From the Director

This year continues to be one of great progress and exciting research at the Institute for Prostate and Urologic Cancers. With your ongoing and generous support, we remain a leader in providing comprehensive, innovative and efficient care based on the latest advances in technology and research.

In this issue, we welcome Phillip Dahm, M.D., an internationally known expert in analyzing outcomes from urological cancers. Be sure to read his article about the prestigious Cochrane Review Group for prostate cancers. Chris Warlick, M.D., also explains our new MRI-guided fusion biopsies, a cutting edge prostate cancer diagnostic technique.

In technology news, I am pleased to announce that the University of Minnesota Medical Center installed two DaVinci XI robots in late August. We are the first hospital in Minnesota to have this technology, making surgical removal of urological cancer even more precise.

We also introduced a new test for prostate cancer. The 4K test allows us to predict men who are likely to have aggressive prostate cancer. We can then specifically select these men for a prostate biopsy.

For men with low risk for prostate cancer, we are ready to launch a new clinical trial with active surveillance. The trial will monitor the effect of dietary intervention in the form of pomegranate extract can alter the genetic make-up of the cancer. We are also looking at a new immunotherapy for kidney cancer and a new treatment that might slow growth of early stage bladder cancer.

Stephanie Jarosek Ph.D., R.N., continues research on survivorship for patients who received radiation or surgical treatment for prostate and other pelvic cancers. I am also collaborating with Simon Rosser Ph.D., M.P.H., L.P., in the School of Public Health to better understand the mental, social and physical health effects of prostate cancer on gay men.

(continued on page 2)
New biopsy option fuses imaging, biopsies in more comfortable setting

A new tool is available at the Institute for Prostate and Urologic Cancers (IPUC) that could make getting a biopsy more comfortable and productive.

Physicians are now utilizing MRI Fusion Biopsy technology to conduct a biopsy with the added advantage of imaging during the procedure.

“We have had a long-standing interest and expertise in image-guided therapies for prostate cancer,” said Christopher Warlick, M.D., a urologic surgeon with the IPUC. “Up to this point, we’ve been performing these biopsies in the MRI machine. It was effective but cumbersome for the patient. This new fusion platform provides a much better patient experience.”

The fusion platform has been used in research for several years and has only recently become commercially available. The system in use at the IPUC is called UroNav.

Benefits of this new type of procedure include:

• More convenient positioning for patients, leading to a more comfortable experience;
• Availability of local anesthesia during the procedure;
• Only one stop, since the procedure can be performed right in the clinic.

Patients who might be a good candidate for the new technology will discuss the benefits and risks with a physician in the clinic. It may be ideal for active surveillance patients or those with previous negative biopsies whose PSA levels are still rising.

“We are certainly moving in the direction of making this the standard of care,” said Warlick. “Still, it’s a pretty new technology and isn’t always the best fit for a first biopsy. Patients and physicians can discuss the options and best fit for care during the visit.”

MRI fusion biopsies are slightly longer than a standard biopsy, but require no additional preparation on the patient’s part. These are performed on an outpatient basis similar to current standard biopsy procedures.

“The overall patient experience will be very similar,” said Warlick. “But now, we have the advantages of the imaging right there during the procedure.”

Bagchi lab appreciates the support of the IPUC on two ongoing projects

Our lab’s first project involves the discovery of PVT1, the gene regulator of MYC, a key cancer gene. The identification of this regulator marks a critical step towards developing targeted therapies against MYC, an otherwise undruggable protein. This study was published in the Aug. 7 issue of Nature, a renowned international journal. The study has also been featured in Cancer Discovery, the flagship journal of American Association for Cancer Research, and Cell Research, another prestigious journal from the Nature Publishing Group. This work formed the basis of an American Cancer Society Research Scholar award to Dr. Bagchi, a highly competitive national award recognizing the best works in the field. Our lab is currently building on this discovery to develop molecules which target the PVT1-MYC co-operation. This will help us to realize our long-term goal of developing a cure for cancer.

Our second project involves the identification of early biomarkers for prostate and urological cancers. This research is based on our observation of remnants of primitive viruses in our genome that are activated in the initial period of cancer development. Early biomarkers of prostate and urological cancers are highly sought after, as they can help us diagnose cancers at an early stage, when patients have a greater chance of being cured. We are currently developing tests on primary prostate cancer tissues to test our findings in prostate cancer cell lines. We are hopeful that successful completion of the project will allow us to develop better diagnostic methods for prostate and urological cancers.

From the Director, continued

Thanks to you, we have had phenomenal success over the last few months with important awareness and fundraising events. Climb 4 Kidney Cancer held at the U of MN TCF Stadium inspired IPUC colleagues Dr. Sean McAdams, Dr. Chris Weight, Dr. Gautam Jha and Dr. Tom Griffith, along with one of our patients, to conduct their own climb in Utah, with two of them summiting the tower.

We also had a terrific turnout for our walk to raise awareness and funds for bladder cancer research. Minnesota hosted the second largest group in the nation participating in the Bladder Cancer Advocacy Network (BCAN) sponsored Bladder Cancer Walk. Starting in 2015, this walk will be named the Donald Tremblay Bladder Cancer Walk in honor of one of our patients.

Along with my colleagues, IPUC faculty have been invited to share our expertise with medical colleagues in India, Germany, Mexico, Brazil and Japan. I am proud that the members of IPUC have continued to establish an international reputation for our clinical and research initiatives. Congratulations to Scott Dehm, Ph.D., who was name the first the Phillip Semmer Scholar in 2014. This award will help him pursue his research on androgen receptors in prostate cancer for the next two years.

Movember is here – I hope you are growing your mustaches (or support someone who can). This annual event helps spark conversation and raise funds for prostate and other cancers.

Along with the IPUC, we are part of the TCF Stadium Bladder Cancer Walk in honor of one of our patients.

From the Director, continued

We look forward to continuing to work with the entire community connected with the IPUC to enhance the health of individuals with prostate and urologic cancers.

Sincerely,

Badrinath R. Konety, M.D.
Director of the Institute for Prostate and Urologic Cancers
New faculty in Pathology and Pharmacology

Paari Murugan, M.B.B.S., M.D., a genitourinary pathologist, has recently been recruited as an assistant professor in the Division of Anatomic Pathology at the University of Minnesota. He obtained his medical education and postgraduate training in pathology in India (2005-2008). Besides a residency in anatomic pathology at the University of Oklahoma (2009-2012), he completed a fellowship in oncologic surgical pathology at the University of Texas MD Anderson Cancer Center, Houston, Texas (2012-2013), followed by a genitourinary pathology fellowship at the Memorial Sloan Kettering Cancer Center, New York, NY (2013-2014), under the mentorship of Dr. Victor Reuter. Dr. Murugan's research interests are focused on genitourinary neoplasms with an emphasis on renal tumors. In particular, his ongoing research projects include a contemporary study addressing the classification, clinicopathologic features and treatment outcome of papillary renal cell carcinoma; gene expression analysis of rhabdoid transformation in clear cell renal cell carcinoma; clonality of bladder tumors following radical nephroureterectomy and clinicopathological studies on primary Ewing sarcoma of the kidney and testicular mesothelioma.

Aaron LeBeau, Ph.D. is an assistant professor in the Department of Pharmacology, having officially joined the University of Minnesota faculty July 1, 2014. Aaron's research is focused on the discovery of new probes for imaging castration-resistant prostate cancer (CRPC) using positron emission tomography and the treatment of CRPC with novel tumor-homing small molecules, peptides and biologics. Prior to joining the U, Aaron was a Department of Defense Postdoctoral Fellow in the Department of Radiology at the University of California, San Francisco. At UCSF, he studied nuclear imaging and radiopharmaceutical drug discovery in the laboratory of Henry Vanbrouckin, Ph.D. Aaron received his Ph.D. in pharmacology from the Johns Hopkins University School of Medicine in 2009. During his graduate studies at Hopkins, working under Samuel Denmeade, M.D., and John Isaacs, Ph.D., Aaron developed a number of protease-activated prodrugs for the treatment of CRPC and studied the role enzymatically active PSA plays in prostate cancer tumorigenesis and metastasis. Aaron has received multiple awards for his research and has presented at numerous international conferences. Most recently he received a Young Investigator Award from the Prostate Cancer Foundation. Aaron is passionate about his research and is looking forward to collaborating with clinicians and basic scientists here at the U. When he is not busy at work, Aaron enjoys spending time with his wife, Maria, and his rambunctious two-and-half-year-old son, Max.

Newly established Philip Semmer Research Fellowship in Prostate Cancer

I established the Phillip Semmer Research Fellowship in Advanced Prostate Cancer at IPUC in memory of my former husband, Phil Semmer. Even though we were divorced, our relationship spanned over 40 years, and I wanted to create a memorial that would honor his life and turn the sadness of his passing into something positive.

Phil received a diagnosis of stage four advanced prostate cancer four weeks before our daughter Anne’s wedding in 2010. Anne, who went to medical school and did her residency at the U of M, urged her dad to meet with Dr. Konety. Phil rallied and was able to walk Anne down the aisle and enjoy the wedding weekend up at Lutsen Resort on Lake Superior. While treatment was sometimes difficult, Phil was able to actively participate in life for several months and create some wonderful memories with Anne and her husband Brandon. Phil died a week before Anne’s first child was born in 2012. He would have adored little Eleanor Rae.

The Phillip Semmer Research Fellowship in Advanced Prostate Cancer will recognize and reward cutting-edge researchers in the hope that future patients will be spared the death sentence of advanced prostate cancer. Our goal is to raise $1,000,000 to fund the Phillip Semmer Research Fellowship in Advanced Prostate Cancer. We will use the annual stipend to help draw and retain exceptional research talent to IPUC. If you are interested in supporting this effort, please contact Dr. Konety or Joan Semmer at Joan@SemmerGroup.com.

Prostate deaths are second only to deaths from lung cancer for American men. Every year over 200,000 husbands, fathers, brothers, uncles, grandparents and friends are diagnosed with prostate cancer. Of these new cases, 5-10 percent involve advanced metastatic disease. There is no cure for this advanced disease.
Prestigious Cochran Group joins IPUC

By Philipp Dahm, MD, MHSc and Molly Neuberger

Last July, the Cochrane Prostatic Diseases and Urologic Cancers (PDUC) Group (http://prostate.cochrane.org) returned to the University of Minnesota and the Minneapolis Veterans Affairs Medical Center (VAMC) after a two year absence.

The PDUC Group is one of 53 disease-centered Review Groups of The Cochrane Collaboration (http://www.cochrane.org), an international organization whose work is recognized as the benchmark for high quality information about the effectiveness of health care. It is frequently cited by clinical practice guideline developers and health policy decision-makers.

The group’s current scope includes prostate cancer, bladder cancer, renal cancer and benign prostatic hypertrophy. Plans are underway to include benign urological conditions of the kidney, such as nephrolithiasis. Another important frontier for the PDUC Group lies in the development of systematic reviews of diagnostic accuracy studies. For example, reviewing the value of positron emission tomography (PET) imaging to stage patients with muscle-invasive bladder cancer or the value of magnetic resonance imaging to stage prostate cancer.

Ongoing collaborations are in place with the University of Minnesota Center for Healthy African American Men through Partnerships (CHAAMPS), a transdisciplinary collaborative dedicated to the unique health issues of African American men; the Minnesota Evidence Based Practice Center, one of only 11 centers funded by the Agency for Healthcare Research and Quality; and the Evidence-based Synthesis Program led by Timothy Wilt at the Minneapolis VAMC.

The PDUC Group plans to serve as a resource for residents-in-training and independent researchers interested in pursuing evidence synthesis. To that end, the PDUC Group partners with the GRADE Working Group (http://www.gradeworkinggroup.org/index.htm) in methodological research and organizing training events and is planning an inaugural workshop of the US GRADE Network for guideline developers (http://gradeconf.org), in Orlando, FL October 29-31.

It also maintains close ties with the IDEAL Collaboration, where Dr. Philipp Dahm is the urology lead. IDEAL is an international organization of surgeons and methodologists committed to the advancement of surgical innovation research (http://www.ideal-collaboration.net/).

A recent study from the PDUC to be presented at the forthcoming 22nd Cochrane Colloquium in Hyderabad, India found that only 1/3 of Cochrane systematic reviews on urological topics include an urologist as co-author. Lack of engagement by urologists is an important issue that the PDUC hopes to address. Anyone interested in working with the PDUC Group either as a contributing author, reviewer or consumer representative should contact Molly Neuberger (neube043@umn.edu), Managing Editor.

Dr. Dahm is the Coordinating Editor for the PDUC Group and Molly Neuberger is Managing Editor.

New fellowship opportunity boost labs, young researchers

Immunology research received a big boost in 2014 with the inaugural American Association of Immunology (AAI) Careers in Immunology Fellowship. The award is granted to investigators working with up and coming young researchers focused on immunology topics.

This new initiative fills a component of training AAI had not previously supported and allows investigators to focus on results and lab work rather than finding funding to pay staff. Thomas Griffith, Ph.D., researcher and faculty member in the Department of Urology at the University of Minnesota, believes this award gives a lot of opportunity for young researchers and their lab projects.

"The award we received as part of this fellowship clearly helps the overall objectives of the lab," said Griffith. "It allows our research grants to help pay for supplies and projects supporting the fellows in our lab, and that allows us to focus more on research and less on the budget."

The one-year fellowship was awarded to 37 labs this year, across the country. Three of those awards came to the University of Minnesota, including Griffith’s lab.

Brittany James, Ph.D., was named fellow through the award to Griffith’s lab. James is a post-doctoral fellow who completed her Ph.D. in June of 2014. Her research focus is cancer immunology and she’s been working with Griffith for about four years.

The AAI Careers in Immunology Fellowship runs October to September. Full details on applications for labs is available on the AAI website.
Raising funds and cancer awareness

Climb 4 Kidney Cancer
As part of Climb 4 Kidney Cancer, a team of doctors, researchers and patients from the U of M successfully climbed one most iconic rock towers in the world, Devils Tower, in Wyoming. Climb 4 Kidney Cancer is a non-profit based in Minneapolis dedicated to raising awareness and funds for kidney cancer research through a combination of stair climbing, rock climbing and mountain climbing events. Climb 4 Kidney Cancer is currently planning for their 2015 Matterhorn climb.

Bladder Cancer Walk
We had a terrific turnout for our walk to raise awareness and funds for bladder cancer research. IPUC hosted the second largest group of walkers in the nation. We had 210 participants and raised $21,495 for the Minneapolis walk.

2013 Faculty Publications

Konety BR, et al. BJU Int. 2014

OTHER HONORS


Commentary as Research Highlight: Johnson P and Morris KV. Expanding the functional role of long noncoding RNAs. Cancer Research. (Advance Online Publication August 8, 2014; doi:10.1158/0008-5472.CAN-14-1041)


Fight Cancer with Ford
Dr. Ford Erickson, one of our University Emergency Physicians, continues to fight cancer with his personal grassroots crusade Fight Cancer with Ford. Dr. Erickson raises money and awareness for cancer research by biking 100+ miles on various routes. Last year Ford’s efforts were directed to the Leukemia & Lymphoma Society. This year after having a recurrence of Prostate Cancer, he has teamed up with University of Minnesota’s Institute for Prostate and Urologic Cancers (IPUC).

On Sept. 6, Ford rode the Jesse James Getaway Route, a 100 mile loop through southern Minnesota’s countryside starting in Northfield and going through Kenyon and Faribault.

Dr. Erickson has raised over $4,000 this summer for IPUC and continues to bring awareness to Prostate and Urologic Cancers by encouraging his supporters to participate in Movember. Check out his story and personal crusade at fightcancerwithford.com.
Current Clinical Trials

**Bladder Clinical Trials**
- Bladder Cancer Open vs. Robotic-Assisted Radical Cystectomy (RARC): A Randomized Trial

**Kidney Clinical Trials**
- Proleukin Observational Registry to Evaluate the Treatment Patterns and Clinical Response in Malignancy (PROCLAIM)
- A Phase 1 Study of an IL-2 Expressing, Attenuated Salmonella Typhimurium in Patients with Unresectable Hepatic Spread From Any Non-Hematologic Primary
- CITN 11-02: A phase 1 study of recombinant human IL15 (rhIL15) in adults with advanced solid tumors.
- An international Phase 3 randomized trial of autologous dendritic cell immunotherapy (AGS-003) plus standard treatment of advanced renal cell carcinoma (ADAPT)

**Prostate Clinical Trials**
- Active Surveillance for Men with Low Volume, Early Stage, Screen Detected Prostate Cancer
- Prostate Cancer Detection and Assessment of Aggressiveness in Urine Using a Giant Magnetoresistive Sensor
- Single high dose Cholecalciferol and daily Genistein vs. placebo in men undergoing prostatectomy.
- Procede-2000
- University of Wisconsin Pomegranate

For more information about clinical trials at the University of Minnesota, ask your physician, or contact our research coordinator at (612) 626-6661.