

Ultrasound OSCE "1-Pager Review"

What probe do I use?

Linear Probe: superficial structures
 Ocular
 ENT
 Vascular
 Lung

VS.

Phase Array: deep structures
 Cardiac
 Abdominal

How do I use the machine?

(**Your USIG instructor may have changed all the settings for you throughout the year, but you need to know how to set up your machine properly yourself for the exam.)

Here's what the relevant **buttons** do:

1. Make sure you are using the correct probe and have it selected on the screen by pressing the **transducer** button. Check that the number on the screen matches the number on the tip of the probe.
2. Next hit **exam** and select the correct one from the menu.
3. How to adjust your image:
 - a) **Depth**: Increasing depth allows you to see deeper structures and vice versa. Notice the centimeter gauge at the side of the screen.
 - b) **Gain**: Increasing gain makes the screen "brighter." Decreasing gain makes the screen "darker." The best explanation I have is that gain is something akin to changing the contrast of your image. (You probably won't need to change this feature, at least not much, to get the image you want.)
 - c) **Freeze**: Freezes image and you can then use the track pad to "scroll back in time" for a limited amount of time.
 - d) **Color Flow**: Shows direction of flow within a vessel. Remember BART--blue away, red towards. (You likely won't need this feature because you can ask the patient to valsalva for the jugular vein if their vein does not collapse under your pressure.)

Your indicator will always point up or to the right for *this* OSCE because you are not doing a full cardiac exam.

The Spark Notes for each exam:

Identify all structures on the checklist:

MS1 Ultrasound OSCE	Structure(s) Identified Correctly?	Structure(s) Identified Correctly?	
		Yes	No
"Please Identify:"			
Ocular	Anterior Chamber Posterior Chamber Lens Optic Nerve		
ENT	Thyroid Trachea		
Pulmonary	Pleural line Rib Shadows		
Vascular	Internal Jugular Vein Common Carotid Artery		
Cardiac	Parasternal Long Axis View Left Ventricle Right Ventricle Interventricular Septum Mitral Valve Aortic Valve		
Abdomen	Right Hemidiaphragm Liver RIGHT Kidney Spleen LEFT Kidney Bladder		

Ocular:

- Tons of goop! Squirt it right on their eye.
- Indicator to the right, probe horizontal rather than vertical.
- Typically the best views are right on top of the upper eyelid.

ENT/Vascular:

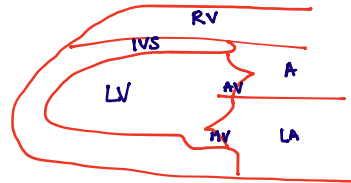
- Jugular should collapse under pressure, carotid will not. Also can ask patient to valsalva and watch the jugular vein swell.

Pulmonary:

- Place probe higher on chest if person is rather muscular (or female) and you should get a good image.
- Place probe vertically with indicator pointing towards head.
- Identify both pleural sliding ("ants on a log") and rib shadow (all that black space under the rib because ultrasound can't see through bone).

Cardiac Parasternal Long Axis View:

- Place probe on sternum at the nipple line (for males) and just slide off the sternum and you're there. It's the 3-5th ICS if you want to count ribs.
- Probe is at 45 degree angle with indicator pointing towards the right shoulder.
- Placing the patient in the left lateral decubitus will bring the heart closer to the chest wall and give you a better image.
- You want to see this and id all structures:



Abdomen:

- Bend patient's knees
- Right side:
 - Identify diaphragm/liver/kidney
 - 9-10th ICS, indicator towards head
 - Start at midaxillary line and slide down or fan around until you find the kidney
- Left side:
 - Identify diaphragm/spleen/kidney
 - 7-8th ICS, indicator towards head
 - Start at posterior axillary line ("knuckles to the bed")
- Bladder:
 - Drink something (not a ton, but don't be dehydrated) before exam.
 - You're going for a spot right above the pubic bone. Don't be afraid to press down farther with the probe, you are unlikely to hurt the patient, but it could feel like you are.
 - Indicator can be towards head or to the right.