20th Annual Advances in Physiology and Pharmacology in Anesthesia and Critical Care

October 25, 2014 \ Workshops
October 25–28, 2014 \ General Session

The Greenbrier
White Sulphur Springs, W.Va.
Welcome to the 20th annual meeting of Advances in Physiology and Pharmacology in Anesthesia and Critical Care presented by the Department of Anesthesiology of Wake Forest School of Medicine. We have an outstanding faculty who will present current information of scientific and clinical importance. These presentations will aid in the understanding of new techniques, equipment and patient management issues facing today’s practitioners of anesthesia and critical care medicine. We provide time for questions and answers in the form of panel discussions after each series of lectures. You also have the opportunity to attend an Airway Management Workshop or participate in an Ultrasound Vascular Access Workshop. Furthermore, our popular special lecture on Saturday evening provides an opportunity for you and your guest to hear a renowned speaker on an interesting national issue.

Kenneth E. Nelson, MD, Co-director
Roger L. Royster, MD, Co-director
Program Committee

Target Audience
This course will provide expert knowledge on innovative/basic physiologic principles and pharmacologic techniques for physicians, resident physicians, nurse anesthetists and student nurse anesthetists, as well as pharmacologists, pharmacists and other health care providers.

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

Registration
To register online, go to www.nwahec.org/?43151. If paying by check, please mail the registration form and check to the Office of Continuing Medical Education, Wake Forest School of Medicine, Medical Center Blvd., Winston-Salem, NC 27157-1028. Checks should be made payable to Wake Forest University Health Sciences. If paying by credit card, you may FAX the registration form to 336-713-7701. For further information, call Sherri Stockner at 336-716-2712 or email Sherri at sstockne@wakehealth.edu.

Cancellation Policy
The registration cancellation deadline is Friday, Sept. 19, 2014, beyond which no refunds will be issued. Meeting cancellation must be received in writing by Sept.19, 2014, in order to receive a full refund less a $75 administrative charge. Hotel reservations must be cancelled seven days prior to arrival; failure to cancel forfeits your deposit.

WakeHealth.edu/anes-cme-annual-meeting
Course Goals and Objectives
This course will provide state-of-the-art information regarding the physiology of various disease states, newer anesthetic techniques and updated modes of therapy.

At the conclusion of the course, the participant should be better able to:
• Understand challenges associated with providing medical care within a military setting and understand how well-functioning teams facilitate care in a high stress environment.
• Utilize the lessons learned from cases reported to the Anesthesia Incident Reporting System in order to reduce preventable errors in the future.
• Differentiate among the various levels in the coagulation cascade where natural and iatrogenic coagulopathies occur, and respond appropriately in these challenging situations.
• Recognize the characteristics of disruptive colleagues in the workplace, and employ effective strategies to deal with ongoing relationships.
• Identify a variety of coagulopathies that occur congenitally, and determine the important anesthetic implications that result.
• Utilize the latest anticoagulation guideline updates in the practice of regional anesthesia.
• Apply the latest recommendations in preparing the patient with cardiac disease for their non-cardiac surgery.
• Distinguish the difference between the output generated from awareness monitors and the actual prevention of awareness during surgery.
• Analyze the process involved in creating practice guidelines and better understand both their practicality and limitations.
• Formulate 10 strategies that will improve analgesic success and patient satisfaction when managing labor epidurals.
• Manage magnesium and antihypertensive therapy during anesthetic care of the preeclamptic parturient.
• Illustrate that traditional doses of oxytocin are excessive, question the appropriateness of ongoing practice and select a more evidence-based approach to dosing oxytocin.
• Define the implications of obstructive sleep apnea on anesthetic management and implement the strategies necessary to safely manage these patients through the intraoperative and postoperative course.
• Understand why medical error is usually a result of system issues, and why it is critical to have a system to report and review cases.
• Formulate the safest anesthetic plan to minimize the risk of operating room fire, by distinguishing avoidable risks in the fire triad.
• Recognize a variety of chronic pain drugs and devices, and identify how to tailor the operating room anesthetic management specific to the needs of these challenging patients.
• Select from various available intravenous fluids to employ them for their most appropriate applications.
• Understand the known factors increasing the risk of postoperative delirium and plan anesthetic strategies to minimize delirium in at-risk patients undergoing surgery.
• Illustrate the role of regional anesthesia in influencing the incidence of chronic pain.
• Differentiate among a variety of anesthetic techniques for total knee surgery and construct the best plan for each patient based on individual needs and goals.
• Recognize the potential benefits of a newly available liposomal local anesthetic and utilize it in current regional anesthetic practice.
• Understand the components of the total joint bundle and how each can potentially lead to better outcomes.
• Describe the latest indications of intervention in cerebrovascular disease and respond appropriately to procedural complications.
• Summarize the implications of managing a patient who has previously had any one of a variety of electronic devices implanted for the ongoing treatment of cardiac disease.

Physician Credit
The Wake Forest School of Medicine designates this live activity for a maximum of 23 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

General Session: A maximum of 19.75 AMA PRA Category 1 Credits™
Airway Workshop: A maximum of 3.25 AMA PRA Category 1 Credits™
Ultrasound Vascular Access Workshop: A maximum of 2.25 AMA PRA Category 1 Credits™
CRNA Credit

**General Session:** This program is awarded 17 CEs by the American Association of Nurse Anesthetists, Code No. 1029636, Expiration Date: October 28, 2014.

**Airway Workshop:** This program is awarded 3 CEs by the American Association of Nurse Anesthetists, Code No. 1029637, Expiration Date: October 25, 2014.

**Ultrasound Vascular Access Workshop:** This program is awarded 2 CEs by the American Association of Nurse Anesthetists, Code No. 1029638, Expiration Date: October 25, 2014.

Conflict of Interest Policy

It is the policy of Wake Forest School of Medicine to require disclosure of any significant financial interest or any other relationship a faculty member or planning committee member has with the manufacturer(s) of any commercial products or services discussed in an educational presentation. This information can be found in the syllabus.

Special Needs

Wake Forest School of Medicine adheres to the Americans with Disabilities Act. Please report to the Department of Anesthesiology at 336-716-2712 any special needs you may have for participation in and/or access to this educational activity.

General Information

**Location (www.greenbrier.com)**

The Greenbrier is located in White Sulphur Springs, W.Va., on 6,500 acres in the scenic Allegheny Mountains. The resort is a AAA Four-Diamond property, a distinction it has held since the inception of the award. A National Historic Landmark, the Greenbrier features classic architecture, exquisite interior design, carefully sculpted landscape and impeccable service. The Greenbrier offers exclusive services and amenities such as championship golf, fine dining, more than 50 activities, designer boutiques, a 40,000-square-foot five-star spa and a 103,000-square-foot gaming and entertainment venue.

Accommodations

The Greenbrier Resort, Reservations: 855-993-8999 (Option #2).

*For guaranteed space in the Anesthesia Meeting Block, make your reservation prior to Aug. 24, 2014; after this date, room requests will be accommodated on a space available basis.*

- **Standard Guestrooms (1 king bed)**: $205 per night
- **Intermediate Guestrooms (1 king or 2 double beds)**: $205 per night
- **Superior Guestrooms (1 king or 2 double beds, more spacious)**: $235 per night
- **Deluxe Guestrooms (1 king, more spacious)**: $255 per night
- **Junior Suites (1 king or 2 double beds and separate sitting areas)**: $305 per night

There is a daily service charge of $25 per room for service and amenities. This includes housekeeping service twice daily, local and toll free calls, wireless internet access and daily newspaper delivery Monday through Saturday. Complimentary valet parking is available.

Dinner reservations are the individual guest’s responsibility and should be made as early as possible to guarantee prime-time dining. Dress code at The Greenbrier is casual. Coat and tie are required at dinner in the Main Dining Room. Other restaurants welcome casual attire.

Travel

If using a GPS device to locate the main entrance to The Greenbrier Resort, please enter 300 W. Main St., White Sulphur Springs, WV, as the street address.

Airlines/Train

Greenbrier Valley Airport (LWB), served by Delta and Continental Airlines, is located only 15 minutes away from The Greenbrier. Other fairly convenient airports are: Roanoke, Va., (ROA) 75 miles from The Greenbrier and Beckley, W.Va., (BKW) 50 miles from the Greenbrier.

Amtrak rail service (800-872-7245) is available across the street from The Greenbrier on Sundays, Wednesdays and Fridays.
Workshops Limited Space (please register early)

Awake Intubation and Airway Workshop (Chesapeake Bay, 1st Floor)
Scott Miller, MD, Director

Saturday, October 25, 2014
1:45 – 2:00 pm  Registration
2:00 – 5:15 pm  Airway Workshop

Objectives
At the conclusion of this workshop the participant should be better able to:
• Understand the overall context awake intubations have in airway management.
• Perform the glossopharyngeal nerve block and understand its importance in airway anesthesia.
• Perform the superior laryngeal nerve block.
• Use the fiberoptic scope and understand in a step-by-step manner how to enter the trachea with the fiberoptic scope.
• Manipulate the fiberoptic scope through the use of a maze simulator.

Ultrasound Vascular Access Workshop (Chesapeake Room, 1st Floor)
J. Wells Reynolds, MD, Director

Saturday, October 25, 2014
1:45 – 2:00 pm  Registration
2:00 – 4:15 pm  Vascular Access Workshop

Ultrasound technology has made it possible to image and identify veins, arteries and neural structures that can facilitate safe and rapid vascular access in the difficult patient. This workshop is designed to provide education and skills training to medical personnel who are tasked with vascular cannulation. From routine central venous catheter placement to challenging peripheral intravenous and arterial line establishment, the ultrasound is a valuable tool. The participant will also learn about new, non-ultrasound modalities that allow for visualization of venous structures.

Objectives
At the conclusion of this workshop the participant should be better able to:
• Review the basics of ultrasound.
• Identify the appearance of veins and arteries.
• Learn the four probe movements that optimize image acquisition.
• Adjust vascular access techniques to account for peripheral vascular disease processes.
• Recognize the appearance of a clot and redirect to a different location for vascular access.
## General Session

### Saturday, October 25, 2014

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>4:00 – 5:15 pm</td>
<td>Registration – Colonial Hall</td>
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<tr>
<td>5:15 – 6:30 pm</td>
<td><strong>Wake Forest School of Medicine - Special Lecture</strong></td>
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<tr>
<td></td>
<td>Welcome and Introduction: Roger L. Royster, MD</td>
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<td></td>
<td>Combat Surgery in Afghanistan: 21st Century Medicine in a Tent</td>
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<td>Bryan S. Helsel, MD</td>
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<tr>
<td>6:30 – 7:30 pm</td>
<td>Reception, Chesapeake Room</td>
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<td>(Spouses/Guests are invited to Special Lecture and Welcome Reception)</td>
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### Sunday, October 26, 2014

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>7:15 am</td>
<td>Registration/Continental Breakfast – Chesapeake Room</td>
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#### Session 1: Lessons Learned

**Drew A. MacGregor, MD, Moderator**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>8:00 – 8:35 am</td>
<td>Learning from AIRS Cases</td>
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<tr>
<td></td>
<td>Patrick J. Guffey, MD</td>
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<tr>
<td>8:35 – 9:10 am</td>
<td>Coagulation Management</td>
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<td>Alice D. Ma, MD</td>
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<tr>
<td>9:10 – 9:45 am</td>
<td>Managing the Disruptive Coworker</td>
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<td>Lawrence C. Tsen, MD</td>
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<td>9:45 – 10:15 am</td>
<td>Panel Discussion/Q&amp;A</td>
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<tr>
<td>10:15 – 10:30 am</td>
<td>Break/Visit Exhibits</td>
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#### Session 2: Medical Guidelines and Surgical Patients

**John A. Thomas, MD, Moderator**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>10:30 – 11:05 am</td>
<td>Congenital Defects in Coagulation and Anesthesia</td>
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<td>Alice D. Ma, MD</td>
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<tr>
<td>11:05 – 11:40 am</td>
<td>ASRA Guidelines and the New Anticoagulants</td>
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<td>Joseph M. Neal, MD</td>
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<tr>
<td>11:40 – 12:15 pm</td>
<td>Preoperative Evaluation of the Cardiac Patient for Non-cardiac Surgery</td>
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<td>Wanda M. Popescu, MD</td>
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<tr>
<td>12:15 – 12:50 pm</td>
<td>Prevention of Intraoperative Awareness: From Neurobiology to Clinical Practice</td>
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<td>Michael S. Avidan, MBBCh</td>
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<tr>
<td>12:50 – 1:35 pm</td>
<td>Panel Discussion/Q&amp;A</td>
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<tr>
<td>6:00 – 7:30 pm</td>
<td><strong>PRO:CON Debate</strong></td>
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<td>Practice Guidelines Create More Problems Than They Resolve</td>
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<td>Joseph R. Tobin, MD, Moderator</td>
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<td></td>
<td>Pro: Drew A. MacGregor, MD</td>
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<td></td>
<td>Con: Joseph M. Neal, MD</td>
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### Monday, October 27, 2014

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<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>7:30 am</td>
<td>Registration/Continental Breakfast – Chesapeake Room</td>
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#### Session 3: Insights into Managing the Obstetric Patient

**Kenneth E. Nelson, MD, Moderator**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>8:00 – 8:35 am</td>
<td>Epidural Equinox: 10 Tips to Optimize Your Epidural</td>
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<td>Lawrence C. Tsen, MD</td>
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General Session

8:35 – 9:10 am  Updates on the Anesthetic Management of the Preeclamptic Parturient
Daniel J. Forest, MD

9:10 – 9:45 am  Oxytocin Overdose! Optimizing Dosing During Cesarean Delivery
Lawrence C. Tsen, MD

9:45 – 10:15 am  Panel Discussion/Q&A

10:15 – 10:30 am  Break/Visit Exhibits

Session 4: Patient Safety
Roger L. Royster, MD, Moderator

10:30 – 11:05 am  Perioperative Management of Sleep Apnea
Michael S. Avidan, MBBCh

11:05 – 11:40 am  To Err Is Human
Patrick J. Guffey, MD

11:40 am – 12:15 pm  Only “YOU” Can Prevent OR Fires: Don’t Get Burned!
Michael A. Olympio, MD

12:15 – 1:00 pm  Panel Discussion/Q&A

Session 5: Pearls, Pitfalls and Progress
Scott A. Miller, MD, Moderator

5:30 – 6:05 pm  From Suboxone to Stimulators: The Effect of Chronic Pain on OR Management
Jennifer L. Roux, MD

6:05 – 6:40 pm  Does the Choice of Fluid Really Make a Difference?
Wanda M. Popescu, MD

6:40 – 7:15 pm  Postoperative Delirium: Challenges for Anesthesia Practice
Michael S. Avidan, MBBCh

7:15 – 7:45 pm  Panel Discussion/Q&A

Tuesday, October 28, 2014

7:30 am  Registration/Continental Breakfast – Chesapeake Room

Session 6: Regional Anesthesia
J. Wells Reynolds, MD, Moderator

8:00 – 8:35 am  Can Regional Anesthesia Reduce Chronic Pain?
Laura D. Clark, MD

8:35 – 9:10 am  What is the Best Anesthetic for Total Knee Surgery?
J. Wells Reynolds, MD

9:10 – 9:45 am  “Exparel:” Is It a Game Changer?
Laura D. Clark, MD

9:45 – 10:15 am  Panel Discussion/Q&A

10:15 – 10:30 am  Break/Visit Exhibits

Session 7: Technical Advances in the Management of Surgical Patients
Benjamin N. Morris, MD, Moderator

10:30 – 11:05 am  Total Joint Bundle: Boon or Boondoggle?
Jason E. Lang, MD

11:05 – 11:40 am  Cerebrovascular Disease Management in the Era of Minimally-invasive Techniques
Rashid M. Janjua, MD

11:40 – 12:15 pm  Management of Pacemakers and Ventricular Assist Devices
Roger L. Royster, MD

12:15 – 1:00 pm  Panel Discussion/Q&A
Faculty

The Wake Forest School of Medicine
Department of Anesthesiology

Angela F. Edwards, MD
Assistant Professor

Daniel J. Forest, MD
Assistant Professor

Drew A. MacGregor, MD
Professor

Scott A. Miller, MD
Assistant Professor

Benjamin N. Morris, MD
Assistant Professor

Kenneth E. Nelson, MD
Associate Professor

Michael A. Olympio, MD
Professor

J. Wells Reynolds, MD
Assistant Professor

Jennifer L. Roux, MD
Clinical Assistant Professor

Roger L. Royster, MD
Professor and Vice Chair

John A. Thomas, MD
Associate Professor

Joseph R. Tobin, MD
Professor and Chair

Guest Faculty

Michael S. Avidan, MBBCh, FCASA
Professor of Anesthesiology & Surgery
Director, Institute of Quality Improvement,
Research and Informatics (INQUIRI)
Division Chief, Cardiothoracic Anesthesiology and
Cardiothoracic Intensive Care
Washington University School of Medicine

Laura D. Clark, MD
Professor of Anesthesiology
Director of Acute Pain & Regional Anesthesia
University of Louisville School of Medicine

Patrick J. Guffey, MD
Assistant Professor of Anesthesiology
Director of Process Improvement
Associate Clinical Director
University of Colorado School of Medicine

Bryan S. Helsel, MD, FACS, FACC, FACP
Lieutenant Colonel
Cardiothoracic Surgeon
San Antonio Military Medical Center & Audie L. Murphy South Texas Veterans Health System

Rashid M. Janjua, MD
Assistant Professor of Neurosurgery, Radiology & Vascular Surgery
Director of (Endo)-Cerebrovascular Surgery
Wake Forest School of Medicine

Jason E. Lang, MD
Associate Professor of Orthopaedics
Director of Adult Reconstruction
Wake Forest School of Medicine

Alice D. Ma, MD
Associate Professor, Department of Medicine
Division of Hematology & Oncology
UNC School of Medicine, Chapel Hill

Joseph M. Neal, MD
Professor of Anesthesiology
Virginia Mason Medical Center
University of Washington School of Medicine

Wanda M. Popescu, MD
Associate Professor of Anesthesiology
Director Thoracic Anesthesia Section
Yale University School of Medicine

Lawrence C. Tsen, MD
Associate Professor in Anaesthesia
Harvard Medical School
Associate Director, BWH Center for Professionalism and Peer Support
Vice Chair, Department of Anesthesiology, Perioperative and Pain Medicine
Brigham and Women's Hospital
Registration Form (Print Clearly)

Advances in Physiology and Pharmacology in Anesthesia and Critical Care
October 25–28, 2014

Name ________________________________________________________________

❑ MD  ❑ CRNA  ❑ Other, Specify ________________________________

Name badge should read ______________________________________________

Last 4 digits of SS# (required) __________________________ AANA # (required) __________________________

Institution __________________________________________________________

Address _____________________________________________________________ ❑ Home  ❑ Office

City/State/Zip _________________________________________________________

Email (required) _____________________________________________________

Daytime Phone _______________________________________________________

Workshops

<table>
<thead>
<tr>
<th>Workshops</th>
<th>Please Check</th>
<th>By Sept. 19</th>
<th>After Sept. 19</th>
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<tbody>
<tr>
<td>Sat. Oct. 25 2:00–5:15 pm</td>
<td>Awake Intubation &amp; Airway Workshop <em>(limited to 20 participants)</em></td>
<td>$275</td>
<td>$325</td>
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<tr>
<td>Sat. Oct. 25 2:00–4:15 pm</td>
<td>Ultrasound Vascular Access Workshop <em>(limited to 20 participants)</em></td>
<td>$125</td>
<td>$150</td>
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General Session

| Oct. 26–29 | Physicians | $595 | $645 |
| Nurse Anesthetists and Other Medical Professionals | $550 | $600 |
| Residents and Student Nurse Anesthetists *(letter from program director required)* | $200 | $225 |

Syllabus Options

| Syllabus Options | $25 | $30 |
| Printed Syllabus | | |
| Syllabus on Flash Drive | $20 | $30 |
| On-site Syllabus Download to iPad | $20 | $30 |

Total Fee(s) Enclosed

Three ways to register:
1. On-line: www.nwahec.org/?43151
2. Mail to: Office of Continuing Medical Education
   Wake Forest School of Medicine
   Medical Center Boulevard, Winston-Salem, NC 27157-1028
   Make check payable to: Wake Forest University Health Sciences.
3. Fax using VISA, Mastercard, or American Express: Complete information below and send with this form to 336-713-7701.

Credit Card # _________________________________________________________ ❑ AmEx  ❑ MC  ❑ Visa

Signature ___________________________________________ Exp. Date __________________________

For general meeting information, contact Sherri Stockner at 336-716-2712 or by email: sstockne@wakehealth.edu

Early Registration and Cancellation Deadlines: Friday, September 19, 2014