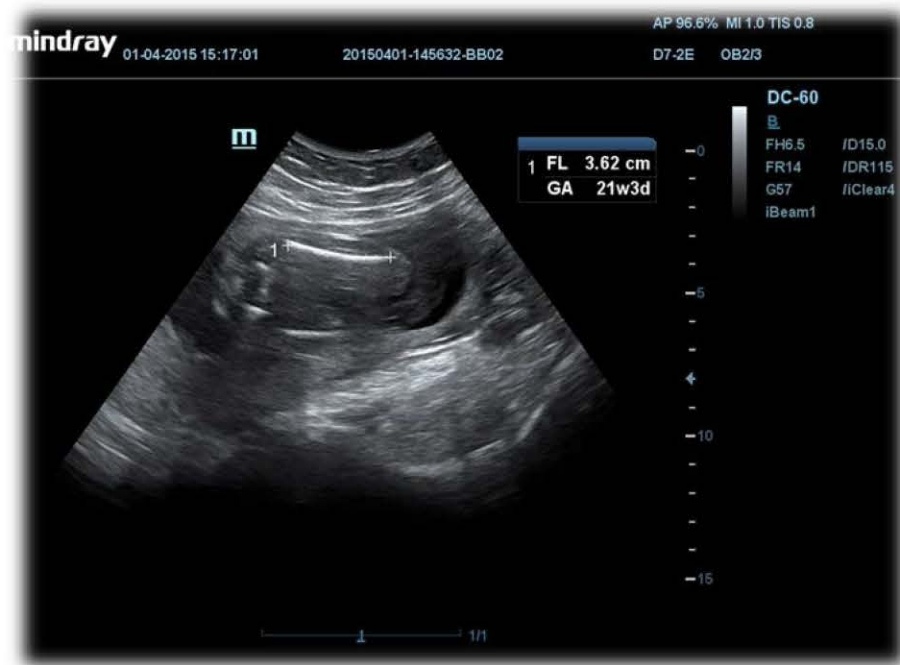
- Rich rendering modes: Surface, Max, Min, X-ray
- Curved ROI: Suit for different shape rendering
- iClear for better volume image quality

# iPage



- Display volume data with multiple parallel 2D images, which could easily interpret anatomical structures, for those are usually difficult to capture and make more confident diagnosis

# Smart OB

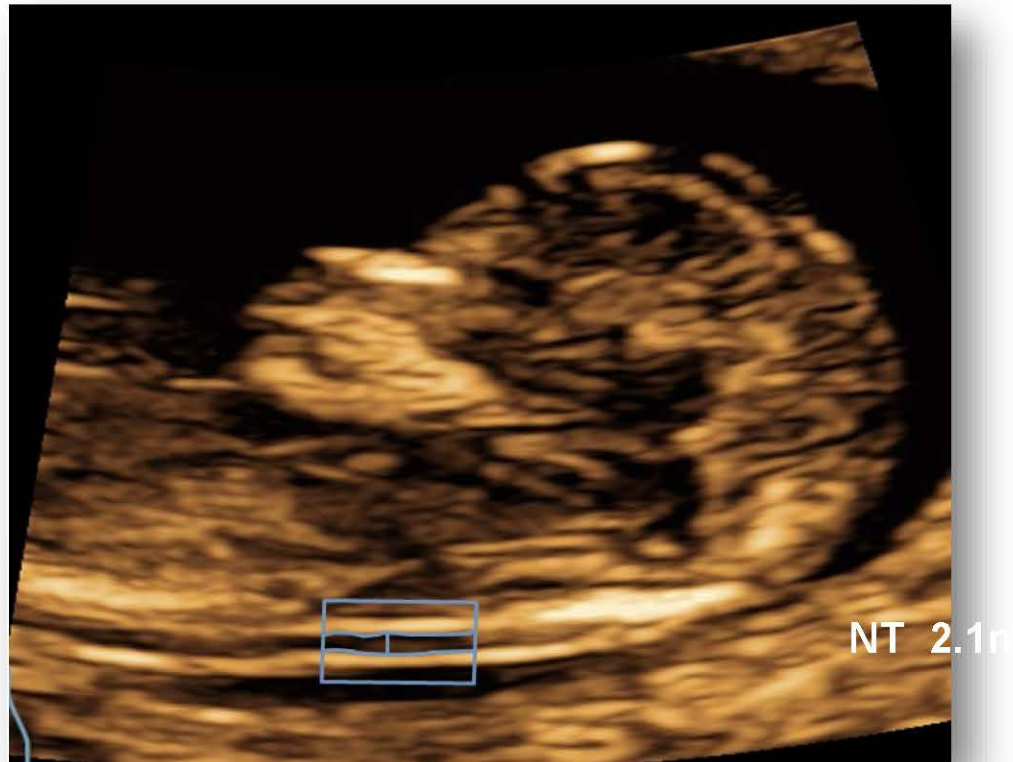


Accurate auto measurements of most frequently examined parameters including BPD/HC/FL/AC/OFD on a single click

- Efficient and accurate
- Greatly reduce repetitive key strokes and increase productivity



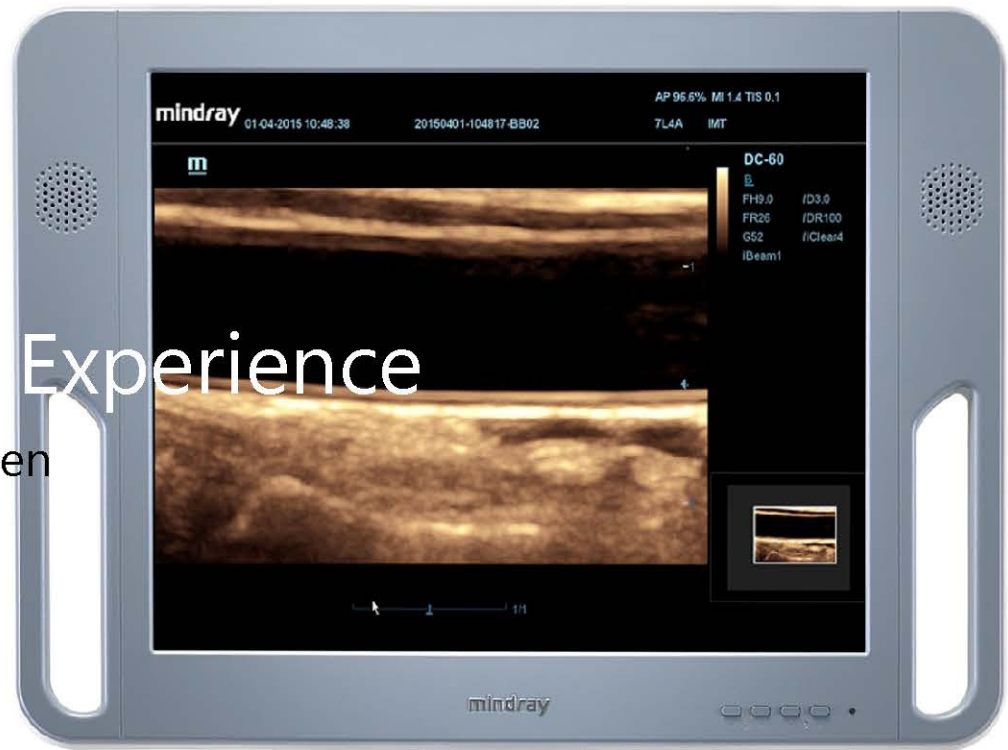
# Smart NT



Automatically trace the NT tube cavity edge and display max NT result by industry standard method of "In to In".

# Comfortable User Experience

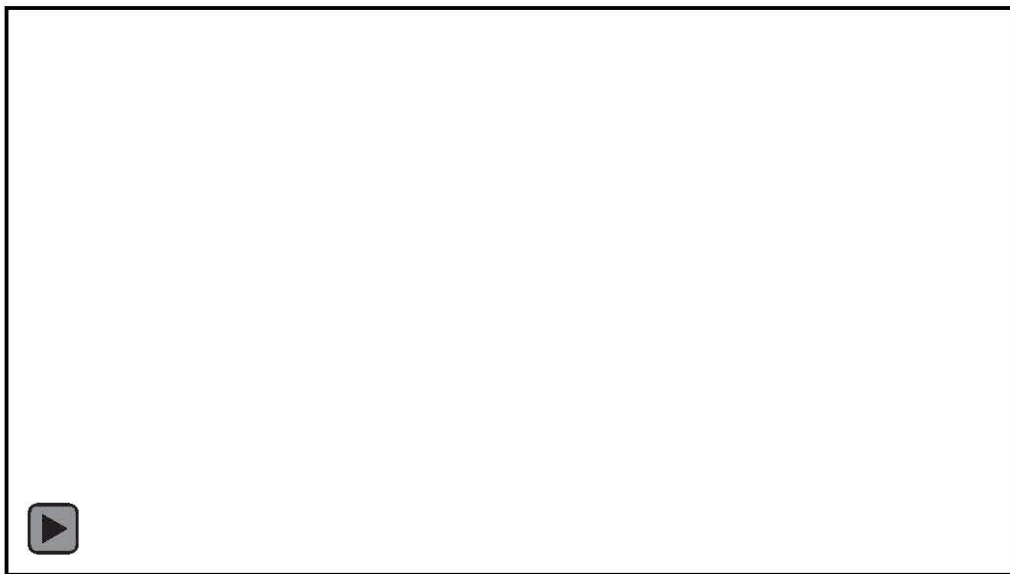
- Gesture sensitive touch screen
- Streamlined workflow
- Powerful data management
- Smart design



# Gesture sensitive touch screen



# Gesture sensitive touch screen



## Amazing gesture operation:

### Image adjustment

- Slide parameter page up/down
- Shift image to touch screen
- Zoom in/out
- 3D/4D rotate&erase
- ...

### Measure on screen

- 2D Caliper & trace
- Manual spectrum trace
- Auto LV, IMT, Smart NT
- ...

### Image review

- Image review
- Cine review frame by frame
- ...

### User defined gestures:

- Initiate imaging mode(Color,PW,3D/4D...)
- Change probe,
- Freeze, measure, save, print
- iZoom, iTouch ...





# Streamlined workflow



- iZoom
- iTouch
- iScanHelper
- iWorks
- Raw data
- Auto measurement

# iScanHelper



Dedicated inbuilt educational tool, providing users with guidance on 'how & what' of ultrasound scanning.

- iScanHelper includes anatomical illustrations, standard ultrasound images, scanning reference pictures and tips on scanning skillfully.

# iWorks



Standardize and simplify the workflow, let you be more focused on the patient and diagnosis

- Complete protocols for abdomen, vascular and other 38 applications
- Reduce up to 50% exam time and 80% keystrokes
- Very flexible with powerful user-define capability

# Raw data



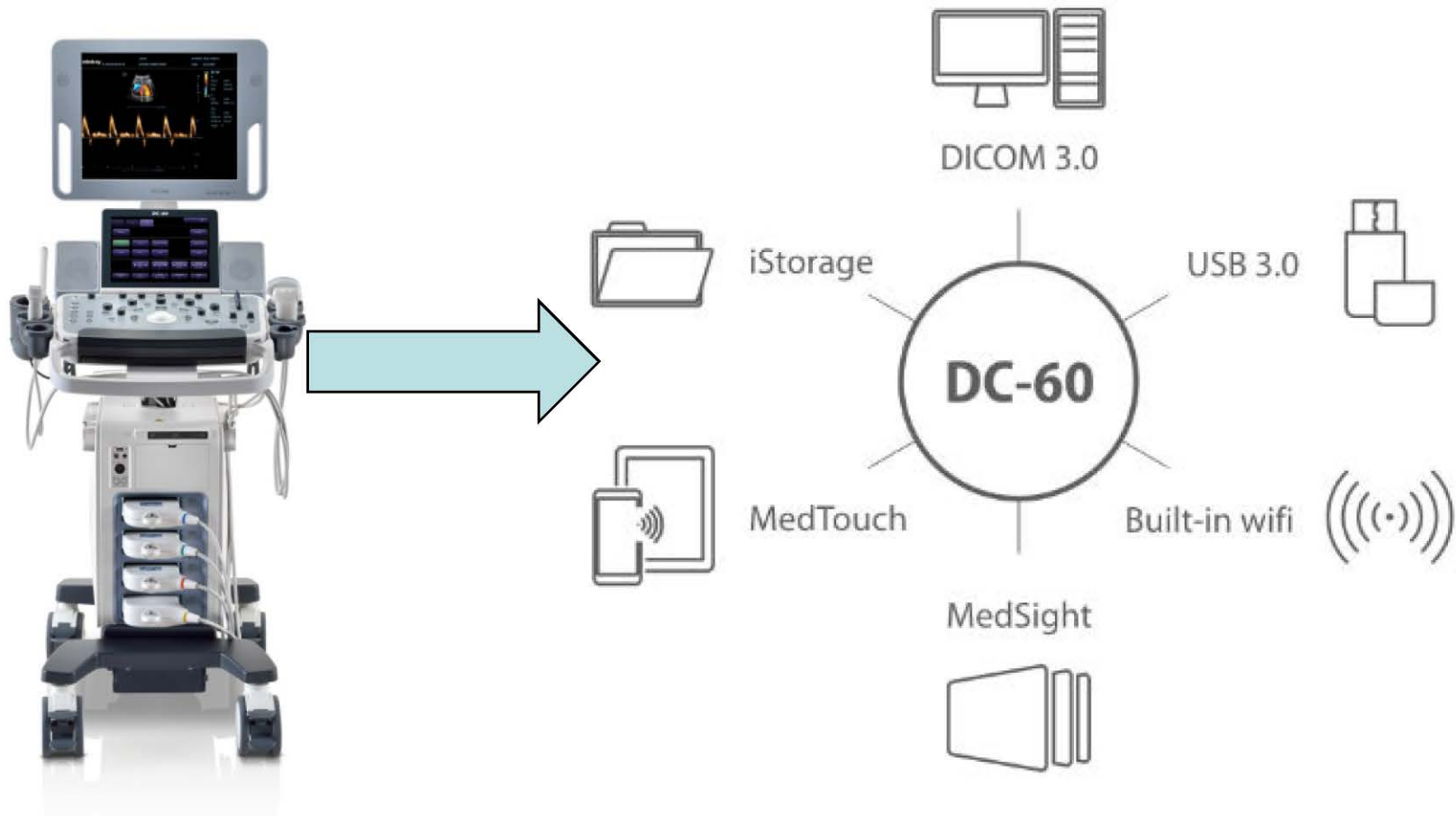
B Gain, Color Gain, PW  
Gain, iClear, Angle...  
Measurements, Comment, .



- Available for many parameters adjustment, adding comment and measurements to stored image
- Achieve maximum productivity during scanning



# Powerful Data management



# iStorage



- Directly transfers images and reports to PC via wired or wireless network

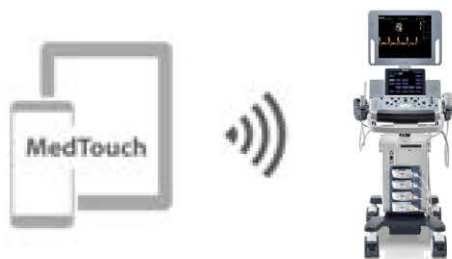
# MedSight



Interactive App that could transfer clinical images/cines and reports from ultrasound to your smart devices via WiFi

- Support both iOS and Android powered devices
- DICOM is not necessary for Android devices
- DC-60 could provide WiFi freely with built-in wireless adapter as the hotspot

# MedTouch



*An powerful Android App for doctors:*

- Remote control ultrasound machine: Gain, Depth, iZoom, iTouch, Freeze, Save...
- Remote patient data management: review, query, retrieve
- Built-in iScanHelper
- DC-60 could provide WiFi freely with built-in wireless adapter as the hotspot



# Smart Design

Standard 17" LED high resolution monitor



**Standard 17"**



**Optional 19"**

- Flexible control panel
- ✓ Height adjustable
- ✓ Rotatable
- ✓ Backlight design



# Smart Design

- Slim design with battery
- 4 active transducer sockets
- Gel warmer
- Easy & fast USB 3.0
- Detachable probe holders
- Dedicated TV probe holder(left/right)
- Retractable key board
- Cable hook



# Summary

- **Advanced technology inherited from high-end to ensure quality exam**
  - ✓ PSH, HR Flow, Echo Boost
  - ✓ Wide range probes to support shared service capabilities
- **Full function, high parameters**
  - ✓ ExFOV, iScape, iNeedle, Auto IMT
  - ✓ CW, TDI & TDI QA, Strain/Strain Rate
  - ✓ Real-time 4D, iPage, Smart OB/NT
- **Smart design with touch screen gesture**
  - ✓ Gesture Sensitive Touch Screen, 10.4" angle adjustable
  - ✓ 17" LED, 4 active probe sockets, Gel warmer, TV probe holder
- **Most of efficient, easy to use**



# Quality Exams at Your Fingertips



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