The Division of Nephrology offers comprehensive care for patients with acute and chronic disorders of the kidney and urinary tract; fluid, electrolyte and acid base disorders; and hypertension. The clinical service of the division includes inpatient and outpatient diagnostic evaluation, hemodialysis, peritoneal dialysis, renal transplantation evaluation, follow-up and support, renal biopsy, interventional nephrology and outpatient follow-up care.

Kevin J. Martin

The clinical activities of the Division of Nephrology have continued to grow in the past year in several areas. Our interventional nephrology program, which is involved in the maintenance of vascular access for patients on dialysis, continues to grow. The interventional nephrology service provides diagnostic venography for problems with arterial venous access, angioplasty, stent placement, and thrombectomies, as required for the maintenance of adequate dialysis access. The interventional nephrology service also places temporary and semi-permanent tunneled dialysis access catheters and provides comprehensive management for complications of vascular access issues.

In the area of vascular access, it should be noted that the Division of Nephrology continues to train interventional nephrologists from other universities who have returned to start interventional nephrology programs at their parent institutions.

The outpatient dialysis services of the division continue to bring new innovations and management skills to the dialysis operation. Our principal dialysis facility at Drummond Hall has been aging and plans are in progress to move to a modern, state-of-the-art dialysis center, potentially at the nearby Salus Center.

The faculty of the Division of the Nephrology participate in broad-based community service at St. Louis ConnectCare, where nephrology consultation and follow-up are provided on a rotating basis. Division members also actively participated in community projects such as the National Kidney Foundation KEEP program and the St. Louis Black Expo, which involved health screenings for kidney disease in the general community.

New faculty have been added to the division to allow us to expand our clinical care, research and teaching missions. The division is also expanding its activity in the area of transplant nephrology and now has a full-time transplant nephrology attending services for both inpatients and outpatients, for the teaching and training of nephrology fellows to add additional resources to the growing renal transplant service.

Research activities of the Division of Nephrology continue in several areas. Ongoing research in the area of renal bone disease has focused on the vitamin D system and clinical trials with vitamin D analogs and phosphate binders are underway. The faculty of the division has been instrumental in demonstrating a high prevalence of nutritional vitamin D deficiency in patients with kidney disease, and work continues in early clinical trials to find adequate means of correcting this deficiency. Clinical research also continues in the area of vascular access to avoid the complications, and the division participates in national studies to try to improve outcomes of vascular access procedures. Clinical studies in dialysis patients also focus on nutrition and the consequences of malnutrition in this patient population.
DIVISION OF NEPHROLOGY

Area of basic research have also grown, particularly among the faculty based at the VA hospital, where studies are in progress on the area of kidney development, acute kidney injury, and the pathophysiology of vascular calcification. As the population ages, so does the population with kidney disease, and studies are in progress to evaluate pertinent issues with dialysis in the elderly.

Working closely with the Center for Outcomes Research, the Division of Nephrology faculty and fellows have contributed to significant outcomes research projects.

Educational activities of the division include the education and training of internal medicine residents, medical students and nephrology fellows. The nephrology training program is accredited by the ACGME.

The educational programs under the direction of Dr. Paul Schmitz have undergone considerable growth and incorporated new technologies, which will allow the program to embrace reforms in healthcare, align the program with the ACGME outcomes project, and most importantly, ensure a robust and invigorating educational experience for all members of the division. In addition to the biweekly journal club and monthly research seminar, the division covers topics that fall into nine major content areas or themes. The topics are specifically chosen to highlight recent advances in basic science which influence medical practice and provide state-of-the-art reviews of important or emerging clinical topics. The nine major content areas include the pathological basis of nephrology, the physiological basis of nephrology, interdisciplinary nephrology, acute and chronic kidney disease, renal replacement therapies, fluid, electrolyte and acid/base disorders, clinical implications of basic science, fundamentals of renal transplantation and hypertension. The division has developed a website which discusses in detail the goals and objectives of each of these themes, provides the presenter with specific guidelines for their presentation, and lists specific topics via a web-based, embedded Google calendar.

In the past year, the division has also developed and incorporated podcasting and videocasting into the core curriculum. These are available for viewing or listening by the trainees during their rotation on the nephrology service. The division is actively engaged in furthering its endeavors in the area of technology through the development of learning management systems for nephrology faculty, fellows, medical students and residents.

The Division of Nephrology continues to coordinate the Renal and Urinary Tract Organ-Based Module as part of the Phase II Curriculum for the second year medical students. The students have consistently ranked this course as the finest in the medical school across a broad range of quality standards, such as course organization, quality of teaching, appropriateness of teaching methods, incorporation of clinically relevant material, motivation for learning, feedback, and helpfulness in preparing the students for clerkships and USMLE exams. The division is particularly proud of these accomplishments.

HONORS AND RECOGNITION

Alejandro Alvarez, M.D.
Best Doctors, St. Louis Magazine

Bahar Bastani, M.D.
Best Doctors, St. Louis Magazine
DIVISION OF NEPHROLOGY

Kevin J. Martin, M.B., B.Ch., F.A.C.P.
Best Doctors, St. Louis Magazine
Program Committee, American Society of Nephrology (2009)

Paul G. Schmitz, M.D.
Best Doctors, St. Louis Magazine
President, St. Louis Society of Internal Medicine (2009)

GRANTS AND CONTRACTS HELD BY EACH FACULTY MEMBER

Tarek El-Achkar, M.D.


Susan Kiefer, Ph.D.

Krista Lentine, M.D.

Kevin J. Martin, M.B., B.Ch., F.A.C.P.
Missouri Kidney Program, “Altering the Progression of Secondary Hyperparathyroidism by Correcting Vitamin D Deficiency with Ergocalciferol,” 2009, $59,000.

University of Toledo subcontract, NIH, “Cardiovascular Outcomes in Renal Atherosclerotic Lesions (CORAL),” 2005-2010.

Michael Rauchman, M.D.

Department of Veterans Affairs Merit Review Award, “Sall1 and Pax2 in Epithelial Cell Regeneration in Acute Kidney Injury,” $189,400.


During fiscal year 2009 the Division of Nephrology had five active studies with different sponsors. Due to confidentiality agreements and non-publicity clauses in contracts with sponsors, specific information pertaining to industry sponsored research may not be released in public documents.