Zach Larson

Storyboard

HPTT 825: Essentials of E-Module

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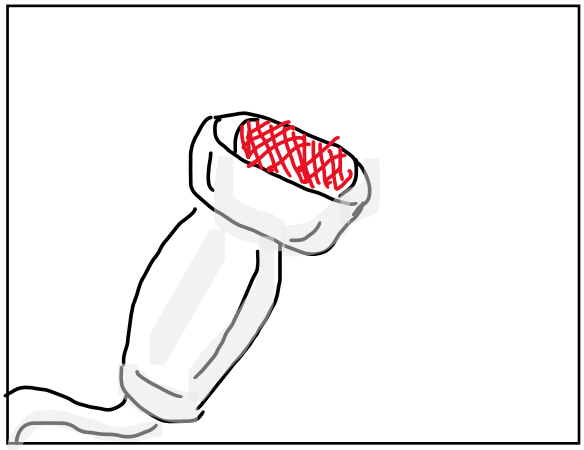
Module Name: Cardiac Sonography: Foundations of Scanning

<table>
<tr><td colspan="2">Title: Slide 1.1 - Introduction</td></tr>
<tr><td>On-screen text (OST): Welcome to Foundations of Scanning! Press “Next” to begin the course.</td><td rowspan="3">Image: Transducer.jpg
  </td></tr>
<tr><td>Voiceover (VO): “Welcome to the cardiac sonography course, foundations of scanning. In this course we will review the foundational skills in becoming a cardiac sonographer.”</td></tr>
<tr><td>Animation notes: OST appears after VO.</td></tr>
<tr><td colspan="2">Programming notes: Go to Slide 1.2 when user selects “Next” button.</td></tr>
</table>

Title: Slide 1.2 - Objectives

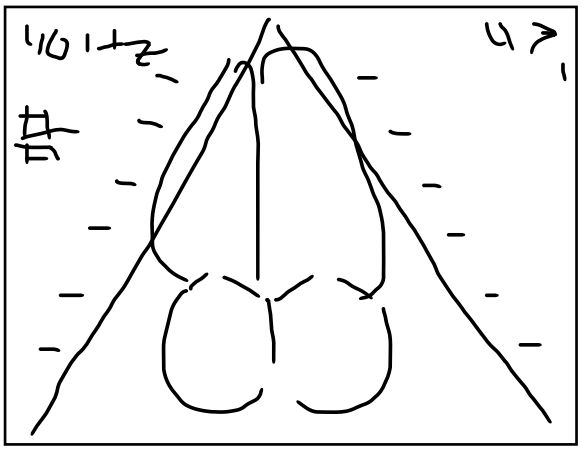
On-screen text (OST):

1. Distinguish on-axis from off-axis
2. Manipulate the transducer to re-create cardiac structures
3. Modify machine settings to optimize frame rate

Voiceover (VO): After this course you will gain foundational scanning abilities by distinguishing (OST1) cardiac structure that is on-axis vs off-axis, learn (OST2) how to manipulate the transducer to re-create cardiac structures, and modify (OST3) machine settings to properly optimize the frame rate for the best images possible.

Animation notes: OST will fade in the slide as followed above in VO. “Next” button will appear after VO.

Image: Apical_4C.jpg

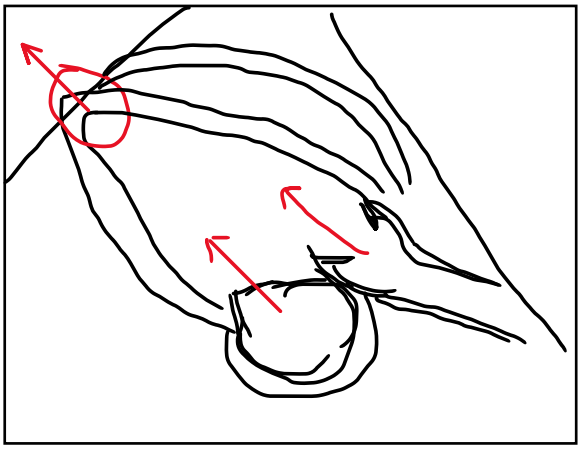


Programming notes: Go to Slide 1.3 when user selects “Next” button.

Title: Slide 1.3 – PLAX window: On-Axis vs. Off-Axis

On-screen text (OST): None.

Image: Off_Axis_PLAX.jpg



Voiceover (VO): When imaging the parasternal long window, your point of emphasis should be focused on the apex (Red Circle1). We know this image is off-axis because the apex is tilting towards the top of the screen (Red Apex Arrow2) along with the cardiac valves (Red Cardiac Valve Arrows3). This indicates we are in a window too low, and must slide the transducer up superiorly (Transducer video?).

Animation notes:

1. Red Circle
2. Red Apex Arrow
3. Red Cardiac Valve Arrows

Consider adding a short video of the transducer sliding superiorly on a patient to demonstrate.

Can show image of on-axis PLAX after video or in next slide.

“Next” button will appear after video or on-axis PLAX image.

Programming notes: Animations fade in as followed in VO. Go to slide 1.4 when user selects “Next” button.

Title: Slide 1.? – Transducer Manipulation: PLAX to PSAX

On-screen text (OST): None.

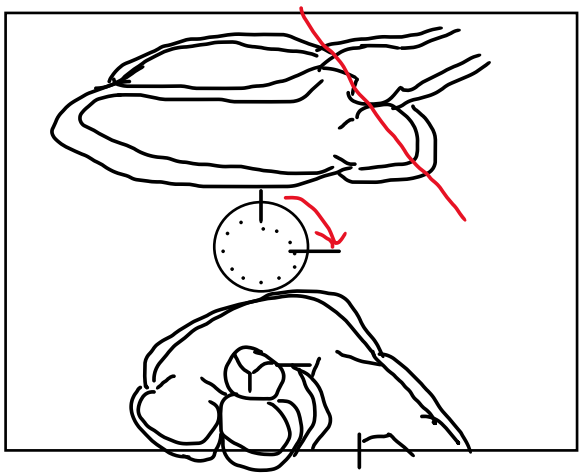
Voiceover (VO): To transition from the parasternal long axis into the parasternal short axis, the transducer will only need one movement, rotation. While in the parasternal long axis window, rotate the transducer clockwise, 45 degrees (Clock1)(Red Clock Arrow2). (PSAX Image4) Once rotated, you will notice the sound wave intersects (Red Line5) the RVOT, aortic valve leaflets and the left atrium.

Animation notes: Slide will start with PLAX image only.

1. Clock
2. Red Clock Arrow (will start at
3. 12 and point to 3)
4. PSAX Image
5. Red Line

"Next" button will appear after VO.

Image: PLAX_to_PSAX.jpg

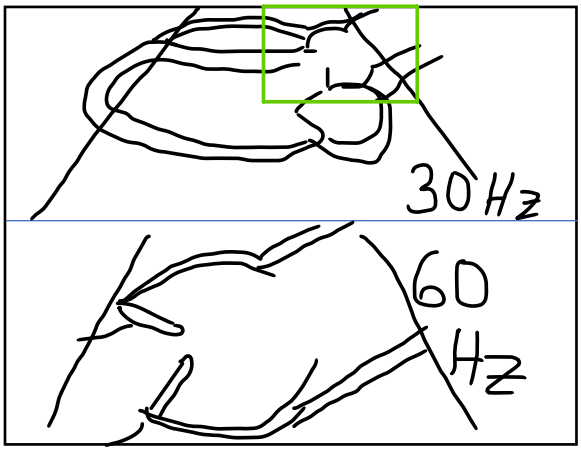


Programming notes: Animations fade in as followed in VO. Go to slide 1.? when user selects "Next" button.

Title: Slide 1.? – Optimizing Machine Settings: Zoom

On-screen text (OST): None.

Image: Zoom_AoV.jpg



Voiceover (VO): Finding ways to optimize machine settings can be very easy. If we are focusing on the aortic valve, a frame rate of 30 Hz (30 Hz Text1) is fine, but it could be better. Using a simple zoom box (Green Zoom Box2) can help increase our frame rate and increase the quality (Zoome in AoV3) of our images by almost double (60 Hz Text4).

Animation notes: Slide will start with zoomed out PLAX image only.

1. 30 Hz Text
2. Green Zoom Box
3. Zoomed in AoV
4. 60 Hz Text

"Next" button will appear after VO.

Programming notes: Animations fade in as followed in VO. Go to slide 1.? when user selects "Next" button.

Part 2:

Many aspects of multimedia principles can by found in this storyboard. For slide 1.3, the Signaling Principle is used to highlight points of interest the student should be focusing on by highlighting an area of the cardiac apex with a red circle. The last three slides in the storyboard optimize the redundancy principle by eliminating text and only combining voiceover with graphics. The Temporal Contiguity Principle is also utilized in these three slides by timing the the animation at the same time as the voiceover audio. All slides in the storyboard plan to use the Personalization Principle, Voice Principle, and Image Principle in the voiceover recording that demonstrates simple & casual language while using my own voice that is friendly and relatable all while limiting little to no time for talking head screen time.