15th Annual
Mayo Clinic Update in Nephrology and Transplantation

February 10-11, 2017
Scottsdale Marriott at McDowell Mountains
Scottsdale, Arizona

Program Highlights:
- Ultrasound Workshop
- Multidisciplinary TMA aHUS Workshop
- Opportunity for Abstract Presentation

Course Director:
Hatem Amer, MD, FASN, FAST

Co-Directors:
Harini Chakkera, MD, MPH, FASN
Ziad M. El-Zoghby, MD, FACP
Mira T. Keddis, MD
Qi Qian, MD

Register Online at CE.MAYO.EDU/NEPHROLOGY
Now Accepting Abstracts!
GENERAL INFORMATION

➤ course description
The 15th Annual Update in Nephrology and Transplantation is a two-day symposium designed to update participants on a range of nephrology topics relevant to current medical practice. Through a combination of lectures, literature review, and case-based presentations, this symposium will deliver up-to-date and cutting edge information that can be directly integrated into clinical practice.

➤ course learning objectives
At the completion of this course, participants should be able to:

• Appraise recent publications related to hypertension guidelines.
• Summarize recent developments in CKD and dialysis.
• Recognize complement mediated renal disease and its implication to transplantation.
• Recall short- and long-term issues for kidney donors.

For the Bedside Ultrasonography Workshop:

• Perform ultrasound of the kidneys, bladder, large vessels and lungs.
• Recognize common pathology detected by ultrasound examination.
• Review and apply the principles of central line placement.

For the ABIM Medical Knowledge Module session:

• Complete the Self-Evaluation of Medical Knowledge module, worth 10 points toward the ABIM Maintenance of Certification.

Attendance at this Mayo course does not indicate nor guarantee competence or proficiency in the performance of any procedures that may be discussed or taught in this course.

➤ intended audience
This course is intended for all members of the nephrology community and will be of interest to nephrologists, nephrology physicians in training, nurse practitioners, physician assistants, internists, primary care physicians and other specialists who participate in the care of patients with kidney disorders and kidney and/or pancreas transplants.

➤ credit
Mayo Clinic College of Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

Mayo Clinic College of Medicine designates this live activity for a maximum of 17.75 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

➤ call for abstracts
Abstract submissions are now being accepted for the 15th Annual Mayo Clinic Update in Nephrology and Transplantation course. Abstracts should be based on original research in the field of Nephrology and Kidney and/or Pancreas Transplantation. Case reports will also be considered. Accepted abstracts will be presented at dedicated poster sessions.

Abstract submission guidelines and deadline information can be found on the website: https://ce.mayo.edu/nephrology

➤ grants and exhibits
At the time of this printing, a complete listing of commercial supporters (financial or in-kind) and exhibitors was not available. Appropriate acknowledgment will be given to all supporters at the time of the meeting.

Exhibits will be available for viewing at all scheduled breaks.

➤ date and location
The 15th Annual Update in Nephrology and Transplantation will be held February 10-11, 2017. Course headquarters will be located at Scottsdale Marriott at McDowell Mountains, 16770 North Perimeter Drive, Scottsdale, Arizona 85260 in the Valencia Ballroom.

➤ registration
To register online, visit: https://ce.mayo.edu/nephrology/content/15th-annual-mayo-clinic-update-nephrology-and-kidney-transplantation-2017

The registration fee includes tuition, comprehensive electronic course syllabus, continental breakfasts, lunches, and break refreshments. Although it is not Mayo School of Continuous Professional Development (CPD) policy to limit the number of registrants for a course, conference room facilities may necessitate
closing of enrollment; therefore, early registration is advised. A letter of confirmation will be sent upon receipt of payment and completed registration form. Please present the confirmation letter when checking in at the meeting registration desk.

For additional information, contact:
Matrix Meetings, Inc.
1202 ½ 7th Street NW, Suite 209
Rochester, MN  55901
Website: ce.mayo.edu/nephrology
E-mail: tracy@matrixmeetings.com
Phone: 507-288-5620
Fax: 507-288-0014

➤ Saturday afternoon session
ABIM Maintenance of Certification Module (2016 Update in Nephrology)

In order to earn a total of 10 points toward the Medical Knowledge portion of the ABIM Maintenance of Certification Process, participants in the Saturday afternoon session must:

• Enroll in the ABIM Maintenance of Certification program, which can be done online via the ABIM web site https://www.abim.org/moc/policies.aspx
• Order the Self-Evaluation of Medical Knowledge module for 2016 Update in the physician log-in section of the ABIM web site: http://www.abim.org/specialty/nephrology.aspx
• Submit the answers to the questions to the ABIM for scoring. Instructions for this are provided when the module is ordered from the ABIM. If claiming the AMA PRA Category 1 Credits™, you may only claim credit with either the ABIM or Mayo School of Continuous Professional Development. You may not claim credit from both organizations.

Conference registrants are welcome to attend this session even if not enrolled in the ABIM Maintenance of Certification program.

➤ Cancellation Policy
Written notification is required to cancel a course registration. Refunds, less a $75.00 administrative fee, will be granted for requests received in writing prior to January 1, 2017.

Mayo School of CPD reserves the right to cancel or postpone any course due to unforeseen circumstances. In the unlikely event Mayo School of CPD must cancel or postpone this course, Mayo School of CPD will refund the registration fee, but is not responsible for any related costs, charges, or expenses to participants, including fees assessed by airline/travel/lodging agencies.

➤ Travel
Access to and from the airport is available by shuttle, taxi, personal driver, or rental car. The Phoenix Sky Harbor International Airport is located 20 minutes from the Scottsdale Marriott at McDowell Mountains Hotel. Travel arrangements are the sole responsibility of the individual registrant.

Approximate one way transportation costs:
• Super Shuttle – $25
  http://www.supershuttle.com/locations/PhoenixPHX
• Taxi – $30
  (480)888-8888
• Transtyle Transportation Service – $65
  (888)948-6131

➤ Lodging Accommodations
Step into the stylish comfort of the Scottsdale Marriott at McDowell Mountains. As one of the premier all-suite hotels in North Scottsdale, we’re situated in the heart of it all, a short drive from downtown, and 22 miles from Phoenix Sky Harbor International Airport (PHX).

A block of guest rooms has been reserved for attendees and their guests at the special course rates. To receive the course rate, reservations must be made before the room block is filled or by January 19, 2017, whichever comes first. Reservations will be taken following this date based on space and rate availability. Make reservations online or call the phone numbers below and ask for the Mayo Clinic Update in Nephrology group discount or online at: https://aws.passkey.com/event/15025195/owner/2499731/home?utm_campaign=75976019

Scottsdale Marriott at McDowell Mountains
18770 North Perimeter Drive
Scottsdale, Arizona  85260
$239 Single/Double
480-502-3836

Check in: 4:00 pm
Check out: 12:00 noon
On-site complimentary parking or valet parking ($23.00/day) are available.

Lodging arrangements are the sole responsibility of the individual registrant.

Mayo School of CPD is not responsible for expenses incurred by an individual who is not confirmed and for whom space is not available at the meeting. Costs incurred by the registrant such as airline or hotel fees or penalties are the responsibility of the registrant.
Course Director
Hatem Amer, MD, FASN, FAST

Co-Directors
Harini Chakkera, MD, MPH, FASN
Ziad M. El-Zoghby, MD, FACP
Mira T. Keddis, MD
Qi Qian, MD

Mayo Clinic Faculty
Roshini Abraham, PhD
Robert Albright, DO, FASN
Mariam Priya Alexander, MD
Nabeel Aslam, MD, FASN
Lynn Beaulieu, APRN, MSN, RN
Fernando G. Cosio, MD, FASN
John Dillon, MD
Fernando Fervenza, MD, PhD
Ronald Go, MD
Joseph Grande, MD, PhD
Raymond Heilman, MD
C. Christopher Hook, MD, FACP
Bruce Kaplan, MD
Kianoush Kashani, MD, FASN, FCCP
Yogish Kudva, MD, FRCP
John C. Lieske, MD, FACP, FASN
Elizabeth Lorenz, MD
David Murray, MD, PhD
K. Sudhakar Reddy, MD
Andrew D. Rule, MD
Carrie Schinstock, MD
Hiroshi Sekiguchi, MD
Sandra Taler, MD
Leslie Thomas, MD

Guest Faculty
Richard Glassock, MD, MACP
University of California – Los Angeles

As a provider accredited by ACCME, Mayo Clinic College of Medicine (Mayo School of Continuous Professional Development) must ensure balance, independence, objectivity and scientific rigor in its educational activities. Course director(s), planning committee, faculty, and all others who are in a position to control the content of this educational activity are required to disclose all relevant financial relationships with any commercial interest related to the subject matter of the educational activity. Safeguards against commercial bias have been put in place. Faculty also will disclose any off-label and/or investigational use of pharmaceuticals or instruments discussed in their presentation. Disclosure of this information will be published in course materials so those participants in the activity may formulate their own judgments regarding the presentation.

Register online: https://ce.mayo.edu/nephrology

Early Bird Rate available through January 15, 2017
Regular Rate starting January 16, 2017
MD, PhD, DO, PharmD (or international equivalent)*
(ISN members in good standing receive a 10% discount)
Physicians in Training*
PA, NP, RN*
Ultrasound Workshop (Participation in the Ultrasound Workshop requires an additional fee at the time of course registration. Space is limited to the first 12 registrants)

Early Bird Rate
Regular Rate
$480.00 $630.00
$400.00 $550.00
$250.00 $350.00

*Mayo Clinic employees MD, PhD, DO, PharmD, Physicians in Training, PA, NP, RN rate is $400.00 for early bird and $460.00 regular rate.

A letter of confirmation and receipt will be forwarded to the email address provided upon receipt of submitted registration and payment.

The registration fee includes tuition, comprehensive electronic course syllabus, continental breakfasts, lunches, and break refreshments.

Although it is not Mayo School of Continuous Professional Development (CPD) policy to limit the number of registrants for a course, conference room facilities may necessitate closing of enrollment; therefore, early registration is advised. Enrollment for this program is limited.
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
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<tbody>
<tr>
<td>7:00 a.m.</td>
<td>Registration and Breakfast</td>
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<tr>
<td>7:45 a.m.</td>
<td>Introduction and Welcome</td>
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<tr>
<td></td>
<td>Hatem Amer, MD, FASN, FAST</td>
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<tr>
<td>7:50 a.m.</td>
<td>Pre-Test</td>
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<td>Hatem Amer, MD, FASN, FAST</td>
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<tr>
<td><strong>Morning Session I – CKD-ESRD</strong></td>
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<tr>
<td>Chairs: Qi Qian, MD and Harini A. Chakkera, MD, MPH, FASN</td>
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<tr>
<td>8:00 a.m.</td>
<td>Update on Home Dialysis Modalities</td>
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<td>John Dillon, MD</td>
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<tr>
<td>8:30 a.m.</td>
<td>CKD/ESRD MBD and the Bundle</td>
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<td>Robert Albright, DO, FASN</td>
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<tr>
<td>9:00 a.m.</td>
<td>Choosing Wisely</td>
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<td>Leslie Thomas, MD</td>
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<tr>
<td>9:20 a.m.</td>
<td>Role of the NPs in the Care Team</td>
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<td>Lynn Beaulieu, APRN, MSN, RN</td>
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<tr>
<td>9:40 a.m.</td>
<td>Discussion</td>
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<tr>
<td>10:00 a.m.</td>
<td>Refreshment Break and Poster Viewing</td>
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<tr>
<td><strong>Morning Session II – Keynote Presentation and Parenchymal</strong></td>
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<tr>
<td>Chairs: Hatem Amer, MD, FASN, FAST and Mira Keddis, MD</td>
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<tr>
<td>10:30 a.m.</td>
<td>Anti-GBM Disease – 50 Years of Progress</td>
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<td>Richard Glassock, MD, MACP</td>
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<tr>
<td>11:30 a.m.</td>
<td>Update on Membranous Nephropathy</td>
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<td>Fernando Fervenza, MD, PhD</td>
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<td>12 Noon</td>
<td>Discussion</td>
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<tr>
<td>12:15 p.m.</td>
<td>Lunch Break and Poster Viewing</td>
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<tr>
<td><strong>Afternoon Session I – Urolithiasis for the Nephrologist</strong></td>
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<tr>
<td>Chairs: Ziad M. El-Zoghby, MD, FACP; Leslie Thomas, MD</td>
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<tr>
<td>1:30 p.m.</td>
<td>Are Kidney Stones Important?</td>
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<td>Andrew D. Rule, MD</td>
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<tr>
<td>1:50 p.m.</td>
<td>Enteric Hyperoxaluria – What is All the Fuss About?</td>
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<td>Mira Keddis, MD</td>
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<td>2:20 p.m.</td>
<td>Medical Management of Urolithiasis-Case Based</td>
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<td>John C. Lieske, MD, FACP, FASN</td>
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<tr>
<td>3:00 p.m.</td>
<td>Discussion</td>
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<tr>
<td>3:30 p.m.</td>
<td>Refreshment Break and Poster Viewing</td>
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<tr>
<td><strong>Afternoon Session II – Electrolytes</strong></td>
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<tr>
<td>4:00 p.m.</td>
<td>Electrolyte Workshop</td>
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<td>Qi Qian, MD</td>
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<td>Nabeel Aslam, MD, FASN</td>
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<td>Bruce Kaplan, MD</td>
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### Afternoon Session III - Pathology

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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| 5:00 p.m. | Renal Pathology Round Table  
Fernando G. Cosio, MD, FASN  
Mariam Priya Alexander, MD  
Joseph Grande, MD, PhD  
Raymond Heilman, MD  
Richard Glassock, MD, MACP  
Fernando Fervenza, MD, PhD |
| 6:30 p.m. | Adjourn                                    |

### SATURDAY, FEBRUARY 11, 2017

#### CONCURRENT MORNING SESSIONS

**Morning Session I – Transplantation**  
Chairs: Harini A. Chakkera, MD, MPH, FASN; Elizabeth Lorenz, MD

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<tr>
<td>7:15 a.m.</td>
<td>Registration and Breakfast</td>
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</tbody>
</table>
| 8:00 a.m. | The State of Affairs of Kidney Transplantization  
Bruce Kaplan, MD |
| 8:20 a.m. | Recurrent Disease  
Fernando G. Cosio, MD, FASN |
| 8:50 a.m. | Cardiovascular Risk  
Ray Heilman, MD |
| 9:15 a.m. | Marginal Kidney Donors  
K. Sudhakar Reddy, MD |
| 9:35 a.m. | Discussion                                                 |
| 10:00 a.m. | Refreshment Break and Poster Viewing                      |

**Morning Session II – Transplantation**  
Chairs: Bruce Kaplan, MD and Fernando Cosio, MD

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</table>
| 10:30 a.m. | The Highly Sensitized Patient  
Carrie Schinstock, MD |
| 10:50 a.m. | SPRINT-Implications for CKD and Transplantation  
Sandra Taler, MD |
| 11:15 a.m. | Discussion                                                 |

**Morning Session III – Transplantation – Transplantation for Diabetes**  
Chairs: Carrie Schinstock, MD and K. Sudhakar Reddy, MD

<table>
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<tr>
<th>Time</th>
<th>Event</th>
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</table>
| 11:30 a.m. | The Technology Clinic  
Yogish Kudva, MD, FRCP |
| 11:50 a.m. | Pancreas Transplantation for the Type 2 Diabetic  
Harini A. Chakkera, MD, MPH, FASN |
| 12:10 p.m. | Kidney First, After or Together  
Elizabeth Lorenz, MD |
| 12:30 p.m. | Lunch Break and Transplantation for Diabetes Discussion |
# Concurrent Sessions

**Bedside Ultrasonography for the Nephrologist: Hands-on Workshop**  
Hiroshi Sekiguchi, MD and Kianoush Kashani, MD, FASN, FCCP

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>8:00 a.m.</td>
<td><strong>Basic Principles of Ultrasonography (Physiology and Knobology)</strong></td>
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<tr>
<td>8:15 a.m.</td>
<td><strong>Kidney and Bladder Ultrasonography</strong></td>
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<tr>
<td>8:30 a.m.</td>
<td><strong>Ultrasonography to Assess Volume Status</strong></td>
</tr>
</tbody>
</table>
| 8:45 a.m.  | **Hands-on Sessions**  
  - Kidney and Bladder  
  - Vascular Access: Jugular Vein Cannulation                           |
| 9:45 a.m.  | **Refreshment Break and Poster Viewing**                                |
| 10:00 a.m. | **Hands-on Sessions**  
  - Lungs  
  - Inferior Vena Cava / Aorta (CVP and Volume Status)                   |
| 11:00 a.m. | **Interpretation: Practice Interpreting Abnormal Studies**               |
| 12:30 p.m. | **Lunch Break**                                                          |

**AFTERNOON SESSIONS (ALL)**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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</table>
| 1:15 p.m.  | **Post-Test and TMA aHUS Pre-Test**  
  Hatem Amer, MD, FASN, FAST                                            |
| 1:30 p.m.  | **Overview of the Complement System**  
  C. Christopher Hook, MD, FACP                                         |
| 1:50 p.m.  | **Complement Mediated Renal Disease**  
  Fernando Fervenza, MD, PhD                                             |
| 2:20 p.m.  | **Pathology of Complement Mediated Renal Disease**  
  Mariam Priya Alexander, MD                                              |
| 2:40 p.m.  | **Interpreting Functional and Genetic Complement Tests**  
  Roshini Abraham, PhD and David Murray, MD, PhD                         |
| 3:15 p.m.  | **Refreshment Break – Meet the Experts**                                |
| 3:30 p.m.  | **Case-Based Discussions with the CAP-TMA Group**  
  Ronald Go, MD and Fernando Fervenza, MD, PhD                           |

**Maintenance of Certification Workshop**

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<tr>
<th>Time</th>
<th>Session</th>
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| 4:30 p.m.  | **ABIM Maintenance of Certification Module**  
  2016 Update in Nephrology  
  Ziad M. El-Zoghby, MD, FACP and Leslie Thomas, MD                      |
| 6:30 p.m.  | **Adjourn**                                                              |
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