

## CLINICAL NEPHROLOGY

**Course Department, Number & Title:** MED 817, CLINICAL NEPHROLOGY

**Course credit or length:** 2- 4 Weeks

**Course director and contact information:** Zeid Khitan, MD

**Course coordinator and contact information:** Brittani Ruiz; 304-691-1739, [ruizb@marshall.edu](mailto:ruizb@marshall.edu)

**Course location:** Cabell Huntington Hospital, St. Mary's Hospital, Erma Byrd Center, Department of Internal Medicine

**Brief Course Description:** Renal disorders are common in general population. These problems are frequently seen as a complication of common diseases such as diabetes mellitus and hypertension which are prevalent in the community. In conjunction with intrinsic renal pathology, kidneys may be affected by numerous other diseases, as well as due to exposure to toxins and various medications. This elective offers students the opportunity to evaluate and manage patients with common renal problems, including acute and chronic renal failure, fluid and electrolyte abnormalities, hypertension, hemodialysis and transplantation. Students are assigned to an inpatient nephrology unit and round daily with the resident and nephrologist. It will be a mixture of inpatient consultation and outpatient experiences.

**Grade Mode:** Honors/Pass/Fail

### CLINICAL NEPHROLOGY

#### **Institutional Objective**

**Patient Care - Students must demonstrate the ability to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.**

#### **Course Objective**

The student will be able to evaluate and manage common clinical nephrological disorders.

#### **Outcome Measure**

The student will be able to obtain an accurate and complete history with emphasis on renal disorders. Faculty will also directly observe the student on at least two cases:

1. Perform a basic physical examination and demonstrate ability to gather information regarding the disease process.
2. Demonstrate the ability to assess patients for appropriateness of hemodialysis, peritoneal dialysis, and continuous veno-venous hemodialysis.
3. Demonstrate the ability to interpret renal scans, renal ultrasound, CT scans and other imaging modalities of the kidneys.
4. Demonstrate the basic ability to interpret arterial blood gases and electrolyte disorders.
5. Demonstrate the ability to effectively communicate diagnostic and therapeutic options to patients, their families and caretakers.

**Medical Knowledge- Students must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social-behavioral sciences, as well as the application of this knowledge to patient care.**

#### **Basic Science Course Objective**

The student must apply knowledge of basic and clinical sciences in the diagnosis and management of common problems in nephrology.

#### **Outcome Measure**

The student must be able to demonstrate the basic ability to apply basic and clinical sciences in the diagnosis and management of at least five of the following common problems in nephrology (one which will be randomly selected by faculty):

- A) Acid-base balance
- B) Acute renal failure
- C) Asymptomatic urinary abnormalities
- D) Chronic renal failure
- E) Diabetic nephropathy
- F) Dialytic therapy
- G) Disorders of renal hormones
- H) Fluid and electrolyte disorders
- I) Glomerular diseases
- J) Hematuria
- K) Hypertensive renal diseases
- L) Nephritic syndrome
- M) Obstructive nephropathy
- N) Proteinuria
- O) Renal biopsy
- P) Renal disease in pregnancy
- Q) Renal infections
- R) Renal stones
- S) Transplantation
- T) Tubule-interstitial disease

**Course Objective**

The student must demonstrate critically evaluate medical information and scientific evidence for use in the care of patients with renal problems.

**Outcome Measure**

The student must orally demonstrate to faculty the ability to evaluate medical information and scientific evidence for use in the care of patients with renal problems.

**Institutional Objective**

**Practice-based Learning and Improvement** - *Students must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning.*

**Course Objective**

The student will incrementally build upon knowledge gained from the patient-care encounters and use information technology and other resources to access and organize information, to support diagnostic and treatment decisions, and aid in patient education.

**Outcome Measures**

The student must demonstrate to faculty the ability to apply knowledge and skills learned from previous cases to similar clinical situations. The student must list changes that he or she would make by using information technology and other resources to access and organize information, to support diagnostic and treatment decisions, and aid in patient education.

**Course Objective**

The student will identify areas for improvement and implement strategies to enhance knowledge, skills and attitudes involving care of patients with renal disorders.

### **Institutional Objective**

**Interpersonal and Communication Skills-** *Students must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.*

#### **Course Objective**

The student will synthesize, arrange, and maintain the information gathered from various sources into a concise and legible medical record.

#### **Outcome Measure**

The student will be able to demonstrate to faculty:

1. The ability to synthesize information obtained from various sources into a concise and complete nephrology consultation note.
2. The ability to arrange and maintain the information gathered from various sources into a concise and legible medical record.

### **Institutional Objective**

**Professionalism-** *Students must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.*

#### **Course Objective**

The student will behave in an ethical, responsible, reliable and dependable manner and be able to accept constructive feedback to improve performance. The student must demonstrate professionalism in interacting with patients and other care providers.

#### **Outcome Measure**

The student will be directly observed and assessed as part of the final grade by faculty to determine ethical behavior, reliability and level of dependability of the student and the student's ability to accept criticisms or suggestions. The student will also be evaluated by faculty on:

1. Professionalism in interacting with patients and other care providers.
2. Ability to demonstrate sensitivity to and tolerance of differences in gender, age, culture, religion, sexual preference, socioeconomic status, beliefs, behaviors and disability of patients, their families and caregivers and professional colleagues.
3. Ability to identify and understand the barriers in providing care to patients.
4. Ability to employ principles of confidentiality, scientific and academic integrity and informed consent in the care of the ambulatory patients.
5. Ability to recognize, identify, and show willingness to aid with deficiencies in peer performance.

### **Institutional Objective**

**Systems-based Practice** - *Students will be able to recognize and better understand the role of other health care professionals in the overall care of the patient.*

#### **Course Objective**

The student will 1) understand and utilize various resources regarding the assistance in providing care for patients within the nephrology specialty, 2) be able to identify and understand barriers in providing care to patients with renal problems who may have difficulty communicating and 3) identify limitations of and opportunities afforded by various practice models.

#### **Outcome Measure**

The student will orally demonstrate to faculty the above.

### **Self-Directed Learning**

As a medical student, you are encouraged to use any unstructured time as an opportunity to read about your patients, research questions that arise during the day, prepare for case conferences, and prepare for student-faculty rounds. Preceptors have been specifically asked to look for evidence that you have read articles and books between clinic sessions. Use this time to build your knowledge of medicine and learn from your patients.

## **EDUCATIONAL METHODS**

- Participation in direct patient care activities under direct supervision of nephrology faculty
- Performing initial nephrology consultation. This will be followed by discussion with the consulting faculty member
- Participation in monthly dialysis unit conferences
- Nephrology conferences and journal clubs
- Core readings to be assigned by the course director

## **ASSESSMENT METHODS**

### **Mid Point Evaluation**

In accordance with LCME standard ED-30, the Course Director will evaluate student performance at mid-point to review the student's professional, clinical and academic performance up to that point. The formative evaluation must be reviewed with the student and the student will have an opportunity to discuss with the Course Director. The form must be signed by the student and returned to the Course Director. The Course Director shall then forward a copy of the form to the Office of Academic Affairs. The form will NOT however be included in the student's official academic record. For rotations that are two weeks, oral feedback will be given to the student at the end of week one.

### **Case Presentation- 25%**

The student will be required to give a 10-15 minute case presentation on a case at a pre-arranged time during their clinical rotation. The case must be pre-approved by the course director and the presentation will be given to the course director and medical students. The student will be notified of the date and time of their presentation one week in advance. The course director will assess the presentation and assign a percentage score.

### **Attendance and Participation – 25%**

Attendance and participation are expected every day. Failure to attend all sessions will result in a lower grade.

### **Preceptor Evaluation- 50%**

#### **Grading**

The preceptors' evaluation will be based, but are not limited to, upon the following factors:

- The demonstration of basic knowledge
- Informal Oral Case Presentations/Patient Workup
- Maturity and Professionalism

**Each component mentioned above (case presentation, attendance, participation and preceptor evaluation) must be passed in order to successfully complete the course.**

**MUJCESOM Policies:** All medical students taking this course will comply with School of Medicine policies given at <http://musom.marshall.edu/students/policies>. Individual policies can be found at the following websites:

Student Infectious Material Exposure:

<http://musom.marshall.edu/ups/postexposure.asp>

MS-IV Attendance:

<https://musom.marshall.edu/students/documents/policies/Yr4attendance.pdf>

Academic Dishonesty Policy:

<https://musom.marshall.edu/students/documents/policies/Standards-of-Professionalism-and-Honor-Code.pdf>

Academic Standards Policy:

<https://musom.marshall.edu/students/documents/Policies/ASC-FINAL-POLICY.pdf>

Policy for Students with Disabilities:

<https://musom.marshall.edu/students/documents/Guidelines.pdf>

University Computing Services' Acceptable Use Policy:

<http://www.marshall.edu/ucs/CS/accptuse.asp>

Affirmative Action Policy:

pp. 16-17

[http://www.marshall.edu/catalog/Graduate/S2008/gr\\_sp08.pdf](http://www.marshall.edu/catalog/Graduate/S2008/gr_sp08.pdf)

Inclement Weather Policy:

<https://musom.marshall.edu/students/documents/policies/MUSOM-Inclement-Weather-Policy.pdf>

Notification of delays and cancellations of classes are posted on the Medical Education Home Page when Marshall University Main Campus is not in session

<https://musom.marshall.edu/weather>

**Required Reading:**

Appropriate chapters in Harrison's Principles of Internal Medicine

Appropriate chapters in Cecil's Textbook of Medicine

The Kidney

Primer on Kidney Disease

MKSAP – Nephrology

All other articles as assigned