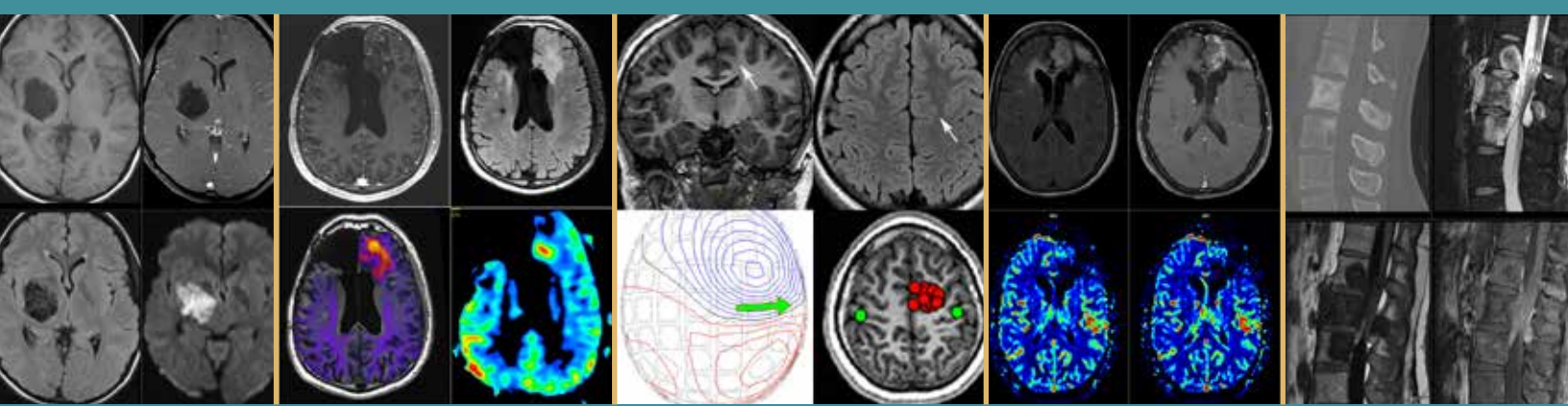




FOCUS SESSION TOPICS

Head/Neck and
Pediatric
Neuroradiology

Advanced Brain
Imaging

Novel Approaches to
Spine Imaging

Innovations in
Neurointerventional
Radiology

Knowledge Beyond
Neuroimaging

ASNR President's Address by
ASNR 2016-2017 President
Howard A. Rowley, MD

Annual Business
Meeting of Members

12.75 AMA PRA
Category 1 Credits™

WESTERN NEURORADIOLOGICAL SOCIETY
IN JOINT SPONSORSHIP WITH
THE INTERNATIONAL INSTITUTE FOR
CONTINUING MEDICAL EDUCATION, INC.

PRESENTS THE

WNRS 48TH Annual Meeting



October 14-16, 2016
Omni Barton Creek Resort & Spa
Austin, Texas

Letter From the President

Dear Friends and Colleagues:

The WNRS 48th Annual Meeting will be held in Austin, Texas at the Omni Barton Creek Resort & Spa, October 14-16, 2016. I am pleased that this meeting will be held in Texas, an area in which we have not held a meeting in the past. We are working hard to expand the society and I want to extend an especially warm welcome to our new members and to first-time attendees to this meeting.

President-elect Steven Imbesi, MD has put together a fantastic program with focus sessions in Advanced Brain Imaging, Spine Imaging, Neurointervention, Head and Neck and Pediatric Imaging, and a special session on Knowledge beyond Neuroimaging. The incoming 2016-2017 ASNR President, and WNRS Senior Member, Howard A. Rowley, MD will be giving his annual update on the ASNR and giving an invited lecture on Gadolinium Deposition in the Brain.

The Omni Barton Creek Resort & Spa is a spectacular facility covering 4,000 acres with a spa, 4 golf courses and 11 tennis courts. In addition to the annual golf outing, organized by Dr. Keith Kortman, Dr. Art Dublin has agreed to organize a tennis tournament. These events are all done in the spirit of good fun and I encourage everyone to participate. So, bring your racket and clubs, these are great ways to spend an afternoon and network with your colleagues.

This is by far my favorite meeting of the year, and I look forward to seeing my neuroradiology friends and welcoming new members to the Society.



William K. Erly, MD, MBA
President WNRS

WNRS 2015-2016 EXECUTIVE COMMITTEE

PRESIDENT

William K. Erly, MD, MBA
University of Arizona
Tucson, Arizona

PRESIDENT-ELECT/PROGRAM CHAIR

Steven G. Imbesi, MD
University of California,
San Diego Medical Center
San Diego, California

SECRETARY

Edward P. Quigley, III, MD, PhD
University of Utah
Salt Lake City, Utah

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Hollie A. Lai, MD
Children's Hospital of Los Angeles
Los Angeles, California

RULES COMMITTEE CHAIR

Roland R. Lee, MD, FACR
UCSD/VA Medical Center
San Diego, California

FIRST PAST PRESIDENT

Arthur B. Dublin, MD, MBA, FACR
University of California,
Davis Medical Center
Sacramento, California

SECOND PAST PRESIDENT

John L. Go, MD, FACR
LAC/USC Medical Center
Los Angeles, California

WNRS PAST PRESIDENTS

1968-70	Gabriel H. Wilson, MD*	1993	Michael Brant-Zawadzki, MD, FACR
1971	R. Thomas Bergeron, MD	1994	William D. Robertson, MD
1972	Henry F. W. Pribram, MD	1995	Joseph R. Thompson, MD
1972	Fred K. Sondheim, MD	1996	Charles E. Seibert, MD
1973	Robert L. Scanlan, MD*	1997	Wallace W. Peck, MD
1974	James A. Pollock, MD*	1998	Livia G. Solti-Bohman, MD, FACR
1975	Calvin L. Rumbaugh, MD	1999	John R. Hesselink, MD, FACR
1976	Leon G. Kaseff, MD	2000	Stephen T. Hecht, MD
1977	T. Hans Newton, MD*	2001	Marvin D. Nelson, Jr., MD, MBA, FACR
1978	Hervey D. Segall, MD	2002	Joseph E. Heiserman, MD, PhD
1979	Richard A. Kramer, MD	2003	Diane R. Newton, MD
1980	John R. Benton, MD	2004	Gary M. Nesbit, MD
1981-82	Anton N. Hasso, MD	2005	William D. Keyes, MD
1983	David Norman, MD	2006	Brian W. Chong, MD, FRCPC
1984	William H. Marshall, MD	2007	Robert J. Sevic, MD, FRCPC
1985	John Howieson, MD	2008	Wade H.M. Wong, DO, FACR
1986	Barton Lane, MD	2009	Walter L. Olsen, MD
1987	John C. Stears, MD*	2010	Christopher F. Dowd, MD
1988	Barry D. Pressman, MD	2011	Richard H. Wiggins, III, MD, CIIP, FSIIM
1989	Dieter R. Enzmann, MD	2012	Keith E. Kortman, MD
1990	Robert W. Jahnke, MD*	2013	John P. Karis, MD
1991	William W. M. Lo, MD*	2014	John L. Go, MD, FACR
1992	Joachim F. Seeger, MD	2015	Arthur B. Dublin, MD, MBA

*Deceased

PROGRAM SCHEDULE

Thursday, October 13, 2016

3:00p – 8:00p Registration Opens – Conference Lobby

Friday, October 14, 2016

7:00a – 12:45p Registration – Conference Lobby

7:00a – 7:50a Continental Breakfast – Barton Creek Room B/C

7:50a – 8:00a Welcome Remarks – Forum Theater. William K. Erly, MD, MBA

8:00a – 10:00a **Focus Session: Head/Neck and Pediatric Neuroradiology – Forum Theater**

Moderators: John L. Go, MD, FACR; Luke N. Ledbetter, MD

8:00a – 8:30a Radiographic Assessment of HPV Related Cancers. Claudia F. E. Kirsch, MD

8:30a – 9:00a Surgical Issues for Head/Neck Cancer Resectability: Current Role of Imaging Jon J. Hallstrom, MD

9:00a – 9:30a Fallor Ergo Sum: Misadventures in Head/Neck Imaging Richard H. Wiggins III, MD, CIIP, FSIIM

9:30a – 10:00a Commonly Overlooked Findings/Diagnoses in Pediatric Neuroradiology. Bido Patel, MD

10:00a – 10:30a Refreshment Break and Visit Technical Exhibits – Barton Creek Room B/C

10:30a – 12:30p **Focus Session: Advanced Brain Imaging I – Forum Theater**

Moderators: Hollie A. Lai, MD; Rivka R. Colen, MD

10:30a – 11:00a Post-operative Imaging of Brain Tumors Using Restriction Spectrum Imaging Nikdokht Farid, MD

11:00a – 11:30a Magnetoencephalography and the Diagnosis of Concussions Roland R. Lee, MD, FACR

11:30a – 12:30p Scientific Oral Presentations I

12:30p – 12:45p Discussion and Questions

12:45p – 1:15p Fellow/Attending Job Fair Social – Barton Creek Room A

1:30p – 5:00p **Tennis Tournament** (separate registration required) – Omni Barton Creek Tennis Club

Coordinator/Moderator: Arthur B. Dublin, MD, MBA, FACR

6:00p – 7:30p Opening Reception – The Hill Country Veranda

Saturday, October 15, 2016

7:00a – 12:45p Registration – Conference Lobby

7:00a – 7:30a Annual Business Meeting Breakfast (Open to all attendees, guests, exhibitors) – Barton Creek Room A

7:30a – 8:00a Annual Business Meeting – Business portion (WNRS Members Only) – Forum Theater

8:00a – 10:00a **Focus Session: ASNR President's Address and Advanced Brain Imaging II – Forum Theater**

Moderators: Hervey D. Segall, MD; Salmaan Ahmed, MD

8:00a – 8:30a ASNR President's Address. Howard A. Rowley, MD

8:30a – 9:00a Gadolinium Deposition in the Brain: Imaging Curiosity or Real Concern? Howard A. Rowley, MD

9:00a – 9:30a Image-Based Grading of Gliomas James G. Smirniotopoulos, MD

9:30a – 10:00a Molecular Markers: What Every Radiologist Must Know James G. Smirniotopoulos, MD

10:00a – 10:30a Refreshment Break and Visit Technical Exhibits – Barton Creek Room B/C

10:30a – 12:30p **Focus Session: Novel Approaches to Spine Imaging – Forum Theater**

Moderators: Walter L. Olsen, MD; Kambiz Nael, MD

10:30a – 11:00a Craniovertebral Junction: Invaginations and Impressions Jeffrey S. Ross, MD

11:00a – 11:30a Multimodal Advanced Imaging of the Spine. Lawrence N. Tanenbaum, MD, FACR

11:30a – 12:30p Scientific Oral Presentations II

12:30p – 12:45p Discussion and Questions

1:00p – 6:00p **Annual Golf Tournament** (separate registration required) – The Fazio Foothills Golf Course

Coordinator/Moderator: Keith E. Kortman, MD

6:00p – 10:30p Grand Reception and Banquet – The Governor's Ballroom

Sunday, October 16, 2016

7:00a – 12:45p Registration – Conference Lobby

7:00a – 8:00a Continental Breakfast – Barton Creek Room B/C

8:00a – 10:00a **Focus Session: Knowledge Beyond Neuroimaging – Forum Theater**

Moderators: Rihan Khan, MD; Jennifer L. Becker, BMBS, MRCS, FRCR

8:00a – 8:30a Emergency MRI: The Impact of a Dedicated ED Scanner & Protocols at the BNI John P. Karis, MD

8:30a – 9:00a Romneycare: Lessons from One Example of Healthcare Reform Alexander M. Norbash, MD

9:00a – 9:30a Image Overload: Practical Ways to Enhance Performance Evan K. Fram, MD

9:30a – 10:00a The Art and Science of Persuasion William K. Erly, MD, MBA

10:00a – 10:30a Refreshment Break and Visit Technical Exhibits – Barton Creek Room B/C

10:30a – 12:30p **Focus Session: Innovations in Neurointerventional Radiology – Forum Theater**

Moderators: Edward P. Quigley III, MD, PhD; Nicholas A. Koontz, MD

10:30a – 11:00a Image-Guided Intervention: To Boldly Go Where No Man Has Gone Before. Gary M. Nesbit, MD

11:00a – 11:30a Fusion Devices in the Lumbar Spine: Disc to Spinous Process. Gregory W. Petermann, MD

11:30a – 12:30p Scientific Oral Presentations III

12:30p – 12:45p Discussion and Questions/Closing Remarks/Meeting Concludes. Steven G. Imbesi, MD

INVITED FACULTY

William K. Erly, MD, MBA

University of Arizona
Tucson, Arizona

Nikdokht Farid, MD

UCSD Medical Center
San Diego, California

Evan K. Fram, MD

Retired, The Barrow Neurological Institute
Phoenix, Arizona

Jon J. Hallstrom, MD

UNM Health System
Albuquerque, New Mexico

John P. Karis, MD

The Barrow Neurological Institute
Phoenix, Arizona

Claudia F.E. Kirsch, MD

North Shore University Hospital
Manhasset, New York

Roland R. Lee, MD, FACR

UCSD/VA Medical Center
San Diego, California

Gary M. Nesbit, MD

Oregon Health & Science University
Portland, Oregon

Alexander M. Norbash, MD

USCD Medical Center
San Diego, California

Bido Patel, MD

Austin Radiological Associates
Austin, Texas

Gregory W. Petermann, MD

Marshfield Clinic
Marshfield, Wisconsin

Jeffrey S. Ross, MD

Mayo Clinic
Phoenix, Arizona

Howard A. Rowley, MD

University of Wisconsin
Madison, Wisconsin

James G. Smirniotopoulos, MD

Retired, Uniform Services University
Bethesda, Maryland

Lawrence N. Tanenbaum, MD, FACR

RadNet, Inc.
New York, New York

Richard H. Wiggins III, MD, CIIP, FSIIM

University of Utah
Salt Lake City, Utah

COURSE INFORMATION

Target Audience:

The 48th Annual Meeting of the Western Neuroradiological Society is geared for the neuroradiologist and radiologist in academic or private practice, physicians in a neurologically-related specialty, physicians in training or post-graduate training in a radiology-related specialty, as well as physicians interested in brain, head and neck, and spine-related imaging and interventional techniques.

Course Description:

The WNRS Annual Meeting is designed to introduce clinically relevant advances in Neuroradiology and provide in-depth review of topics within Neuroradiology. The meeting will feature Focus Sessions in Head and Neck, Advanced Brain Imaging, New Approaches to Spine Imaging, Interventional Neuroradiology, Pediatric Neuroradiology, as well as more General Medical Knowledge as it relates to Neuroimaging.

Accreditation Statement:

This activity has been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education through the joint sponsorship of the International Institute for Continuing Medical Education, Inc. and The Western Neuroradiological Society.

Designation Statement:

The International Institute for Continuing Medical Education, Inc. designates this live activity for a maximum of **12.75 AMA PRA Category 1 Credits™**. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Course Objectives:

Upon completion of this course the following goals and objectives will have been met:

- Understand pathology of the head and neck, including HPV related cancers, imaging issues regarding cancer resectability, and misdiagnoses in head and neck imaging.
- Become acquainted with advanced brain imaging techniques such as grading of brain neoplasms and use of molecular markers, restriction spectrum imaging for brain tumors, use of magnetoencephalography in the diagnosis of concussion, and understanding the effect of Gadolinium deposition in the brain.
- Learn about novel imaging techniques and approaches in spinal imaging.
- Review commonly overlooked findings in pediatric neuroradiology.
- Understand current concepts and new technology for brain and spine neurointerventional procedures.
- Obtain additional general medical knowledge as it pertains to neuroimaging including MRI scanning in the emergency department, healthcare reform, performance enhancement, and the art and science of persuasion.





ACCOMMODATIONS

48th Annual Meeting WESTERN NEURORADIOLOGICAL SOCIETY October 13-16, 2016

OMNI RESORTS
barton creek | austin

8212 Barton Club Dr, Austin, TX 78735

Reservations: 512-329-4616

Reservation Deadline - September 15, 2016

Group Rate - \$249.00 Single/Double

The Group Rate is based on single/double occupancy. The deadline for accepting reservations into this room block is **September 15, 2016**. Group rate is available three days prior and three days after meeting dates. Reservations requests received after 5:00 PM local time at the Hotel on the Cut-off date will be accepted on a

space and rate availability basis. Resort Charge is 10% per room, per night (plus applicable taxes), which includes: toll-free, credit card and local calls, basic internet access, fitness center and steam room access, in-room coffee and tea, self-parking on-property transportation, nature trails, miniature golf as well as gratuities for golf bag handling and housekeeping personnel. **Valet Parking:** There is a charge for valet parking. The current per vehicle, overnight valet rate is \$25.00 plus tax and \$12.00 per vehicle for day use only.

This high-end resort spread across 4,000 landscaped acres is located just outside the city of Austin, 7 miles from Zilker Botanical Garden and 8 miles from the Austin Zoo.

The elegant rooms and suites have flat-screen TVs. Upgraded options also feature balconies and pull-out sofas. Suites add living rooms, DVD players and minibars. Upgraded suites have Jacuzzi tubs.

The resort has both indoor and outdoor pools, and there are 4 golf courses and 11 tennis courts. The 4 dining options include a formal restaurant with a veranda, as well as a poolside bar. There's a beautifully-appointed, full-service spa and 43,000 sq. ft. of meeting and event space. The resort fee covers the use of Wi-Fi and access to the gym and steam room.

THINGS TO DO IN AUSTIN

With all of the things to do and see in the city, deciding how to spend your time can be quite an agonizing decision. 10Best has narrowed all of the available attractions in Austin to a list of the most appealing and reputable, to aid in your decision making.

Austin is America's It City. In January 2014, Forbes named it the #1 fastest growing city in the country for the second year, and its continuing popularity has it growing by leaps and bounds. Austin's story, like the city, is ever evolving. Austin has a lot to offer, from parks and great outdoor recreation, to the arts, music and cultural events. There are plenty of choices for relaxing and playing as well, from restaurants and shopping to nightlife and live music.

Here are some of the best ways to catch the unique vibe here that's so different from the rest of Texas. You can rest easy knowing that any choice you make from this list is sure to please.

1. Texas State Capitol - Austin is not only the home of the University of Texas, but the Texas State Capitol Building. The Capitol is an extraordinary example of late 19th century public architecture and is widely recognized as one of the nation's most distinguished state capitols. The Capitol grounds span 22 acres and feature historical buildings, 17 monuments, and beautifully landscaped lawns in addition to the Capitol building itself.

2. Zilker Metropolitan Park - This 351-acre park is arguably the most popular in town, and is considered "Austin's most-loved park." Miles of hike and bike trails, train rides on the Zilker Zephyr miniature train, a playscape for kids, and a natural swimming pool (Barton Springs) are available.

3. Barton Springs Pool - Within Zilker Park's 358 acres lies one of the crown jewels of Austin - Barton Springs Pool. The pool itself measures three acres in size, and is fed from underground springs with an average temperature of 68-70 degrees, ideal for year-round swimming.

4. Mount Bonnell - Mount Bonnell provides a spectacular vista of Lake Austin, surrounding bluffs and multi-million dollar homes, the 360 bridge



and downtown skyline. Climb the stairs or path to reach the highest point in the city, and you can even take a picnic - tables and grills are available.

5. Austin City Limits - Austin City Limits still remains as the main focal point of Austin live music scene, and is the longest running music series in the country.

6. Bats of the Congress Avenue Bridge - Every year nearly 1 Million Mexican free-tailed bats call Austin home, typically arriving as the warm weather sets back in the Spring. They stay in Austin until early fall, and are the largest urban bat colony in North America.

7. SoCo, or South Congress Avenue - This stretch of South Congress, just across the bridge from downtown, is home to a multitude of boutiques, vintage stores, restaurants and clubs. Shop to your heart's content, and when you need to recharge, sit down with some sweets from old-fashioned Big Top candy store or one of the numerous food trailers.

8. Austin Duck Tour - A fun, narrated, amphibious tour of downtown Austin ends with a splash on Lake Austin. Tour Austin inside one of the unsinkable, US Coast Guard-inspected, Hydra Terra vehicles.

9. University of Texas - Wander about this historic college campus for a fun and free activity. You can see the University of Texas tower, which is the center point of the university. Check out the behemoth football stadium, which serves as home to the Texas Longhorns.

10. Hike and Bike Trail and Boardwalk - Lady Bird Lake - once named Town Lake and still called that by many locals - is a major recreation area for the city. The Ann and Roy Butler Hike-and-Bike Trail around the lake lies at the heart of Austin, with 10 miles of a unique urban path that meanders along the water's edge and the downtown core.

REGISTRATION

A letter of verification from the Department Chair must accompany the registration of anyone wishing to qualify for the Resident/Fellow rate.

Attendance will be confirmed on the basis of registration fee. Registrations will not be processed without payment. We cannot guarantee meeting materials for registrations received after September 15, 2016.

REFUNDS:

Cancellations received in writing by September 15, 2016 will receive a refund minus a \$75 administrative fee. There will be no refunds for cancellations received after September 15, 2016.

REGISTRATION:

Registration will begin on October 13, 2016 at 3:00 p.m. in the Conference Lobby.

PLEASE NOTE: You will receive registration confirmation via regular mail from the International Institute of Continuing Medical Education, Inc. approximately two weeks after your registration is received. We are unable to confirm your registration by fax or email.

TRAVEL

RENTAL CARS: HERTZ CV# 01VA0152

Hertz is the official rental car supplier. Special low rates have been negotiated to reduce your travel costs. Call the Hertz Convention Control Center at (800) 654-2240 and refer to the CV# above.

AIR TRAVEL DISCOUNTS

Delta Airlines is the official airline of iiCME, Inc. Please use the Meeting Code below to receive between 2% and 10% off your domestic air fare or between 3% and 20% off your international air fare. All booking classes cannot be listed, contact **Delta Airlines at 1-800-455-2720** for more information. Discounts valid on Delta and applicable DL Code-share flights.

MEETING TICKET DESIGNATOR/MEETING CODE: NMN8Z

POLICIES

A SPECIAL NOTE TO THE DISABLED

The International Institute for Continuing Medical Education, Inc. wishes to ensure that no individual with a disability is excluded, denied services, segregated or otherwise treated differently than other individuals because of the absence of auxiliary aids or services. If you need any auxiliary aids or services identified in the Americans with Disabilities Act, please indicate so on your registration form.

DISCLAIMER

The International Institute for Continuing Medical Education, Inc., and WNRS as co-sponsors of this meeting, claim no responsibility for the acts of any supplier to this meeting nor for the safety of any attendee while in transit to or from the meeting. The total amount of liability during the meeting will be limited to a refund of the registration fee. Purchase non-refundable airline tickets at your own risk.

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It is the policy of the International Institute for Continuing Medical Education, Inc. to comply with the Accreditation Council for Continuing Medical Education (ACCME) Standards for commercial support of CME activities. All faculty participants in iiCME programs are required to disclose to the program audience any real or apparent conflict(s) of interest related to this meeting or its content. Faculty disclosure forms are included in the course syllabus and are available at the registration desk for review. In addition, faculty disclosures will be announced at the beginning of each lecture.



REGISTRATION FORM

48th Annual Meeting WESTERN NEURORADIOLOGICAL SOCIETY

Make check or money order payable to WNRS 2016. Foreign payments must be made by a draft on a United States bank. Register online at: **www.iicme.net** or

Mail/Fax to: The International Institute for Continuing Medical Education, Inc.

P.O. Box 350, Springville, AL 35146 • FAX (205) 467-0195

_____ WNRS Member	\$350
_____ Non-Member	\$700
_____ Resident/Fellow*	\$120
_____ WNRS Member Spouse/Guest	\$150
_____ Non-Member Spouse/Guest	\$210
_____ Resident/Fellow Spouse/Guest	\$110
_____ Tennis Tournament (Please indicate handicap) _____	\$ 50
_____ Golf Tournament (Please indicate handicap) _____	\$195
(Please indicate if rental clubs are needed - additional fee will apply) ☐ Right-handed ☐ Left-handed	
_____ Late Fee (After September 15, 2016)	\$100
TOTAL \$ _____	

*A letter of verification from the Department Chair must accompany the registration of anyone wishing to qualify for the Resident/Fellow rate.

One registrant per form, please photocopy for others. Please print.

First Name _____ MI _____ Last Name _____

Please circle your title: MD DO PhD MPH RN RT(R) RT(R)(M) Other _____

Address _____

City _____ State/Province _____ Zip/Postal Code _____

Home Phone (____) _____ Office Phone (____) _____

Fax Number (____) _____ Email _____

Name of Registered Guest _____

Additional Registered Guest _____

CREDIT CARD: ☐ Visa ☐ MasterCard ☐ Discover ☐ American Express

Please note: A 3.25% fee will be added if using American Express

Account/Card No. _____ Expiration Date _____

Cardholder's Billing Address _____

Signature _____ Amount \$ _____

☐ Please check if you have any special needs/disabilities and a WNRS representative will contact you.

Special Requirements: If you are physically challenged and have any special needs, please list them here.



Social Event Registration

Name of Registered Guest _____

Additional Registered Guest _____

Friday Opening Reception #: _____ will attend Saturday Banquet #: _____ will attend

Will you be attending the Saturday Annual Business Meeting Breakfast? ____ Yes ____ No

Please indicate any special dietary needs: ☐ Kosher ☐ Vegetarian ☐ Other _____



OFFICE REC'D _____ **CONF:** _____



WESTERN NEURORADIOLOGICAL SOCIETY

c/o The International Institute for Continuing Medical Education, Inc.

Post Office Box 350 • Springville, Alabama 35146



WNRS 49th Annual Meeting
Grand Hyatt Kauai Resort & Spa • Koloa, Hawaii
October 25–28, 2017