INSTRUCTIONS/ASSIGNMENT FOR ANATOMICAL DISSECTION:

Once you click on the link to open the dissection module, the first thing you need to do is to be sure you can see all the controls as follows. If you do not see these controls, maximize your browser. If you still do not see them, please stop and contact us for assistance by clicking on the ‘contact the instructor link’ above the quiz questions back on the course page.

Navigating the Dissection Programs – Read This! Very Important!

- **Select Starting Point**, in the tool bar appearing vertically on the left side of your screen, click on the first icon that looks like this: ![icon] and follow instructions provided.

- **Change Layer**, use the controls that are found on the left below the image: ![icon].
  You can either use the up/down arrow to change layers, or click on the layer number to select a different layer from the dropdown box.

- **Change Frame** (which rotates the anatomical model) use the controls that are found centrally under the image. ![icon].
  The frame number appears and you can use the arrows to advance one frame at a time or the curved arrows to jump multiple frame.

- **Identify Structures**: Click on any structure in the anatomical dissection and the structure will highlight in green and information pertaining to the structure will appear in the dialogue box on the right side of the screen. Read all information pertaining to the structure. If you are wrong, select another structure until you identify the correct one. Repeat for each structure we ask you to identify.

- **Having trouble finding a structure?** In case you are having a problem identifying a structure, all you need to do is to click on the box in the lower right corner that says Visible structures. A list of all structures visible in the dissection will show in the box. Simply click on the name of the structure, it will highlight and you can proceed with reading about that structure.

The above five instructions are all you need! Refer back to them if you need to.

Let’s get started!
Dissection Starting Point:

- **Select Starting Point**: Go to **Trigger Points**, select **Trunk** from the sub menu, select **Muscles of the abdominal wall** from the sub menu, and click on **Abdominal obliques 1**

- Change Frame to 1

**Identify Structures:**

- Abdominal obliques 1 (click on the trigger point indicated by the symbol #) - Read the contents of dialogue box.

**Study**: The location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.

**Identify Structures:**

- External Oblique (click on muscle) - Read the contents of dialogue box.
- Under Primary Actions, Contralateral rotation of the trunk when acting unilaterally. Click on the (Anim) link. Change Frame to 16. Play the video and NOTE the anterior attachment to the broad, abdominal aponeurosis, the anterior iliac crest, the anterior superior iliac spine and the pubic tubercle.
- Under Lateral flexion of the lumbar spine when acting unilaterally, Click on the (Anim) link. Play the video and NOTE that in order for the unilateral action of the external oblique to produce lateral flexion instead of rotation the ipsilateral *iliocostalis lumborum*, *logissimus thoracis*, *psoas major*, *quadratus lumborum* and *internal oblique abdominal* must also contract.

**Back on the left menu under 3D views, under Trigger Points, click on Abdominal obliques 2** (may have to scroll down)

**Change Frame** to 36

**Identify Structures:**

- Abdominal obliques 2 (click on the trigger point indicated by the symbol #) - Read the contents of dialogue box. **Study**: The location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.
- In the dialogue box, click on the link for External Abdominal Oblique. NOTE that the view is **Layer 13 of 14** indicating that the external oblique is a superficial muscle. Change Layer to 12. IDENTIFY the Internal oblique and fascia and Read the contents of dialogue box.

  NOTE that this muscle is deep to the external oblique. Change Layer to 11. IDENTIFY the Transverse abdominals and fascia and Read the contents of dialogue box. IDENTIFY the Rectus abdominis and Read the contents of dialogue box. NOTE that these are the deepest layers of the abdominal group.
Back on the left menu under 3D views, under Trigger Points, click on Rectus abdominis 1 (may have to scroll down)

**Change Frame** to 1

**Identify Structures:**

- Rectus abdominis 1 (click on the trigger point indicated by the symbol #) - **Read** the contents of dialogue box.

**Change Frame** to 19 to view the location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.

Back on the left menu under 3D views, under Trigger Points, click on Rectus abdominis 2 (may have to scroll down)

**Change Frame** to 1

**Identify Structures:**

- Rectus abdominis 2 (click on the trigger point indicated by the symbol #) - **Read** the contents of dialogue box.

**Change Frame** to 19 to view the location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.

Back on the left menu under 3D views, under Trigger Points, click on Rectus abdominis 3 (may have to scroll down)

**Change Frame** to 1

**Identify Structures:**

- Rectus abdominis 3 (click on the trigger point indicated by the symbol #) - **Read** the contents of dialogue box.

**Study:** The location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.

Back on the left menu under 3D views, under Trigger Points, select Trunk from the sub menu, select **Muscles of the back** from the sub menu, and click on **Iliocostalis thoracis 1**

**Change Frame** to 19
Identify Structures:

- Iliocostalis thoracis 1 (click on the trigger point indicated by the symbol #) - Read the contents of dialogue box.

Study: The location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.

Change Frame to 36 to view the anterior location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.

Back on the left menu under 3D views, under Trigger Points, click on Iliocostalis thoracis 2

Change Frame to 18

Identify Structures:

- Iliocostalis thoracis 2 (click on the trigger point indicated by the symbol #) - Read the contents of dialogue box.

Study: The location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.

Change Frame to 36 to view the anterior location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.

Change Frame to 18

Change Layer to 2

Identify Structures:

- Erector spinae: iliocostalis thoracis (click on muscle) - Read the contents of dialogue box.
- Under Primary Actions, Extension of the thoracic spine when acting bilaterally. Click on the (Anim) link. Change Frame to 11. Play the video and NOTE the agonistic action of the iliocostalis cervicis, iliocostalis lumborum, longissimus thoracis, semispinalis cervicis and semispinalis thoracis.
- Under Lateral flexion of the thoracic spine when acting unilaterally, Click on the (Anim) link. Change Frame to 10. Play the video and NOTE that in addition to the agonistic action of the iliocostalis cervicis, iliocostalis lumborum and longissimus thoracis, the external and internal oblique abdominal muscles also contract to assist with lateral flexion but also to neutralize extension.

Back on the left menu under 3D views, under Trigger Points, click on Iliocostalis Lumborum (may have to scroll down)

Change Frame to 19
Identify Structures:

- Iliocostalis Lumborum (click on the trigger point indicated by the symbol #) - **Read** the contents of dialogue box.

**Study:** The location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.

**Back on the left menu under 3D views, under Trigger Points, click on Longissimus thoracis 1** (may have to scroll down)

**Change Frame** to 19

Identify Structures:

- Longissimus thoracis 1 (click on the trigger point indicated by the symbol #) - **Read** the contents of dialogue box.

**Study:** The location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.

**Back on the left menu under 3D views, under Trigger Points, click on Longissimus thoracis 2** (may have to scroll down)

**Change Frame** to 19

Identify Structures:

- Longissimus thoracis 2 (click on the trigger point indicated by the symbol #) - **Read** the contents of dialogue box.

**Study:** The location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.

**Identify Structures:**

- Erector spinae: longissimus thoracis (click on muscle) - **Read** the contents of dialogue box.
- Under Primary Actions, Extension of the thoracic spine when acting bilaterally. Click on the (Anim) link. **Change Frame** to 10. Play the video.
- Under Lateral flexion of the thoracic spine when acting unilaterally. Click on the (Anim) link. **Change Frame** to 10. Play the video. **NOTE** while viewing the animation for extension and lateral flexion that all the erector muscles contribute. In performing the action of extension in the thoracic region the *iliocostalis cervicis, iliocostalis thoracis, longissimus thoracis, semispinalis cervicis* and *semispinalis thoracis* are also active. In performing the action of extension in the lumbar region the *iliocostalis lumborum* and *the spinalis thoracis* are more
active. Similarly, in performing the action of lateral flexion in the thoracic region the *iliocostalis cervicis, iliocostalis thoracis, longissimus cervicis, iliocostalis lumborum and the internal* and *external oblique abdominal* muscles are also active. In performing the action of lateral flexion in the lumbar region the *iliocostalis lumborum, psoas major, quadratus lumborum* and the *oblique abdominal* muscles are more active.

**Back on the left menu under 3D views, under Trigger Points, click on Multifidus 1** (may have to scroll down)

**Change Frame** to 18  
**Change Layer** to 2  

**Identify Structures:**

- Multifidus 1 (click on the trigger point indicated by the symbol #) - **Read** the contents of dialogue box.

**Study:** The location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.

**Change Frame** to 36 to view the anterior location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.

**Back on the left menu under 3D views, under Trigger Points, click on Multifidus 2** (may have to scroll down)

**Change Frame** to 18  
**Change Layer** to 2  

**Identify Structures:**

- Multifidus 2 (click on the trigger point indicated by the symbol #) - **Read** the contents of dialogue box.

**Study:** The location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.

**Change Frame** to 36 to view the anterior location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.

**Back on the left menu under 3D views, under Trigger Points, click on Multifidus 3** (may have to scroll down)

**Change Frame** to 18  
**Change Layer** to 2
Identify Structures:

- Multifidus 3 (click on the trigger point indicated by the symbol #) - Read the contents of dialogue box.

Study: The location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.

Back on the left menu under 3D views, under Trigger Points, click on Multifidus 4 (may have to scroll down)

Change Frame to 18
Change Layer to 2

Identify Structures:

- Multifidus 4 (click on the trigger point indicated by the symbol #) - Read the contents of dialogue box.

Study: The location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.

Identify Structures:

- Transversospinalis: multifidus (click on muscle) - Read the contents of dialogue box.
- Under Primary Actions, Contralateral rotation of the cervical spine when acting unilaterally. Click on the (Anim) link. Change Frame to 8. Play the video.
- Under Contralateral rotation of the trunk when acting unilaterally. Click on the (Anim) link. Change Frame to 10. Play the video.

Back on the left menu under 3D views, under Trigger Points, click on Quadratus lumborum 1 (may have to scroll down)

Change Frame to 18
Change Layer to 2

Identify Structures:

- Quadratus lumborum 1 (click on the trigger point indicated by the symbol #) - Read the contents of dialogue box.

Study: The location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.
**Change Frame** to 26 to view the lateral location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.

**Change Frame** to 34 to view the anterior location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.

**Back on the left menu under 3D views, under Trigger Points, click on Quadratus lumborum 2** (may have to scroll down)

**Change Frame** to 21  
**Change Layer** to 2

**Identify Structures:**

- Quadratus lumborum 2 (click on the trigger point indicated by the symbol #) - **Read** the contents of dialogue box.

**Study:** The location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.

**Change Frame** to 25 to view the lateral location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.

**Back on the left menu under 3D views, under Trigger Points, click on Quadratus lumborum 3** (may have to scroll down)

**Change Frame** to 18  
**Change Layer** to 2

**Identify Structures:**

- Quadratus lumborum 3 (click on the trigger point indicated by the symbol #) - **Read** the contents of dialogue box.

**Study:** The location of the primary (dark shaded) and secondary (light shaded) referral patterns of the muscle.

**Identify Structures:**

- Quadratus lumborum (click on muscle) - **Read** the contents of dialogue box.  
- Under Primary Actions, Lateral flexion of the lumbar spine when acting unilaterally. Click on the (Anim) link. Play the video.  
- Under Proximal Attachment, click on the link for Transverse Processes. **Change Frame** to 20.  
  **Change Layer** to 6. **Read** the contents of dialogue box and study the attachments of the muscle.
After you complete this assignment, CLOSE the dissection window and return to the course page to answer course quiz questions.