

# ACUSON Juniper Ultrasound System

Measurement Configuration  
2.0 SW Release

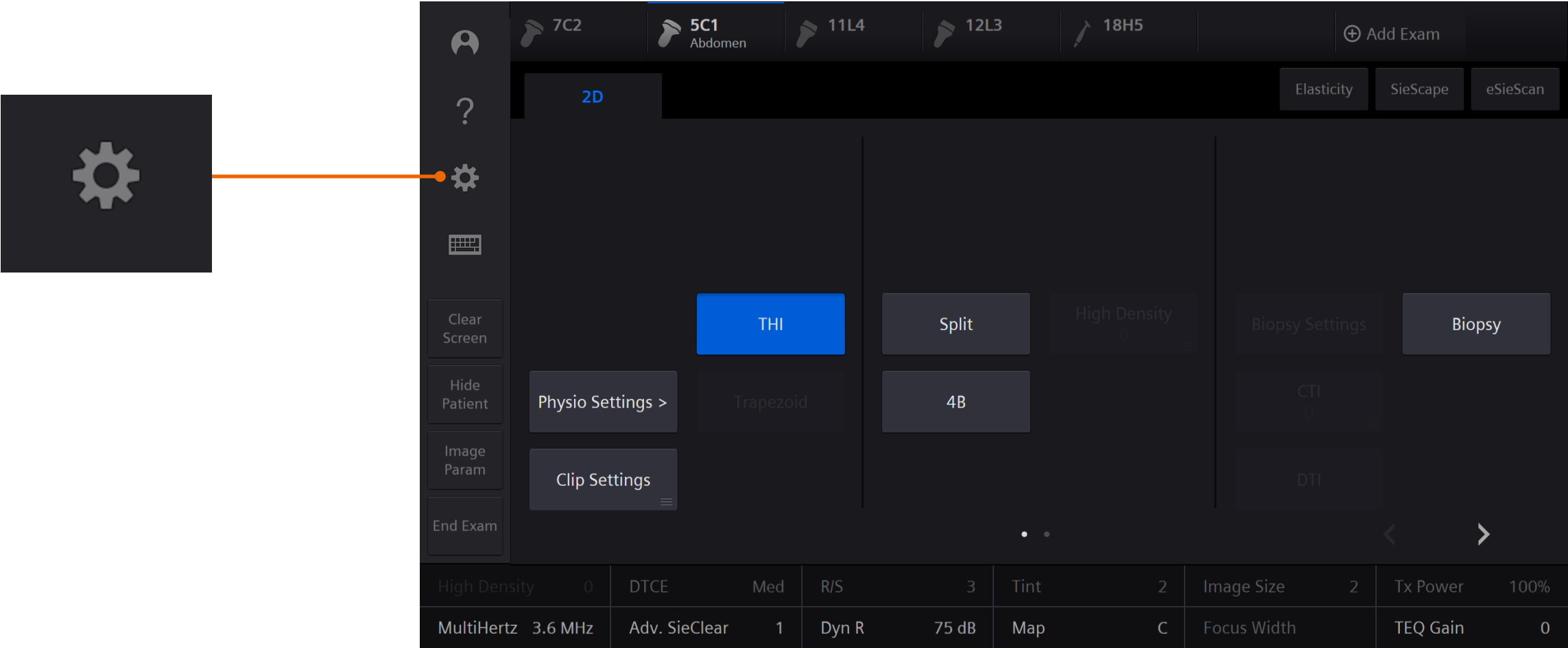


# Objectives

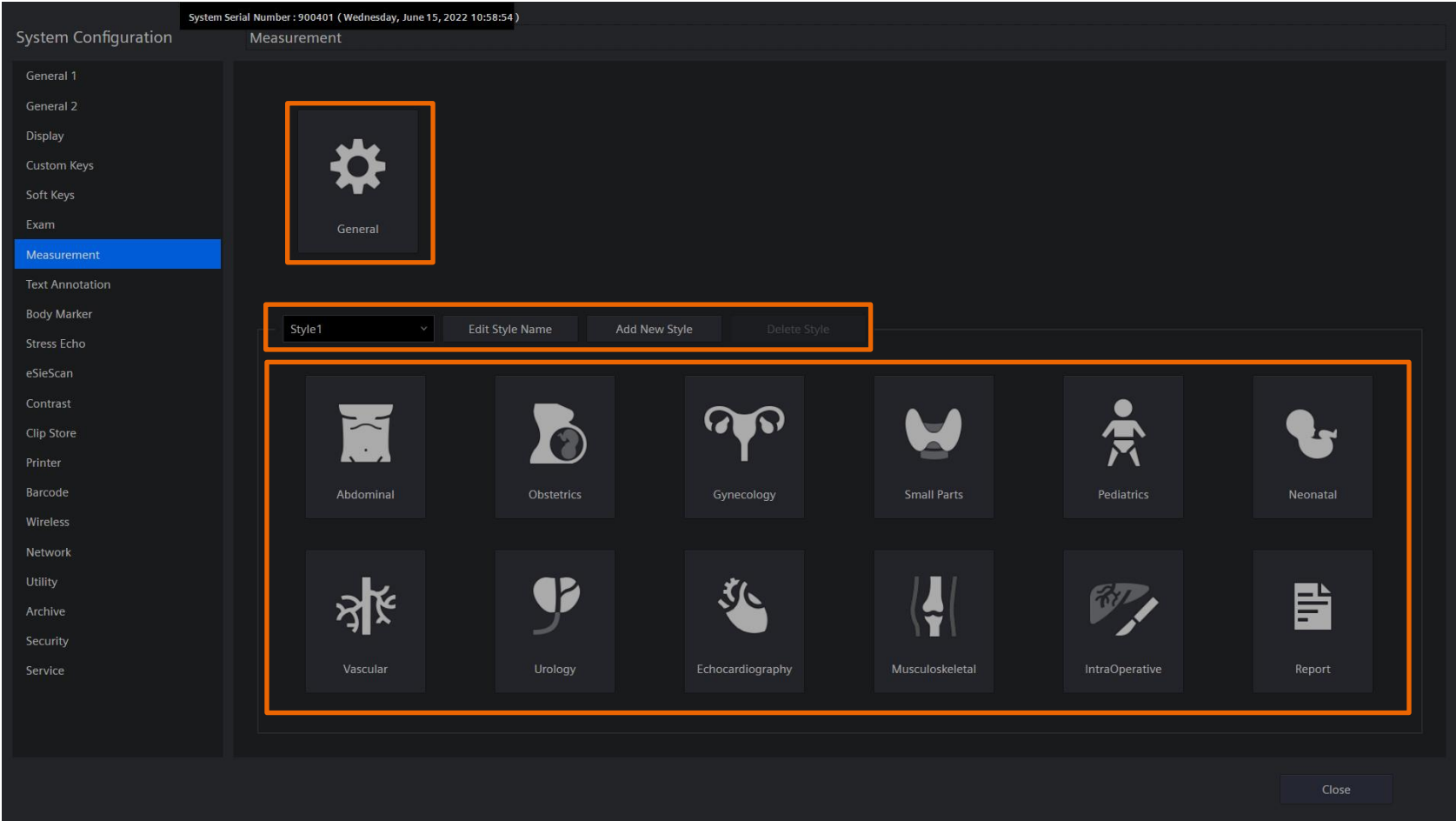
- Explain measurement configuration access and homepage layout
- Review the General icon
- Analyze the Exam Specific icon layout
- Discuss Configuration
  - Touch Screen
  - Left Panel
  - Edit Label
  - Tables and Formula
- Examine patient report



# Measurement configuration access

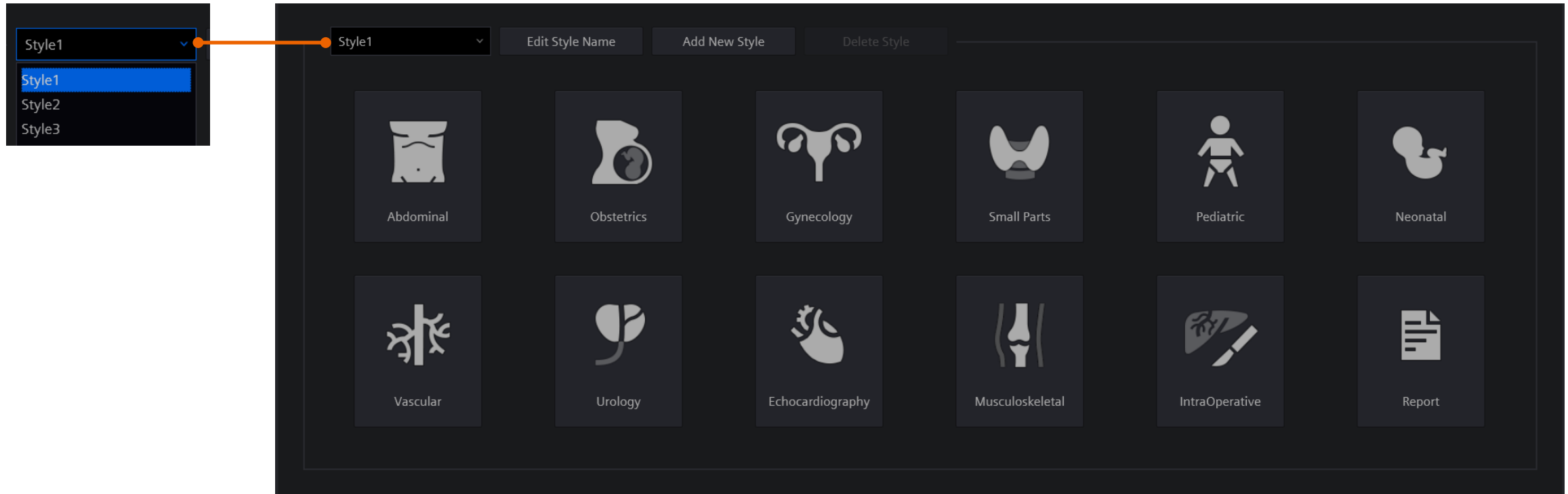


# Measurement configuration home page



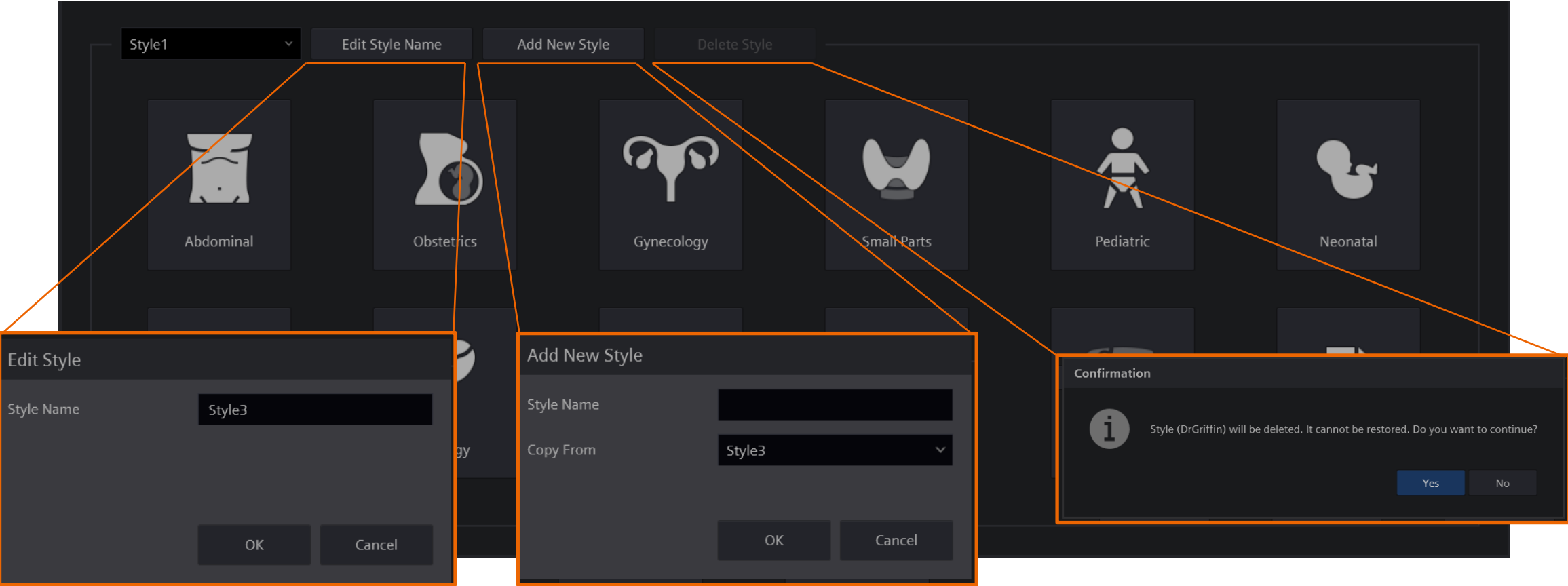
# Measurement options

## Styles



# Measurement options

## Styles – Edit, Add, Delete



# Objectives

- Explain the measurement configuration access and homepage layout
- **Review the General icon**
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# Measurement tab

## General icon



General Exam Specific

Guide Line

2D Calipers ☒ Draw Dotted Lines Between Calipers

Doppler / M-Mode ☐ On ☐ Off

Marker Display Settings

Size ☐ Small ☒ Large

Type ☐ Object ☒ Number

Caliper Default Position ☐ Depth ☒ Center of Image

Heart Rate Tool

Number of Heart Cycles 1

Shearwave Measurement Units

☒ Velocity (m/s) ☐ Elasticity (kPa)

Wall Motion Scoring

Segment Model ☒ 16 Segments ☐ 17 Segments

Report View Type ☒ View Plane ☐ Bull's Eye ☐ Both

Measurement Results Display Settings

2D M Doppler

Font Size (20/30)

Background Opacity (0/100)

Default Position

Units and Precision (General Tools)

	Units	Precision
Distance	mm	1
Area	cm <sup>2</sup>	2
Volume	cm <sup>3</sup>	1
Velocity	cm/s	1
Time	ms	0

Default Tool

2D Mode Distance

M Mode Distance

D Mode Velocity

A-%Stenosis Ellipse

A-Flow Volume Ellipse

Restore Defaults



# General icon

## System-wide settings

System-wide settings for 2D, M-mode, and Doppler

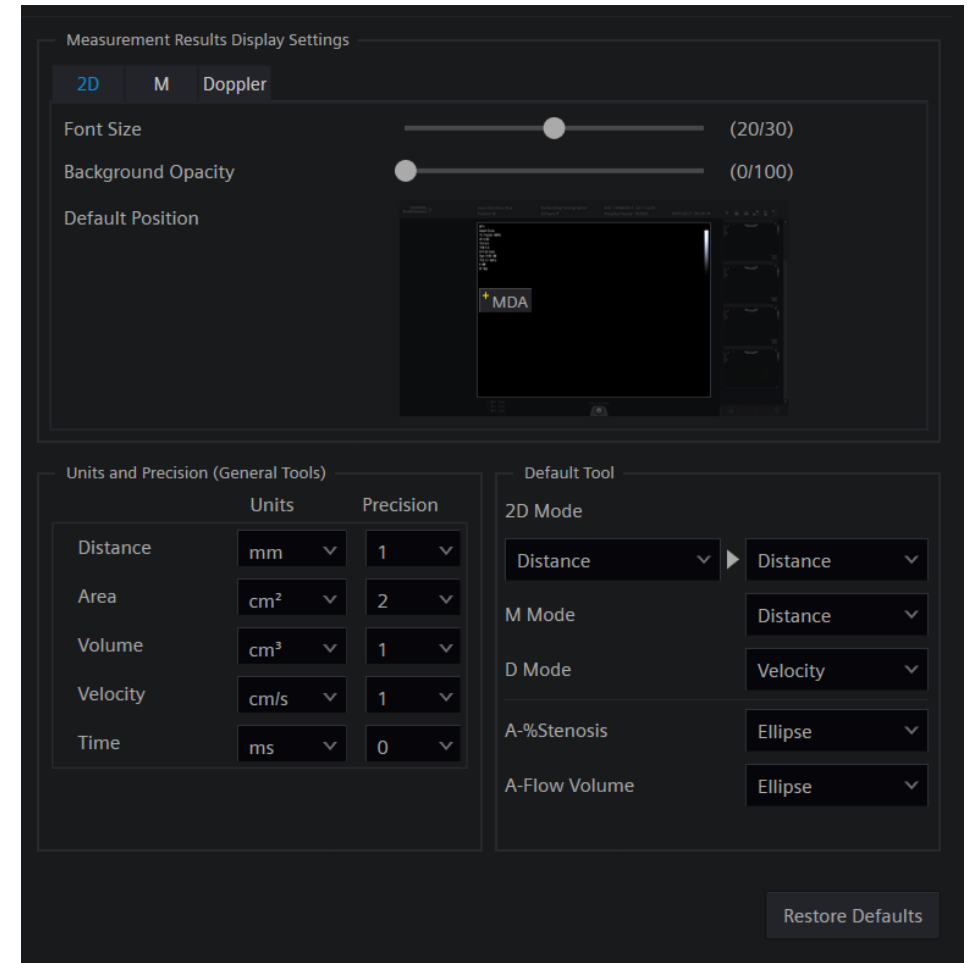
- Font size
- Background Opacity of MDA



- Units and Precision – General Tools
- Set default measurement type for distance, M-mode, D-mode, etc.

Variable settings between modes

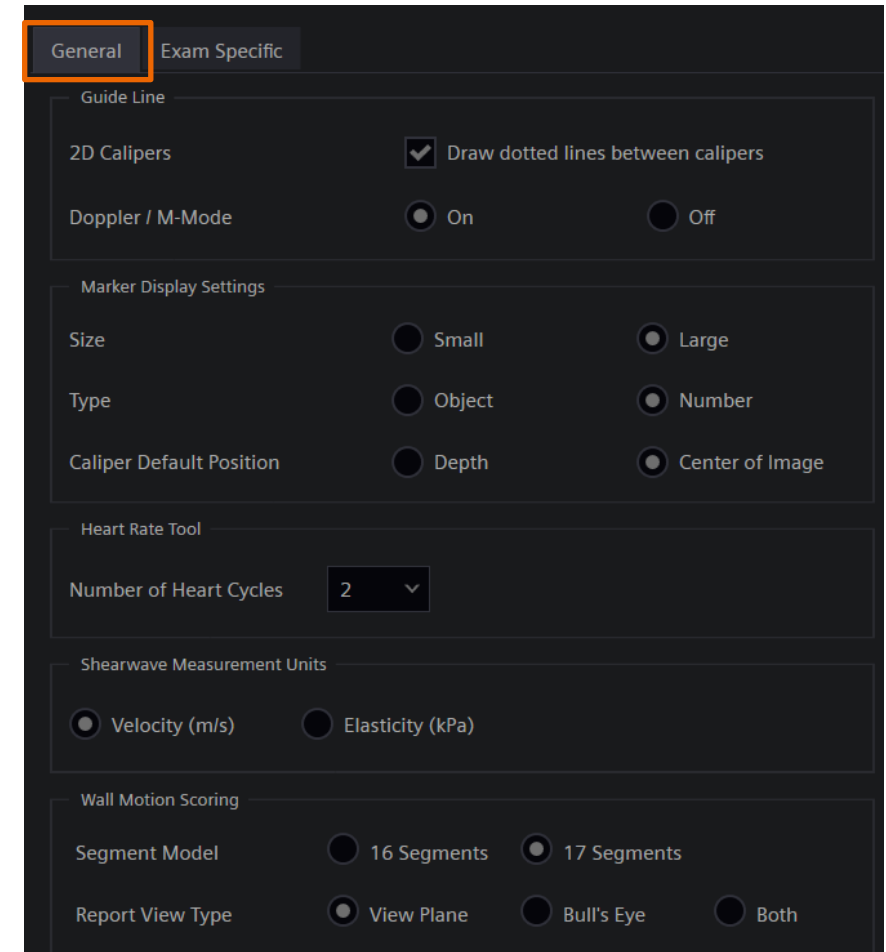
- Position of MDA



# General icon

## General options tab

- Marker Display Settings
  - Size – small / large
- Type – object / number
- Caliper Default Position – center / depth
- Guide Line for Doppler / M-mode and On / Off
- Heart Rate Tool settings (heart cycle options 1-5)
- Shear wave Measurement Units
- Wall Motion Scoring settings for cardiac



# General icon

## Exam Specific options tab - Obstetrics

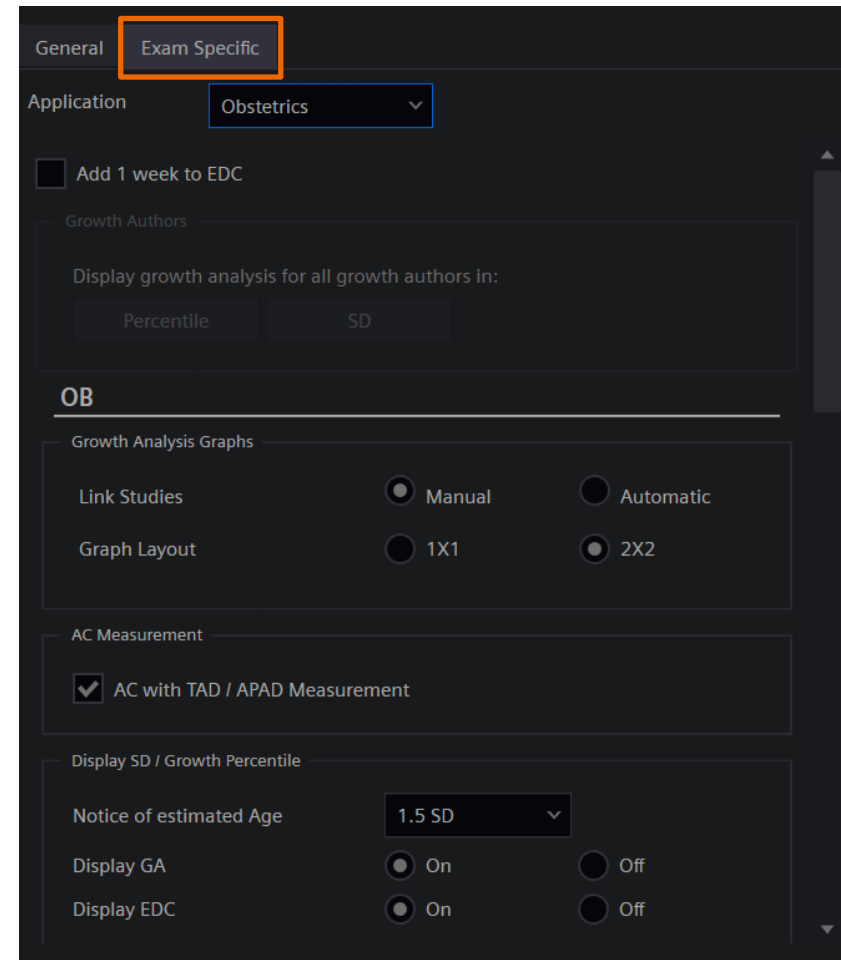
Separate customizable options for each obstetrical application:

- OB
- Early OB
- Advanced OB

Measurement and display parameters

- Standard Deviation
- Display GA / EDC onscreen
- Graph layout
- BPD measurement markers
- HC and AC display settings

Auto OB On / Off default selection



The screenshot displays the 'Exam Specific' configuration tab for the 'Obstetrics' application. The 'OB' (Obstetrics) section is highlighted with an orange arrow. This section contains several sub-sections: 'Growth Analysis Graphs' with radio buttons for 'Link Studies' (Manual/Automatic) and 'Graph Layout' (1X1/2X2); 'AC Measurement' with a checked checkbox for 'AC with TAD / APAD Measurement'; and 'Display SD / Growth Percentile' with a dropdown for 'Notice of estimated Age' set to '1.5 SD', and checkboxes for 'Display GA' and 'Display EDC', both set to 'On'.

# General icon

## Exam Specific options tab - Echocardiography

Separate customizable options for each cardiac application:

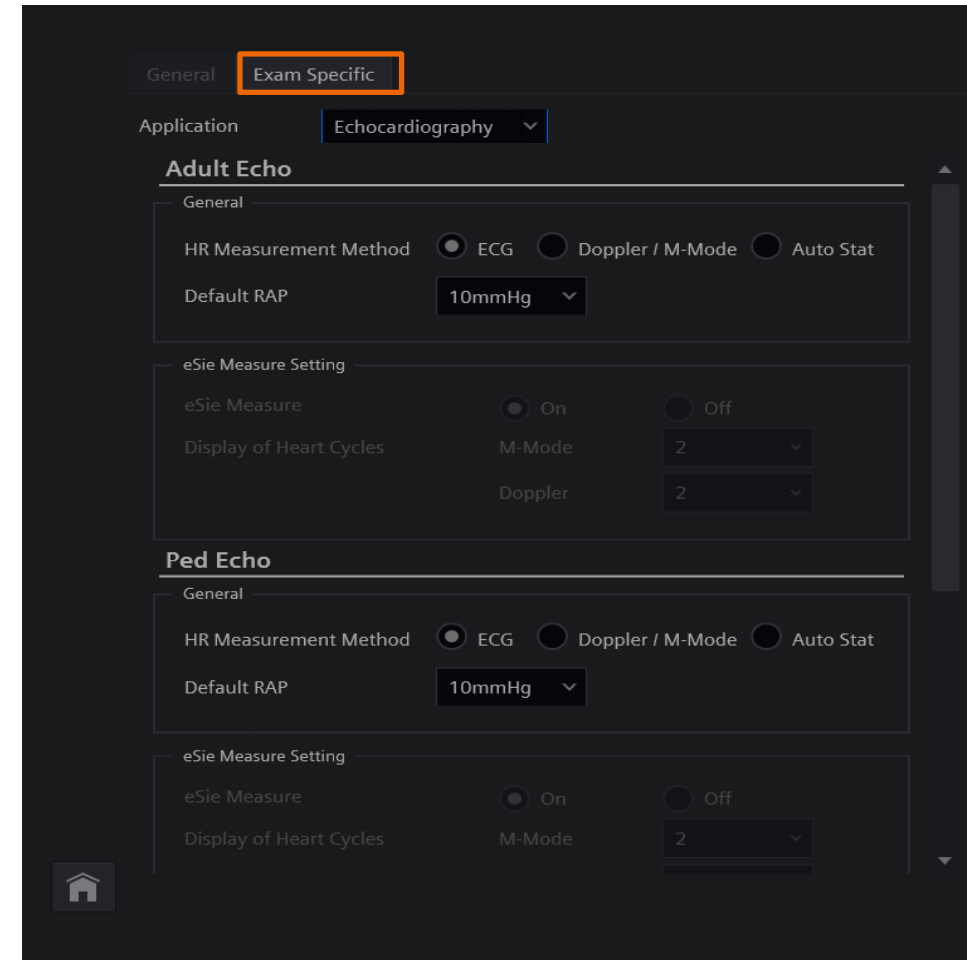
- Adult Echo
- Ped Echo
- Neo Echo

Heart rate measurement method

- ECG
- Doppler / M-mode
- Auto Stat

Default RAP setting (right arterial pressure)

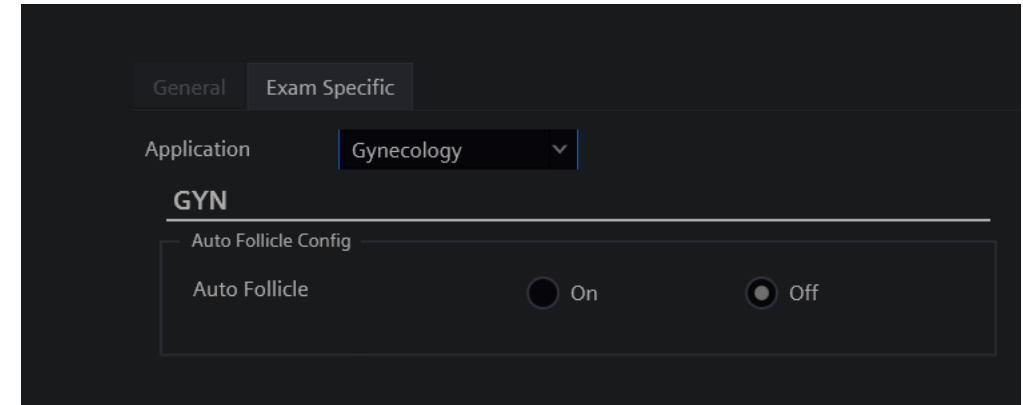
eSie Measure Settings



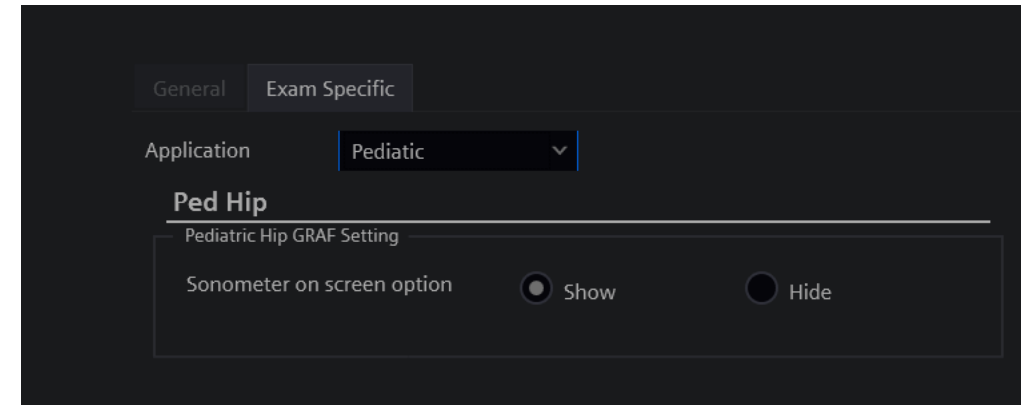
## General icon

## Exam Specific options tab

Gynecology application default setting for Auto Follicle On / Off



Pediatric Hip application default setting for Sonometer display onscreen On / Off

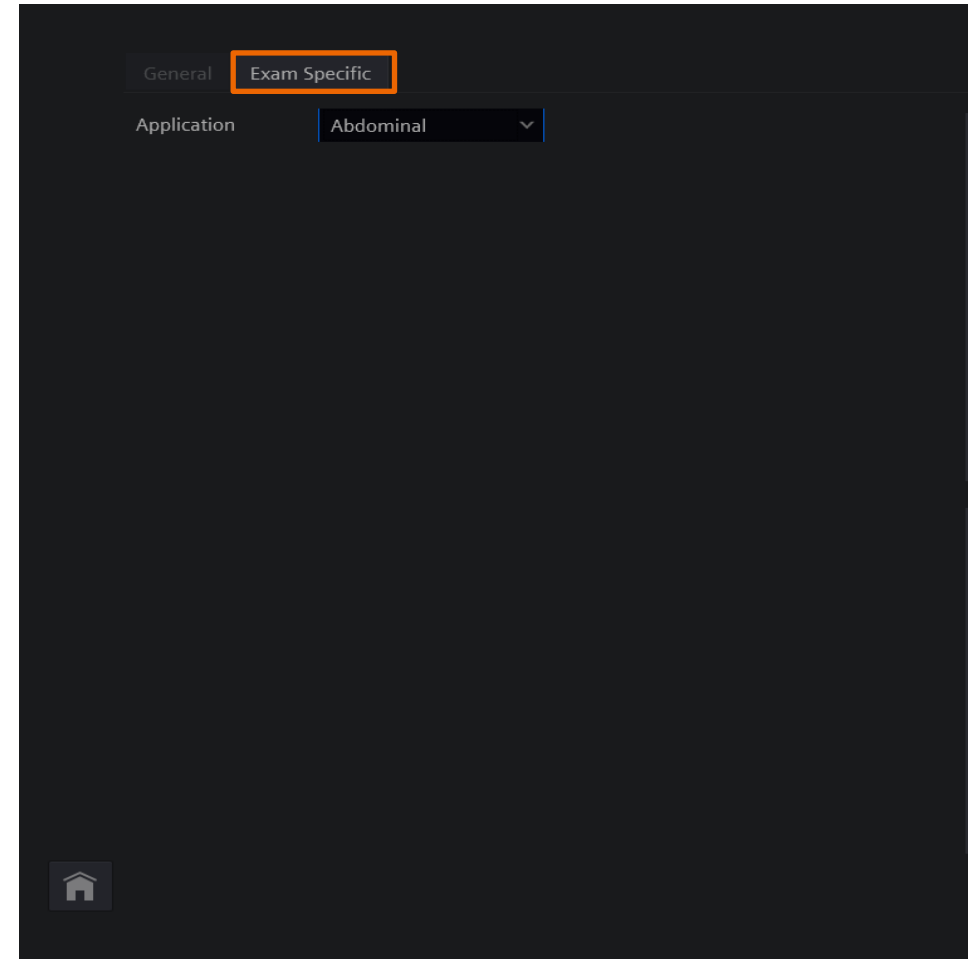


# General icon

## Exam Specific options tab

Applications without Exam Specific options:

- Abdominal
- Small parts
- Neonatal
- Vascular
- Urology
- Musculoskeletal (MSK)
- Intraoperative

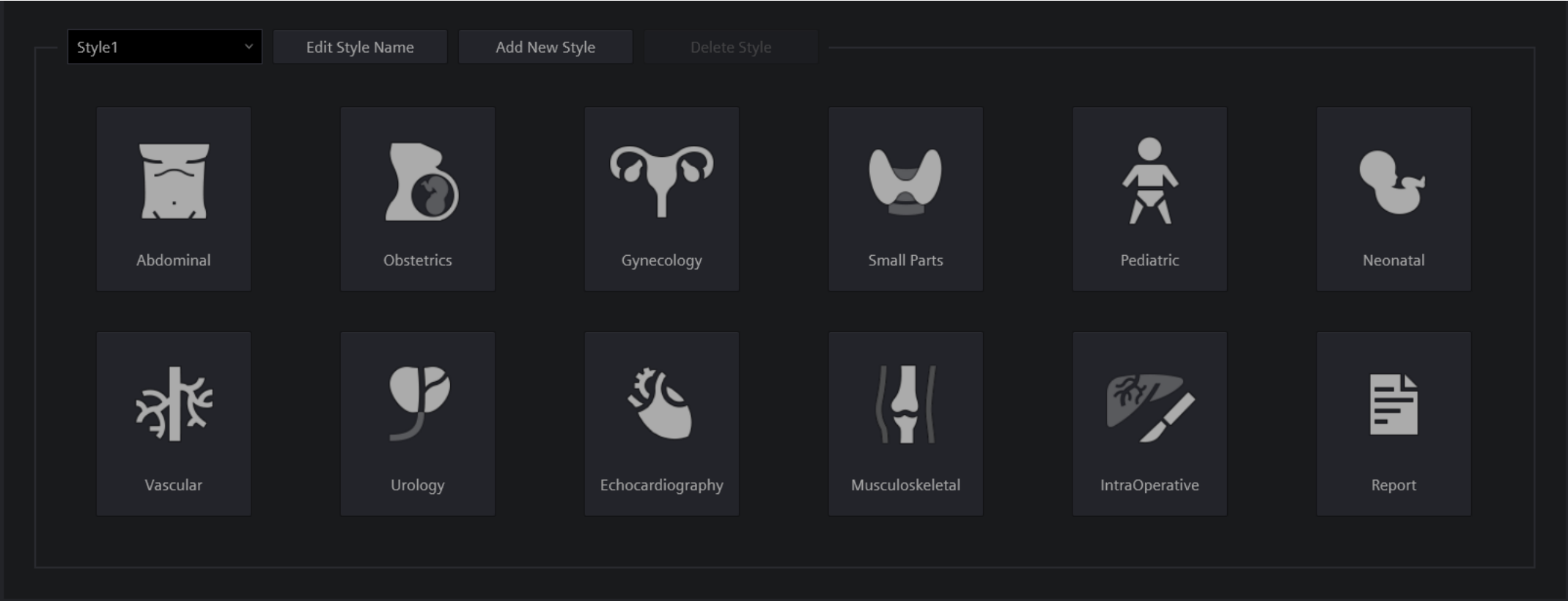


# Objectives

- Explain the measurement configuration access and homepage layout
- Review the General icon
- **Analyze the Exam specific icon layout**
- Discuss Configuration
  - Touch Screen
  - Left Panel
  - Edit Label
  - Tables and Formula
- Examine patient report



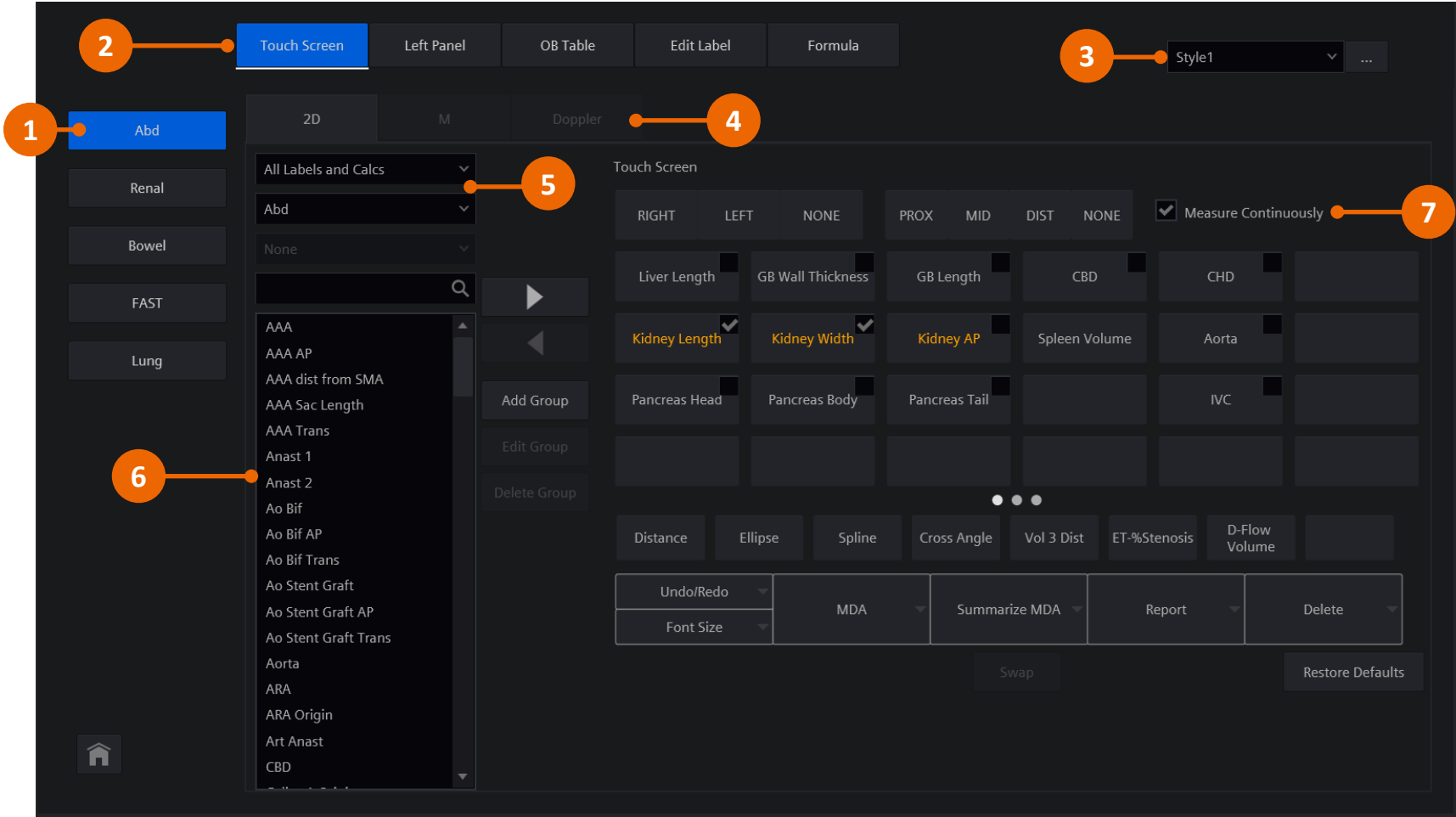
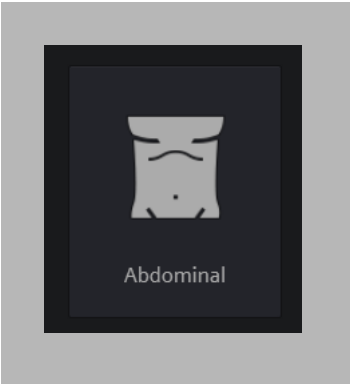
# Exam Specific icons





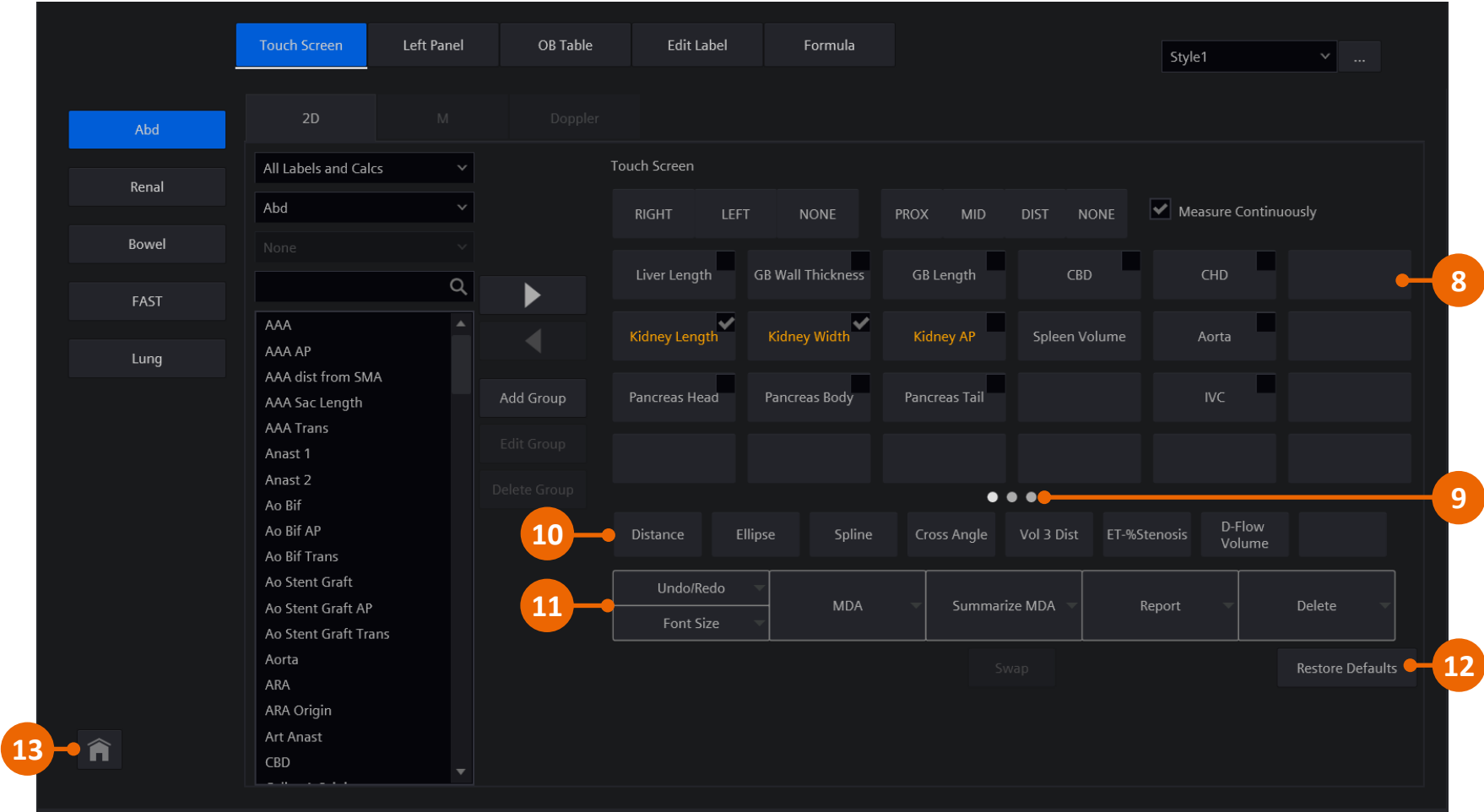
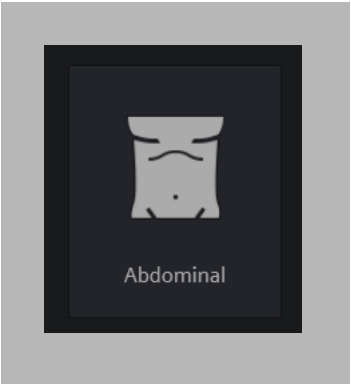
# Exam specific icons

## Overview



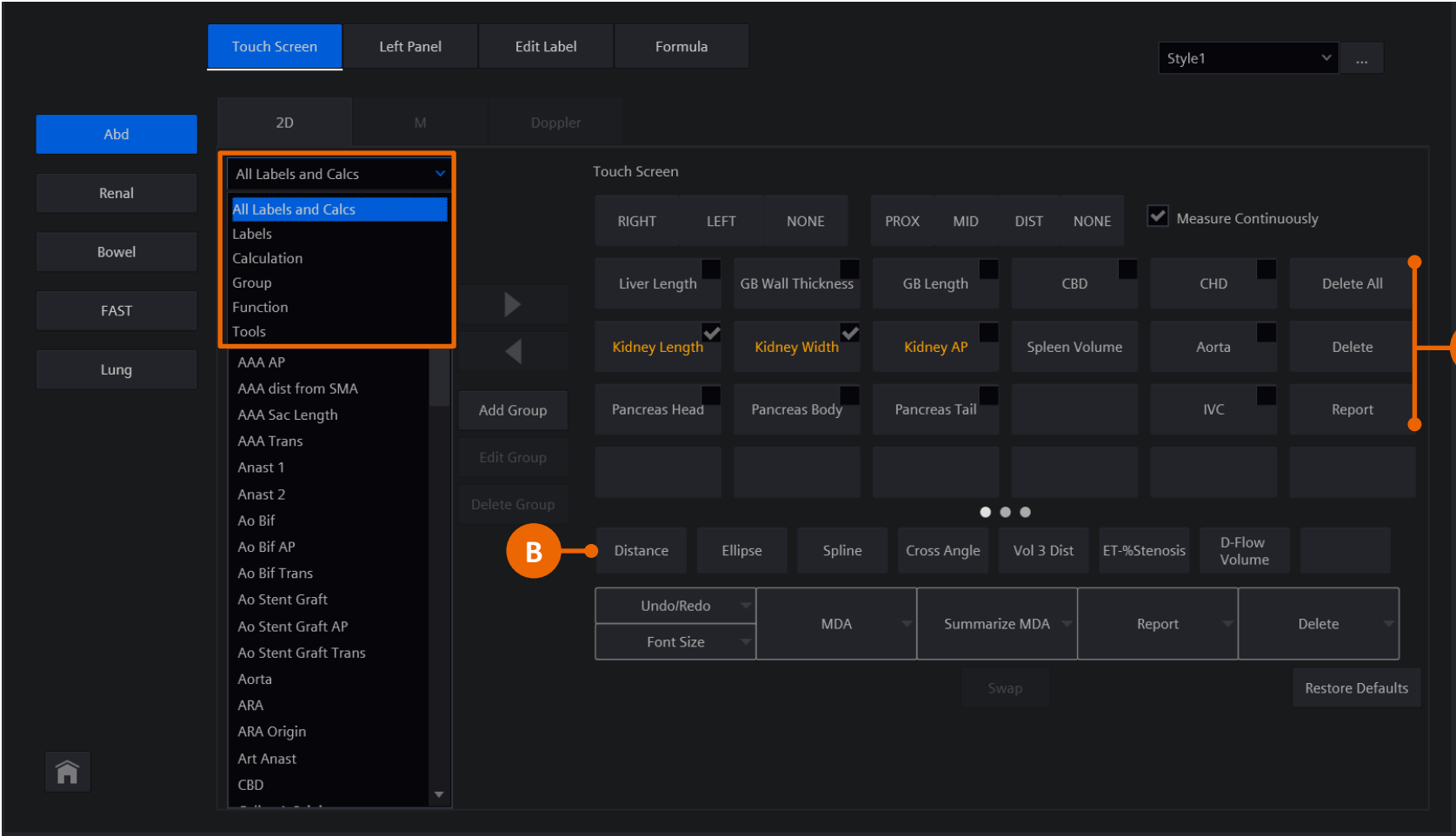
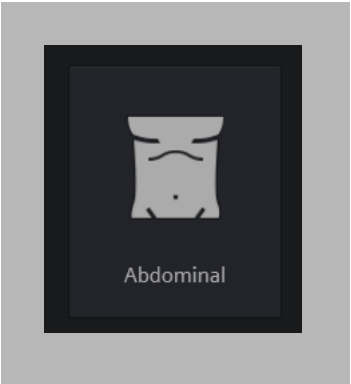
# Exam specific icons

## Overview – continued



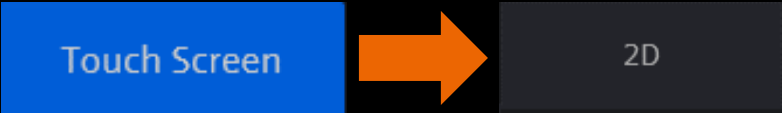
# Exam specific icon

## drop-down menu options



# Exam specific icon

## drop-down menu options



All Labels and Calcs ▾

Abd ▾

None ▾

AAA

AAA AP

AAA dist from SMA

AAA Sac Length

AAA Trans

Anast 1

Anast 2

Ao Bif

Ao Bif AP

Ao Bif Trans

Ao Stent Graft

Ao Stent Graft AP

Ao Stent Graft Trans

Aorta

ARA

ARA Origin

Art Anast

CBD

Labels ▾

Abd ▾

None ▾

AAA

AAA AP

AAA dist from SMA

AAA Sac Length

AAA Trans

Anast 1

Anast 2

Ao Bif

Ao Bif AP

Ao Bif Trans

Ao Stent Graft

Ao Stent Graft AP

Ao Stent Graft Trans

Aorta

ARA

ARA Origin

Art Anast

CBD

Calculation ▾

Abd ▾

None ▾

GB

Kidney Volume

Liver

Spleen Volume

Transplant Kidney Vol

Group ▾

Abd ▾

None ▾

Liver Doppler

Function ▾

Abd ▾

None ▾

Delete

Delete All

Report

Tools ▾

Abd ▾

None ▾

1 Ellipse

2 Distance Avg

3 Distance Avg

4 Point Dist

5 Point Dist

6 Point Dist

A-%Stenosis

AFI

AP Depth

Area Ratio

Auto Stenosis

Auto Trace

Cardiac Axis

Cross Angle

D-%Stenosis

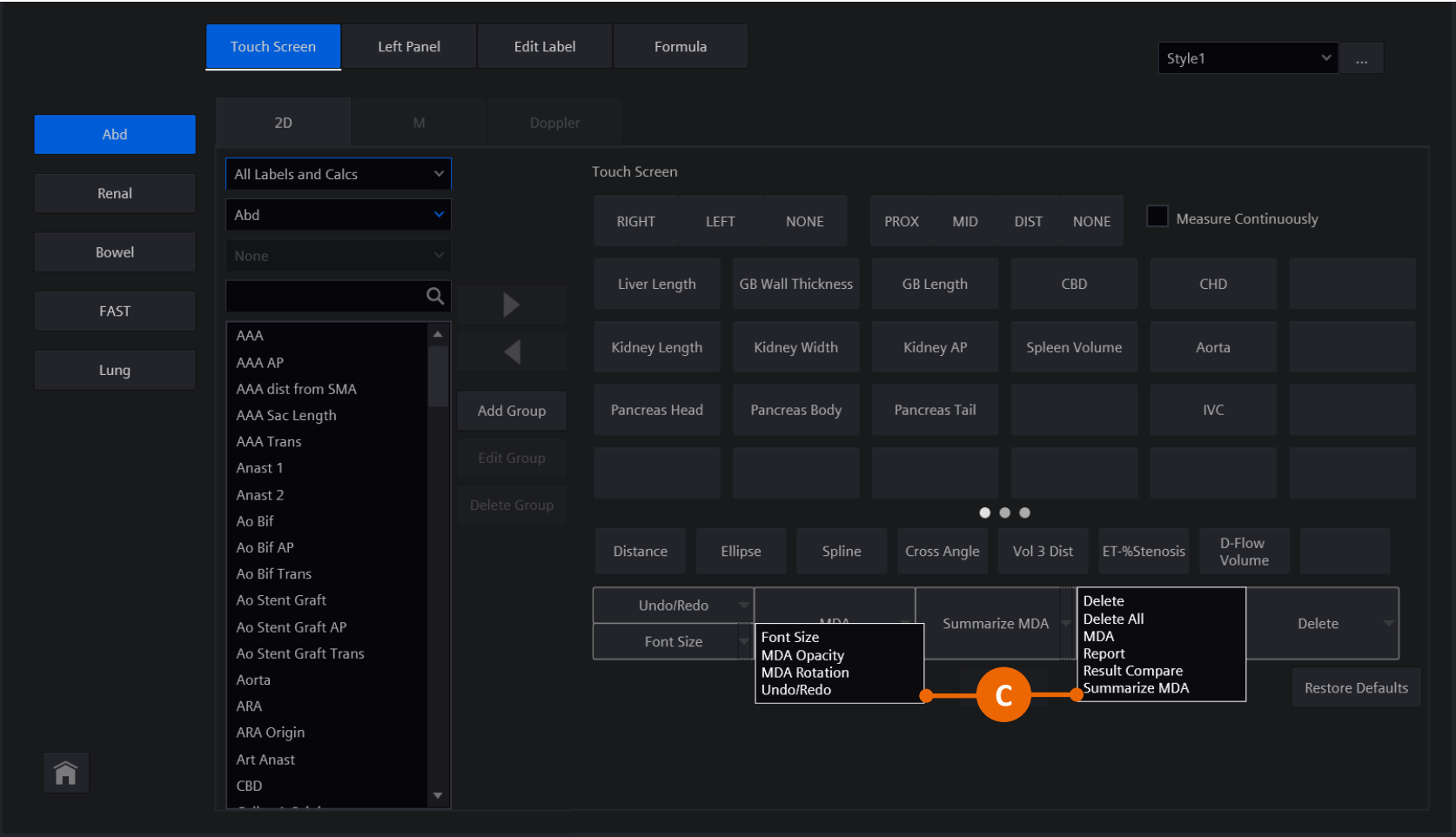
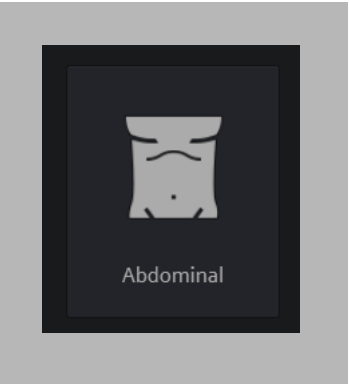
d:D Ratio

Disk

Disk Trace

# Exam specific icon

## Rotary dial / soft key options



# Objectives

- Explain the measurement configuration access and homepage layout
- Review the General icon
- Analyze the Exam specific icon layout
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  - Touch Screen
  - Left Panel
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# Configuration Touch Screen

The screenshot displays the Siemens Healthineers Touch Screen Configuration interface. The interface is divided into several sections: a top navigation bar with tabs for 'Touch Screen', 'Left Panel', 'Edit Label', and 'Formula'; a left sidebar with 'Exam type options' (Abd, Renal, Bowel, FAST, Lung); a central 'Touch Screen' area with a grid of measurement labels (Liver Length, GB Wall Thickness, GB Length, CBD, CHD, Kidney Length, Kidney Width, Kidney AP, Spleen Volume, Aorta, Pancreas Head, Pancreas Body, Pancreas Tail, IVC); and a bottom section with 'Access to additional pages' (Undo/Redo, Font Size, MDA, Summarize MDA, Report, Delete, Swap, Restore Defaults). Annotations with orange lines point to specific elements: 'Select Touch Screen tab' points to the 'Touch Screen' tab; 'Exam type options' points to the 'Abd' button; 'Label options' points to the 'AAA' option in the dropdown menu; 'Mode and Style selection' points to the 'Style1' dropdown; 'Select to add label to touch screen' points to the 'Add Group' button; and 'Access to additional pages' points to the 'Report' button.

Select Touch Screen tab

Exam type options

Label options

Mode and Style selection

Select to add label to touch screen

Access to additional pages

# Configuration

## Label Swap

Touch Screen Left Panel Edit Label Formula

Style1

Abd Renal Bowel FAST Lung

2D M Doppler

All Labels and Calcs

Abd

None

AAA AAA AP AAA dist from SMA AAA Sac Length AAA Trans Anast 1 Anast 2 Ao Bif Ao Bif AP Ao Bif Trans Ao Stent Graft Ao Stent Graft AP Ao Stent Graft Trans Aorta ARA ARA Origin Art Anast CBD

RIGHT LEFT NONE PROX MID DIST NONE Measure Continuously

Liver Length GB Wall Thickness GB Length CBD CHD

Kidney Length Kidney Width Kidney AP Spleen Volume Aorta

Pancreas Head Pancreas Body Pancreas Tail IVC

Distance Ellipse Spline Cross Angle Vol 3 Dist ET-%Stenosis D-Flow Volume

Undo/Redo Font Size MDA Summarize MDA Report Delete

Swap

Restore Defaults

Select label to be moved

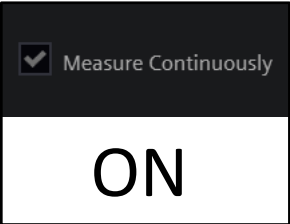
Select new label location

Swap

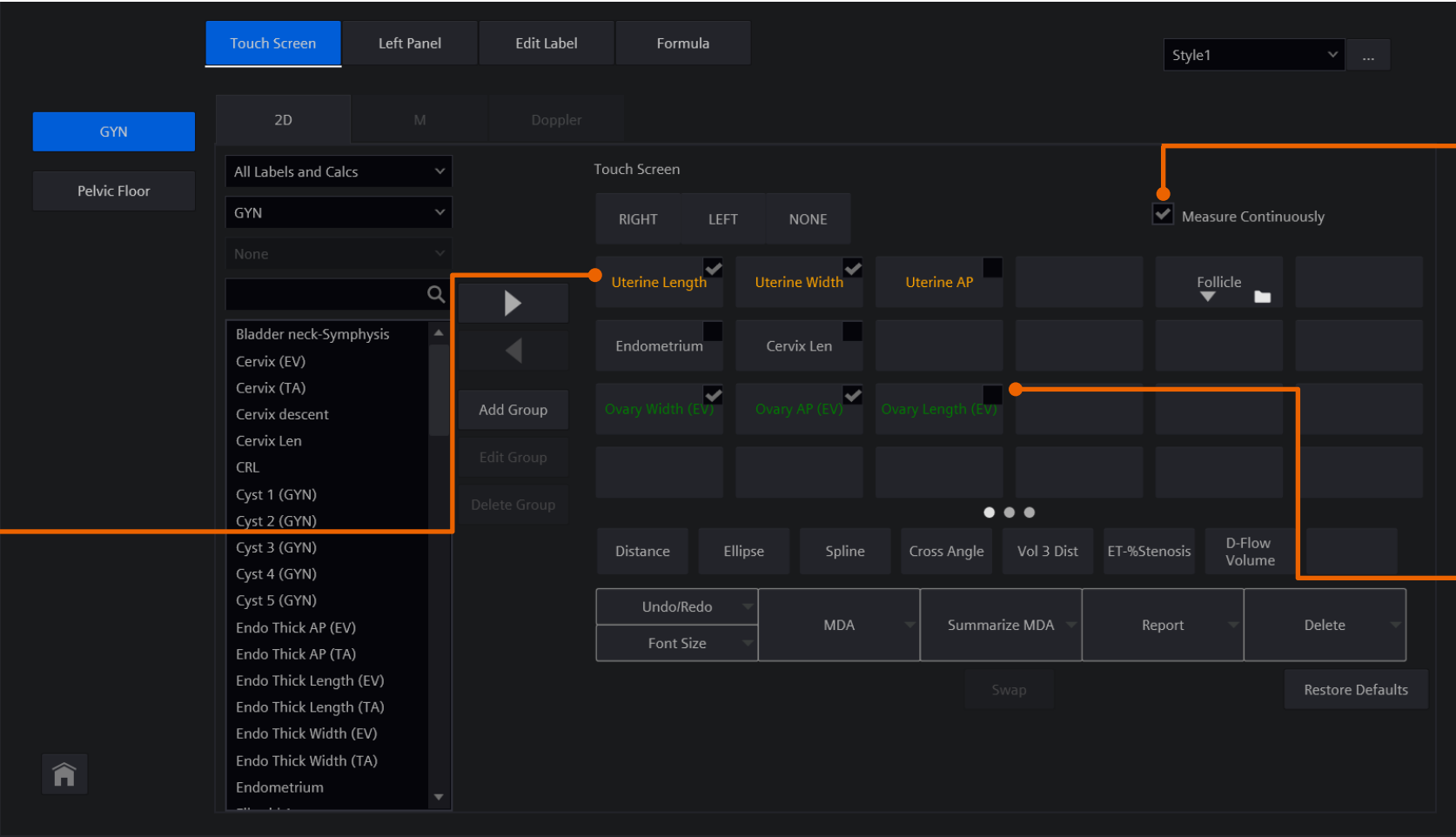


# Configuration

## Measure Continuously



Colored labels with check mark in corner box



Measure Continuously function box contains check mark ☒

Last label in series is unchecked

# Configuration

## Measure Continuously

☐ Measure Continuously

OFF

Labels  
gray in  
color

Touch Screen

Left Panel

OB Table

Edit Label

Formula

Style3

OB

Early OB

Fetal Echo

OB (Adv)

All Labels and Calcs

OB

None

Clavicle

CRL

CSP

CTR Area

Cyst 1 (GYN)

Cyst 2 (GYN)

Cyst 3 (GYN)

Cyst 4 (GYN)

Cyst 5 (GYN)

EFW1

EFW2

Facial Angle

Fibroid 1

Fibroid 2

Fibroid 3

Fibroid 4

Fibroid 5

Fibula

RIGHT

LEFT

NONE

A

B

C

D

BPD

HC

AC

FL

HL

OFD

APAD

TA

Q1

Q2

Q3

Q4

Distance

Ellipse

Spline

Cross Angle

Vol 3 Dist

ET-%Stenosis

D-Flow Volume

Font Size

Summarize MDA

Report

Delete

Swap

Restore Defaults

Measure Continuously

GA by CRL/BPD

TAD/APAD

Growth Graph

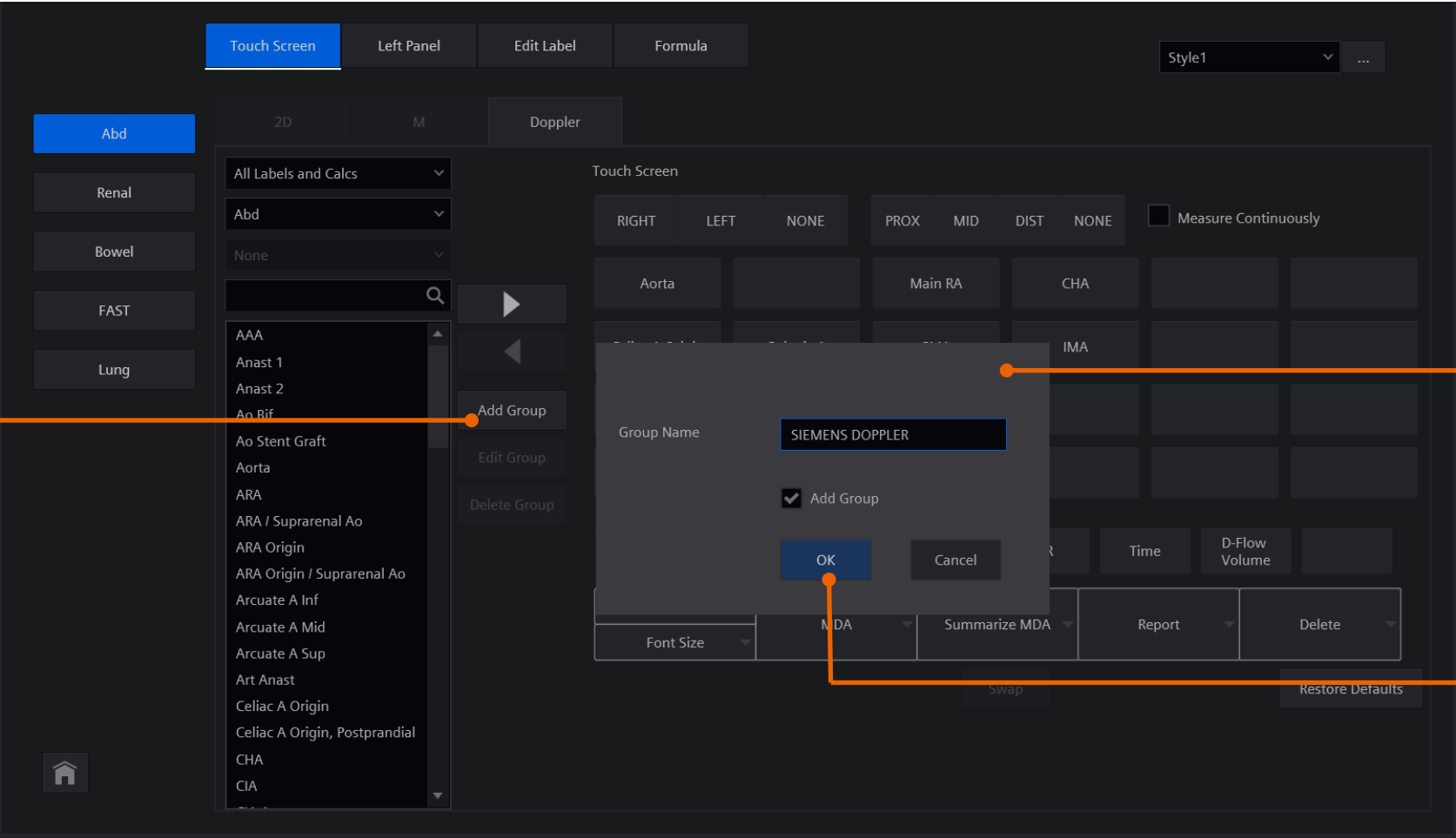
Function  
box is  
unchecked

All labels  
lack check  
mark boxes

# Configuration

## Add Group

Select to  
add new  
group

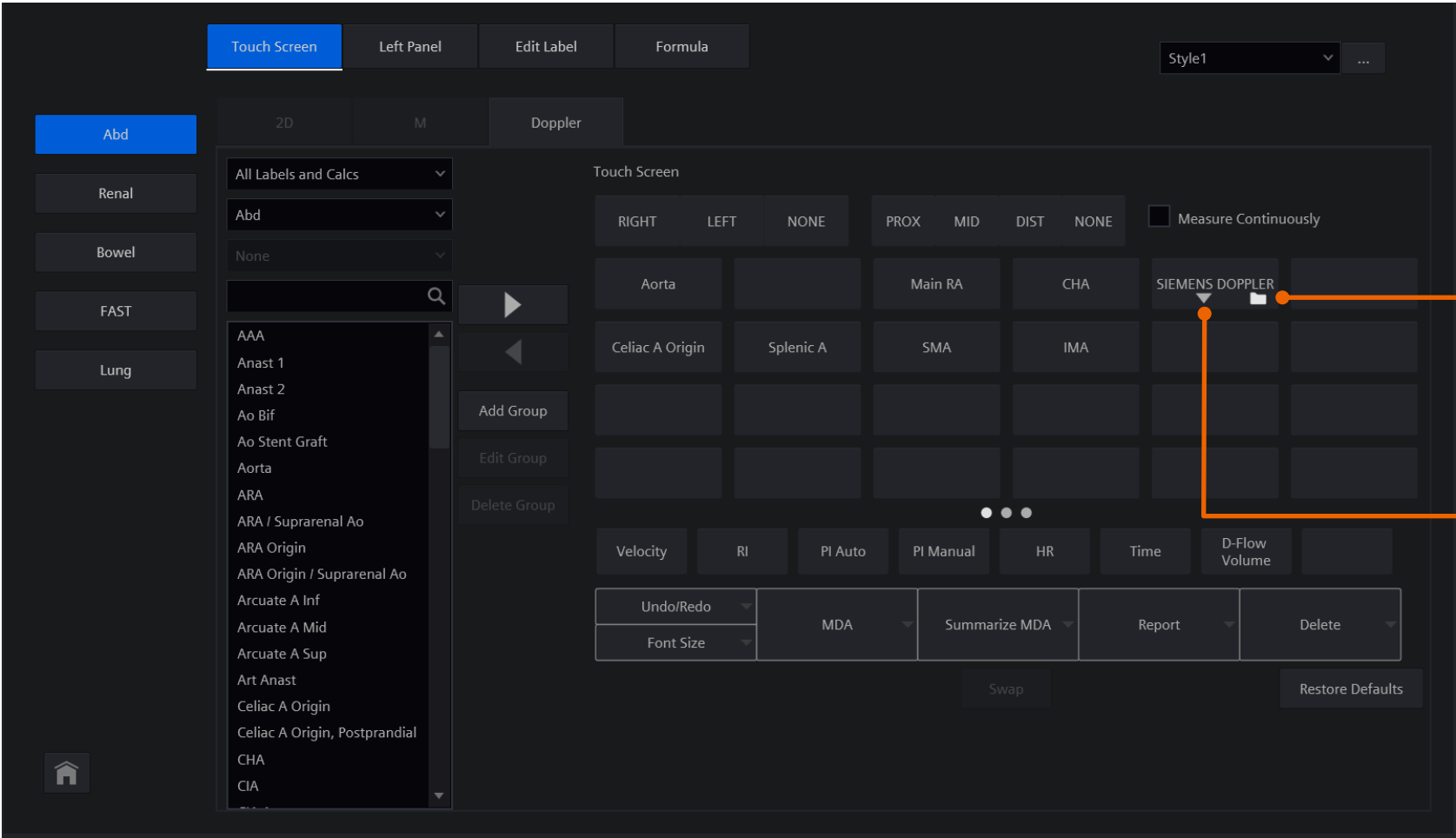


Dialogue  
box to  
name  
group

Select **OK**  
to save  
group

# Configuration

## Add Group



File icon



indicates a  
group label

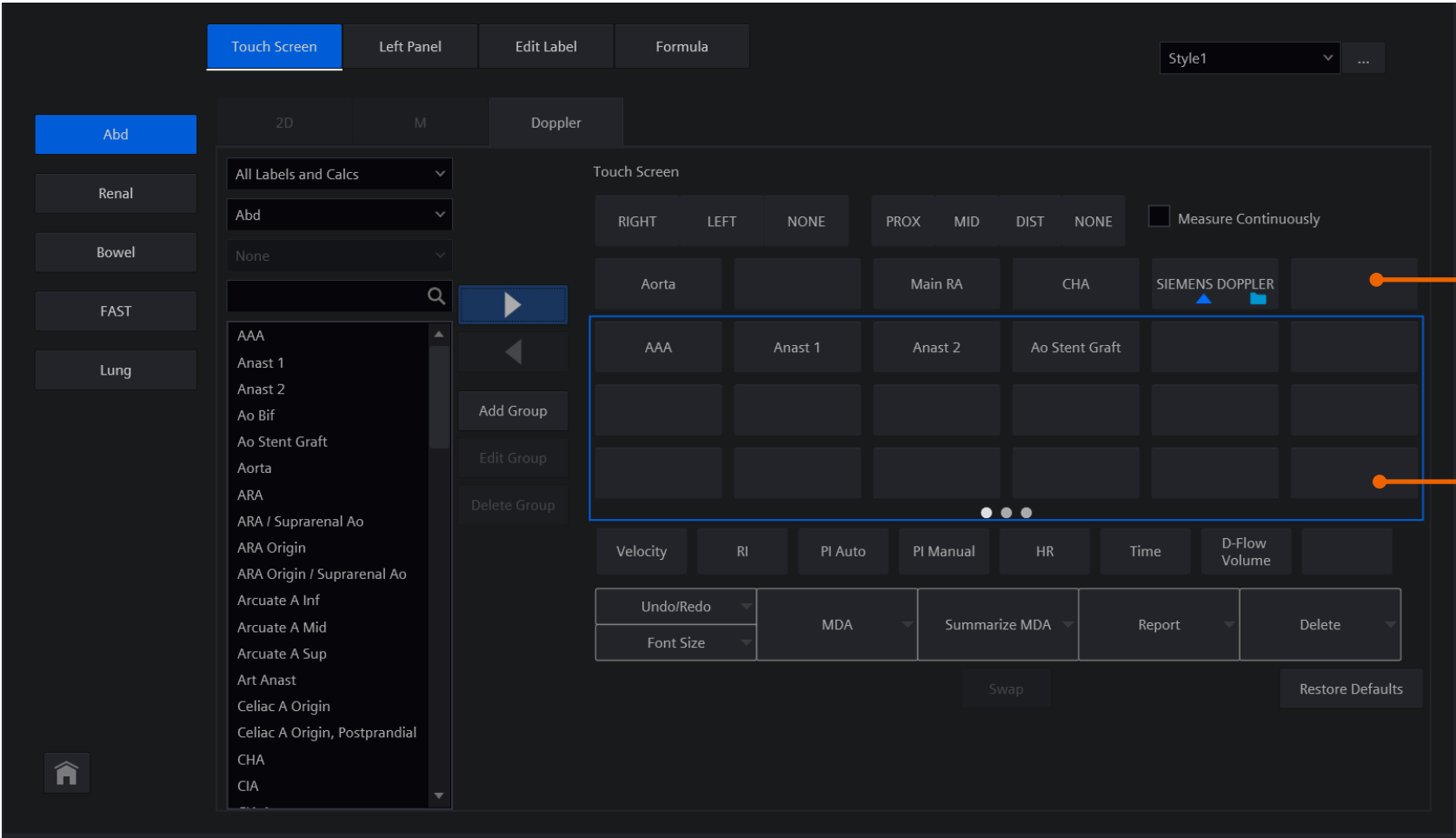
Use arrow



to display  
group

# Configuration

## Add Group



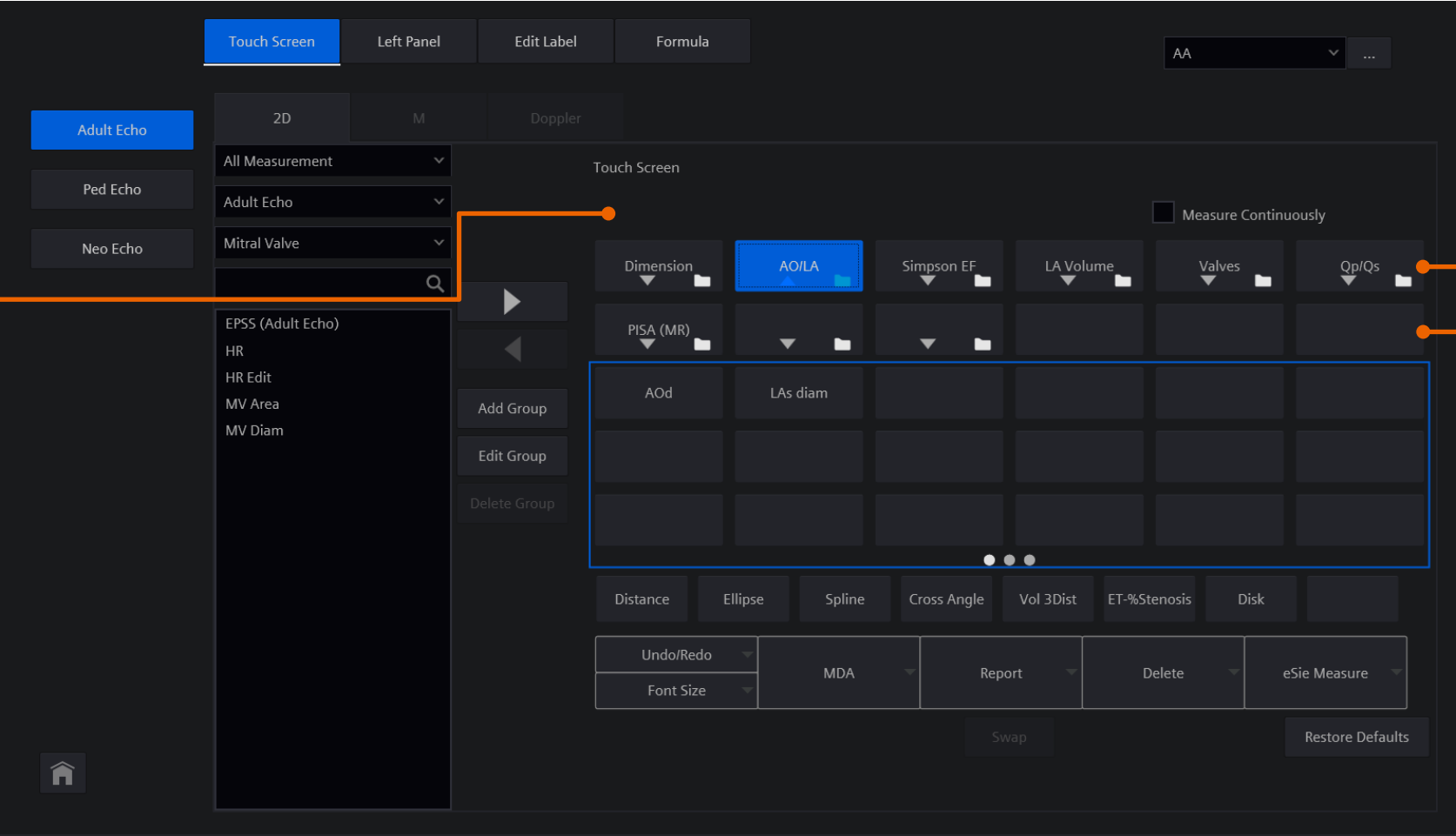
General  
imaging  
group  
location

Open group  
to add labels

# Configuration

## Add Group

No labels  
for laterality  
or location



Cardiac  
groups

# Objectives

- Explain the measurement configuration access and homepage layout
- Review the General icon
- Analyze the Exam specific icon layout
- **Discuss Configuration**
  - Touch Screen
  - **Left Panel**
  - Edit Label
  - Tables and Formula
- Examine patient report



# Configuration

## Left Panel

Touch Screen Left Panel Edit Label Formula

Style1

Abd

Renal

Bowel

FAST

Lung

2D M Doppler

All Labels and Calcs

Abd

None

Search

AAA

AAA AP

AAA dist from SMA

AAA Sac Length

AAA Trans

Anast 1

Anast 2

Ao Bif

Ao Bif AP

Ao Bif Trans

Ao Stent Graft

Ao Stent Graft AP

Ao Stent Graft Trans

Aorta

ARA

ARA Origin

Art Anast

CBD

Add Group

Edit Group

Delete Group

Measurement Lists

Liver Length

GB Wall Thickness

GB Length

CBD

CHD

Kidney Length

Kidney Width

Kidney AP

Spleen Volume

Aorta

Pancreas Head

Pancreas Body

Pancreas Tail

IVC

Measure Continuously

Restore Defaults

Add or remove labels

Highlight label to be moved

Arrows to change label location



# Objectives

- Explain the measurement configuration access and homepage layout
- Review the General icon
- Analyze the Exam specific icon layout
- **Discuss Configuration**
  - Touch Screen
  - Left Panel
  - **Edit Label**
  - Tables and Formula
- Examine patient report



# Configuration

## Edit Label

New

Touch Screen

Left Panel

Edit Label

Formula

Style1

Abd

Renal

Bowel

FAST

Lung

2D

M

Doppler

All Labels and Calcs

None

AAA

AAA AP

AAA dist from SMA

AAA Sac Length

AAA Trans

Anast 1

Anast 2

Ao Bif

Ao Bif AP

Ao Bif Trans

Ao Stent Graft

Ao Stent Graft AP

Ao Stent Graft Trans

Aorta

ARA

ARA Origin

Art Anast

CBD

Celiac A Origin

Celiac A Origin, Postprandial

CHA

CHD

CIA

CIA Aneurysm

CIA Aneurysm AP

CIA Aneurysm Trans

CIA AP

CIA Stent

CIA Stent AP

CIA Stent Trans

New

Edit

Copy

Delete

Label

Exam

Report Section

Value Display Type

Lt./Rt.

Prox/Mid/Dist

Highlight Value

Data Shared Between Exams

Display Area

MDA

Report

Supporting Tools

2D Mode

M Mode

D Mode

Available Method

Selected Method

Name	Units	Precision
------	-------	-----------

Save

Restore Defaults

# Configuration

## Edit Label

Touch Screen Left Panel **Edit Label** Formula

Style1

Abd 2D M Doppler

Abd

Renal

Bowel

FAST

Lung

All Labels and Calcs

None

Label NEW LABEL

Exam Abd

Report Section 2D Mode Measurement

Value Display Type Last

☒ Lt./Rt. ☒ Prox/Mid/Dist

☐ Data Shared Between Exams

Highlight Value ☐

Display Area ☒ MDA ☒ Report

New Edit Copy Delete

Supporting Tools

☒ 2D Mode ☐ M Mode ☐ D Mode

Available Method Distance

Selected Method Distance (D)

Name	Units	Precision
------	-------	-----------

☒ Distance ☐ Open Trace ☐ Auto Trace

Save

Restore Defaults

# Configuration

## Edit Label

Edit

Touch Screen

Left Panel

Edit Label

Formula

Style1

...

Abd

Renal

Bowel

FAST

Lung

All Labels and Calcs

None

Liver

Liver AP

Liver Length

Liver Mass 1

Liver Mass 10

Liver Mass 2

Liver Mass 3

Liver Mass 4

Liver Mass 5

Liver Mass 6

Liver Mass 7

Liver Mass 8

Liver Mass 9

Liver Width

LPV

Main RA

Main RA Origin

MHV

MPV

Neck Diam

Neck Length

\*NEW LABEL

Outflow Vessel 1

Outflow Vessel 2

Pancreas Body

Pancreas Duct

Pancreas Head

Pancreas Tail

Portal V Anast

Portal V Pre Anast

New

Edit

Copy

Delete

Label

NEW LABEL

Exam

Abd

☒ Lt./Rt.

☒ Prox/Mid/Dist

Report Section

2D Mode Measurement

Value Display Type

Last

☐ Highlight Value

☐ Data Shared Between Exams

Display Area

☒ MDA

☒ Report

Supporting Tools

☒ 2D Mode

☐ M Mode

☐ D Mode

Available Method

Distance

Selected Method

Distance (D)

☒ Distance

☐ Open Trace

☐ Auto Trace

Name	Units	Precision
<input checked="" type="checkbox"/> D	mm	1

Save

Restore Defaults

# Configuration

## Edit Factory label

Copy

Touch Screen Left Panel Edit Label Formula Style1

Abd Renal Bowel FAST Lung

2D M Doppler

All Labels and Calcs

None

AAA  
AAA AP  
AAA dist from SMA  
AAA Sac Length  
AAA Trans  
Anast 1  
Anast 2  
Ao Bif  
Ao Bif AP  
Ao Bif Trans  
Ao Stent Graft  
Ao Stent Graft AP  
Ao Stent Graft Trans  
Aorta  
ARA  
ARA Origin  
Art Anast  
CBD  
Celiac A Origin  
Celiac A Origin, Postprandial  
CHA  
CHD  
CIA  
CIA Aneurysm  
CIA Aneurysm AP  
CIA Aneurysm Trans  
CIA AP  
CIA Stent  
CIA Stent AP  
CIA Stent Trans

New Edit Copy Delete

Label AORTA 2

Exam Abd, Renal, FAST, Ped Abd

Report Section 2D Mode Measurement, D Mode M

Value Display Type Last

☐ Lt./Rt. ☒ Prox/Mid/Dist

☒ Data Shared Between Exams

Highlight Value ☐

Display Area ☒ MDA ☒ Report

Supporting Tools

☒ 2D Mode ☐ M Mode ☐ D Mode

Available Method Distance

Selected Method ☒ Distance (D) ☐ Open Trace (D) ☐ Open Spline (D)

	Name	Units	Precision
<input checked="" type="checkbox"/>	D	mm	1

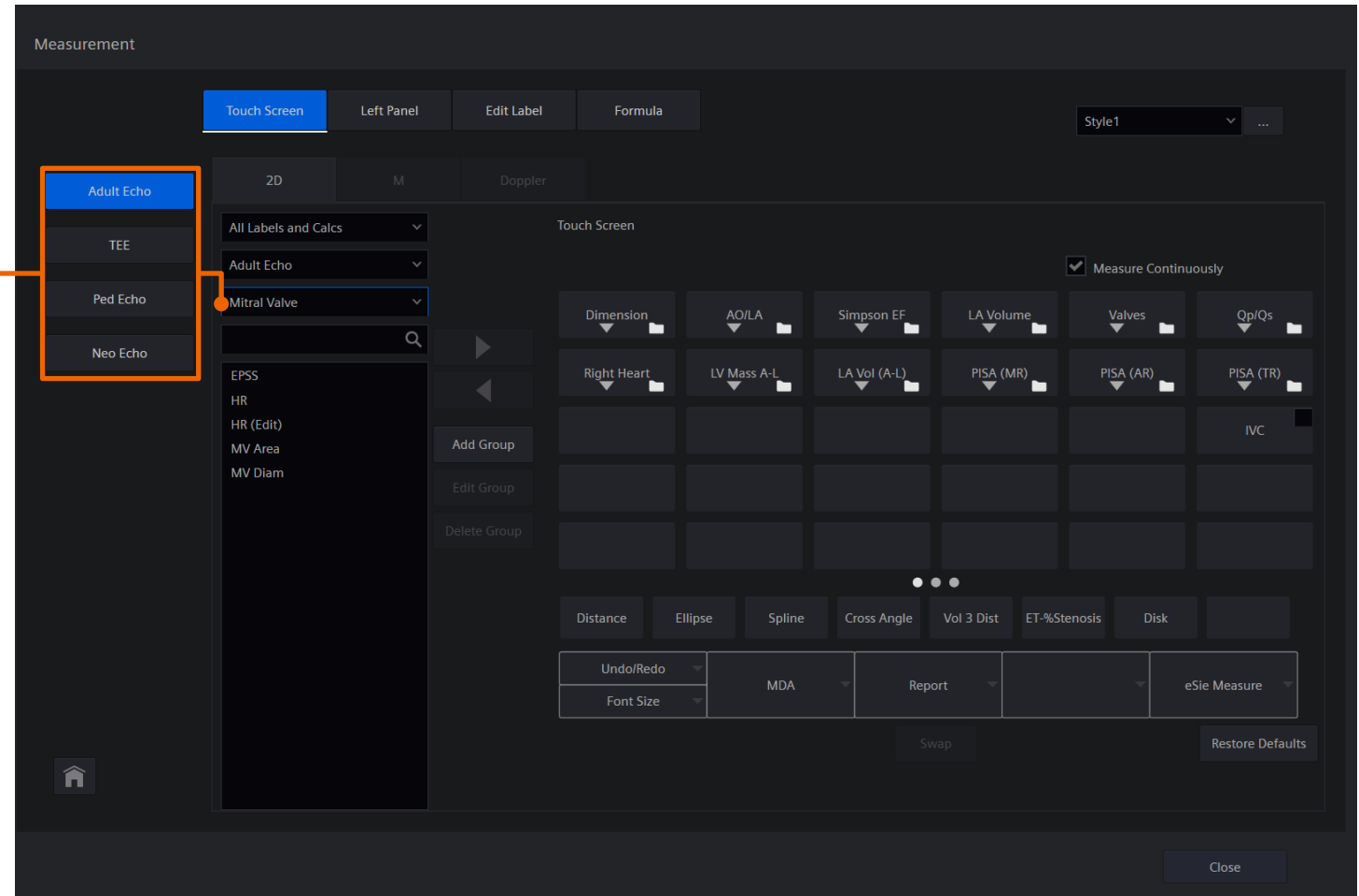
☒ Distance ☒ Open Trace ☒ Auto Trace

Save Restore Defaults

# Configuration

## Cardiac Labels – Add New

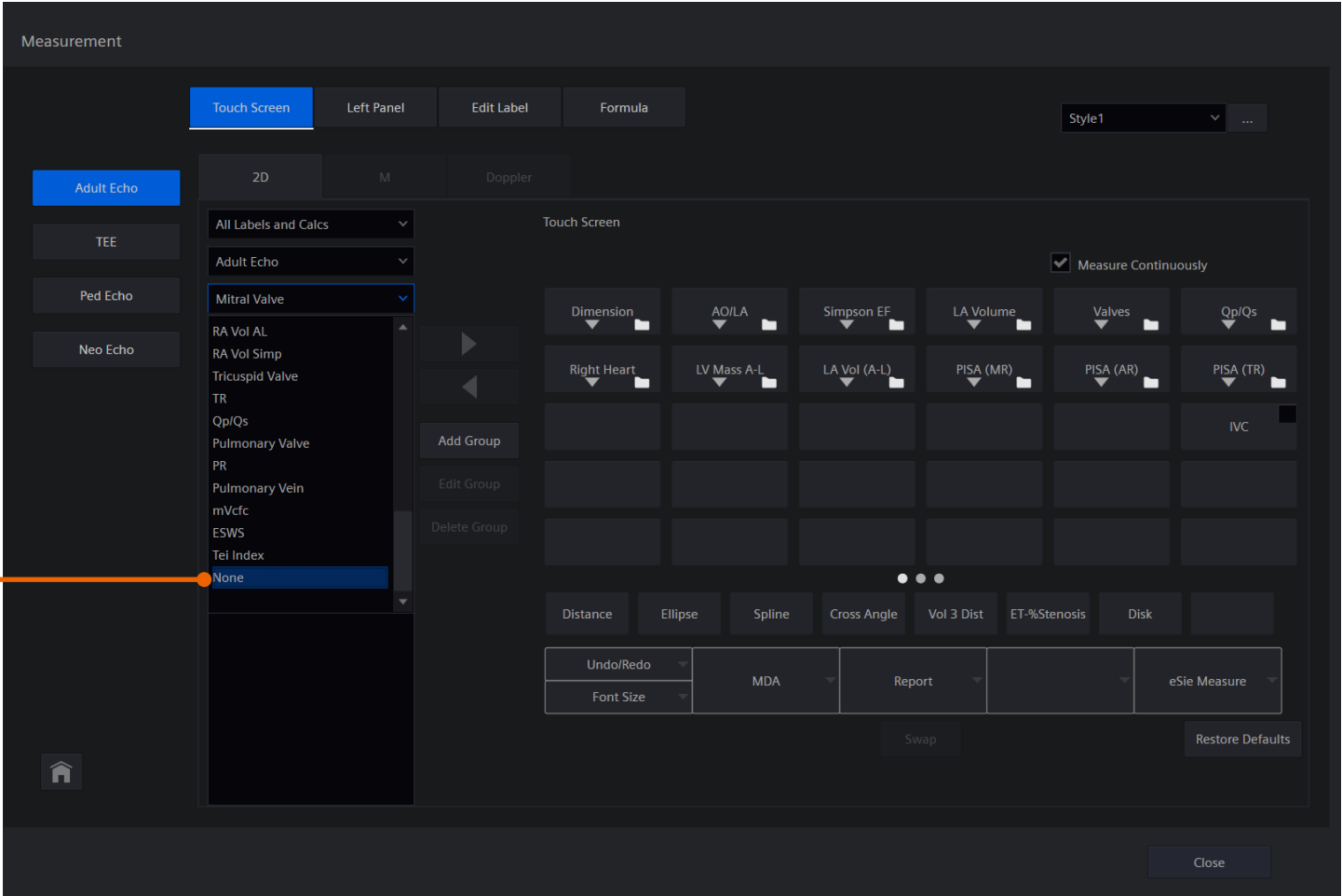
- All Echocardiography exam types have label categories
- All other exams do not have label categories



# Configuration

## Cardiac Labels – Add New

“None” category  
for Cardiac is at  
bottom of list



# Configuration

## Cardiac Labels – Add New

Touch Screen Left Panel Edit Label Formula Style1

2D M Doppler

All Labels and Calcs

Aortic Valve

AV Area  
AVA (Vmax)  
AVA (VTI)  
CI  
CO  
HR  
HR (Edit)  
LVOT Diam  
Qp/Qs  
Qp-Qs  
SI  
SV

Label test label Report Section 2D Mode Measurement

Exam Adult Echo Value Display Type Last

LT/Rt Prox/Mid/Dist Highlight Value

Data Shared Between Exams Display Area MDA Report

New Edit Copy Delete

Supporting Tools

2D Mode M Mode D Mode

Available Method Selected Method

Distance Distance (D)

Distance Open Trace Open Spline

Save Restore Defaults

Label  
does not  
appear in  
Aortic  
Valve list

2D

All Labels and Calcs

Aortic Valve

AV Area  
AVA (Vmax)  
AVA (VTI)  
CI  
CO  
HR  
HR (Edit)  
LVOT Diam  
Qp/Qs  
Qp-Qs  
SI  
SV

Label  
appears  
in  
“None”  
list

2D

All Labels and Calcs

None

\*AO  
IVC  
\*test label



# Configuration

## Cardiac Labels – Copy / Add New

The screenshot shows the Siemens Healthineers configuration interface for Cardiac Labels. The interface is divided into several sections:

- Top Navigation:** Includes tabs for 'Touch Screen', 'Left Panel', 'Edit Label' (selected), and 'Formula'. A 'Style1' dropdown is also present.
- Left Sidebar:** Contains buttons for 'Adult Echo' (highlighted with arrow 1), 'Ped Echo', and 'Neo Echo'. Below these is a list of labels: 'All Labels and Calcs', 'AO/LA', 'ACS', 'AOd', 'AOd/LAs', 'AOs', 'LAd Diam', 'LAs Diam', 'LAs/AOd', and 'RV Diam' (highlighted with arrow 2).
- Main Configuration Area:**
  - Label:** 'RV test label' (highlighted with arrow 3).
  - Exam:** 'Adult Echo, Ped Echo, Neo Echo'.
  - Report Section:** 'AO/LA, AO/LA (M)'.
  - Value Display Type:** 'Last'.
  - Supporting Tools:** Includes radio buttons for '2D Mode' (selected), 'M Mode', and 'D Mode'. Below this is a table for 'Available Method' and 'Selected Method'.
  - Available Method Table:**

Available Method
<input checked="" type="checkbox"/> Distance
<input type="checkbox"/> Open Trace
<input type="checkbox"/> Open Spline
  - Selected Method Table:**

Name	Units	Precision
<input checked="" type="checkbox"/> D	mm	1
  - Buttons:** 'New', 'Edit', 'Copy', 'Delete', 'Save' (highlighted with arrow 4), and 'Restore Defaults'.
- Right Sidebar:** Shows a list of labels: 'All Labels and Calcs', 'AO/LA', 'ACS', 'AOd', 'AOd/LAs', 'AOs', 'LAd Diam', 'LAs Diam', 'LAs/AOd', 'RV Diam', and '\*RV test label' (highlighted with arrow 5).

# Objectives

- Explain the measurement configuration access and homepage layout
- Review the General icon
- Analyze the Exam specific icon layout
- **Discuss Configuration**
  - Touch Screen
  - Left Panel
  - Edit Label
  - **Tables and Formula**
- Examine patient report



# Measurement Configuration

## OB Table



Touch Screen

Left Panel

OB Table

Edit Label

Formula

Style1

OB

Early OB

Fetal Echo

OB (Adv)

Gestational Age

GA (BPD)	Hadlock
GA (BPDa)	Hadlock
GA (HC)	Hadlock
GA (AC)	Hadlock
GA (FL)	Hadlock
GA (HL)	Jeanty
GA (Foot)	Mercer
GA (OFD)	ASUM
GA (FTA)	Osaka
GA (APTD x TTD)	Tokyo
GA (TAD)	Merz
GA (APAD)	Merz
GA (Ulna)	Jeanty

Growth Analysis Graphs

Growth (BPD)	Hadlock
Growth (HC)	Hadlock
Growth (AC)	Hadlock
Growth (AFI)	Moore
Growth (LV-A)	Nicolaides
Growth (APTD x TTD)	JSUM
Growth (CI)	Hadlock
Growth (Cist Magna)	Nicolaides
Growth (Clavicle)	Yarkoni
Growth (CRL)	Hadlock
Growth (EFW1)	Hadlock
Growth (William EFW1)	William
Growth (EFW2)	Hadlock

Ratio

CI (OB)	Hadlock
Cerebellum/AC	Meyer
Lat Vent/HW	Johnson
FL/AC	Hadlock
HC/AC	Campbell
FL/BPD	Hohler

Same Author for All Labels

Hadlock

Apply

Estimated Fetal Weight

EFW 1	Hadlock1 - (AC, FL)
EFW 2	Hadlock4 - (BPD, HC, AC, FL)
USGA	Average

Restore Defaults

# Measurement Configuration

## Formula – New table

Table type

Select **New**  
to begin  
entering  
table

Touch Screen Left Panel OB Table Edit Label Formula Style1

OB Gestational Age EFW Ratio Growth Analysis Graphs Custom

Early OB Fetal Echo OB (Adv)

GA (BPD) - Hadlock  
GA (BPD) - Merz  
GA (BPD) - Lasser  
GA (BPD) - Rempen  
GA (BPD) - Tokyo  
GA (BPD) - Osaka  
GA (BPD) - JSUM  
GA (BPD) - ASUM  
GA (BPDa) - Hadlock  
GA (BPDa) - Merz  
GA (BPDa) - Lasser  
GA (BPDa) - Rempen  
GA (BPDa) - Tokyo  
GA (BPDa) - Osaka  
GA (BPDa) - JSUM  
GA (BPDa) - ASUM  
GA (HC) - Hadlock  
GA (HC) - Merz  
GA (HC) - Lasser  
GA (AC) - Hadlock  
GA (AC) - Merz  
GA (AC) - Lasser  
GA (AC) - JSUM

New Copy Edit Delete

Reference  
Reference (Author)  
Variable Label  
Range  
Data Type  
Result Unit

Formula SD Limits Formula

Constant  
Label Value  
A  
B  
C  
D  
E  
F  
G  
H  
I  
J  
K  
L

Variable  
OB 2D Mode  
Label Units Lt./Rt. Proximity  
BPD mm NONE NONE  
HC mm NONE NONE  
AC mm NONE NONE  
FL mm NONE NONE  
HL mm NONE NONE  
Q1 mm NONE NONE  
Q2 mm NONE NONE  
Q3 mm NONE NONE

Operation  
+ - \* / ^ ( ) 'SIN' 'COS' 'TAN' 'ATAN' 'LOG'  
0 1 2 3 4 5 6 7 8 9 'LN' 'EXP' 'SQRT' 'ABS'

Restore Defaults Save

# Measurement Configuration

## Formula – Custom GA table addition

Touch Screen Left Panel OB Table Edit Label **Formula** Style1

OB Gestational Age EFW Ratio Growth Analysis Graphs Custom

OB  
Early OB  
Fetal Echo  
OB (Adv)

GA (BPD) - Hadlock  
GA (BPD) - Merz  
GA (BPD) - Lasser  
GA (BPD) - Rempen  
GA (BPD) - Tokyo  
GA (BPD) - Osaka  
GA (BPD) - JSUM  
GA (BPD) - ASUM  
GA (BPDa) - Hadlock  
GA (BPDa) - Merz  
GA (BPDa) - Lasser  
GA (BPDa) - Rempen  
GA (BPDa) - Tokyo  
GA (BPDa) - Osaka  
GA (BPDa) - JSUM  
GA (BPDa) - ASUM  
GA (HC) - Hadlock  
GA (HC) - Merz  
GA (HC) - Lasser  
GA (AC) - Hadlock  
GA (AC) - Merz  
GA (AC) - Lasser  
GA (AC) - JSUM

New  
Copy  
Edit  
Delete

Reference  
Reference (Author)  
Variable Label  
Range  
Data Type  
Result Unit

1 0 0 0.0 0.0 0.0

Weeks Days Low Limit Value Up Limit

Undo Clear Cell Clear Line Clear All

Restore Defaults

Save

# Measurement Configuration

## Custom GA chart / Save

Touch ScreenLeft PanelOB TableEdit LabelFormula

Style1

OBGestational AgeEFWRatioGrowth Analysis GraphsCustom

OB

Early OBFetal EchoOB (Adv)

GA (BPD) - Hadlock

GA (BPD) - Merz

GA (BPD) - Lasser

GA (BPD) - Rempen

GA (BPD) - Tokyo

GA (BPD) - Osaka

GA (BPD) - JSUM

GA (BPD) - ASUM

GA (BPDa) - Hadlock

GA (BPDa) - Merz

GA (BPDa) - Lasser

GA (BPDa) - Rempen

GA (BPDa) - Tokyo

GA (BPDa) - Osaka

GA (BPDa) - JSUM

GA (BPDa) - ASUM

GA (HC) - Hadlock

GA (HC) - Merz

GA (HC) - Lasser

GA (AC) - Hadlock

GA (AC) - Merz

GA (AC) - Lasser

GA (AC) - JSUM

New

Copy

Edit

Delete

Reference

Reference (Author)

Test

Variable Label

GA (BPD)

Range

6w0d

to14w0d

Data Type

TableFormula

Result Unit

WeekDay

	Weeks	Days	Low Limit	Value	Up Limit
1	6	0	3.0	4.0	5.0
2	6	1	3.0	5.0	7.0
3	6	2	4.0	5.0	8.0
4	6	3	5.0	6.0	9.0
5	6	4	5.0	7.0	10.0
6	6	5	6.0	8.0	11.0
7	6	6	7.0	9.0	12.0
8	7	0	7.0	10.0	13.0
9	7	1	8.0	11.0	14.0
10	7	2	9.0	12.0	15.0
11	7	3	10.0	13.0	17.0
12	7	4	10.0	14.0	18.0
13	7	5	11.0	15.0	19.0
14	7	6	12.0	16.0	20.0
15	0	0	0.0	0.0	0.0

Undo

Clear Cell

Clear Line

Clear All

Restore Defaults

Save



Gestational Age

GA (FTA) - Osaka

GA (APTD x TTD) - Tokyo

GA (TAD) - Merz

GA (APAD) - Merz

GA (Ulna) - Jeanty

GA (Binoc D) - Jeanty

GA (Binoc D) - Tongsong

GA (Tibia) - Jeanty

GA (Clavicle) - Yarkoni

GA (CRL) - Hadlock

GA (CRL) - Robinson

GA (CRL) - Hansmann

GA (CRL) - Lasser

GA (CRL) - Tokyo

GA (CRL) - Osaka

GA (CRL) - JSUM

GA (CRL) - ASUM

GA (Mean Sac Diam) - Hellman

GA (Mean Sac Diam) - Rempen

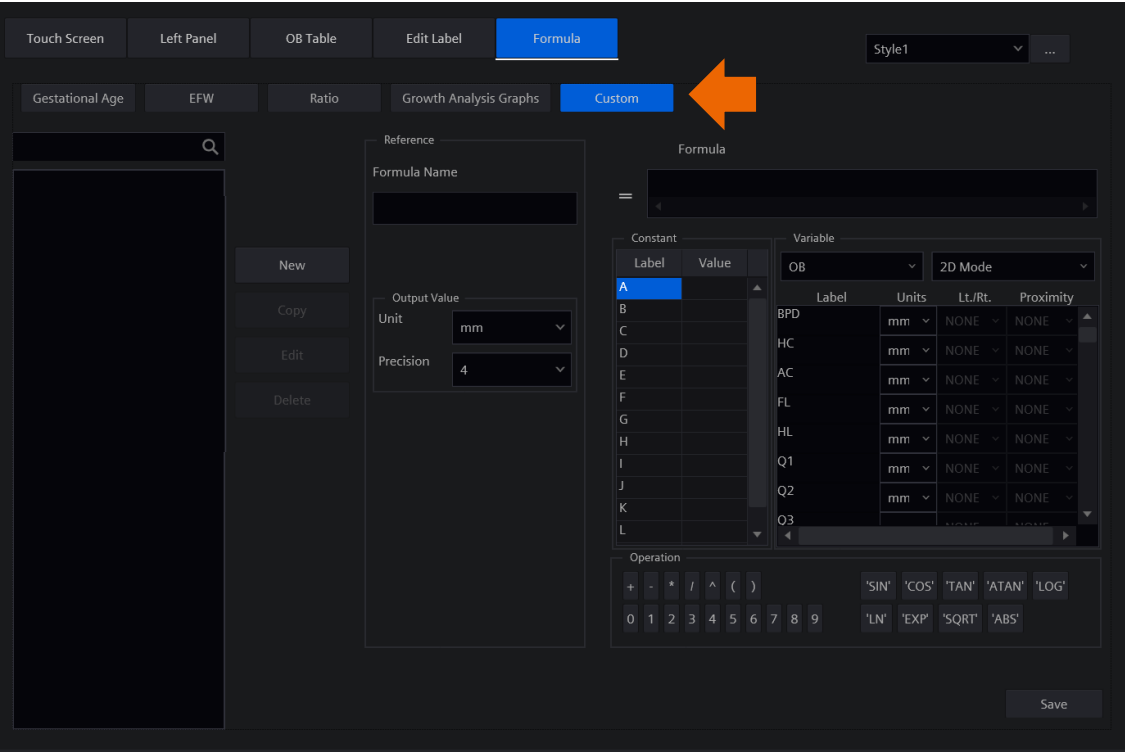
GA (GSD) - Tokyo

GA (GSD) - Osaka

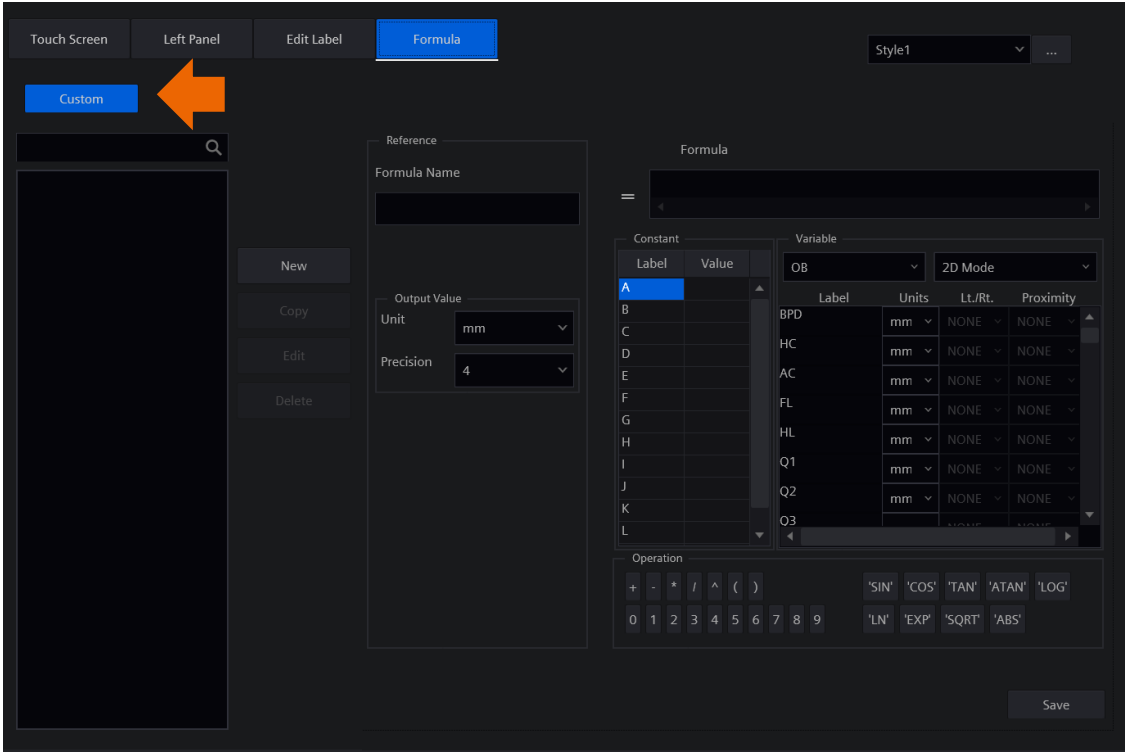
GA (BPD) - \*Test

# Measurement Configuration

## Custom Formula



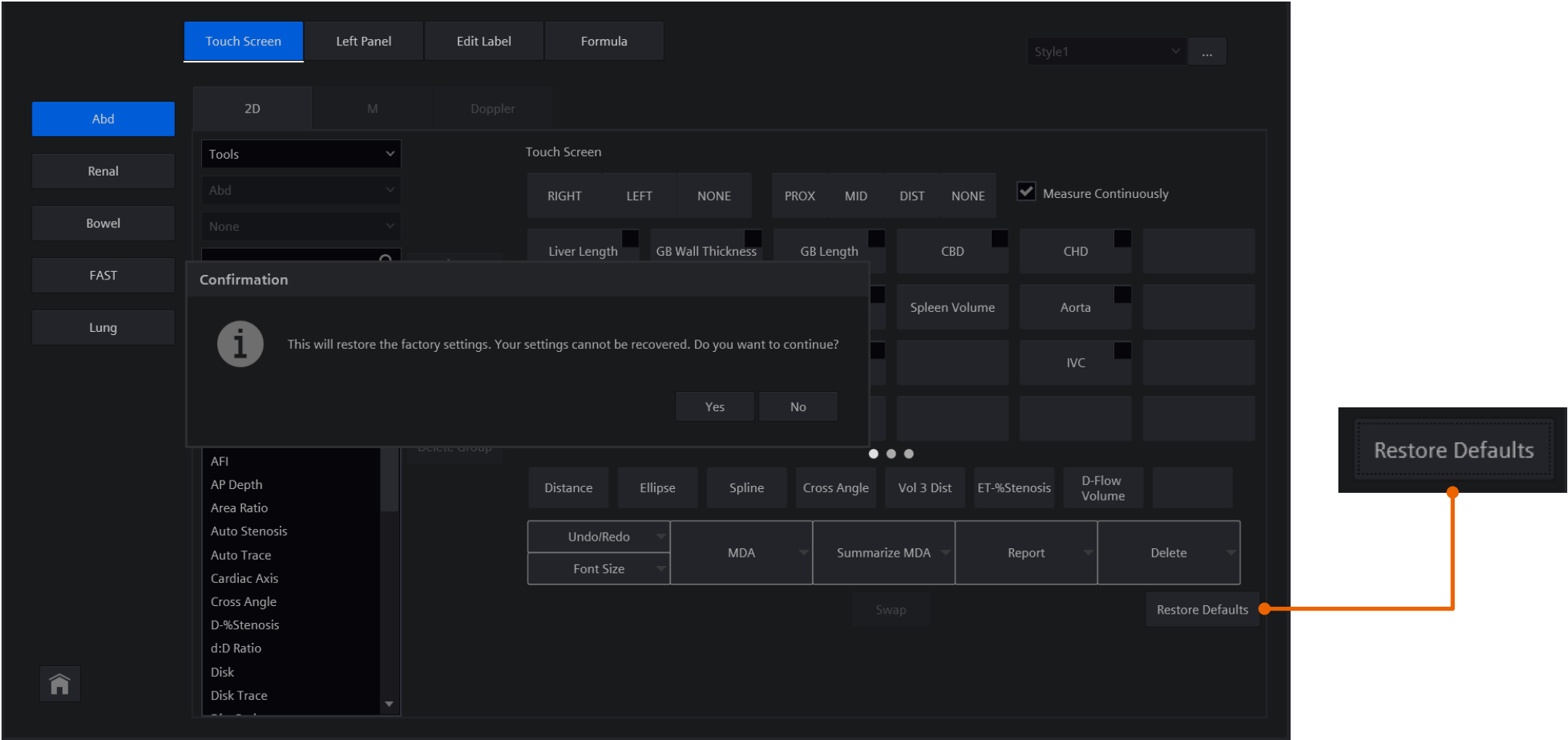
OB Custom Formula Tab



General Imaging Custom  
Formula Tab

# Measurement Configuration

## Restore Defaults





# Custom formula using body surface area (BSA) Echocardiography

Custom formulas using  
BSA are only supported in  
Echocardiography  
measurement  
configuration menu

For custom **BSA** formulas  
to work, user must enter  
**Height** and **Weight** for  
patient's exam

Register New Patient

New Patient

Edit Patient Data

Patient Demographics

Last Name BSA TEST33 Patient ID

First Name

Date of Birth DD / MM / YYYY Age

Mi Pre Suf

Gender Male Female Other

Height 170 cm BSA 1.97 m²

Weight 85 kg BP / mmHg

Medical Information

Additional Info

Order Information

Performing MD Referring MD

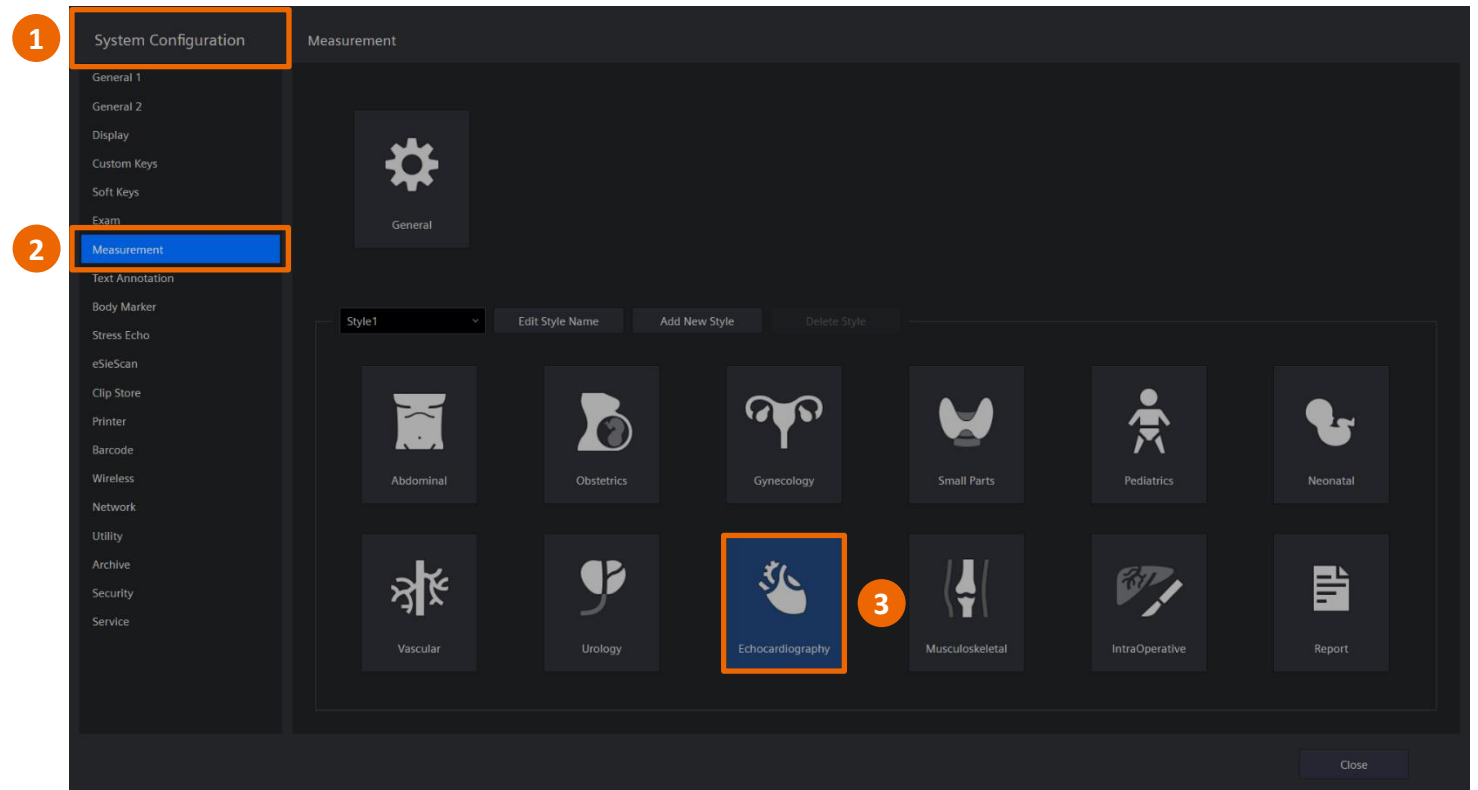
Sonographer

OK Cancel

# Creating a custom formula using BSA Echocardiography

To access:

1. System Configuration
2. Measurement
3. Echocardiography

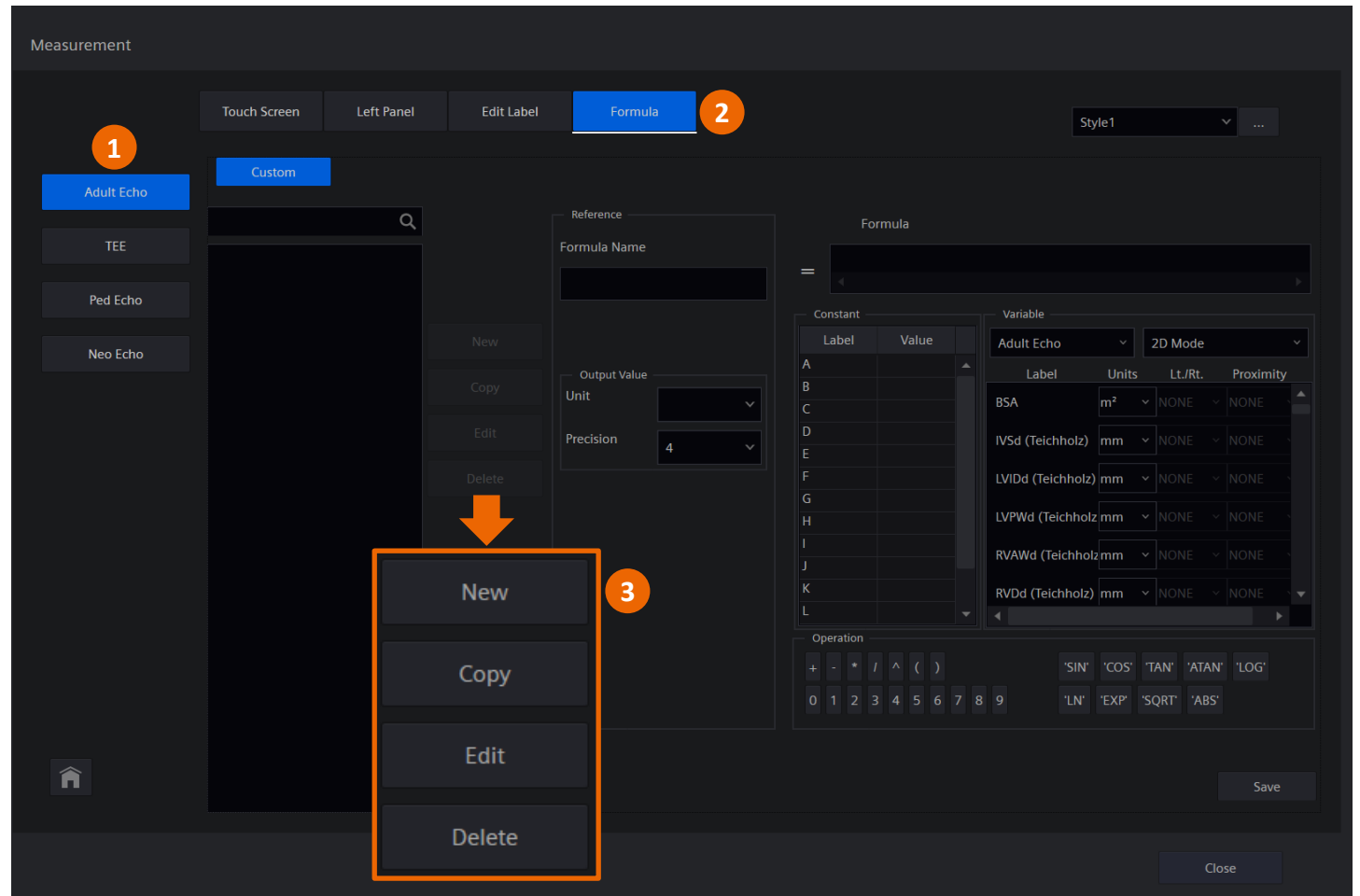


# Creating a custom formula using BSA

## Echocardiography

To begin creating a new custom formula:

1. Select exam type
2. Select Formula
3. Select New



# Creating a custom formula using BSA

## Echocardiography

1. Define **Formula Name**
2. Select **Unit** and **Precision** of measure
3. Choose exam type
4. Select mode of measure
5. Listed available factory labels
6. Available operations for creating custom equation
7. Custom Formula displays as created

Select **Save** to complete formula

The screenshot shows the 'Formula' editor interface in the Siemens Healthineers BSA software. The interface is dark-themed with various panels and buttons. Numbered callouts (1-7) highlight specific steps in the process:

- 1**: Points to the 'Formula Name' input field in the 'Reference' panel.
- 2**: Points to the 'Unit' and 'Precision' dropdown menus in the 'Output Value' section.
- 3**: Points to the 'Adult Echo' dropdown menu in the 'Variable' panel.
- 4**: Points to the '2D Mode' dropdown menu in the 'Variable' panel.
- 5**: Points to the list of available factory labels (e.g., LV 2ch EDV, LV 2ch ESV, EDV, ESV, LVLd apical, LVLd sxMV) in the 'Variable' panel.
- 6**: Points to the 'Operation' panel containing mathematical operators (+, -, \*, /, ^, (, ), etc.) and trigonometric functions (SIN, COS, TAN, etc.).
- 7**: Points to the 'Formula' input field where the custom equation is entered.

Other visible elements include a 'Save' button at the bottom right, a 'Close' button at the bottom right, and a 'Style 1' dropdown at the top right. The left sidebar shows exam type buttons: 'Adult Echo', 'TEE', 'Ped Echo', and 'Neo Echo'.

# Custom formula using BSA example

## Echocardiography

Measurement

Touch Screen Left Panel Edit Label Formula Style1

Adult Echo TEE Ped Echo Neo Echo

Custom

EDVI(BP)

Reference

Formula Name

EDVI(BP)

Output Value

Unit mL/m<sup>2</sup>

Precision 2

New Copy Edit Delete

Formula

$$((\text{'LV 4ch EDV (Simpson BP)' + 'LV 2ch EDV (Simpson BP)'}) / 2) / \text{'BSA'}$$

Constant

Label	Value
A	
B	
C	
D	
E	
F	
G	
H	
I	
J	
K	
L	

Variable

Label	Units	Lt./Rt.	Proximity
LV 4ch EDV (Simp)	cm <sup>3</sup>	NONE	NONE
LV 2ch EDV (Simp)	cm <sup>3</sup>	NONE	NONE
BSA	m <sup>2</sup>	NONE	NONE
IVSd (Teichholz)	mm	NONE	NONE
LVIDd (Teichholz)	mm	NONE	NONE
LVPWd (Teichholz)	mm	NONE	NONE

Operation

+ - \* / ^ ( ) 'SIN' 'COS' 'TAN' 'ATAN' 'LOG' 'LN' 'EXP' 'SQRT' 'ABS'

Save

“Invalid formula format”  
notification appears when  
a custom formula is not  
created correctly

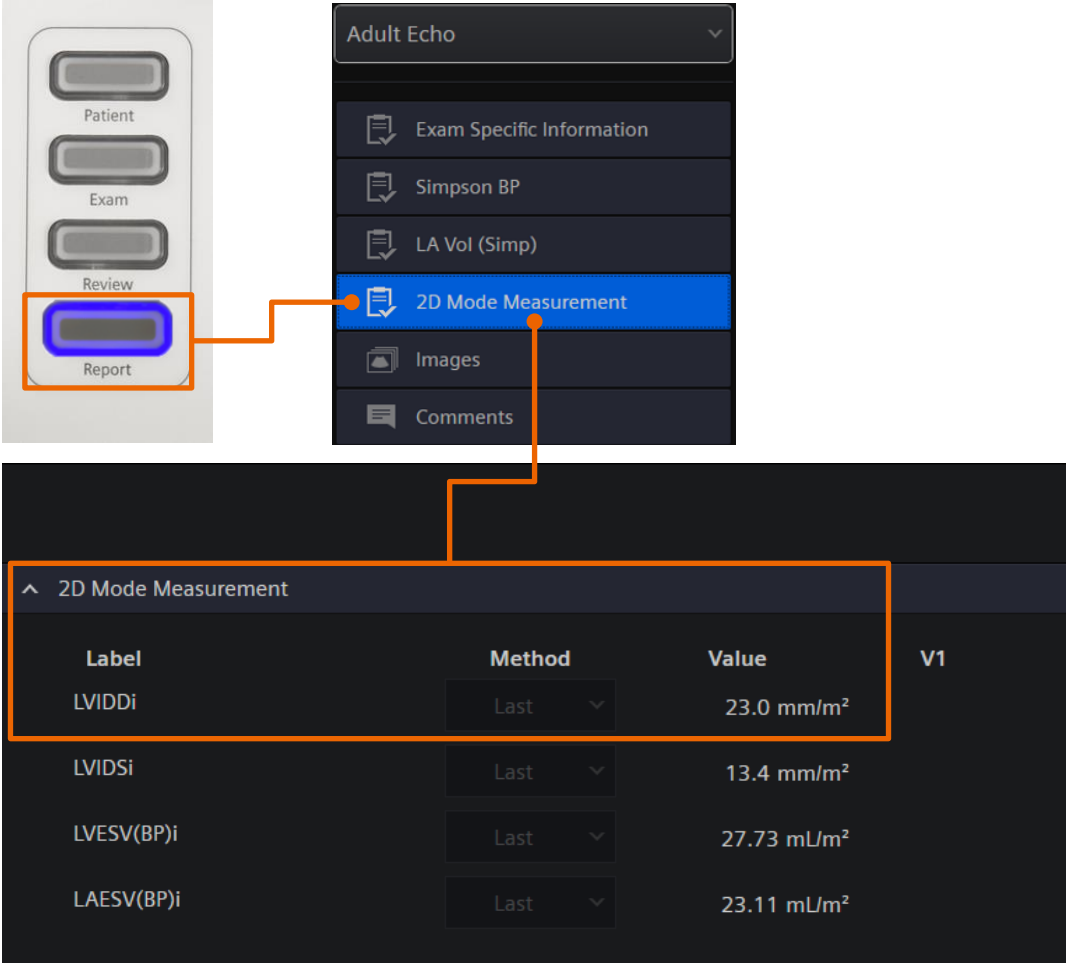
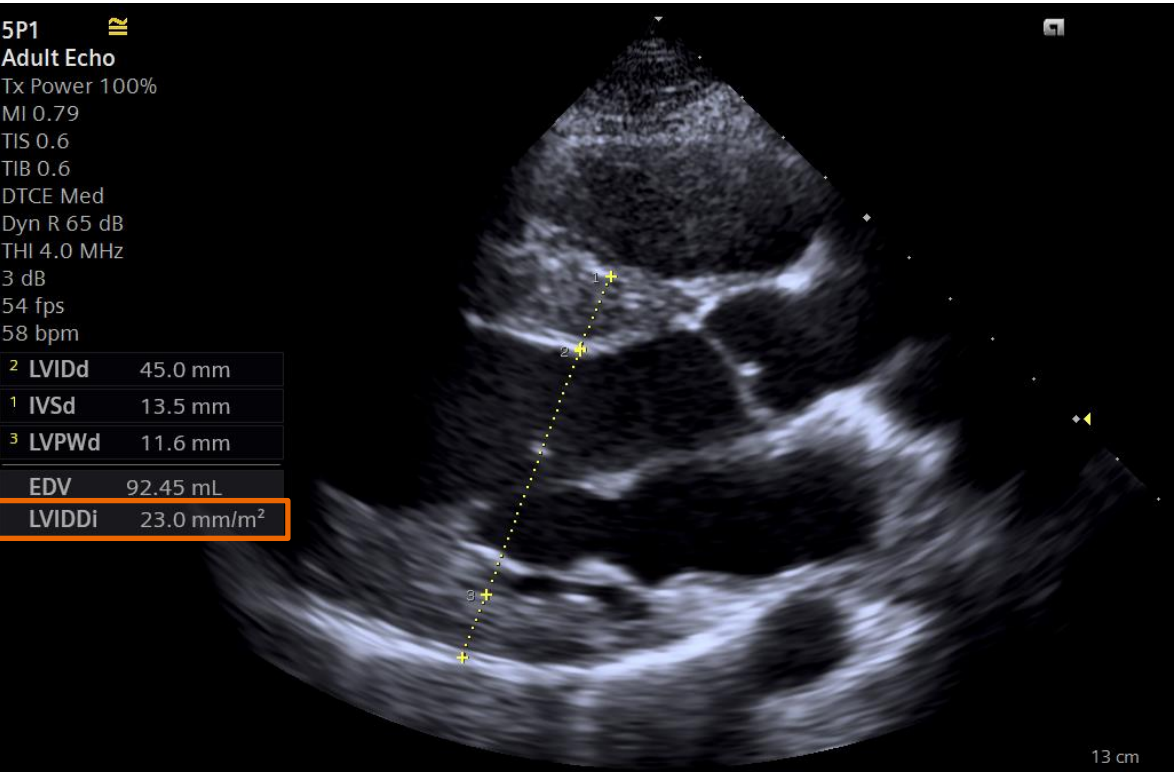
Confirmation

Invalid formula format. Please check formula equation.

OK

# Display of custom formula results using BSA example

## Echocardiography



# Common custom formula equations with BSA

## Echocardiography

- **LVIDDi** Left Ventricular Internal Diameter diastole indexed  
'LVIDd (Teichholz)' / 'BSA'
- **LVIDSi** Left Ventricular Internal Diameter systole indexed  
'LVIDs (Teichholz)' / 'BSA'
- **LVEDV(BP)i** Left Ventricular End Diastolic Volume biplane indexed  
 $((\text{'LV 4ch EDV (Simpson BP)'} + \text{'LV 2ch EDV (Simpson BP)'}) / 2) / \text{'BSA'}$
- **LVESV(BP)i** Left ventricular End Systolic Volume biplane indexed  
 $((\text{'LV 4ch ESV (Simpson BP)'} + \text{'LV 2ch ESV (Simpson BP)'}) / 2) / \text{'BSA'}$
- **LAESV(BP)i** Left Atrial End Systolic Volume biplane indexed  
 $((\text{'LA 4ch ESV (LA Vol Simp)'} + \text{'LA 2ch ESV (LA Vol Simp)'}) / 2) / \text{'BSA'}$
- **RAESVi** Right Atrial End Systolic Volume indexed  
'4ch (RA Vol Simp)' / 'BSA'

# Custom formula using BSA - key reminders

## Echocardiography

- Height and weight must be entered during patient registration for custom formulas using BSA to work
- Must use at least one or more predefined measurement labels in addition to BSA
- Custom label cannot be used in custom formula (only factory loaded labels are available for use in custom formulas)
- Custom formula names are unique for each exam type under the Echocardiography measurement configuration menu

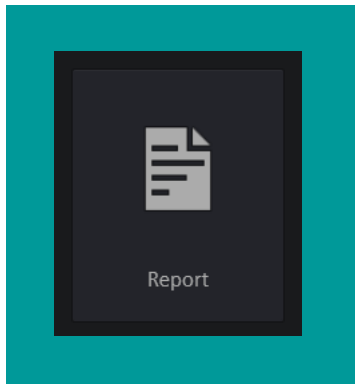


# Objectives

- Explain the measurement configuration access and homepage layout
- Review the General icon
- Analyze the Exam specific icon layout
- Discuss Configuration
  - Touch Screen
  - Left Panel
  - Edit Label
  - Tables and Formula
- **Examine patient report**



## Measurement Report 4 Category Tabs



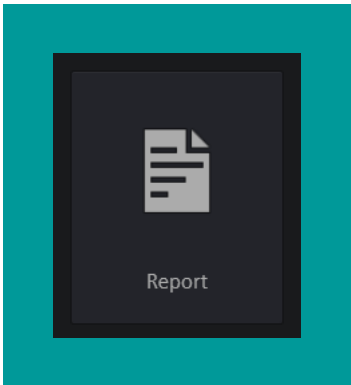
Report  
Section

Anatomy  
Assessment

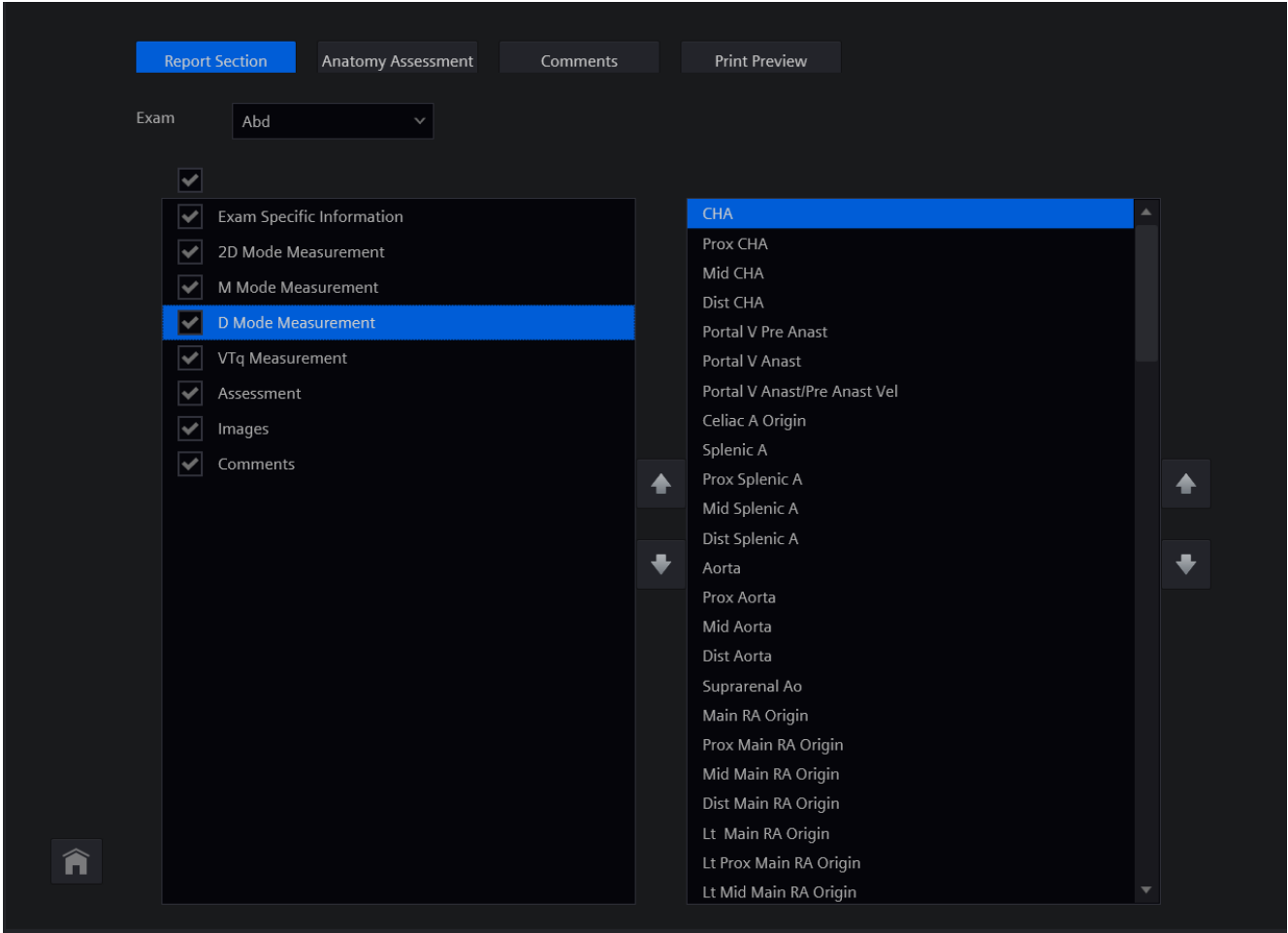
Comments

Print  
Preview

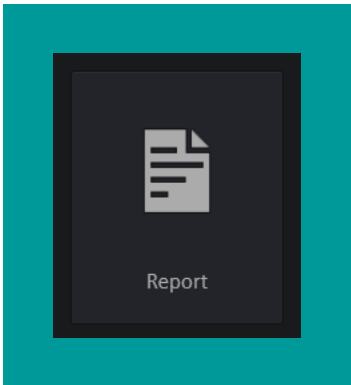
# Patient report



Report  
Section



# Patient report



Anatomy  
Assessment

Report Section   **Anatomy Assessment**   Comments   Print Preview

Exam   OB   ▾

Add

Delete

Assessment Order

☒

☒ Fetal Heart Motion

☒ 4Ch heart

☒ RVOT

☒ LVOT

☒ Ao Arch

☒ Ductal Arch

☒ Fetal Number

☒ Fetal Position

☒ Placenta Location

☒ Previa

☒ Placenta Grade

☒ AF Volume

☒ Placental Cord

☒ Facial Profile

☒ Lips/Palate

☒ Lateral Ventricles

↑

↓

Add

Delete

Selection Order

☒ Motion Seen

☒ No Motion Seen

☒ Not Applicable

☐ Single

☐ 1 of 2

☐ 2 of 2

☐ Multiple

☐ Vertex

☐ Breech

☐ Transverse

☐ Oblique

☐ Variable

☐ Yes

☐ No

☐ Adequate

☐ Increased

↑

↓

Home

# Patient report

## Anatomy Assessment

Report Section **Anatomy Assessment** Comments Print Preview

Exam OB

NEW Add Delete

Assessment Order

- ☒ Fetal Heart Motion
- ☒ 4Ch heart
- ☒ RVOT
- ☒ LVOT
- ☒ Ao Arch
- ☒ Ductal Arch
- ☒ Fetal Number
- ☒ Fetal Position
- ☒ Placenta Location
- ☒ Previa
- ☒ Placenta Grade
- ☒ AF Volume
- ☒ Placental Cord
- ☒ Facial Profile
- ☒ Lips/Palate
- ☒ Lateral Ventricles

Selection Order

Home

Report Section **Anatomy Assessment** Comments Print Preview

Exam OB

Add Delete

Assessment Order

- ☒ \*NEW
- ☒ Fetal Heart Motion
- ☒ 4Ch heart
- ☒ RVOT
- ☒ LVOT
- ☒ Ao Arch
- ☒ Ductal Arch
- ☒ Fetal Number
- ☒ Fetal Position
- ☒ Placenta Location
- ☒ Previa
- ☒ Placenta Grade
- ☒ AF Volume
- ☒ Placental Cord
- ☒ Facial Profile
- ☒ Lips/Palate

Selection Order

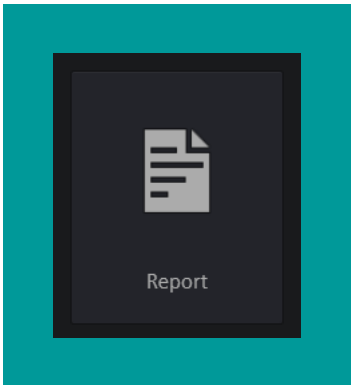
- ☒ Motion Seen
- ☐ No Motion Seen
- ☐ Not Applicable
- ☒ Single
- ☐ 1 of 2
- ☐ 2 of 2
- ☒ Multiple
- ☐ Vertex
- ☐ Breech
- ☐ Transverse
- ☒ Oblique
- ☐ Variable
- ☐ Yes
- ☐ No
- ☐ Adequate
- ☐ Increased

Home

## Comments



## Comments



Print  
Preview

Report Section

Anatomy Assessment

Comments

Print Preview

Site Information

Logo

Load

Remove

Text 1

Font

Text 2

Font

Text 3

Font

Section Display

☐ Hide institution

☐ Hide patient information

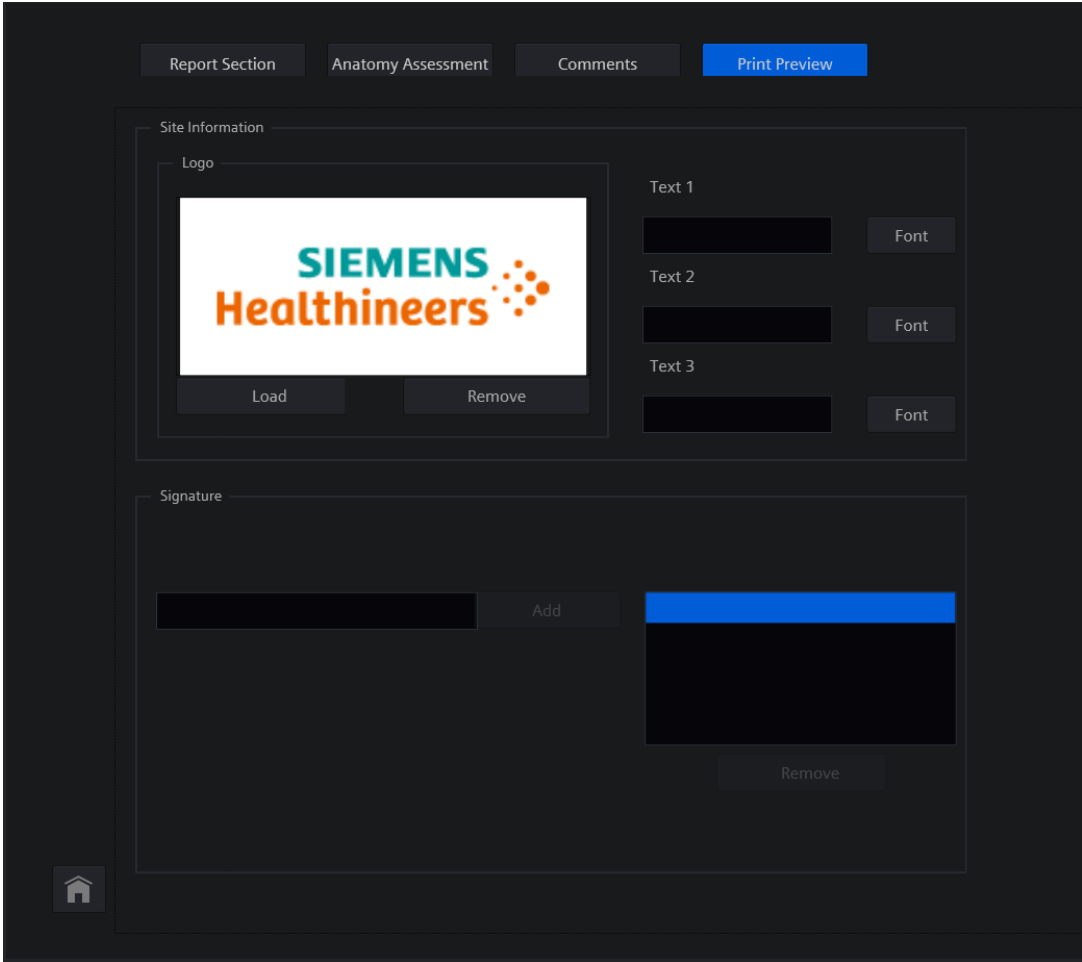
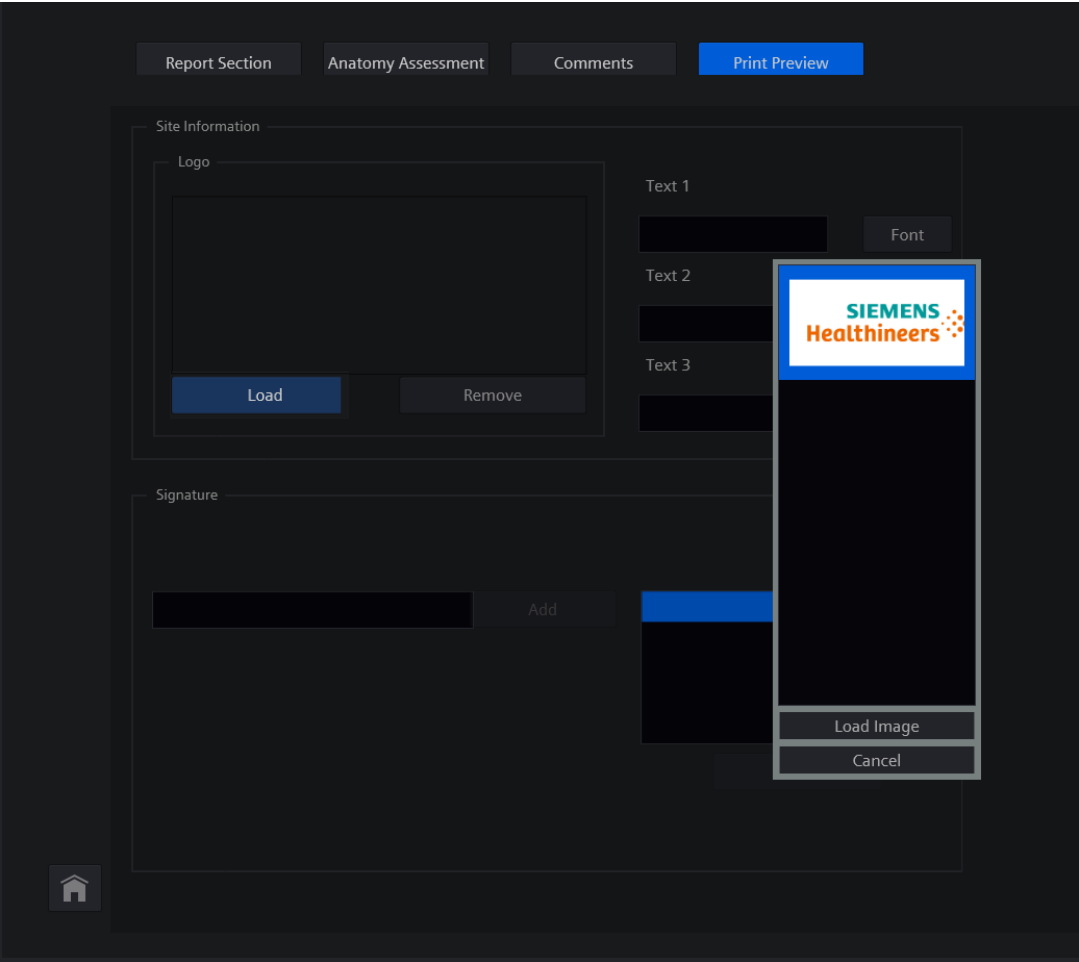
Signature

Add

Remove

# Patient report

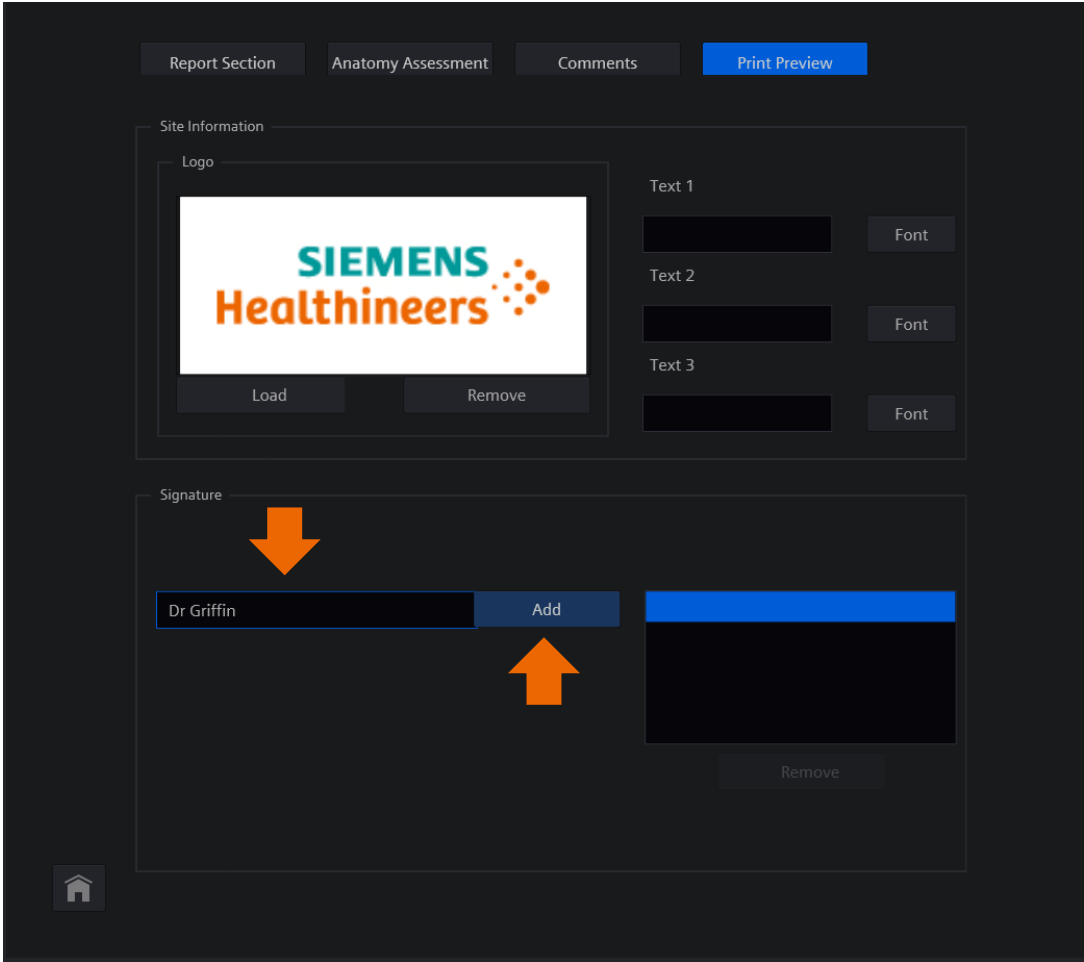
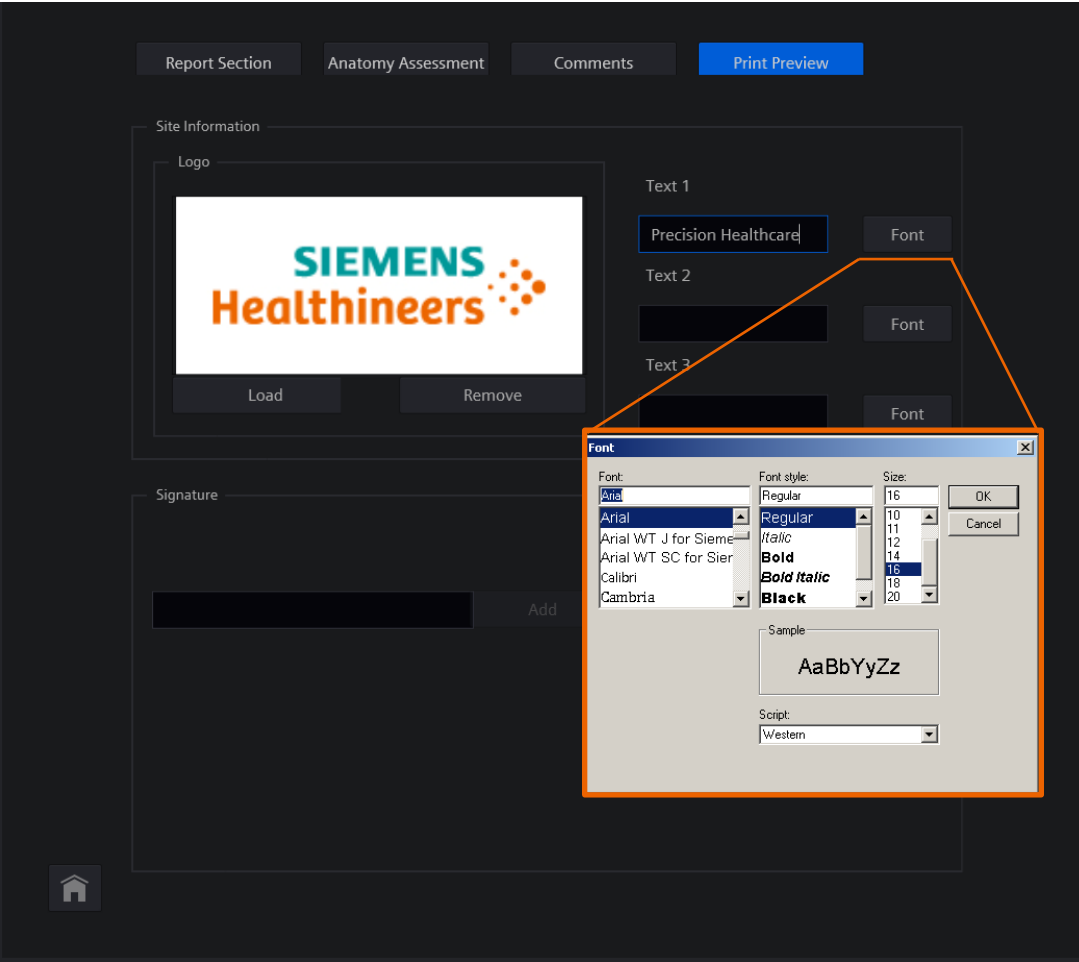
## Logo customization





# Patient report

## Personalized text and signature



# Patient report

## PDF with logo / text example

Institution information

Patient information


Export options

ACUSON 07/12/2017

HOSPITAL NAME 07/22/1987  
PATIENT NAME 05\_15\_2020\_09\_00\_33

Abd Report

Institution

  
Precision Healthcare

Institution Name HOSPITAL NAME  
Performing MD DR NAME  
Referring MD DR NAME 2  
Sonographer SONOGRAPHER NAME

Patient Information

Patient Name	PATIENT NAME		
Patient ID	05_15_2020_09_00_33		
Age	32Years	Gender	Male
Height	6ft 0in	Weight	190lb 0oz
BP (mmHg)		Study Date	05/15/2020
		BSA	2.08m²

Report Export PDF Print Report Store Report

Customized logo and statement text

Scroll to access full report

# Patient report

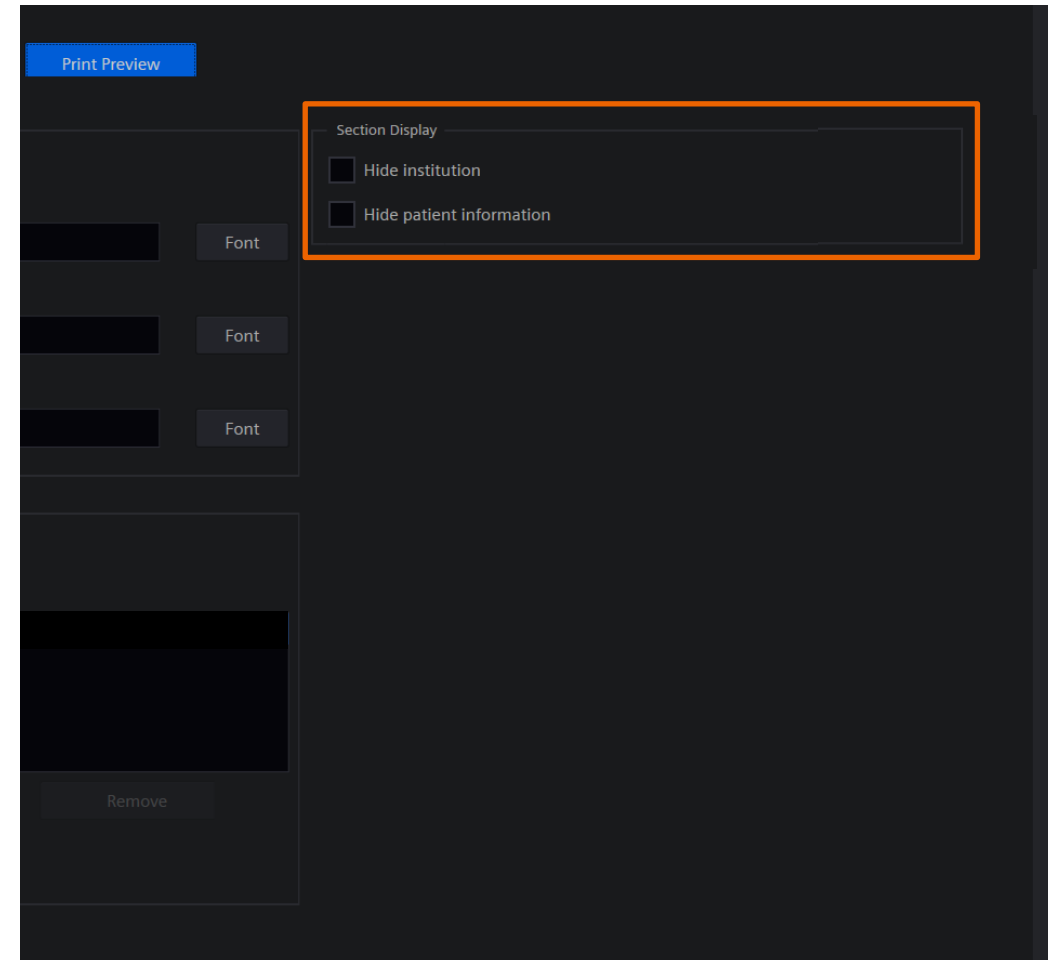
## Print Preview > Section Display

Section Display contains options to control what is displayed in report

Options are:

- Hide institution
- Hide patient information

Selecting these options will shorten report length when displaying, exporting, or storing it to patient file



# Patient report > Store Report example

## “Hide”

JOHN DOE			Thyroid Report					1234567					
Institution													
Institution Name				HOSPITAL NAME									
Performing MD				DR ABC									
Referring MD													
Sonographer													
Patient Information													
Patient Name		JOHN DOE											
Patient ID		1234567											
Age		64Years		Gender		Male							
Height				Weight		BSA							
BP (mmHg)				Study Date		06/08/2020							
2D Mode Measurement													
Label		Method	Value	V1	V2	V3	V4	V5					
Rt Thyroid Lobe SAG		Last	10.1 mm	10.1									
Rt Thyroid Lobe AP		Last	7.4 mm	7.4									
Rt Thyroid Lobe TRV		Last	6.7 mm	6.7									
Rt Thyroid Lobe Volume		Last	0.24 mL										
2D Mode Side by Side													
Label		Right	Left										
Thyroid Lobe SAG		10.1 mm											
Thyroid Lobe AP		7.4 mm											
Thyroid Lobe TRV		6.7 mm											
Thyroid Lobe Volume		0.24 mL											
Images													

“Not Hidden”

JOHN DOE

1234567

Thyroid Report

2D Mode Measurement

Label	Method	Value	V1	V2	V3	V4	V5
Rt Thyroid Lobe SAG	Last	10.1 mm	10.1				
Rt Thyroid Lobe AP	Last	7.4 mm	7.4				
Rt Thyroid Lobe TRV	Last	6.7 mm	6.7				
Rt Thyroid Lobe Volume	Last	0.24 mL					

2D Mode Side by Side

Label	Right	Left
Thyroid Lobe SAG	10.1 mm	
Thyroid Lobe AP	7.4 mm	
Thyroid Lobe TRV	6.7 mm	
Thyroid Lobe Volume	0.24 mL	

Images

“Hidden”

# Patient report > PDF example

## “Hide”

PATIENT NAME  
05\_15\_2020\_09\_00\_33

DR NAME SONGRAPHER NAME  
32Years M

HOSPITAL NAME

05/15/2020

HOSPITAL NAME  
07/22/1987

PATIENT NAME  
05\_15\_2020\_09\_00\_33

Thyroid Report

Institution

Institution Name  
HOSPITAL NAME

Performing MD  
DR NAME

Referring MD  
DR NAME 2

Sonographer  
SONGRAPHER NAME

Patient Information

Patient Name  
PATIENT NAME

Patient ID  
05\_15\_2020\_09\_00\_33

Age  
32Years

Gender  
Male

Height  
6ft 0in

Weight  
190lb 0oz

BSA  
2.08m²

BP (mmHg)

Study Date  
05/15/2020

2D Mode Measurement

Label

Method

Value

V1

V2

V3

V4

V5

Isthmus AP

Last

2.13 mm

2.13

Rt Thyroid Lobe Volume

Last

0.63 mL

“Not Hidden”

PATIENT NAME  
05\_15\_2020\_09\_00\_33

DR NAME SONGRAPHER NAME  
32Years M

HOSPITAL NAME

05/15/2020

HOSPITAL NAME  
07/22/1987

PATIENT NAME  
05\_15\_2020\_09\_00\_33

Thyroid Report

2D Mode Measurement

Label

Method

Value

V1

V2

V3

V4

V5

Isthmus AP

Last

2.13 mm

2.13

Rt Thyroid Lobe Volume

Last

0.63 mL

Rt Thyroid Lobe TRV

Last

8.51 mm

8.51

Rt Thyroid Lobe SAG

Last

17.82 mm

17.82

Rt Thyroid Lobe AP

Last

8.72 mm

8.72

2D Mode Side by Side

Label

Right

Left

Thyroid Lobe Volume

0.63 mL

Thyroid Lobe TRV

8.51 mm

Thyroid Lobe SAG

17.82 mm

Thyroid Lobe AP

8.72 mm

Images

“Hidden”

# Summary

- Explain the measurement configuration access and homepage layout
- Review the General icon
- Analyze the Exam specific icon layout
- Discuss Configuration
  - Touch Screen
  - Left Panel
  - Edit Label
  - Tables and Formula
- Examine patient report



Thank you for your enthusiasm!

# Questions?