UC DAVIS MEDICAL CENTER

The University of California at Davis is part of the 10 campus UC system, regarded as one of the top educational systems in the world. UC Davis is one of 5 UC campuses with a Medical Center. The UC Davis Medical Center, located in Sacramento, the Capital of California, provides health care for the greater Sacramento area, and also serves as a tertiary referral center for much of Northern California and Nevada. The hospital has 645 beds, managing almost 55,000 annual Emergency Room visits and over 33,000 annual hospital admissions. The UC Davis Health system provides over 915,000 annual clinic/office visits.

The UC Davis Health System supports a large School of Medicine and a new School of Nursing. It is also home of an internationally renowned School of Veterinary Medicine. The UC Davis Medical Center has been named one of the top hospitals in the nation by the Leapfrog Group, a coalition of the largest healthcare purchasers for companies like Intel, Fed-Ex and Boeing. In addition, as the area’s only Level 1 Trauma center for both adults and children (nationwide, there are less than 20 such trauma centers), UC Davis provides more admissions for trauma than any other UC medical campus.

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UC Davis Nephrology is a division of the Department of Internal Medicine which supports over 140 residents and fellows. There are presently 10 full-time faculty members in the Division and 4 Transplant Nephrologists. The Division continues to grow, anticipating the addition of faculty in general Nephrology, Interventional Nephrology, and in Transplant.

The Nephrology Division is active in clinical and basic science research. Faculty members have ongoing projects involving the bench-side investigations of polycystic kidney disease, renal cell carcinoma, IgA nephropathy, and lipid disorders of Nephrotic syndrome. The Division has participated as a clinical study site for various large NIH studies in the recent past, including the HEMO study, the Frequent Hemodialysis Network trial and the ongoing SPRINT trial.
THE FELLOWSHIP

The nephrology fellowship at UC Davis Medical Center is a 2-year, ACGME-accredited program that is primarily based at the UC Davis Medical Center in Sacramento with extensive additional clinical activities at the Sacramento Veterans Administration (VA) Medical Center. Our training program accepts 3 fellows per year. An additional third research year can be designed around acceptable and approved research projects. Fellows who have completed our program have continued on in academic and private nephrology careers. We take pride in the teaching excellence of our faculty.

The clinical training is extensive and includes: inpatient consultative nephrology at both hospital sites; longitudinal experience in CKD patients; longitudinal outpatient dialysis experience involving hemodialysis and peritoneal dialysis patients; exposure to our home hemodialysis program; renal transplantation in all of its aspects; active participation in interventional nephrology; and many research opportunities.

The University owns and operates the Medical Center which is located in Sacramento, the capital of California. It serves both as a University referral hospital and as a neighborhood hospital, providing care to a diverse population. The UC Davis Medical Center has a broad range of residency and subspecialty training programs. Nephrology fellows interact extensively with medical students, interns, residents, and fellows in other subspecialty programs. The UCD Health System’s Primary Care Network serves as a valuable source of referrals.

INPATIENT TRAINING – UC DAVIS MEDICAL CENTER HOSPITAL

Patients on the nephrology consultative service at UC Davis Medical Center exhibit a wide array of renal pathology. As a Level 1 Trauma Center and a Tertiary referral center, fellows are involved in the care of high acuity patients, including those on the medical, surgical, cardiac and burn ICU’s. In addition, the Nephrology team is often involved in the care of hematology/oncology and obstetric patients. When renal replacement therapy is required, options include standard hemodialysis, slow extended daily dialysis (SLEDD) for intensive unit patients, or continuous renal replacement therapy (CRRT) for the most critically ill of patients. There are 2 Fellows assigned to the UC Davis inpatient consultative service on weekdays. The census usually ranges from 25-40 patients. Dialysis is provided at the patient’s bedside, or in a central acute care dialysis unit staffed by some of the most proficient dialysis nurses and technicians.
INPATIENT TRAINING – VETERANS AFFAIRS MEDICAL CENTER HOSPITAL

A wide array of renal diseases is also encountered in patients seen at the VA Medical Center Hospital. The VA Mather Field Medical Center is about 11 miles east of the UC Davis Medical Center. UC Davis faculty provide many of the sub-specialty care for the facility, both outpatient and inpatient. Fellows rotate through the inpatient consultative service, which is generally much lighter than that of the UC Medical Center, with a census ranging from 3-8 patients.

OUTPATIENT DIALYSIS EXPERIENCE

Our nephrologists see over 450 long-term dialysis patients at 5 community-based dialysis clinics. The fellows receive a longitudinal experience in both hemodialysis and peritoneal dialysis by way of rounds on a set panel of patients, arranged by the faculty with whom they are paired. In addition, fellows are first call for questions or issues that arise at the dialysis centers during their patient’s treatments.

Exposure to home hemodialysis, a growing modality of treatment, is also part of the fellowship training. In addition, fellows learn some of the basics involved in becoming a medical director of a dialysis unit. Topics such as water treatment, quality improvement oversight, and patient/staff safety are emphasized.

TRANSPLANT TRAINING

The UC Davis Renal Transplant Service performed about 200 kidney transplants in the last year. The Renal Transplant program recently received an Award of Excellence by HealthGrades, an independent healthcare ratings organization. The UC Davis program was 1 of only 10 transplant centers in the nation (and only 2 in California) to get this recognition. Fellows rotate on this inpatient service, which is staffed by both Transplant Surgery and Transplant Nephrology faculty, in both the first and second years of their fellowship. The Transplant Surgeons are also involved in placing permanent dialysis accesses for our CKD patients.

A good deal of time is also spent in the follow-up and new patient evaluation clinics. In those settings, fellows learn the intricacies of immunosuppression medication adjustments as well as
the proper evaluation of CKD patients for transplant candidacy. Fellows also gain extensive experience in performing renal transplant biopsies under the supervision of the Transplant Nephrologists. Additional longitudinal transplant experience is found at both the VA outpatient and UC Davis renal clinics.

INTERVENTIONAL NEPHROLOGY EXPOSURE

Our program is proud to offer one of the few interventional nephrology experiences integrated into the fellowship program. Our program is ASDIN-certified and trains nephrologists outside of our health system. Established 5 years ago, interventional nephrology at UC Davis performs about 900 procedures a year, ranging from insertion of tunneled hemodialysis catheters to thrombectomy of clotted AV shunts. In addition, our service places infusion and apheresis catheters for the hematology/oncology physicians.

Fellows are provided direct experience with ultrasound guided vascular procedures. Depending on skill level, fellows can be directly involved in performing angiograms and angioplasties during their rotations on the interventional service. Additionally, fellows learn how to perform a complete physical examination of AV shunts, pinpointing suspected problems and understanding what studies are required.

Fellows will appreciate the critical importance of early placement, monitoring and ongoing maintenance of HD access. They are invited to participate in the monthly multidisciplinary conference on HD access, which involves surgery, radiology and nephrology faculty.

RENAL CLINICS

Fellows achieve a diverse, longitudinal outpatient nephrology experience in the clinics at the UC Davis Ambulatory Care Clinics, located near the main hospital, and in the VA clinics, located adjacent to the VA Medical Center. Fellows serve as the primary renal consultants for a wide
range of patients with kidney diseases, ranging from active glomerular diseases to end stage disease. Fellows perform percutaneous kidney biopsies for patients who require tissue diagnosis. All clinics are supervised by faculty, and all clinics employ full electronic medical records (EMR) and Fellows will understand the advantages to such systems, training for which is provided at the start of Fellowship.

TEACHING

UC Davis Nephrology offers an intensive teaching program for our fellows, rotating residents and students who choose a nephrology elective. In addition to inpatient consultation rounds, fellows attend weekly Nephrology Grand Rounds, Journal Club/Research Conferences, a monthly Renal Pathology conference, a weekly core topic series, a transplant and immunology lecture series, and a series of core material in nephrology for starting fellows.

Fellows are invited to present at all of these conferences, including Grand Rounds and Journal Club. Conferences are scheduled several months in advance, allowing time for preparation. These sessions give trainees an opportunity to hone their speaking skills and to become an “expert” on a particular nephrology topic.

RESEARCH

The research component of the UCD Nephrology fellowship is an integral part of the program. Fellows are required to perform research in each year of fellowship. Fellows are assigned a mentor who will assist them in finding and completing a project. Current research areas include VA and NIH-funded projects in proteomics and metabolomics of renal disease (PCKD, IgA Nephropathy and kidney cancer), renal cancer, and PKD signaling.

In addition, the Division is renowned for its work in exploring and defining the relationship between nutrition (as measured by serum albumin, transthyretin, and body composition) and inflammation, and its effects on cardiovascular and overall outcomes in dialysis patients. Key faculty members have focused their careers in elucidating the importance of lipoprotein levels, structure and function, as it pertains to renal disease both in humans and in experimental animal models. Members of the Division are also responsible for creating a bio-repository for the USDRS Nutrition special study group. The basic science component of the Nephrology Division occupies
modern laboratories in the new Genome and Biomedical Science building on the UC Davis main campus. Our division has close collaboration with not only other departments within the UC Davis School of Medicine, but also with similar divisions at other institutions across the country.

Almost all of our fellows present abstracts or posters at national societal meetings such as the ASN and NKF national conferences. Scholarly activity is a requirement for fellowship graduation. Progress during the research blocks is monitored and faculty members are interested in the successful implementation of research skills.

**SCHEDULE**

The UC Davis Nephrology Fellowship is a busy one, which prepares the trainees for just about anything that they may experience in the real world. Past graduates have stated that their experiences from fellowship have allowed them successful careers in both private and academic settings.

The distribution of time in the first and second years is outlined below. Each “block” is approximately 2 weeks in duration. The year is comprised of 24 of these blocks. In general, inpatient consultative time at both the UC Davis main hospital and the VA hospital run a minimum of 2 consecutive blocks.

*These allotted block times are approximations only. Circumstances may change on an annual basis.*
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