We dedicate this year’s report to the life and career of Dr. William B. Schwartz
1922—2009
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Message from the Chief

Welcome to our 8th Annual Report. The Division is comprised of 22 full-time and part-time physicians and scientists and 37 staff to support our growing clinical, research, educational and administrative endeavors, which are described in the following pages. Our family tree continues to grow; 6 more babies joined the Division in 2009 and another in early 2010. See the new additions in our family album (pages 3-4).

This has been a year of great sadness and great joy. In March, Dr. Schwartz, the founder of the Division, died after a lengthy illness. On November 13th, in conjunction with his family, we held a Remembrance Day at the Medical Center. Over 90 current and former staff and fellows, family, and friends attended. On pages 81 and 82, we include a full listing of the day’s events and pictures. It was a very special event. We dedicate this year’s Annual Report to Dr. Schwartz’s life and career, so that we can refresh our memory of his remarkable achievements and continue to build his legacy.

As in previous years, caring for patients remains the core of what we do. Research, education, and public policy round out our academic mission, and we have much to be proud of in 2009. Major clinical events of this year include the Division being ranked in the 50 best hospitals for nephrology in US News and World Report and Dr. Harrington’s retirement from the Division. Research highlights include another record research budget, with 5 Division members holding Career Development (K23) Awards. This year, Dr. Eberhard Ritz from the Department of Internal Medicine Ruperto Carola University of Heidelberg, Germany was the Harrington Visiting Professor to celebrate World Kidney Day in March. Collaborations with external partners have continued to be incredibly rewarding and valuable. Our work with the National Kidney Foundation includes the Tufts Center for Kidney Disease Guideline Development and Implementation (pages 56 and 75) and continuing as the editorial home for the American Journal of Kidney Diseases (page 66). We also continue our long collaboration with Dialysis Clinic, Inc. which is described starting on page 72. Our public policy initiatives continued to grow in 2009 and are described starting on page 69. We also continue to report on philanthropic support to the Division (page 76). This year we dedicated The Hortense “Diddy” Seybolt Fund For Staff Enrichment in Nephrology. The event is described on page 84.

Division members received an impressive array of awards this year. Lorna Davies was awarded the Saltonstall Employee Excellence Award. Several clinical awards were received: the NKF of MA, RI, NH & VT awarded Deb Basler, MSN, NP, Transplant Coordinator and Dr. Lawrence Milner, Floating Hospital for Children Chief of Pediatric Nephrology, with the 2009 Gift of Life Outstanding Nurse in Nephrology and Outstanding Physician, respectively; Dr. Perrone was recognized in Boston Magazine
as one of Boston’s best nephrologists; and the dialysis program exceeded the 2009 CMS stretch goal of 66% for dialysis treatments conducted using a fistula. Division members honored with research awards include Dr. Pereira; and Drs. Cindy Huang, Navdeep Tangri, and Martin Wagner, all research fellows. Teaching awards were given to Drs. Gilbert, Jaber, Moorthi, and Rifkin. Dr. Perrone received the 25 Year Faculty Service Award from TUSM and was also informed that in 2010 he will be awarded the Distinguished Faculty Award, which is one of the most important honors the Tufts University School of Medicine can bestow. Finally, Dr. Kassirer received the David E. Rogers award from the American Association of Medical Colleges. He has also been nominated by the esteemed *British Medical Journal* for an international honor, the Lifetime Achievement Award. I thank Dr. Richardson for preparing this year’s Annual Report.

This year I became a patient of the Division, by donating a kidney for my wife, Dr. Roberta Falke, as part of a three-pair exchange, coordinated by the New England Program for Kidney Exchange. The transplants occurred on December 15, and as of this writing, donors and recipients in all three pairs are doing well. I am grateful for this opportunity, which has given Roberta a chance for a better life, and given me a strong sense of personal and professional fulfillment. In addition, I am very proud to have done it here at Tufts Medical Center. We are thankful for the wonderful care we've received, both before and after the transplant.

I hope you enjoy learning about our accomplishments from this year’s Annual Report. As always, I welcome your feedback on any other aspects of our Division that you would like to hear about. We wish you and your family a happy and successful 2010!

Sincerely yours,

Andrew S. Levey, MD
Chief, William B. Schwartz Division of Nephrology
Tufts Medical Center
Dr. Gerald J. and Dorothy R. Friedman Professor of Medicine
Tufts University School of Medicine
Division Family Tree

2009 Additions

The Division family continued to grow in 2009 with 6 more babies being born to or adopted by Division members. In the last 3 years, 19 babies have joined the Division. The total score is nearly equal—Girls 10; Boys 9!

Leah Marie born to Caren DeMello & Carlton Vaz
January 23rd; 6 pounds 7 ounces

John Carter born to Julie & Charlie Driggs
January 26th at 4:57 am; 6 pounds 12 ounces

Noah Weiner born to Scott & Lisa Gilbert
February 23rd at 6:34 am, 7 pounds 14 ounces

Zachary Herbert adopted by Michelle & Mark Richardson
May 30th at 3:15 pm; 7 pounds 14 ounces, 19"

Philip Steven born to Dana Miskulin & Paul Martyniuk
September 23rd at 4 pm; 6 pounds 10 ounces, 18"

Sehler born to Aneet & Sukh Deo
December 4th at 6:07 pm; 6 pounds 14 ounces, 18.5"
Early 2010 Additions

And this new addition makes the girl:boy perfectly even—10 each!

Nehan born to Gautham Viswanathan and Malar Ramasamy
February 3rd at 3 pm; 21.5”
Administration

The William B. Schwartz Division of Nephrology is an integral part of the Tufts Medical Center, Tufts University School of Medicine (TUSM), and Tufts University communities. As listed below in the Staffing section, many Division members have other appointments within Tufts Medical Center, TUSM, and the Sackler School of Graduate Biomedical Sciences at Tufts University. In addition, the Division also enjoys a close and long-term relationship with Dialysis Clinic, Inc. (DCI), the largest not-for-profit provider of dialysis care in the United States and the National Kidney Foundation (NKF). In a broader organizational structure, Division members are also active participants within their professional organizations. Through these relationships, the Division is able to provide excellent patient care, perform high-level research, educate students and practitioners about kidney disease, and influence public policy relating to the diagnosis and treatment of kidney diseases.

Location

The Division maintains offsite and onsite ambulatory, dialysis, and inpatient operations, with administrative and research operations located within the Tufts Medical Center campus. The location of activities performed both onsite at Tufts Medical Center and at
Table 1: Onsite Locations of Division Activities at Tufts Medical Center

<table>
<thead>
<tr>
<th>Building</th>
<th>Floor</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 Kneeland Street</td>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
<td><em>American Journal of Kidney Diseases</em> Editorial Offices</td>
</tr>
<tr>
<td></td>
<td>4&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Kidney and Blood Pressure Center (KBPC) and KBPC Staff</td>
</tr>
<tr>
<td></td>
<td>5&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Outpatient dialysis services provided by DCI</td>
</tr>
<tr>
<td></td>
<td>5&lt;sup&gt;th&lt;/sup&gt; &amp; 6&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Majority of Division support operations and physician and research staff offices</td>
</tr>
<tr>
<td></td>
<td>8&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Physician and research staff offices</td>
</tr>
<tr>
<td>Ziskind</td>
<td>7&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Dr. Balakrishnan’s research lab</td>
</tr>
<tr>
<td>Floating</td>
<td>7&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Inpatient dialysis services provided by DCI</td>
</tr>
<tr>
<td>North</td>
<td>7&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Primary location for inpatient ward service</td>
</tr>
</tbody>
</table>

Table 2: Offsite Clinical Nephrology Activities Affiliated with Tufts Medical Center

<table>
<thead>
<tr>
<th>Area</th>
<th>Physicians</th>
<th>Practice Sites</th>
<th>Services Offered</th>
</tr>
</thead>
</table>
| Concord     | Andrei Kouznetsov, MD Valerie R. Price, MD Klemens B. Meyer, MD | - Pratt Medical Group Nephrology and Hypertension  
- Emerson Hospital, Whittier Rehab  
- DCI Walden Pond | - Outpatient nephrology  
- Inpatient consultation and dialysis services  
- Outpatient dialysis services |
| Greater Boston | Michael B. Cohen, MD Anthony Z. Dash, MD | - Hospital-based clinics at Lawrence Memorial, Melrose-Wakefield and Caritas St. Elizabeth’s Medical Center hospitals  
- Caritas St. Elizabeth’s Medical Center, Kindred, Lawrence Memorial, Melrose-Wakefield, Mt. Auburn and Whidden hospitals  
- DCI Ball Square, Caritas St. Elizabeth’s Medical Center, Cambridge, Malden, Medford, Saugus, Stoneham, and Woburn dialysis units | - Outpatient nephrology  
- Inpatient consultation and dialysis services  
- Outpatient dialysis services |
Staffing

Physician Staff
Andrew S. Levey, MD, Chief
Ronald D. Perrone, MD, Associate Chief
V. S. Balakrishnan, MD, MRCP, PhD
Jeanine A. Carlson, MD
Michael B. Cohen, MD
Anthony Z. Dash, MD
Scott J. Gilbert, MD, FASN
Annamaria T. Kausz, MD, MS
Andrei Kouznetsov, MD
Amy B. Kuhlik, MD
Vandana Menon, MD, PhD, MPH, MS
Klemens B. Meyer, MD
Dana C. Miskulin, MD, MS, FRCP(C)
Brian J.G. Pereira, MD, MBA
Monika Pilichowska, MD, PhD
Valerie R. Price, MD
Madhumathi Rao, MD, FRCP(E)
Mark J. Sarnak, MD, MS
Carmen Castaneda Sceppa, MD, PhD
Lesley A. Stevens, MD, MS, FRCP(C)
Katrin Uhlig, MD, MS
Ashish Upadhyay, MD
Daniel E. Weiner, MD, MS

Dr. Gerald J. and Dorothy R. Friedman Professor of Medicine
Professor of Medicine
Associate Professor of Medicine
Associate Clinical Professor of Medicine
Assistant Professor of Medicine
Assistant Professor of Medicine
Assistant Professor of Medicine
Assistant Professor of Medicine
Assistant Professor of Medicine
Dean of Students, TUSM
Associate Professor of Medicine
Associate Professor of Medicine
Assistant Professor of Medicine
Professor of Medicine
Assistant Professor of Pathology
Assistant Clinical Professor of Medicine
Assistant Professor of Medicine
Associate Professor of Medicine
Associate Professor
Department of Health Sciences
Northeastern University
Associate Professor of Nutrition
Friedman School of Nutrition Science and Policy
Assistant Professor of Medicine
Assistant Professor of Medicine
Assistant Professor of Medicine
Assistant Professor of Medicine

Special and Scientific Staff
Michelle M. Richardson, PharmD, BCPS, FCCP

Assistant Professor of Medicine

Associate Physician Staff
Bertrand L. Jaber, MD, MS, FASN

Associate Professor of Medicine
Vice Chair for Clinical Affairs
Department of Medicine
Caritas St. Elizabeth’s Medical Center

Nicolaos E. Madias, MD, FASN

Maurice S. Segal, MD Professor of Medicine
Chairman, Department of Medicine
Caritas St. Elizabeth’s Medical Center
Chief Academic Officer
Caritas Christi Health Care System
Adjunct Physician Staff

Miguel Cendoroglo, MD  
Associate Professor of Medicine  
Federal University of Sao Paulo  
Administrative Director of the Oswaldo Ramos Foundation  
Director of the Israelite Hospital Albert Einstein  
Sao Paulo, Brazil

John Gill, MD, MS  
Assistant Professor of Medicine  
University of British Columbia and St. Paul’s Hospital  
Vancouver, Canada

Tazeen H. Jafar, MD, MPH  
Director, Clinical Epidemiology Unit  
Head, Section of Nephrology  
Associate Professor  
Medicine & Community Health Sciences  
Aga Khan University  
Karachi, Pakistan

Gregorio Obrador, MD, MPH  
Professor of Medicine  
Dean  
Panamerican University School of Medicine  
Mexico City, Mexico

Martin Wagner, MD, MS  
Adjunct Instructor  
Resident, Internal Medicine  
University Hospital of Würzburg, Germany  
Würzburg, Germany

Faculty Emeriti

John T. Harrington, MD  
Professor of Medicine  
Dean Emeritus, TUSM

Jerome P. Kassirer, MD  
Distinguished Professor  
Special Assistant to the Dean, TUSM

Management Staff

Elizabeth J. Fitzgerald, MPA  
Business Operations Manager III  
William B. Schwartz Division of Nephrology and Pratt Medical Group Nephrology and Hypertension, Concord

Krista Boisclair, MS  
Research Administrator II

Teresa Hamelin  
Research Administrator II
Faculty Descriptions

Andrew S. Levey, MD

Dr. Levey's interests are in patient care, research, clinical practice guidelines, training in research and education, and health care policy related to chronic kidney disease (CKD).

His patient care interests are in CKD, diabetic kidney disease, polycystic kidney disease, and systemic lupus erythematosus.

His research interests include measurement and estimation of kidney function, epidemiology of CKD, treatments to slow the progression of CKD, cardiovascular disease in CKD, nutrition in CKD, and assessment of outcomes in patients treated by dialysis and kidney transplantation. Dr. Levey has been at the forefront of the development of equations to estimate glomerular filtration rate (GFR) from serum creatinine using large databases, including the widely-used Modification of Diet in Renal Disease (MDRD) Study equation. He is now leading the NIDDK-sponsored CKD Epidemiology Collaboration (CKD-EPI) to pool databases from other studies to develop improved estimating equations based on serum creatinine and cystatin C. In addition, he has a long history of participating in multicenter clinical trials and clinical investigations. He was the principal nephrologist co-investigator for the NIDDK-sponsored MDRD Study, a randomized trial of diet and blood pressure control in CKD. He was Principal Investigator for the ACE Inhibition in Progressive Renal Disease (AIPRD) Study Group, a collaboration of investigators who have pooled individual patient data on clinical trials of ACE inhibitors in nondiabetic kidney disease. He was Principal Investigator for the NIDDK-sponsored Hemodialysis (HEMO) Study, comparing the standard dose of dialysis with high dose of dialysis. He was also the principal nephrologist co-investigator for the AHRQ-sponsored CHOICE Study, a Patient Outcomes Research Team, studying kidney failure treated by dialysis. More recently, he has served as a member of the Executive Committees of the Trial to Reduce Cardiovascular Events with Aranesp Therapy (TREAT), comparing erythropoiesis stimulating agents to placebo for treatment of anemia in diabetic kidney disease and Folic Acid for Vascular Outcome Reduction in Transplantation (FAVORIT), comparing folic acid to placebo in kidney transplant recipients.

Dr. Levey is a widely recognized authority on clinical practice guidelines in CKD. He led the National Kidney Foundation (NKF) Task Force on Cardiovascular Disease in 1998. He was the Chair for two NKF Kidney Disease Outcome Quality Initiation (KDOQI) Work Groups. “Chronic Kidney Disease: Evaluation, Classification and Stratification of Risk” was published in 2002. “Hypertension and Antihypertensive Agents in Chronic Kidney Disease” was published in 2004. He is a member of the ongoing KDIGO Workgroup on Acute Kidney Injury. He has led three Kidney Disease Improving Global Outcomes (KDIGO) conferences. In 2004, the conference addressed definition and classification of CKD and in 2006 the conference addressed public health approaches and initiatives. In 2009, the conference addressed prognosis in CKD. He is Director of the Tufts Center for Kidney Disease Guideline Development and Implementation at Tufts Medical Center.

Dr. Levey’s interests in training are focused primarily at the level of post-graduate fellowship training and mentoring junior faculty. He directs the large research fellowship-training program of the Division. He is Principal Investigator of the Division’s 10-year NIDDK grant (T32) “Epidemiology, Clinical Trials and Outcomes Research”. The research program is also funded, in part, by the Tufts Center for Kidney Disease Guideline Development and Implementation, and grants and contracts from foundations and industry.
Dr. Levey’s contributions to policy are focused primarily on guideline implementation, quality improvement, and public policy related to CKD. He is a member of the National Kidney Disease Education Program (NKDEP) of the NIDDK. He has been the Editor-in-Chief of the American Journal of Kidney Diseases since 2006, and was formerly Associate Editor for Kidney Disease and Hypertension for the Annals in Internal Medicine. He co-chaired the 2007 technical expert panel sponsored by the Centers for Disease Control and Prevention on “Comprehensive Public Health Strategies for Preventing the Development, Progression, and Complications of Chronic Kidney Disease” and the 2008 workshop sponsored by NKF and Food and Drug Administration on “Proteinuria as a Surrogate Outcome in Chronic Kidney Disease.”

Ronald D. Perrone, MD

Dr. Perrone’s patient care interests are in polycystic kidney disease, general nephrology, and kidney transplantation medicine. He is the Director of the Polycystic Kidney Disease Center. His research interests are largely focused in the area of polycystic kidney disease, including slowing progression and determining the natural history of the extrarenal complications. In prior studies, he addressed the mortality of extrarenal complications of polycystic kidney disease after kidney failure treated by dialysis. Dr. Perrone also is the Principal Investigator of the Boston Patient Care Center of a NIH-funded multi-center clinical trial (HALT Progression in PKD, part of the Polycystic Kidney Disease Clinical Trials Network). This study uses angiotensin converting enzyme inhibitors in combination with angiotensin receptor blockers to slow the progression of polycystic kidney disease and utilizes the unique endpoint of kidney volume growth as assessed using magnetic resonance imaging. Tufts Medical Center is one of the four national HALT-PKD Study centers that is conducting this 6-year, $25 million study sponsored by the NIH. Drs. Perrone (the PI) and Miskulin direct the study that started in the winter of 2006.

Dr. Perrone is the Tufts Medical Center Principal Investigator of the TEMPO 3/4 study. TEMPO 3/4 is a global trial that is addressing the efficacy of the vasopressin-receptor antagonist tolvaptan to slow progression of polycystic kidney disease. The unique endpoint of kidney volume growth will be assessed using magnetic resonance imaging. Tufts Medical Center is one of 100 international TEMPO 3/4 Study centers.

Dr. Perrone is the clinical leader of the Polycystic Kidney Disease Database Consortium sponsored by the Polycystic Kidney Disease Foundation. This group is composed of representatives from FDA, the Critical Path Institute, the Clinical Data Interchange Standards Consortium, multiple pharmaceutical companies, and representatives of Mayo Clinic, Emory University, Tufts Medical Center, and the University of Colorado Medical Center. The goal is to develop consensus data elements to use in clinical investigation of polycystic kidney disease; using these consensus data elements, existing data from long-term registries and clinical trials will be combined and used to develop a quantitative disease model to assess the impact of increased total kidney volume in patients with polycystic kidney disease.
Vaidyanatha S. Balakrishnan, MD, PhD
Dr. Balakrishnan’s clinical specialties are CKD, dialysis, transplantation, and the treatment of kidney stones. His research interests focus on factors modulating inflammation and oxidative stress and their impact on clinical outcomes among patients with CKD, particularly those on hemodialysis. He is interested in the impact of pro-inflammatory and anti-inflammatory cytokines and cytokine-specific inhibitory proteins on clinical outcomes in patients on hemodialysis. In recent years, Dr. Balakrishnan’s research has focused on the role of genetic factors, particularly single nucleotide polymorphisms involving the cytokine genes, modulating the micro-inflammatory state and clinical outcomes among hemodialysis patients. He has also focused his attention on the mitochondrial genome and mitochondrial biogenesis and their impact on the complications associated with CKD. Dr. Balakrishnan has received several research awards for his work on oxidative stress and inflammation. He is the Director of Continuing Medical Education for the Division and coordinates research conferences and visiting professorships.

Jeanine A. Carlson, MD
Dr. Carlson’s primary appointment is within the Division of General Medicine and her clinical practice is within the Pratt Diagnostic Center. She continues to be an active nephrologist, with particular expertise in the medical complications of pregnancy. The Pratt Diagnostic Center is a concierge-style medical practice that is offered to patients who want to spend more time with their doctors, while exploring preventative and wellness techniques. Patients pay an annual fee for this service, and the funding benefits Tufts Medical Center's primary care practice, General Medical Associates.

Michael B. Cohen, MD
Dr. Cohen practices primarily at Melrose-Wakefield Hospital. He consults in both the inpatient and outpatient settings on the care of patients with kidney disease, hypertension, and those treated with hemodialysis and peritoneal dialysis. Dr. Cohen is Co-Medical Director at the DCI Ball Square dialysis unit in Somerville. Additionally he is involved with teaching medical students, residents, and fellows in nephrology.

Anthony Z. Dash, MD
Dr. Dash practices primarily at Lawrence Memorial Hospital and Caritas St. Elizabeth’s Medical Center (CSEMC). He consults in both the inpatient and outpatient settings on the care of patients with kidney disease, hypertension, and those treated with hemodialysis and peritoneal dialysis. Dr. Dash is the Co-Medical Director at the DCI Ball Square dialysis unit in Somerville.

Scott J. Gilbert, MD, FASN
Dr. Gilbert coordinates educational activities within the Division. He is the Director of the Fellowship Training Program and coordinates house staff nephrology education. He oversees resident rotations on the inpatient Ward and Consult services and the outpatient Kidney and Blood Pressure Center (KBPC). Dr. Gilbert is active in reforming the educational curriculum at Tufts Medical Center for interns, residents, and fellows. At TUSM, Dr. Gilbert is course director of Pathophysiology, section leader of Renal Pathophysiology, and coordinates the fourth year Consultative Nephrology elective. He has been instrumental in the development and introduction of the new medical school curriculum. Dr. Gilbert’s other educational activities include teaching Renal Pharmacology at the Sackler School of Graduate Biomedical Sciences and the Renal Section of Nutritional Biochemistry and Physiology in the Friedman School of Nutrition. His clinical interests are the treatment of CKD, renal artery stenosis, hemodialysis,
and transplantation. Dr. Gilbert’s research interests include the management of lupus nephritis and the treatment of renal artery stenosis. Dr Gilbert is an Associate Professor of Medicine at TUSM.

Bertrand L. Jaber, MD, MS, FASN
Dr. Jaber’s primary appointment is in the Department of Medicine at CSEMC where he serves as Vice Chair for Clinical Affairs in the Department of Medicine and he also directs the Kidney and Dialysis Research Laboratory. His research interests are broad and include: gene polymorphisms in acute kidney injury, biomarkers for early detection and prognostication of acute kidney injury, biocompatibility of dialyzers, cytokine and leukocyte biology in uremia, and the role of more frequent dialysis therapies for the treatment of kidney failure. Dr. Jaber is co-editor for the American Journal of Kidney Diseases.

Annamaria T. Kausz, MD
Dr. Kausz is now a Senior Director of Clinical Research at AMAG Pharmaceuticals, Inc; its chief therapeutic product is an intravenous iron product aimed at optimizing the management of anemia in patients with chronic kidney disease. She remains affiliated with the Division, participating in patient care, research, and other academic activities. Her research has encompassed the evaluation of the care of patients with CKD at all stages, including examination of the impact of the complications associated with decreased kidney function and comorbid conditions on outcomes among patients with CKD. Dr. Kausz’s clinical interests are in CKD, dialysis, transplantation, and pediatric nephrology.

Andrei Kouznetsov, MD
Dr. Kouznetsov practices at Emerson Hospital and the Pratt Medical Group Nephrology and Hypertension office in Concord. Dr. Kouznetsov is also the Associate Medical Director of Walden Pond DCI in Concord. His clinical specialties are CKD, hypertension, dialysis, transplantation, and general nephrology.

Amy B. Kuhlik, MD
Dr. Kuhlik is the Dean for Student Affairs at TUSM. She maintains a clinical practice within the Division by holding one half-day clinic a week and also attending on the nephrology consult service several weeks a year. Dr. Kuhlik’s clinical specialties are CKD, pregnancy, and polycystic kidney disease.

Nicolaos E. Madias, MD, FASN
Dr. Madias’ primary appointment is in the Department of Medicine at CSEMC. He is Chairman of the Department of Medicine at CSEMC, Chief Academic Officer at Caritas Christi Health Care System, and the Maurice S. Segal, MD Professor of Medicine at TUSM. Dr. Madias is interested in the broad field of acid-base and electrolyte metabolism. He is pursuing several projects on the epidemiology and management of hyponatremia and the assessment of acid-base disorders.

Vandana Menon, MD, PhD, MPH, MS
Dr. Menon is the recipient of a K23 Career Development Award from the NIDDK to investigate the role of non-traditional risk factors in the development of cardiovascular disease in CKD. Using data from the MDRD Study cohort, Dr. Menon is studying novel risk factors, including oxidative stress and insulin resistance in non-diabetic kidney disease. In addition, she is conducting an ancillary study to the HALT-PKD trial examining the interrelationships between inflammation, oxidative stress, and endothelial function in patients at different stages of PKD.
Dr. Menon has also received funding from the Polycystic Kidney Disease Foundation and Satellite Healthcare to study the epidemiology of endothelial function in PKD. She has an R21 from the NIDDK to study the effect of niacin in raising HDL and improving endothelial function in patients in the earlier stages of CKD. She is the recipient of a Clinical Scientist Award from the National Kidney Foundation. Dr. Menon’s publications during the past year include asymmetric dimethylarginine and uric acid as prognostic markers in in patients with stage 3-4 CKD.

Klemens B. Meyer, MD
Dr. Meyer is Director of Dialysis Services at Tufts Medical Center, Medical Director at Dialysis Clinic Inc. (DCI) Boston and DCI Walden Pond, and Medical Director for the Home Dialysis Program at DCI Ball Square. In 2008, he was promoted to Professor of Medicine at TUSM. His clinical interests are CKD, dialysis, and kidney transplantation. His teaching interests involve the techniques of interpersonal care. Dr. Meyer’s research interests are dialysis informatics and the measurement of patient experience and of the quality of care. He is also actively involved in data-driven quality improvement activities. In his capacity as DCI's Medical Director for Information Systems, Dr. Meyer participates in the development and operations of both medical and business information systems, guiding the work of a team of 64 information technology staff and four nursing informatics specialists. Dr. Meyer currently serves on the Boards of Directors of the ESRD Network of New England and of the National Forum of ESRD Networks and on the United States Renal Data System External Advisory Committee.

Dana C. Miskulin, MD, MS, FRCP (C)
Dr. Miskulin is the recipient of a K23 Career Development Award from the NIDDK pertaining to the measurement of case-mix severity in dialysis patients and its application to clinical trials the assessment of quality of care of dialysis patients. Dr. Miskulin also directs the DCI Comorbidity Assessment Project whose goal is to develop and implement procedures for the collection of comorbidity information and adjustment for comorbidity in reporting the quality of care provided at DCI facilities. Dr. Miskulin is also a Co-Investigator for the HALT-PKD Study. Her clinical interests are in general nephrology, polycystic kidney disease, and kidney stones.

Brian J.G. Pereira, MD, MBA
Dr. Pereira is President and Chief Executive Officer of AMAG Pharmaceuticals, Inc, and retains his appointment within the Division. He has three major areas of research interest. In the laboratory he is interested in cytokines and cellular mechanisms in dialysis; his work in clinical trials focuses on hepatitis in dialysis and transplantation; and finally his interest in outcomes and economics focus on the indices and costs of care among patients with CKD. He has mentored more than 25 post-doctoral trainees, the majority of who are in senior leadership positions in academia and industry in the US and abroad. In addition to the Board of Directors of AMAG Pharmaceuticals, he also serves on the Board of Directors of Biodel, Tengion, Satellite Health Care, and is Chairman of the Board of the Harvard-MIT Biomedical Enterprise Program.

Monika Pilichowska, MD, PhD
Dr. Pilichowska’s primary appointment is in the pathology department at Tufts Medical Center. She is board certified in Anatomic and Clinical Pathology and Hematopathology and is a member of the Renal Pathology Society. Dr. Pilichowska has a special interest in kidney diseases and interprets kidney biopsies in patients with medical kidney disease and kidney transplants. She conducts kidney biopsy conference at regular intervals for Division members. Her current research studies include renal involvement in lymphoproliferative disorders,
autoreactive B-cell clones in systemic lupus erythematosi, and IgA nephropathy.

Valerie R. Price, MD  
**Dr. Price** practices at Emerson Hospital and the Pratt Medical Group Nephrology and Hypertension office in Concord. Her areas of interest include acute kidney injury and chronic kidney failure, management of chronic dialysis patients, and electrolyte disorders. In addition, Dr. Price works closely with community urologists to manage kidney stone disease. She volunteers at a local school, teaching children about anatomy and physiology.

Madhumathi Rao, MD, FRCP (E)  
**Dr. Rao’s research interests** are in the genetics of CKD and diabetic kidney disease and in the role of mitochondrial injury in the complications and progression of CKD. She is a recipient of a K23 career development award from the NIDDK to study the role of genetic polymorphisms of TGF-b1 and PAI-1 in cardiovascular and kidney disease progression among patients with CKD. In addition, she is extending these studies to the development and progression of kidney disease in patients with type I diabetes under the Genetics of Kidney Disease in Diabetics (GoKinD) study conducted by the Joslin Diabetes Center and George Washington University Biostatistics Center. Dr. Rao is also a recipient of an R-21 award and the NKF Young Investigator award, to study the role of mitochondrial injury in the anemia of CKD. She received funding from the Paul Teschan Research Fund and Amgen to evaluate the role of mitochondrial dysfunction in anemia, inflammation and cardiovascular disease among dialysis patients. Dr. Rao actively collaborates with Dr. Balakrishnan and with Dr. Shirihai of TUSM, to study the role of calcineurin inhibitor induced mitochondrial injury in the development of de novo diabetes after kidney transplantation and with Dr. Jose Ordovas of the Human Nutrition Research Center on Aging for her genetic studies.

Michelle M. Richardson, PharmD, FCCP, BCPS  
**Dr. Richardson’s research interest** is the study of quality of life and satisfaction in patients with CKD. She is the Tufts Medical Center Project Director for the NIH-funded study entitled Functional Health Computerized Adaptive Testing in Chronic Kidney Disease. As a pharmacist, her clinical interests involve appropriate dosing and use of medications in patients with CKD. Dr. Richardson is the director of the DCI Outcomes Monitoring Program (OMP). She is also the Director of Communications for the Division and is responsible for producing this Annual Report and maintaining the Division’s Web site.

Mark J. Sarnak, MD, MS, FASN  
**Dr. Sarnak** is the Director of Research in the Division of Nephrology and the Associate Director of the Research Training Program. He is interested in cardiovascular epidemiology in CKD. His research focuses on traditional and non-traditional cardiovascular risk factors in CKD, aging and kidney disease, and cognitive function and CKD. Drs. Sarnak and Levey have undertaken the Cardiovascular Disease Pooling Project, pooling multiple NHLBI databases to evaluate the effect of kidney function and anemia on cardiovascular disease. Drs. Sarnak and Weiner collaborate with Drs. Folstein and Rosenberg to study the association of homocysteine, cognition, and cerebrovascular disease in the homebound elderly. Drs. Sarnak and Menon are evaluating the impact of non-traditional risk factors for cardiovascular disease in CKD using databases from the MDRD Study. Dr. Sarnak is funded by the NIDDK and the National Institutes of Aging to perform these research projects. Dr. Sarnak’s clinical specialties are in cardiovascular disease in patients with kidney disease, management of chronic kidney disease, dialysis, kidney transplantation, and kidney stones.
Carmen Castaneda Sceppa, MD, PhD

**Dr. Sceppa’s** primary appointment is in the Bouvé College of Health Sciences at Northeastern University and her secondary appointment is in the Friedman School of Nutrition Science and Policy at Tufts University. Her research focuses on the role of protein nutrition (primarily protein) and exercise (primarily resistance training) to counteract the loss of muscle mass and function with age and with chronic diseases like diabetes and CKD in older adults. She studies mechanisms associated with muscle wasting including insulin resistance and inflammation. Dr. Sceppa’s research efforts include reaching out to populations of diverse ethnic backgrounds as well as translating her research findings into clinical care and public health.

Lesley A. Stevens, MD, MS, FRCP (C)

**Dr. Stevens’s** primary research interests are in kidney function measurement and estimation, as well as epidemiology and outcomes related to CKD. She is the co-principal investigator of CKD-EPI, a collaborative effort to use pooled individual patient data to address central questions in the epidemiology of CKD, including developing improved GFR estimation equations, using these equations to refine prevalence estimates for CKD from National Health and Nutrition Examination Survey, and evaluating changes in proteinuria as a surrogate marker for kidney disease outcomes in clinical trials. Dr. Stevens is the recipient of a K23 career development award, the American Society of Nephrology American Specialty Professors (ASN-ASP) Junior Development Grant in Geriatric Nephrology and the DCI-Paul Teschan Research Fund, all of which focus on projects related to kidney function and aging. The later two awards investigate the validity and reliability of novel ways to measure GFR. Dr. Stevens is the principal investigator and director of the Scientific and Data Coordinating Center of a multi-center grant from Gilead Inc to measure kidney function in HIV positive patients. Dr. Stevens is also interested in research and policy related to implementation of CKD Guidelines. She is Program Director, Implementation in the Tufts Center for Kidney Disease Guideline Development and Implementation. She works with NKF leadership and national organizations to implement CKD guidelines, including issues related to GFR estimation and revisions to diagnostic codes for kidney disease. Dr. Stevens’s clinical interests are general nephrology, detection and treatment of CKD, geriatric nephrology, HIV-associated kidney disease, and kidney stones. She is the Director for Quality Improvement for the Division.

Katrin Uhlig, MD, MS

**Dr. Uhlig** is the Director of Guideline Development at the Tufts Center for Kidney Disease Guideline Development and Implementation. Dr. Uhlig co-directs the evidence review teams for several guideline projects. She has worked on nephrology guidelines since 2001 and in 2003 was a co-founder of the Center. In 2003, she became the Center’s Program Director, Nephrology and in 2008 the Director of Guideline Development. Through participation in several guidelines as Director or Co-Director of the Evidence Review Team (ERT), Dr. Uhlig has acquired unique knowledge as a methods expert in evidence synthesis and critical literature appraisal in the domain of nephrology. Dr. Uhlig provides consultation to the NKF on issues related to process of guideline development and methods of systematic review and critical literature appraisal. She mentors and supervises fellows in the development of evidence-based clinical practice guidelines and related research topics. Dr. Uhlig lectures on guideline topics. She co-teaches an annual course on meta-analysis in the Master of Science Program at the Sackler School of Graduate Biomedical Sciences at Tufts University. Dr. Uhlig’s clinical specialty is in the care of patients with CKD, kidney transplants and kidney stones.
Ashish Upadhyay, MD
Dr. Upadhyay is the Medical Director of the Division’s Kidney and Blood Pressure Center. His clinical interests are general nephrology, glomerular diseases and kidney transplantation. Dr. Upadhyay's research interests include clinical practice guideline development and kidney disease epidemiology. He has published in areas ranging from arterial stiffness in CKD to dialysis complications and epidemiology of hyponatremia. Dr. Upadhyay also currently serves as an Assistant Project Director of the evidence review team for the KDIGO Guideline on Blood Pressure in CKD. He joined the division as Assistant Professor of Medicine in July of 2009 after completing his clinical fellowship training at Boston Medical Center and research fellowship training at the Framingham Heart Study, and continues to be involved with the Framingham Heart Study investigators in a number of CKD epidemiology projects.

Daniel E. Weiner, MD, MS
Dr. Weiner is the recipient of a K23 Career Development Award from the NIDDK to investigate cerebrovascular disease and cognitive impairment in individuals with CKD. His research work includes evaluating the effect of traditional and non-traditional cardiovascular disease risk factors on stroke and other cardiovascular disease outcomes and evaluating the burden of and risk factors for cognitive impairment and cerebrovascular disease in elderly individuals with all stages of CKD, including those receiving hemodialysis. Additionally, Dr. Weiner received a Carl W. Gottschalk Research Scholar Grant from the American Society of Nephrology to investigate the medical, ecologic and economic impact of dialyzer reprocessing practices. He is also leading Tufts’ involvement in the multicenter NIH-funded Systolic Blood Pressure Intervention Trial (SPRINT), which will help elucidate the appropriate blood pressure goal for antihypertensive treatment in non-diabetic adults with cardiovascular risk factors. Dr. Weiner is the Associate Medical Director of DCI Boston. In this role, he is working to enhance care for dialysis patients and dialysis education at Tufts Medical Center. Since October 2006, Dr. Weiner has been the Deputy Editor of the American Journal of Kidney Diseases. In this position, working with a dedicated staff, he is responsible for many of the day-to-day operations of the Journal, and has endeavored to develop new content while maintaining current excellence. Dr. Weiner’s clinical specialties are general nephrology and dialysis, internal medicine, and cardiovascular disease in patients with CKD.

Division Staff

Administration

Members of the support staff sustain the Division’s administrative, clinical, and research operations. Elizabeth J. Fitzgerald, MPA Business Operations Manager III, supervises 37 personnel within the Division (35 onsite and 2 offsite employees). The support personnel are diverse and each staff member brings specialized knowledge and skills to their respective positions. All administrative and clinical staff functions as teams supporting operations and each other. Personnel are cross-trained, enabling each team to support day-to-day operations and the other, when the need arises. The ambulatory support staff also works very closely with our physicians, fellows, staff
nurse, physician assistant, and transplant nurse practitioners to provide high-quality care and customer service to our patients. Ms. Fitzgerald also oversees the Division’s Fellowship program, currently staffed as 13 Clinical and Clinical Research/Training Grant full-time equivalents.

**Administrative Support Staff**

<table>
<thead>
<tr>
<th>Staff Member</th>
<th>Position</th>
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<tbody>
<tr>
<td>Lorna Davies</td>
<td>Administrative Assistant III</td>
</tr>
<tr>
<td>Hasnaa Moussaif</td>
<td>Administrative Assistant II</td>
</tr>
<tr>
<td>Neva Parsons</td>
<td>Administrative Assistant III</td>
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**Kidney and Blood Pressure Center Staff**

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<th>Staff Member</th>
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<tbody>
<tr>
<td>Robyn Bluestein, MPH</td>
<td>Ambulatory Supervisor</td>
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<tr>
<td>Helen Freedman</td>
<td>Patient Service Coordinator III</td>
</tr>
<tr>
<td>Debbie Mitchell-Dozier, RN</td>
<td>Staff Nurse</td>
</tr>
<tr>
<td>Ashley Parker</td>
<td>Phlebotomist / Medical Assistant</td>
</tr>
<tr>
<td>Finna Tam</td>
<td>Patient Service Coordinator III</td>
</tr>
<tr>
<td>Jennifer Trignano, PA-C</td>
<td>Physician Assistant</td>
</tr>
<tr>
<td>Bary (Ho Ching) Yuen</td>
<td>Patient Service Coordinator II</td>
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**Pratt Medical Group Nephrology and Hypertension, Concord**

<table>
<thead>
<tr>
<th>Staff Member</th>
<th>Position</th>
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<tbody>
<tr>
<td>Julie Bryant</td>
<td>Patient Service Coordinator II</td>
</tr>
<tr>
<td>Julie Flynn</td>
<td>Patient Service Coordinator II</td>
</tr>
</tbody>
</table>
**Research Support Staff (i.e., Assistants, Associates, & Statisticians)**

<table>
<thead>
<tr>
<th>Staff Member</th>
<th>Position</th>
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<tbody>
<tr>
<td>Brian Agganis</td>
<td>Clinical Research Coordinator II</td>
</tr>
<tr>
<td>Juliana Castedo</td>
<td>Research Assistant I</td>
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<tr>
<td>Julie Driggs, RN</td>
<td>Clinical Research Associate IIA</td>
</tr>
<tr>
<td>Amy Earley</td>
<td>Project Coordinator</td>
</tr>
<tr>
<td>Lena Giang</td>
<td>Clinical Research Coordinator II</td>
</tr>
<tr>
<td>Srila Gopal</td>
<td>Research Assistant I</td>
</tr>
<tr>
<td>Priyanka Jain</td>
<td>Research Assistant I</td>
</tr>
<tr>
<td>Peter Laucks</td>
<td>Clinical Research Coordinator II</td>
</tr>
<tr>
<td>Maia Leppo</td>
<td>Clinical Research Assistant</td>
</tr>
<tr>
<td>Lijun Li</td>
<td>Research Assistant II</td>
</tr>
<tr>
<td>Alice Martin, RN</td>
<td>Research Nurse</td>
</tr>
<tr>
<td>Danielle Nicolazzo</td>
<td>Research Assistant II</td>
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<tr>
<td>Aghogho Okparavero</td>
<td>Clinical Research Associate II</td>
</tr>
<tr>
<td>Kruti Pandya</td>
<td>Statistician/Research Associate II</td>
</tr>
<tr>
<td>Rebecca Persson</td>
<td>Research Assistant II</td>
</tr>
<tr>
<td>Vidya Rajagopal</td>
<td>Research Assistant</td>
</tr>
<tr>
<td>Wendy Shinzawa</td>
<td>Research Assistant I</td>
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<tr>
<td>Gertrude (Peachy) Simon, RN</td>
<td>Clinical Research Associate IIA</td>
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<tr>
<td>Nubia Smith-Vaughn</td>
<td>Clinical Research Coordinator II</td>
</tr>
<tr>
<td>Ximena Vanegas</td>
<td>Research Assistant II</td>
</tr>
<tr>
<td>Lucy Zhang</td>
<td>Statistician / Research Associate II</td>
</tr>
<tr>
<td>Open Positions</td>
<td>Research Assistant II</td>
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<td></td>
<td>Statistician/Research Associate II</td>
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</table>
Research Administration

Krista Boisclair, MS and Teresa Hamelin, both Research Administrators II, under the supervision of Director of Research Administration for the Department of Medicine, are responsible for assisting investigators and research staff in all aspects of grants management and coordination with research activities of the Division. Research activities of the Division are discussed in more detail starting on page 38.

American Journal of Kidney Diseases

Nijsje Dorman, PhD, is Managing Editor for the *American Journal Kidney Diseases*. Dr. Dorman is responsible for all aspects of editorial operations of the journal. Further information about AJKD is on page 66.

*American Journal of Kidney Diseases Editorial Office Staff*

<table>
<thead>
<tr>
<th>Staff Member</th>
<th>Position</th>
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<tbody>
<tr>
<td>David Boffa</td>
<td>Editorial Assistant</td>
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<tr>
<td>Elizabeth Bury</td>
<td>Editorial Assistant</td>
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<tr>
<td>Elizabeth Frank</td>
<td>Associate Managing Editor</td>
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Faculty and Staff Changes in 2009

Faculty Changes

- In 2009, Dr. **Gilbert** received an appointment as Adjunct Associate Professor in the Friedman School of Nutrition Science and Policy at Tufts University.
- In June, Dr. **Harrington** retired from the Division. Although “officially” retired from clinical practice, Dr. Harrington is working 2 days a week in the International Affairs office at the medical school.
- In 2009, Dr. **Jaber** received a faculty appointment to the Sackler School of Graduate Biomedical Sciences.
- Dr. **Khan** left the Division in April to accept a position at Abbott Laboratories in Chicago.
- Dr. **Liangos** resigned his position as a member of the Associate Physician Staff to return to his native Germany.
• Dr. Menon was promoted to Associate Professor of Medicine at TUSM.

• Dr. Rifkin completed her 1-year appointment as an Instructor of Medicine at TUSM. During that year, she continued her research with Dr. Sarnak. Dr. Rifkin is now a member of the Division of Nephrology at the University of California in San Diego.

• In early 2010, Dr. Sarnak was promoted to Professor of Medicine at TUSM. This promotion is in recognition of Dr. Sarnak’s outstanding achievements in research, teaching, and patient care, and his tremendous contributions to the division, department, hospital and university. He has reached this milestone at an early stage in his career -- a testament to his many capabilities, hard work, and tireless devotion to his principles.

• Dr. Upadhyay joined the Division in July. Dr. Upadhyay completed his internal medicine residency at CSEMC and his nephrology fellowship at Boston Medical Center (BMC). While at BMC, Dr. Upadhyay was active in clinical research looking at CKD in the Framingham Heart Study. His responsibilities at Tufts will include directing the KBPC, participating in the development of clinical practice guidelines, and providing patient care and medical education at Tufts Medical Center.

Staff Changes

Research Administration

• Jack Keenan left his position as a Research Administrator II and was replaced by Teresa Hamelin. Teri oversees pre and post awards in Rheumatology, as well as the programs of Drs. Menon, Meyer, Miskulin, Richardson, and Weiner in the Division of Nephrology.

Clinical

• Lisa Mables was hired as a new biller to support the Division’s clinical revenue efforts.

Research

• Several new Research Assistants (Priyanka Jain, Vidya Rajagopal, and Ximena Vanegas) and a Clinical Research Coordinator (Nubia Smith-Vaugh) were hired to support the Division’s growing research enterprise.

• Juliana Castedo joined the Division to work with Dr. Perrone on a project to create standard data elements for clinical trials in polycystic kidney
disease. This project is funded by the PKD Foundation and involves working with the FDA and the clinical data interchange standards consortium (CDISC). She is a graduate of Columbia University. Prior to starting in the Division, Juliana worked for 4 years in New York researching life sciences companies for their investment potential.

- Darya Rudym and Kimberly Clayton, MPH resigned from their Research Assistant II positions. Darya began her medical studies at TUSM and Kimberly started a position as a health inspector trainee at the San Bernadino Department of Public Health. Samuel Abariga, Caren DeMello, and Mohammad Iraniha also resigned their research support positions in 2009.

### 2009 Administrative Accomplishments

- With the arrival of Dr. Upadhyay, the role of Medical Director for the Kidney and Blood Pressure Center has begun to transition from Dr. Gilbert to Dr. Upadhyay.

### Service

Members of the Division are involved in local, national, and international service.

#### Service to Tufts Medical Center

- Dr. Gilbert serves on the Internal Medicine Residency Clinical Competency Committee, the Graduate Medical Education Committee, the Internal Medicine Residency Curriculum Committee and the Teaching Task Force.

- Dr. Jaber is a scientific reviewer for the Tufts Clinical and Translational Science Institute (CTSI) Pilot Studies Program.

- Drs. Levey and Sarnak are members of the Clinical Research Program Advisory Committee for the Fellowship Program in the Institute for Clinical Research and Health Policies in the Division of Clinical Care Research.

- Dr. Menon is a Senior Epidemiologist in the Design and Data Resource Center of the Tufts CTSI. The Design and Data Resource Center supports researchers in preparing innovative clinical research protocols and grants, creating secure data systems, and conducting full data analysis.

- Dr. Meyer is the medical staff sponsor for the Schwartz Center Rounds.

- Dr. Miskulin serves on the Hospital Pharmacy and Therapeutics Committee, a
policy setting and monitoring committee of the medical staff responsible for the appropriate use of drugs and is co-facilitator on the Performance Outcome Team on Communication about Medications.

- Dr. **Perrone** continues to serve as the United Network for Organ Sharing (UNOS) certified Transplant Physician at Tufts Medical Center.

- Dr. **Rao** is a member of the Tufts Medical Center Investigational Review Board.

- Drs. **Sarnak**, **Gilbert**, and **Weiner** are members of the Tufts Medical Center Internal Medicine Residency Selection Committee.

- In 2009, Dr. **Stevens** ended her service on the Care Review and Patient Safety Committee.

- Dr. **Weiner** is a Navigator for the Tufts Clinical and Translational Science Institute (CTSI) and The mission of the Tufts CTSI is to identify, stimulate, and expedite innovative clinical and translational research with the goal to improve the public’s health.

**Service to TUSM/Sackler School of Graduate Biomedical Sciences**

- Drs. **Balakrishnan** and **Menon** are members of the Scientific Affairs Committee at TUSM.

- In 2009, Dr. **Gilbert** completed his service as a member of the MedFoundations Working Group for Curriculum Redevelopment. The Working Group was tasked with redeveloping the preclinical medical education.

- Dr. **Gilbert** is an *Ex Officio* member of the TUSM Curriculum Committee.

- Since 2007, Dr. **Gilbert** has served as the Chair of the From Health to Disease: Cardiac/Pulmonary/Renal Course Development Committee.

- In 2008, Dr. **Jaber** was elected to the Clinical Faculty Appointment and Promotion Committee of TUSM.

- In 2009, Dr. **Madias** completed his service as a member of the Committee on Clinical Appointments and Promotions and the Vice Dean for Clinical and Academic Affairs Search Committee at TUSM. He also completed his service as a member of the Neurology Chair Search Committee for TUSM and Tufts Medical Center.

- Dr. **Meyer** serves as a member of the TUSM Compassionate Care Key Theme
Committee, which oversees the teaching, learning, and assessment of the compassionate care key theme throughout the 4-year curriculum. The Medical School has identified compassionate care as one of nine key curricular themes; the others include professionalism and ethics; communication skills; population medicine and health care systems; evidence based medicine/information mastery; community service and citizenship; culturally competent care; physician well being; and life cycles.

- **Dr. Meyer** is a member of the Kenneth B. Schwartz Center Compassionate Care Faculty Development program. Already a master at compassionate patient care, Dr. Meyer is one of a core group of physicians who is training to be a ‘master teacher’ of compassionate patient care. This purposes of this program, through the generous support of the Kenneth B. Schwartz Center, are to 1) train a core group of health care educators from the hospital affiliates of TUSM to be ‘master teachers’ of compassionate patient care; 2) have participants join a site-based team to develop, implement, and assess an educational compassionate care project at their clinical site and receive feedback throughout the process; 3) develop a TUSK website that will serve as a repository for compassionate care resources as well as teaching, learning and assessment strategies; 4) assess the impact of the program on (a) the professional development of participating educators and (b) the educational experience of the site-based project’s participants. The Compassionate Care Faculty Development Program builds upon the work of the Compassionate Care Faculty Advisory Group which developed a curricular template to teach compassionate care throughout the TUSM 4-year medical school curriculum.

- In 2009, **Dr. Perrone** completed a long tenure serving as the representative of the Tufts Medical Center Department of Medicine on the TUSM Faculty Senate. During his tenure he served as a member, vice-president, and president.

- **Dr. Rao** was elected to the TUSM Scientific Affairs Committee.

- **Dr. Sarnak** is a member of the Clinical Research Program Advisory Committee for the Fellowship Program in the Institute for Clinical Research and Health Policy in the Division of Clinical Care Research.

- **Dr. Sarnak** is a member of the Subcommittee to Evaluate and Formulate Exams for PhD Theses for the Sackler School of Graduate Biomedical Sciences.

- **Dr. Uhlig** is a member of the Sackler Clinical Research Program Admissions Committee in the Sackler School of Graduate Biomedical Sciences.

- **Dr. Weiner** is a member of the Curriculum Committee at TUSM.
Service to Professional Organizations

In addition to providing service on a local level, Division members are actively involved in providing service to our professional organizations on the local, national, and international levels.

- Dr. Balakrishnan is a member of the Scientific Advisory Board for AMAG Pharmaceuticals, Inc.

- Dr. Balakrishnan sits on the Clinical Research Grants Review Committee of the NKF.

- Drs. Gilbert and Perrone serve as members of the Medical Advisory Board of the NKF of MA, RI, NH and VT. In 2009, Dr. Meyer concluded his service to the local NKF chapter.

- Dr. Jaber has been a member of the Acute Kidney Injury Advisory Group for the American Society of Nephrology since 2007. He is also a member of the Disaster Relief Task Force of the ASN.

- Dr. Jaber is a member of the Kidney Disease Outcomes Quality Initiative (KDOQI) Advisory Board of the NKF. He has held this position since 2004. He is also a member of the Council on Renal Nutrition Research Grant Selection Committee for the NKF.

- Dr. Jaber is a member of the Renal Disease & Detoxification Committee of the Association for Advancement of Medical Instrumentation (AAMI) and also a member of the Dialysis Research Consortium Committee.

- Dr. Levey is a member of the NKF Scientific Advisory Board.

- In 2009, Dr. Madias was appointed as a member of the Advisory Board for the Hellenic Bioscientific Association in the USA.

- Dr. Madias is a member of the Scientific Advisory Board for Astellas Pharma US, Inc. located in Deerfield, IL and is also a member of the Board of Directors for Arisaph Pharmaceuticals located in Boston MA.

- Dr. Madias is a member of the Education Committee for the American Society of Nephrology.

- Dr. Menon is a member of the NIH Clinical Translational Science Awards Biostatistics/Epidemiology/Research Design (BERD) Workgroup.
• Dr. Menon was an abstract reviewer for the 2009 American Society of Nephrology’s 42nd Annual Meeting & Scientific Exposition.

• In 2009, Dr. Menon was appointed to the NKF’s KDOQI Research Advisory Committee.

• Dr. Meyer is a member of the Board of Directors and of the Executive Committee of the End-Stage Renal Disease Network of New England.

• Since 2006, Dr. Meyer has been a member of the Board of Directors of the Forum of End-Stage Renal Disease Networks. He also represents the Forum Board on the United States Renal Data System External Advisory Committee and also the Fistula First Breakthrough Initiative. The Forum is a not-for-profit organization that comprises the 18 regional End-Stage Renal Disease Networks that are responsible for coordinating care for patients with kidney failure throughout the United States. The Forum’s mission is to provide support to the ESRD Networks in promoting and improving the quality of care of ESRD patients. Their mission is achieved through education and the collection, analysis, and dissemination of data and information.

• Drs. Miskulin and Meyer are members of the Quality Management Committee of Dialysis Clinic Inc.

• Dr. Miskulin is the Chair of the Endpoints Committee for the HALT-PKD Study.

• Dr. Perrone serves on the Living Donor Committee of the United Network for Organ Sharing.

• Since 2006, Dr. Sarnak has been the co-chair of the Cardiovascular Health Study (CHS) Renal Work Group. He joined the Work Group in 2003.

• Dr. Sarnak is on the writing committee of the cardiovascular subcommittee of the Hemodialysis (HEMO) Study.

• In 2009, Dr. Sarnak was an abstract reviewer for the epidemiology meeting of the American Heart Association.

• Since 2004, Dr. Sceppa has been a grant reviewer for the European Society for Parenteral and Enteral Nutrition.

• Dr. Stevens is a member of the NKF’s Kidney Disease Early Evaluation Program (KEEP) Steering Committee and also is the chair of the Clinical Oversight Committee of KEEP.
**Administrative Honors and Awards**

- In 2009, Dr. **Meyer** was elected President-Elect of the National Forum of ESRD Networks. His term began in July and will end in June 2011.

- Lorna Davies, Administrative Assistant III, was awarded the Saltonstall Employee Excellence Award in May and honored with a luncheon in the Division. The Saltonstall award honors employees who exhibit the highest standards of service and performance in their work and their interactions with staff, patients and visitors. Lorna began working in the Division in 1996. As Ms. Fitzgerald wrote to the entire Division “Lorna is truly an integral part of our Nephrology team. Lorna always greets you with a smile, is always willing to help, and serves as a great resource.”

![Drs. Levey and Meyer, Ms. Davies, Drs. Perrone and Harrington
Saltonstall Award Luncheon](image)

**Patient Care**

The Division provides diagnostic and treatment expertise for patients with chronic kidney diseases, including kidney failure and kidney transplantation, acute kidney injuries, fluid and electrolyte disorders, and all forms of hypertension. The staff has expertise in evaluation and treatment of nephrotic syndrome, various glomerular diseases, diabetic kidney disease, polycystic kidney disease, urinary tract infections, urinary reflux and obstruction, kidney stones, and all other kidney diseases. Special diagnostic and treatment modalities offered by the division include glomerular filtration rate estimation, kidney biopsy, transplant immunosuppression, ambulatory blood pressure monitoring, percutaneous transluminal renal angioplasty and stenting, hemodialysis, peritoneal dialysis, continuous venovenous hemofiltration, vascular access monitoring and repair, and kidney transplantation.

All our clinical programs continue to expand, offering care for a wide range of complex and complicated issues associated with acute and chronic kidney disease. The following section highlights our clinical programs.
2009 Clinical Initiatives

Outpatient

- With the arrival of Dr. Upadhyay, the role of Director for the Kidney and Blood Pressure Center has begun to transition from Dr. Gilbert to Dr. Upadhyay.

Continuing Outpatient Clinical Initiatives

Program Descriptions

Kidney and Blood Pressure Center

Outpatient clinical activities take place primarily in the KBPC, directed by Dr. Upadhyay. There are currently nine half-day-a-week clinics staffed by Drs. Balakrishnan, Gilbert, Kausz, Kuhlik, Levey, Meyer, Miskulin, Perrone, Sarnak, Stevens, Uhlig, and Upadhyay.

The KBPC emphasizes a multi-disciplinary approach to kidney disease. Collaboration with the Division of Transplant Surgery, Department of Urology, the DCI outpatient dialysis unit, and the Frances Stern Nutrition Center improve the quality of care delivered. The KBPC specializes in the diagnosis and management of CKD, hypertension, glomerular diseases, kidney transplantation, kidney stones, and peritoneal dialysis. Ambulatory blood pressure monitoring, intravenous iron administration and subcutaneous erythropoietin administration services are offered by the KBPC. Recently, a multidisciplinary Kidney Stone Clinic began coordinating nephrology, surgery, radiology, and nutrition expertise.

Many clinical studies on CKD occur in the clinic, including studies of polycystic kidney disease, lupus nephritis (in conjunction with the Division of Rheumatology), transplant immunosuppression, cardiovascular disease in transplantation, computerized assessment of health-related quality of life, and genetic predisposition to progression.

For 2 consecutive years, the Division of Nephrology has been ranked in the "Best Hospitals" edition of US News and World Report.
Home Hemodialysis

The DCI home hemodialysis program uses the NxStage system. Our experience with this modality has been quite good and we are actively endeavoring to expand our home hemodialysis program. Jane Maxim, Carla Rice, and Pauline Grey provide dedicated nursing care for the home hemodialysis program as well as for the peritoneal dialysis program.

Center for Polycystic Kidney Disease

In 2006, Dr. Perrone opened The Center for Polycystic Kidney Disease at Tufts Medical Center. This multidisciplinary clinic offers comprehensive, coordinated care for patients with polycystic kidney disease. The Center’s physicians are internationally recognized experts in treating and managing the complications of PKD. In addition to Drs. Perrone and Miskulin of the Division of Nephrology, physicians from transplant surgery, cardiothoracic surgery, urology, neurosurgery, and clinical genetics participate in the Center. Areas of expertise include providing coordinated care for chronic kidney disease including dialysis and transplantation, treatment of hypertension, and evaluation and management of the complications of liver and kidney cysts including chronic pain, kidney stones, and cardiovascular issues including intracranial aneurysms. Multidisciplinary consultations are provided in collaboration with Gennaro Carpinito, MD, Urologist-in-Chief and Chairman, Department of Urology; Adel Malek, MD, Neurosurgeon; Richard Rohrer, MD, Chief, Transplant Surgery; Michael Tarnoff, MD, Associate Director, Minimally Invasive Surgery Center; Laurence H. Brinckerhoff, M.D., Division of Thoracic Surgery; Diana Bianchi, MD, Vice Chair for Research, Floating Hospital; and Laurie Demmer, MD, Chief, Genetics.

This center also addresses the complications of polycystic kidney disease resulting in new transplants, aneurysm repair, video thorascopic splanchnicectomy (VSPL) for relief of intractable cyst pain, laparoscopic cyst reduction, and expansion of the nephrology practice at Tufts Medical Center. As part of this PKD center, Dr. Perrone has initiated a PKD clinic during which he and Dr. Miskulin see new patients referred specifically for expert advice regarding complications of cystic disease. This clinic meets biweekly and is staffed in rotation by Dr. Perrone or Dr. Miskulin with participation by clinical fellows on a rotating basis. The fellows have responded enthusiastically to this activity that provides a unique opportunity to see a wide range of complications in this disease.
Kidney Transplant Program

Although all Division attending physicians in the KBPC see kidney transplant patients, the Division of Nephrology runs a specific Transplant Multidisciplinary clinic on Wednesday mornings. This clinic is staffed by Dr. Perrone, Medical Director of Kidney Transplantation, and also staffed by one of three Transplant surgeons, in rotation. Two nurse practitioner transplant coordinators also attend the clinic, one working with Dr. Perrone and one with the Transplant Surgeon. Consultation and interaction regarding new and long-term kidney transplant recipients, kidney transplant candidates, and kidney donors is easily and frequently accomplished. Another benefit of this joint activity is the facilitation of dialysis access planning and interventions. Dr. Gilbert also works closely with one of the transplant coordinators, seeing patients on Tuesday mornings in the KBPC.

Kidney Stone Program

In 2006, the Kidney Stone Clinic was initiated as a new clinical service within the KBPC. Drs. Miskulin, Stevens, and Uhlig in collaboration with Dr. Dierks, Division of Urology, and Jessica Lane, Francis Stern Center for Nutrition, offer comprehensive and coordinated care for patients with kidney stones. Outpatients are seen in the kidney stone clinics on Monday and Tuesday afternoons.

Outpatient Dialysis

At Tufts Medical Center, Drs. Meyer and Weiner are the Director of Dialysis Services and Associate Director of Dialysis Services, respectively. Since 1986, the dialysis program has been operated by Dialysis Clinic, Inc. (DCI), a national not-for-profit dialysis organization well-respected for its high quality care.

The DCI Boston outpatient hemodialysis unit treats approximately 100 patients. The unit operates 5 shifts, including one of the few evening shifts in Greater Boston. Debbie Van Allen, RN, MS, who joined the dialysis program in 1976, manages the outpatient dialysis center. The hemodialysis nursing staff have a median of 25 years of dialysis experience and the patient care technicians have a median 8 years’ dialysis experience. In January 2008, Jean McCorry RN, a long time member of the dialysis nursing staff, received the Nephrology Nursing Gift of Life Award from the National Kidney Foundation of Massachusetts, Rhode Island, New Hampshire and Vermont. The Division’s research and administrative offices are adjacent to DCI Boston. Physical proximity makes frequent patient contact practical and physicians round on each patient shift twice a week. Table 3 lists the dialysis programs affiliated with the Division of Nephrology.

This year, DCI Boston received recognition from the ESRD Network of New England
for attaining a consistent prevalent AV fistula rate of 60% or greater for hemodialysis patients. This is the third year the dialysis unit has been recognized for its performance in the Fistula First National Vascular Access Improvement Initiative and is a credit to the hard work of the nurses, technicians, nephrologists, interventional radiologists, and access surgeons who make this accomplishment possible.

Peritoneal dialysis and home hemodialysis services are provided at the DCI Ball Square Home Dialysis Program, which continues to grow. Jane Maxim, RN, a former Tufts Medical Center dialysis nurse with 30 years’ experience in home dialysis, leads both the DCI Ball Square home program and DCI’s peritoneal dialysis program based at the Faulkner Hospital. Carla Rice, RN, and Pauline Grey, RN, both experienced home dialysis nurses, work with her at the Ball Square program. In December 2007, the peritoneal dialysis program was one of four programs recognized nationally by Baxter Healthcare for quality of care.

Table 3: Outpatient Hemodialysis Units Affiliated with Tufts Medical Center

<table>
<thead>
<tr>
<th>Location</th>
<th>Dialysis Unit</th>
<th>Medical Directors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tufts Medical Center</td>
<td>DCI Boston</td>
<td>Klemens B. Meyer MD, Medical Director</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Daniel E. Weiner MD, Associate Medical Director</td>
</tr>
<tr>
<td>Somerville</td>
<td>DCI Ball Square</td>
<td>Anthony Z. Dash MD, Medical Director</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Michael B. Cohen MD, Co-Medical Director</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Klemens B. Meyer MD, Medical Director for Home Dialysis</td>
</tr>
<tr>
<td>Concord</td>
<td>DCI Walden Pond</td>
<td>Klemens B. Meyer MD, Medical Director</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Andrei Kouznetsov MD, Associate Medical Director</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Valerie R. Price MD, Associate Medical Director</td>
</tr>
</tbody>
</table>

Outpatient Volume

Table 4 demonstrates outpatient volume at Tufts Medical Center and the Pratt Medical Group Nephrology and Hypertension in Concord. Table 5 shows the number of outpatient dialysis visits by Division-affiliated physicians. All volume numbers are for the Tufts Medical Center and DCI fiscal year 2009, which ran from October 2008 to September 2009, unless otherwise stated.

Clinical activity performed in 2009 by Division nephrologists practicing in the Greater Boston area increased from 40-80% at all 3 hospital-based clinic sites.
Table 4: Comparison of Outpatient Activity: Fiscal Year 2008 vs. 2009

<table>
<thead>
<tr>
<th>Institution and Location</th>
<th>Fiscal Year</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008</td>
<td>2009</td>
</tr>
<tr>
<td><strong>Tufts Medical Center</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kidney Blood Pressure Center</td>
<td>4,965</td>
<td>6,244</td>
</tr>
<tr>
<td>Pratt Medical Group Nephrology and Hypertension, Concord</td>
<td>1,147*</td>
<td>1,814</td>
</tr>
<tr>
<td><strong>Dialysis Clinic, Incorporated</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boston (Tufts Medical Center) hemodialysis treatments</td>
<td>14,792</td>
<td>14,564</td>
</tr>
<tr>
<td>Ball Square hemodialysis treatments</td>
<td>11,852</td>
<td>12,163</td>
</tr>
<tr>
<td>Ball Square home-dialysis patients†</td>
<td>32</td>
<td>33</td>
</tr>
<tr>
<td>Walden Pond hemodialysis treatments</td>
<td>7,903</td>
<td>7,704</td>
</tr>
</tbody>
</table>

*Total number for only partial year due to change in billing company midyear.
†Total number of PD and home HD patients for calendar year 2009

Table 5: Comparison of Outpatient Dialysis Visits by Division Physicians at Affiliated Units: Fiscal Year 2008 vs. 2009

<table>
<thead>
<tr>
<th>Dialysis Unit</th>
<th>Number of Visits Fiscal Year 2008</th>
<th>Number of Visits Fiscal Year 2009</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambridge</td>
<td>43</td>
<td>14</td>
<td>-67%</td>
</tr>
<tr>
<td>Caritas St. Elizabeth’s Medical Center</td>
<td>218</td>
<td>206</td>
<td>-6%</td>
</tr>
<tr>
<td>Lawrence Memorial</td>
<td>78</td>
<td>66</td>
<td>-15%</td>
</tr>
<tr>
<td>Malden</td>
<td>14</td>
<td>0</td>
<td>-100%</td>
</tr>
<tr>
<td>Saugus</td>
<td>190</td>
<td>205</td>
<td>8%</td>
</tr>
<tr>
<td>Stoneham</td>
<td>315</td>
<td>421</td>
<td>34%</td>
</tr>
<tr>
<td>Woburn</td>
<td>1</td>
<td>0</td>
<td>-100%</td>
</tr>
</tbody>
</table>
Inpatient Program Descriptions

Nephrology Inpatient Services

Every 14 days, the Division's nephrologists rotate responsibility for care of patients hospitalized on the inpatient nephrology service at Tufts Medical Center. The nephrology and dialysis staff work closely with the nursing staff on North 7, the inpatient nephrology floor, to maintain continuity of care. In addition, all Division attending physicians participate in the inpatient nephrology consultation service. The consultation service responds to over 70 requests monthly for evaluation of acute kidney injury, chronic kidney disease, fluid and electrolyte disorders, glomerulonephritis, hypertension, and solid organ and bone marrow transplant-related issues. The nephrology consultation service also provides expertise for all forms of renal replacement therapy, including but not limited to hemodialysis, peritoneal dialysis, continuous renal replacement therapy (CVVH and SCUF), and charcoal hemoperfusion. Under the supervision of staff physicians, Division fellows perform all temporary access procedures required for initiating hemodialysis, including ultrasound-guided femoral and central catheter insertions.

Kidney Transplantation

Dr. Perrone is the Medical Director and all Division attending physicians also participate in the Tufts Medical Center Kidney Transplant Program. A relatively high proportion of kidney transplants derive from related or unrelated living donors. Tufts Medical Center is also an active participant in the New England Program for Kidney Exchange that has centralized the coordination of sharing by mismatched donor-recipient pairs so as to allow regional paired-donor exchanges. Patients who have received transplants are seen weekly in the KBPC in the initial months following the transplant, thereafter at increasing intervals. The transplant team at Tufts Medical Center has conducted more than 1000 kidney transplants.
**Inpatient Dialysis**

Inpatient hemodialysis is performed in the Floating 7 inpatient dialysis unit and in Tufts Medical Center intensive care units. Dr. **Meyer** is the Director of Dialysis Services and Dr. **Weiner** is the Associate Medical Director. Drs. **Perrone** and **Meyer** share responsibility for the continuous renal replacement program.

DCI, the hospital’s dialysis provider, assigns 3 nurses to both perform inpatient hemodialysis treatments and facilitate continuous hemofiltration therapies performed in the intensive care units, with additional staff as needed. Linda Courtemanche, RN manages the inpatient dialysis program, which she joined in 1986. The staff performs pediatric and adult hemodialysis. The program is organized with particular attention to patient flow; most of the patients receiving hemodialysis treatment are also undergoing many other tightly scheduled tests and procedures. Response time for emergency hemodialysis after hours is 45 minutes; during the day, treatments can be initiated even more quickly.

**Continuous Renal Replacement Therapy**

Dr. **Perrone** is the Director of this program that provides continuous renal replacement therapies such as continuous venovenous hemofiltration (CVVH) and slow continuous ultra filtration (SCUF) in all intensive care units. These therapies are utilized with increasing success to support critically ill patients from other services who have developed acute kidney injury as a complication of their underlying illnesses, other treatments, or surgery. Introduction of citrate regional anticoagulation has markedly improved the efficiency and efficacy of CVVH, thereby allowing its use in all intensive care units at Tufts Medical Center. Intraoperative SCUF is provided for patients with kidney failure who undergo liver transplantation. With the growth of solid organ and bone marrow transplantation, cardiac surgery, and oncology programs, increased utilization of continuous renal replacement therapies will be required.

**Inpatient Volume**

All volume numbers in Tables 7 and 8 are from the fiscal year, October 2008 to September 2009, unless otherwise indicated. Inpatient activity at Tufts Medical Center and affiliated hospitals by Tufts Medical Center physicians are listed in Table 7. Inpatient treatments by DCI at Tufts Medical Center and Emerson Hospital are listed in Table 8.
Table 7: Comparison of Inpatient Activity: Fiscal Year 2008 vs. 2009

<table>
<thead>
<tr>
<th>Institution and Location</th>
<th>Fiscal Year</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008</td>
<td>2009</td>
</tr>
<tr>
<td><strong>Tufts Medical Center</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient-days of service: Nephrology Consult &amp; Ward Services</td>
<td>10,382</td>
<td>9,747</td>
</tr>
<tr>
<td>Kidney transplants*</td>
<td>47</td>
<td>35</td>
</tr>
<tr>
<td>Bone biopsy day surgery procedures</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>Days of CVVH and peritoneal dialysis treatments</td>
<td>596</td>
<td>555</td>
</tr>
<tr>
<td><strong>Caritas St. Elizabeth’s Medical Center</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient days of service</td>
<td>354</td>
<td>180</td>
</tr>
<tr>
<td><strong>Emerson Hospital</strong></td>
<td></td>
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</tr>
<tr>
<td>Patient days of service</td>
<td>793†</td>
<td>1,055</td>
</tr>
<tr>
<td><strong>Kindred Hospital</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient days of service</td>
<td>437</td>
<td>500</td>
</tr>
<tr>
<td><strong>Lawrence Memorial Hospital</strong></td>
<td></td>
<td></td>
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<tr>
<td>Patient days of service</td>
<td>877</td>
<td>469</td>
</tr>
<tr>
<td><strong>Melrose Wakefield Hospital</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient days of service</td>
<td>2,802</td>
<td>1,425</td>
</tr>
<tr>
<td><strong>Whidden Hospital</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient days of service</td>
<td>244</td>
<td>138</td>
</tr>
</tbody>
</table>

NA—Not applicable  
*Calendar year 2009  
†Total number for only partial year due to change in billing company midyear.

Table 8: Comparison of DCI Inpatient Hemodialysis Treatments: Fiscal Year 2008 vs. 2009

<table>
<thead>
<tr>
<th>Institution and Location</th>
<th>Fiscal Year</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2008</td>
<td>2009</td>
</tr>
<tr>
<td><strong>Tufts Medical Center</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inpatient hemodialysis treatments</td>
<td>2,383</td>
<td>1845</td>
</tr>
<tr>
<td><strong>Emerson Hospital</strong></td>
<td></td>
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</tr>
<tr>
<td>Inpatient hemodialysis treatments</td>
<td>305</td>
<td>265</td>
</tr>
</tbody>
</table>
Division Quality Improvement

The division remains committed to improving the quality of care both for our patients and patients throughout the institution. Dr. Stevens is Director for Quality Improvement for the Division.

Morbidity and Mortality Rounds

This past year, Morbidity and Mortality rounds continued in the Division. These rounds are held approximately six times a year and provide the opportunity for fellows and attending physicians to discuss issues related to problems in knowledge or delivery of care that lead to patient poor outcomes, with the goal to develop systems to avoid these problems in the future. This year, the focus of the rounds has been on quality improvement activities. Fellows are responsible for identifying a target behavior, measuring the appropriateness of delivered care, and presenting their findings at a Division conference.

In 2009, a special M&M Rounds was held. Dr. Ed Silbermain from the Department of Psychiatry facilitated. Fellows and attendings discussed a complicated patient situation for 1-2 minutes followed by group discussion. The complicated topics included handling drug abuse/drug seeking, patient calls at inappropriate times, refusing care (e.g., refusal to come to the ER, dictating care, non compliance), verbal abuse, and manipulation.

Community Service/Patient Education

Division staff members actively participate in community projects, particularly in neighboring Chinatown. In addition to health screenings, the Division has focused on education for health care providers, patients, and the general community. Please refer to Table 9 for a detailed listing of events.

- Dr. Perrone serves on the Physician’s Advisory Board of the Asian-American Civic Association in Boston.

- Dr. Sceppa is a member of the Advisory Committee of the Community Health Education and Literacy Program of the Center for Community Health Education Research and Service.

- Dr. Sceppa is also a member of the ABCD Head Start Citywide Health Services Advisory Committee for the city of Boston.
Table 9: 2009 Community Service Events

<table>
<thead>
<tr>
<th>Date</th>
<th>Type</th>
<th>Community</th>
<th>Location</th>
<th>Partner(s)</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/12/09</td>
<td>World Kidney Day KEEP Screening</td>
<td>Patients at risk for CKD</td>
<td>Boston MA</td>
<td>NKF of MA, RI, NH and VT</td>
<td>87</td>
</tr>
<tr>
<td>3/29/09</td>
<td>Presentation by Dr. Perrone—PKD</td>
<td>PKD Patients</td>
<td>Waltham MA</td>
<td>New England Chapter of the Polycystic Kidney Disease Foundation</td>
<td>98</td>
</tr>
<tr>
<td></td>
<td>Through the Stages</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/29/09</td>
<td>Presentation by Dr. Perrone—PKD</td>
<td>PKD Patients</td>
<td>Waltham MA</td>
<td>New England Chapter of the Polycystic Kidney Disease Foundation</td>
<td>98</td>
</tr>
<tr>
<td></td>
<td>Relationship(s) with Your</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nephrologist and Other Caregivers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4/26/09</td>
<td>KEEP Screening</td>
<td>Patients at risk for CKD</td>
<td>Lynn MA</td>
<td>NKF of MA, RI, NH and VT</td>
<td>14</td>
</tr>
<tr>
<td>9/26/09</td>
<td>Tufts Medical Center Health Fair</td>
<td>Patients and staff</td>
<td>Boston MA</td>
<td>Tufts Medical Center</td>
<td>50</td>
</tr>
<tr>
<td>10/4/09</td>
<td>El Planeta Health Fair</td>
<td>Patients at risk for CKD</td>
<td>Boston MA</td>
<td></td>
<td>71</td>
</tr>
</tbody>
</table>

- Division members participated in 2 NKF-sponsored Kidney Early Evaluation Program (KEEP) screenings in 2009. KEEP is a comprehensive screening program that includes a health risk questionnaire, blood pressure measurement, blood and urine tests, and individual consultation with a physician to discuss the patient’s risks for diabetes, hypertension, and CKD.

- Twenty five division members, families and their friends participated in the NKF Boston Kidney Walk held at the Franklin Zoo on May 17th. The “Tufts Kidney Care” team had a fun time at the Zoo and to an extremely generous gift given from a friend of Dr. Perrone’s, who donated to the NKF in memory of his father, the Tufts team ranked 2nd in fund raising with a total just shy of $11,000!.
Despite the pouring rain, on Saturday, September 12th, the Tufts Kidney Care Team consisting of 5 diehard Division members and their families participated in the Walk for PKD.

Patient Care Awards and Honors

- In January, the NKF of MA, RI, NH & VT awarded Deb Basler, MSN, NP, Transplant Coordinator and Dr. Lawrence Milner, Floating Hospital for Children Chief of Pediatric Nephrology, with the 2009 Gift of Life Outstanding Nurse in Nephrology and Outstanding Physician, respectively. The Gift of Life Award recognizes outstanding service to the NKF and commitment to the kidney and transplantation community. The 2009 awards were the 4th year in a row that clinicians from Tufts Medical Center have been honored as Gift of Life Award recipients.

- In 2009, the William B. Schwartz Division of Nephrology was honored for the 2nd year in a row "Best Hospitals" edition of US News and World Report.

- Dr. Jaber was selected as a Best Doctor in America by Best Doctors, Inc.

- In May, Dr. Perrone was selected to serve as the Region 1 Representative on the OPTN/UNOS Living Donor Committee. His term on the committee began in July and ends June 2011. As the Region 1 Representative his role includes attending committee meetings; representing the Region 1 membership during committee deliberations; providing an update on committee activities during the face to face Regional Meetings held in the Spring/Fall; presenting the committee proposals during all face to face and internet based Regional Meetings and
providing feedback to the committee as to the regional sentiment on proposals.

- In the December Boston’s Best Doctors issue of Boston Magazine, Dr. Perrone was recognized in the as one of Boston’s best nephrologists.

- In May, the kidney transplantation program at Tufts Medical Center received full and unconditional CMS approval.

- In September, the dialysis program exceeded the 2009 CMS stretch goal of 66% for dialysis treatments conducted using a fistula. Nationally, 52.6% of treatments were done with fistulas in May, the last month for which data were available, and in Network 1 (New England), 56.4%. DCI Boston received recognition from the ESRD Network of New England for attaining a consistent prevalent AV fistula rate of 60% or greater for hemodialysis patients. This is the second year the dialysis unit has been recognized for its performance in the Fistula First National Vascular Access Improvement Initiative.

Research

Research conducted in the Division is focused on solving clinical problems. Each research project has a domain expert, in most cases a nephrologist, a methods expert, and collaborators from other disciplines. The location of the Division offices, the KBPC, and the DCI Boston dialysis unit on 3 adjacent floors in the same building has been a major reason for the Division’s success in performing clinical research. The Division’s primary focus is on clinical research in CKD. However, there are a growing number of projects in acute kidney injury. Areas of emphasis are listed in Table 10.
Division members were well represented at the 2009 American Society of Nephrology’s 42nd Annual Meeting and Scientific Exposition.

4 special sessions, 1 platform presentation, 8 free communications, and 27 posters were presented by Division members!

<table>
<thead>
<tr>
<th>Area of Emphasis</th>
<th>Research Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epidemiology of CKD</td>
<td>• Definition and staging of CKD</td>
</tr>
<tr>
<td></td>
<td>• Prevalence in US population and subgroups defined by demographic and clinical characteristics</td>
</tr>
<tr>
<td>Assessment of kidney function</td>
<td>• Development and validation of GFR prediction equations</td>
</tr>
<tr>
<td></td>
<td>• Development of a national program for standardization of serum creatinine assay</td>
</tr>
<tr>
<td>Interventions to slow progression of kidney disease</td>
<td>• Secondary analysis of studies of dietary modification</td>
</tr>
<tr>
<td></td>
<td>• Antihypertensive agents and blood pressure goals</td>
</tr>
<tr>
<td></td>
<td>• Halt-PKD clinical trial (Polycystic kidney disease)</td>
</tr>
<tr>
<td></td>
<td>• TEMPO 3/4 (Tolvaptan) clinical trial (Polycystic kidney disease)</td>
</tr>
<tr>
<td>Clinical and epidemiological studies of nutrition in CKD</td>
<td>• Secondary analysis of studies of dietary modification in CKD</td>
</tr>
<tr>
<td></td>
<td>• Clinical trials of strength training in CKD</td>
</tr>
<tr>
<td></td>
<td>• Secondary analysis of obesity in CKD</td>
</tr>
<tr>
<td>Bone disease in CKD</td>
<td>• Prevalence of adynamic bone disease in bone biopsies from dialysis patients</td>
</tr>
<tr>
<td>Implementation of clinical practice guidelines in CKD</td>
<td>• Demonstration projects in managed care organizations</td>
</tr>
<tr>
<td></td>
<td>• Clinical trials in CKD populations</td>
</tr>
<tr>
<td>Epidemiology of CVD in CKD</td>
<td>• Studies of the burden of CVD and CVD risk factors in CKD</td>
</tr>
<tr>
<td></td>
<td>• CKD as a risk factor for CVD</td>
</tr>
<tr>
<td>Clinical and epidemiological studies on cerebrovascular disease in CKD</td>
<td>• Antihypertensive therapy to prevent stroke recurrence</td>
</tr>
<tr>
<td>Clinical and epidemiological studies on cognition in CKD</td>
<td>• Prevalence and risk factors for cognitive impairment in CKD</td>
</tr>
<tr>
<td>Epidemiological studies on optimal care for kidney failure</td>
<td>• Timing of initiation of dialysis</td>
</tr>
<tr>
<td></td>
<td>• Treatments for anemia, malnutrition, metabolic bone disease</td>
</tr>
<tr>
<td></td>
<td>• Utilization of preventative services</td>
</tr>
</tbody>
</table>

Table 10 is continued on the next page.
Table 10 Continued: Areas of Research Emphasis in the Division

<table>
<thead>
<tr>
<th>Area of Emphasis</th>
<th>Research Examples</th>
</tr>
</thead>
</table>
| Clinical studies of effects of dialysis modality and dose | • HEMO Study  
• CHOICE Study  
• Daily dialysis trials |
| Clinical and translational studies on mediators of inflammation and oxidative stress in kidney disease | • Leukocyte function and apoptosis  
• Iron therapy, infection and oxidative stress  
• Genetic factors influencing outcomes in acute and chronic kidney disease |
| Quality management in dialysis networks | • Development of medical information systems  
• Methods for assessing quality of life, patient satisfaction and comorbidity |
| Clinical studies of immunosuppression and infection in dialysis and kidney transplantation | • Relationship of HCV and CMV bacteremia to immunosuppressive drug regimens and iron therapy |
| Epidemiological studies of CKD after kidney transplantation | • Complications after kidney transplantation  
• Barriers to care |
| Polycystic kidney disease | • Epidemiological studies of the morbidity and mortality of extrarenal and renal complications of ADPKD after ESRD  
• Cardiovascular disease in APDKD  
• Endothelial function in APDKD |
| Patient-based assessments | • Developing computerized quality of life assessment (CKD-CAT) |
| Lupus Nephritis | • Induction and maintenance of remission |

2009 New Research Grant Awards

- All new research grants received in 2009 are listed in Table 11.

Drs. Perrone and Stevens each received a new grant award funded by the American Recovery and Reinvestment Act of 2009.
Table 11: New Research Grant Awards Received in 2009

<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Award Source</th>
<th>Type of Award</th>
<th>Title</th>
<th>Study Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Levey</td>
<td>NIH/NIDDK</td>
<td>Federal Subcontract</td>
<td>Aorta, Brain, and Kidney Structure and Function in the AGES-Reykjavik study</td>
<td>4</td>
</tr>
<tr>
<td>Dr. Levey</td>
<td>NIH/NIDDK</td>
<td>Federal Subcontract</td>
<td>Proteomic Approach to CKD Biomarker Discovery and Validation</td>
<td>5</td>
</tr>
<tr>
<td>Drs. Levey, Uhlig &amp; Stevens</td>
<td>National Kidney Foundation</td>
<td>Foundation</td>
<td>Tufts Center for Kidney Disease Guideline Development and Implementation</td>
<td>3</td>
</tr>
<tr>
<td>Dr. Menon</td>
<td>NKF</td>
<td>Foundation</td>
<td>Urinary Biomarker in Non-Diabetic CKD Clinical Scientist Award</td>
<td>3</td>
</tr>
<tr>
<td>Dr. Miskulin</td>
<td>NIH/NIDDK</td>
<td>Federal Subcontract</td>
<td>Warfarin Use in ESRD Patients with Atrial Fibrillation</td>
<td>1</td>
</tr>
<tr>
<td>Dr. Perrone</td>
<td>NIH/NIDDK</td>
<td>Federal Supplement</td>
<td>Clinical Centers for the HALT-Polycystic Kidney Disease Trials</td>
<td>2</td>
</tr>
<tr>
<td>Dr. Stevens</td>
<td>NIH/NIDDK</td>
<td>Federal Supplement</td>
<td>Kidney Function and Aging</td>
<td>2</td>
</tr>
<tr>
<td>Dr. Weiner</td>
<td>Tufts University</td>
<td>Foundation</td>
<td>Novel biomarkers of Vascular Calcification in CKD</td>
<td>1</td>
</tr>
<tr>
<td>Dr. Weiner</td>
<td>ASN</td>
<td>Foundation</td>
<td>Medical Economics &amp; Ecologic Impact of Dialyzer Reuse</td>
<td>1</td>
</tr>
</tbody>
</table>

5 Division members hold a NIH-funded Clinical Research Career Development Grant (K23).

1 Division member holds a prestigious Midcareer Investigator Award In Patient-Oriented Research (K24) grant.

**Total Amount and Type of Research Grant Awards**

Figure 1 and Table 12 demonstrate the increasing numbers and dollars of research grant awards received by Division members.
Figure 1: Division of Nephrology Research Grant Awards 2005-2009, by type

Table 12: Ongoing Research Grant Awards Received Prior to 2009

<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Award Source</th>
<th>Type of Award</th>
<th>Title</th>
<th>Year of Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Balakrishnan</td>
<td>NIH/NIDDK</td>
<td>Federal</td>
<td>Cytokine Gene Polymorphisms in the CRIC Cohort</td>
<td>2006</td>
</tr>
<tr>
<td>Dr. Levey</td>
<td>NIH/NIDDK</td>
<td>Federal U01</td>
<td>Chronic Renal Disease-Individual Patient Meta Analysis</td>
<td>1999</td>
</tr>
<tr>
<td></td>
<td>NIH/NIDDK</td>
<td>Federal T32</td>
<td>Epidemiology, Clinical Trials and Outcomes Research</td>
<td>1999</td>
</tr>
<tr>
<td>Drs. Levey, Uhlig &amp;</td>
<td>Amgen, Inc.</td>
<td>Industry</td>
<td>Trial to Reduce Cardiovascular Events with Aranesp Therapy</td>
<td>2006</td>
</tr>
<tr>
<td>Stevens Dr. Menon</td>
<td>National Kidney</td>
<td>Foundation</td>
<td>NKF Center for Clinical Practice Guideline Development and Implementation</td>
<td>2006</td>
</tr>
<tr>
<td></td>
<td>Foundation</td>
<td>Federal K23</td>
<td>Novel Cardiac Risk Factors and Endothelial Function in Chronic Kidney Disease</td>
<td>2004</td>
</tr>
<tr>
<td></td>
<td>Satellite Healthcare</td>
<td>Foundation</td>
<td>Endothelial Function in Early Stage Polycystic Kidney Disease</td>
<td>2005</td>
</tr>
</tbody>
</table>

Table 12 is continued on the next page.
Table 12 Continued: Ongoing Research Grant Awards Received Prior to 2009

<table>
<thead>
<tr>
<th>Principal Investigator</th>
<th>Award Source</th>
<th>Type of Award</th>
<th>Title</th>
<th>Year of Initial Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Menon</td>
<td>NIH/NIDDK</td>
<td>Federal R21</td>
<td>Does Raising HDL-C with Niacin Improve Endothelial Function in Early CKD?</td>
<td>2008</td>
</tr>
<tr>
<td>Dr. Meyer</td>
<td>NIH/NIDDK</td>
<td>Federal SBIR</td>
<td>Computerized Adaptive Testing in Chronic Kidney Disease</td>
<td>2006</td>
</tr>
<tr>
<td></td>
<td>Quality Metric Subcontract Tyco Health</td>
<td>Industry</td>
<td>A Randomized, Open-Label Comparison of the Performance and Longevity of a Split-Tip Versus a Symmetric Tip Hemodialysis Catheter</td>
<td>2008</td>
</tr>
<tr>
<td>Dr. Miskulin</td>
<td>NIH/NIDDK</td>
<td>Federal K23</td>
<td>Case-Mix and its Effects on Quality Indicators in ESRD</td>
<td>2004</td>
</tr>
<tr>
<td>DCI</td>
<td>Foundation</td>
<td></td>
<td>Decision Support for Anemia Management in Hemodialysis Patients</td>
<td>2008</td>
</tr>
<tr>
<td>DCI</td>
<td>Foundation</td>
<td></td>
<td>Pilot Study for a Future Randomized Clinical Trial</td>
<td>2008</td>
</tr>
<tr>
<td>Dr. Perrone</td>
<td>NIH/NIDDK</td>
<td>Federal U01</td>
<td>Polycystic Kidney Disease Clinical Trials Network</td>
<td>2002</td>
</tr>
<tr>
<td>Dr. Rao</td>
<td>National Kidney Foundation</td>
<td>Foundation</td>
<td>Chronic Kidney Disease Anemia Beyond Erythropoietin Deficiency—The Role of Mitochondrial Injury</td>
<td>2008</td>
</tr>
<tr>
<td></td>
<td>NIH/NIDDK</td>
<td>Federal K23</td>
<td>TGF-Beta 1 and PAI-1 Genotypes in CKD</td>
<td>2004</td>
</tr>
<tr>
<td></td>
<td>NIH/NIA</td>
<td>Federal R21</td>
<td>Somatic Mitochondrial Injury and Anemia in Elderly Patients with CKD</td>
<td>2007</td>
</tr>
<tr>
<td>DCI</td>
<td>Foundation</td>
<td></td>
<td>Somatic Mitochondrial Mutations – A Simple and Novel Genomic Biomarker of Clinical Outcomes Among Hemodialysis Patients</td>
<td>2005</td>
</tr>
<tr>
<td>Dr. Richardson</td>
<td>Amgen, Inc.</td>
<td>Industry</td>
<td>Dialysis Preceptorship</td>
<td>2007</td>
</tr>
<tr>
<td>Dr. Sarnak</td>
<td>NIH/NIDDK</td>
<td>Federal R01</td>
<td>Cognition and Dialysis</td>
<td>2008</td>
</tr>
<tr>
<td></td>
<td>NIH/NIDDK</td>
<td>Federal R01</td>
<td>Does Kidney Function Determine Aging Success?</td>
<td>2005</td>
</tr>
</tbody>
</table>

Table 12 is continued on the next page.
2009 Division Publications

A total of 73 publications were authored and/or co-authored by Division members in 2009. An asterisk beside a name indicates a trainee as an author.


61. **Stevens LA, Stoycheff N**, **Levey AS**. Staging and management of chronic kidney


2009 Research Awards and Honors

- Dr. Cindy Huang, Research Fellow, received an Outstanding Poster Award from the National Kidney Foundation 2009 Spring Meeting in Nashville, TN. She placed 2nd in the competition for her abstract entitled “Body composition and all-cause mortality in hemodialysis patients”. Her collaborators were Hocine Tighiouart, Srinivasan Beddu, Alfred Cheung, Johanna Dwyer, Garabed Eknoyan, Gerald Beck, Andrew Levey, and Mark Sarnak. Dr. Huang’s work was the result of a multicenter collaboration of researchers at Tufts Medical Center in Boston the University of Utah in Salt Lake City; Baylor College of Medicine in Houston; and the Cleveland Clinic in Cleveland. The researchers concluded that both higher muscle mass and fat mass are associated with decreased all-cause mortality in HD patients.

- In 2009, Dr. Menon was appointed as a member of an NIH (NIDDK) Study Section.

- Dr. Meyer is a member of the Data Safety Monitoring Board at the Harvard Clinical Research Institute in Boston MA for the HERCULES Study of Renal Artery Stenting.

- Dr. Pereira received The David M. Hume Award from the National Kidney Foundation at its 2009 Annual Spring Clinical Meeting. The David M. Hume Memorial Award was created in memory of one of the National Kidney Foundation's most distinguished members. The Hume Award is the highest honor given to a distinguished scientist-clinician in the field of kidney and urologic diseases. It is bestowed upon an individual who exemplifies the high ideals of scholarship and humanitarianism in an outstanding manner.

- Dr. Sarnak is an Ad Hoc Reviewer for a NIH (NIDDK) Study Section.

- In 2009, Dr. Sceppa was a grant reviewer for the Brookdale Leadership in Aging Fellowship Program.

- Dr. Sceppa is also a grant reviewer for the Directors of the Diabetes Australia Research Trust.

- Dr. Stevens is a member of the external advisory committee of the NIDDK-funded Hemodialysis Fistula Maturation which is a prospective multi-center observational cohort study investigating factors associated with the failure of arteriovenous fistulas to mature.

- In May, Dr. Christoph Wanner from Germany was a Visiting Professor in the Division. In addition to meeting with Division faculty, Dr. Wanner presented "Decreasing the Burden of Cardiovascular Disease in Patients with CKD: How are we doing?" at the Division's Research Conference.
Dr. Navdeep Tangri, Research Fellow, received a Top Trainee Abstract Award at the Canadian Society of Nephrology Meeting in Edmonton, Alberta. He, along with co-fellow Dr. Martin Wagner, also received a Young Investigator Award from the World Congress of Nephrology/ERA-EDTA Meeting in Milan, Italy. The awards are for projects titled “Predicting Mortality in Incident Dialysis Patients: An Analysis of the United Kingdom Renal Registry” and “Effect of bone mineral guideline target achievement on survival: An analysis of the United Kingdom Renal Registry”. His collaborators were Martin Wagner, David Kent, John Griffith, Dana Miskulin, Christoph Wanner, Alex Hodsman, David Ansell and David Naimark. Dr. Tangri’s work was the result of a multi-center collaboration of researchers at Tufts Medical Center in Boston; University of Toronto in Toronto, Canada; United Kingdom Renal Registry in Bristol UK; and the University of Wuerzberg in Wuerzberg, Germany. The researchers created a prediction tool from easily available demographic and laboratory variables that accurately predicted all cause mortality in patients with end stage kidney disease on dialysis. They also demonstrated that achieving the bone mineral guideline targets does not improve survival for patients on dialysis.

Education

The Division is committed to education. Local and national initiatives involve all members of the Division. National efforts stem largely from leadership and participation in basic and clinical research, service to national organizations and boards that establish standards in clinical practice and educational testing, and speaking engagements at local, national, and international conferences. Affiliations with TUSM, TUSDM, the Friedman School of Nutrition Science and Policy, and the Sackler School of Graduate Biomedical Sciences at Tufts University are the focus of most of our local education initiatives. Table 13 and Table 14 list ongoing teaching initiatives by Division members.

New Teaching Initiatives in 2009

Postgraduate-level Initiatives

- In 2009, the Tufts Center for Kidney Disease Guideline Development and Implementation officially ended recruiting fellows into the Clinical Educator Research Fellowship Track.

Division Members teach at 5 schools including:

Tufts University School of Medicine. Tufts University School of Dental Medicine. Friedman School of Nutrition Science and Policy, Sackler School of Graduate Biomedical Sciences, and The Francis Stern Nutrition Center at Tufts Medical Center
**Continuing Teaching Initiatives**

Table 13: Longstanding Graduate-level Teaching Initiatives by Division Members

<table>
<thead>
<tr>
<th>School</th>
<th>Course</th>
<th>Personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUSM</td>
<td>Renal Pathophysiology Course</td>
<td>Dr. Gilbert, Course Director Division Attendings and Fellows</td>
</tr>
<tr>
<td></td>
<td>Physical Diagnosis Course</td>
<td>Nephrology fellows and several members of the physician staff</td>
</tr>
<tr>
<td></td>
<td>Renal Ward Service</td>
<td>Division Attendings</td>
</tr>
<tr>
<td></td>
<td>4-part clinical nephrology series for Internal Medicine Clerkship</td>
<td>Dr. Gilbert</td>
</tr>
<tr>
<td></td>
<td>Department of Public Health and Family Medicine MD/MPH Program: Clinical Epidemiology of Cardiovascular Disease</td>
<td>Dr. Menon, Course Director</td>
</tr>
<tr>
<td></td>
<td>Consultative Nephrology</td>
<td>Dr. Gilbert, Course Director</td>
</tr>
<tr>
<td></td>
<td>Evidence-based medicine elective</td>
<td>Dr. Gilbert, Course Co-Director</td>
</tr>
<tr>
<td></td>
<td>Cell and Molecular Pharmacology</td>
<td>Dr. Gilbert, Nephrology Section Leader</td>
</tr>
<tr>
<td></td>
<td>Evidence Based Medicine</td>
<td>Dr. Uhlig, Consultant</td>
</tr>
<tr>
<td></td>
<td>Selective Program Mentor</td>
<td>Dr. Weiner</td>
</tr>
<tr>
<td>Tufts University School of Dental Medicine</td>
<td>Lectures on topics related to hypertension and nephrology</td>
<td>Drs. Meyer and Weiner</td>
</tr>
<tr>
<td>Friedman School of Nutrition Science and Policy at Tufts University</td>
<td>Lectures on topics related to kidney disease, hypertension and nephrology</td>
<td>Drs. Balakrishnan, Meyer, and Weiner</td>
</tr>
<tr>
<td>Sackler School of Graduate Biomedical Sciences at Tufts University</td>
<td>Nutritional Biochemistry and Physiology</td>
<td>Dr. Gilbert, Nephrology Section Leader</td>
</tr>
<tr>
<td></td>
<td>Renal Pharmacology</td>
<td>Dr. Gilbert</td>
</tr>
<tr>
<td></td>
<td>Introduction to Meta-Analysis</td>
<td>Dr. Uhlig, Co-faculty</td>
</tr>
<tr>
<td></td>
<td>Graduate Clinical Research Training Program: Scientific Manuscript Writing; Scientific Grant Writing; and Introduction to Epidemiology</td>
<td>Dr. Menon</td>
</tr>
<tr>
<td>The Francis Stern Nutrition Center at Tufts Medical Center</td>
<td>4-week experiential rotation in DCI Boston dialysis unit</td>
<td>Poonhar Poon, RD</td>
</tr>
</tbody>
</table>
Table 14: Longstanding Postgraduate-level Teaching Initiatives by Division Members

<table>
<thead>
<tr>
<th>Institution</th>
<th>Role</th>
<th>Personnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sackler School of Graduate Biomedical Sciences at Tufts University</td>
<td>Mentor fellows during their independent research and thesis preparation in pursuit of a Masters of Science degree</td>
<td>Drs. Levey, Balakrishnan, Menon, Sarnak, &amp; Uhlig</td>
</tr>
<tr>
<td>TUSM Department of Pharmacology and Experimental Therapeutics</td>
<td>Coordinate the Nephrology Section of the Advanced Molecular and Cellular Pharmacology Course</td>
<td>Dr. Gilbert</td>
</tr>
<tr>
<td>Tufts Medical Center</td>
<td>Renal Ward Service Nephrology Consultation Service Intern and Resident Teaching KBPC senior medical residents</td>
<td>Division Attendings</td>
</tr>
</tbody>
</table>

Table 15: Graduated Clinical Fellows

<table>
<thead>
<tr>
<th>Name</th>
<th>Training Period</th>
<th>Current Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nick Stoycheff, MD, MS</td>
<td>2008-2009</td>
<td>Private Practice Columbus OH</td>
</tr>
<tr>
<td>Ranjani Moorthi, MD, MPH, MS</td>
<td>2008-2009</td>
<td>Assistant Research Professor; Assistant Professor of Clinical Medicine University of Indiana Indianapolis IN</td>
</tr>
<tr>
<td>Marie Sosa, MD</td>
<td>2007-2009</td>
<td>Assistant Professor of Medicine University of Massachusetts Medical School Worcester MA</td>
</tr>
</tbody>
</table>

**Fellowship Programs**

**Clinical Fellowship Training**

Dr. Gilbert is the Director of the highly respected clinical fellowship training program. A well-organized curriculum emphasizing breadth and depth of clinical knowledge, rotations at Tufts Medical Center and CSEMC, and continuous evaluation all result in a highly successful program.

Over the past 14 years, approximately 42% of the 33 graduates of the fellowship program have continued in full-time academic positions. Another 27% have become private practitioners with substantial teaching responsibilities, many in hospitals with university affiliations. The remaining graduates are largely engaged in private practice.

During the past academic year, 260 applications to the clinical fellowship program were reviewed for three open positions available in 2010. Table 15 and Table 16 list graduating and current clinical fellows.
Table 16: Current Clinical Fellows

<table>
<thead>
<tr>
<th>Name</th>
<th>Training Period</th>
<th>Previous Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ezra Gabbay, MD</td>
<td>2009-2010</td>
<td>Nephrology Research Fellow Tufts Medical Center Boston MA</td>
</tr>
<tr>
<td>Faina Gurevich, MD</td>
<td>2009-2011</td>
<td>Yale University New Haven CT</td>
</tr>
<tr>
<td>Cindy Huang, MD, PhD</td>
<td>2009-2010</td>
<td>Nephrology Research Fellow Tufts Medical Center Boston MA</td>
</tr>
<tr>
<td>Siddhartha Kakani, MD</td>
<td>2008-2010</td>
<td>Creighton University Omaha NE</td>
</tr>
<tr>
<td>Cynthia Sfeir, MD</td>
<td>2008-2010</td>
<td>Resident Caritas-St Elizabeth's Medical Center Boston MA</td>
</tr>
</tbody>
</table>

Research Fellowship Training

Continuing Research Fellowship Training Initiatives

The Division offers training in clinical research and fellows can elect to participate in research projects at CSEMC under the direction of Drs. Jaber, and Madias.

Clinical Investigator Track: NIDDK Training Grant

The NIDDK Institutional Research Training Award, in "Epidemiology, Clinical Trials and Outcomes Research in Nephrology" funds four trainees per year in the Clinical Investigator Track. This program is designed for fellows aspiring to a career as an independent investigator in clinical research in nephrology. The program has been focused primarily on chronic kidney disease, although in recent years, there is a growing interest in acute kidney injury. The specific aims of the Training Program are:

1. Didactic Training - course work in fulfillment of the MS degree in the Graduate Program in Clinical Research at the Sackler School of Graduate Biomedical Sciences at Tufts University;

2. Independent Study - a hypothesis-based research project supervised by a nephrologist mentor and a research team of faculty with expertise in other disciplines;

3. Training in Presentation - participation in conferences and seminars designed to improve trainees' oral and written presentations.

The nephrologist mentors ensure integration of all aspects of the curriculum with trainees' research projects.
Medical Educator Track: Tufts Center for Kidney Disease Guideline Development and Implementation

The goal of the fellowship at the Center is to train nephrologists in applying methods from evidence-based medicine to the domain of kidney diseases and to provide support to KDOQI and KDIGO guideline development and implementation. Fellows are fully integrated into the clinical research fellowship training program in the Division of Nephrology at Tufts MC. Fellows participate in service to the NKF in guideline development and implementation and conduct research projects at the Center. They are supervised and mentored by staff of the Center and other members the Division of Nephrology and the ICRHPS at Tufts MC. Fellows receive formal training in research methods in pursuit of a Master of Science degree at the Sackler School of Graduate Medical Sciences at Tufts University. The Center offers two overlapping 2-year fellowship positions in clinical research to individuals planning a career in academic nephrology as medical educators. Fellows are recruited through a competitive selection process.

During 2009, fellows in the Center have held central roles in ongoing KDOQI and KDIGO guideline development projects. They have also conducted research towards theses in the Sackler School’s Master of Science in Clinical Care Research program.

- Dr. Martin Wagner, former fellow at the Center, conducted a thesis in the Clinical Care Research program of the Sackler School at Tufts University, towards the Master of Science degree. It is titled “Mycophenolate Mofetil versus Azathioprine for Primary Immunosuppression in Kidney Transplant Recipients - Systematic Review, Meta-Analysis, Meta-Regression”. He presented his work at the 11th Annual Sackler Symposium at Tufts University in May 2009 and submitted an abstract to the 2009 American Society of Nephrology’s 42nd Annual Meeting & Scientific Exposition held in San Diego CA. The protocol for this review has been published at the Cochrane Database for Systematic reviews in 2009.

- Dr. Wagner published a “personal viewpoint forum” article in the American Journal of Transplantation titled “Subgroup Analyses in Randomized Controlled Trials and the Need for Risk–Stratification in Kidney Transplantation”.

- Dr. Jose Calvo, current fellow at the Center, submitted a thesis proposal entitled “Acute Kidney Injury: A Proposed Operational Definition According to Baseline Kidney Function Level”. This project aims to look at incremental changes in kidney function and their prognostic significance for predicting mortality in hospitalized patients. Dr. Calvo gave a presentation on this topic at the March 12th Research Training Program Meeting.
• Dr. Aneet Deo submitted a thesis proposal entitled “Empiric Evaluation of Attrition in Randomized Clinical Trials in Chronic Kidney Disease-Systematic Review”. She gave a presentation on this topic at the March 12th Research Training Program Meeting and presented a poster on this topic at the 11th Annual Sackler Symposium at Tufts University in May 2009.

Research Fellowship Program Statistics

We have 6 current research fellows in training. We received 125 applications in 2009 for 1 open research fellowship position. See Table 17 and Table 18 for listings of graduated and current research fellows.

Table 17: Graduated Research Fellows

<table>
<thead>
<tr>
<th>Name</th>
<th>Training Period</th>
<th>Current Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ezra Gabbay, MD</td>
<td>2007-2009</td>
<td>Clinical Nephrology Fellow</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tufts Medical Center</td>
</tr>
<tr>
<td>Cindy Huang, MD, PhD</td>
<td>2007-2009</td>
<td>Clinical Nephrology Fellow</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tufts Medical Center</td>
</tr>
</tbody>
</table>

Table 18: Current Research Fellows

<table>
<thead>
<tr>
<th>Name</th>
<th>Prior Institution</th>
<th>Nephrology Mentor</th>
<th>Funding Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jose Calvo Broce, MD</td>
<td>Hospitalist Haywood Regional Medical Center Clyde NC</td>
<td>Katrin Uhlig, MD, MS</td>
<td>NIDDK Institutional Training Grant</td>
</tr>
<tr>
<td>Aneet Deo, MD</td>
<td>Chief Medical Resident St. Vincent's Medical Center Bridgeport CT</td>
<td>Katrin Uhlig, MD, MS</td>
<td>NKF/KDOQI</td>
</tr>
<tr>
<td>Smita Padala, MD</td>
<td>Resident Rhode Island Hospital Providence RI</td>
<td>Lesley A. Stevens, MD, MS</td>
<td>Division Funds</td>
</tr>
<tr>
<td>Shani Shastri, MD</td>
<td>Resident University of Massachusetts Worcester MA</td>
<td>Mark J. Sarnak, MD, MS</td>
<td>NIDDK Institutional Training Grant</td>
</tr>
<tr>
<td>Navdeep Tangri, MD</td>
<td>Clinical Nephrology Fellow Tufts Medical Center Boston MA</td>
<td>Andrew S. Levey, MD</td>
<td>Kidney Foundation of Canada</td>
</tr>
<tr>
<td>Gautham Viswanathan, MD</td>
<td>Resident St. Catherine’s Hospital East Chicago IN</td>
<td>Lesley A. Stevens, MD, MS</td>
<td>Division Funds</td>
</tr>
</tbody>
</table>
Continuing Medical Education

2009 New Medical Education Initiatives

- Dr. Jaber was the co-chair of Nephron Forum: Acute Kidney Injury in and Urban Area of Brazil at the XV Congresso Paulista de Nefrologia in Campos do Jordão São Paulo Brazil.

- Dr. Madias participated as a Session Chairman for the World Congress of Nephrology 2009 held in Milan Italy and also as a Session Chairman for 2 scientific sessions at the 2009 American Society of Nephrology’s 42nd Annual Meeting & Scientific Exposition.

- Dr. Weiner co-presented at Tufts Medical Center Grand Rounds with Marvin Konstam, MD, Chief Physician Executive of The Cardiovascular Center at Tufts Medical Center. Their presentation was entitled “Ace Inhibitors, ARBs and Their Combination in Heart Failure and Kidney Disease. “Making Sense of Conflicting Clinical Trial Data”.

Continuing Medical Education Initiatives

For the 3rd year in a row, Division members were invited to give more than 60 local, national, and international presentations.

- The Evidence Review Team (ERT) at the Tufts Center for Guideline Development and Implementation trains Work Group members in methods of guideline development through lectures, seminars and workshops provided at the work group meetings. Physicians in the Work Group who attend the formal teaching sessions are eligible for Continuing Medical Education (CME) credits through Tufts University School of Medicine. The ERT presentations held in 2009 are listed in Table 19.
Table 19: Tufts Center for Guideline Development and Implementation ERT Presentations

<table>
<thead>
<tr>
<th>Meeting</th>
<th>ERT Presentations</th>
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<tbody>
<tr>
<td>KDIGO GN: Chairs Meeting</td>
<td>Ethan Balk, MD, MPH</td>
</tr>
<tr>
<td>January 23-24, 2009</td>
<td>● ERT understanding of topics for review and for the guidelines</td>
</tr>
<tr>
<td>Boston, MA</td>
<td>● Overview of steps for production of guidelines</td>
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<tr>
<td></td>
<td>● Question formulation etc. – PICO-D</td>
</tr>
<tr>
<td></td>
<td>● Focus on study design: RCT, other intervention, observational, diagnostic</td>
</tr>
<tr>
<td></td>
<td>0 hours CME credit</td>
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<tr>
<td></td>
<td>Dr. Calvo and Aneet Deo, MD</td>
</tr>
<tr>
<td></td>
<td>● Data extraction, study quality appraisal, summary tables</td>
</tr>
<tr>
<td></td>
<td>Samuel Abariga, MD MS</td>
</tr>
<tr>
<td></td>
<td>● Existing systematic reviews and other guidelines</td>
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<td></td>
<td>Dr. Uhlig</td>
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<tr>
<td></td>
<td>● GRADE and evidence profiles</td>
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<tr>
<td></td>
<td>● Writing and “grading” recommendations</td>
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<tr>
<td></td>
<td>● Focus on outcomes: clinical vs. intermediate outcomes/proteinuria</td>
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<tr>
<td>KDIGO GN: 1st Work Group Meeting</td>
<td>Dr. Balk</td>
</tr>
<tr>
<td>May 1-3, 2009</td>
<td>● Process, Timeline, and Meeting Goals</td>
</tr>
<tr>
<td>Boston, MA</td>
<td>● Guideline process recap</td>
</tr>
<tr>
<td></td>
<td>● Current Topics for Guideline</td>
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<td></td>
<td>● Example from start to finish: Immunomodulation in Care of the Kidney Transplant Recipient (KDIGO guideline)</td>
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<td></td>
<td>3 hours CME credit</td>
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<tr>
<td></td>
<td>Dr. Deo</td>
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<tr>
<td></td>
<td>● Formulating Good Questions and Defining PICO-DD Criteria: Introduction</td>
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<tr>
<td></td>
<td>● Grading Study Quality</td>
</tr>
<tr>
<td></td>
<td>Dr. Uhlig</td>
</tr>
<tr>
<td></td>
<td>● Grading Strength of Evidence (GRADE system)</td>
</tr>
<tr>
<td></td>
<td>● Structure of Recommendations</td>
</tr>
<tr>
<td>Ms. Earley</td>
<td>Preliminary Data Search and Results</td>
</tr>
<tr>
<td></td>
<td>● Existing Systematic Reviews</td>
</tr>
<tr>
<td></td>
<td>● Work Products (Data extraction forms, Summary Tables, Evidence Profiles)</td>
</tr>
<tr>
<td>Dana C. Miskulin, MD</td>
<td>Dr. Calvo and Ms. Earley</td>
</tr>
<tr>
<td></td>
<td>● ERT demonstration of evidence review and instructions for breakout groups</td>
</tr>
<tr>
<td>KDIGO AKI: 3rd Work group Meeting</td>
<td>Dr. Uhlig</td>
</tr>
<tr>
<td>June 5-6, 2009</td>
<td>● Grading recommendations, ungraded statements, and formatting</td>
</tr>
<tr>
<td>Boston, MA</td>
<td>2 hours CME credit</td>
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</tbody>
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Table 19 is continued on the next page.
Table 19 Continued: Tufts Center for Guideline Development and Implementation ERT Presentations

<table>
<thead>
<tr>
<th>Meeting</th>
<th>ERT Presentations</th>
</tr>
</thead>
</table>
| KDIGO AKI: 3rd Work group Meeting | Dr. Calvo and Ms. Earley  
- ERT demonstration of evidence review and instructions for breakout groups  
Dr. Uhlig  
- Grading recommendations, ungraded statements, and formatting |
| June 5-6, 2009 Boston, MA | 2 hours CME credit |

KDIGO BP: Chairs Meeting | Dr. Uhlig  
- Overview of process for guideline development  
- Systematic review steps  
- Question formulation – PICO-DD criteria  
- Surrogate outcomes  
- Observational data for treatment and non treatment questions  
- Using existing systematic reviews and other guidelines  
- GRADEing evidence and recommendations  
- Writing and formatting recommendations  
Dr. Levey  
- Tips to the Incoming Work Group Chairs Presentation by Past KDOQI Blood Pressure Work Group Chair |
| June 12-13, 2009 Boston, MA | 0 hours CME credit |

- Dr. Uhlig is the Course Director and a faculty member for the CME course on “Methods in evidence-based clinical practice guideline development”, which teaches guideline development workgroups in the methods of systematic literature review and appraisal. Faculty and fellows at the Tufts Center teach the course. The Office of Continuing Education at Tufts University Medical School provides CME credit to participants.

The Division is actively involved in providing various forms of continuing medical education. Table 20 lists the continuing education presentations given by Division faculty in 2009. The table excludes presentations given within the Division, as all faculty are expected to present one Journal Club and one Research Conference annually, and the Tufts Center ERT presentations listed in Table 19.

Table 20: 2009 Local, National, and International Presentations by Division Faculty

LOCAL/REGIONAL PRESENTATIONS

Dr. Jaber  
Renal Replacement Therapy—Acute Kidney Injury Expert Panel  
Renal Symposium  
Boston MA

Table 20 is continued on the next page.
Table 20 Continued: 2009 Local, National, and International Presentations by Division Faculty

Dr. Jaber

Prevention of Catheter-Related Infection in End Stage Renal Disease
Caritas St. Elizabeth’s Medical Center
Boston MA

Kidney Stones: Diagnostic and Treatment Strategies
Caritas St. Elizabeth’s Medical Center Medical Grand Rounds
Boston MA

Update on Acute Renal Failure
Carney Hospital Medical Grand Rounds
Dorchester MA

Update on Biomarker Studies in Acute Kidney Injury
Nephrology Research Conference
Tufts Medical Center
Boston MA

Diagnostic and Prognostic Biomarkers in Acute Kidney Injury
Research Conference, Division of Nephrology & Transplantation
Maine Medical Center
Portland ME

Dr. Levey

A New Equation to Estimate GFR
NYU School of Medicine Renal Grand Rounds
New York City NY

CKD: A new public health threat
Carney Hospital
Dorchester MA

A new equation to estimate GFR and updated prevalence estimates for CKD in the US
Brigham and Women’s Hospital Renal Grand Rounds
Boston MA

A new equation to estimate GFR, and the debate over the definition of CKD
The Alpert Medical School Brown University
Providence RI

Drs. Levey and Sarnak

Cardiovascular Disease and Chronic Kidney Disease (in collaboration with Dr. Andrew Weintraub)
Medical Grand Rounds
Tufts Medical Center
Boston MA

Dr. Menon

Study Design and Protocol Implementation Workshop
Lahey Clinic
Burlington MA

Table 20 is continued on the next page.
Table 20 Continued: 2009 Local, National, and International Presentations by Division Faculty

Dr. Meyer

Interstitial Nephritis
Infectious Disease and Geographic Medicine Morbidity and Mortality Conference
Tufts Medical Center
Boston MA

Resistant Hypertension
3rd Annual Quality Forum sponsored by TUSM and New England Quality Care Alliance
Braintree MA

Topics in Hypertension
General Medical Associates at Tufts Medical Center
Boston MA

Introduction to Dialysis
Tufts Medical Center Department of Medicine House Staff Conference
Boston MA

Dr. Perrone

PKD: Clinical Aspects
Harvard Center for Polycystic Kidney Disease Research
Boston MA

Clinical Trials in PKD
Renal Rounds
Maine Medical Center
Portland ME

Translation From Bench-to-Bedside: Research in PKD
Sackler School of Graduate Biomedical Sciences
Tufts University
Boston MA

Polycystic Kidney Disease
Renal Research Symposium, Tufts University School of Veterinary Medicine
Grafton MA

Dr. Richardson

Managing the Anemia Associated with Chronic Renal Failure in the Older Adult
Continuing Education Program
Waterbury CT, Haverhill MA, and Cromwell CT

Dr. Sarnak

Chronic Kidney Disease and the Heart
Grand Rounds, Melrose Wakefield Hospital
Melrose MA

Dr. Stevens

New Equation to Estimate GFR: Performance and Updated Prevalence Estimates in the US
Brigham and Women’s Hospital Grand Rounds
Boston MA

Table 20 is continued on the next page.
Table 20 Continued: 2009 Local, National, and International Presentations by Division Faculty

MDRD and Other Ways of Estimating GFR
Renal Grand Rounds Winthrop University Hospital
Long Island NY

NATIONAL PRESENTATIONS

Dr. Jaber  
Reduce, Reuse, Recycle  
National Kidney Foundation Annual Spring Clinical Meetings  
Nashville TN

Dr. Levey  
Use of GFR Estimating Equations for Drug Dosages  
Food and Drug Administration CDER - VPLS  
Silver Spring MD

Dr. Madias  
Invited Lecturer  
The Methodist Hospital  
Houston TX

Dr. Menon  
Hypobicarbonatemia and Long-term Outcomes in Chronic Kidney Disease  
American Society of Nephrology 42nd Annual Meeting & Scientific Exposition  
San Diego CA

Dr. Meyer  
Information Technology Update  
Medical Information Steering Committee  
Dialysis Clinic Inc.  
Nashville TN

IT Update and EMR/ePrescribing Survey Results  
DCI Medical Director’s Advisory Committee  
Nashville TN

The State of the Forum  
Forum of ESRD Networks Annual Meeting

Information Technology Update  
DCI Medical Information Steering Committee  
Marco Island FL

Dr. Perrone  
Clinical Trials and Drug Development  
20th Annual Conference on PKD, Polycystic Kidney Disease Foundation  
Chicago IL

Dr. Richardson  
Hemodialysis and Peritoneal Dialysis Patients (CKD Stage 5) – Clinical Pearls for Bridging the Gap Between Hospitalization and Outpatient Clinic Care.  
American College of Clinical Pharmacy 2009 Annual Meeting Nephrology PRN Focus Session  
Anaheim CA

Table 20 is continued on the next page.
Table 20 Continued: 2009 Local, National, and International Presentations by Division Faculty

| **Dr. Richardson** | Assessment Questions: Recall-type and Case-based Item Writing and Analysis. Accreditation Council for Pharmacy Education 13th Conference on Continuing Pharmacy Education  
St. Louis MO  
Writing CME Assessment Questions to Assess Competence, Not Knowledge (formal presentation and workshop) MedscapeCME New York City NY |
|**Dr. Sarnak** | Cardiac Biomarkers in CKD—Issues with Interpretation and Practical Points  
National Kidney Foundation 2009 Spring Clinical Meeting  
Nashville TN  
Nephrology Grand Rounds  
University of California San Diego  
San Diego CA  
Chronic Kidney Disease in the Elderly  
28th Annual Advanced Nephrology: Nephrology for the Consultant  
San Diego CA  
Nontraditional CVD Risk Factor in CKD  
28th Annual Advanced Nephrology: Nephrology for the Consultant  
San Diego CA  
Cardiovascular Risk Factors in CKD  
Massachusetts General Hospital Nephrology Review Course  
Boston MA  
Kidney Function and Adverse Outcomes in the Elderly. Focus on Cystatin C  
National Institutes of Aging  
Bethesda MA  
Cardiovascular Risk Factors in Dialysis Patients: Traditional and Nontraditional  
American Society of Nephrology 42nd Annual Meeting & Scientific Exposition  
San Diego CA |
| **Dr. Stevens** | Visiting Professor Series  
Food and Drug Administration  
Silver Spring MD  
Proteinuria: Origins and Implications  
American Society of Parenteral Nutrition Annual Meeting  
Bethesda MD |
| **Dr. Weiner** | A Primer on Epidemiology and Outcomes Research in Nephrology  
American Society of Nephrology 42nd Annual Meeting & Scientific Exposition  
San Diego CA |

Table 20 is continued on the next page.
Table 20 Continued: 2009 Local, National, and International Presentations by Division Faculty

| Dr. Weiner | Microalbuminuria and GFR as a Predictor of Cardiovascular Disease  
|            | Cardiovascular Disease in Chronic Kidney Disease  
|            | American Heart Association Scientific Sessions 2009  
|            | Orlando FL |

**INTERNATIONAL PRESENTATIONS**

| Dr. Jaber | Inflammation and Atherosclerosis  
|           | Chronic Kidney Disease Keynote Lecture  
|           | XV Congresso Paulista De Nefrologia  
|           | Campos do Jordão, São Paulo, Brazil  
|           | Immunomodulatory Cytokines in Acute Renal Failure  
|           | Acute Renal Failure Symposium  
|           | XV Congresso Paulista De Nefrologia  
|           | Campos do Jordão, São Paulo, Brazil  
|           | Principles and Classification of Biomarkers in Acute Renal Failure  
|           | Acute Renal Failure Keynote Lecture  
|           | XV Congresso Paulista De Nefrologia  
|           | Campos do Jordão, São Paulo, Brazil  

| Dr. Levey | CKD Public Health Forum: Global CKD: Common, Harmful, Treatable  
|           | World Congress in Nephrology 2009  
|           | Milan Italy  
|           | Diagnosis and Staging of CKD: Should We Modify the Current Staging System?  
|           | World Congress in Nephrology 2009  
|           | Milan Italy  
|           | Measurement of Kidney Function: New Solutions to Estimate GFR: the CKD-EPI Formula(s)  
|           | World Congress in Nephrology 2009  
|           | Milan Italy  
|           | KDIGO 2009 Accomplishments - Presented on CKD: Definition, Classification and Prognosis  
|           | KDIGO Corporate Roundtable  
|           | Brussels, Belgium  

| Dr. Madias | Invited Lecturer  
|            | 11th Panhellenic Congress of Hypertension  
|            | Athens, Greece  
|            | Invited Lecturer  
|            | World Congress of Nephrology 2009  
|            | Milan, Italy  

Table 20 is continued on the next page.
Table 20 Continued: 2009 Local, National, and International Presentations by Division Faculty

Dr. Madias  Invited Lecturer  
Forefronts in Nephrology, ISN Forefronts Symposium on Renal and Extrarenal Control of Acid-Base Homeostasis in Health and Disease  
Florence, Italy

Invited Speaker  
5th Borrelli Conference, Acid-Base and Electrolyte Balance: From Bench to Clinic  
Naples, Italy

Dr. Sarnak  Cystatin C—A Marker of Kidney Function or Adverse Outcomes  
World Congress of Nephrology 2009  
Milan, Italy

Dr. Stevens  Prevalence and Implications of Reduced GFR in the Elderly  
World Congress of Nephrology 2009  
Milan, Italy

Measures of Kidney Function and Damage  
KDIGO  
London, United Kingdom

Dr. Uhlig  Evolution of Guidelines from Evidence to Opinion – What Has Been the Practical Result?  
11th International Conference on Dialysis, Advances in CKD 2009  
Las Vegas NV

Methodology of Guideline Development  
World Congress of Nephrology 2009  
Milan, Italy

Editorial Appointments

American Journal of Kidney Diseases

The Division houses the editorial office of the American Journal of Kidney Diseases (AJKD), the official journal of the NKF, and division members lead a multi-institution ffort to continue to make AJKD the preeminent clinical journal in nephrology. The first issue of AJKD compiled by Tufts Medical Center appeared in January 2007.

Dr. Levey is the Editor-in-Chief and Dr. Weiner serves as the Deputy Editor. Other Tufts Medical Center-based editors of AJKD include Drs. Balakrishnan, Gilbert, and Schmid, and Mr. Tighiouart. The Editorial Board includes five additional Editors affiliated with other local hospitals, as well as 28 Associate Editors worldwide. Dr. Harrington is a Tufts Medical Center-based Associate Editor.

January 2010 AJKD Cover
The editorial office is staffed by Nijsje Dorman, PhD (Managing Editor), Elizabeth Frank (Associate Managing Editor), and David Boffa and Liz Bury (Editorial Assistants). The editorial office is located on the first floor of the Traders Building at 35 Kneeland Street.

Continuing a trend of increasing manuscript submissions, AJKD received over 1,300 submissions in the 2009 operating year, with 19% accepted for publication. Over the past year, AJKD editors have concentrated on building and sustaining multiple journal features. These features include “In Translation”, which analyzes developments in basic science with diagnostic or therapeutic implications in the clinical practice of nephrology; “In Practice”, which examines clinical topics beyond nephrology that affect nephrologists daily; “The Acid-Base & Electrolyte Teaching Case”, which educates clinicians on acid-base and electrolyte pathophysiology and the interpretation of serum and urine chemistries in clinical practice; and “In My Words”, which describes the experiences of clinical practice.

Finally, AJKD has continued to be a strong advocate of World Kidney Day. In March 2009 the editors highlighted kidney disease as a public health problem in the United States, focusing on an article is titled “Comprehensive Public Health Strategies for Preventing the Development, Progression, and Complications of Chronic Kidney Disease: Report of an Expert Panel Convened by the Centers of Disease Control and Prevention.” This article was the product of a 2007 Technical Expert Panel co-chaired by Dr. Levey and Dr. William McClellan at Emory University in Atlanta, GA. The panel of experts designed a comprehensive public health strategy to prevent the development and complications of chronic kidney disease in the US. This trend will continue in 2010, with the editors highlighting CKD in developing nations around the world.

Other Editorial Board Appointments

In addition to their responsibility for editorship of American Journal of Kidney Diseases, members of the Division serve on other editorial boards.

- Dr. Jaber is a member of the editorial board of Nephron Clinical Practice.
• Dr. Madias is a member of the editorial boards of *Hippokratia* and *Hellenic Medicine*.

• Dr. Perrone is the cystic kidney disease editor for Up to Date. In 2009, he retired from serving on the Editorial Board of the *Clinical Journal of the American Society of Nephrology*.

• In 2009, Dr. Richardson completed her service as the Editorial Board Chair for the 6th edition of the *Pharmacotherapy Self-assessment Program* (PSAP). In 2008, she was elected to be the Editorial Board Chair for the 7th edition of the series. The PSAP series is a premier publication of the American College of Clinical Pharmacy and is modeled after the Medical Knowledge Self-Assessment Program. The program is designed as a self-assessment tool to assist pharmacists in sharpening their clinical skills and keeping abreast in therapeutic areas with updated standards of practice.

• In 2009, Dr. Sarnak completed his service as a member of the Editorial Board for the *Clinical Journal of the American Society of Nephrology*. In 2010, he will begin as a member of the editorial board for the *Annals of Internal Medicine*.

**2009 Education Awards and Honors**

• Dr. Gilbert participated on a Panel of Excellence for the Graduate Institute For Teaching (GIFT) at Tufts University. The Panel of Excellence consists of an inspired group of academics from across disciplines who answer questions that the 15 GIFT Teaching Fellows have about an academic career.

• Dr. Gilbert received the Outstanding Teaching in the Pre-clerkship Years award from the 2009 TUSM Senior Class.

• Dr. Gilbert also received the Outstanding Lecturer for 2008-2009 from students at TUSM.

• Dr. Gilbert was interviewed for and feature in the Faculty Focus column in the February 2010 TUSM Newsletter of the Office of Educational Affairs.

• Dr. Jaber received the 2009 Excellence in Ambulatory Education Award from the Internal Medical Residency Training Program House Staff at Caritas St. Elizabeth’s Medical Center.

• Dr. Madias received an honorary Doctorate from the School of Medicine at the Aristotelian University of Thessaloniki located in Thessaloniki, Greece.

• Dr. Moorthi, MD, MPH, MS, Clinical Fellow, received the Excellence in
Teaching Award from by the TUSM Senior Class. Dr. Moorthi received the award at the Senior Dinner on Wednesday, May 13th at the Omni Parker House Hotel in Boston.

- **Dr. Perrone** received the TUSM 25 Year Faculty Service Award on June 1st.

- Dr. Perrone was awarded the Distinguished Faculty Award which is one of TUSM's most important honors. The award recognizes careers highlighted by major national and local accomplishments in research, teaching, and overall contributions to academic medicine and Tufts.

- Dr. Rifkin won an Attending Teaching Award from the Tufts Medical Center housestaff. Dr. Rifkin received the award as a 1st year attending.

**Public Policy**

**2009 Policy Initiatives**

- The Tufts Center was very active in 2009. The KDIGO Guideline for the Diagnosis, Evaluation, Prevention, and Treatment of Chronic Kidney Disease-Mineral and Bone Disorder (CKD-MBD) was published in August 2009 and the KDIGO Guideline for the Care of the Kidney Transplant Recipient was published in November 2009. In addition, work continues on the KDIGO Guideline for the Evaluation and Management of Acute Kidney Injury and the KDIGO Guidelines for the management of glomerulonephritis and management of blood pressure in Chronic Kidney Disease was initiated.

- Dr. Levey was the first author on behalf of a Centers for Disease Control and Prevention (CDC) expert panel on CKD prevention published in this month's issue of the *American Journal of Kidney Diseases*. The experts recommended a comprehensive public health strategy to prevent the development, progression, and complications of CKD in the United States. The expert panel's work included applying strategies for primary, secondary, and tertiary prevention for chronic diseases to the conceptual model for development, progression, and complications of CKD; reviewing epidemiologic data from US federal agencies; and discussing ways of integrating public health efforts from various agencies and organizations. The panel also recommended a 10-point plan to the CDC to improve surveillance, screening, education, and awareness directed at 3 target populations: people with CKD or at increased risk of developing CKD; providers, hospitals, and clinical laboratories; and the general public.
Dr. **Levey** was the chair of a landmark KDIGO conference held in London that determined that the current CKD classification system needed to be modified because it did not adequately describe the prognosis of CKD. The committee reached consensus and determined that predicting prognosis for patients with CKD could be improved by emphasizing classification by cause in addition to stage. They recommended adding albuminuria stages in addition to GFR and by subdividing CKD stage 3 into two stages. More than fifty cohort studies submitted data for review at the Controversies Conference, drawing from meta-analyses on 1.5 million study participants. The data reviewed showed a strong, consistent gradation in risk for all outcomes of CKD, according to the level of estimated GFR and urine albumin-to-creatinine ratio (ACR) across a wide range of study populations. In general, increased risk was noted below a level of GFR around 60 ml/min/1.73 m$^2$ and at urinary ACR at all levels above 10 mg/g (the lowest value examined). The risk for cardiovascular mortality and kidney disease outcomes tended to be elevated at a higher GFR than all-cause mortality. As a consequence of this landmark meeting, it is anticipated that revision of the 2002 KDOQI Clinical Practice Guidelines on Definition and Classification of CKD will be undertaken by KDIGO in the near future. Dr. Levey also reported the results of the conference at the American Society of Nephrology’s 42nd Annual Meeting & Scientific Exposition in San Diego CA and at the KDIGO Board of Directors Meeting in Brussels, Belgium.

- Dr. **Meyer** was the principal author of comments by the Forum of ESRD Networks to the Centers for Medicare and Medicaid Services (CMS) on the CMS ESRD Network Assessment Report. Dr. Meyer is the President-elect of the Forum, which advocates for the organizations that monitor the quality of chronic kidney disease, dialysis, and kidney transplant care in the United States.

- Drs. **Meyer** and **Richardson** worked with the DCI Information Technology specialists to develop an entirely new computerized system to administer, score, and report health-related quality of life and patient satisfaction surveys to meet the new Centers for Medicare and Medicaid Services Conditions for Coverage.
In 2009, Dr. Perrone was appointed as the Clinical Lead of the Polycystic Disease Database Consortium. The goal of the Consortium is to establish a polycystic kidney disease clinical database. This appointment was the culmination of several years of effort. In 2007, Dr. Perrone was appointed as Chairman of the Steering Committee for the Clinical Trial Endpoints and Therapies in Polycystic Kidney Disease workshop jointly sponsored by the FDA and the PKD Foundation. As an extension of this workshop, Dr. Perrone chaired the 2008 Polycystic Kidney Disease Database Consortium meeting with the FDA and representatives from the pharmaceutical industry and academic institutions. Dr. Perrone continues to work with the FDA, the PKD foundation, the Clinical Data Interchange Standards Consortium (CDISC), and The Critical Path Institute (C-PATH). These efforts are directed toward the ultimate acceptance, by the FDA, of total kidney volume as a surrogate endpoint for clinical trials in polycystic kidney disease.

**Continuing Policy Initiatives**

**Consultancies**

- In 2009, Dr. Meyer concluded his service as a consultant to the Food and Drug Administration’s Gastroenterology and Urology Devices Panel.

- Dr. Stevens is a member of the National Institute for Diabetes, Digestive and Kidney Disease: United States Renal Data System External Advisory Committee.

- Dr. Stevens is the co-chair of the KDIGO Renal Working Group which in conjunction with the World Health Organization will revise ICD-10 towards development of ICD-11.

- Dr. Stevens is the Chair of the NKDEP Workgroup on Estimation of Kidney Function for Medication Dosage Prescriptions.

- Since 2007, Dr. Uhlig has been a consultant to the Society of Gynecological Surgeons Systematic Review Group in the for evidence review and development of two evidence-based clinical practice guidelines. Her role has included being a methods consultant, member of evidence review group and guideline writing group, and a co-organizer and workshop faculty. The first guideline project was on the use of mesh material in anterior vaginal prolapse repair and the second topic is on treatment of benign uterine bleeding.

**DCI Information Systems**
Dr. Meyer serves as Medical Director for Information Systems for Dialysis Clinic, Inc., chairs its Medical Director Computer Steering Committee, and serves on its Quality Management Committee. Dr. Meyer is one of the principal architects of DCI’s information system, which sets an industry standard for quality of care and of information, and continues to participate in its development. The team’s current projects include continued development of decision support tools for treatment of dialysis patients’ anemia and the implementation of an interface between hemodialysis machines and the information system.

DCI Outcomes Monitoring Program

Dr. Richardson directs the corporate-wide DCI Outcomes Monitoring Program. The program has two facets, one is the use of patient experience data to improve care, and the other is the collection of high-quality comorbidity data. Patient experience is assessed using the SF-36+24 or the KDQOL-36 questionnaire and a patient satisfaction questionnaire. Data are collected from all DCI chronic dialysis units. The current HRQOL database contains over 200,000 observations from more than 45,000 dialysis patients. The new Conditions for Coverage issued in 2008 by the Centers for Medicare and Medicaid Services have resulted in significant changes for the program. In 2009, the OMP staff revised all of their systems to meet the new mandate that dialysis patients complete health status questionnaires on a regular basis. DCI now uses a custom computerized program that is one-of-a-kind.

Dr. Miskulin and Alice A. Martin, RN lead the Comorbidity Assessment Program. Using DCI data, Dr. Miskulin is examining the center variability in meeting targets for ESRD Clinical Performance Measures and the extent to which case-mix (comorbidity) explains these differences. She is also studying the effects the new proposed bundling payment system will have on care delivery. They have also been working with DCI staff to develop and implement a Nursing Assessment to meet requirements for the new CMS Conditions for Coverage for ESRD Facilities. The form will be electronically entered into the DCI Medical Information System and enable linking of comorbid conditions with the DCI Problem List to enhance comorbidity data collection.
Tufts Center for Kidney Disease Guideline Development and Implementation

The Tufts Center for Kidney Disease Guideline Development and Implementation (formerly the National Kidney Foundation Center for Clinical Practice Guideline Development and Implementation) was established in July 2003 at Tufts Medical Center. The mission of the Center is to contribute to improvements in the quality of care of individuals with kidney disease within the frameworks of the Kidney Disease Outcomes Quality Initiative (KDOQI) and Kidney Disease: Improving Global Outcomes (KDIGO) initiative.

The aims of the Center are to:

1. Provide service to the NKF
   - in development of KDOQI and KDIGO guidelines
   - in implementation of KDOQI guidelines

2. Conduct research
   - in guideline development
   - in guideline implementation

3. Train fellows and work group members in applying evidence-based methods to the domain of kidney diseases.

Dr. Levey is the Center Director, Nephrology; Dr. Uhlig is the Director of Guideline Development and the Co-Director of the Evidence Review Team; and Dr. Stevens is the Director of Guideline Implementation. Additional staff at the Center are Ethan Balk, MD MPH Director of Evidence Based Medicine and Co-Director of the Evidence Review Team and Dr. Upadhyay who has begun his training to develop into the role of a Project Director for the Evidence Review Team.

Service in Guideline Development

The process of KDOQI and KDIGO guideline development is supported by a team of nephrologists and methodologists, which constitutes the Evidence Review Team (ERT).

Role of the ERT:
- Closely collaborate with the experts in the work groups assembled by the NKF;
- Provide methodological guidance in guideline development;
- Provide leadership in conducting the systematic reviews and produce the evidence reports; and
- Ensure methodological rigor and timely completion of critical work process steps.
The ERT aims to assure that the guideline development process is of high quality by insuring that question formulation, literature synthesis and appraisal follow a structured and explicit approach and that guidelines connect to the evidence reviewed. Progress on individual KDOQI and KDIGO guidelines is described above.

**Service in Guideline Implementation**

The Tufts Center provides service to the NKF in guideline implementation through consultation and collaboration with NKF and KDIGO in projects in collaboration with other organizations and through “academic detailing,” at Tufts Medical Center and other partners.

Collaborative Partners of the Tufts Center include:

- Centers for Disease Control and Prevention
- Coventry Health Care
- U.S. Food and Drug Administration
- Laboratory Corporation of America
- National Committee for Quality Assurance
- NIDDK National Kidney Disease Education Program
- World Health Organization
Drs. Stevens and Levey work closely with the NKF leadership to develop and enhance NKF programs, such as Kidney Early Evaluation Program (KEEP) and Kidney Learning System (KLS) activities. The focus of this collaboration is to develop strategies and tools for implementation of KDOQI and KDIGO clinical practice guidelines.

**Research in Guideline Development and Advancement of Guideline Development Methods**

The ERT is constantly evaluating and streamlining the procedures for guideline development as well as improving and standardizing the methods. It conducts meta-analyses for selected evidence review topics and promotes adherence to generally accepted standards when matching the evidence with the guideline questions. The ERT currently provides consultation to the NKF, KDOQI, and KDIGO leadership on issues related to methods and processes.

**Research in Guideline Implementation**

Guideline implementation research projects study the effectiveness of strategies and tools for guideline implementation to ensure the translation of the guidelines into clinical practice. A research group has been constituted at the Tufts Center to lead the implementation efforts. This group also provides advisors for independent research projects undertaken by the Tufts Center fellows. This group has established partnerships with Coventry Healthcare, Kaiser Permanente Northwest, LabCorp and Quest Diagnostics, and, jointly with the NKF leadership, is exploring additional partnerships, including the Chronic Disease Research Group at the University of Minnesota.

**National Kidney Disease Education Program**

Drs. Levey and Stevens are members of the National Kidney Disease Education Program (NKDEP) of the NIDDK. Dr. Levey has participated in the efforts of the NKDEP to recommend reporting GFR estimates by clinical laboratories and to standardize serum creatinine assays for more accurate GFR estimation. Dr. Stevens is the Chair of a subcommittee of NKDEP to develop recommendations for use of GFR estimates for drug dosing.

**2009 Public Policy Awards and Honors**

- Dr. Kassirer received the David E. Rogers award sponsored by the American Association of Medical Colleges and the Robert Wood Johnson Foundation. The award recognizes a medical school faculty member who has made major contributions to improving the health and health care of the American people.
Dr. Kassirer was specifically honored for helping medical schools and teaching hospitals nationwide revise their conflict-of-interest policies.

- Dr. **Kassirer** was also nominated by the esteemed *British Medical Journal* for an international honor, the Lifetime Achievement Award. The Lifetime Achievement Award is bestowed upon the "individual who has, over his or her working lifetime, made a unique and substantial contribution to improving health care, whether in clinical practice, health services, public health, health policy, medical education, or medical research".

**Philanthropic Support of the Division**

**Dr. Gerald J. and Dorothy R. Friedman Professor of Medicine Endowed Chair in Nephrology at Tufts University School of Medicine and Tufts Medical Center**

The Dr. Gerald J. and Dorothy R. Friedman Professor of Medicine Endowed Chair in Nephrology at Tufts University School of Medicine and Tufts Medical Center was established in 2001 with Dr. Andrew S. Levey as its first recipient.

Gerald J. Friedman, MD was an internist known as a superb diagnostician, as well as a specialist in diabetes, cardiac disease, endocrinology, and nutrition.

A lifelong New Yorker, Dr. Friedman earned his bachelor’s and medical degrees from New York University College, returning to teach there for most of his career. After serving as commanding officer at the 222nd Station Hospital in World War II, he joined the staff of Beth Israel Medical Center in New York, where he remained for the rest of his career, serving on almost every significant committee and as President of the Medical Board.

Dr. Friedman always maintained an active practice and a reputation for thorough physical examinations in the city. For more than 30 years beginning in 1957, he was also international medical director for the United Parcel Service, and an active member of the Industrial Medical Association.

He wrote extensively on the management of diabetes, especially in the workplace, at a time when many employers discriminated against people with diabetes. He also helped the New York Diabetes Association establish a summer camp in upstate New York for children with diabetes.
While playing saxophone during his days as a medical intern, Dr. Friedman met and married Dorothy Ross, a Boston-born jazz pianist and recording artist. While Mrs. Friedman stopped performing professionally after her husband finished his residency, her private playing has always entertained the Ross and Friedman families and friends.

Dr. Friedman died on November 25, 2004 at the age of 91. He is survived by his wife Dorothy and his niece, Jane Friedman.

2009 Friedman Fund Updates

- In 2009, the Friedman Foundation held the Second Annual Gerald J. Friedman Fellows Symposium on Nutrition, Diabetes and Human Health. Several Tufts Medical Center Endocrinology Fellows participated. The Friedman Foundation hopes that this website serves as a venue to help “connect with those whose work you find interesting, and benefit from the opportunities to forge new relationships and renew old ones”.

William B. Schwartz Nephrology Fund

Bill Schwartz founded the Division of Nephrology at Tufts Medical Center in 1950 and served as its chief until 1971. He developed the Division into a preeminent referral center for patients with kidney diseases in the New England region and beyond, and he cared personally for hundreds of patients. He made landmark discoveries that revolutionized our understanding of the pathophysiology and management of acid-base and electrolyte disorders. But most importantly, he created a school of rigorous pathophysiological thought and analytical reasoning, whose graduates have contributed greatly to the field of nephrology.

We have endeavored to preserve Dr. Schwartz’s academic legacy by establishing the William B. Schwartz Nephrology Fund. The fund was created in 2000 by charitable gifts to Tufts Medical Center on the 50th anniversary celebration of the founding of the Division and reunion of faculty and trainees. The Fund supports a number of academic initiatives of the Division, including research and training opportunities for both junior and senior investigators within the Division.
We are extremely honored by the following Founding Gifts to the William B. Schwartz Nephrology Fund:

**Individual Donors**
- Dr. John Harrington
- Drs. Nicolaos and Ourania Madias
- Dr. Jerome and Sheridan Kassirer
- Dr. Dwight and Rhonda Makoff
- Dr. Mark and Judy Needle
- Dr. David and Lynn Lowance
- Drs. Andrew Levey and Roberta Falke
- Dr. Jill Speigel
- Drs. Brian and Sunita Pereira
- Mr. and Mrs. John P. Brogan

**Corporate/Institutional Donors**
- AMGEN, Inc.
- Dialysis Clinic, Inc. Boston
- Ortho BioTech
- Merck & Co.
- Genzyme

**2009 Schwartz Fund Updates**

- It is with great sadness that Tufts Medical Center announced the passing of one of the preeminent physicians and administrators in its history, former Chairman of Medicine William B. Schwartz, MD, 86. Dr. Schwartz died in March after a long illness in Los Angeles CA, where he had lived for a number of years.

  “Dr. Schwartz was a remarkably productive and intelligent physician who made major contributions in kidney disease, computers in medicine and medical economics,” said Deeb Salem, MD, Chairman of Medicine. “I had the honor and pleasure of working with him up until last year, and his sharp mind, rigorous analytical ability and health policy acumen will be sorely missed.”

  In addition to his clinical, educational and research roles at Tufts Medical Center and Tufts University School of Medicine, Dr. Schwartz became one of the nation’s leading thinkers on the intersection of medicine and economics.

  He authored or co-authored several books and hundreds of articles on subjects ranging from electrolyte disorders to the use of artificial intelligence in medicine to the rationing of health care. From 1976-1992, he was the Vannevar Bush University Professor and Professor of Medicine at Tufts University. He founded Tufts Medical Center’s Division of Nephrology in 1950 and served as its chief
until 1971, when he became Chairman of the Department of Medicine at Tufts Medical Center. Dr. Schwartz served as Chairman of Medicine and physician-in-chief at Tufts Medical Center until 1976. On the 50th anniversary of the nephrology division in 2000, it was named in his honor.

In his work at Tufts University and Tufts Medical Center, he personally trained more than 60 nephrologists. He was known for his rigorous attention to detail in scientific analysis, which he imparted to the physicians he trained. He led landmark discoveries in the physiology and management of acid-base and electrolyte disorders, in understanding potassium depletion, and glomerulonephritis, a disease characterized by the inflammation of the small blood vessels in the kidneys. Along with the late Frederic C. Bartter, MD, he discovered and defined the characteristics of the syndrome of inappropriate anti-diuretic hormone (SIADH, also known as the Schwartz-Bartter Syndrome), in which there is excess secretion of the antidiuretic hormone, disturbing the critical water balance in the body.

In 1971, Dr. Schwartz spent a summer at the RAND Corporation, which spawned a second career in health policy and health services research. He remained a principal advisor to Health Science Program at the RAND for more than a decade. In 1984, he co-authored (with economist Henry Aaron), *The Painful Prescription: Rationing Hospital Care*, which examined health care in the United Kingdom, and its implications for American health care. Before the advent of MRIs and other increasingly expensive medical technologies, Aaron and Dr. Schwartz put forward the notion that technology would drive health care costs to a large extent. In a 1998 book, *Life Without Disease: the Pursuit of Medical Utopia*, Dr. Schwartz explored the impact of genetic discoveries on medicine, health spending, and society. Dr. Schwartz’s essays and analyses appeared regularly in national newspapers and health policy journals, and government and industry leaders consulted with him on health policy issues.

After moving to California, Dr. Schwartz became emeritus professor of medicine at the University of Southern California.

Dr. Schwartz is survived by his wife Tressa Ruslander Miller of Los Angeles CA, his son Dr. Eric Schwartz and his wife Dr. Gayle Tillman of Weston MA, his daughter Laurie Schwartz Naparstek and her husband Jay Naparstek of Worcester MA, his stepson Joshua D. Miller and his wife Lori Miller of San Jose CA, his daughter-in-law Ellen Cohen of Newton MA, his former wife Carol Schwartz of Newton MA, and five grandchildren. He was also the father of the late Kenneth B. Schwartz.

He was a member of the American Academy of Arts and Sciences and Institute of Medicine, a past president of the American Society of Nephrology, a past chairman of the Scientific Advisory Board of the National Kidney Foundation. He received his undergraduate and medical degree at Duke University.
Two memorial services were held, one in Los Angeles immediately after his death and a second memorial service was held in November at Tufts Medical Center in Boston.

- On November 13th, Dr. Schwartz’s family and the Division cohosted a Day of Remembrance. Nearly 100 colleagues, family members, and friends attended the day-long event to celebrate Dr. Schwartz’s life and career.

![Dr. Schwartz's Family in Attendance](image)

- The day’s events included:
  
  - 2 presentations during Medical Grand Rounds
    - Dr. Kassirer reviewing Dr. Schwartz’s classic paper “A syndrome of renal sodium loss and hyponatremia probably resulting from inappropriate secretion of antidiuretic hormone” and
    - Joseph P. Newhouse, PhD reviewing “Health Care in the US: the vision of William B. Schwartz”;

![Drs. Kassirer and Newhouse](image)
• A Remembrance of William B. Schwartz with Friends, Family, and Colleagues with Dr. Madias as the Master of Ceremonies; and a

• Social gathering at Jacob Wirth’s Restaurant.

• In 2009, we were very appreciative to receive new gifts from the following individuals:

  • Ms. Lizanne Boily
  • DeCrescente Distributing Company, Inc.
  • Ms. Dolores Driscoll
  • Dr. Howard B. and Mrs. Sandra Garfinkel
  • The Sands Family Foundation
  • Dr. Richard L. and Mrs. Vivien Tannen

**Dr. John T. Harrington Endowed Fund**

The Dr. John T. Harrington Endowed Fund was created in 2006. It was established by charitable gifts to Tufts Medical Center in honor of Dr. Harrington’s 70th birthday. Through his outstanding career, Dr. Harrington, Dean Emeritus at TUSM, has played a vital role in Tufts Medical Center’s Division of Nephrology. Widely known as a gifted nephrologist who has brought long-term hope to seriously-ill patients, his contributions to the field of Nephrology are many. In the early 1970s, Dr. Harrington developed the hemodialysis, peritoneal dialysis and kidney transplant programs. Another of his most notable contributions to medical education and nephrology was his leadership of the “Nephrology Forum” in *Kidney International*, the official journal of the International Society of Nephrology. The Forum served as an invaluable resource of information and perspective for nephrologists around the globe for over 25 years.

The Dr. John T. Harrington Endowed Fund supports a mission that Dr. Harrington holds near and dear – the continuous medical education of physicians, both young and more senior, on the delivery of the highest-quality care possible to patients suffering from kidney disease. Each year, the Harrington Fund supports a Visiting Professor in the Division of Nephrology to participate in the evaluation of the Division’s research training program and to speak at Grand Rounds in the Department of Medicine. In addition, the Harrington Fund can support other educational programs and initiatives within the Division, include innovative research projects that require seed funding and special patient care projects.
We are very grateful for the following Founding Gifts for the Dr. John T. Harrington Endowed Fund:

**Individual Donors**
- Mr. Thomas F. and Mrs. Mary J. Shields
- Mr. and Mrs. John P. Brogan
- Drs. Nicolaos and Ourania Madias

**Corporate/Institutional Donors**
- Dialysis Clinic, Inc.
- Tufts University School of Medicine
- Merck & Co., Inc

Previous Visiting Professors:

**1st Annual John T. Harrington Grand Rounds**
January 2007
Nicolaos E. Madias, MD, Visiting Professor
Caritas St. Elizabeth’s Medical Center
*Shared Primacy of Sodium and Potassium in the Pathogenesis of Hypertension*

**2nd Annual John T. Harrington Grand Rounds**
March 2008
Sharon Moe, MD, Visiting Professor
University of Indiana
*Chronic Kidney Disease: Looking for Bone in All the Wrong Places*

**2009 Harrington Fund Updates**

- In 2009, Dr. Eberhard Ritz from the Department of Internal Medicine Ruperto Carola University of Heidelberg, Germany was the Visiting Professor for the 3rd Annual John T. Harrington Grand Rounds. During his March visit, he presented on the Heart and Uremia at the Division’s Research Conference and also gave the Grand Rounds presentation entitled *The World Kidney Day: The Kidney and Hypertension.*

- Nephrologists from several Tufts-associated hospitals (Maine Medical Center, Baystate Medical Center, and Caritas St. Elizabeth’s Medical Center) joined Division members at the presentation and evaluation of the Division’s research training program.

- Also in 2009, Dr. Bertram Kasiske accepted an invitation to be the Visiting Professor for the 4th Annual John T. Harrington Grand Rounds being held
March 11-12, 2010. Dr. Kasiske is a Professor of Medicine and head of Transplant Nephrology at the University of Minnesota. He is also the Director of the Renal Division at Hennepin County Medical Center.

The Hortense “Diddy” Seybolt Fund for Staff Enrichment in Nephrology

The Hortense “Diddy” Seybolt Fund for Staff Enrichment in Nephrology was established in 2008 by the family and friends of Diddy Seybolt in recognition of her great appreciation for the compassionate care provided to her by technicians, nurses, and other medical care providers in conjunction with her dialysis treatments at Tufts Medical Center and DCI Boston. Mrs. Seybolt was a long-time benefactor of Tufts Medical Center and a former member of the Hospital's Board of Trustees.

The purpose of the Hortense “Diddy” Seybolt Fund for Staff Enrichment in Nephrology is to support professional development and training in nephrology with a special focus on staff that care for dialysis patients. Examples of professional development and training include participation in conferences, seminars, coursework and other continuing medical education opportunities that will advance the knowledge, skill, and careers of technicians, nurses, and other medical care providers who care for dialysis patients. To support these enrichment activities, it is expected that the Fund will distribute multiple awards every year in the range of $500—$1,500 each, depending on funding available. The awards will provide important recognition to the hardworking staff that cares for dialysis patients and awardees will be acknowledged as receiving support.
from the Hortense “Diddy” Seybolt Fund for Staff Enrichment in Nephrology. Mrs. Seybolt's determination, good humor, grace, and dignity inspired both her fellow dialysis patients and the physicians and staff who were privileged to care for her. Even as she confronted a rigorous treatment for an exhausting chronic illness, she was attentive to the experiences and aspirations of the staff who performed her hemodialysis treatments. The Division is profoundly grateful to her family and friends for memorializing Mrs. Seybolt's concern and sense of community in this fund.

We are grateful for the following founding gifts received:

- The Friends and Family of Hortense “Diddy” Seybolt

2009 Diddy Seybolt Fund Updates

- In 2009, we were very appreciative to receive new gifts from the following individuals:
  - The Friends and Family of Hortense “Diddy” Seybolt

- In March 2009, the Hortense “Diddy” Seybolt Fund for Staff Enrichment in Nephrology was dedicated. Numerous friends, family members, and Division members were in attendance for the unveiling of a plaque at the entrance of the dialysis unit and also a plaque outside the staff room. Dr. Meyer announced that this year’s professional development funds would be used to support Patient Care Technicians taking the certification examination that is being required for the first time in 2009.
Friends of the Division and DCI

We also recognize extraordinary gifts to the Division and the DCI Boston dialysis unit.

- In 1986, on the occasion of the opening of the DCI’s first dialysis unit in Boston, Mr. and Mrs. John P. Brogan donated televisions for patients in the unit.

Information to Make Gifts to the Division

The Division is always appreciative of new gifts. If you wish to make a contribution to the Friedman Fund, please designate that you would like your contribution to support that Fund. You can make your contribution to Tufts University School of Medicine online or mail it to:

Tufts University School of Medicine
Office of Development & Alumni Relations
136 Harrison Avenue
Boston, MA 02111

To support any of the other funds, please indicate the specific name of the fund to which you wish your gift to be directed. Contributions can be made to Tufts Medical Center online or mailed to:

Tufts Medical Center
Development Office
800 Washington Street
Box 231
Boston, MA 02111
617-636-7656 (phone)
617-636-7659 (fax)