



Abdominal Ultrasound
Chapter 1

GETTING TO KNOW THE PROCESS



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Getting to know the process

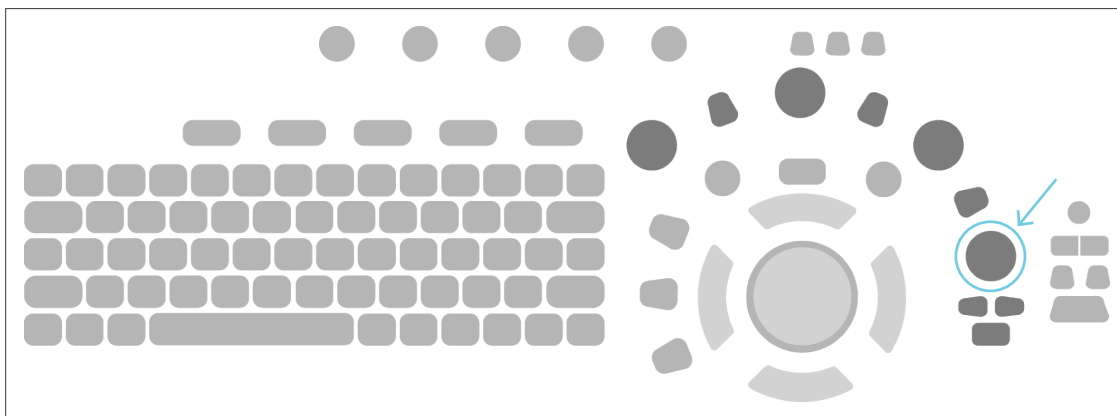
NAVIGATING THE ULTRASOUND MACHINE

Many novices are overwhelmed by the number of buttons on an ultrasound machine, but for standard abdominal ultrasound there are only a few buttons

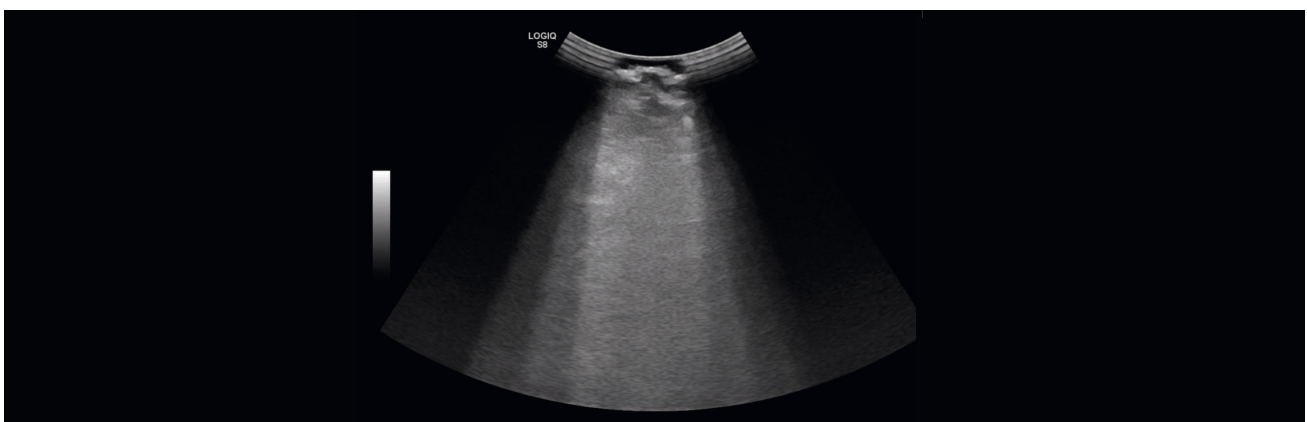
that are really important and most of these do exactly what their name says!

Gain

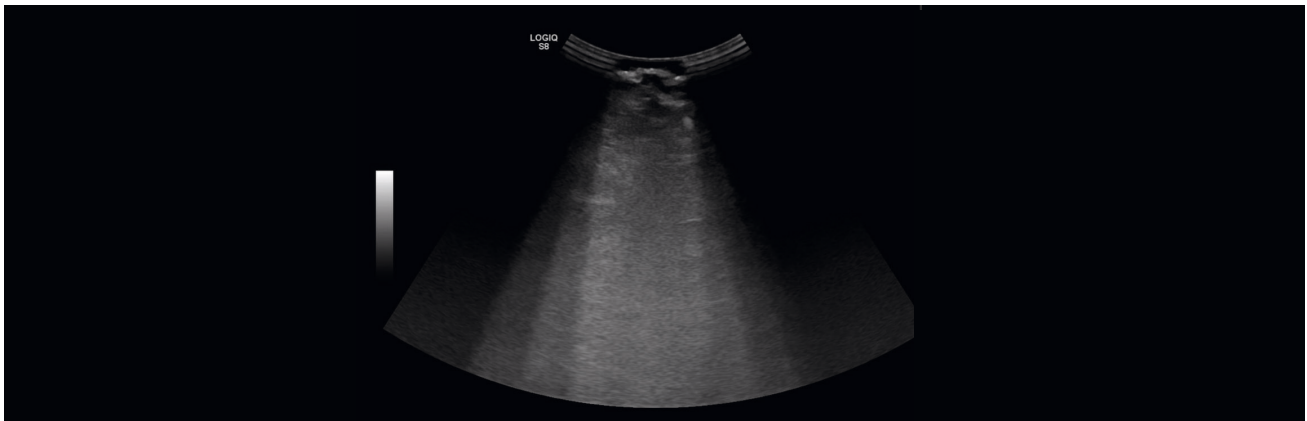
You use the gain button to adjust the brightness (or darkness) of an image



If you turn it clockwise (or increase the gain) the image gets brighter.

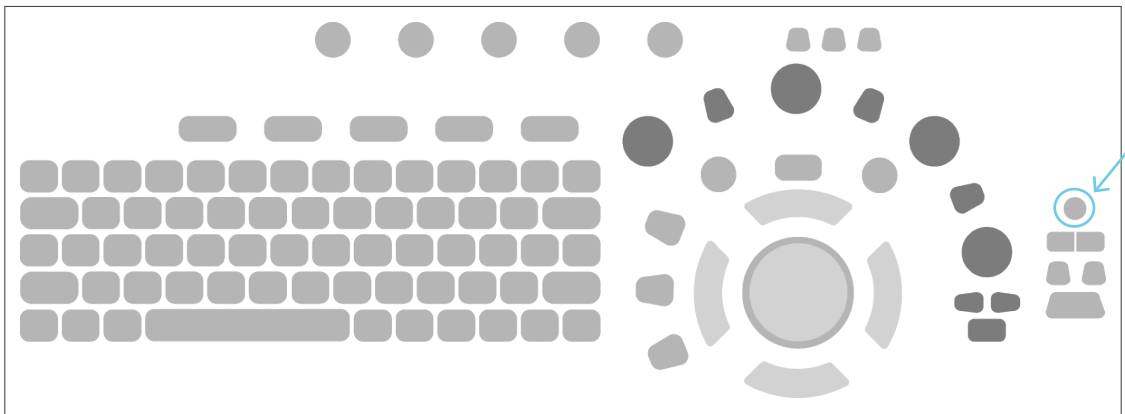


If you turn it counterclockwise (or decrease the gain) the image gets darker.

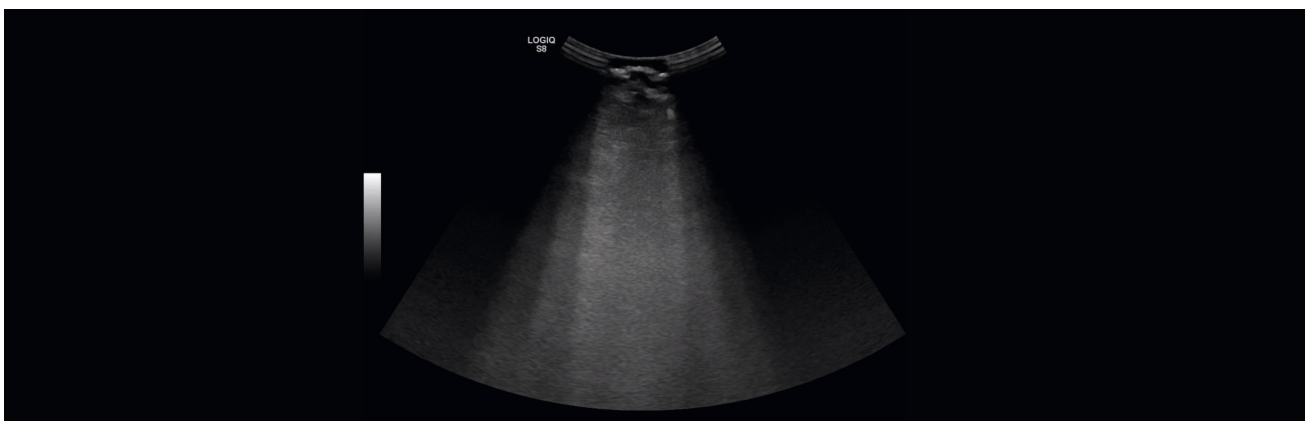


Depth

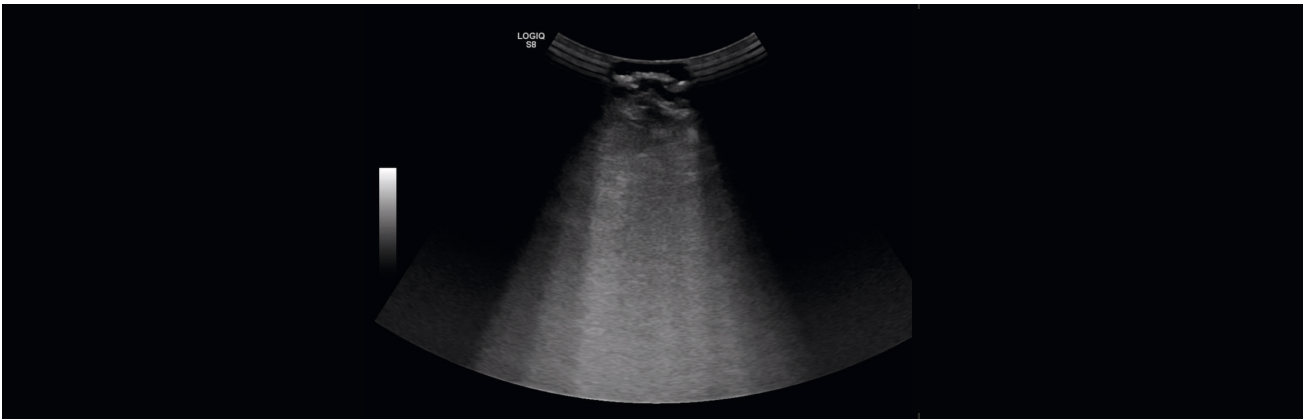
You can use this button to adjust how deep you are imaging.



If you want to see deeper structures you increase the depth.

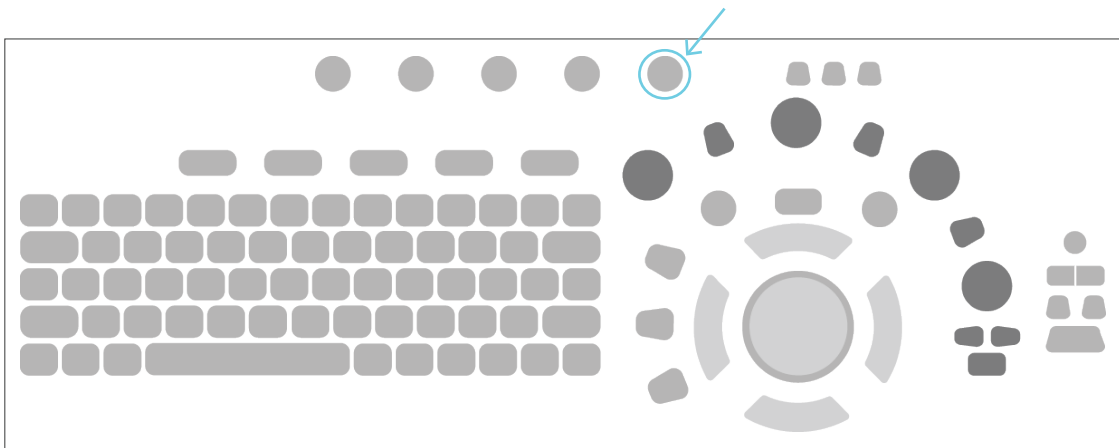


If you want to see more superficial structures you toggle the button in the other direction (decrease the depth).



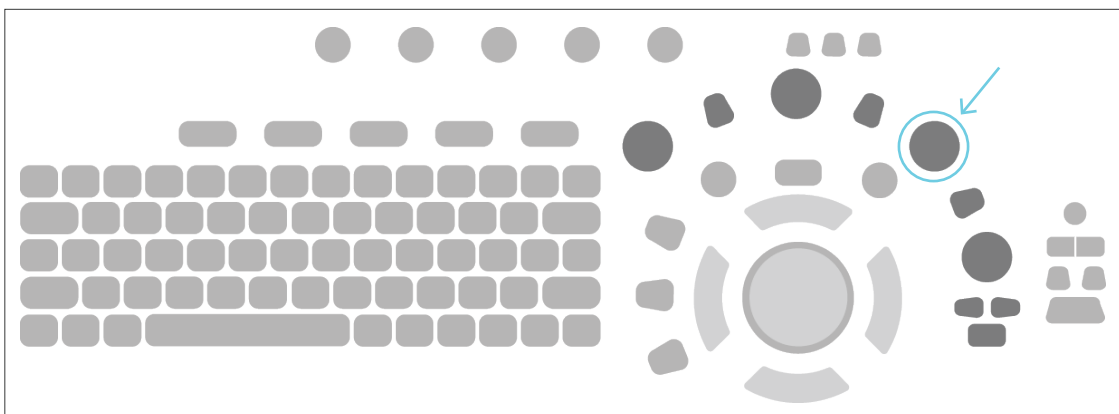
Focus

You can use the focus button to see the structures more clearly.

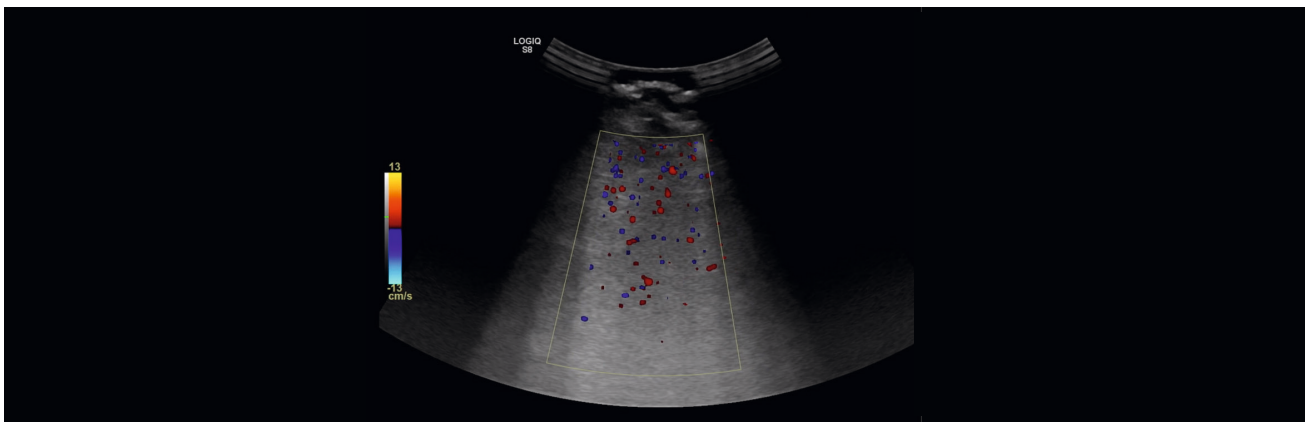


Color Doppler

This button is most important when you want to assess vascular structures.



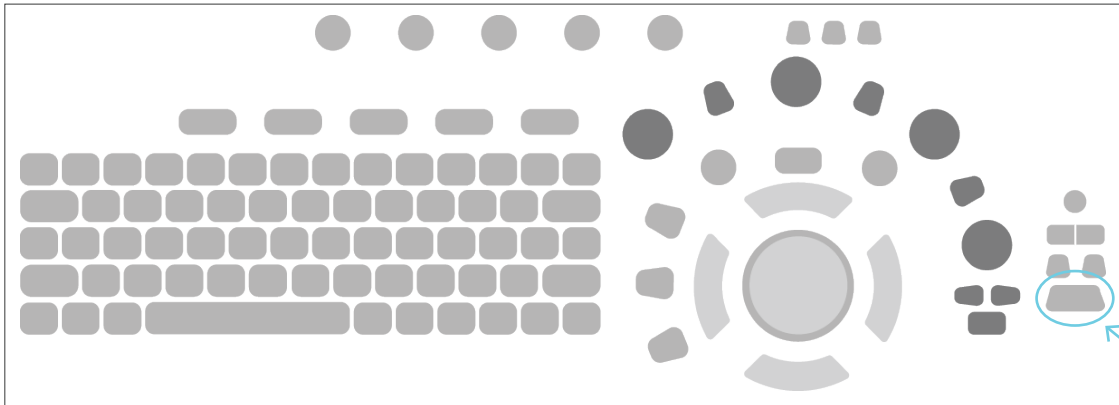
When you push this button, you will see a window appear with color on it. This will tell you if there is a vessel (an artery or vein) in this field of view.



Freeze

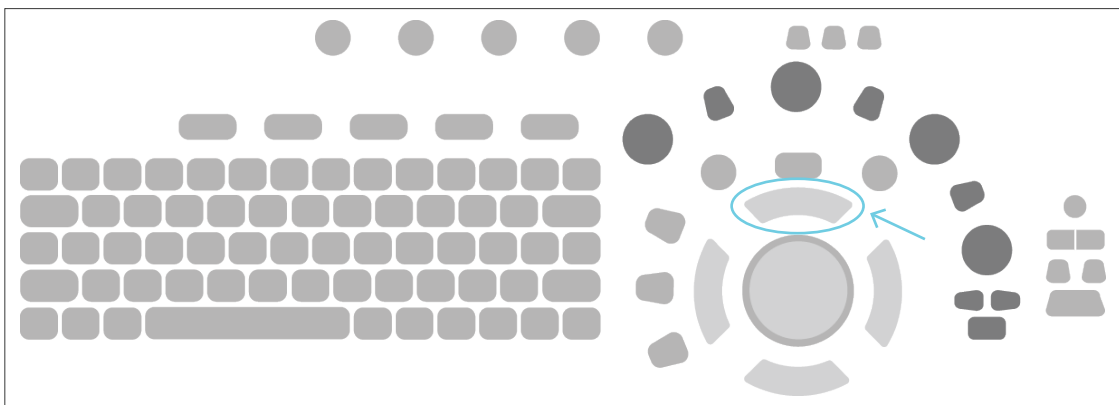
This button is important because you are imaging a living system in real time—it is constantly moving. You can use this button to do exactly what it says—freeze your image so you can perform further analysis on the structures you are interested in.

If you press the freeze button a second time (while in the freeze mode), any measurements you have on the screen will disappear and the picture becomes live again.

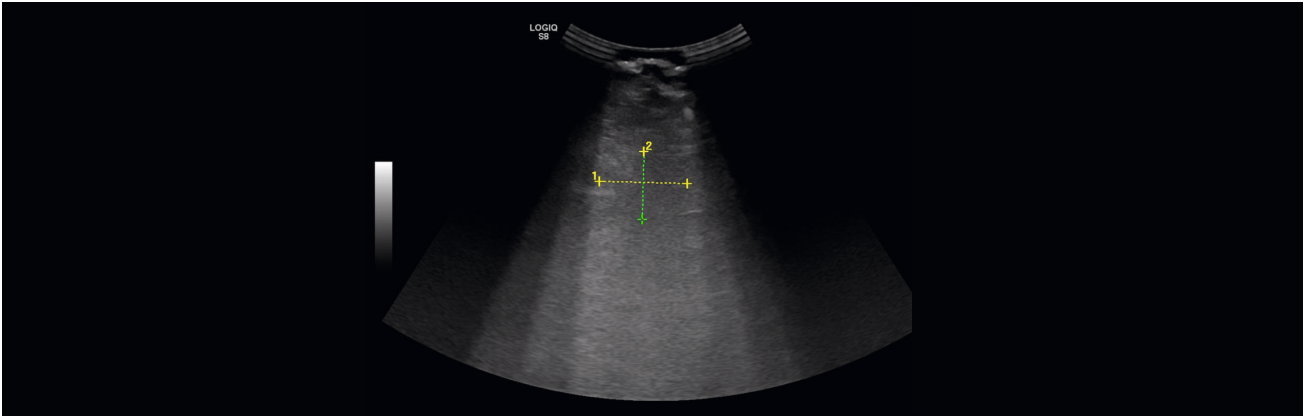


Measure

While in the freeze mode, you can use the measure button to find a structure and measure it.



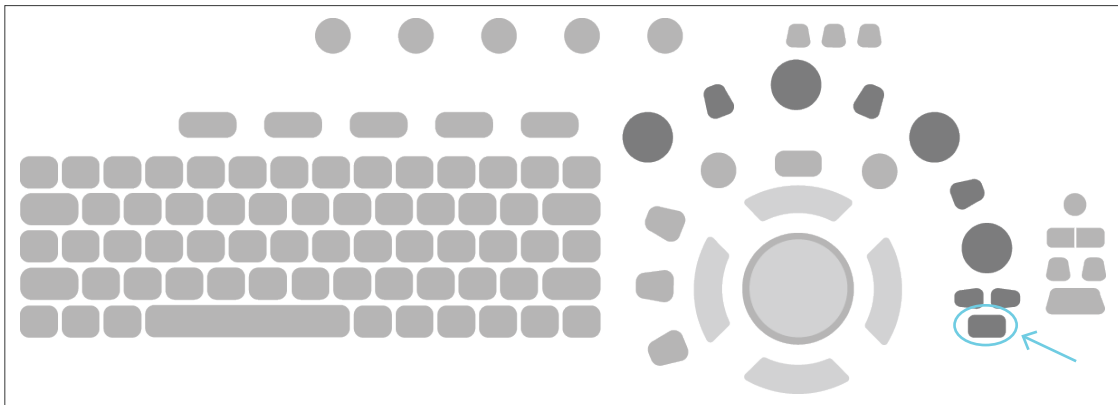
A small cursor will appear on your screen and you can drag the cursor across a structure to measure it.



P1 (documentation and print button)

If you ever want to save a still image, you can press P1, the documentation and print button. If your ultrasound machine is hooked up to a picture archiving and communication system (PACS), the

image will automatically be saved digitally; if you only have a printer, you will print a hard copy of the image.



Not all ultrasound machines are alike, so you'll have to familiarize yourself with where these buttons are on your machine.

Getting to know the process

MAKING YOUR PATIENT COMFORTABLE

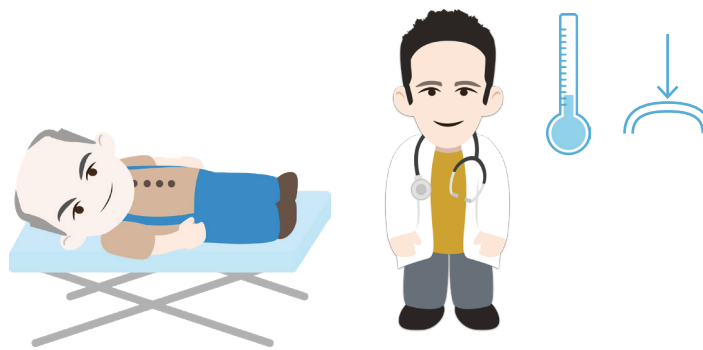
As with anything new, not knowing what will happen can be scary. Before performing any ultrasound procedure be sure to explain clearly to the patient

how the ultrasound exam works. At minimum, start by telling them the following points.

Let them know how it will feel

I will apply ultrasound gel, which can be very cold.

I will apply pressure with the probe on your stomach, which can be uncomfortable.



Let them know what will happen

I will ask you to inhale deeply and hold your breath (breath-hold). When you cannot hold it any longer you are free to exhale.

I may ask you to shift position to help me get a

better picture of what I am trying to see.

The examination normally takes five minutes. Sometimes it can take longer depending on what I see.



Let them know when they can expect results

At the end of the examination I will explain all the results to you.

OR

After the exam the radiologist will look at the images and your doctor will follow up with your results.

(Depending upon what is standard in your hospital or practice)



Ask them if they have any questions

Making your patient feel comfortable should always be the first step in an ultrasound exam.

