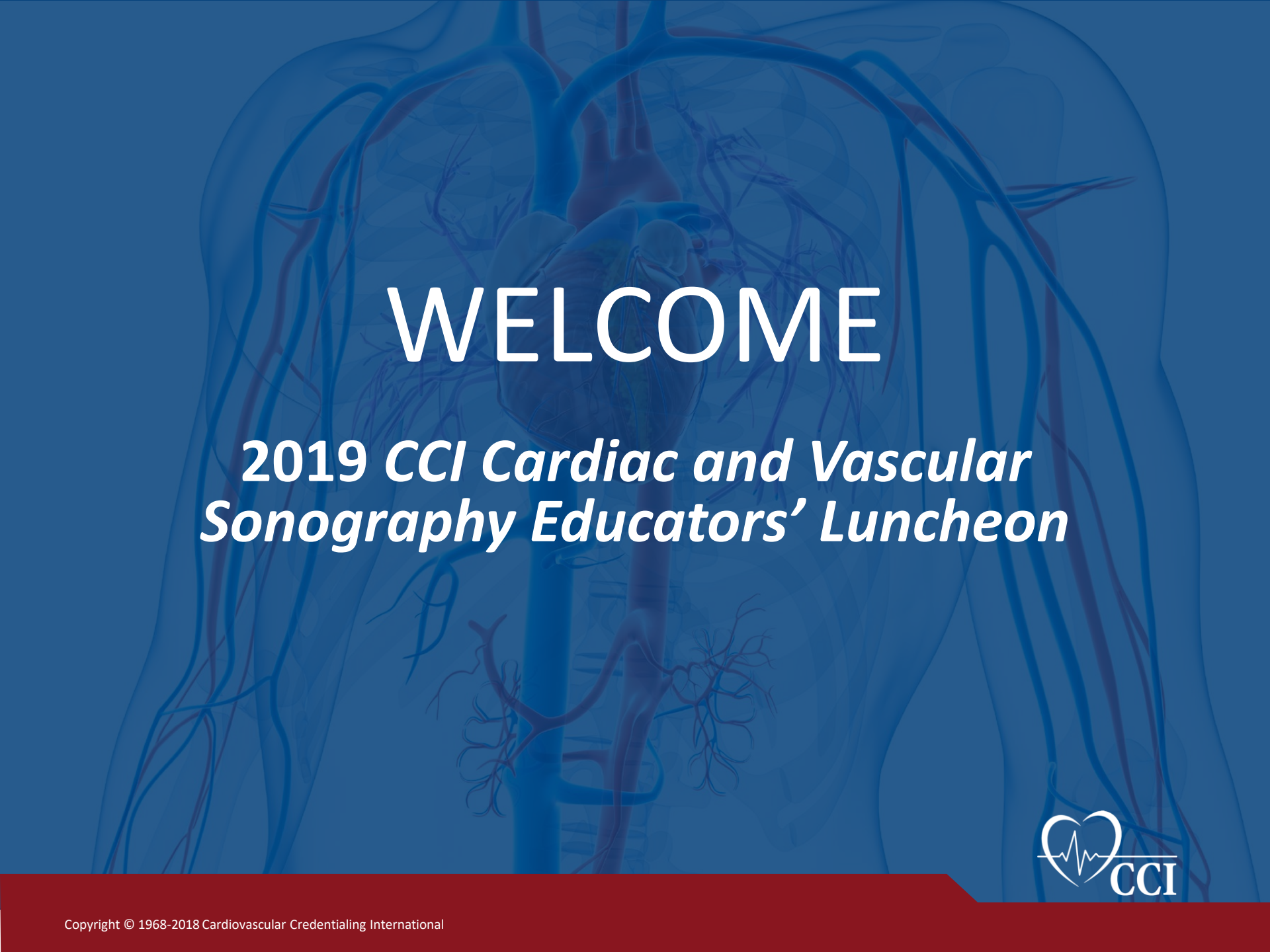




WELCOME

2019 CCI Cardiac and Vascular Sonography Educators' Luncheon





GAIL SIZE
BS, RPhS, RVS, RVT, FSVU

PRESIDENT, CCI





- CCI Aaron S. White Educational Grant
- 2020 Educators' Forum May 1-2, Scottsdale, AZ
- Exam Fee Waiver for Educators



Instructional Design for Hybrid Learning: the use of design principles and techniques to improve and enhance education

Asha Glenn, RVT
Sentara College of Health Sciences,
Program Coordinator &
Assistant Professor for Non-invasive
Vascular Studies

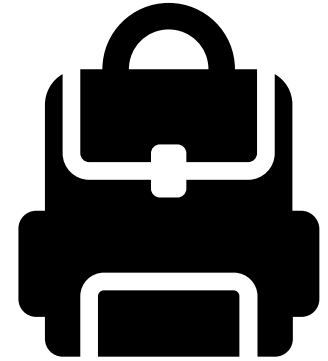
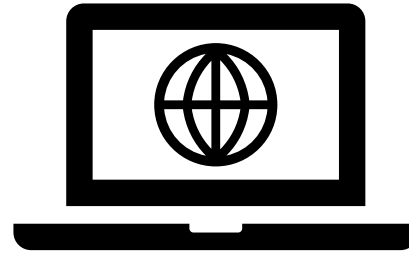
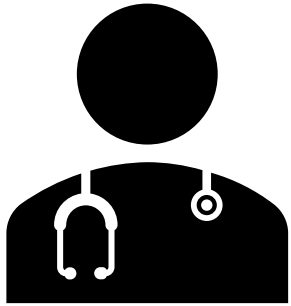




INSTRUCTIONAL DESIGN FOR HYBRID LEARNING:

The Use of Design Principles and
Techniques to Improve and Enhance
Education

ASHA GLENN MSED, BS, RVT



HOW DID I GET HERE? |

INSTRUCTIONAL DESIGN



Traditional Thinking:

“Instruction can follow many paths to facilitate learning.”



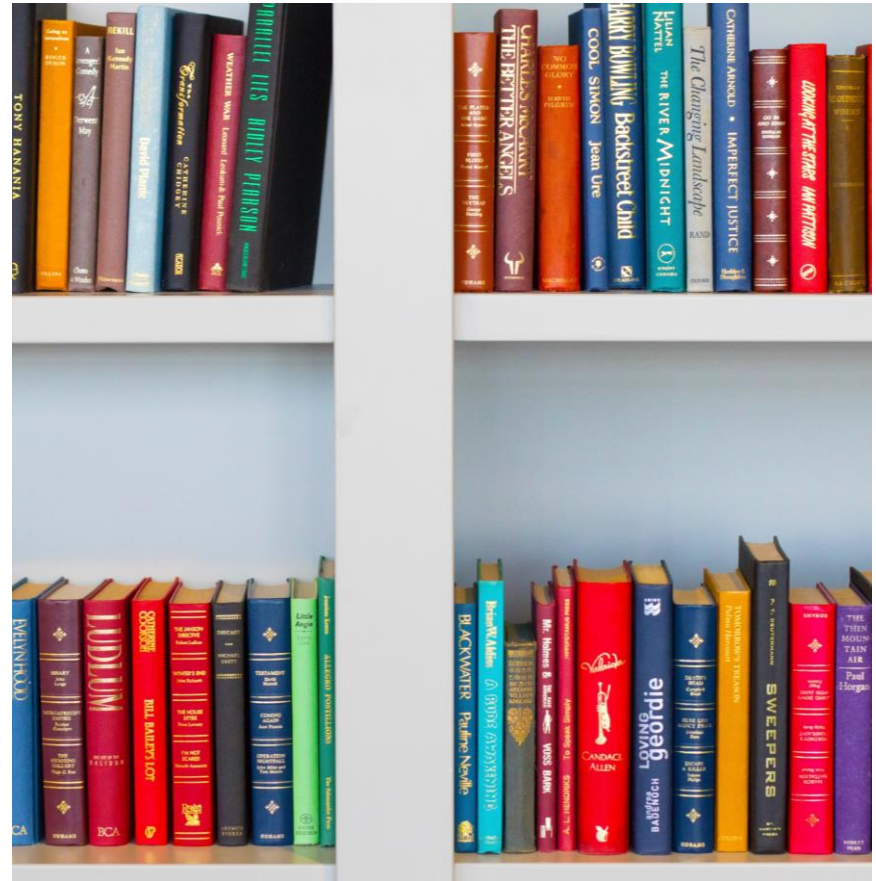
Modern Instructional Design:

“Instruction should have an *appropriate* destination and the *right* road to get you there.”

TRADITIONAL DESIGN

Focuses heavily
on content

- Complete and Accurate Information
- Presentations that are clear as possible
- Precise Assessments precise



MODERN INSTRUCTIONAL DESIGN

Concerned about
the learning
experience

Desires to make it:

- Meaningful
- Memorable
- Motivational



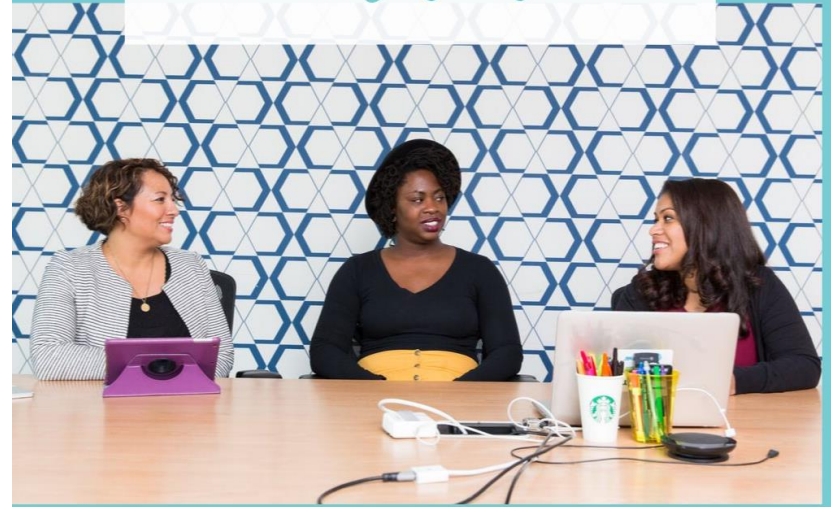
The

Instructor



The

Facilitator



The *Art* of

Instructional Design



The *Science* of

Instructional Design



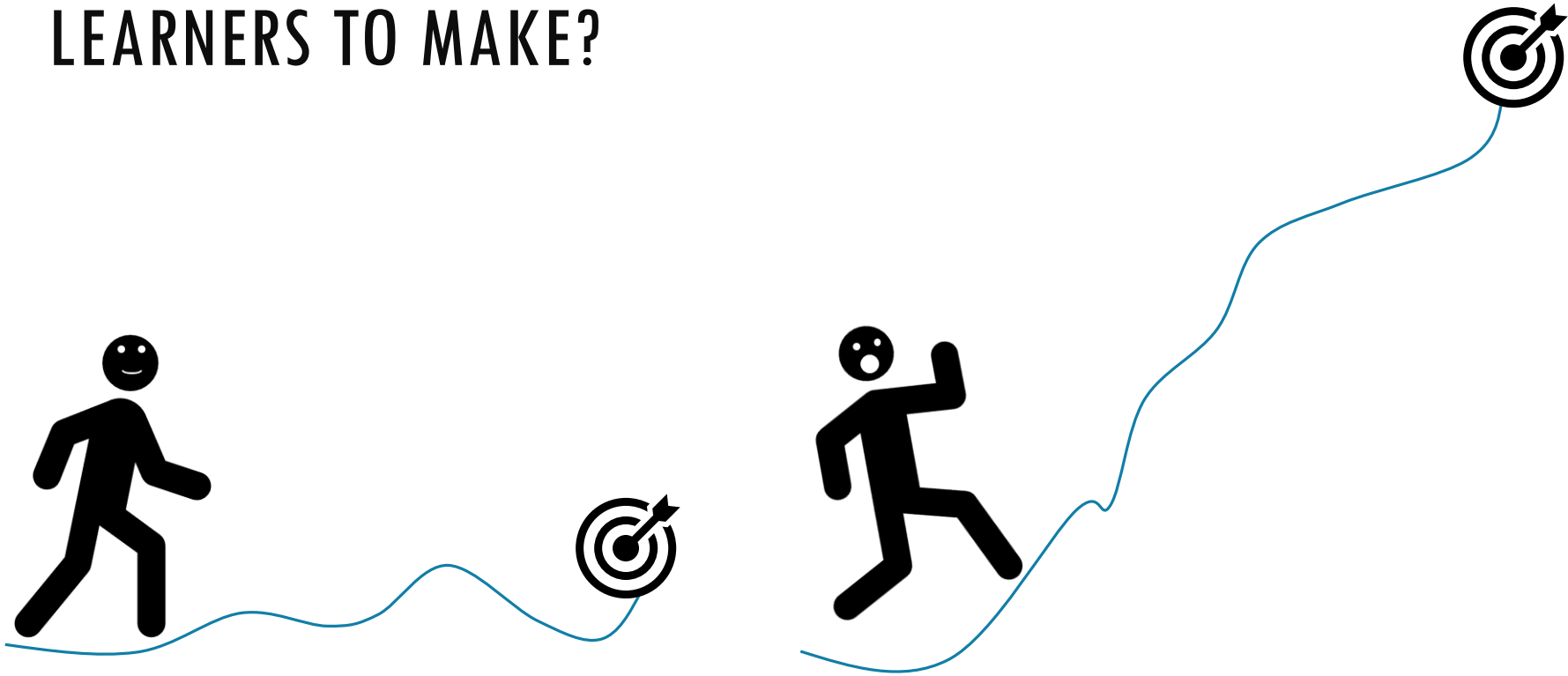


WHAT IS THE GAP?

There's a gap between your learner's current situation and where they need to be in order to be successful.

If you can pinpoint the gaps, you can design a better learning experience.

**HOW MUCH EFFORT ARE YOU ASKING YOUR
LEARNERS TO MAKE?**



A close-up photograph of an incandescent lightbulb standing upright on a bed of fine, multi-colored sand. The lightbulb is unlit, showing its internal filament and base. The sand is a mix of tan, orange, and brown grains. On the left side of the image, there is a dark, semi-transparent rectangular box containing white text.

MY CHALLENGE
BEGINS...



SKILLS LAB |

WHAT ARE YOU
TRYING TO GET
YOUR STUDENTS TO
DO?



WHAT DO I SAY TO MY LEARNERS?

“Visualize the vessel”

“Try to imaging the blood moving...”

“Picture what is happening when.....”

“I need you to try and see how flow changes when.....”



MAYBE THERE IS A BETTER WAY

Imagine
Visualize
See
Picture

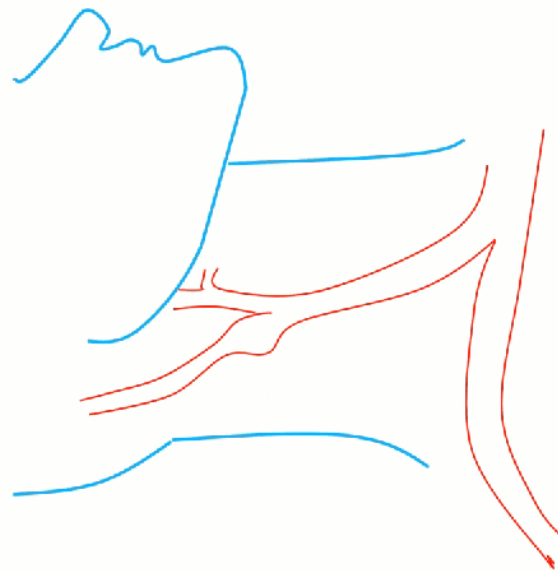
SIMPLE GRAPHICS

It's not about how fancy something is, it's about how effective it is.

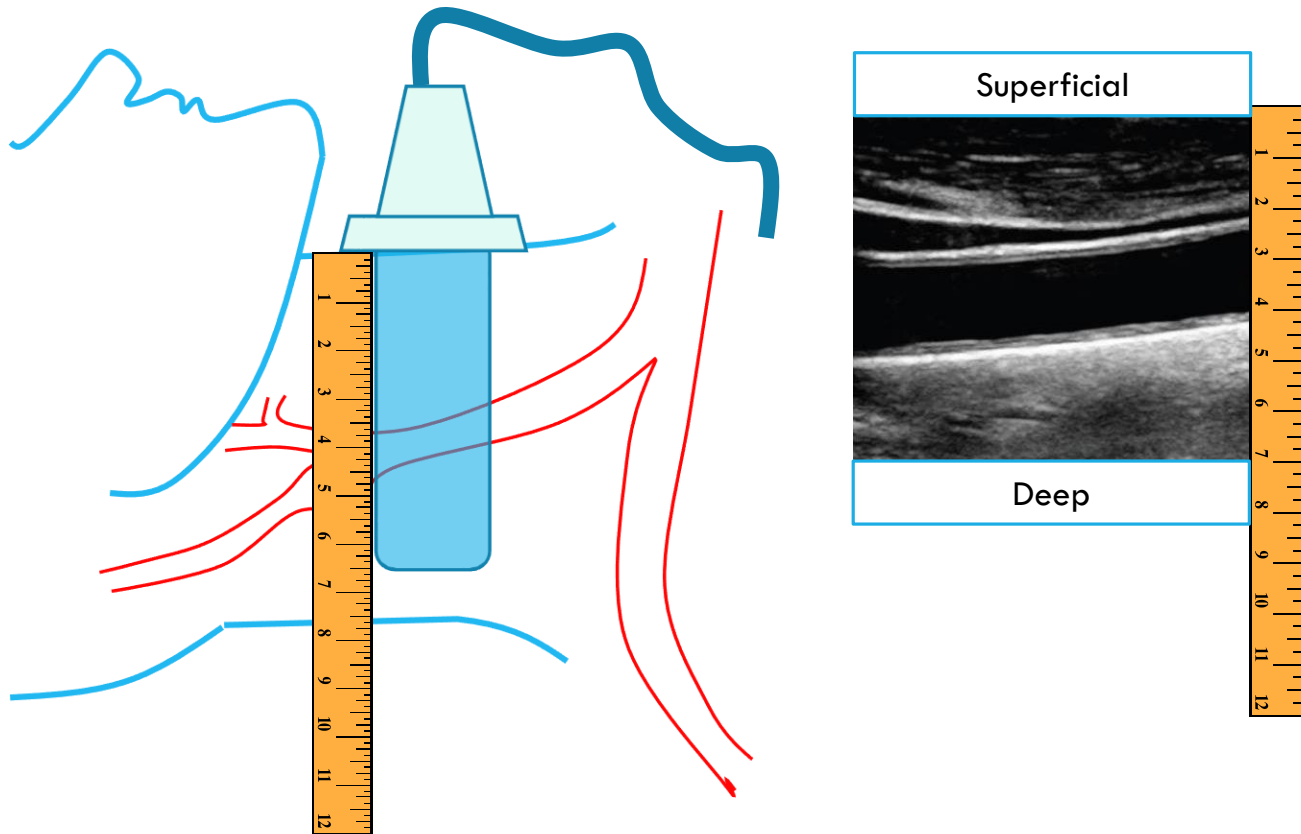


UNDERSTANDING THE BEAM

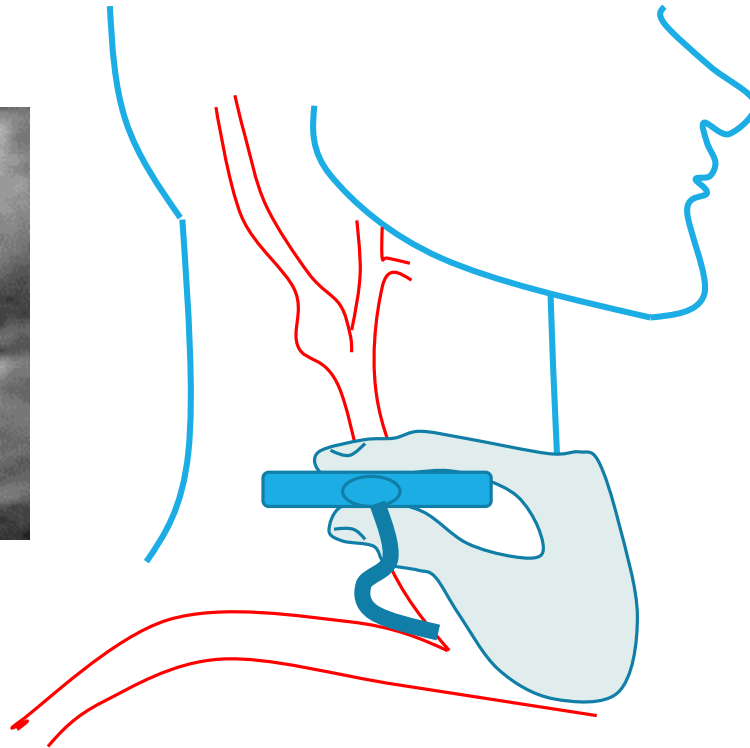
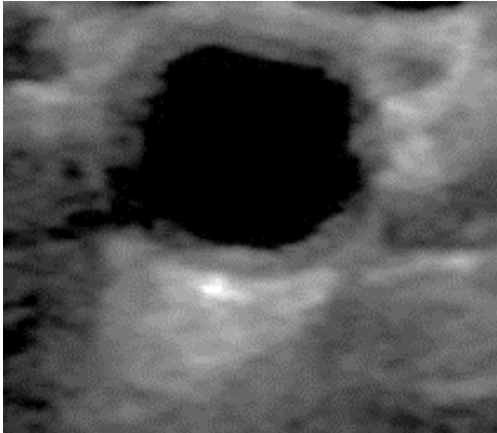
- Be purposeful
- It's about the beam, not the probe



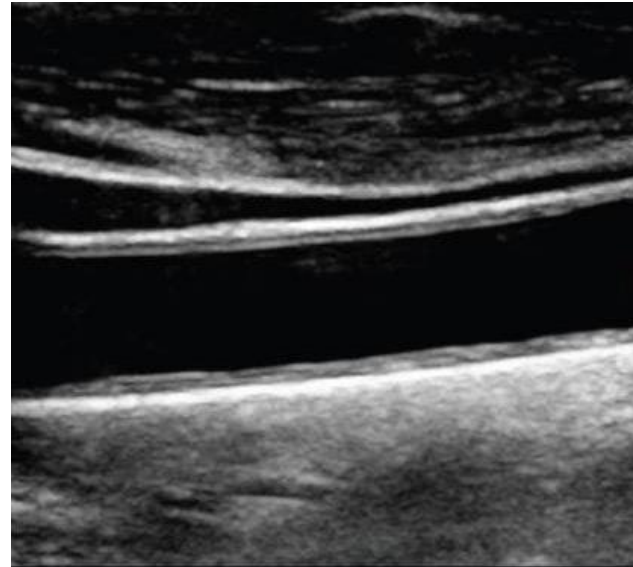
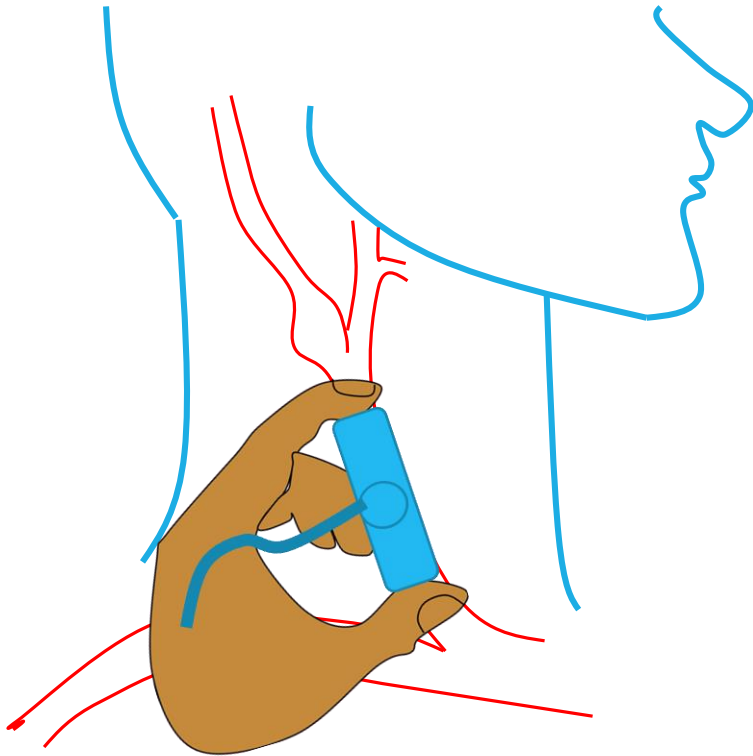
UNDERSTANDING THE BEAM



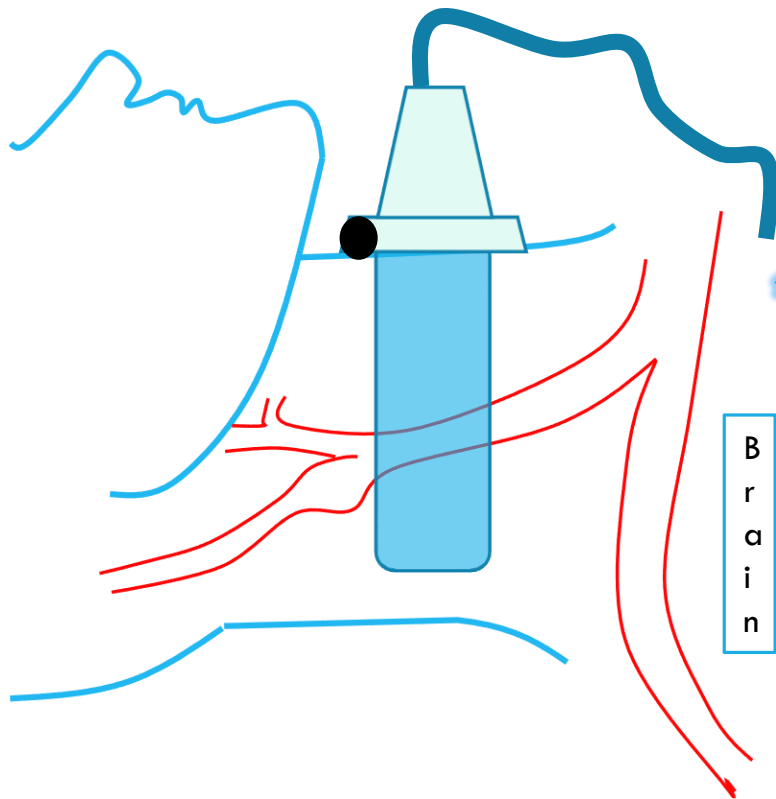
TRANSVERSE SCANNING



LONGITUDINAL SCANNING



PROBE ORIENTATION



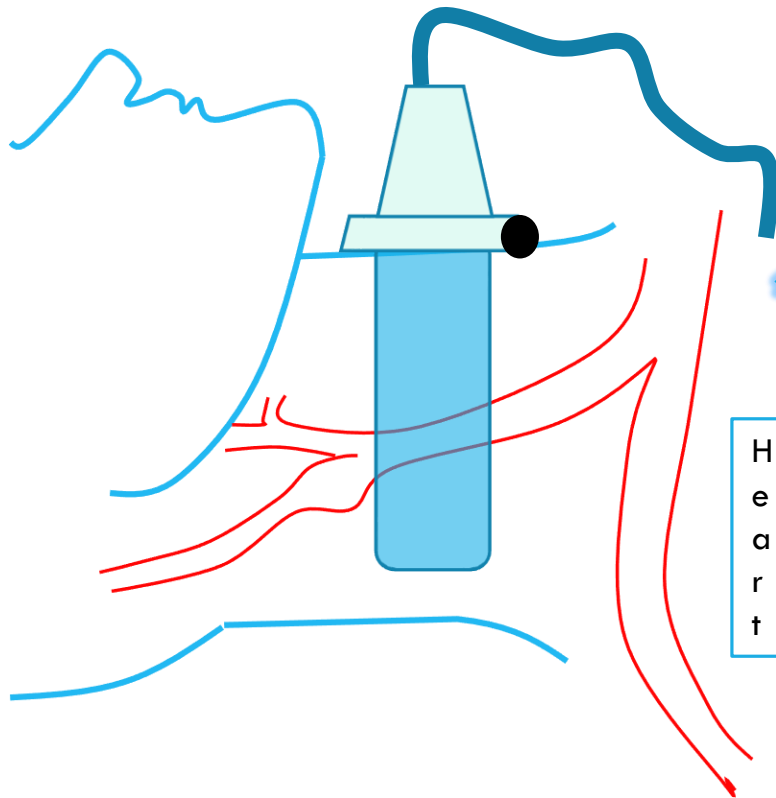
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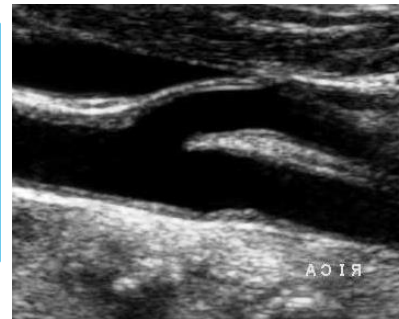
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PROBE ORIENTATION



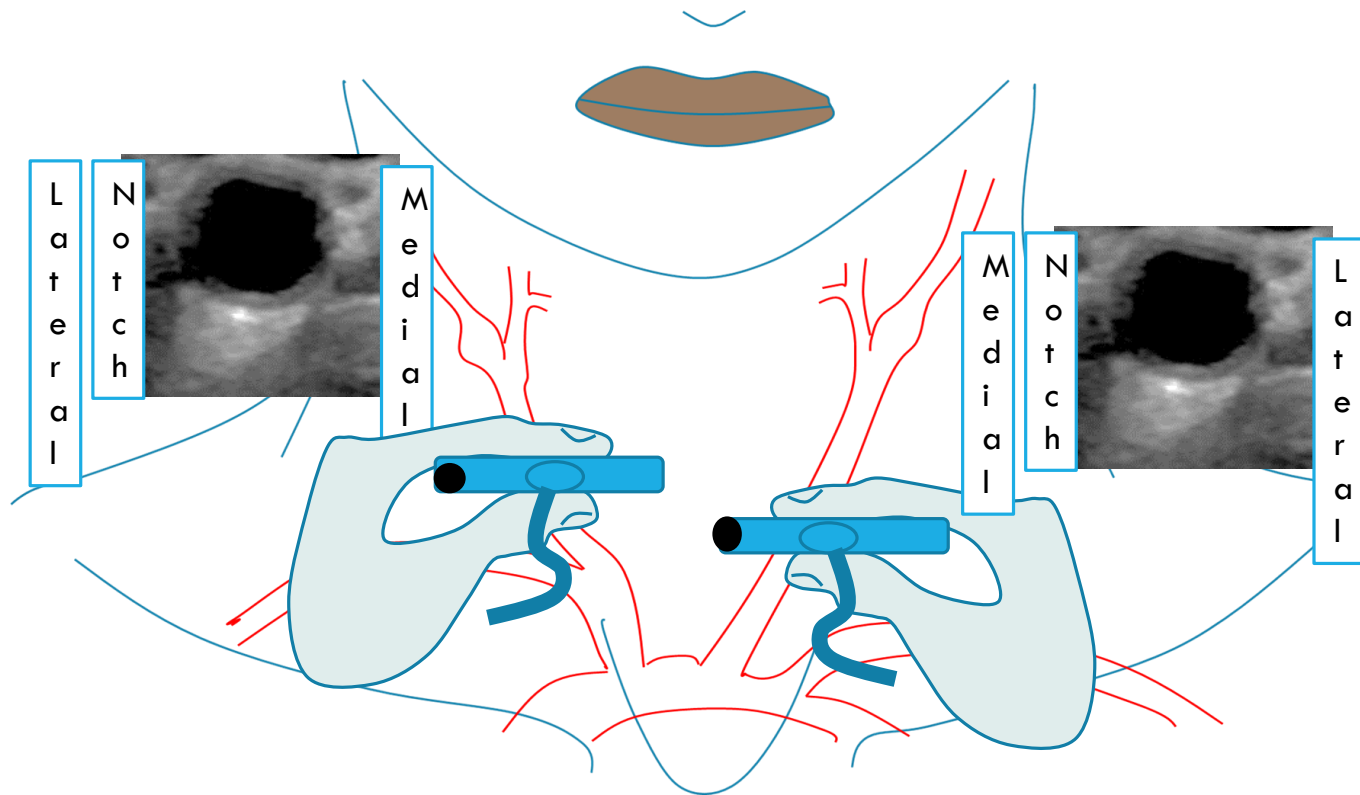
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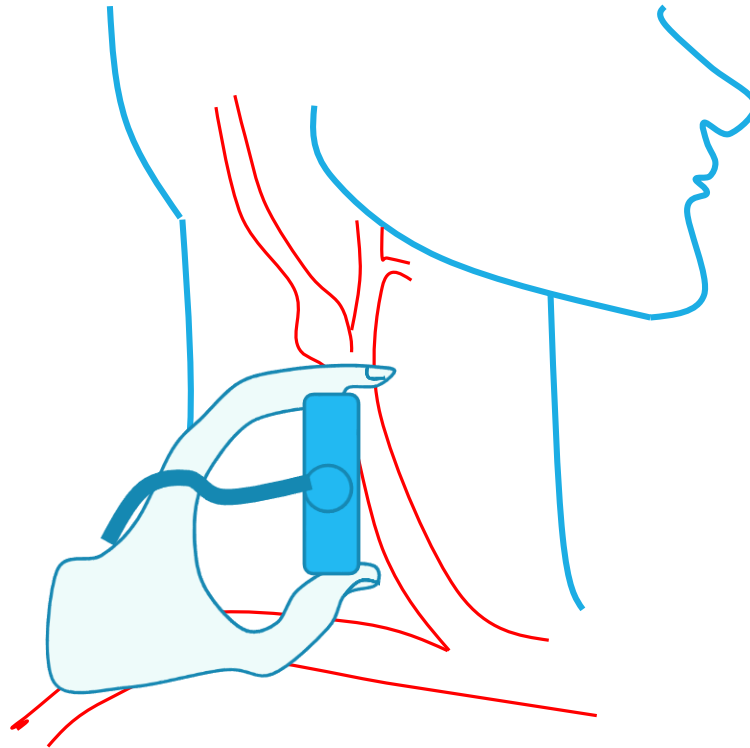
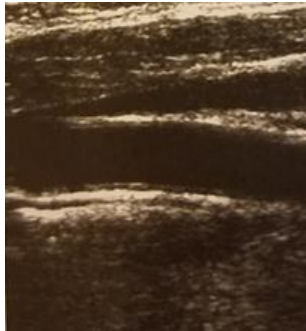


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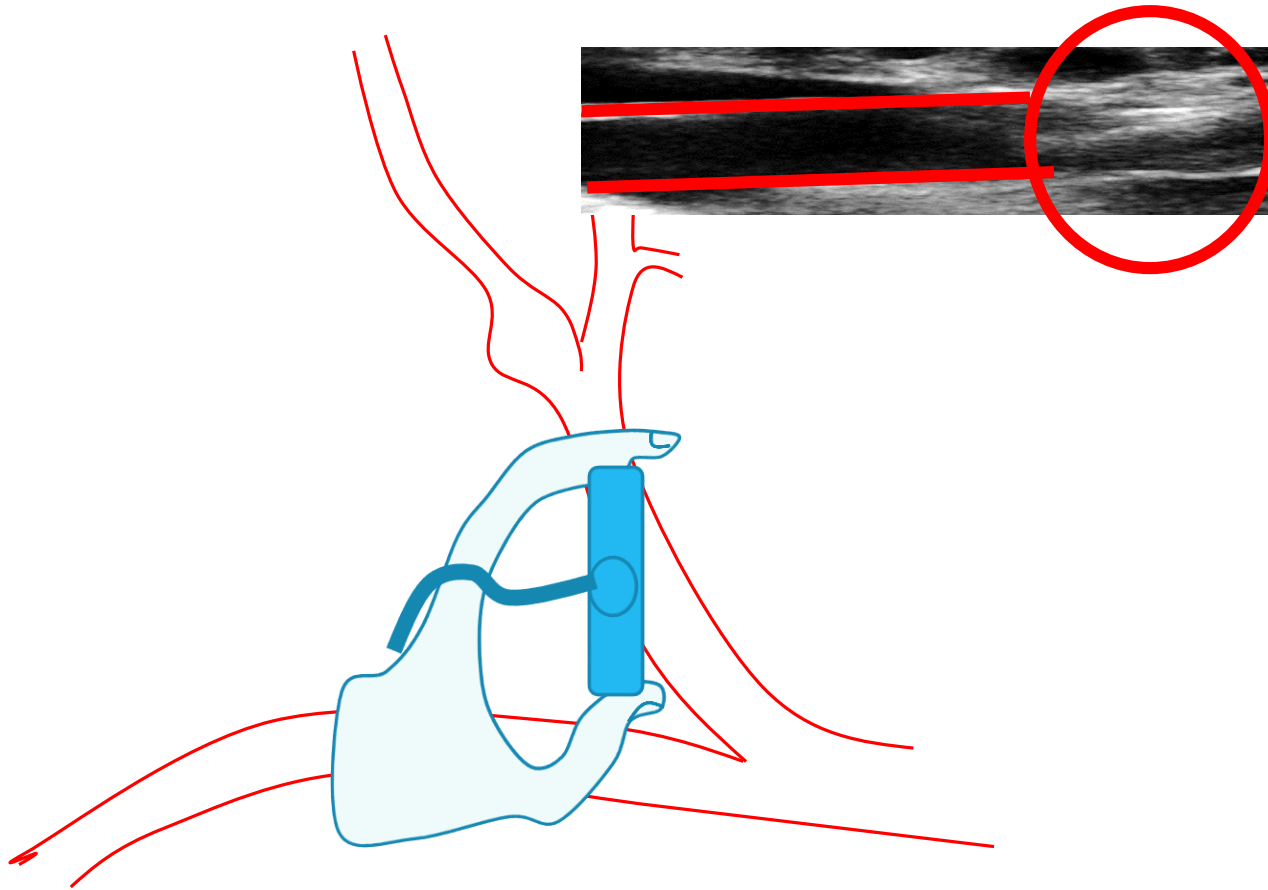
PROBE ORIENTATION



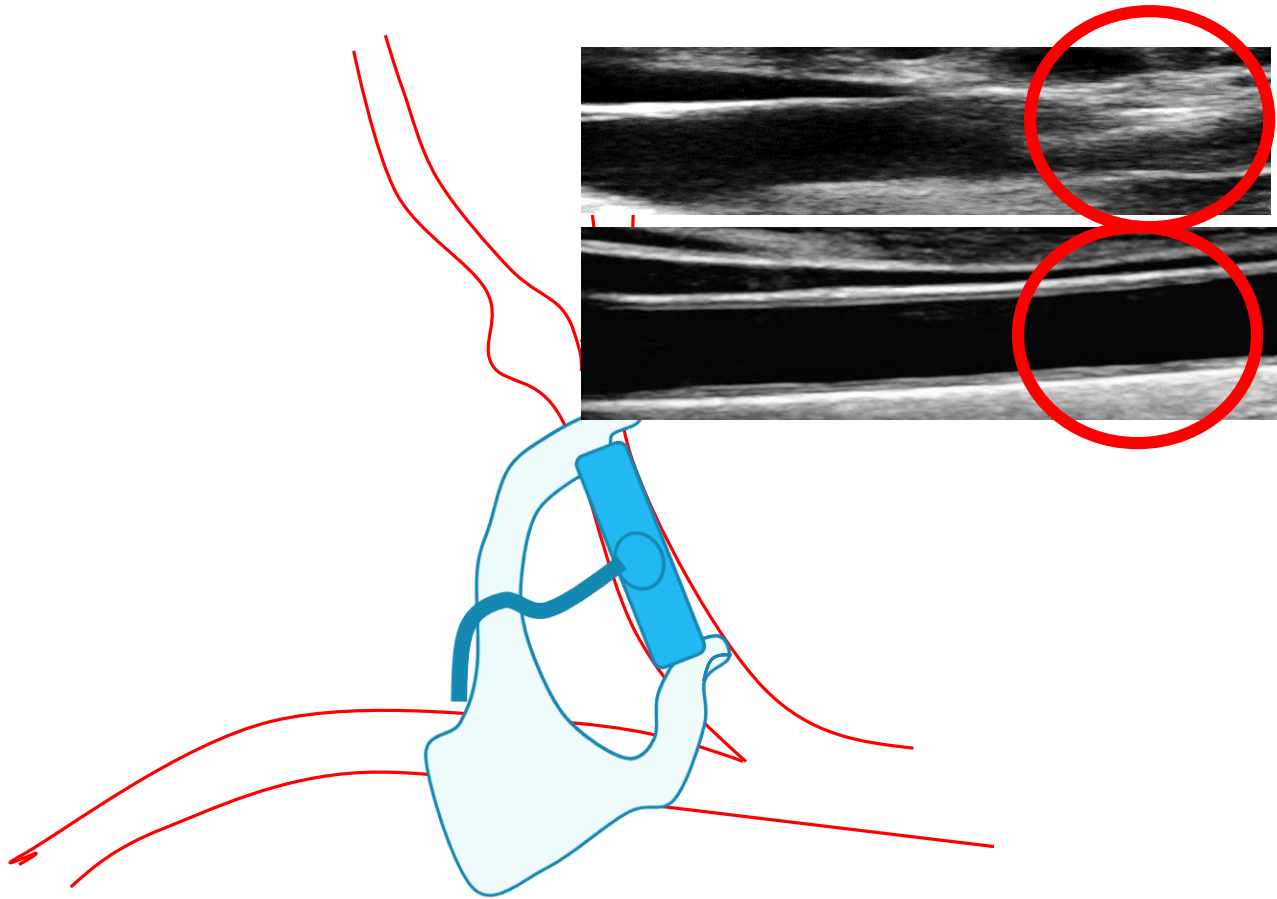
SWEEPING



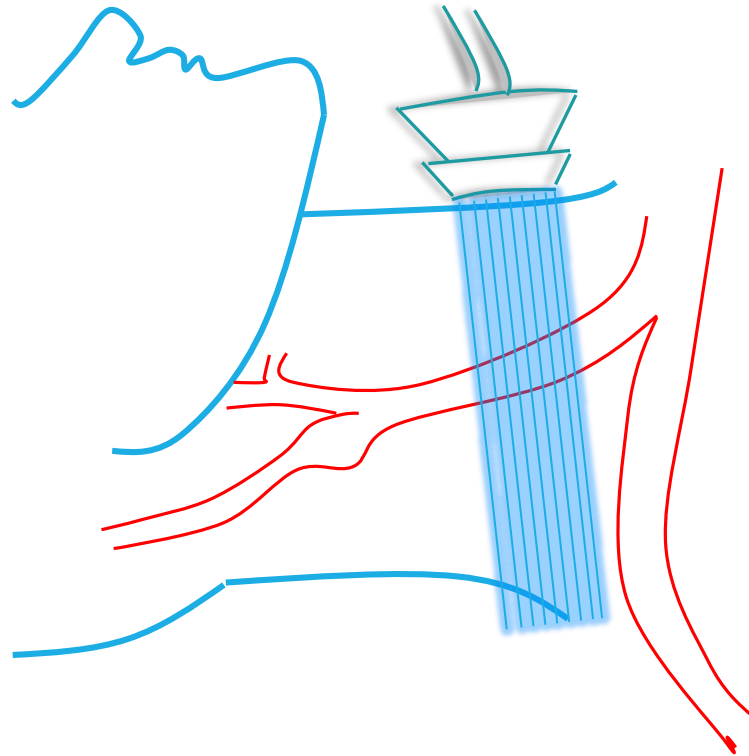
ROTATING THE BEAM

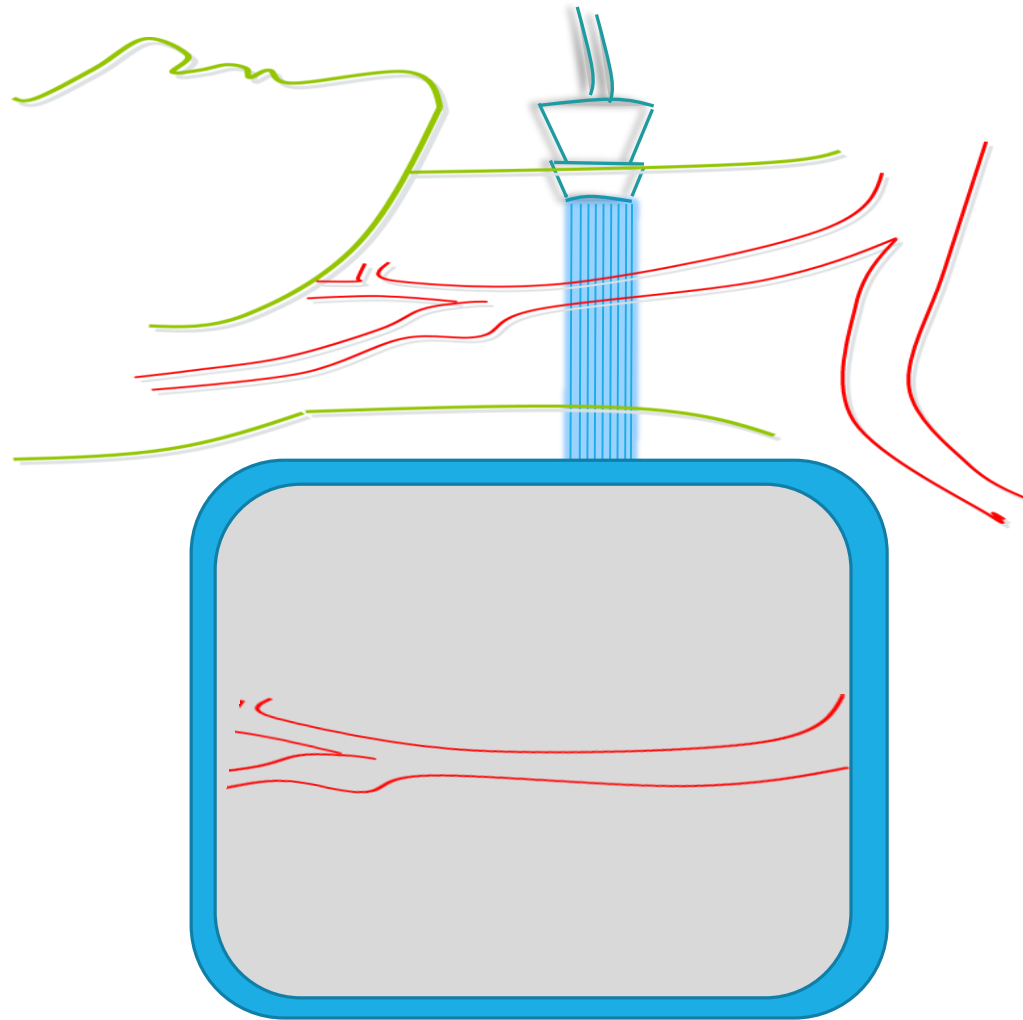


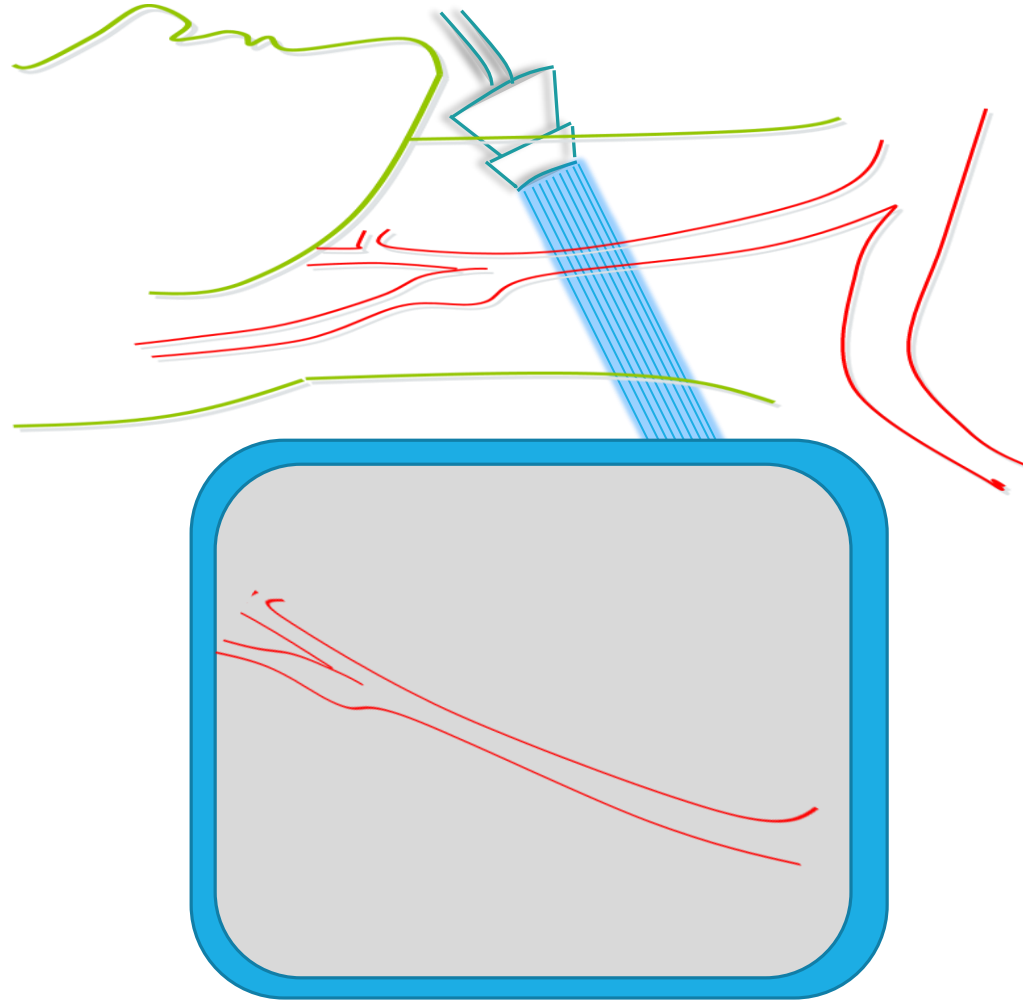
ROTATING THE BEAM

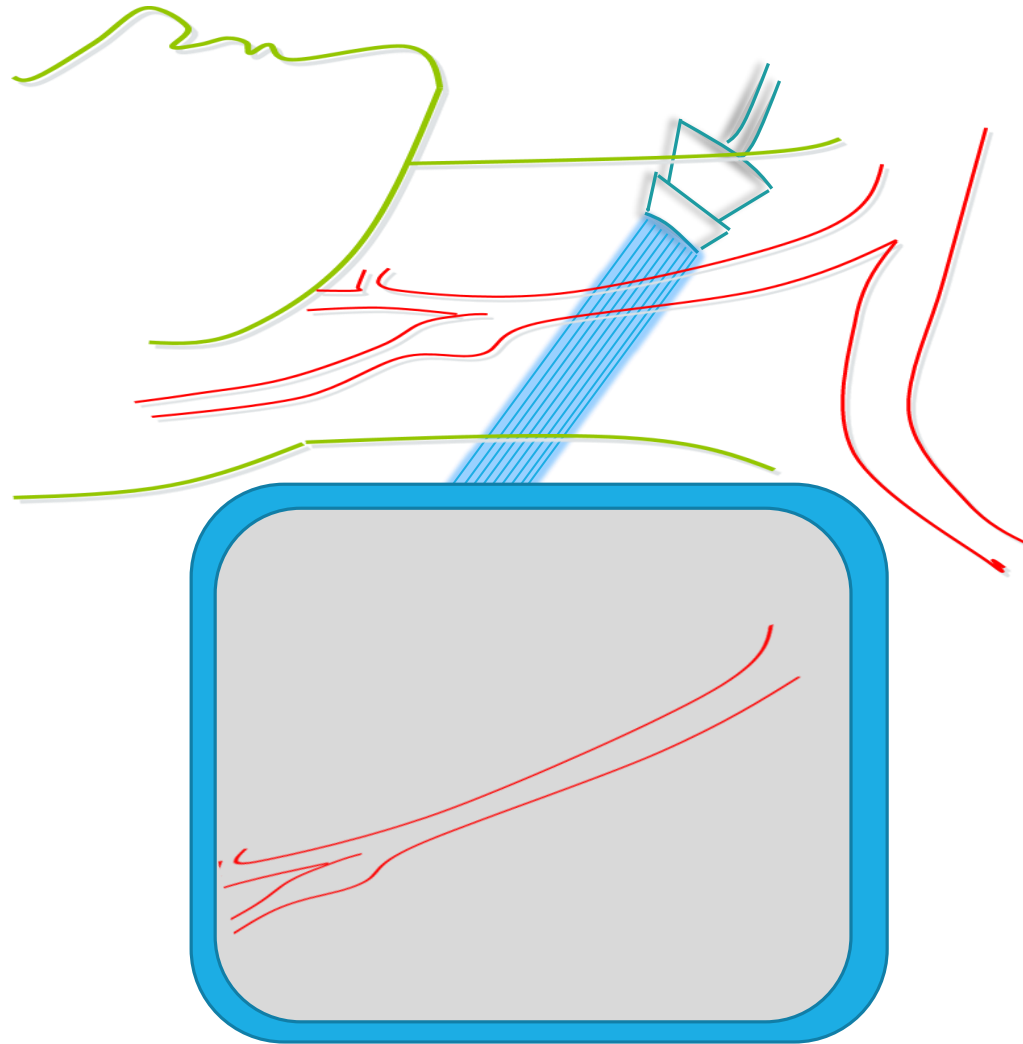


ROCKING THE PROBE

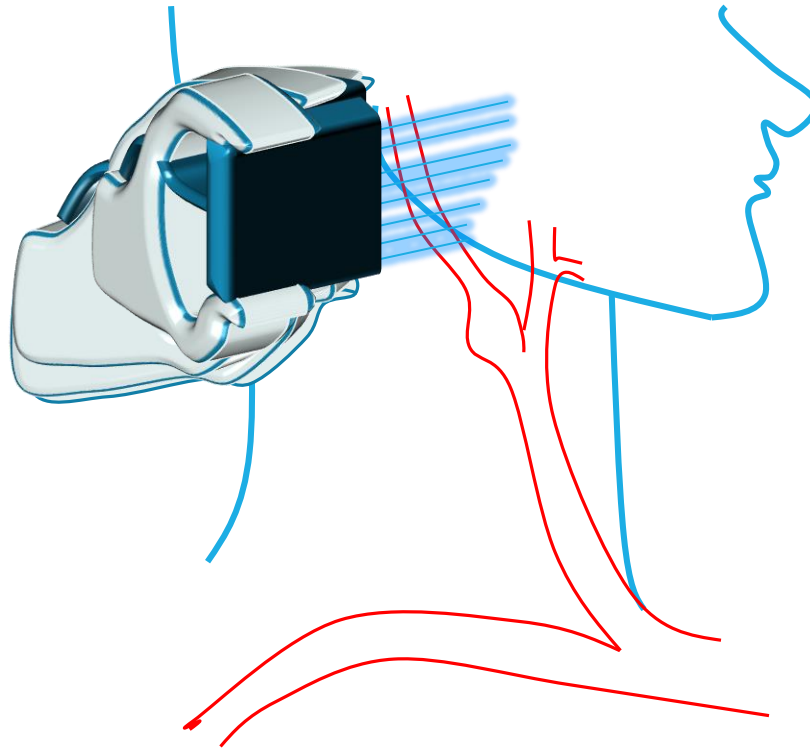




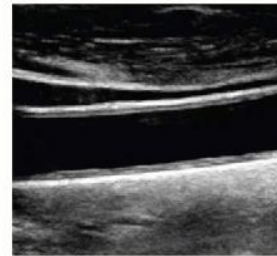
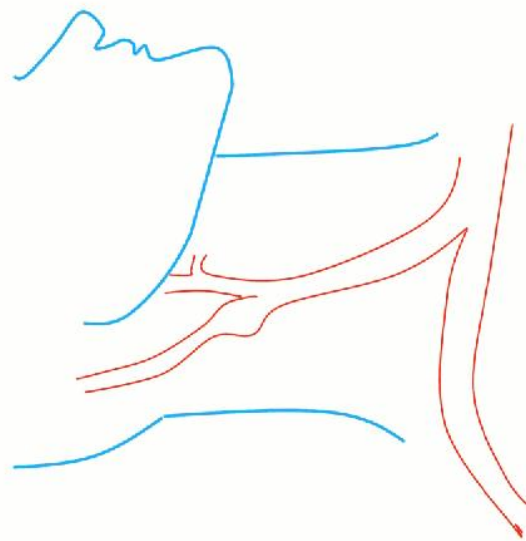




ANGLING BEHIND JAW LINE

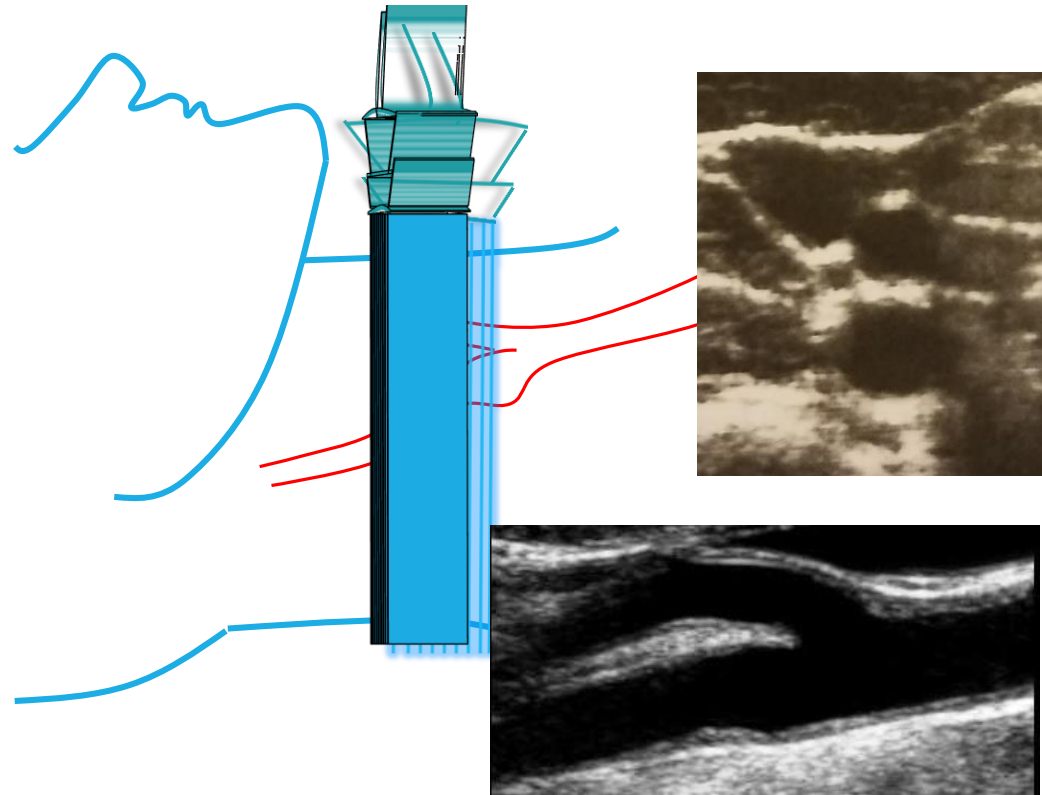


SCANNING PLANES (WINDOWS)

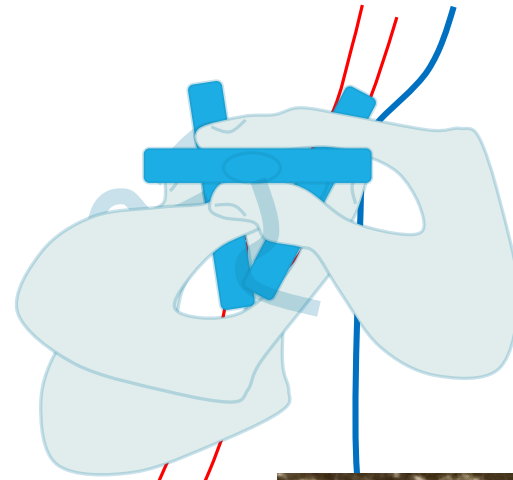
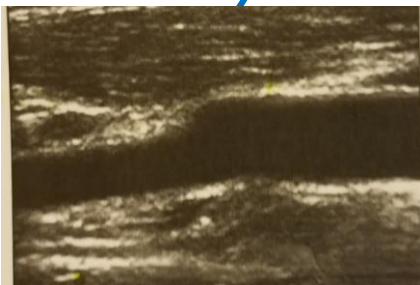
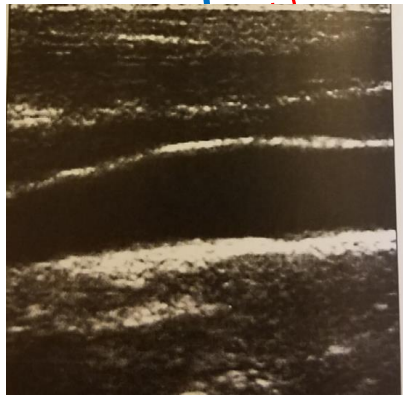


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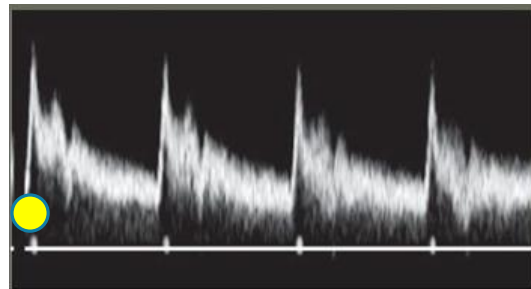
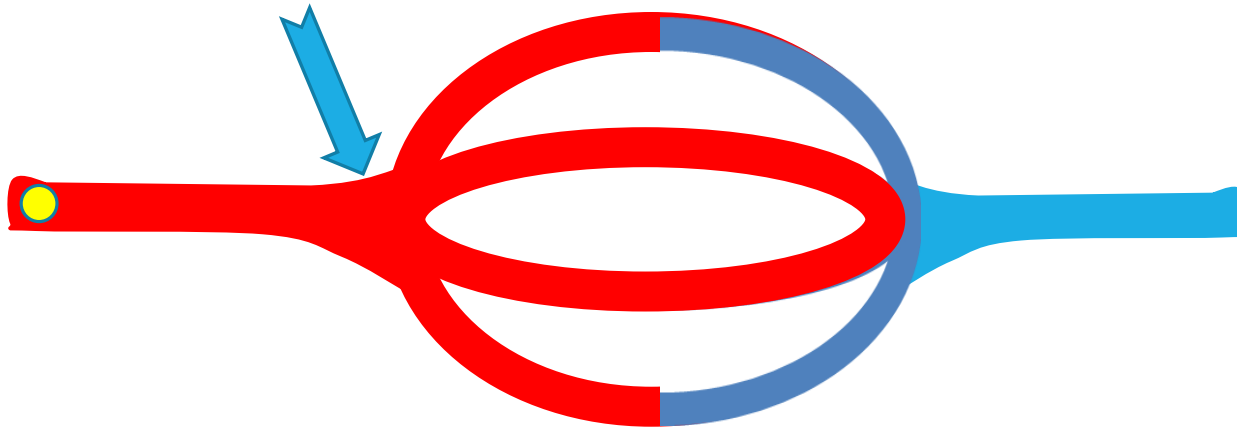
TUNING FORK VIEW



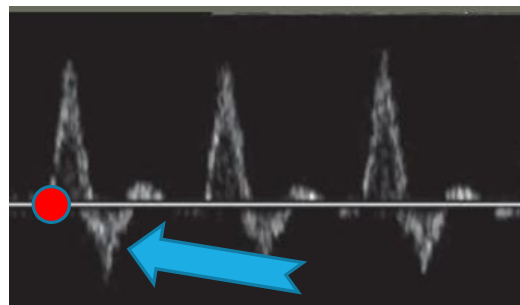
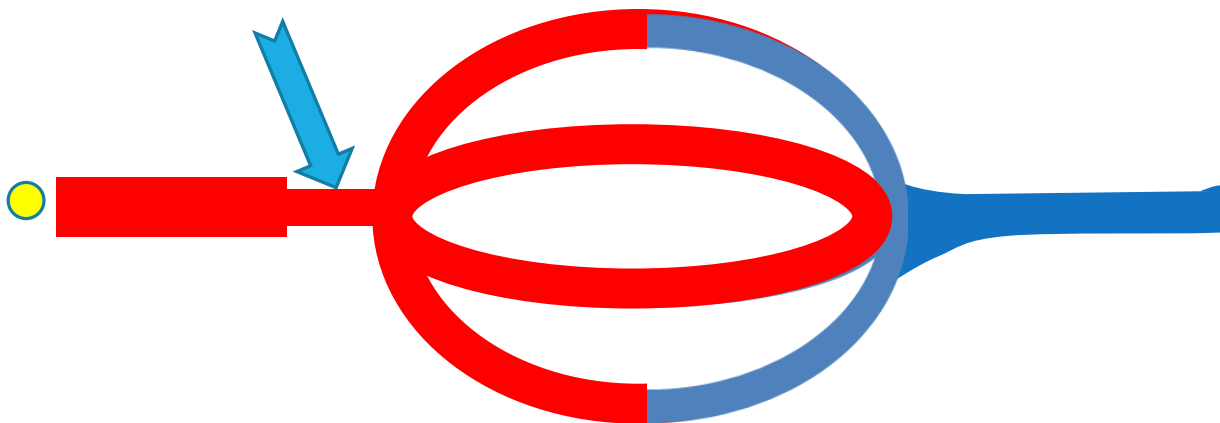
ICA/ECA MANEUVER



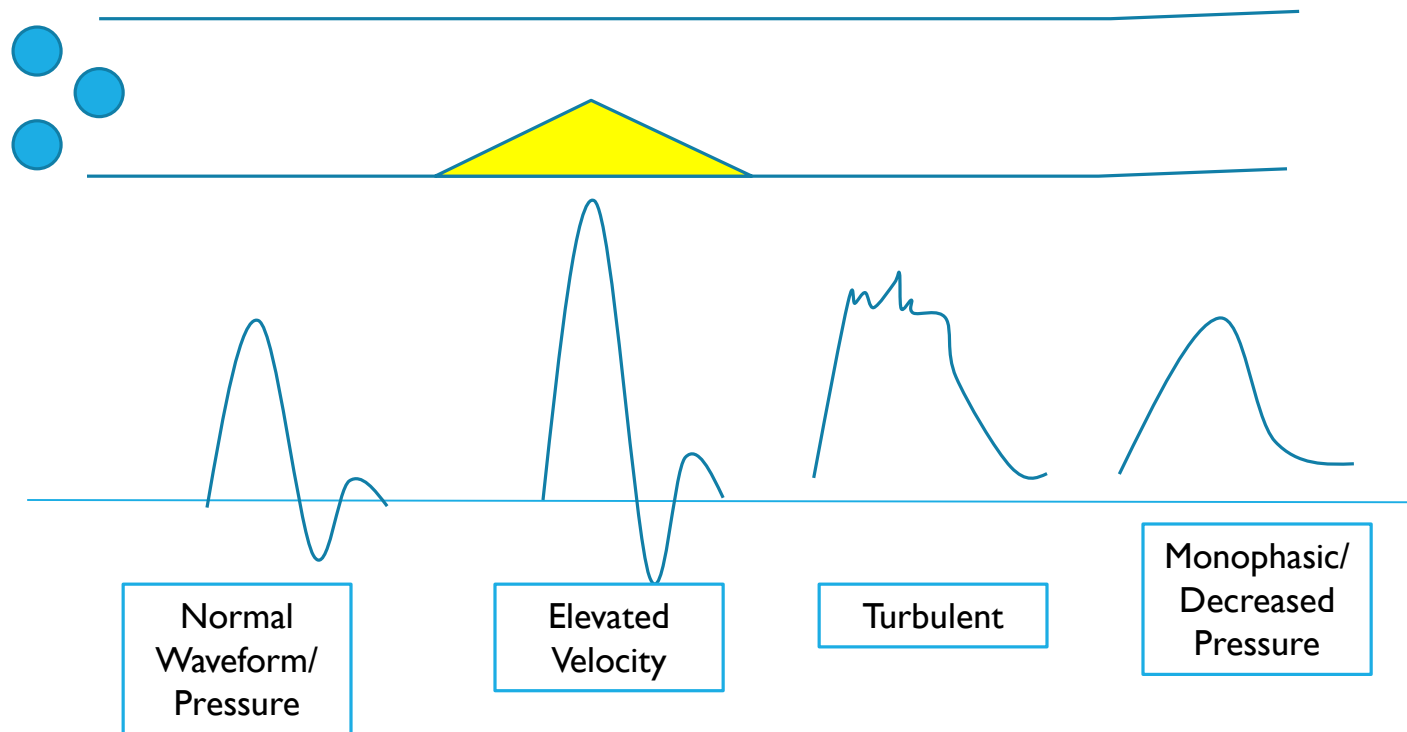
LOW RESISTANCE



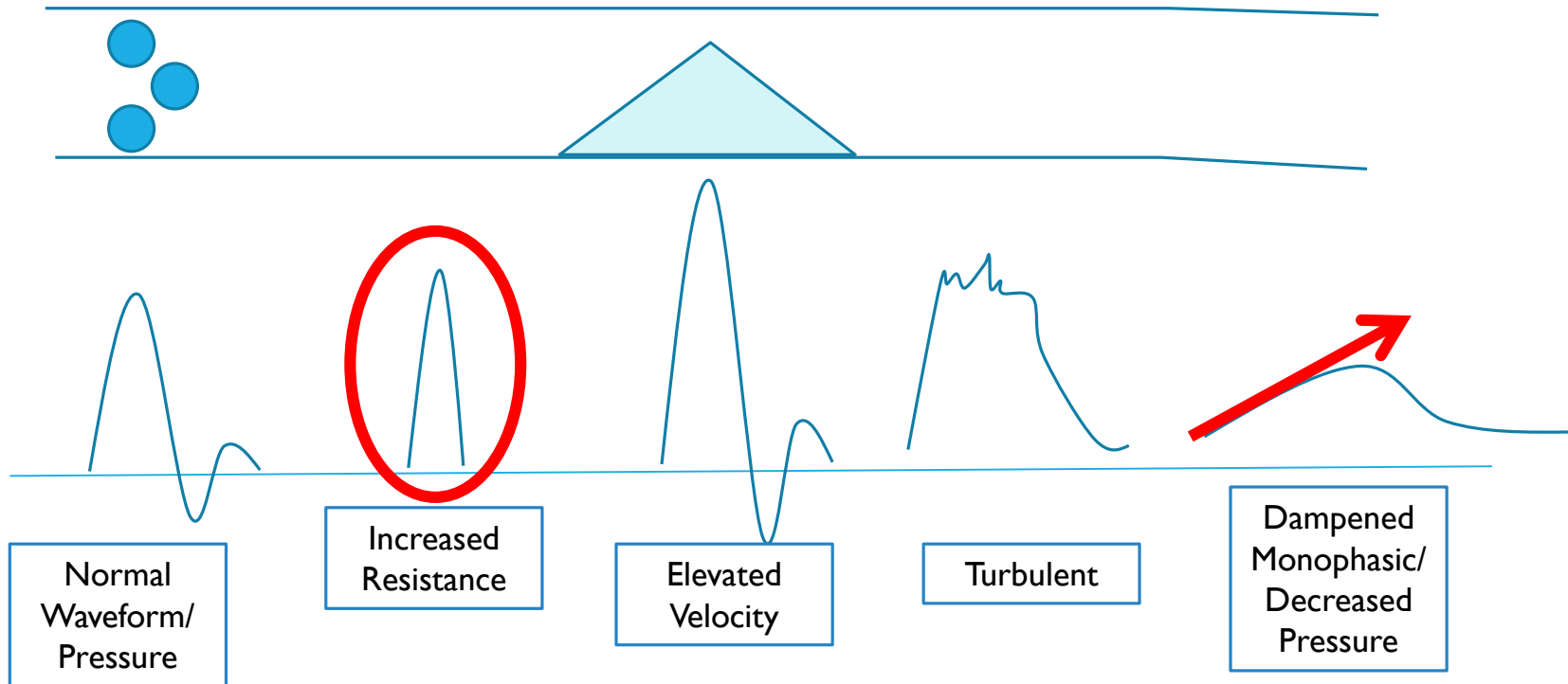
HIGH RESISTANCE



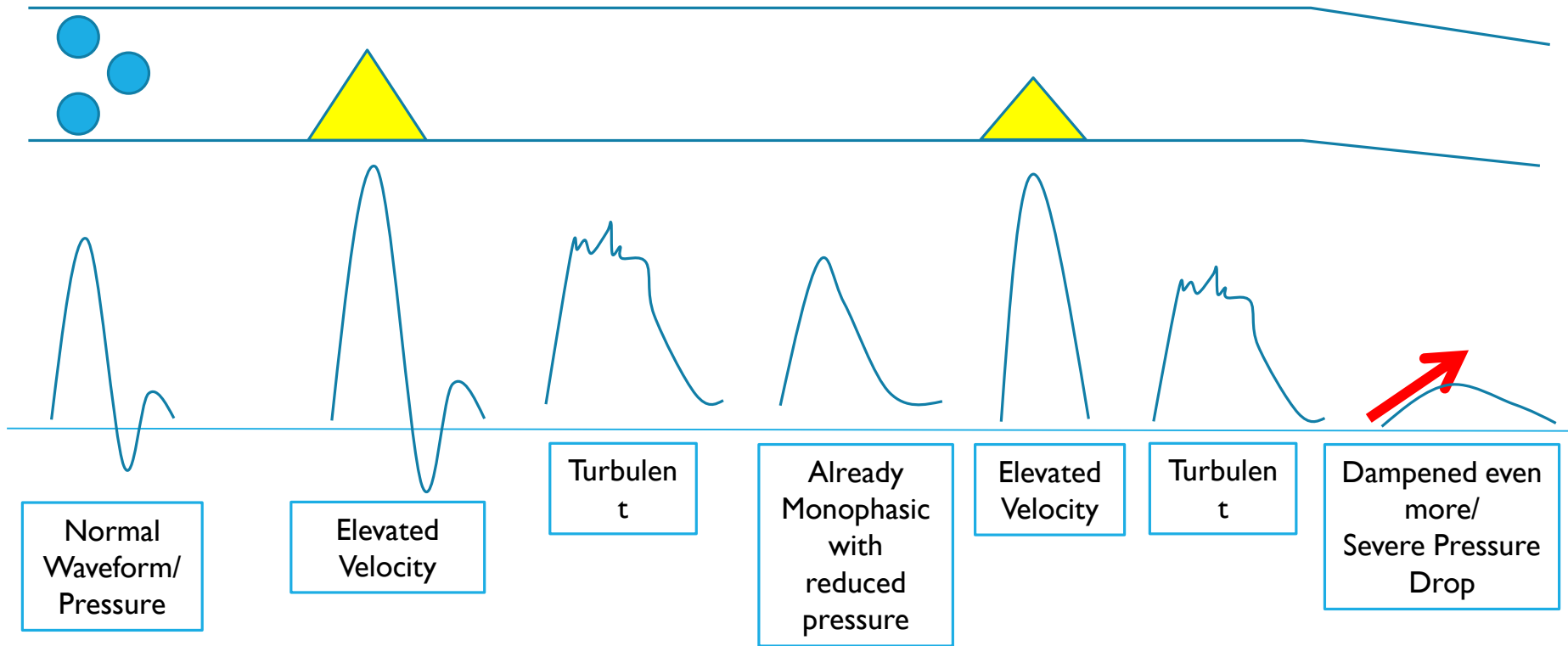
FLOW THROUGH A STENOSIS



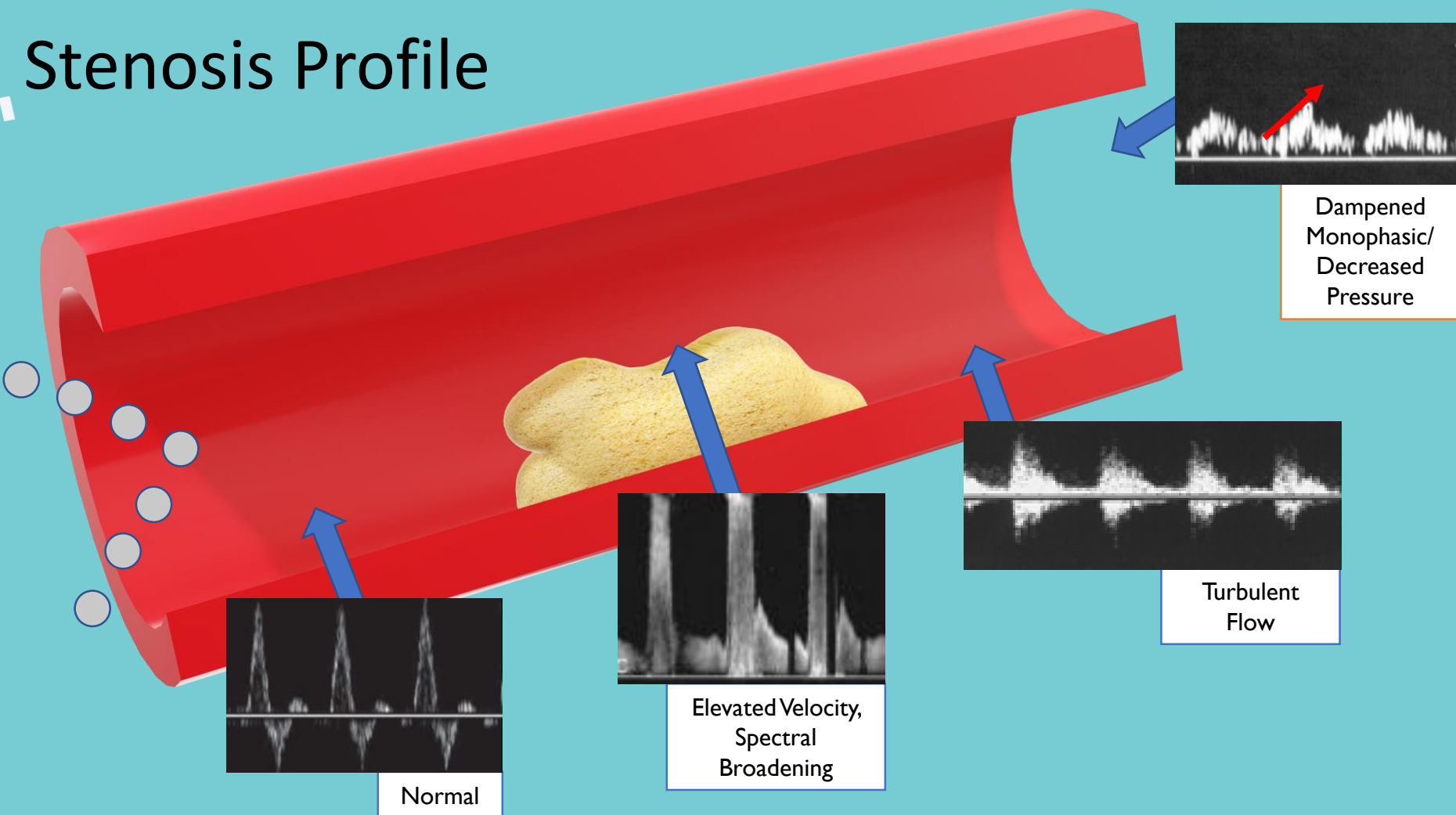
FLOW THROUGH A SEVERE STENOSIS



FLOW THROUGH A SECOND LESION



Stenosis Profile





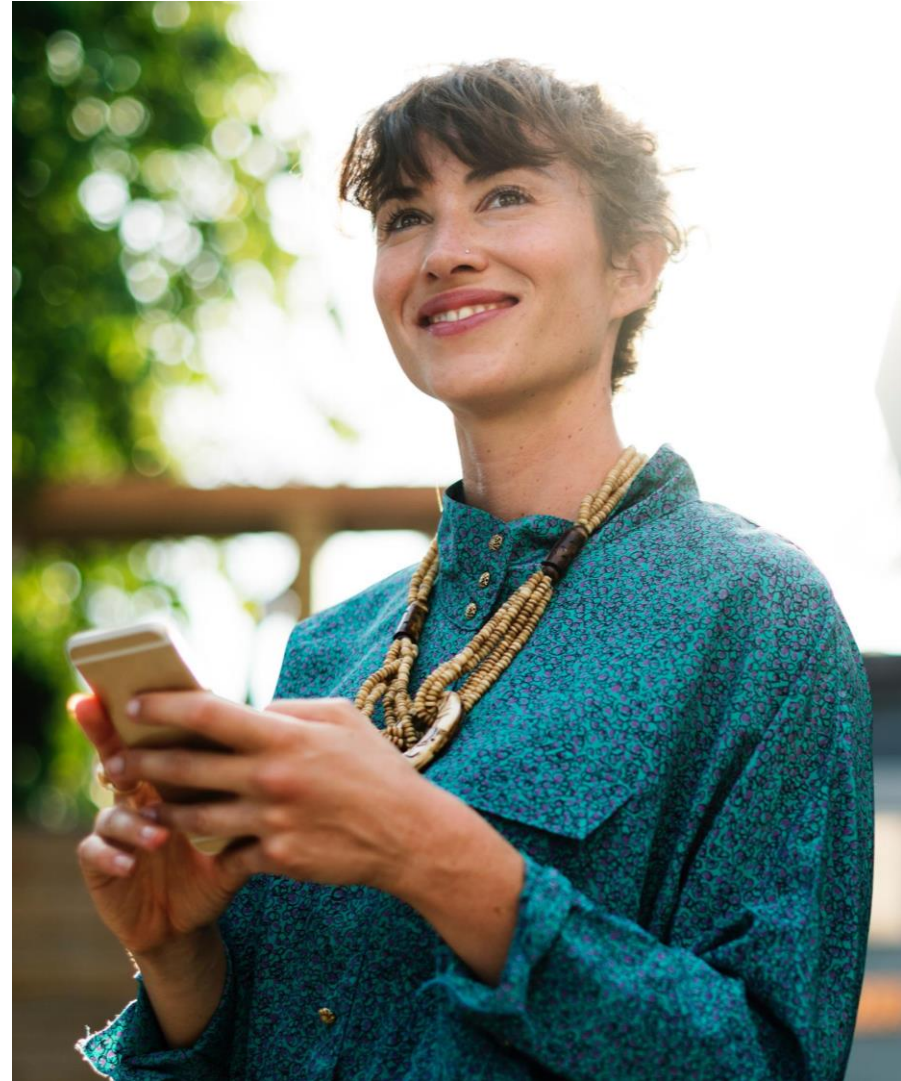
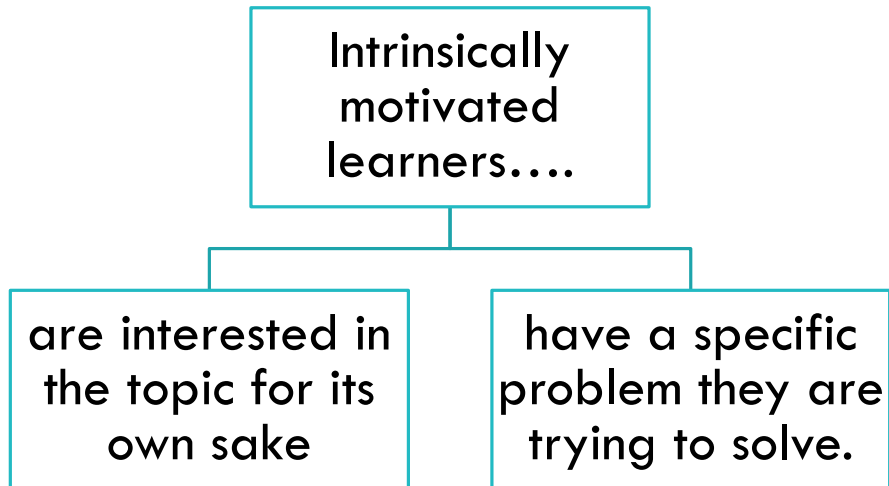
WHAT HAPPENED?

A photograph of a person pouring coffee from a glass carafe into a white ceramic mug. The mug has the word 'UGH' written on it in a hand-drawn, black-outlined font. The scene is set on a dark wooden table. A black rectangular box is overlaid on the left side of the image, containing the word 'MOTIVATION' in white, bold, sans-serif capital letters, followed by a thin horizontal line.

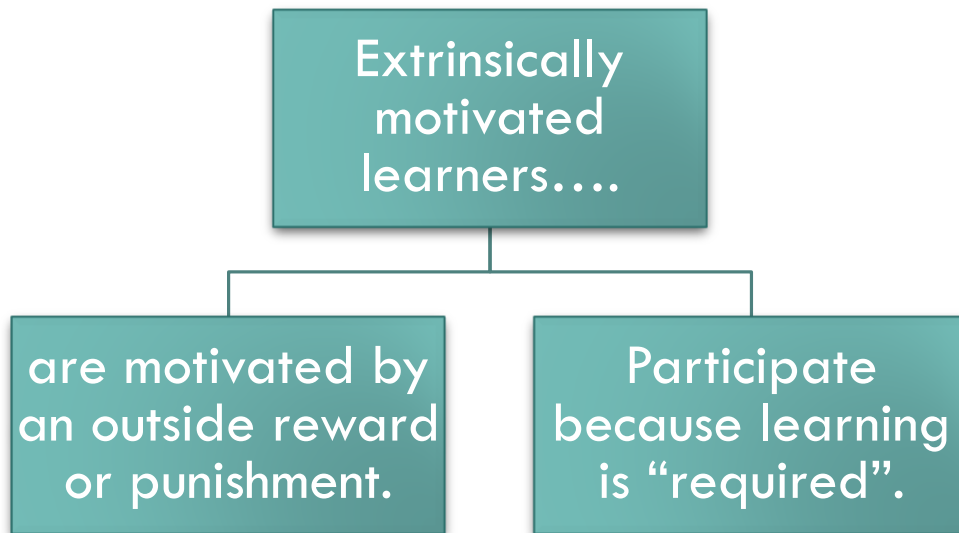
MOTIVATION

UGH

MISSION: MOTIVATION

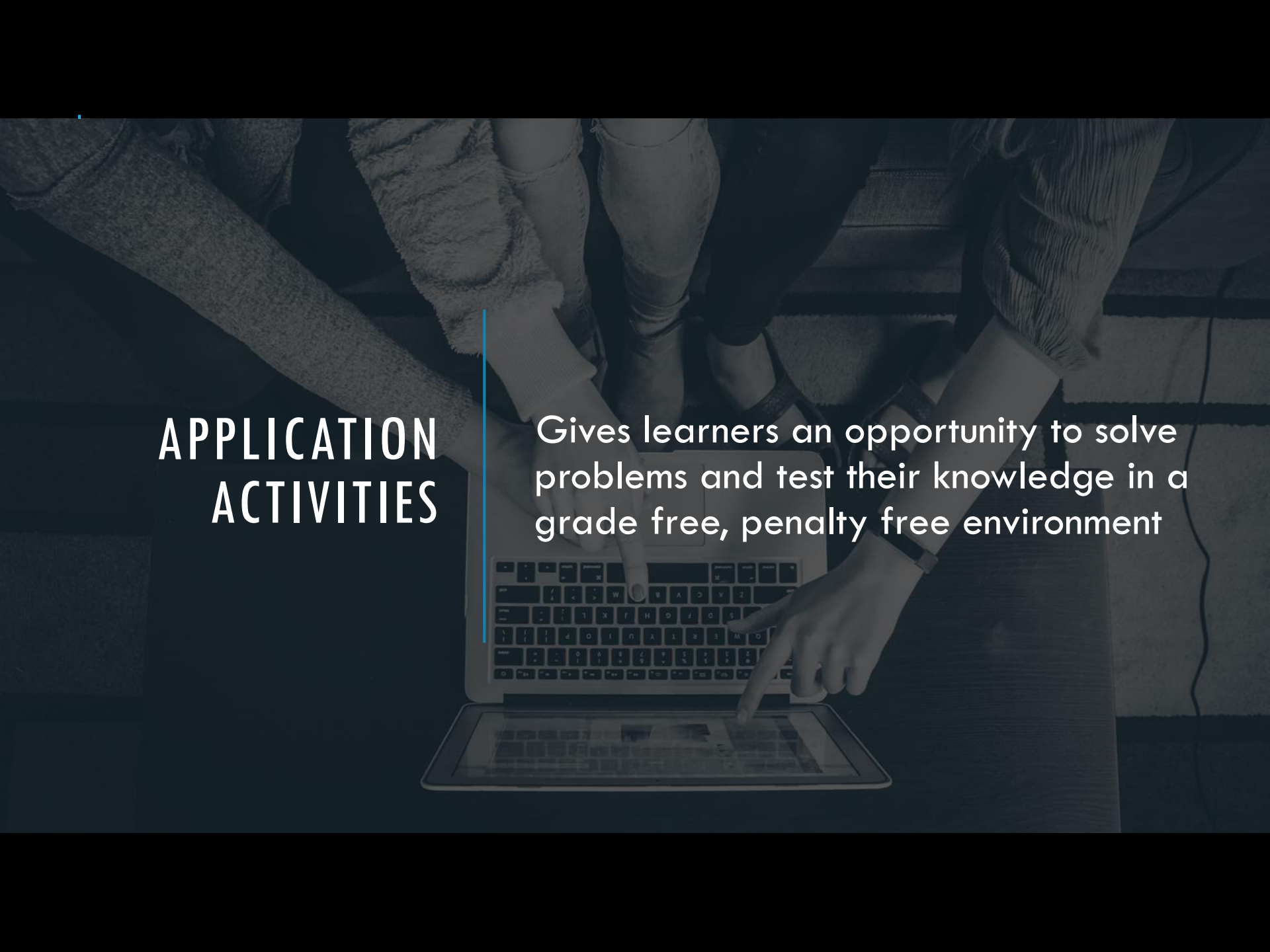


MISSION: MOTIVATION



“I DON'T KNOW
WHAT I DON'T
KNOW”



A dark, grayscale photograph showing several people's hands and forearms gathered around a laptop and a tablet. One hand is pointing at the laptop screen, while another points at the tablet. The image is dimly lit, with the text overlaid in white. A thin blue vertical line is positioned to the left of the text.

APPLICATION ACTIVITIES

Gives learners an opportunity to solve problems and test their knowledge in a grade free, penalty free environment

APPLICATION EXERCISES

When you engage your learners with a genuinely interesting challenge or puzzle to solve, it helps turn extrinsic into intrinsic motivation.



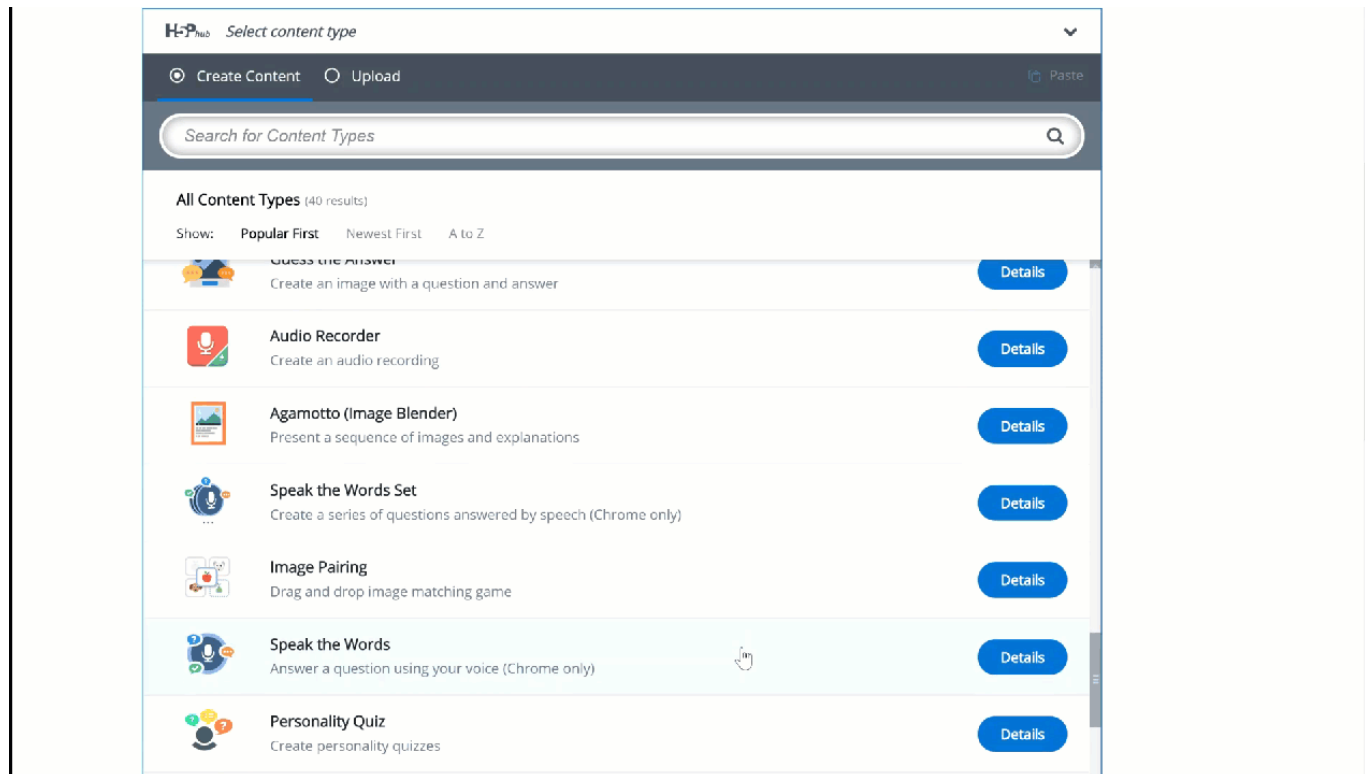
APPLICATION EXERCISES

Provoke students
to action

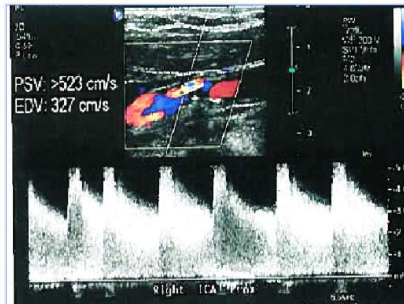
Helps the learner
to fill in the gaps



H5P.ORG



EXAMPLES



ICA STENOSIS CRITERIA

% stenosis category	Peak Systolic Velocity	Plaque Estimate	End Diastolic Velocity	ICA/CCA Ratio
Normal	PSV <125 cm/sec	None	EDV <40 cm/sec	Ratio <2.0
<50%	PSV <125 cm/sec	<50%	EDV <40 cm/sec	Ratio <2.0
50-69%	PSV 125-230 cm/sec	>50%	EDV 40-100 cm/sec	Ratio >2.0- 4.0
70-99%	PSV >230 cm/sec	>50%	EDV >100 cm/sec	Ratio >4.0
Occluded	No flow recorded	No detectable lumen		
Distal Occlusion	High resistant ICA	Varies		

Other Interpretation Criteria

CCA stenosis >50%	Focal Doubling of PSV	PSV >200 cm/sec	B mode evidence of narrowing with post stenotic turbulence
ECA stenosis >50%		PSV > 200 cm/sec	B mode evidence of narrowing with post stenotic turbulence

Based on the criteria and what we see in this ICA, what would say the percentage of stenosis is?

☐ Distal Occlusion

☐ 50-69%

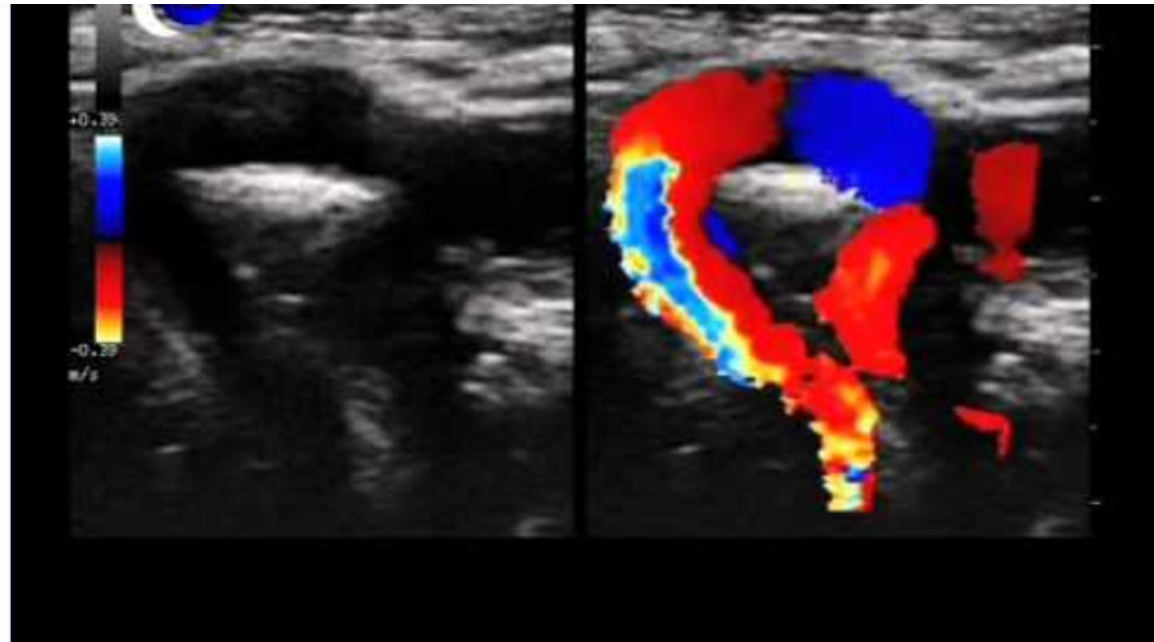
☐ Normal

☐ 70-99%

☐ <50%

☐ Occluded

EXAMPLES



Other than potential atherosclerotic disease, what could be causing the aliasing seen in this ICA?

☐ vessel dissection

☐ tortuosity of the vessel

☐ PRF set too high

☒ Check

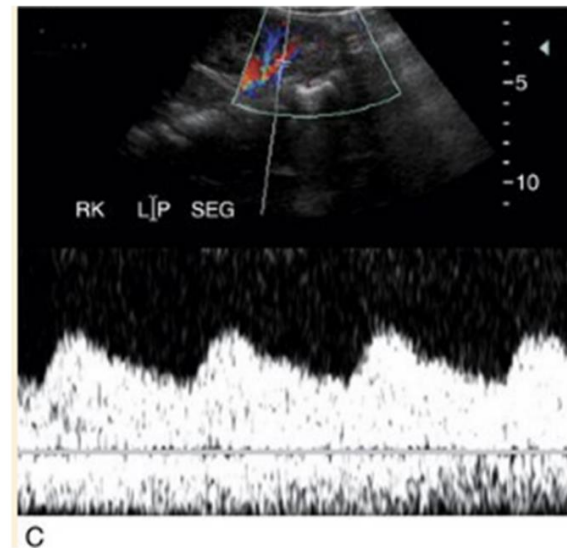


EXAMPLES

click on the letter of the correct answer

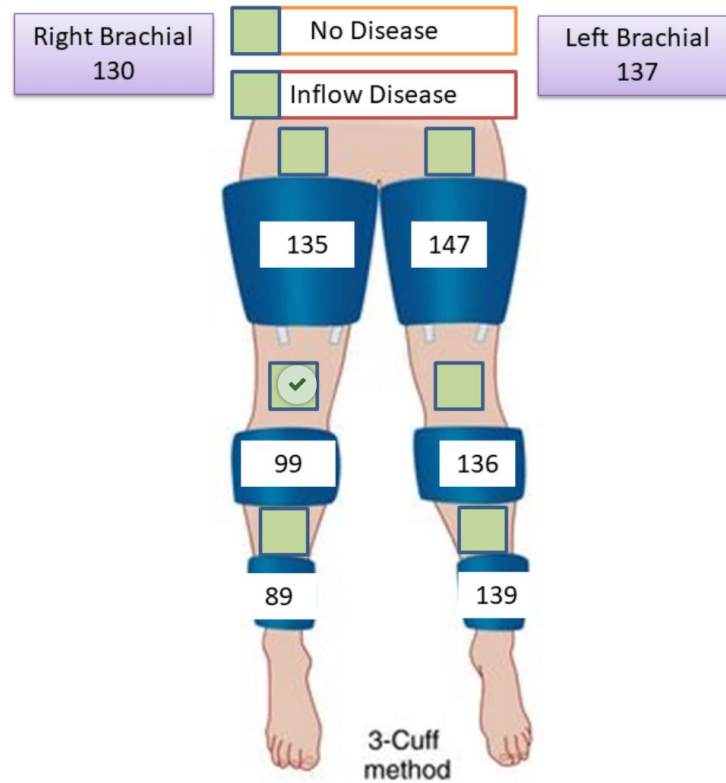
THIS SIGNAL, IF FOUND IN AN ARTERY OF THE LOWER POLE OF THE KIDNEY, WOULD SUGGEST?

- a) A distal obstruction
- b) A proximal obstruction
- c) A normal finding



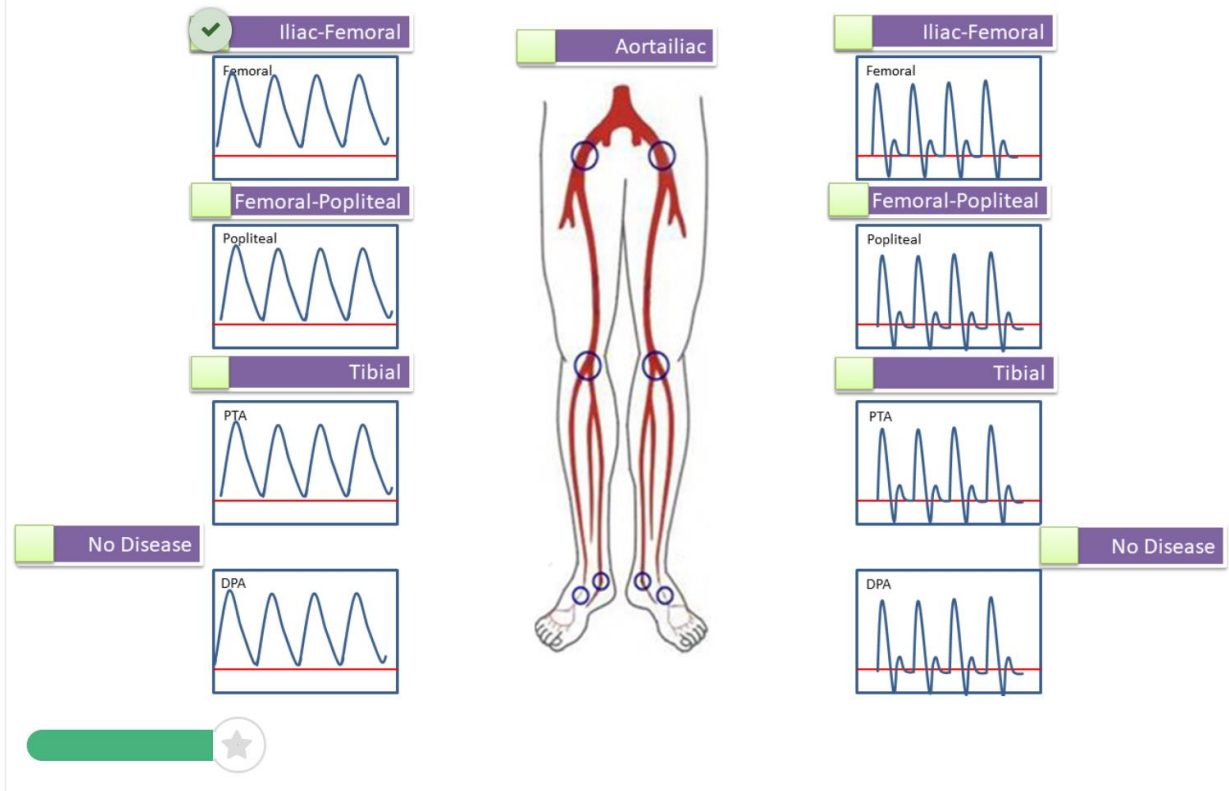
EXAMPLES

Where is the origin/level of disease based on the segmental pressures? Identify this by clicking on the appropriate green box/boxes corresponding to an area of disease.



EXAMPLES

Look at the waveforms collected down the patient's lower extremities. Based on what you know about normal resting extremity waveforms, where is the disease? Click on the green box next to the associated level.



TAKE-AWAYS....

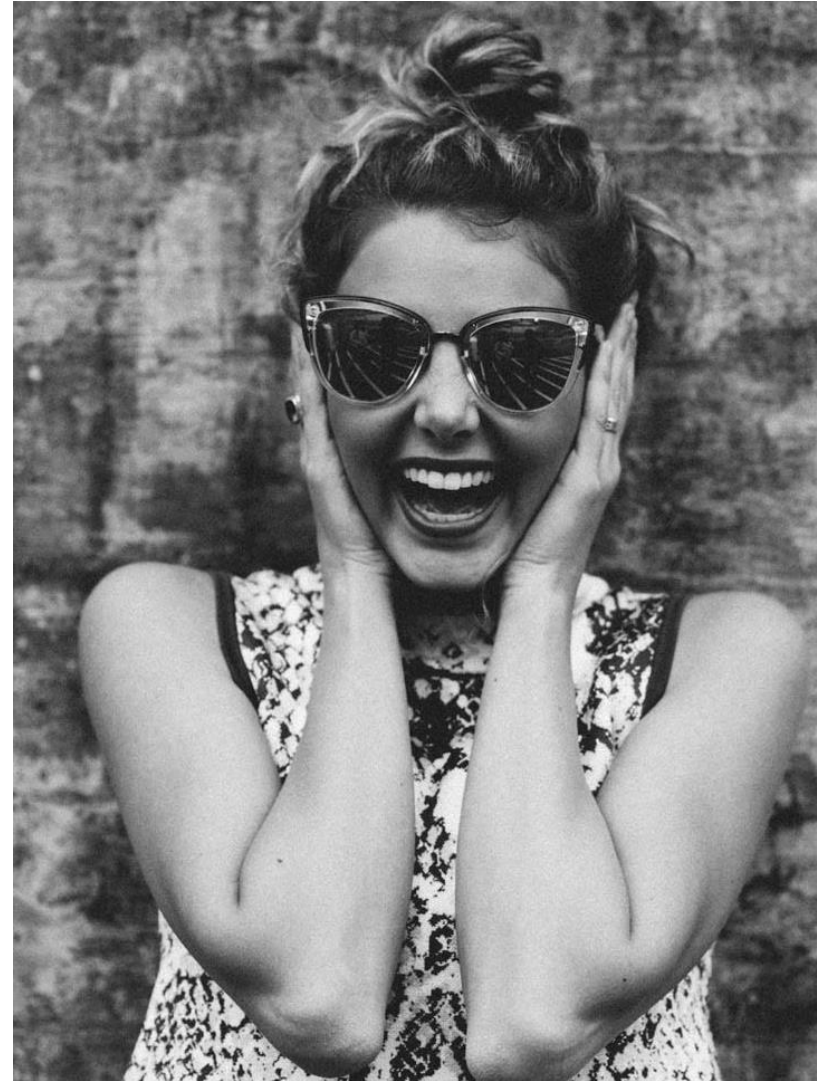
Consider the content you teach

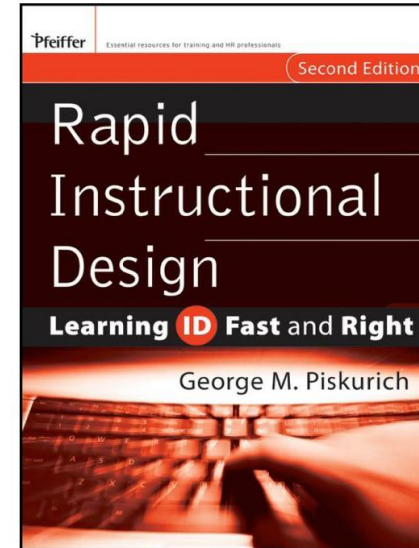
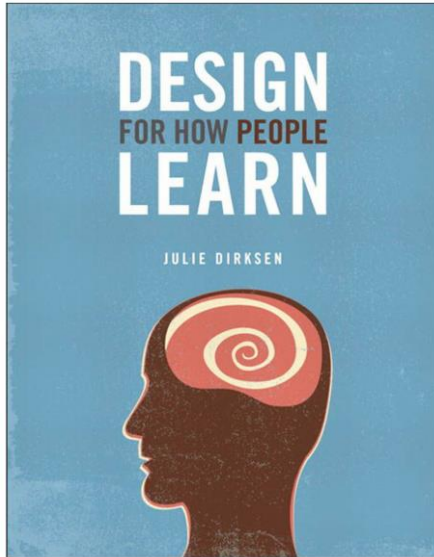
Is there a topic your learners find hard to grasp?

What do you want your learners to be able to do?

Does the teaching method match the desired outcomes?

Is there a better way?





THE END, THANK YOU

AGLENN@SENTARA.EDU