Welcome to the updated 2019 Carolina Refresher Course (CRC), a unique and refreshingly enjoyable learning experience hosted at the desirable, family-friendly Kiawah Island Golf Resort. We invite you to update your medical skills in the morning and then take time to relax on the barrier island beaches or explore the bountiful activities of Kiawah Island in the afternoon. Or visit the nearby historic sites and sample the renowned restaurants within America’s best-preserved colonial city, Charleston, SC.

In a hospitable and relaxed atmosphere, you will meet expert UNC School of Medicine faculty and invited guest speakers from various fields. The CRC offers valuable 30-minute lecture sessions covering carefully-selected, relevant, and up-to-date topics. Offering much more than passive listening, the CRC features active participation through intimate, small group problem-based learning discussions (PBLD) as well as interactive, expert speaker panels with devoted time for question-answer sessions. New for 2019 are several internationally recognized guest speakers in pain and regional anesthesia, as well as hands-on TTE, TEE, and point-of-care ultrasound (POCUS) workshops.

The CRC’s schedule uniquely affords time for afternoon exploration of Kiawah Island and surrounding Charleston. The Kiawah Golf Resort is home to five championship golf courses, including the Ocean Course, the #4 public golf course in the U.S. according to Golf Digest and home of the upcoming 2021 PGA Championship. Relax at the top-ranked luxury spa, swimming pools, or miles of wondrous, natural seaside splendor. In addition to the luxurious amenities, try your hand at the tennis resort that has been ranked No. 1 nationally for multiple years. With recreational options including water sports, nature trails, cycling, wildlife tours, as well as multiple youth and teen activities, Kiawah offers fun for the whole family.

We invite you to come sample the Carolina teaching experience and join those who return for the CRC’s tradition of quality and intimate learning amid a renowned, beach resort destination. Register today, we guarantee you’ll find our course refreshing!
Course Directors

DAVID HARDMAN, MD, MBA, FASA
Professor and Vice Chair for Professional Affairs, University of North Carolina at Chapel Hill, Carolina Refresher Course Director

JAMES C. KRAKOWSKI, MD
Assistant Professor of Anesthesiology, University of North Carolina at Chapel Hill, Course Co-Director

University of North Carolina at Chapel Hill Faculty

Department of Medicine

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Professor of Medicine, Fellowship Director, Hematology/Oncology Program

Department of Anesthesiology

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Assistant Professor of Anesthesiology and Critical Care Medicine

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J. GREGORY BALFANZ, MD
Assistant Professor of Anesthesiology

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Professor of Anesthesiology, Chief of Pain Medicine, Director, Acute Pain Management, Sidney Kimmel Medical School of Thomas Jefferson University, ASRA President 2019-2021

University of North Carolina at Chapel Hill Faculty

MEENA BHATIA, MD
Assistant Professor of Anesthesiology and Critical Care Medicine

BENJAMIN G. COBB, MD
Assistant Professor of Anesthesiology and Obstetrics and Gynecology

BENJAMIN J. HELLER, MD
Assistant Professor of Anesthesiology

PRIYA A. KUMAR, MD
Professor of Anesthesiology and Director of Clinical Research of Anesthesiology

MATT C. MAUCK, MD PHD
Assistant Professor of Anesthesiology

ANTHONY N. PASSANNANTE, MD
Professor and Executive Vice Chair of Anesthesiology

SARA L. PITTENGER, MD
Associate Professor of Anesthesiology and Pediatrics

RICARDO A. SERRANO, MD
Assistant Professor of Anesthesiology

DAVID A. ZVARA, MD
Professor and Chair of Anesthesiology

Guest Faculty

KI JINN CHIN, MBBS, MMED, FANZCA, FRCPC
Associate Professor, Department of Anesthesia, Faculty of Medicine, University of Toronto

JERROLD H. LEVY, MD, FAHA, FCCM
Professor of Anesthesiology, Professor of Cardiothoracic Surgery, Co-Director, Cardiothoracic ICU, Duke University

MEENA BHATIA, MD
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<table>
<thead>
<tr>
<th>Time</th>
<th>Wednesday JUNE 19</th>
<th>Thursday JUNE 20</th>
<th>Friday JUNE 21</th>
<th>Saturday JUNE 22</th>
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<tbody>
<tr>
<td>6:15-6:55</td>
<td>Continental breakfast, exhibit area open</td>
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<tr>
<td>6:55-7:00</td>
<td>Daily Announcements</td>
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<tr>
<td>7:00-7:30</td>
<td>Challenges and controversies in trauma management <strong>Jacob D. Acton, MD</strong></td>
<td>New developments in carotid disease &amp; carotid endarterectomy <strong>Anthony N. Passannante, MD</strong></td>
<td>Pediatric anesthesia literature update for 2019: How will it affect your clinical practice? <strong>Sara L. Pittenger, MD</strong></td>
<td>How do I avoid aspiration in a patient with a bowel obstruction? Lessons from medicolegal review <strong>Harendra Arora, MBBS</strong></td>
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<tr>
<td>7:30-8:00</td>
<td>Allergic and anaphylactic reactions in the perioperative setting <strong>Jerrold H. Levy, MD, FAHA, FCCM</strong></td>
<td>Concepts and controversies in acute pain management <strong>Eugene R. Viscusi, MD</strong></td>
<td>Management of acute heart failure <strong>Jerrold H. Levy, MD, FAHA, FCCM</strong></td>
<td>The nexus of addiction, addiction treatment, and acute pain management in 2019 <strong>Eugene R. Viscusi, MD</strong></td>
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<td>8:00-8:30</td>
<td>POCUS: How to acquire and interpret basic transthoracic cardiac views <strong>David Hardman, MD, MBA, FASA</strong></td>
<td>Perioperative point of care ultrasound for lung and gastric evaluation <strong>David Hardman, MD, MBA, FASA</strong></td>
<td>Ultrasonography of the spine for neuraxial blockade <strong>Ki Jinn Chin, MBBS, MMed, FANZCA, FRPC</strong></td>
<td>Update on post-Cesarean analgesia <strong>Benjamin G. Cobb, MD</strong></td>
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<td>8:30-9:00</td>
<td>Panel &amp; Daily Review with Faculty</td>
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<td>9:00-9:30</td>
<td>Break &amp; Exhibits</td>
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<td>9:30-10:00</td>
<td>Sex differences in anesthesiology and pain medicine and how it affects clinical practice <strong>Matt C. Mauck, MD, PhD</strong></td>
<td>Congenital coagulation defects and how to manage them <strong>Alice D. Ma, MD</strong></td>
<td>Perioperative management of patients with coronary artery stents: Guideline update <strong>Priya A. Kumar, MD</strong></td>
<td>Break &amp; Exhibits</td>
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<tr>
<td>10:00-10:30</td>
<td>Tips and tricks for optimizing technical performance in US-guided peripheral nerve blocks <strong>Ki Jinn Chin, MBBS, MMed, FANZCA, FRPC</strong></td>
<td>All you ever wanted to know about the erector spinae and other related blocks <strong>Ki Jinn Chin, MBBS, MMed, FANZCA, FRPC</strong></td>
<td>Acquired coagulation defects and how to manage them <strong>Alice D. Ma, MD</strong></td>
<td>GI endoscopy: Complications and advanced procedures coming soon to a suite near you <strong>Benjamin J. Heller, MD</strong></td>
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<td>10:30-11:00</td>
<td>How to manage your pediatric congenital heart patient for non-cardiac surgery <strong>Sara L. Pittenger, MD</strong></td>
<td>Anticoagulation guideline update: What you need to know for best practice in administration of regional and neuraxial anesthesia <strong>Matt C. Mauck, MD, PhD</strong></td>
<td>Is your code team up to snuff? How to improve your institutional response to life threatening cardiac events <strong>J. Gregory Balfanz, MD</strong></td>
<td>Innovations in anesthesia and how they are transforming our clinical practice in 2019 <strong>James C. Krakowski, MD</strong></td>
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<td>11:00-11:30</td>
<td>Active management of labor neuraxial analgesia <strong>Benjamin G. Cobb, MD</strong></td>
<td>New concepts in the treatment of bleeding <strong>Jerrold H. Levy, MD, FAHA, FCCM</strong></td>
<td>Hopping off the hamster wheel: Defining success and failure in your practice <strong>David A. Zvara, MD</strong></td>
<td>Reducing intraoperative blood transfusions: Fighting dogma with evidence &amp; quality improvement <strong>J. Gregory Balfanz, MD</strong></td>
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<td>11:30-12:00</td>
<td>Panel &amp; Daily Review with Faculty</td>
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**Problem-Based Learning Discussion**

- **Everyday pediatric anesthesia dilemmas and how to tackle them (max 12 registrants)** **Sara L. Pittenger, MD**
- **Case studies in coagulation management** **Alice D. Ma, MD**
- **Dealing with disruptive personalities in your organization** **David A. Zvara, MD**

**Workshops**

- **POCUS: Cardiac parasternal, apical & subcostal window scanning in live models (max 16 registrants)** **Meena Bhatia, MD; Jacob D. Acton, MD; Ricardo A. Serrano, MD; David Hardman, MD, MBA, FASA**
- **POCUS: Cardiac review, gastric, and abdominal scanning in live models** **Meena Bhatia, MD; Jacob D. Acton, MD; Ricardo A. Serrano, MD; David Hardman, MD, MBA, FASA**
- **POCUS: Lung and abdominal scanning, plus cardiac review in live models** **Meena Bhatia, MD; Jacob D. Acton, MD; Ricardo A. Serrano, MD; David Hardman, MD, MBA, FASA**

**Workshops**

- **Simulator based TEE and TTE scanning & interpretation (max 8 registrants)** **Priya A. Kumar, MD; Harendra Arora, MBBS**
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**Meet faculty & colleagues**

**Wine Pour Reception**

Come join us for beer, wine, and heavy hors d’oeuvres. Free to registrants, but guests can attend for $20 per person.
**Conference Location** All sessions will be conducted at the East Beach Conference Center, Kiawah Island Resort. Kiawah Island is 21 miles south of Charleston and a 45-minute drive from Charleston International Airport (CHS). Additional resort information is available at kiawahisland.com. Kiawah Island Resort is on a lush barrier island with unspoiled beaches, great visibility due to lack of high rises, waterways perfect for kayaking and one of the top US golf courses. Be sure to sample the Southern charm, sights and world-class restaurants of Charleston, one of the best-preserved colonial cities in America.

**Staying in Kiawah** A block of 1- and 2-bedroom condos has been reserved for attendees of the Carolina Refresher Course at the Kiawah Island Resort. To make a reservation, please call Kiawah Island Resort at (800) 654-2924 and identify yourself with the UNC School of Medicine, booking code 15158. Individuals are responsible for making their own reservations. A non-refundable deposit equal to one night's stay per reserved accommodation is required. The deposit guarantees accommodations for the scheduled arrival day and will be applied to the last night's reservation. Early departure, or failure to arrive on the scheduled arrival day, will result in forfeiture of the deposit. It is recommended that reservations be made at the earliest opportunity. There are a limited number of rooms at the preferred rate, and they book quickly! In addition, a limited block of rooms is available at the beachfront Sanctuary luxury hotel upon request. Please contact Kiawah Resort for prices and availability.


<table>
<thead>
<tr>
<th>Conference Pricing</th>
<th>Registration Fee</th>
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<tr>
<td><strong>Before</strong></td>
<td><strong>After</strong></td>
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<tr>
<td>12/31</td>
<td>3/19</td>
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<tr>
<td>Physician, CRNA</td>
<td>$735</td>
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**Point-of-Care-Ultrasound Workshops**
Three-day workshop will cover cardiac, lung and abdominal scanning and is limited to a total of 16 participants, 4 attendees per instructor. Complimentary, but first come, first serve. You can only register for one workshop each day.

**Simulator based TEE and TTE Workshops**
The simulator-based TEE and TTE workshop sessions are limited to 8 participants each and will cover different scanning windows for both transesophageal and transthoracic echocardiography. Complimentary, but first come, first serve. You can only register for one workshop each day.

**Truncal & Spine Ultrasonography Workshops**
The truncal nerve blocks and spine ultrasonography workshop sessions are limited to 8 participants each and will cover the different ultrasound scanning views for truncal nerve blocks and spine anatomy. Complimentary, but first come, first serve. You can only register for one workshop each day.

**Problem-Based Learning Discussions**
Problem-Based Learning Discussion sessions are complimentary, but limited to 12 participants each, so please register early as they tend to fill quickly. Case discussions and references will be emailed to registered attendees two weeks prior to the course.

**Educational Objectives**
The information presented at this educational activity should improve your ability to:
- Manage challenges in trauma
- Distinguish perioperative allergic and anaphylactic reactions
- Review basic point-of-care-ultrasound indications and recognize pathology
- Account for sex differences in the management of pain
- Review the management of pediatric congenital heart disease for non-cardiac surgery
- Discuss active labor epidural management and review safety
- Implement the newest techniques in carotid surgery management
- Describe controversies in acute pain management
- Manage congenital coagulation defects
- Utilize new treatments in the bleeding patient

**Statement of Need**
Anesthesiology, Pain, and Critical Care Medicine are medical disciplines uniquely characterized by an exponentially expanding base of peer reviewed literature, evolving technology, and new techniques combined with ever increasing clinical realms of practice in which this novel information is relevant. The Carolina Refresher Course seeks to present a portion of this material in a format that emphasizes utility, practicality, and retention so that the content learned may be easily and effectively applied in the improvement of patient safety, comfort, and satisfaction.

**Target Audiences**
The course is designed for physicians, including but not limited to anesthesiologists, critical care specialists, pain specialists, surgeons, and internists, as well as certified registered nurse anesthetists, anesthesiology resident and fellow physicians, certified anesthesiologist assistants, and allied services practitioners.

**Course Credit**
Physicians: The School of Medicine of the University of North Carolina at Chapel Hill designates this live activity for a maximum of 22 AMA PRA Category 1 Credits ™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

CRNAs: This program has been approved by the American Association of Nurse Anesthetists for a pending approval maximum of CE credits; Code Number pending; Expiration Date pending. CRNAs should only claim credit commensurate with the extent of their participation in the activity.

**Accreditation**
The School of Medicine of the University of North Carolina is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

**Contact Information**
For additional information, please send an email to: anesthesiologycme@aims.unc.edu with "CRC 2019" in the subject line. Fee includes certificate of completion and online handouts. Continental breakfast and refreshments provided. Directions with information to on how to download handouts will be sent several weeks before the meeting.

**Disclosures**
This activity has been planned and implemented under the sole supervision of the course directors, in association with the UNC Office of Continuing Professional Development (UNC CPD). This activity has not received any financial support from commercial interests.

**ADA Statement**
If an attendee requires the use of auxiliary aids or services identified by the American Disabilities Act in order to attend this meeting, he or she should contact Lynn Craven at 919-966-0009.

**Refund/Credit/Payment/Cancellation Policy**
Cancellation request prior to midnight, May 20, 2019 — a full refund will be issued. After midnight, May 20, 2019— no refunds will be issued. All cancellations must be submitted in writing (fax, email, or postmarked mail). No Substitutes.

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**Register ONLINE**

at [GO.UNC.EDU/CRC2019](http://GO.UNC.EDU/CRC2019)

Scan the code to get started

You may also call or email Lynn Craven to register at 919-966-0009, or Lynn_Craven@med.unc.edu
Register today at

GO.UNC.EDU/CRC2019

Scan the code to get started

Save the Date | June 24-27, 2020 | June 23-26, 2021