### ETSU Applied Anatomy & Clinical Procedure Series:
**Lumbar Puncture**

Saturday, March 2, 2019

ETSU Quillen College of Medicine - Johnson City, TN

<table>
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<tr>
<th>Time</th>
<th>Activity</th>
<th>Learning Objectives:</th>
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<tr>
<td>7:30 AM – 7:50 AM</td>
<td>Breakfast and Registration</td>
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<tr>
<td>7:50 AM – 8:00 AM</td>
<td>Welcome and Introductions</td>
<td><em>As a result of participating in this activity, the attendee will be able to...</em></td>
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</table>
| 8:00 AM – 9:00 AM | **The Clinical Anatomy of Lumbar Puncture**                   | • Identify relevant anatomy of the back and spine, including the anatomical landmarks for the procedure  
                              *Caroline Abercrombie, MD*  
                              *Jodi Carlsen, MSNA, CRNA*  
                              *Michelle Couper, DNAP, CRNA*  
                              • Discuss the anatomical considerations of planning, administering, and managing lumbar puncture  
                              • Describe the basic approach and technique to the procedure  
                              • Identify information to be documented after performing a lumbar puncture  
                              • Identify potential adverse effects of a lumbar puncture |
| 9:00 AM – 9:15 AM | Break and Transition into Lab                                |                                                                                      |
| 9:15 AM – 10:15 AM | **Anatomy Review: Virtual Reality and Applied Clinical Anatomy** | • Identify the relevant anatomy of the back and spine, including the anatomical landmarks for the procedure  
                              *Breakout Session 1*  
                              *Rob Becker, BS*  
                              *Thomas Kwasigroch, PhD*  
                              • Discuss important anatomical relationships in the back and spine that are pertinent to lumbar puncture |
<p>| 10:15 AM – 10:25 AM | Transition to Breakout Session 2                             |                                                                                      |</p>
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<tr>
<th>Time</th>
<th>Session Description</th>
<th>Activities</th>
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<tr>
<td>10:25 AM – 11:25 AM</td>
<td><strong>Lumbar Puncture: Clinical Procedure Station</strong>&lt;br&gt;Breakout Session 2&lt;br&gt;<em>Jodi Carlsen, MSNA, CRNA&lt;br&gt;Michelle Couper, DNAP, CRNA</em></td>
<td>- Understand the basic indications and contraindications for lumbar puncture&lt;br&gt;- Review equipment required to successfully perform a lumbar puncture&lt;br&gt;- Demonstrate competency in performing a lumbar puncture on a surgical donor&lt;br&gt;- Discuss steps to identify and mitigate potential complications</td>
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<td>11:25 AM – 11:35 AM</td>
<td><strong>Transition to Breakout Session 3</strong></td>
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<td>11:35 AM – 12:35 PM</td>
<td><strong>Simulation Lab Scenario</strong>&lt;br&gt;Breakout Session 3&lt;br&gt;<em>Nathan Justice, MD</em></td>
<td>- Demonstrate competency in lumbar puncture strategies through simulation lab scenario performance&lt;br&gt;- Identify relevant symptoms and contraindications associated with lumbar puncture</td>
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<td>12:35 PM – 12:45 PM</td>
<td><strong>Debrief and Review of the Credit Claiming Process</strong></td>
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ETSU Applied Anatomy & Clinical Procedure Series:
Lumbar Puncture
March 2, 2019
ETSU Quillen College of Medicine, Johnson City, TN

Activity Directors
Caroline Abercrombie, MD

Target Audience
Family Practice Physicians, Internal Medicine Physicians, Emergency Medicine Physicians, Physician Assistants, Advanced Practice Nurses, CRNAs

Overall Conference Objectives
As a result of attending this activity, the participant will be able to:

- List the indications and potential adverse effects for lumbar puncture
- Identify relevant anatomy of the back and spine, including the anatomical landmarks for the procedure
- Demonstrate the basic approach and technique to the procedure

Disclosure Information and Potential Conflicts of Interest
East Tennessee State University’s Quillen College of Medicine, Office of Continuing Medical Education (OCME) holds the standard that its continuing medical education programs should be free of commercial bias and conflict of interest. It is the policy of the OCME that each presenter and planning committee member of any CME activity must disclose any financial interest/arrangement or affiliation with commercial organizations whose products or services are being discussed in a presentation. All commercial support of an educational activity must also be disclosed to the conference attendees.

Participants with No Potential Conflicts of Interest
Each of the following individuals have completed a disclosure form indicating that neither they nor their spouse/family have a financial interest/arrangement or affiliation that could be perceived as a real or apparent conflict of interest related to the content or supporters involved with this activity:

Activity Directors
Caroline Abercrombie, MD

Planning Committee Members
Robert Becker, BS
Elizabeth Wolf, MBA, CPPS, CPHRM
Speakers/ Skills Session Instructors

Caroline Abercrombie, MD  
Rob Becker, BS  
Jodi Carlsen, MSNA, CRNA  
Michelle Couper, DNAP, CRNA  
Nathan Justice, MD  
Thomas Kwasigroch, PhD

Commercial Support Disclosure

It is the policy of the Office of Continuing Medical Education at Quillen College of Medicine, East Tennessee State University to disclose all commercial supporters of this educational activity from which educational grants were received. This activity has received NO commercial support via educational grants.

The mission of the Office of Continuing Medical Education at the Quillen College of Medicine is to provide lifelong learning opportunities that meet the needs of faculty, community physicians and other health professionals. In addition, the Office of CME is committed to excellence and dedicated to the improvement of health care in Northeast Tennessee and the surrounding Appalachian Region.

Handouts

If the author has given permission for us to share his/her presentation(s) it will be posted online and will be available for download and viewing at:
https://www.etsu.edu/com/cme/lumber_puncture.php

Transcripts of CME Credit

You have 30 days to complete the evaluation in order to claim credit. By completing the evaluation and posttest in the HighMarks system this activity will be added to your TRANSCRIPT, which is maintained in the ETSU Office of CME. You may print your transcript online from your HighMarks account. Ww2.highmarksce.com/etsu. Check with the Registration Desk for information on how to access and print your transcript, or call our office, 423-439-8027, with questions.

Conference Planner

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If you have questions, concerns, or comments about this activity, please contact:  
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Accreditation

**ACCME Accreditation:** The Quillen College of Medicine, East Tennessee State University, is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

**CME Credit:** Quillen College of Medicine, East Tennessee State University designates this live activity for a maximum of 4.0 AMA PRA Category 1 Credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through the Quillen College of Medicine, East Tennessee State University. The Quillen College of Medicine, East Tennessee State University is accredited by the ACCME to provide continuing medical education for physicians.