Volume 1
Bi-Annual Report

Department of Urology

New system used to treat prostate cancer
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MANY STRENGTHS. ONE MISSION.

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LOMA LINDA UNIVERSITY HEALTH

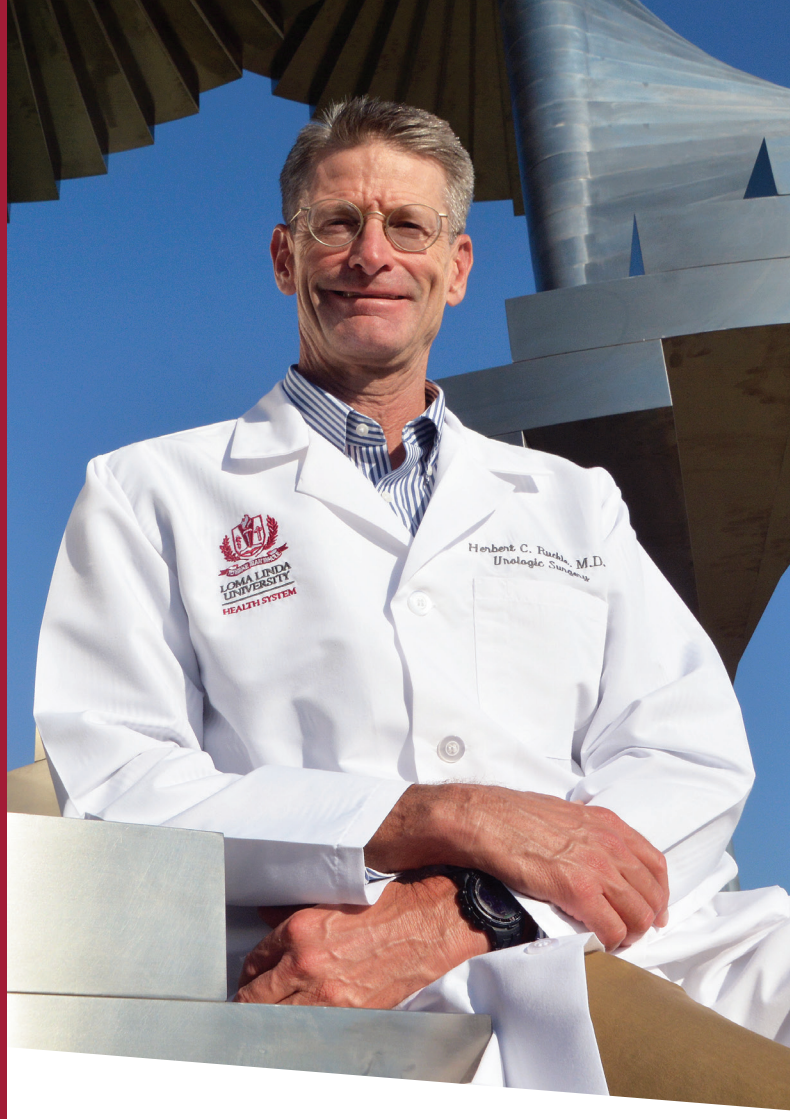
Greetings from Loma Linda University Urology!

This is our first issue of a periodic newsletter produced to keep our alumni and friends updated on happenings within the department. In this issue we highlight some important research contributions coming from our department, introduce our new residency coordinator and all of the residents.

Led by Dr. Duane Baldwin, there have been several studies performed by our department that have led to a greater understanding of the radiation risk for urology imaging and intra-operative fluoroscopy. This research describes techniques for reducing radiation dosage and the harm caused from over-exposure. Residents are involved in all aspects of our research program, including the School of Medicine's Summer Research Program. Each summer we invite three to five second year medical students to our summer program. The students are mentored and gain experience through research projects and publications. Our program helps foster a culture of inquiry, questioning and discovery. Our departmental research received several awards this year.

We are planning to expand our yearly resident program from two to three residents. After approval, we will consider reducing the residency from six to five years.

As our department continues to grow, we provide cutting edge care to our community and our region, while practicing our mission of healing, research and education. Thank you for your support.



" … we provide cutting edge care to our community and our region … "

We hope to see you at our
"Contemporary Issues in Urology"

Mammoth Lakes, CA
Saturday-Tuesday, February 24-27, 2018

For information, please contact:
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Resident Happenings

The Loma Linda University Medical Center urology residency program welcomed two new residents in 2017, bid farewell to one departing graduate and welcomed another to the faculty.

CURRENT RESIDENTS

FOURTH YEAR

Salim Cheriyan, MD

Medical School
University of Texas Southwestern Medical School

Jim Shen, MD

Medical School
New York Medical College

SECOND YEAR

Julie Cheng, MD

Medical School
Case Western Reserve University School of Medicine

Hillary Wagner, MD

Medical School
Loma Linda University School of Medicine

THIRD YEAR

Isaac Kelly, MD

Medical School
Loma Linda University School of Medicine

Matt Pierce, MD

Medical School
University of Maryland School of Medicine

FIRST YEAR

Muhannad Alsyouf, MD

Medical School
University of Jordan, Faculty of Medicine, Amman

Phillip Stokes, MD

Medical School
Loma Linda University School of Medicine

GRADUATING RESIDENTS

Daniel Faaborg, MD

Medical School
University of Washington, Seattle

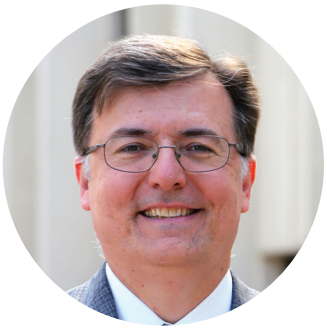
Next Move
Billings, Montana, to practice urology.

Kristene Myklak, MD

Medical School
University of Colorado, Denver

Next Move
Joining the LLUSM urology faculty and working at the Veteran's Administration Medical Center.

Watch for the department happenings on our LLU residency Facebook page: facebook.com/LomaLindaUro/



Eliminating Unnecessary Radiation Exposure

Urologist Researches to Reduce Cancer Risk

Duane Baldwin, MD, professor of urology at Loma Linda University School of Medicine, heard a statement nearly a decade ago that revolutionized his practice and subsequently saved many lives.

During grand rounds one day, Dale Broome, MD, then a radiologist at Loma Linda University Medical Center, said approximately one out of every 1,000 people who gets an abdominal and pelvic CT scan will die of cancer from radiation exposure received during the study. "That deeply concerned me, considering the large number of CT scans I order," Baldwin says.

After researching the issue, Baldwin learned that an estimated 30,000 Americans die from radiation exposure received during medical imaging every year.

Galvanized by the discovery, Baldwin began a series of studies to see if radiation exposure could be significantly reduced during the imaging and treatment of urinary stones without impacting the ability of diagnostic and therapeutic imaging to answer important clinical questions. Working with interventional radiologist, Jason Smith, MD, Baldwin found that radiation exposure during CT imaging for urinary stones could be reduced by 95 percent with no loss in sensitivity or specificity for the detection of stones.

More than 20 published articles later, he is convinced that common radiation dosages are far too high and can easily and safely be reduced without any loss of clinical information.

Click on the following links to learn more about Baldwin's work in reducing cancer risk from radiation exposure:

nejm.org/doi/full/10.1056/NEJMoa0901249#t=article

link.springer.com/chapter/10.1007/978-1-62703-206-3_20

online.liebertpub.com/doi/abs/10.1089/end.2012.0478

online.liebertpub.com/doi/full/10.1089/end.2011.0109

online.liebertpub.com/doi/abs/10.1089/end.2010.0040

Partly because of Baldwin's research, imaging at Loma Linda University Health is done with the lowest radiation dose possible.

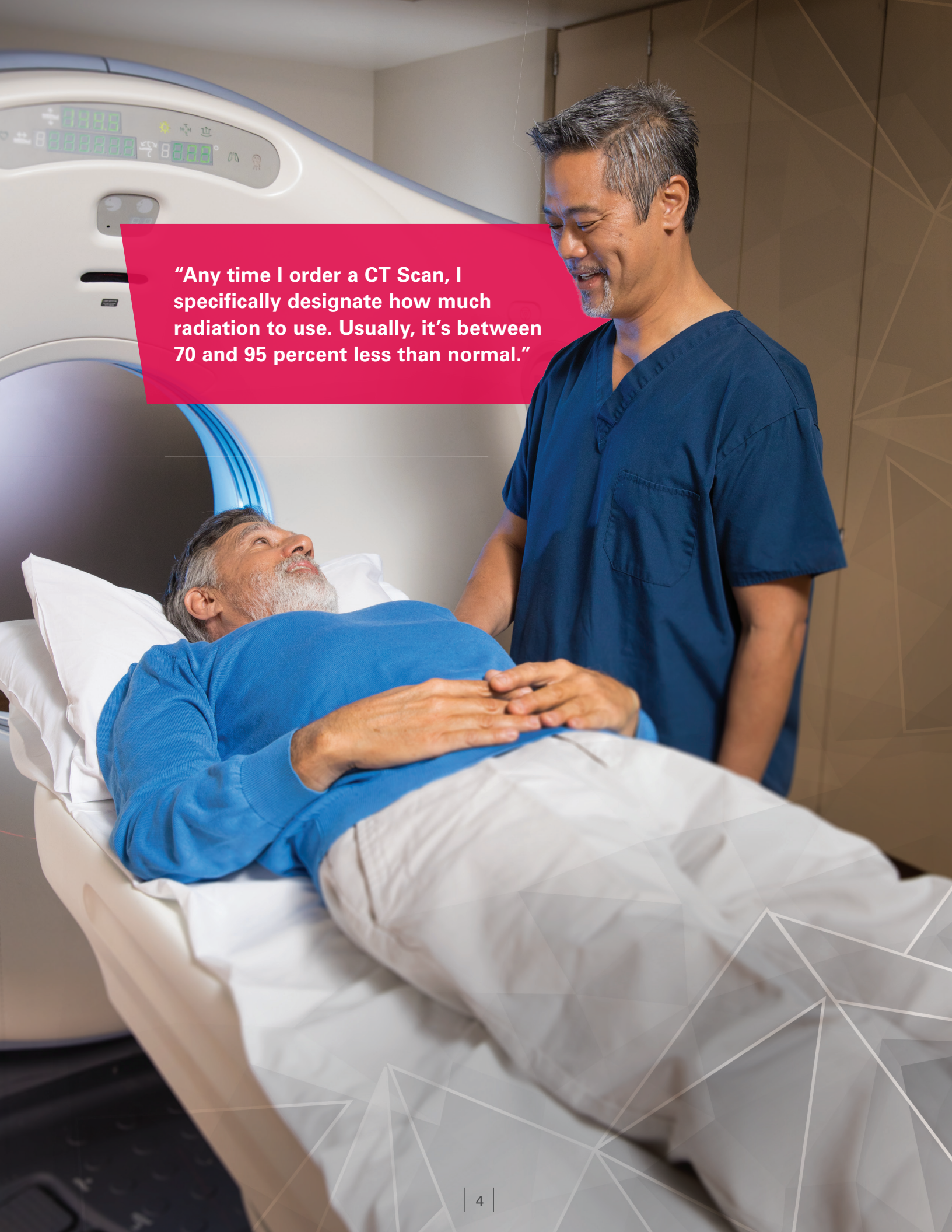
"Anytime I order a CT scan, I specifically designate how much radiation to use," Baldwin says. "Usually, it's between 70 and 95 percent less than normal." He and his colleagues have developed modifications for several surgical procedures employing fluoroscopy. The result, shortened fluoroscopy time and significantly reduced ionizing radiation.

As an example, Baldwin points out that standard fluoroscopy time for treating a large kidney stone using percutaneous nephrostolithotomy, typically ranges from five to 15 minutes or much longer. However, he now routinely performs the same procedure with less than 10 seconds of fluoroscopy. He and his team have also found ways to uteroscopically treat ureteral stones and small renal stones with zero fluoroscopy.

While acknowledging that lymphoma and leukemia are commonly associated with radiation exposure, Baldwin says any form of malignancy can be caused by radiation. He adds that kidney stone patients, who are frequently young, receive a lot of exposure over the course of their lives.

Since risk is directly commensurate to the total amount of radiation received during a lifetime, he advocates for reducing radiation exposure whenever possible. "Risk is proportional to age at the time they are exposed," he says. "Below age 30, the risk is high. Above 60, it's much lower."

Baldwin has demonstrated his techniques locally and internationally. This year, he presented his reduced radiation technique for percutaneous nephrostolithotomy in a live surgery video demonstration at the American Urological Association. He also delivered a radiation safety course at the World Congress of Endourology in September.


“Any time I order a CT Scan, I specifically designate how much radiation to use. Usually, it’s between 70 and 95 percent less than normal.”

LLUH Acquires UroNav Fusion Biopsy System to Treat Aggressive Prostate Cancer

New System Makes it Easier to Locate, Destroy Deadly Lesions

The Loma Linda University Health (LLUH), department of urology, will soon acquire a sophisticated new weapon in the fight against aggressive forms of prostate cancer, which kills an estimated 27,000 American men every year.

The need for the new system can hardly be overstated. The American Cancer Society says 180,000 men are diagnosed with prostate cancer annually, and of that number, about 15 percent or 27,000 men, die from the disease.

Since prostate cancer typically takes many years to advance, the majority of patients die from other causes long before the cancer reaches a dangerous stage. That is not true, however, for patients with aggressive forms of the disease. Not only does their cancer progress at a more rapid pace, but conventional diagnostic methods — such as digital rectal exams (DRE), prostate-specific antigen tests (PSA) and transrectal ultrasounds (TRUS) — can miss dangerous cancers.

"It will help us diagnose hard-to-find cancers and save the lives of young men with aggressive cancers."

The UroNav system by Invivo, however, gives urologists a significant advantage in diagnosis and treatment, allowing physicians to see what's going on inside the patient in real time. By superimposing live, 3-D ultrasound images over high-resolution, but static, 3-D magnetic resonance images of the prostate, UroNav enables physicians to see abnormalities in the prostate and precisely guide the biopsy needle to the cancer site.

"The UroNav system will improve our ability to find, biopsy, treat and monitor prostate cancer," said Herbert C. Ruckle, MD, chair of urology at LLUH. He added that the system is also superior at locating smaller, hard-to-find tumors for earlier detection and treatment. Ruckle added that the system can also be used to identify specific areas for focal therapy to treat only part of the prostate, in selected patients.

Ruckle said he foresees an increase in the number of prostate cancer patients at LLUH from the current 200 per year to more than 400 per year in the future. He says a better diagnosis leads to targeted, effective therapy and reduces the cost and side effects of unnecessary treatments.

Three gifts enabled the acquisition of the UroNav system. The first was from the HEDCO Foundation, which previously helped fund the robotic surgery training console at Loma Linda University Surgical Hospital. The foundation provided a one-for-two challenge grant of $75,000 for the UroNav system. This meant an additional $150,000 in philanthropic support was necessary to secure the HEDCO funds.

The second was from the Pryke Foundation. Raymond Pryke, a British immigrant who became a prominent newspaper editor and real estate developer in California's Victor Valley, was a patient at Loma Linda University Health. He often shared how grateful he was for the care he received. After his death in 2015, at the age of 91, a foundation was established in his name. To continue Pryke's appreciation for his care, his foundation recently committed to giving $225,000 to help meet the matching opportunity from the HEDCO Foundation grant, and help support the remaining amount needed to purchase the UroNav system.

The third gift was from Todd Norgaard, a grateful patient and his wife Linda, who made a gift to help meet the HEDCO match.

Ruckle said he is excited about the UroNav system. "It will help us diagnose hard-to-find cancers and save the lives of young men with aggressive cancers."

Staff Profile: Maggie Fasbender

Urology Residency Coordinator Loves Her Job, Endures the Jokes

Maggie Fasbender, urology residency coordinator, didn't realize how much she loved Loma Linda University Medical Center, until she left in 2013 for another job.

Fasbender maintains there is something unique about Loma Linda University Health. "It's the mission, the spirituality," she says. "You feel it, you miss it. I got homesick, so I came back."

Fasbender first joined the LLUMC department of Internal Medicine in 2007. Upon her return in 2017, she transitioned to the much-smaller department of urology. When asked what she liked about urology, she insisted it was the people. "The faculty are so nice," she said. "The residents are awesome!" Fasbender added that she looks forward to meeting and networking with the former residents.

Off-duty, she enjoys traveling, reading procedural crime mysteries, cooking, singing karaoke and spending time with her husband, Todd, a supervisor for Union Pacific Railroad, and their four children. The couple took a two-week road trip around Northern California for their honeymoon, and they have also explored Cancun, Mexico and the Western states. Her youngest son, David, was invited to the presidential inauguration this year as part of a youth leadership group, and Fasbender went along to chaperone.

Despite the fact that Fasbender's favorite color is blue, especially sapphire, the most colorful object in her office is a pair of yellow sneakers displayed in a glass case.

If, as she maintains, the craziest thing about working in the department are the urology jokes, then perhaps the shoes belong. When a resident completes the program, they have to autograph the sneakers.

"Their sense of humor is very unique," Fasbender says, "and I love it!"

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