ED cure? Or unproven treatment?

Shock wave therapy may play an important role, but many unanswered questions remain

Lisette Hilton / UT Correspondent

Low-intensity extracorporeal shock wave therapy is a safe treatment for men with erectile dysfunction and might work to improve, or even cure, ED in some patients. But there remain important unanswered questions, including which patients are ideal candidates and which protocol and devices are best. Without answers, offering the ED treatment outside research settings is questionable medicine, some urologists say. Research on the use of shock wave therapy in Peyronie’s disease has shown it may improve penile pain, but not curvature. Where low-intensity extracorporeal shock wave therapy for ED may offer the greatest patient benefit is in ED.

Georgios Hatzichristodoulou, MD, associate professor of urology at the Julius-Maximilians-University of Würzburg in Germany, has conducted several of the European studies on use of shock wave therapy for erectile dysfunction and Peyronie’s disease.

“The studies that have been performed in the last 6 years are very promising, especially with vasculogenic erectile dysfunction,” Dr. Hatzichristodoulou said.

The European Association of Urology guideline for erectile dysfunction recommends use of low-intensity shock wave treatment in mild organic erectile dysfunction patients or poor responders to phosphodiesterase type-5 (PDE-5) inhibitors, according to Dr. Hatzichristodoulou, a member of the guideline committee.

See SHOCK WAVES, on page 20

Inside

17 LET’S TALK MEN’S HEALTH
Male infertility evaluation: Time for a new clinical pathway?

25 CODING Q&A
How to bill when a stone changes location during procedure

33 SPEAK OUT
How are you educating yourself on transgender issues?

38 MALPRACTICE CONSULT
Why physician testimony is so important

Post-procedure opioid Rx may be unnecessary

Majority of medication prescribed goes unused, prospective data reveal

Cheryl Guttmann Krader / UT Contributing Editor

Routine prescribing of opioids may not be necessary for effective pain management after outpatient urologic procedures, but the practice may contribute to the opioid epidemic.

Those are the findings of a prospective randomized study presented by researchers from Case Western Reserve University, Cleveland, at the AUA annual meeting in Chicago. The study randomized patients to receive a prescription for 30 oxycodone 5-mg tablets or 20 ketorolac 10-mg...
### Prioritizing kidney preservation in upper tract urothelial carcinoma (UTUC): Are we doing all we can?

The challenges associated with UTUC treatment have created a paradigm where up to 80% of patients with low-grade disease are treated with radical surgery.\(^1\) Yet despite the challenges, there is still plenty of clinical rationale to justify prioritizing kidney preservation whenever possible.

"As urologists, we constantly balance cancer risks with the morbidity of our surgery. At times, removing a kidney for low-grade UTUC can be overkill."

- Brian Hu, MD, Assistant Professor of Urologic Oncology, Loma Linda University, Loma Linda, CA

#### UTUC patients may already have significant renal impairment and comorbidities

A 2017 retrospective analysis of 731 patients undergoing radical nephroureterectomy (RNU) for UTUC found that 50% of patients had preoperative chronic kidney disease (CKD) stage ≥ 3.\(^2\)

Not surprisingly, RNU only accelerates declining kidney function and progression to CKD.\(^3,4\)

---

**PREOPERATIVE CKD STAGE OF PATIENTS UNDERGOING RNU FOR UTUC**

<table>
<thead>
<tr>
<th>Stage</th>
<th>eGFR</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>≥90</td>
<td>16%</td>
</tr>
<tr>
<td>2</td>
<td>60-89</td>
<td>34%</td>
</tr>
<tr>
<td>3</td>
<td>30-59</td>
<td>43%</td>
</tr>
<tr>
<td>4</td>
<td>15-29</td>
<td>5%</td>
</tr>
<tr>
<td>5</td>
<td>&lt;15</td>
<td>2%</td>
</tr>
</tbody>
</table>

50% of patients had preoperative CKD stage ≥ 3

---

Additionally, many UTUC patients suffer from comorbid conditions such as cardiac disease, hypertension, diabetes, or hyperlipidemia.\(^2,5\)

"UTUC typically presents later in life with many more competing risks for patients, including baseline renal dysfunction. Treatment should focus both on cancer control and on preserving long-term kidney function to prevent other risks to the patient’s survival and quality of life."

- David Morris, MD, FACS, Urology Associates PC, Nashville, TN

#### Accurate risk stratification is paramount to identifying candidates for kidney-sparing treatment

Guidelines from the European Association of Urology recommend risk stratifying UTUC to identify candidates for kidney-sparing treatment.\(^6\) But understanding patients’ baseline renal function and risk for further deterioration are also important when selecting appropriate treatment.

“The ‘best’ recommended treatment for a patient with UTUC will allow for the balance of cancer control and preserving renal function and tissue,” Morris said. “This recommendation hinges on the accurate staging and risk stratification before definitive treatment.”

---


---

© 2019 UrogPharma, Inc. All rights reserved.

---

FOR MORE PERSPECTIVES ON KIDNEY PRESERVATION IN UTUC, VISIT: [WWW.UTUC.INFO](http://www.utuc.info)
A landslide trial for patients with metastatic RCC

FERN ANARI, MD, and ALEXANDER KUTIKOV, MD

Dr. Anari is a hematology/oncology fellow, and Dr. Kutikov is chief of urology and urologic oncology and professor of surgical oncology, Fox Chase Cancer Center, Philadelphia.

Near 15 years have passed since the seismic shift to anti-VEGF therapy from first-generation immunotherapy agents in patients with metastatic renal cell carcinoma (mRCC). With the advent of modern immunotherapy, tectonic plates of mRCC therapy continue to shift. Indeed, several recent studies have sent significant tremors through the mRCC space. These studies compared combinations of therapies such as dual immunotherapy (PD-1/PD-L1 inhibitor + CTLA-4 inhibitor) and checkpoint inhibitor + VEGF-targeted tyrosine kinase inhibitor (TKI), to sunitinib monotherapy as first-line treatment.

The first interim analysis of the KEYNOTE-426 study was recently presented. This study compared efficacy of pembrolizumab (Keytruda), a PD-1 inhibitor, plus axitinib (Inlyta), an anti-VEGF TKI, against sunitinib (Sutent) monotherapy as first-line treatment for mRCC (page 4). The study met its two primary endpoints of improved overall survival (OS) and progression-free survival (PFS). Impressively, combination therapy reduced the risk of death by 47% (HR: 0.53; p<0.0001) and risk for progression versus sunitinib by 31% (HR: 0.69; p<0.0001).

The benefit from combination therapy was observed in all subgroups tested, including (International Metastatic RCC Database Consortium) IMDC risk and PD-L1 expression subgroups. One of the study’s strengths is its diverse patient population in terms of IMDC risk and PD-L1 expression. In addition, approximately 60% of patients in each arm had a PD-L1 combined positive score ≥1.

While the study data points to a new standard for care of advanced RCC, many questions remain. It’s still unclear which treatment is best for intermediate- and poor-risk patients due to very promising results from the CheckMate 214 trial. This trial evaluated nivolumab (Opdivo [PD-1 inhibitor]) plus ipilimumab (Yervoy [CTLA-4 inhibitor]) versus sunitinib and showed an OS benefit with dual immunotherapy in patients with previously untreated intermediate- and poor-risk advanced RCC.

In patients with intermediate- or poor-risk disease, shared decision-making between the provider and patient is essential to determine if dual immunotherapy or checkpoint inhibitor plus anti-VEGF TKI is the best treatment option. Overall response rate (ORR) was higher with pembrolizumab + axitinib compared with nivolumab + ipilimumab (59.3% vs. 42%). Another consideration when choosing between treatments is the complete response (CR) rate, which was higher in CheckMate 214 versus KEYNOTE-426 (9% vs. 5.8%, respectively).

Overall, KEYNOTE-426 marks an exciting breakthrough in the management of advanced and metastatic RCC. Indeed, the study’s aftershocks are sure to be felt in the mRCC space for years.
Pembro plus axitinib is new standard in advanced RCC

Wayne Kuznar
UT Correspondent

SAN FRANCISCO—On the basis of findings from the KEYNOTE-426 study, the combination of pembrolizumab (KEYTRUDA) plus axitinib (Inlyta) represents a new standard as front-line treatment for metastatic clear cell renal cell carcinoma, said Thomas Powles, MD, at the Genti­tourinary Cancers Symposium in San Francisco.

Data from the first interim analysis of KEY­NOTE-426 showed that pembrolizumab plus axitinib significantly improved the overall response rate (ORR), progression-free survival (PFS), and overall survival (OS) compared with sunitinib (Sutent) in patients with advanced or metastatic clear-cell RCC. (The FDA recently approved pembrolizumab in combination with axitinib for the first-line treatment of patients with advanced RCC; for more, see “New Products & Services,” p. 32.)

Previous findings suggesting synergy between the combination of pembrolizumab and axitinib provided the rationale for KEYNOTE-426, said Dr. Powles, professor of urology oncology at Barts Cancer Institute in London. The study randomized 861 patients to oral sunitinib, 50 mg once daily for the first 4 weeks of each 6-week cycle, or to combination therapy with intravenous pembrolizumab, given at 200 mg every 3 weeks for up to 35 cycles, along with oral axitinib, 5 mg twice daily. Treatment continued until disease progression, unacceptable toxicity, or patient withdrawal. The median patient age was 62 years and 73% were male. The International Metastatic Renal Cell Carcinoma Database Consortium risk category was intermediate in 55.1% of patients assigned to combination therapy and 57.3% assigned to sunitinib monotherapy, and favorable in 31.9% and 30.5%, respectively. About 60% of patients in each arm had a PD-L1 expression score ≥1. Co-primary endpoints were OS and PFS.

At a median follow-up of 12.8 months, combination therapy was associated with a 47% reduction in the risk of death compared with sunitinib (HR: 0.53; p < .0001). The 12-month OS rate was 89.9% in the combination arm versus 78.3% in the sunitinib arm. The advantage in OS with pembrolizumab plus axitinib was observed irrespective of risk group or PD-L1 status.

Median PFS was 15.1 months in the combination patients and 11.1 months in sunitinib patients, corresponding to a 31% reduction in the risk for progression (HR: 0.69; p = .0001). The ORR was 39.3% and 35.7%, respectively. PFS favored pembrolizumab and axitinib across subgroups, including those for PD-L1 expression and risk group. About 11% in the pembrolizumab/axitinib arm and 17% in the sunitinib arm had progressive disease.

Median duration of response was not reached in patients assigned to combination therapy compared with 15.2 months in those assigned to sunitinib.

Treatment is ongoing in 59% of patients in the combination arm versus 43.1% in the sunitinib arm. Among the patients who discontinued pembrolizumab/axitinib, 50% have received subsequent treatment, and of those discontinuing sunitinib, 60.7% received subsequent anticancer treatment.

Treatment-related grade 3-5 side effects were observed in 62.9% of patients on the combination therapy compared with 58.1% who received sunitinib. These side effects led to discontinuation of all treatment in 8.2% versus 10.1%, respectively. The rates of increases in the levels of alanine aminotransferase and aspartate aminotransferase each exceeded 20% in the pembrolizumab plus axitinib arm.

“We have a number of unanswered questions at this point, particularly the absence of biomarkers to predict response. PD-L1 levels, which have been markers for immunotherapy success in other cancers, remain unproven in renal cancer. It is possible that by combining pembrolizumab with axitinib, the predictive value of PD-L1 is being masked,” Dr. Powles said. “Overall, we have not previously seen a renal cancer study which has improved response, PFS, and OS. This is therefore a major step forward in renal cancer.”

Invited discussant Lori Wood, MD, associate professor of medical oncology at Dalhousie University, Halifax, Nova Scotia, called the results “a step forward in renal cancer.”

She observed that resource utilization will be high with the pembrolizumab/axitinib combination, with visits every 3 weeks to administer the regimen for a total of 18 physician visits, 18 nurse visits, and 18 infusion visits, and many unscheduled visits for side effects, over the course of 1 year.

KEYNOTE-426 was funded by Merck. Dr. Powles has a financial or other relationship with Bristol-Myers Squibb, Merck, Roche/Genentech, AstraZeneca/MedImmune, Novartis, and Ipsen. For full disclosures, go to bit.ly/keynote-426disclosures. UT

<table>
<thead>
<tr>
<th>TABLE PEMBROLIZUMAB/AXITINIB VS. SUNITINIB FOR ADVANCED RCC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>12-month overall survival</strong></td>
</tr>
<tr>
<td><strong>Median progression-free survival</strong></td>
</tr>
<tr>
<td><strong>Overall response rate</strong></td>
</tr>
<tr>
<td><strong>Rate of progressive disease</strong></td>
</tr>
<tr>
<td><strong>Median duration of response</strong></td>
</tr>
<tr>
<td><strong>Rate of treatment-related grade 3-5 side effects</strong></td>
</tr>
</tbody>
</table>

Source: Thomas Powles, MD
Deep-learning algorithm developed for bladder Ca detection

John Schieszer
UT Correspondent

New data suggest it may be possible to use computer-augmented cystoscopy to aid in diagnostic decision-making and improve the diagnostic yield of papillary bladder cancers.

At the AUA annual meeting in Chicago, researchers reported that they have created a deep-learning algorithm that may more accurately detect bladder cancer.

“We have demonstrated that computer-augmented cystoscopy based on a deep-learning algorithm can detect bladder tumors with high sensitivity and specificity and may serve as a new adjunct imaging technology for bladder cancer detection,” said study investigator Joseph C. Liao, MD, associate professor of urology at Stanford University School of Medicine and chief of urology at the VA Palo Alto Health Care System in Palo Alto, CA.

Dr. Liao and his colleagues have developed a deep-learning algorithm using recorded videos derived from office-based cystoscopy and transurethral resection of bladder tumor (TURBT) from 100 subjects and 141 videos. Video frames containing histologically confirmed papillary bladder cancer were first manually annotated.

Using an image analysis platform called TUMNet, the authors then evaluated the videos in two stages. First, they used it to recognize frames containing abnormal areas and then segmented them within the tumor. By examining 417 cancers and 2,335 normal frames, a training set was constructed based on 95 subjects and validated in five subjects.

Technology accurately detects tumors in test cohort

The authors found that the TUMNet per-frame sensitivity was 88% and per-tumor sensitivity was 90% with a per-frame specificity of 99%. In addition, TUMNet was able to accurately detect all 16 tumors that were resected in the ongoing prospective test cohort (15 cancerous and one benign).

“We believe our deep-learning algorithm holds significant promise for clinical translation in both clinic and OR settings. Potential applications include post-hoc quality control review and real-time integration during cystoscopy and TURBT,” first author Eugene Shkolyar, MD, urology resident at Stanford University School of Medicine, told Urology Times.

In order to enable real-time integration, he and his colleagues are actively working on further streamlining the algorithm and adding automated reporting features. They are also investigating this approach for identifying flat tumors, including carcinoma in situ and benign lesions.

“Prior to disseminating the technology, we aim to fully evaluate its clinical utility, and are hoping to conduct studies evaluating its use both real-time and for recorded videos,” said Dr. Shkolyar.

He noted that more than 1 million cystoscopies are performed annually in the U.S. for detection and surveillance of bladder cancer. Yet, studies suggest that standard cystoscopy may fail to detect up to 20% of bladder cancers. Using deep-learning algorithms as diagnostic tools during endoscopy in other fields has been shown to improve care by providing additional quality control and standardization.

Dr. Liao said with bladder cancer, the diagnostic accuracy of cystoscopy depends on provider experience and ability to recognize a variety of benign and cancerous lesions in the bladder.

“Computer-aided cystoscopy can help to reduce the variability between providers by serving as a second observer. It can also provide guidance for trainees and physician extenders in underserved areas where access to urologists is limited,” said Dr. Liao.

Yair Lotan, MD, professor of urology and chief of urologic oncology at UT Southwestern Medical Center, Dallas, said this approach sounds like it has potential, but much more validation will be required. He said the deep-learning algorithm will need to be much more thoroughly investigated to understand its strengths and weaknesses.

“It sounds really cool. We have to wait to see if it is clinically useful,” said Dr. Lotan, who was not involved with the research.

In Brief / For up-to-date news, visit urologytimes.com

BIAS DETECTED IN CLINICAL PRACTICE GUIDELINES ISSUED BY SPECIALTY SOCIETIES

Clinical practice guidelines issued by specialty societies in North America often recommend health care services linked to their specialties, in contrast with European guidelines and those from independent organizations, argues a commentary published in the Canadian Medical Association Journal (2019; 191:E297-8).

“Regardless of country of origin, physicians often recommend procedures and treatments that they are trained to provide, a phenomenon known as ‘specialty bias,’ ” write Ismail Jatoi, MD, of the University of Texas Health, San Antonio, and Sunita Sah, MD, MBA, PhD, of Cornell University, Ithaca, NY.

For example, the National Comprehensive Cancer Network included 25 urologists on its 32-member guideline panel for prostate cancer and recommends PSA screening for healthy men aged 45 years and older. By contrast, the Canadian Task Force on Preventive Health Care, which has no urologists on its nine-member panel, and the European Society for Medical Oncology, which includes one urologist on its four-member panel, both recommend against PSA screening for men of all ages.
Pyruvate kinase appears to be bladder cancer marker

Exposing cancer cell lines to pyruvate kinase inhibitor reduces cell proliferation

Andrew Bowser
UT Correspondent

PHOENIX—Pyruvate kinase, a primary driver of tumor glycolysis, is promising both as a biomarker of bladder cancer and as a drug target, researchers reported at the 2018 Society of Urologic Oncology annual meeting in Phoenix.

Growing bladder cancer cells in increasing concentrations of glucose resulted in upregulation in the expression of tumor M2-PK, the dimeric form of the pyruvate kinase M2 isozyme, according to the researchers.

Moreover, exposing bladder cancer cell lines to a pyruvate kinase inhibitor reduced cell proliferation and caused switching of pyruvate kinase isoforms, said researcher Eugene K. Lee, MD, assistant professor of urology in the division of urologic oncology at the University of Kansas Medical Center, Kansas City.

Although these are early findings, they do suggest potential implications for evaluation and treatment of bladder cancer at some point in the future, Dr. Lee said in an interview with Urology Times.

“What clearly, metabolism is important for bladder cancer, so I do think that we could potentially use this as a urinary marker—either as an adjunct to cystoscopy, or potentially as an alternative to cystoscopy, which would be an ideal goal, though I think that we’re far from that,” he said.

Bladder cancer cells have a high affinity for glucose and depend on a shift to aerobic glycolysis-dependent metabolism, which is known as the Warburg effect, and pyruvate kinase is a principal driver of that effect, investigators said.

Pyruvate kinase M2 oscillates between an inactive dimer, which predominates in bladder cancer, and active tetramer, they noted.

In their research, presented as a poster at the SUO annual meeting, Dr. Lee and co-investigators exposed two bladder cancer cell lines after exposure to varying concentrations of glucose, and then assessed cell proliferation and protein expression of pyruvate kinase M2.

Significant increases in cell proliferation and upregulation of pyruvate kinase M2 expression were seen when they exposed cells to higher glucose levels, they reported.

Compared to the standard 100-mg/dL glucose level, a 200-mg/dL level resulted in a twofold increase in growth rate for UM-UC-3 cells (urothelial bladder transitional cell carcinoma) cells, and a 1.7-fold increase in HTB-9 cells (urothelial bladder, grade II carcinoma).

Conversely, when glucose was reduced to 25 mg/dL, there was a 3.75-fold decrease in growth rate in UM-UC-3 cells and a 2.8-fold decrease in HTB-9 cells, the data show.

Shikonin also evaluated

Dr. Lee and colleagues also evaluated the effects of shikonin, a pyruvate kinase inhibitor, in inhibiting cancer cell proliferation at various glucose concentrations.

Shikonin treatment not only inhibited cell proliferation, they found, but resulted in switching of the pyruvate kinase M2 isoforms from the bladder cancer-associated dimeric form (M2-PK) to the tetramer form.

In patient samples, dimeric tumor M2-PK has been significantly correlated with presence of bladder cancer, the investigators noted.

The poster was presented by co-investigator Meredith Metcalf, MD, of the University of Kansas.

Germline variants found in 18% of patients with familial UC

Incidence higher than that reported by Cancer Genome Atlas consortium

Wayne Kuznar
UT Correspondent

SAN FRANCISCO—About one in five patients with familial urothelial carcinoma (UC) have pathogenic germline variants, according to an analysis of 79 such patients using germline multigene panel testing.

This incidence is much higher than that reported by The Cancer Genome Atlas (TCGA) consortium, which examined germline variants in patients not selected for family history, said Amin Nassar, MD, who presented his group’s data at the Genitourinary Cancers Symposium in San Francisco.

In the TCGA muscle-invasive bladder cancer dataset, germline pathogenic variants were identified in 30 of 412 patients (7.3%), across 22 genes. A total of 22 of the 30 pathogenic alterations involved DNA damage repair pathway.

“We thought there might be more to the story, especially with the scarcity of information about family history in relation to UC reported in the literature,” said Dr. Nassar, research fellow at Brigham and Women’s Hospital, Boston. “We thought there might be a select population that has a higher prevalence and was worth further study.”

Two potential cohorts for further study were identified. One group was patients younger than 50 years, “because you would expect that these would have a higher prevalence of germline variants,” he said. “When we looked at the TCGA dataset, we could not find enrichment of germline variants in patients who were younger,” added Dr. Nassar, who worked on the study with Guru P. Sonpavde, MD, and colleagues.

The authors also hypothesized that patients with a family history of UC were a high-risk population and should also be included in the study.

Please see UROTHELIAL CA, on page 7
UROTHELIAL CA  
continued from page 6

“The reason is that Lynch syndrome is associated with UC, so based on that we thought that patients with family history of UC may be at increased risk for those germline variants and others and thus may be worth studying,” Dr. Nassar said.

His group therefore analyzed patients who had germline multigene panel testing (Invitea) who had a family history of UC, defined as first- to third-degree relatives with UC. Of the 79 patients included, 67 had bladder cancer, six had upper urinary tract cancer, and the site of UC was unknown in six. Six patients were excluded as the relation of the family member was unknown. Forty-eight of the 73 remaining patients (66%) had a first-degree relative with UC and 25 (34%) had a second-degree relative. There were 37 women (51%) and 36 men (49%) in the cohort. Their median age at UC diagnosis was 58 years.

Alterations found in 13 patients

A total of 14 known pathogenic alterations were found in 13 patients (18%). These alterations occurred in SDHC (n=1), MITF (n=2), BRIP1 (n=1), BRCA2 (n=1), MSH2 (n=3), BRCA1 (n=1), CHEK2 (n=1), PTCH (n=1), MUTYH (n=2), and BAP1 (n=1).

Eight of the 48 patients (17%) with first-degree relatives with UC and five of 25 (20%) with second-degree relatives with UC had pathogenic variants. There was no difference in the prevalence of pathogenic variants based on gender (p=0.37) or age (p=0.77).

CHEK2 has recently been shown to be prominent in other cancers, such as colorectal cancer, and BRCA1/2 variants are prevalent in ovarian and breast cancer. Screening guidelines recommend colonoscopy in patients who have germline CHEK2 variant, and enhanced screening with mammography and breast magnetic resonance imaging for women who have BRCA1 and BRCA2 variants, Dr. Nassar noted.

Twelve percent of the patients in this study had a variant or alteration in a gene for which the National Comprehensive Cancer Network recommends screening for other cancers, he said.

Immune checkpoint inhibitors are approved therapy by the FDA for patients who have solid tumors with somatic mutations in Lynch syndrome genes. There are no guidelines that recommend immune checkpoint inhibitors as treatment for patients with UC and detected germline variants; “but this could be the subject of further studies in this realm,” said Dr. Nassar. “I also think that with emerging data showing better response to PARP inhibitors in patients with ovarian and breast cancer who have germline BRCA1 or BRCA2 alterations, there is room for potential therapeutic implications in the future.”

“I... think that with emerging data showing better response to PARP inhibitors in patients with ovarian and breast cancer who have germline BRCA1 or BRCA2 alterations, there is room for potential therapeutic implications in the future.”

AMIN NASSAR, MD

had a first-degree relative with UC and 25 (34%) had a second-degree relative. There were 37 women (51%) and 36 men (49%) in the cohort. Their median age at UC diagnosis was 58 years.

Alterations found in 13 patients

A total of 14 known pathogenic alterations were found in 13 patients (18%). These alterations occurred in SDHC (n=1), MITF (n=2), BRIP1 (n=1), BRCA2 (n=1), MSH2 (n=3), BRCA1 (n=1), CHEK2 (n=1), PTCH (n=1), MUTYH (n=2), and BAP1 (n=1).

Eight of the 48 patients (17%) with first-degree relatives with UC and five of 25 (20%) with second-degree relatives with UC had pathogenic variants. There was no difference in the prevalence of pathogenic variants based on gender (p=0.37) or age (p=0.77).

CHEK2 has recently been shown to be prominent in other cancers, such as colorectal cancer, and BRCA1/2 variants are prevalent in ovarian and breast cancer. Screening guidelines recommend colonoscopy in patients who have germline CHEK2 variant, and enhanced screening with mammography and breast magnetic resonance imaging for women who have BRCA1 and BRCA2 variants, Dr. Nassar noted.

Twelve percent of the patients in this study had a variant or alteration in a gene for which the National Comprehensive Cancer Network recommends screening for other cancers, he said.

Immune checkpoint inhibitors are approved therapy by the FDA for patients who have solid tumors with somatic mutations in Lynch syndrome genes. There are no guidelines that recommend immune checkpoint inhibitors as treatment for patients with UC and detected germline variants; “but this could be the subject of further studies in this realm,” said Dr. Nassar. “I also think that with emerging data showing better response to PARP inhibitors in patients with ovarian and breast cancer who have germline BRCA1 or BRCA2 alterations, there is room for potential therapeutic implications in the future.”

Although the high percentage of pathogenic germline variants in UC patients with a family history of UC is intriguing, “It’s too early to recommend a change in guidelines” for this population of patients, he said.

Unpublished data from his group suggest that the prevalence of pathogenic germline variants may be 20% to 30% in patients with UC, “and we are working on expanding our cohort to an unselected UC population,” Dr. Nassar said.

The use of larger gene panels may also provide novel insights, as most patients in the analysis did not have detected pathogenic alterations.

Several of Dr. Nassar’s co-authors have disclosures related to Invitae or pharmaceutical companies. For full disclosures, go to bit.ly/germlinedisclosures.

DR. PONSKY APPOINTED CHAIR AT UH CLEVELAND

Lee H. Ponsky, MD, was recently appointed chair of urology at UH Cleveland Medical Center and director of the UH Urology Institute.

“After an extensive national search, Dr. Ponsky emerged as the clear choice for this leadership position,” said Daniel I. Simon, MD, president of UH Medical Centers. “He is a well-respected academic physician with a strong track record of achievement at UH and a clear vision for the future of our department of urology and UH Urology Institute.”

Dr. Ponsky’s clinical interests are urologic oncology, particularly kidney and prostate cancer. He also specializes in advanced laparoscopy and robotics.

ASSI Spermatic Cord Holding Clamp™

For grasping the testicular cord through small incisions for correction of varicoceles.

Specially coated jaws can be placed into the incision around the cord, which can then be lifted up and brought into view.

Designed by Anthony J. Thomas, M.D.  
Head, Section Male Infertility,  
Glickman Urological Institute,  
Cleveland Clinic Foundation,  
Cleveland, Ohio  
Patent Pending  

accurate surgical & scientific instruments corporation  
300 Shames Drive, Westbury, NY 11590  
800.645.3569  516.333.2570  
fax: 516.997.4948  west coast: 800.255.9378  
www.accuratesurgical.com
### Intermediate-risk PCa treatments: Complication rates compared

**Wayne Kuznar**  
UT Correspondent

**SAN FRANCISCO—**Among the treatment options for intermediate-risk prostate cancer, brachytherapy is associated with the lowest 10-year rate of severe urinary complications while radical prostatectomy (RP) most often resulted in the use of devices to treat erectile dysfunction, according to findings from a retrospective analysis of patients who underwent treatment between 2004 and 2007.

The data come from an examination of a Kaiser Permanente database of 1,503 patients with intermediate-risk prostate cancer who were treated with either RP (n=819), external beam radiation therapy (EBRT) (n=574), or brachytherapy using iodine-125 (n=110).

Almost all patients (97%) in the database who underwent brachytherapy had prior assessment using the AUA score for urination, which may explain the low rate of urinary complications observed in this group, said lead investigator Barry W. Goy, MD, who presented the data at the Genitourinary Cancers Symposium in San Francisco.

“We know in general that brachytherapy causes more urinary irritative symptoms and can cause some degree of retention if you implant patients with moderately obstructive uropathy,” said Dr. Goy, radiation oncologist at Southern California Permanente Medical Group, Los Angeles.

In contrast, only 11.5% of patients who underwent EBRT and 7.3% who underwent RP had a pretreatment assessment for urinary function using the AUA score.

“From a urinary standpoint, I was expecting prostatectomy to be worse, and we found that prostatectomy and radiation were actually quite similar,” Dr. Goy told *Urology Times*.

The 10-year rates of severe late genitourinary (GU) effects were 10.1% for RP, 12.5% for EBRT, and 4.0% for brachytherapy. Although the rate of GU complications associated with radiation was fairly low in the study, especially at 5 years, over 10 years some patients required incontinence pads or had post-void residual >100 cc, said Dr. Goy.

#### Obtaining AUA score beneficial

“Some of those patients didn’t follow up with radiation oncology; they went straight to urology because some needed intermittent catheterization,” he said.

“We think that by doing an AUA score, you can better select patients who might be better suited for surgery or transurethral resection of the prostate followed by radiation versus the radiation options. Obtaining a pretreatment AUA score allows me to counsel patients more accurately about the percentages of severe complications.”

Last year, his group used the same database to show that 10-year rates of freedom from biochemical failure were 82% for brachytherapy, 58% for radical prostatectomy, and 58.8% for EBRT (p<.0001). On multivariable analyses, brachytherapy remained an independent predictor for improved freedom from biochemical failure (p=0.049 vs. external beam radiation therapy, and p<.0001 vs. RP).

Urinary and rectal complications following RP were graded as severe if patients required three or more pads/diapers per day, chronic use of a condom catheter or penile clamp, daily self-catheterization, or placement of a sling or an artificial urinary sphincter, or patients developed rectal fistula/incontinence.

Complications for EBRT and brachytherapy were graded as severe if they were classified as grade 3 or 4 on the Radiation Therapy Oncology Group grading system for late effects.

Severe gastrointestinal late effects (fistula, incontinence, or colostomy) were experienced by 0.5%, 1.6%, and 0.0% of those who underwent RP, EBRT, and brachytherapy, respectively.

The prevalence of patients requiring injections, pumps, or penile implants for a diagnosis of erectile dysfunction was calculated after a minimum of 1 year of follow-up. Almost one-fourth (24.3%) of patients who underwent RP required ED devices, compared with 6.6% of those who had EBRT and 8.2% who had brachytherapy.

---

### Radiation safe as salvage option after HIFU

43% of patients report no/very small problems with overall urinary function

**Wayne Kuznar**  
UT Correspondent

**SAN FRANCISCO—**Radiation is a well-tolerated and effective salvage option following primary high-intensity focal ultrasound (HIFU) for the treatment of localized prostate cancer, according to findings from a single-institution retrospective analysis.

Among 28 patients who received salvage radiotherapy at University College London Hospitals (UCLH) between 2010 and 2018, at a median follow-up of 43 months after either conformal radiotherapy or intensity modulated radiotherapy, 12 of the 28 reported no or very small problems with overall urinary function using the Expanded Prostate Cancer Index Composite for Clinical Practice (EPIC–CP) symptom tool.

Data on late toxicity using Patient-Reported Outcome Measures (PROMs) with salvage Please see HIFU, on page 9.
radiotherapy in this setting are limited. EPIC-CP is a validated and clinically relevant tool to assess and quantify side effects from pelvic radiotherapy.

“In our center, men who relapse after focal therapy who then have significant disease on repeat MRI staging and biopsy are offered ‘salvage radical treatment,’ which may be either radical prostatectomy or salvage radiation,” said lead investigator Reena Davda, MD, consultant in uro-oncology, UCLH, NHS Foundation Trust, London. She presented the data at the Genitourinary Cancers Symposium in San Francisco.

“Although the cohort is small, late toxicity measured using PROMs is comparable to toxicity reported in men receiving radiation therapy as their primary treatment for localized prostate cancer,” she said. “We have a unique cohort at UCLH as we have a long-established focal therapy practice and therefore have long-term data related to failure and outcomes following radical salvage treatment.”

“Although the cohort is small, late toxicity measured using PROMs is comparable to toxicity reported in men receiving radiation therapy as their primary treatment for localized prostate cancer.”

REENA DAVDA, MD

All 28 men in the series had undergone focal therapy as their primary treatment for prostate cancer. Gleason score at diagnosis in the cohort was 3+3 in four patients, 3+4 in 22 patients, and 4+3 in two patients. All patients had recurrence as demonstrated by multiparametric magnetic resonance imaging and biopsy, with a median PSA level of 6.6 ng/mL. “Many men in the cohort were extensive-ly treated with the use of whole-gland HIFU, and almost half of the cohort underwent focal therapy again following relapse after the first HIFU treatment,” Dr. Davda said. Nine of the 28 underwent focal HIFU, six had whole-gland HIFU, seven had focal and redo focal, one had focal and redo whole gland, and five had whole gland and redo.

Patients received 74 Gy to the prostate. Four patients received additional pelvic lymph node irradiation. Three men received conformal radiotherapy and 25 underwent arcing intensity-modulated radiotherapy. Median age at radiation was 67 years.

The time from primary initial HIFU to requiring salvage treatment ranged from 17 to 120 months. The median time from initial HIFU to requiring salvage treatment was 59 months.

What EPIC-CP scores show
Late bowel and urinary toxicity was measured by EPIC-CP, on which lower scores indicate a more favorable health-related quality of life, with a score of 0 being the best possible score and 12 being the worst possible score. Overall urinary function was graded as “no problem” in eight men, “very small problem” in four, “small problem” in seven, “moderate problem” in five, and “big problem” in four. The average urinary incontinence symptom score was a 1 and the average urinary irritation/obstructive symptom score was 0.5.

Rectal pain or urgency was graded as “no problem” in seven, “very small problem” in two, “small problem” in two, “moderate problem” in four, and “big problem” in one. The average bowel symptom score was 2.5.

Seven patients each also graded increased frequency and overall bowel movements as “no problem.” Four considered increased frequency and two considered overall bowel movements a “very small problem,” and one and three, respectively, a “small problem.”

Biochemical relapse occurred in two of the 28 patients. “The small number of patients who have relapsed after treatment in our cohort have been managed with hormone therapy, and we have not recommended further focal therapy or local salvage in this small number of patients,” said Dr. Davda.

Dr. Davda is a consultant/adviser to and has received travel, accommodation, and expenses from Janssen. Several of her co-authors have disclosures with pharmaceutical companies; for full disclosures, go to bit.ly/salvageafterHIFUdisclosures.

MARIJUANA, OPIOID USE MORE COMMON IN PATIENTS WITH CANCER

Many people with cancer use marijuana, and rates of use in the U.S. have increased over time, according to a recent study.

The research, published in CANCER (April 22, 2019 [Epub ahead of print]), also found that patients with cancer are more likely to use prescription opioids than adults without cancer.

The authors matched 826 people with cancer to 1,652 controls without cancer. Among survey respondents who had cancer, 40.3% used marijuana with-in the past year, compared with 38.0% of respondents without cancer. Also, people with cancer were more likely to use prescription opioids than their demographically equivalent counterparts without cancer (13.9% versus 6.4%).

“Prospective clinical trials are needed to quantify the efficacy of marijuana in cancer-specific pain as well as the risk of opioid misuse in this patient popu-lation,” said first author Kathryn Ries Tringale, MD, MAS, of the University of California, San Diego.

**TABLE**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall urinary function</td>
<td></td>
</tr>
<tr>
<td>“No problem”</td>
<td>8</td>
</tr>
<tr>
<td>“Small” and “Very small problem”</td>
<td>11</td>
</tr>
<tr>
<td>“Moderate problem”</td>
<td>5</td>
</tr>
<tr>
<td>“Big problem”</td>
<td>4</td>
</tr>
<tr>
<td>Rectal pain or urgency</td>
<td></td>
</tr>
<tr>
<td>“No problem”</td>
<td>7</td>
</tr>
<tr>
<td>“Small” and “Very small problem”</td>
<td>4</td>
</tr>
<tr>
<td>“Moderate problem”</td>
<td>4</td>
</tr>
<tr>
<td>“Big problem”</td>
<td>1</td>
</tr>
</tbody>
</table>

*Expanded Prostate Cancer Index Composite for Clinical Practice

Source: Reena Davda, MD
OAB device produces durable efficacy through 12 months

John Schieszer
UT Correspondent

An implantable neuromodulation device appears to be safe and produce durable efficacy through 12 months and may be a promising new treatment option for patients with refractory overactive bladder (OAB) syndrome with urgency urinary incontinence (UUI).

Known as the electroceutical Coin (eCoin), the device was tested in a prospective, single-arm, open-label study with 46 participants who had refractory UUI. The study was conducted at multiple sites in the United States and New Zealand, and the latest feasibility data were presented at the AUA annual meeting in Chicago.

Researchers found that 30 of the 46 participants (65%) experienced more than a 50% improvement in UUI. Among these 30 patients, eight experienced a 75% improvement and 12 patients experienced 100% improvement. Overall, patients experienced a mean increase of 86% improvement in their incontinence quality of life (I-QOL) scores.

“I believe that eCoin therapy will be first tried by most patients and urologists when medications fail, and it will be a very important treatment modality for our refractory OAB population.”

SCOTT A. MACDIARMID, MD

“I believe that eCoin therapy will be first tried by most patients and urologists when medications fail, and it will be a very important treatment modality for our refractory OAB population,” said study investigator Scott A. MacDiarmid, MD, a urologist with Alliance Urology Specialists, Greensboro, NC.

The eCoin, which is being developed by Valencia Technologies Corp., is an investigational battery-powered device. It is just slightly larger than a nickel in diameter (23.3 mm) and thickness (2.4 mm). Dr. MacDiarmid and colleagues evaluated its safety and durability over a 12-month period in adults with UUI who had already failed or were intolerant of OAB medications.

The device works by electrically stimulating the tibial nerve, and it can be implanted during an office-based procedure under local anesthesia. The eCoin has a significant advantage because it does not require external stimulation, Dr. MacDiarmid noted. A majority of OAB patients currently do not reach their treatment goal with medication, either due to a lack of efficacy, side effects, or costs. Dr. MacDiarmid said the penetration of three third-line therapies is less than 5%, due to a variety of patient and physician barriers.

“eCoin is an effective, safe, and easy-to-perform office-based procedure that addresses such barriers and I’m hopeful will bring us one step closer to bring neuromodulation for the masses,” he told Urology Times.

In the current investigation, the mean age of the patients was 63.4 years and 45 of the 46 participants were female. The investigators found that episodes of UUI were reduced by a median 68% (4.2 versus 1.7 episodes/day at 12 months). The device was implanted in the lower leg over the tibial nerve and activated after 4 weeks. Patients kept bladder diaries and the investigators used validated quality-of-life instruments. Patients were assessed at 3, 6, and 12 months post-activation.

This approach is attractive because it eliminates the need for frequent visits and the required office infrastructure associated with percutaneous tibial nerve stimulation (PTNS), Dr. MacDiarmid said.

“It eliminates the safety concerns, the retreatment rate, and the fear of urinary retention requiring self-catheterization associated with onabotulinumtoxinA (Botox) injection therapy. It eliminates the surgery, the cost, and the perceived invasiveness of sacral nerve stimulation,” said Dr. MacDiarmid, who presented the study findings at the AUA annual meeting in Chicago.

Only one serious adverse event turned up in the trial, and it was resolved with intravenous antibiotics. A patient developed an infected blister from an ankle wrap that resolved.

‘Major positive impact’ in refractory OAB

“eCoin therapy has the potential to become the preferred third-line therapy chosen by patients and recommended by urologists. It will have a major positive impact in treating patients with refractory OAB,” said Dr. MacDiarmid. “I would expect the device to be approved and able to help patients by 2021.”

Ajay Singla, MD, a urologist with the faculty of medicine at Harvard Medical School, Boston, said this approach appears to be an improvement over the traditional PTNS device.

“PTNS over the years has been used for peripheral nerve stimulation in the office setting. The disadvantage has been performing weekly sessions for a total of 12 weeks. This has caused non-compliance and inconvenience to the patients. This new battery-operated device avoids the need for weekly visits for external stimulation,” said Dr. Singla, who was not involved with the research.

He noted in the current study the efficacy still remains low with approximately 65% experiencing more than a 50% improvement. Dr. Singla said this is in line with prior PTNS studies.

“This study shows that it is useful to have an implantable device rather than frequent external stimulations, which results in better patient compliance, but overall efficacy in the short term has not shown any improvement over traditional PTNS,” he said.

Valencia Technologies Corp. provided funding for the study.
Study evaluates ‘clinically meaningful’ margins, recurrence

Only adverse pathologic features, unfavorable PSMs raise post-RP recurrence risk

After prostatectomy, the presence of positive surgical margins is a well-established risk factor for biochemical (PSA) recurrence (BCR). However, the association of BCR with metastases and the optimal timing of subsequent, adjuvant, or salvage treatment remain unclear. Research from Martini et al indicates that most PSMs do not result in clinical recurrence or metastases, except in those with additional significant risk factors (Eur Urol Oncol 2019 [in press]).

The authors analyzed 1,757 patients treated with prostatectomy between 2011 and 2017 who had not received any neoadjuvant or adjuvant therapies. Their clinical characteristics were in line with other prostatectomy cohorts. Of these, 285 (16%) had PSMs of variable extent, length, and fociality. A total of 406 patients (23%) had aggressive pathologic features (≥pT3b and/or lymph node involvement [LNI] and/or grade group 4-5) and had a higher rate of PSMs, as expected.

During a relatively short median follow-up period of 36 months, 202 patients experienced BCR, 29 of whom progressed to clinical recurrence. Overall, the 5-yr BCR-free and clinical recurrence-free survival rates were 79% and 96%, respectively. The presence of PSMs, the number of PSMs, and PSM length were predictors of BCR \((p=.02)\), while only those patients with multifocal or long PSMs were associated with the risk of clinical recurrence \((p<.04)\).

Margins categorized as favorable, unfavorable

The authors divided the PSMs into two groups: favorable, defined as a single margin of <3 mm, and unfavorable, defined as multifocal or ≥3 mm PSM. Overall, 120 patients (42%) had favorable PSMs and 165 patients (58%) had unfavorable PSMs. The 5-year BCR-free survival rates for patients without PSMs, patients with favorable PSMs, and patients with unfavorable PSMs were 81%, 71%, and 61%, \((p<.002)\), respectively. Similarly, the clinical recurrence-free survival rates for patients without PSMs, patients with favorable PSMs, and patients with unfavorable PSMs were 98%, 97%, and 89% \((p<.002)\), respectively.

The authors noted that patients with both features, ie, the aggressive pathologic characteristics (≥pT3b/4 and/or grade group 4-5 and/or LNI) and the unfavorable PSMs (multifocal or ≥3 mm), had increased risk of biochemical and clinical recurrence. For this group with multiple adverse pathologic features, the 5-year BCR-free survival rates for patients without PSMs, patients with favorable PSMs, and patients with unfavorable PSMs were 62%, 63%, and 53%. The clinical recurrence-free survival rates for patients without PSMs, patients with favorable PSMs, and those with unfavorable PSMs were 90%, 96%, and 76%.

Both the European and the American urologic associations recommend adjuvant radiation therapy be administered or be specifically discussed in patients with PSMs. For men who undergo prostatectomy (or any treatment) for prostate cancer, the functional outcomes are often the overriding concern and there is heavy focus on intraoperative and perioperative measures to improve recovery of urinary and sexual function. So the decision about delivering adjuvant treatment (in the absence of cancer or symptoms) is made more complex due to the concerns regarding overtreatment and further worsening the urinary and sexual function. In this study, even if only the higher risk subgroup (unfavorable PSMs and advanced stage/grade) were to receive adjuvant treatment, nearly 75% of patients may potentially be overtreated.

The outcomes of men with PSMs after prostatectomy are quite heterogeneous. Identifying men at highest risk of clinical recurrence and metastases (not just BCR) may allow us to either modify the follow-up protocols to select men for adjuvant or timely salvage therapy. Our ability to prognosticate cancer outcomes based on the usual clinical parameters (grade, stage, margins) is limited. Hopefully, more sophisticated genomic or proteomic tests in the future will allow us to select the correct patients for adjuvant therapy while avoiding overtreatment for majority of the patients.

The outcomes of men with PSMs after prostatectomy are quite heterogeneous. Identifying men at highest risk of clinical recurrence and metastases (not just BCR) may allow us to either modify the follow-up protocols to select men for adjuvant or timely salvage therapy. Our ability to prognosticate cancer outcomes based on the usual clinical parameters (grade, stage, margins) is limited. Hopefully, more sophisticated genomic or proteomic tests in the future will allow us to select the correct patients for adjuvant therapy while avoiding overtreatment for majority of the patients.

<table>
<thead>
<tr>
<th>TABLE</th>
<th>POSITIVE SURGICAL MARGIN STATUS AND RECURRENCE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Patients without PSMs</td>
</tr>
<tr>
<td>5-year biochemical recurrence-free survival rate</td>
<td>81%</td>
</tr>
<tr>
<td>Clinical recurrence-free survival rate</td>
<td>99%</td>
</tr>
<tr>
<td>5-year BCR-free survival rate, patients with adverse pathologic features</td>
<td>62%</td>
</tr>
<tr>
<td>Clinical recurrence-free survival rate, patients with adverse pathologic features</td>
<td>90%</td>
</tr>
</tbody>
</table>

Source: Eur Urol Oncol 2019 [in press]
Male infertility evaluation:
Time for a new clinical care pathway?

Approximately 15.5% of couples struggle with infertility (Fertil Steril 2013; 99:1324-31.e1) and about seven million couples seek infertility care annually in the United States (Vital Health Stat 23 2005; 25:1-160). A component of male factor infertility is identified in about 50% of infertile couples, and a male factor is solely responsible in 20% (Fertil Steril 2015; 103:e18-25).

Infertile couples are evaluated by a variety of different specialty providers, with the majority presenting to gynecologists or reproductive endocrinologists as women tend to initiate seeking medical care. Guidelines from the AUA (The optimal evaluation of the infertile male: AUA best practice statement, 2011) and American Society for Reproductive Medicine (ASRM) (Fertil Steril 2015; 103:e18-25) have been created to assist health care providers in the management of male infertility.

These guidelines state that for all infertile couples, the male partner should have an initial screening that includes, at a minimum, a reproductive history and two semen analyses. A full evaluation by a urologist should be performed if the initial screening demonstrates any abnormality. A full male evaluation should also be considered in couples with unexplained infertility.

Despite these guidelines, many practitioners choose not to follow these recommendations. National infertility data from the U.S. show that among couples who seek infertility counseling, 18% to 27% of the male partners are not evaluated (J Urol 2013; 189:1030-4). According to the National Survey of Family Growth, between 2006 and 2010, only 27% of subfertile men aged 25 to 44 years had received any infertility-related advice (Natl Health Stat Report 2014; 73:1-21). It is clear from these data that in many infertile couples, only the female partner is evaluated.

Accordingly, many potentially treatable and/or reversible male factor fertility issues are left undiagnosed, which can lead to a loss of precious time and resources for the couple. In addition, a thorough male infertility workup can often uncover diagnoses, such as scrotal pathologies, endocrinopathies, and genetic disorders, that affect the overall health of the patient. This article briefly reviews the current guidelines and proposes a clinical care pathway for health care practitioners who perform the initial evaluation of infertile couples.

Who should be evaluated for male infertility?

The goal of the evaluation of the infertile male is to identify and treat correctable conditions in order to maximize the success of natural conception, identify couples who may need assisted reproductive technology, detect genetic causes of male infertility, and diagnose underlying medical conditions that may present as infertility. Given recent data that link male infertility to general male health, the male fertility evaluation also presents an opportunity to counsel male partners about their general health and to establish a physician-patient relationship that can lay the foundation for lifelong health.

Couples should be evaluated if they have failed to achieve a successful pregnancy following 1 year of regular unprotected intercourse (or 6 months if the couple is over age 35 years). The World Health Organization (2010) guidelines recommend that infertile couples be evaluated if they have failed to achieve a successful pregnancy following 1 year of regular unprotected intercourse.

TABLE 1. WORLD HEALTH ORGANIZATION 2010 SEMEN ANALYSIS REFERENCE VALUES

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Lower reference limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (mL)</td>
<td>1.5</td>
</tr>
<tr>
<td>Sperm count (10⁶/mL)</td>
<td>15</td>
</tr>
<tr>
<td>Normal morphology (%)</td>
<td>4</td>
</tr>
<tr>
<td>Total motility (%)</td>
<td>40</td>
</tr>
<tr>
<td>Vitality (%)</td>
<td>58</td>
</tr>
<tr>
<td>Leukocyte count (10⁶/mL)</td>
<td>&lt;1.0</td>
</tr>
<tr>
<td>pH</td>
<td>≥7.2</td>
</tr>
</tbody>
</table>

female partner is over 35). The initial physician, who is often a reproductive endocrinologist, should obtain a thorough reproductive history and two semen analyses. The reproductive history should include coital frequency and timing, duration of infertility and prior fertility, childhood illnesses and developmental history, systemic medical illnesses and prior surgeries, sexual history, and gonadal toxin exposure.

If the initial evaluation is abnormal, the patient should be referred to a male infertility specialist. However, a comprehensive male fertility evaluation by a urologist rarely takes place due to local practice patterns where many couples proceed directly to in vitro fertilization (IVF) without the male having a full evaluation and the lack of availability of urologists with male infertility training.

We view this as a lost opportunity to optimize male reproductive potential, offspring health, and the general health of the male partner. Studies have shown an association between male infertility and an increased risk for testicular and male infertility may also serve as a biomarker for health problems, such as cardiovascular, metabolic, and autoimmune disease (Fertil Steril 2018; 110:810-4). The Centers for Disease Control and Prevention has advocated for the concept of preconception paternal health as there is significant evidence that a man’s weight and as toxic chemical exposures can impact the epigenetic profile of his progeny for generations (Curr Mol Biol Rep 2017; 3:288-296).

What to include in a full male evaluation
A full evaluation should include a complete medical and reproductive history, physical examination, and at least two semen analyses if not done previously. The physical should include examination of the penis, urethral meatus, testes, presence and consistency of the vasa deferentia and epididymides, presence of varicoceles, and secondary sex characteristics. With regard to the semen analyses, reference values are based on World Health Organization 2010 (table 1), although it is important to keep in mind that these cutoffs are not the minimum values needed for conception.

When male partners are not referred to urologists for evaluation, a significant number of correctable male fertility factors are not identified and serious pathology, such as testis cancer, may be missed.

Based on the results of the full evaluation, other procedures, blood work, and tests may be indicated. These tests may include additional semen analyses, endocrine evaluation, imaging with ultrasonography, genetic screening, post-ejaculatory urinalysis, and specialized tests on semen and sperm.

Endocrine evaluation
Up to 45% of infertile men present with endocrine abnormalities (Urology 2015; 85:1062-7; Urol Clin North Am 2008; 35:147-55). The AUA and ASRM recommend that an initial endocrine evaluation should include at least a serum total testosterone and follicle-stimulating hormone (FSH) level if sperm concentration is less than 10 million/mL, impaired sexual function, or other clinical findings suggestive of a specific endocrinopathy. We found that androgen deficiency was common among infertile men (43%), but it was not well associated with sperm concentration (Urology 2015; 85:1062-7).

This suggests that there may be a greater role for routine endocrine evaluation in all male partners of infertile couples, even if they have favorable sperm concentration. The levels of hormones, such as testosterone, luteinizing hormone (LH), FSH, and prolactin, can aid in identifying an underlying clinical condition (table 2), such as hypogonadism or a prolactinoma, which can have harmful effects beyond only infertility. Accordingly, at our institution, we typically order a broader hormone panel on any patient who presents with male infertility.

Imaging
Similar to the endocrine workup, imaging evaluation of the infertile male can diagnose occult pathologies that may affect the patient’s overall health. Scrotal ultrasonography is indicated in 6% of men evaluated for infertility are found to have a testicular malignancy. Accordingly, when male partners are not referred to urologists for evaluation, a significant number of correctable male fertility factors are not identified and serious pathology, such as testis cancer, may be missed.

Genetic screening
Genetic abnormalities can cause infertility by affecting sperm production or transport. The three most common genetic factors related to male infertility are: cystic fibrosis transmembrane conductance regulator (CFTR) gene mutations associated with congenital bilateral absence of the vas deferens (CBAVD), chromosomal abnormali-
ties resulting in impaired testicular function, and Y-chromosome microdeletions (YCMD) associated with spermatogenic impairment.

In the case of CBAVD, the patient and female partner should be offered testing and counseling to identify carriers of cystic fibrosis (CF), as this may have implications for future offspring. Men with nonobstructive azoospermia or severe oligozoospermia (<5 million/mL) should be offered karyotyping and Y-chromosome analysis. Karyotyping can diagnose sex chromosome disorders like Klinefelter syndrome (KS), which is underdiagnosed and associated with low sperm production in the majority of cases. Because some of these conditions affect other aspects of the patient’s health (ie, KS, CF) and some can be passed along to offspring (ie, CF, YCMD), it is critical for health care practitioners to refer patients to urologists to do a thorough evaluation.

A new clinical care pathway

One factor that can account for the differences in care between female and male partners of infertile couples is the fact that the females tend to initiate reproductive endocrinologists and primary care physicians (PCPs) will refer the male partner more than men. Another major factor is that not all reproductive endocrinologists and primary care physicians use EHRs that link the female patient to the male partner, so it should be feasible to add a male infertility algorithm to the female partner’s EHR. For instance, for all female patients on a man’s health.

We suspect that adherence to guidelines and clinical care pathways is higher in urologic oncology than it is in infertility. For instance, when the U.S. Preventive Services Task Force (USPSTF) recommended against PSA screening for prostate cancer in 2012, studies showed a significant decrease in PSA testing, prostate biopsy, and prostate cancer incidence in the following years due to a decrease inerrals from PCPs to urologists (Cancer 2018; 124:2733-9). In response to these prostate cancer screening recommendations, the Duke Cancer Institute created a multidisciplinary clinical care algorithm and embedded it into the electronic health record; thus, it was widely adopted among PCPs, leading to an increased rate of screening among all age and race categories in their community (Urol Oncol 2018; 36:502.e1-502.e6).

* failure to achieve pregnancy following one year of regular unprotected intercourse or 6 months if female partner is over 35

*Infertile Couple

Referral to Urologist (male infertility specialist)

Hormone panel: Total T, FSH, LH, SHBG, albumin, estradiol

Genetic work-up:
1. Karyotype
2. Y chromosome microdeletion

Reproductive History
2 Semen Analyses

Abnormal

Concentration <5 million/mL.

* Male Factor Initial Evaluation

**Male Factor Work-up by Reproductive Endocrinologist

Source: Philip J. Cheng, MD, Darshan P. Patel, MD, Alexander W. Pastuszak, MD, PhD, and James M. Hotaling, MD, MS

FIGURE 1 / Scrotal US: Potential utility in screening infertile men

**Male infertility clinical care pathway for the non-urologist

Let’s Talk Men’s Health
Patients who wish to seek shock wave therapy for ED should be encouraged to look for clinical trial opportunities and enroll in them.”

RANJITH RAMASAMY, MD

The trial compared two different dose regimens. In group A, a total of 3,600 shocks were given over a period of 5 days. In group B, the regimen was a total of six treatments given 3 days a week (Monday, Wednesday, and Friday) for 2 weeks in a row.

The trial revealed shock wave therapy worked well to restore erectile function in men with mild to moderate vasculogenic ED. It did not have an effect in men with severe erectile dysfunction resulting from diabetes or in those who had undergone prostatectomy, cystectomy, or radiation. Nor did it have an effect in men with Peyronie’s disease. There was no sham arm in the trial to evaluate for placebo effect.

Researchers don’t yet know how long shock wave treatment benefits last in men with ED, according to Dr. Ramasamy, who is an investigator for Direx.

“The guidelines basically say that because this is not FDA approved, it should be used only under an IRB-approved protocol,” Dr. Ramasamy said. “Unfortunately, there are a lot of studies that demonstrate that it is efficacious and safe, but the majority of these studies that have been published are from outside the U.S. At the University of Miami, we have an ongoing clinical trial. Patients who wish to seek shock wave therapy for ED should be encouraged to look for clinical trial opportunities and enroll in them.”

In March 2019, the Sexual Medicine Society of North America issued a position statement on restorative therapies for ED, including low-intensity shock wave therapy, stating that the use of such therapies is experimental and should be conducted under research protocols (see, “SMSNA: Shock waves for ED not ready for mainstream,” below).

Dr. Ramasamy and colleagues recently finished a phase II trial looking at the MoreNova shock wave therapy device, made by Direx.

“The ideal protocol is not only how many shock waves? And what energy level among the most ideal candidates for shock wave therapy, but it’s not clear if they are the only ones. Ideal protocols for delivering the therapy also remain unclear,” Dr. Hatzichristodoulou said.

“The ideal protocol is not only how many sessions the patient needs to have but also how many shock waves? And what energy level should we use to treat the patient with erectile dysfunction?” he said. “The third question is, there are a lot of devices on the market, but we do not know which is the best one for which patients.”

Limited data in the U.S.

FDA approval for a low-density extracorporeal shock wave device to treat ED likely is years away, according to Ranjith Ramasamy, MD, assistant professor of urology and director of male reproductive medicine and surgery at the University of Miami.

According to the AUA erectile dysfunction guidelines published in 2018, low-intensity extracorporeal shock wave therapy should be considered investigational for men with ED. “The guidelines basically say that because this is not FDA approved, it should be used only under an IRB-approved protocol,” Dr. Ramasamy said. “Unfortunately, there are a lot of studies that demonstrate that it is efficacious and safe, but the majority of these studies that have been published are from outside the U.S. At the University of Miami, we have an ongoing clinical trial. Patients who wish to seek shock wave therapy for ED should be encouraged to look for clinical trial opportunities and enroll in them.”

In March 2019, the Sexual Medicine Society of North America issued a position statement on restorative therapies for ED, including low-intensity shock wave therapy, stating that the use of such therapies is experimental and should be conducted under research protocols (see, “SMSNA: Shock waves for ED not ready for mainstream,” below).

Dr. Ramasamy and colleagues recently finished a phase II trial looking at the MoreNova shock wave therapy device, made by Direx.

“Some of the trials have demonstrated a benefit up to 12 months, but that’s probably the longest time that we know that shock wave therapy can provide a benefit for.”

On the upside, shock wave therapy is unlike other ED treatment options in that it offers a potential cure for ED.

“I think that in patients with mild to moderate erectile dysfunction, it can reverse the pathophysiology of the disease and not merely treat the condition and potentially restore erectile function,” Dr. Ramasamy said.

Drawbacks of the therapy are that urologists and others would offer it as an in-office treatment that would require patients to make several office visits.

“Each of the treatments are about 30 minutes long,” Dr. Ramasamy said. “The biggest drawback is, you don’t know who is going to respond and who isn’t.”

Another potential drawback is cost. When providers use it off-label, outside the research setting, shock wave therapy protocols can cost from $3,000 to $6,000, according to Dr. Ramasamy.

Important unanswered questions

Studies suggest men with vasculogenic ED are among the most ideal candidates for shock wave therapy, but it’s not clear if they are the only ones. Ideal protocols for delivering the therapy also remain unclear, Dr. Hatzichristodoulou said.

“The ideal protocol is not only how many sessions the patient needs to have but also how many shock waves? And what energy level should we use to treat the patient with erectile dysfunction?” he said. “The third question is, there are a lot of devices on the market, but we do not know which is the best one for which patients.”

Limited data in the U.S.

FDA approval for a low-density extracorporeal shock wave device to treat ED likely is years away, according to Ranjith Ramasamy, MD, assistant professor of urology and director of male reproductive medicine and surgery at the University of Miami.

According to the AUA erectile dysfunction guidelines published in 2018, low-intensity extracorporeal shock wave therapy should be considered investigational for men with ED. “The guidelines basically say that because this is not FDA approved, it should be used only under an IRB-approved protocol,” Dr. Ramasamy said. “Unfortunately, there are a lot of studies that demonstrate that it is efficacious and safe, but the majority of these studies that have been published are from outside the U.S. At the University of Miami, we have an ongoing clinical trial. Patients who wish to seek shock wave therapy for ED should be encouraged to look for clinical trial opportunities and enroll in them.”

In March 2019, the Sexual Medicine Society of North America issued a position statement on restorative therapies for ED, including low-intensity shock wave therapy, stating that the use of such therapies is experimental and should be conducted under research protocols (see, “SMSNA: Shock waves for ED not ready for mainstream,” below).

Dr. Ramasamy and colleagues recently finished a phase II trial looking at the MoreNova shock wave therapy device, made by Direx.

“Some of the trials have demonstrated a benefit up to 12 months, but that’s probably the longest time that we know that shock wave therapy can provide a benefit for.”

On the upside, shock wave therapy is unlike other ED treatment options in that it offers a potential cure for ED.

“I think that in patients with mild to moderate erectile dysfunction, it can reverse the pathophysiology of the disease and not merely treat the condition and potentially restore erectile function,” Dr. Ramasamy said.

Drawbacks of the therapy are that urologists and others would offer it as an in-office treatment that would require patients to make several office visits.

“Each of the treatments are about 30 minutes long,” Dr. Ramasamy said. “The biggest drawback is, you don’t know who is going to respond and who isn’t.”

Another potential drawback is cost. When providers use it off-label, outside the research setting, shock wave therapy protocols can cost from $3,000 to $6,000, according to Dr. Ramasamy.

Important unanswered questions

Studies suggest men with vasculogenic ED are among the most ideal candidates for shock wave therapy, but it’s not clear if they are the only ones. Ideal protocols for delivering the therapy also remain unclear, Dr. Hatzichristodoulou said.

“The ideal protocol is not only how many sessions the patient needs to have but also how many shock waves? And what energy level should we use to treat the patient with erectile dysfunction?” he said. “The third question is, there are a lot of devices on the market, but we do not know which is the best one for which patients.”

Limited data in the U.S.

FDA approval for a low-density extracorporeal shock wave device to treat ED likely is years away, according to Ranjith Ramasamy, MD, assistant professor of urology and director of male reproductive medicine and surgery at the University of Miami.

According to the AUA erectile dysfunction guidelines published in 2018, low-intensity extracorporeal shock wave therapy should be considered investigational for men with ED. “The guidelines basically say that because this is not FDA approved, it should be used only under an IRB-approved protocol,” Dr. Ramasamy said. “Unfortunately, there are a lot of studies that demonstrate that it is efficacious and safe, but the majority of these studies that have been published are from outside the U.S. At the University of Miami, we have an ongoing clinical trial. Patients who wish to seek shock wave therapy for ED should be encouraged to look for clinical trial opportunities and enroll in them.”

In March 2019, the Sexual Medicine Society of North America issued a position statement on restorative therapies for ED, including low-intensity shock wave therapy, stating that the use of such therapies is experimental and should be conducted under research protocols (see, “SMSNA: Shock waves for ED not ready for mainstream,” below).

Dr. Ramasamy and colleagues recently finished a phase II trial looking at the MoreNova shock wave therapy device, made by Direx.

“Some of the trials have demonstrated a benefit up to 12 months, but that’s probably the longest time that we know that shock wave therapy can provide a benefit for.”

On the upside, shock wave therapy is unlike other ED treatment options in that it offers a potential cure for ED.

“I think that in patients with mild to moderate erectile dysfunction, it can reverse the pathophysiology of the disease and not merely treat the condition and potentially restore erectile function,” Dr. Ramasamy said.

Drawbacks of the therapy are that urologists and others would offer it as an in-office treatment that would require patients to make several office visits.

“Each of the treatments are about 30 minutes long,” Dr. Ramasamy said. “The biggest drawback is, you don’t know who is going to respond and who isn’t.”

Another potential drawback is cost. When providers use it off-label, outside the research setting, shock wave therapy protocols can cost from $3,000 to $6,000, according to Dr. Ramasamy.
OPIOIDS

continued from page 1

TABLE OPIOID USE IN UROLOGIC PATIENTS: OXYCODONE VS. KETOROLAC

<table>
<thead>
<tr>
<th></th>
<th>Oxycodeone group</th>
<th>Ketorolac group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prescription fill rate</td>
<td>84%</td>
<td>60%</td>
</tr>
<tr>
<td>Mean number of pills taken</td>
<td>7.4</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Source: Kirtishri Mishra, MD

patients with Peyronie’s disease. The question arises whether we should treat Peyronie’s disease with extracorporeal shock wave therapy because we know that pain will resolve over time without treatment,” Dr. Hatzichristodoulou said. “The most important and predominant symptom of patients with Peyronie’s disease is penile curvature. And this is the most important symptom because it can lead to the inability of the patient to perform sexual intercourse. And we cannot treat penile curvature with shock wave therapy.”

These data do not stop companies from promoting shock wave devices for treatment for Peyronie’s disease. One manufacturer’s website claims that most men treated for Peyronie’s disease “are able to return to optimal sexual performance after therapy.”

Spotlight on controversies

Tobias Kohler, MD, MPH, professor of urology at Mayo Clinic, Rochester, MN, made a YouTube video about erectile dysfunction treatment scams. On his “unproven” list is the use of shock wave therapy.

“There are two types of shock wave machines,” Dr. Kohler explained. “There’s the SwissWave, which is a class 1 medical device that’s offered throughout the country by chiropractors and the like with claims that it improves erectile dysfunction. Because it’s a class 1 medical device, they can offer this to patients and administer it without a worry from the FDA.

“The question is, why is it a class 1 medical device? Because it doesn’t do anything. It delivers a shock which is very shallow and of insufficient energy to do anything to any kind of scar tissue in the penis. There is zero point zero medical literature supporting the use of this type of shock wave therapy for problems with erection,” Dr. Kohler said.

The GAINSWave therapy also is a class 1 medical device, according to Dr. Kohler. Yet men are flocking to clinics that offer the therapy, spending thousands of dollars without real evidence that it works, he said.

The class 2 shock wave therapy devices are FDA regulated and cannot be used outside a clinical trial, Dr. Kohler explained.

“That’s the difference. Those are the real machines that actually deliver shocks,” Dr. Kohler said. “There are some good researchers working on studies with those devices. Is there a role for shock wave therapy? Maybe. We need to do more trials, and until more work is done, men should not spend their money on it.”

For now, a lot of urologists are sitting on the sidelines.

Allen D. Seftel, MD, chief of urology at Cooper University Hospital, Camden, NJ, does not offer shock wave therapy for ED or Peyronie’s disease because it’s considered experimental by the AUA guideline panel and his patient population wouldn’t be able to afford the treatment without coverage, he said.

“Nonetheless, it seems that select physicians are offering it for treatment and that patients are paying out of pocket,” Dr. Seftel said. “The good news is that several short-term, suboptimally designed studies have shown promise, which is encouraging. The really good news is that it appears that there is no negative impact reported in these studies for the shock wave for ED treatment. Thus, a large, well-done study may actually provide the data needed to make an informed decision.”

“Opioids use in urologic patients: Oxycodeone vs. Ketorolac

Patients were instructed to take oxycodone, 5-10 mg every 4 hours as needed for up to 5 days, or ketorolac, 10 mg every 6 hours as needed for up to 5 days, and they were given oral and written instructions for disposing any unused medication.

Information was collected from patients via telephone surveys conducted 1 week after the procedure. Findings from an interim analysis that included data from 91 patients showed that the prescription fill rate was higher in the oxycodone group than in the ketorolac group (84% vs. 60%). In both groups, the majority of medication was not used, although the mean number of pills taken was significantly higher for oxycodone than ketorolac (7.4 vs. 3.1; p=0.0005).

Data on pain severity assessed using a validated instrument (Indiana Polyclinic Combined Pain scale) indicated that ketorolac was non-inferior to oxycodone for providing pain relief. In addition, the study found that overall, only 9% of patients who filled their prescriptions disposed of their medications appropriately, and the percentage of patients who failed to do so was significantly higher in the oxycodone group, where 71% of patients kept their unused pills, reported Kirtishri Mishra, MD, a urology resident at Case Western.

“Statistics about the growing burdens of opioid addiction, including data showing rising rates of overdose-related deaths and of infants born with neonatal abstinence syndrome, are alarming, and indiscriminate physician prescribing of narcotics for pain management is clearly contributing to these problems,” said Dr. Mishra, who worked on the study with Christopher M. Gonzalez, MD, MBA, and colleagues.

“Previous retrospective studies have shown that a large percentage of patients who undergo surgical procedures do not fill their prescriptions for analgesics or do not use the medications if they do. Our prospective study is part...
**OPIOIDS continued from page 21**

of a longer range project to provide a higher level of evidence about usage of opioids after outpatient urologic procedures and to offer solutions that may decrease opioid prescribing and its related problems.”

Patients were eligible to participate in the study if they were age 18 years or older, underwent an uncomplicated outpatient urologic procedure, had a glomerular filtration rate >40 mL/min/1.73 m², and had no history of problems related to opioid use. There were no significant differences between the oxycodone and ketorolac groups in demographic characteristics, procedure types, or current alcohol use.

**URS accounts for half of procedures**

Overall, ureteroscopy accounted for about 50% of the procedures and transurethral resection of the prostate, scrotal surgery, and transurethral resection of bladder tumor were most common among the other types. Medications that could limit postoperative pain were not routinely given intraoperatively.

Putting the project in context, Dr. Mishra cited research showing that one of every 48 patients who are prescribed a new opioid in the emergency room becomes a long-term opioid user. In addition, he said there are ample data showing that the majority of patients who become addicted to opioids initially gained access to the medications through a prescription written for them or a family member.

“It is important that physicians become proactive in efforts to curtail the usage of opioids in the community.”

KIRTISHRI MISHRA, MD

“Preliminarily, it appears the intervention is associated with significant reduction in pain medication use. As we explore various strategies to address the problems of opioid usage, we are encouraged that this minimal-risk intervention may have clinically significant benefit,” Dr. Mishra said.

**FDA launches education campaign for disposal of unused opioids**

The FDA has launched a new education campaign to help Americans understand the role they play in removing and properly disposing of unused prescription opioids from their homes.

As part of the “Remove the Risk” campaign, the FDA launched a new toolkit of materials, available in English and Spanish, which include: television, radio, and print public service announcements (PSAs); fact sheets; social media graphics and posts; and website badges that can be used by individuals, health care providers and organizations. These materials are being made available free of charge to news media, health care providers, consumer groups, and other organizations working to combat the opioids crisis. The agency also recently updated information on safe disposal of unused prescription opioids on its Disposal of Unused Medicines: What You Should Know webpage, which can help individuals determine the best disposal option for their situation.

“As part of the ‘Remove the Risk’ campaign, the FDA launched a new toolkit of materials, available in English and Spanish, which include: television, radio, and print public service announcements (PSAs); fact sheets; social media graphics and posts; and website badges that can be used by individuals, health care providers and organizations. These materials are being made available free of charge to news media, health care providers, consumer groups, and other organizations working to combat the opioids crisis. The agency also recently updated information on safe disposal of unused prescription opioids on its Disposal of Unused Medicines: What You Should Know webpage, which can help individuals determine the best disposal option for their situation.”

“Far too many Americans, both teens and adults, are gaining access to opioids for the first time from the medicine cabinets of their parents, relatives and friends. Millions of unused opioid pills should not be readily available and easily accessible in our homes,” said Douglas Throckmorton, MD, deputy director of regulatory programs in the FDA’s Center for Drug Evaluation and Research. “Our ‘Remove the Risk’ campaign serves to both educate Americans on this issue and provide them with easy-to-follow steps to take so they can immediately remove prescription opioids from their homes and avoid unintentionally contributing to the risk of misuse or abuse of these drugs by a friend or loved one.”

Medicine take-back options are the preferred way to dispose of most types of unneeded medicines safely, including opioids. Authorized locations may be in retail pharmacies; hospital or clinic pharmacies; and law enforcement facilities. Some authorized collection sites may also offer mail-back programs or “drop-boxes” to assist patients in safe disposal of their unused medicines.
FOR THE TREATMENT OF METASTATIC
CASTRATION-RESISTANT PROSTATE CANCER

HARNESS THE PERFORMANCE
OF MICRONIZATION

An innovative formulation of abiraterone acetate is here.
YONSA® (abiraterone acetate) is a micronized formulation taken in a 500 mg
dose once daily in combination with 4 mg of methylprednisolone taken twice daily,
with or without food, that allows for rapid
dissolution and absorption.¹

INDICATION
YONSA® (abiraterone acetate) in combination with methylprednisolone is indicated for the treatment of patients
with metastatic castration-resistant prostate cancer (CRPC).

Important Administration Instructions
YONSA® may not be interchangeable with other abiraterone acetate products. To avoid substitution errors and overdose,
be aware that YONSA® tablets may have different dosing and food effects than other abiraterone acetate products.
Patients receiving YONSA® should also receive a gonadotropin-releasing hormone (GnRH) analog concurrently or should
have had bilateral orchiectomy.

IMPORTANT SAFETY INFORMATION

CONTRAINDICATIONS
YONSA® can cause fetal harm and potential loss of pregnancy.

WARNINGS AND PRECAUTIONS

Hypertension, Hypokalemia, and Fluid Retention Due to Mineralocorticoid Excess: YONSA® may cause hypertension,
hypokalemia, and fluid retention as a consequence of increased mineralocorticoid levels resulting from CYP17 inhibition.
Monitor patients for hypertension, hypokalemia, and fluid retention at least once a month. Control hypertension and correct
hypokalemia before and during treatment with YONSA®.

Closely monitor patients whose underlying medical conditions might be compromised by increases in blood pressure,
hypokalemia or fluid retention, such as those with heart failure, recent myocardial infarction, cardiovascular disease, or
ventricular arrhythmia. The safety of YONSA® in patients with left ventricular ejection fraction <50% or New York Heart
Association (NYHA) Class III or IV heart failure (in Study 1) or NYHA Class II to IV heart failure (in Study 2) was not
established because these patients were excluded from these randomized clinical trials.

ADVERSE REACTIONS
The most common adverse reactions (≥10%) are fatigue, joint swelling or discomfort, edema, hot flush, diarrhea, vomiting,
cough, hypertension, dyspnea, urinary tract infection, and contusion.

Please see Brief Summary of Prescribing Information on next page and the full Prescribing Information at www.YonsaRx.com

Brief Summary of Prescribing Information for YONSA® (abiraterone acetate) tablets
This Brief Summary does not include all the information needed to use YONSA safely and effectively.
See full prescribing information for YONSA.
See package insert for full Prescribing Information
Initial U.S. approval: 2011

INDICATIONS AND USAGE:
YONSA (abiraterone acetate) is indicated in combination with methylprednisolone for the treatment of patients with metastatic castration-resistant prostate cancer.

CONTRAINDICATIONS:
YONSA is contraindicated for use in pregnant women. YONSA can cause fetal harm and potential loss of pregnancy.

DOSAGE AND ADMINISTRATION:
Recommended dose: YONSA 500 mg (four 125 mg tablets) administered orally once daily in combination with methylprednisolone 4 mg administered orally twice daily. Patients receiving YONSA should also receive a gonadotropin-releasing hormone (GnRH) analog concurrently or should have had bilateral orchiectomy.

To avoid medication errors and overdose, be aware that YONSA tablets may have different dosing and food effects than other abiraterone acetate products.

WARNINGS AND PRECAUTIONS:
YONSA may cause hypertension, hypokalemia, and fluid retention as a consequence of increased mineralocorticoid levels resulting from CYP17 inhibition. Monitor patients for hypertension, hypokalemia, and fluid retention at least once a month. Control hypertension and correct hypokalemia before and during treatment with YONSA.

Monitor for symptoms and signs of adrenocortical insufficiency. Increased dosage of corticosteroids may be indicated before, during and after stressful situations.

Hepatotoxicity can be severe and fatal. Measure serum transaminases (ALT and AST) and bilirubin levels prior to starting treatment with YONSA, every two weeks for the first three months of treatment and monthly thereafter.

ADVERSE REACTIONS:
The most common adverse reactions (≥10%) are fatigue, joint swelling or discomfort, edema, hot flush, diarrhea, vomiting, cough, hypertension, dyspnea, urinary tract infection and contusion.

The most common laboratory abnormalities (>20%) are anemia, elevated alkaline phosphatase, hypertriglyceridemia, lymphopenia, hypercholesterolemia, hyperglycemia, elevated AST, hypophosphatemia, elevated ALT and hypokalemia.

DRUG INTERACTIONS:
CYP3A4 Inducers: Avoid concomitant strong CYP3A4 inducers during YONSA treatment. If a strong CYP3A4 inducer must be co-administered, increase the YONSA dosing frequency.

CYP2D6 Substrates: Avoid co-administration of YONSA with CYP2D6 substrates that have a narrow therapeutic index. If an alternative treatment cannot be used, exercise caution and consider a dose reduction of the concomitant CYP2D6 substrate.

USE IN SPECIFIC POPULATIONS:
Females: Women who are pregnant or women who may be pregnant should not handle YONSA tablets without protection, e.g., gloves.

Males of Reproductive Potential: Males with female partners of reproductive potential should use effective contraception.

Hepatic Impairment: Do not use YONSA in patients with baseline severe hepatic impairment (Child-Pugh Class C).

Pediatric Use: Safety and effectiveness of abiraterone acetate in pediatric patients have not been established.

To report SUSPECTED ADVERSE REACTIONS, contact Sun Pharmaceutical Industries, Inc. at 1-800-818-4555, FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

Manufactured for:
Sun Pharma Global FZE

Distributed by:
Sun Pharmaceutical Industries, Inc.
Cranbury, NJ 08512

YONSA is a registered trademark of Sun Pharma Global FZE
Copyright © 2019 Sun Pharma Global, FZE
All rights reserved
PM-US-YON-0108
Rx ONLY
How to bill when a stone changes location during procedure

Adhere to pre-treatment diagnosis; procedures are not location specific

Q: I have a coding question regarding the proper definition of stone location for a ureteroscopy procedure. I had a case in which a proximal ureteral stone became dislodged from the ureter during URS and flew back into the kidney during the procedure. Therefore, although the stone was actually a “ureteral” stone, all of the actual laser lithotripsy was performed in the renal pelvis. In addition, there was a known second adherent stone in the kidney that required extraction with a basket. A stent was left in the ureter following the lithotripsy. My understanding is that the stone that was in the ureter immediately prior to the surgery should be classified as a ureteral stone, regardless of where the actual lithotripsy was performed. Therefore, my argument is that this should be coded as a 32356 (ureter), and also 32353-2 was performed. Therefore, my argument is that this should be coded as 32356 (ureter), and also 32353-XS (kidney), based on the pre-treatment diagnosis of ureteral and renal stone. Our coder is reluctant to do so because the actual lithotripsy was performed in the kidney. What are your thoughts?

A: We agree with you. You are treating a patient with a ureteral stone and a renal stone. The ureteral stone was treated with lithotripsy; the fact that you “manipulated” the stone into the kidney prior to lithotripsy did not change that scenario. The procedures themselves include approach and application for treatment and as such are not dependent on location in which the treatment is provided. The initial diagnosis was a ureteral stone and a kidney stone. At the end of the encounter, the stones were removed. If the second stone was simply removed by basket without lithotripsy as suggested by your scenario, then the correct billing would be 52356 and 52352-XS.

Q: I’m having issues with prostate needle biopsy, outpatient facility: 52000, 76872, 76942, 55700. Medicare is not paying for the cystoscopy with the biopsy. I stopped billing the cysto code, but 76872 and 76942 are being denied. I would like the correct coding for the prostate needle biopsy with the correct modifiers. I did ask AUA Coding Hotline and was told not to use the cysto code and was given the modifiers to use, but I’m still getting denials.

A: The appropriate coding for a medically necessary cystoscopy at the same encounter as a prostate needle biopsy would be 55700, 52000, and 76872. 52000 is not bundled into a prostate needle biopsy and should be paid separately without requiring a modifier. (-51 could be added for private payers to identify the lesser procedure.) Medicare should not have denied payment based on bundling edits. If the explanation of benefits statements are still available from past service denials, we would recommend checking denial codes.

If you feel that the cystoscopy is medically necessary for a patient having a prostate needle biopsy, you may report the services on the same date, however, multiple procedure adjustment will apply to the cystoscopy. As with all services, make sure that your documentation supports the need and performance of the cystoscopy. It is also important to report the correct ICD-10 code for the cystoscopy.

Medicare has bundled the 76942 into code 76872. Although unbundling is allowed with a modifier, it is difficult to support the use of an appropriate unbundling modifier for a typical prostate needle biopsy. On the positive side, code 76872 was increased in value by 32% for 2019 to offset the bundling in this case. Therefore, coding for a routine prostate needle biopsy without cystoscopy can be reported as 55700 and 76872 if a diagnostic transrectal ultrasound of the prostate is documented in the medical record and medically necessary.

Alternatively, you can report 55700 and 76942 if the prostate needle biopsy is documented without a diagnostic ultrasound of the prostate or the diagnostic ultrasound was not medically necessary at the time of the biopsy.

It should be noted that most private payers have adopted Medicare NCCI bundling rules for the prostate needle biopsy and will therefore pay similarly.

Q: What is the appropriate coding for the following InterStim procedure? For the procedure, the existing device was removed, an incision was made over the device, and the device was pulled from the field. The wire was traced to the point of insertion. A small incision was made and the entire lead was removed. Access to the third foramen on the right side was obtained under fluoroscopy control with good placement of a new lead. The lead was then traced to the pocket of the generator and a new generator was connected. Connections were performed and tested.

A: Proper coding would be 64581 (Incision for implantation of neurostimulator electrode array; sacral nerve [transforaminal placement]) and 64590 (Insertion or replacement of peripheral or gastric neurostimulator pulse generator or receiver, direct or inductive coupling). The two codes are not bundled; therefore, you do not need a modifier. (-51 could be added to 64590 to identify the lesser procedure for private payers.)

Although the old lead was removed prior to placement of the new lead, the removal of the lead cannot be reported separately as it is considered bundled into the insertion code. [UT] Questions of general interest will be chosen for publication. The information in this column is designed to be authoritative, and every effort has been made to ensure its accuracy at the time it was written. However, readers are encouraged to check with their individual carrier or private payers for updates and to confirm that this information conforms to their specific rules.
Growth in drug costs and spending for Medicare beneficiaries has been an area of concern for patients, policymakers, and regulators for several years. Medicare pays for most drugs through either the Part B program (generally injectable medications purchased by providers and administered in a clinical setting) or the Part D program (generally prescribed oral and patient-administered medications).

Most urologists know Part B drugs as those they “buy and bill,” and most of these drugs are reimbursed on the basis of an “average sales price” plus 6%, less any sequester. Not all physicians pay the same purchase price for a drug, but for any given drug there is only one “average sales price” that determines reimbursement. Therefore, a practice that purchases a drug below average sales price (which is recalculated quarterly) will realize more revenue from administering it to a patient than a practice that pays more than the average sales price. It is even possible to be “under water” on Part B drugs—meaning it costs a practice more to administer an individual drug than Medicare pays.

Factors that determine the average sales price include supply, demand, the availability of generic or biosimilar products, the number of manufacturers (competition), and other economic forces. Policymakers and regulators worry that the average sales price reimbursement methodology encourages physicians to use more expensive drugs when there is a choice of drugs or causes them to question whether to treat at all.

CMS data reveal trends in Part B drug spending

Denosumab, triptorelin pamoate both see increases in utilization

<table>
<thead>
<tr>
<th>HCPCS</th>
<th>Brand</th>
<th>Generic</th>
<th># Manufacturers</th>
<th>Total spending, 2017</th>
<th>Total units, 2017</th>
<th>Total beneficiaries, 2017</th>
<th>Avg. spending per dosage unit, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>J0897</td>
<td>Prolia*</td>
<td>Denosumab*</td>
<td>1</td>
<td>$1,238,722,483</td>
<td>74,787,573</td>
<td>470,360</td>
<td>$16.56</td>
</tr>
<tr>
<td>J9217</td>
<td>Eligard*</td>
<td>Leuprolide Acetate*</td>
<td>3</td>
<td>$267,302,327</td>
<td>1,282,638</td>
<td>153,539</td>
<td>$208.40</td>
</tr>
<tr>
<td>Q2043</td>
<td>Provenge</td>
<td>Sipuleucel-T/Lactated Ringers</td>
<td>1</td>
<td>$202,485,909</td>
<td>5,230</td>
<td>1,926</td>
<td>$38,716.24</td>
</tr>
<tr>
<td>J0775</td>
<td>Xiaflex</td>
<td>Collagenase Clostridium Hist.</td>
<td>1</td>
<td>$41,814,444</td>
<td>1,038,742</td>
<td>7,118</td>
<td>$40.25</td>
</tr>
<tr>
<td>J9031</td>
<td>BCG (Tice Strain) (J9031)*</td>
<td>BCG Live*</td>
<td>1</td>
<td>$23,359,842</td>
<td>184,570</td>
<td>32,322</td>
<td>$126.56</td>
</tr>
<tr>
<td>J3315</td>
<td>Treteral</td>
<td>Triptorelin Pamoate</td>
<td>2</td>
<td>$22,999,720</td>
<td>66,796</td>
<td>8,748</td>
<td>$344.33</td>
</tr>
<tr>
<td>J9155</td>
<td>Firmagon</td>
<td>Degarelix Acetate</td>
<td>1</td>
<td>$17,886,201</td>
<td>4,988,258</td>
<td>13,060</td>
<td>$3.59</td>
</tr>
<tr>
<td>J9280</td>
<td>Mitomycin</td>
<td>Mitomycin</td>
<td>2</td>
<td>$11,494,670</td>
<td>104,469</td>
<td>6,357</td>
<td>$110.03</td>
</tr>
<tr>
<td>J9202</td>
<td>Zoladex</td>
<td>Goserelin Acetate</td>
<td>1</td>
<td>$8,830,507</td>
<td>26,717</td>
<td>3,498</td>
<td>$330.52</td>
</tr>
<tr>
<td>J9357</td>
<td>Valstar</td>
<td>Valrubicin</td>
<td>1</td>
<td>$8,644,482</td>
<td>3,808</td>
<td>399</td>
<td>$1,144.29</td>
</tr>
<tr>
<td>J9201</td>
<td>Gemcitabine HCL*</td>
<td>Gemcitabine HCL*</td>
<td>13</td>
<td>$5,583,960</td>
<td>952,321</td>
<td>17,109</td>
<td>$5.86</td>
</tr>
<tr>
<td>J9225</td>
<td>Vanta</td>
<td>Hifrelin Acetate</td>
<td>1</td>
<td>$3,002,560</td>
<td>958</td>
<td>956</td>
<td>$3,127.67</td>
</tr>
<tr>
<td>J0696</td>
<td>Ceftriaxone*</td>
<td>Ceftriaxone In Is-Osm Dextrose*</td>
<td>14</td>
<td>$2,760,382</td>
<td>4,260,412</td>
<td>664,122</td>
<td>$0.65</td>
</tr>
<tr>
<td>J1071</td>
<td>Depo-Testosterone*</td>
<td>Testosterone Cypionate*</td>
<td>9</td>
<td>$2,406,845</td>
<td>104,399,702</td>
<td>63,888</td>
<td>$0.02</td>
</tr>
<tr>
<td>J1580</td>
<td>Gentamicin Sulfate*</td>
<td>Gentamicin Sulfate*</td>
<td>6</td>
<td>$265,060</td>
<td>173,728</td>
<td>79,859</td>
<td>$1.53</td>
</tr>
<tr>
<td>J3121</td>
<td>Testosterone Enantate</td>
<td>Testosterone Enantate</td>
<td>2</td>
<td>$75,107</td>
<td>1,946,843</td>
<td>1,768</td>
<td>$0.04</td>
</tr>
</tbody>
</table>

*Indicates multiple brand and/or generic names for a specific HCPCS code

Source: Adapted from Centers for Medicare & Medicaid Services data by Robert A. Dowling, MD
all. Drugs and biologicals may be a frequent target of medical reviews (bit.ly/reviewtopics).

Various attempts at reforming the Part B program have been made since its inception—with limited or unproven success at lowering costs. Yet it remains an active area of policymaking and scrutiny by the stewards of Medicare and the public. In this article, I take a look at Part B drug spending that may be of interest to the practicing urologist.

Total spending up nearly 6%
The Centers for Medicare & Medicaid Services (CMS) recently released detailed drug spending data for the years 2013-2017. “Spending” in this context includes the estimated total costs, including deductible, coinsurance, and Medicare spending. Total spending in 2017 for the Part B program was nearly $29.5 billion, up 5.94% from 2016 (bit.ly/partbdashboard).

Spend on any single drug may increase because of increased utilization, increased price, or both. Let’s take a closer look at some individual drugs that urologists typically use in their practice. (It is not possible using this data to determine what fraction of spending is “ordered” by urologists or the indication for any individual drug.)

Of 16 common drugs used in the urology office for Medicare beneficiaries (table), the drug with the largest 2017 total spend was denosumab ($1.24 billion). In 2017, utilization for denosumab increased 7.32%, spending per dose increased 6.35%, and total spending increased 14.15% compared to 2016. Denosumab spending has increased 4.31% per year over the last 5 years, which may explain why denosumab is the target of automated medical review in at least one state (Florida) (bit.ly/Proliareview).

The drug with the largest annual growth in spending per dose unit is mitomycin (47.38% annual growth); spending per dose on mitomycin increased 14.25% in 2017 alone, but total spending was down 42.05% largely due to a significant decrease in utilization (almost 50%).

In the androgen suppression market (figure), leuprolide acetate (Lupron) spending in 2017 was $267 million (7.47% less than in 2016) or 83.5% of spending in this drug class. Over the last 5 years, growth in spending per dose has been flat. The largest growth in utilization was seen with triptorelin pamoate, and the largest decrease in utilization was with histrelin acetate. Triptorelin pamoate has seen the largest annual average growth in spending per dose—17.25%.

In general, among these 16 drugs, those with one or two manufacturers have seen positive annual growth in spending per dose (a surrogate for price), and those with three or more manufacturers have seen negative annual growth. Gentamicin is an exception to this rule, with six manufacturers, 16% growth in spending per dose in 2017, and 7% average annual growth over the last 5 years.

Bottom line: Of 16 Part B drugs commonly used by urologists, seven drugs increased in spending faster than Part B spending overall in 2017 (5.94%). The drug with the largest total spend is denosumab, and the drug with the largest annual growth in spending per dose over the last 5 years is mitomycin (47.38%). Mitomycin, valrubicin, and histrelin acetate saw the largest decreases in both utilization and total spending in 2017 compared to 2016. Urologists should be familiar with the average sales price and trends of the common Medicare Part B drugs administered to their patients.
The pros and cons of buying vs. renting your home
Ownership has advantages, but debt levels and contracts are considerations

Q: I’m beginning my urology career, and my spouse and I are trying to decide if we should buy a home or continue renting. Which is the better option?
A: The decision to purchase a home or continue renting is a difficult one. Many early-career physicians struggle financially through medical school and residency (perhaps a fellowship too), and once they are an attending physician, want to increase their standard of living dramatically. This often includes purchasing a home. Buying a home has advantages, but it also has its risks and may not be for everyone.

The advantages to purchasing a home are fairly straightforward. You can build equity in the property. The value of the property may appreciate, acting as an investment. However, just like any investment, there is the risk that the value drops instead of rises. There may also be state and federal tax benefits to homeownership.

The downsides to home ownership are also fairly straightforward. There are added expenses such as homeowner’s insurance, a flood policy, homeowners association fees, property taxes, and higher utility bills. You are responsible for repairs and remodeling. Additionally, home ownership makes it very difficult to relocate.

Those are the more obvious pros and cons, but the debate between homeownership and renting is often more complicated for physicians. Debt levels can be a serious concern. The 2018 median student loan debt for physicians entering their first year as an attending was $200,000. As an attending, a physician’s payments are likely going to jump up dramatically compared to their income-based payments during residency. Physicians should use caution and learn what their student loan responsibilities will be before taking out a mortgage.

Physicians should ask themselves if they really need to purchase a home right away or could they be better served renting for a few years.

Physicians can also be enticed by physician loans. These loans offer low-to-no required down payment, as well as favorable interest rates and terms. For some physicians, these can be excellent options. However, for others, it can result in unsustainable levels of debt. Not paying a down payment means a higher overall debt level, faster interest accumulation, and higher monthly payments. If a physician has $200,000 in student loans and takes out a $500,000 to $800,000-physician loan to purchase a home, they could find themselves $700,000 to $1,000,000 in debt before they’ve worked a day as an attending.

It is also important for physicians to remember their contracts when considering homeownership. Most first-time attending physician contracts are for 3- to 4-year periods. Following the first contract, many physicians look for new employment that is a better fit. This can result in looking for opportunities away from where they just purchased a home. Owning a home can make relocation difficult.

Additionally, most physician contracts only guarantee a salary for the first 2-3 years and then transition to a relative value unit structure. Many physicians see a drop in their income during this transition. If this drop is not planned for, a once-affordable mortgage may not be moving forward.

Physicians should ask themselves if they really need to purchase a home right away or could they be better served renting for a few years. Renting could buy time to determine if their current location is where they will put down long-term roots and buy time to save for a down payment that produces a manageable mortgage payment amount.

Overall, there is no one right answer. We recommend speaking with your financial adviser about the pros and cons of home ownership.

Q: Should I take money out of my investment accounts to put a down payment on a house?
A: The general rule of thumb is, if you think you can earn a higher long-term rate of return on your investments than the interest rate being charged on the mortgage, it makes sense to keep the money invested and pay the mortgage from cash flows. Interest rates currently remain relatively low (about 4%, as of April 1, 2019). Depending on your investment allocation, outperforming current interest rates over a 30-year period should be achievable.

However, if the money is absolutely needed to make a down payment so the monthly cost of purchasing the home is reasonable, then a withdrawal can be OK. Do not tap into an emergency fund to make the down payment. This money should come from a different source.

FINANCIAL TIPS
- Physicians should use caution and learn what their student loan responsibilities will be before taking out a mortgage on a home.
- It is important for physicians to remember their contracts when considering homeownership.
- If you think you can earn a higher long-term rate of return on your investments than the interest rate being charged on the mortgage, it makes sense to keep the money invested and pay the mortgage from cash flows.

The information in this column is designed to be authoritative. The publisher is not engaged in rendering legal, investment, or tax advice.
Why you should take a risk-aware approach to cybersecurity
A compliance-focused mindset fails to adequately address threats to a practice

JOSEPH E. GUIMERA, JD
Mr. Guimera is an attorney and founder of GuimeraLaw Cybersecurity Advisory, where he helps organizations plan, build, and execute cybersecurity programs. This article was originally published by Urology Times sister brand Physicians Practice.

Medical practices often ask, “Is our security program compliant?” While meant with the best of intentions, this is the wrong question to ask. The question practices should be asking is, “Is our security program operating effectively?”

Security-by-compliance
“Is our security program compliant?” evidences a compliance-focused mindset that provides a minimum level of security.

Many medical practices base their cybersecurity program on government or industry frameworks, such as the Department of Commerce’s National Institute of Standards and Technology Cybersecurity Framework, the Department of Health and Human Services’ Health Industry Cybersecurity Practices, and the Health Information Trust Alliance Framework. These frameworks provide cybersecurity best practices, templates, and other resources to create cybersecurity programs.

The problem is that these frameworks are intended to apply to the broadest audience possible. They are non-customizable and apply to practices of every size, every medical specialty and subspecialty, and every configuration of technologies and software. The minimum baseline created by the framework may be sufficient for risk mitigation and compliance for some practices, but for many practices it will not be enough.

Compliance to these frameworks, therefore, leads to a check-the-box approach that provides a low level of security but fails to adequately address actual threats to a practice.

Furthermore, frameworks are static documents that cannot keep up with the constantly changing threat landscape. Identifying a new threat, evaluating it against the framework, and revising the framework in order to address the threat all take time. During this time, practices adhering to the framework are unprotected from the threat.

Compliance-based efforts are blind to the specific business needs, potential risks, and security objectives of a practice. Taking actions merely to ensure that minimum requirements of a framework are met can lead to spending resources unnecessarily while still leaving a practice at risk.

Risk-conscious and security-aware
“Is our security program operating effectively?” promotes a risk-conscious, security-aware approach that allows a practice to customize cybersecurity efforts to ensure that measures taken are optimized and cost-effective. Risk management becomes the primary focus of the cybersecurity process, and specific security measures become secondary.

By focusing on risk management, practice leaders can evaluate the risks associated with their infrastructure and data assets, identify the acceptable levels of risk, and pinpoint the resources available or necessary to minimize risk.

This approach recognizes that not all risks are the same. The consequences of some risks are so low they can be ignored, while the consequences of other risks are so severe they must be avoided at all costs. Adopting this approach requires a practice to identify each risk, analyze the likelihood and consequence of each risk with and without an appropriate security measure, and evaluate whether the risk is acceptable or serious enough to warrant adopting a security measure. A risk-aware approach does not eliminate the consideration of compliance, but merely treats it as another risk.

By focusing on risk management, practice leaders can evaluate the risks associated with their infrastructure and data assets, identify the acceptable levels of risk, and pinpoint the resources available or necessary to minimize risk. It is a more encompassing view that addresses a practice’s unique risks, threats, vulnerabilities, risk tolerance, and existing and proposed security measures. It also takes into account the human element of cybersecurity since a risk-based approach must involve personnel from all areas of a practice and account for their strengths and weaknesses.

Practices with this approach have a dynamic cybersecurity program that can evolve quickly with changes to a practice’s goals and objectives, patient care, industry, technology, the threat landscape, and laws and regulations.

In the event of a breach, a risk-aware approach offers an additional benefit over a compliance-based approach. One question arising following a breach is whether the breached party met its due diligence obligation (based on industry-accepted norms or standards of care) to take appropriate actions to protect against the breach. But those norms and standard are not always clear. For cybersecurity, they may vary from industry to industry, or in the case of medical practices, from subspecialty to subspecialty. In some situations, the standard of care may not even align with industry norms.

Documenting that a risk management plan was carefully considered and adopted may go further in meeting the due diligence standard than a compliance-based approach.

“Is our security program compliant?” or “Is our security program operating effectively?” One question will lead toward creating a robust set of cybersecurity controls designed to meet the specific business needs of your practice. The other will lead to adopting a one-size-fits-some regulatory or industry framework.

Which question will you ask?
Spring brings budget cuts, Stark debate, and hope for GME

Department of Health and Human Services initiative would streamline Stark Law

Spring has been an active season for developments in Washington that impact health care, from proposed budget cuts to modernizing the Stark Law and boosting Graduate Medical Education funding.

The Trump administration recently submitted a new budget proposal to Congress for fiscal year 2020. The budget includes some small cuts to domestic discretionary spending on agencies such as the Centers for Disease Control and Prevention ($5.28 billion) and the National Institutes of Health ($6 billion). The budget also includes some reductions to mandatory spending programs such as Medicare and Medicaid. The scale-back remains relatively minor compared to the overall budget for these programs, but Democratic leadership in the House of Representatives asserts that the domestic reductions are too much.

Health and Human Services Secretary Alex Azar testified in support of the 2020 budget proposal before several committees in the House and Senate on March 12. He said the cuts are necessary to help reign in spending. Azar laid out his main priorities for HHS, including increased access to and affordability of health insurance. In addition, he mentioned shifting Medicare toward a more value-based system, lowering prescription drug costs, and embracing telehealth services, which will help rural communities.

Referring to Medicare as a “bedrock of our society,” Azar said he is determined to keep the program solvent by driving out waste, fraud, and abuse. He said the recent White House budget proposal continues the shift toward value-based and outcome-based care, adding that “the future of Medicare must be driven by value.”

At the regulatory level, HHS and Secretary Azar have taken up a proposal to modernize and streamline the Stark Law in an effort to reduce regulatory burdens. Secretary Azar discussed an HHS initiative known as the “Regulatory Sprint to Coordinated Care.” The agency is undergoing a “comprehensive reexamination of rules that may be impeding coordinated care,” he said. As a “sprint,” he noted the goal is to issue rulemaking to alleviate certain regulatory impediments “as soon as possible.”

In his speech, Secretary Azar identified the Stark Law as a major impediment to value-based compensation arrangements. He noted that the law is necessary in a fee-for-service environment to prevent incentives to increase the volume of services. However, as the Trump administration seeks to transition to payment based on outcomes rather than volume, Azar views the Stark Law as an obstacle. The Stark Law was the first issue targeted by the administration's Sprint to Coordinated Care, with the Office of Inspector General seeking comments on a potential exception for advanced payment models and other changes in a Request for Information issued in June.

The AACU has long advocated for improvements to the nation’s Graduate Medical Education system.

Strong language from HHS Secretary regarding rebates

Shifting to the administration’s focus on affordable health care, Azar’s discussion of Anti-Kickback Statute reforms focused on the recent proposed rule to eliminate discount safe harbor protection for formulary rebates. As he has done in prior remarks on pharmaceutical rebates, Azar used strong language in attacking the use of rebates.

“Any approach to drug pricing that does not tackle the issue of rebates—whether through our proposed approach or otherwise will simply not get list prices down,” he said. “If you stand for rebates, you stand for ever-higher list prices, and against transparency, and lower patient out-of-pocket costs at the pharmacy. It’s that simple.”

(Also see, “HHS Leader Addresses Referral Law Reform, Administrative Burdens,” bit.ly/hhsspeech.)

At the same time, the AACU is working with a coalition to promote a legislative solution. The bill sponsored by Rep. Larry Bucshon (R-IN-8) in 2017 is gaining traction and has a chance at being proposed again in the House of Representatives for the 116th Congress. The Senate has already proposed a similar bill to Bucshon’s, which is currently sponsored by Sen. Rob Portman (R-OH) and Sen. Michael Bennet (D-CO).

Graduate Medical Education funding is also seeing some success in both chambers of Congress. The number of Medicare-funded residency positions has been frozen since 1997, when the Balanced Budget Act limited payments at 1996 levels. The AACU has long advocated for improvements to the nation’s GME system, the most comprehensive effort being the Physician Shortage Reduction Act, which was reintroduced in the Senate by Sens. Bob Menendez (D-NJ), John Boozman (R-AR), and Chuck Schumer (D-NY). A concurrent bill has been introduced in the House by Rep. Terri Sewell (D-AL-7) and Rep. John Katko (R-NY-24). Both House and Senate bills have bipartisan sponsorship, providing a decent chance of some progress being made on this issue. Increasing funding in Medicare may be difficult, but funding for residency positions has been growing in other departments such as the Department of Veterans Affairs.
Test used to identify BRCA mutations may play role in mCRPC

Myriad Genetics, Inc. has expanded its companion diagnostic collaboration with AstraZeneca and Merck. Under the expanded collaboration, the companies will use BRACAnalysis CDx to identify germline BRCA mutations in men who have metastatic castrate-resistant prostate cancer and are enrolled in the phase III PROfound (NCT02987543) study. If the study is successful, Myriad says it intends to file a supplemental premarket approval application with the FDA for BRACAnalysis CDx to be used as a companion diagnostic to olaparib (Lynparza) for its use in this patient population. The collaboration between Myriad and AstraZeneca on olaparib began in 2007 and has resulted in multiple regulatory approvals for BRACAnalysis CDx.

Phase III data for UTUC agent presented at AUA 2019

UroGen Pharma Ltd. has announced a new presentation from the pivotal phase III OLYMPUS trial of UGN-101 (mitomycin gel) for instillation, an investigational formulation for the primary non-surgical treatment of patients with low-grade upper tract urothelial cancer (LG UTUC). The analysis, which discusses the minimally invasive chemosaturation approach of UGN-101 to potentially treat LG UTUC tumors, including those that are unresectable, was presented at the AUA annual meeting in Chicago. The company initiated its rolling submission of the UGN-101 New Drug Application to the FDA in December 2018.

Company-practice collaboration to support validation of PCA test

Anixa Biosciences, Inc. has extended and expanded its collaboration with New Jersey Urology, LLC (NJU). Pursuant to the extension, NJU will continue to provide patient samples for Anixa’s ongoing Cchek early cancer detection study. Further, the collaboration has been expanded to include support of clinical validation of Anixa’s Cchek Prostate Cancer Confirmation test with Anixa’s commercialization partner, ResearchDx. The Cchek platform is a series of inexpensive noninvasive blood tests for the early detection of solid tumors, which is based on the body’s immune response to the presence of a malignancy.

Company teams with researchers on hyperoxaluria Tx trial

Allena Pharmaceuticals, Inc. announced an agreement with the Duke Clinical Research Institute (DCRI), Durham, NC, to support the URIROX-2 phase III clinical trial of reloxaliase in enteric hyperoxaluria. DCRI will establish and lead an academic coordinating center for URIROX-2, one of two ongoing pivotal phase III clinical trials evaluating the safety and efficacy of reloxaliase as a novel therapy for patients with enteric hyperoxaluria. The center will establish an academic steering committee to provide independent oversight and support investigator engagement for URIROX-2. The academic coordinating center will also contribute scientific expertise and thought leadership to the data analysis and publication strategy, including health economics outcomes research, in support of the development of reloxaliase as a novel therapeutic candidate for patients with enteric hyperoxaluria.
FDA approves first-line treatment for advanced renal cell carcinoma

The FDA has approved pembrolizumab (KEYTRUDA), a PD-1 inhibitor, in combination with axitinib (Inlyta), a tyrosine kinase inhibitor, for the first-line treatment of patients with advanced renal cell carcinoma (RCC). The approval is based on findings from the pivotal phase III KEYNOTE-426 trial, which demonstrated significant improvements in overall survival (OS), progression-free survival (PFS), and objective response rate (ORR) for pembrolizumab in combination with axitinib compared to sunitinib (Sutent). For the main efficacy outcome measures of OS and PFS, the pembrolizumab–axitinib combination reduced the risk of death by 47% compared to sunitinib (HR=0.53 [95% CI: 0.38-0.74]; p<.0001); for PFS, the pembrolizumab–axitinib combination showed a reduction in the risk of progression of disease or death of 31% compared to sunitinib (HR=0.69 [95% CI: 0.57-0.84]; p=.0001). The ORR was 59% for patients who received the pembrolizumab–axitinib combination (95% CI: 54-64) and 36% for those who received sunitinib (95% CI: 31-40) (p<.0001). For more on KEYNOTE-426, see “Pembro plus axitinib is new standard for metastatic urothelial Ca agent” (page 4). This is the first indication for pembrolizumab in advanced RCC and the first anti-PD-1 therapy FDA-approved as part of a combination regimen that significantly improved OS, PFS, and ORR versus sunitinib in patients with advanced RCC, according to Merck.

For more information, visit www.merck.com.

Accelerated approval granted for metastatic urothelial Ca agent

The Janssen Pharmaceutical Cos. of Johnson & Johnson announced that erdafitinib (BALVERSA) received accelerated approval from the FDA for the treatment of adults with locally advanced or metastatic urothelial carcinoma (mUC) that has susceptible fibroblast growth factor receptor (FGFR)3 or FGFR2 genetic alterations and who have progressed during or following at least one line of prior platinum-containing chemotherapy, including within 12 months of neoadjuvant or adjuvant platinum-containing chemotherapy. Erdafitinib is the first FGFR kinase inhibitor approved by the FDA, according to Janssen. Continued approval for this indication may be contingent upon verification and description of clinical benefit in confirmatory trials. The FDA simultaneously approved a companion diagnostic for use with erdafitinib, the QIAGEN therascreeN FGFR RGQ reverse-transcription-polymerase chain reaction kit, which is the first polymerase chain reaction–based companion diagnostic approved to detect FGFR alterations.

For more information, visit www.jnj.com.

Trocar allows one-handed laparoscope/hand instrument control

The Fujifilm InterLock Trocar is a novel tandem motion visualization device that allows a surgeon to control both a laparoscope and a hand instrument at the same time and with one hand. The device is designed to provide surgical access through a single incision for both a 5-mm hand instrument and the Fujifilm Ultra-Slim “Chip on the Tip” HD Video Laparoscope. The technology allows the surgeon full control of the scope throughout the procedure by directly controlling the hand instrument. Tandem motion of the hand instrument and the Fujifilm scope is achieved through a coupling mechanism within the InterLock Trocar. Additional features include an integrated lens-cleaning function, which allows the lens to be cleaned and restores image quality without removing the scope from the trocar—saving time and reducing the need for repositioning, according to Fujifilm New Development U.S.A., Inc. The device has received 510k clearance from the FDA and will be commercially available in the United States later this year.

For more information, visit www.fujifilmmis.com.

Newly approved oral capsules are for TRT in certain adult men

The FDA has approved testosterone undecanoate capsules for oral use (CIID) (JATENZO) for testosterone replacement therapy in adult males for conditions associated with a deficiency or absence of endogenous testosterone: primary hypogonadism (congenital or acquired) and hypogonadotropic hypogonadism (congenital or acquired). JATENZO is a first-in-class proprietary softgel oral formulation and the first oral testosterone medicine approved in more than 60 years, according to Clarus Therapeutics. FDA approval is based on phase III inFUSE clinical trial data, which showed 97% of hypogonadal men treated with JATENZO achieved a daily average testosterone level in the normal range, with an adverse event profile generally consistent with other testosterone replacement therapies.

For more information, visit www.clarustherapeutics.com.

New version of PI-RADS prostate imaging system released

The PI-RADS Steering Committee—a collaboration of the American College of Radiology, European Society of Urogenital Radiology, and AdMcTech Foundation—has released an update, Prostate Imaging Reporting and Data System version 2.1 (PI-RADS v2.1). This version introduces several modifications while maintaining the original framework of assigning scores to individual imaging sequences and using these scores to derive, on a lesion-by-lesion basis, an overall likelihood that an abnormal area in the prostate represents clinically significant prostate cancer.

For more information, visit www.acr.org.

Delivery model works with physicians to help treat pelvic floor disorders

Consortia Health has created an integrated delivery model working with physicians to provide diagnosis, treatment, and educational support to address pelvic floor disorders, including urinary incontinence, pelvic pain, and sexual health. Consortia Health says its rehabilitation therapy has proven effective in minimizing incontinence symptoms in up to 95% of patients. The treatment consists of weekly 30-minute sessions using FDA-approved neuromodulation technology designed to retrain the pelvic floor muscles.

For more information, visit www.consortiahealth.com.
How are you educating yourself on transgender issues?

We're not typically well-educated on transgender issues, but we deal with them. We need background knowledge regarding the surgical experience and increased knowledge of what transgender is, and the proper vocabulary. That's definitely something we can work on.

There are centers of excellence for surgeries; they aren't done everywhere. The procedures aren't common, so you don't want every hospital doing one every 2 years.

At Brown, we have an active, cutting-edge adolescent medicine program. I see patients who are referred for an orchietomy, for example, if they have gone through all the steps. We start hormones earlier than we used to. It's been proven to make the transition from male to female a little easier, even from female to male.

We have a multidisciplinary team involving social work, psych, pediatrics, endocrinology, and urology, and we're expanding into reconstructive surgery. We did our first adult vaginoplasty, from male to female, about a year ago. We haven't done adolescent surgery; they just haven't been ready, which is not surprising.

I am involved with transgender education, but don't teach transgender surgery. I think we have one lecture a year in our residency program about the adolescent program. The surgery itself is not taught in residency because access to those patients is infrequent, but residents are welcome to observe.

We see very early stages of transgenderism in pediatrics; it's more common than we think. They may declare themselves when slightly older teenager/young adults, but I treat transgender patients for all urologic issues.

It takes education in your practice: the right pronouns, proper vocabulary. Just changing medical records is tough. Hospital records can be changed, then patients get to an office and don't want to be referred to as he/she. You can change intake forms to differentiate sex/gender because their sex may not be their gender. That's something all medical students should be educated in."

Liza Aguiar, MD / Providence, RI

B

B

basically, we're looking for ways to educate ourselves regarding transgender medical care—what is available in the literature versus what is political correctness. What is science versus emotion is very difficult to discern. All we can do as physicians is reach out to patients with dignity and respect for who they recognize themselves to be. Right now, I'm not sure there's much else to do.

I've found a lot of literature to be somewhat biased to one degree or another. A lot of it, quite frankly, is in the lay press, not so much in our literature. What is the science behind transgender? I've found the amount of evidence-based information really lacking.

Urologists are trying to answer basic questions. What are the definitions? Where are the fine lines drawn between transgender versus transsexual versus homosexual and how much crossover is there between them? Where do you put an XY female who is attracted to men? Then, is that person transgender, genetically male but they identify as female? Just starting with the definitions, where are we?

The kind of gradations and where they fit in that spectrum is hard for urologists and doctors. You don't want to be offensive to anybody."

Scott Montgomery, MD / Merrim, KS

Because we touch on the sexual medicine/reproductive health side of things, it's a hot topic in this state. I'm immediate past president of the Washington State Urology Society; we focused on this because a lot of people want to learn more. We're bringing a physician in to talk about it at our state society meeting, hoping to learn from an expert.

The AUA has a focus on transgender medicine as well. Most urologists really aren't trying to dabble in the reconstructive surgery aspect of transgender medicine, but most of us want to be respectful and use our pronouns appropriately.

There's a lot of interest in our community in treating folks with respect and understanding. That's what we're after education-wise.

Centers of excellence are the only ones who should be doing this type of care, because it's a multispecialty approach—you need someplace that has the resources to provide multispecialty support. But these patients are going to show up in ERs with urgent issues. We need to understand the anatomy and how things are reconstructed so we can deal with them appropriately.

As an example, if you have a transgender patient who's had surgery show up with urinary retention in your ER 6 weeks after an intervention, it's important to understand the procedure they had, so we're better able to care for those issues.

For something that's not an acute problem, we'll send them back to their surgeons."

Jeffrey Evans, MD / Burien, WA

ADVERTISERS INDEX

Companies featured in this issue

To obtain additional information about products advertised in this issue, use the contact information below. This index is provided as an additional service. The publisher does not assume any liability for errors or omissions.

<table>
<thead>
<tr>
<th>Advertiser Name</th>
<th>Brand/Product</th>
<th>Page #</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accurate Surgical &amp; Scientific Instruments</td>
<td>Microspike</td>
<td>7</td>
<td><a href="http://www.accuratesurgical.com">www.accuratesurgical.com</a></td>
</tr>
<tr>
<td>Boston Scientific</td>
<td>BSC Urology</td>
<td>CV4</td>
<td>bostonscientific.com/beyondstents</td>
</tr>
<tr>
<td>NeoTract</td>
<td>NeoTract/Teleflex</td>
<td>CV3</td>
<td><a href="http://www.urolift.com">www.urolift.com</a></td>
</tr>
<tr>
<td>Physician Reimbursement Systems</td>
<td>-</td>
<td>31</td>
<td><a href="http://www.prsnetwork.com">www.prsnetwork.com</a></td>
</tr>
<tr>
<td>Sun Pharma</td>
<td>YONSA</td>
<td>23-24</td>
<td><a href="http://www.YonsaRx.com">www.YonsaRx.com</a></td>
</tr>
<tr>
<td>UroGen Pharma</td>
<td>Kidney Preservation Campaign</td>
<td>CV2</td>
<td><a href="http://www.urogen.com">www.urogen.com</a></td>
</tr>
</tbody>
</table>
The Future of Patient Positioning

Excellent for in-office procedures

- Cushioned GStirrup® boots provide a safe and comfortable place for patients to rest their feet and legs
- Easily slide onto current footrests on almost any table
- No tools required, installs in seconds
- Helpful for the elderly or patients with neurological disorders
- Qualifies for the Disabled Access Tax Credit of almost 50%

The GStirrup meets US Access Board standards and a tax credit is available when set is purchased under the American Disability Act. Tax form 8826

GStirrup

To order contact your favorite distributor rep. or order direct at 844-587-8719 or www.GStirrup.com

$100 off with coupon Gstirrup2019

Recruitment

NEW YORK

General Urologist Surgeon
Plattsburgh, NY

The Department of Surgery at the University of Vermont College of Medicine is seeking a Clinical Practice Physician in the Division of Urology to join the Champlain Valley Physicians Hospital (CVPH) in Plattsburgh, New York. CVPH is a progressive medical center with nine state-of-the-art OR’s and Ambulatory Surgery Center. This position offers the unique opportunity to work in a community setting while having an active affiliation with Vermont’s only Academic Medical Center; the only ACS verified Level 1 trauma center in the state providing tertiary care to patients from Vermont and Northern NY. Serving the patients from Upstate New York for decades, the local urologic surgery practice recently joined the faculty at the University of Vermont and are now seeking an additional colleague to join the dynamic Urology faculty that span the network hospitals. Specifically, the Division seeks applications from individuals seeking a community Urology practice employment opportunity with a collegial and collaborative setting with University support.

Applicants must be board certified or board eligible and eligible for medical licensure in the state of New York. This is a full-time, 12 month, salaried position.

Plattsburgh is located on the shores of Lake Champlain, near the Adirondack Mountains, Olympic-Lake Placid region, Montreal and Burlington, VT.

The University is especially interested in candidates who can contribute to the diversity and excellence of the academic community through their research, teaching, and/or service. Applicants are requested to include in their cover letter information about how they will further this goal.

The University of Vermont is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, protected veteran status, or any other category legally protected by federal or state law. The University encourages applications from all individuals who will contribute to the diversity and excellence of the institution.

Interested individuals should apply online at https://www.uvmjobs.com/postings/31529 (position number 00024781).

Inquiries may be directed to Mark Plante, MD, FRCS(C), FACS, Division Chief, via Kristin Allard; Kristin.Allard@uvmhealth.org
The Division of Urology at the University of Vermont College of Medicine in alliance with the University of Vermont Medical Center, is seeking a Clinical Practice Physician who is board eligible/board certified Urologist to join the Urology service at our affiliate community medical center, Central Vermont Medical Center (CVMC). This position offers the unique opportunity to work in a community setting while still being involved with an academic center. The successful applicant must have completed an American Board of Urology approved urology residency, be eligible for medical licensure in the State of Vermont and eligible to work in the United States. Duties will include general urologic patient care (adult and minor pediatric) with potential opportunities for the teaching of medical students and urology residents. This is a full-time, 12 month, salaried position with attending staff privileges at Central Vermont Medical Center.

The University is especially interested in candidates who can contribute to the diversity and excellence of the academic community through their research, teaching, and/or service. Applicants are requested to include in their cover letter information about how they will further this goal.

The University of Vermont is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, protected veteran status, or any other category legally protected by federal or state law. The University encourages applications from all individuals who will contribute to the diversity and excellence of the institution.

Interested individuals should apply online at http://www.uvmjobs.com/postings/33676 (position number 00023212).
Inquiries may be directed to Mark Plante, MD, FRCS(C), FACS, Chief of Urology,
Via Kristin Allard Kristin.Allard@uvmhealth.org

**PRODUCTS & SERVICES**

**PROSTATE CANCER 20/20:**
A Practical Guide to Understanding Management Options for Patients and Their Families is an unbiased and comprehensive supplement to the urology consult intended for:

- Newly diagnosed patients
- Patients who have failed primary treatments
- Patients with urinary and sexual side effects
- Family members

Available on Amazon and Apple
For a promotional PDF copy, email: ProstateCancer2020@gmail.com

**GET FAST ACTION!!**

WITH THE DYNAMICS OF MARKETPLACE ADVERTISING!
The Department of Surgery at the University of Vermont College of Medicine and its affiliated medical centers, the University of Vermont Medical Center and Vermont Children’s Hospital, is seeking a Pediatric Urologic Surgeon. The University of Vermont Medical Center and Vermont Children’s Hospital, along with the university, offers a full spectrum of pediatric medical and surgical specialties. The institution has a Level III NICU, a fully staffed PICU, and serves as the regional adult and pediatric regional trauma center. The Division of Urology holds a long-standing reputation as a premier urologic surgery practice for the surrounding communities’ pediatric and adult patients with urologic care needs and enjoys an excellent relationship with the Department of Pediatrics. With a highly respected residency training program with a robust compliment of dynamic faculty across the network hospitals, the Division seeks applications from individuals seeking an academic career in a collegial and collaborative setting.

Applicants must be BE/BC in Urology and Pediatric Urology, eligible for licensure in the State of Vermont, and eligible to work in the United States. They must have experience in the teaching of medical students and surgical residents, and the clinical and research activities of an academic division of Pediatric Surgery.

This is a full-time, 12-month salaried faculty appointment in the Clinical Scholar Pathway at the rank of Assistant or Associate Professor and carries with it attending staff privileges at University of Vermont Medical Center, a level 1 trauma center that serves as a tertiary care facility serving Vermont and northern New York State. Salary is competitive and commensurate with ability and experience.

Burlington, is located on the eastern shore of Lake Champlain between the Adirondack and Green Mountains, is consistently ranked one of the top places to live and work. Numerous recreational and cultural opportunities across four seasons are available, with Vermont considered to be an outstanding environment to practice medicine.

The University is especially interested in candidates who can contribute to the diversity and excellence of the academic community through their research, teaching, and/or service. Applicants are requested to include in their cover letter information about how they will further this goal.

The University of Vermont is an Equal Opportunity/Affirmative Action Employer. Applications from women, veterans, individuals with disabilities and people from diverse racial, ethnic, and cultural backgrounds are encouraged.

Interested individuals should apply online at https://www.uvmjobs.com/postings/30302 (position number 00024730). Inquiries may be directed to Mark Plante, MD, FRCS(C), FACS, Division Chief, via Kristin Allard Kristin.Allard@uvmhealth.org

FOR PRODUCTS & SERVICES RECRUITMENT PLEASE CONTACT:

JOANNA SHIPPOLI at
800-225-4569 x 2615 or
E-mail: jshippoli@mmhgroup.com
ESWL reimbursement slashed by 22%
Urology groups lobbying for changes by 2020

The 35-day government shutdown over President Trump’s border wall may have had a direct impact on many urologists beyond the many inconveniences and the cost to taxpayers that it caused—a reduction of 22% in the reimbursement rate for a popular procedure.

Because of the shutdown, leaders representing urology were unable to meet with officials at the Centers for Medicare & Medicaid Services (CMS) to discuss their concerns regarding the agency’s Hospital Outpatient Prospective Payment System (OPPS) and Ambulatory Surgery Center (ASC) Payment System final rule for 2019.

The rule, which has the effect of slashing reimbursement to ASCs for extracorporeal shock wave lithotripsy (ESWL) by 22%, will make it difficult for many patients in rural communities to gain access to this procedure as they seek treatment for kidney stones, according to the major groups representing urologists.

AUA, LUGPA, AACU seek meeting with CMS

Although unable to change CMS policy for this year, officials from the AUA, LUGPA, and the AACU are working together hoping to convince CMS to make meaningful changes in its 2020 OPPS-ASC payment rule. At press time, a working group representing the three organizations was seeking a meeting with CMS officials to discuss the matter.

At issue is the 2019 rule’s migration of ESWL from Ambulatory Payment Classification (APC) 5375 to 5374, which LUGPA, in Jan. 2 written comments to CMS, said would result in ASCs seeing their ESWL payment rates slashed by some 22%, well below the cost of providing the service. As a result, LUGPA cautioned, many ASCs, particularly those in rural areas with insufficient volume, would be unable to provide ESWL services and patients would be forced to visit hospital outpatient departments.

LUGPA President Deepak Kapoor, MD, explained that by shifting lithotripsy to a lower APC “bucket,” while hospitals make less money, it is still sufficient to cover their cost. But, he said, “CMS did not recognize that most people do not own their own lithotripsy machines. Mobile ESWL providers charge the facility for that machine depending on the locale. Most people rent the machine for the day along with the technical personnel to operate it.”

The change has implications even beyond the urology APCs that the agency announced in the final rule either for ESWL alone (Code 50590) or for all affected urology procedures until the agency can consider the implications that the payment changes will have on access to ESWL in the ASC setting.

“We had planned on meeting with CMS during the comment period after the final rule was issued, but we got timed out because of the government shutdown,” said Dr. Kapoor. “AUA, AACU, and LUGPA are all working together to help CMS understand the economic ramifications of what they’re doing, as well as the impact on access to care particularly on lower volume hospitals in rural areas.”

DEEPAK KAPOOR, MD
LUGPA PRESIDENT

“AUA, AACU, and LUGPA are all working together to help CMS understand the economic ramifications of what they’re doing, as well as the impact on access to care particularly on lower volume hospitals in rural areas.”

“Historically, CMS recognized the uniqueness of lithotripsy and considered it in its own bucket. That’s really the ideal solution and what we want to advocate for.”

LUGPA suggests solutions

In its Jan. 2 letter to CMS Administrator Seema Verma, LUGPA offered suggested solutions to the problem:

• It could adjust the ASC payment to a higher percentage of the OPPS rate to account for the equipment-intensive nature of the procedure.
• It could place HCPCS Code 50590 in a newly created APC 5374A with a payment rate in between the rates set for APCs 5374 and 5375.
• It could undo the changes in assignments within the urology APCs that the agency announced in the final rule either for ESWL alone (Code 50590) or for all affected urology procedures until the agency can consider the implications that the payment changes will have on access to ESWL in the ASC setting.

“Moving procedures around within APCs fundamentally alters reimbursement for every other APC because they figure it on weighted cost,” he explained. “When you move the CPT code for lithotripsy, because of the volume of services it completely changes the dynamics of how other procedures within the APC are paid. Consequently, it actually becomes much more complicated than simply moving ESWL back to the original APC.

“ESWL reimbursement slashed by 22%”

FAST FACTS
A 22% drop in reimbursement to ambulatory surgical centers for extracorporeal shock wave lithotripsy:
- Comes from the migration of ESWL from Ambulatory Payment Classification 5375 to 5374 in CMS’ Hospital Outpatient Prospective Payment System and Ambulatory Surgery Center Payment System 2019 final rule
- Will leave many ASCs unable to provide ESWL services, forcing patients to visit hospital outpatient departments
- Is the subject of a coordinated effort from the AUA, LUGPA, and the AACU to fix the problem for 2020
Why physician testimony is so important

Defendants found to be argumentative, evasive

How important is the quality of physician’s testimony—and even his or her demeanor—in a medical malpractice case? Let’s consider a case that involves the award of over $1.7 million to the estate of a deceased state prisoner for substandard care constituting medical malpractice for approximately 2 years, resulting in death from stage IV urothelial cancer.

How important is the quality of physician’s testimony—and even his or her demeanor—in a medical malpractice case? A case involving an award of over $1.7 million to the estate of a state prisoner who died from stage IV urothelial cancer demonstrates how vital credible, believable testimony is.

The claimant alleged that the defendant (the state) failed to diagnose or properly treat her for cancer of the ureter, which ultimately led to her death while the case was being tried. The court acknowledged the long-held rule that where a state engages in functions such as providing medical and/or psychiatric care, the state is held to the same duty of care as private individuals.

The claimant in this case had multiple complaints of flank pain and hematuria over a 2-year span. When she was transferred to an emergency room for assessment of these complaints, a computed tomography scan revealed moderately severe hydronephrosis and non-obstructing calculi. The hospital diagnosed the claimant with acute abdominal pain and likely urolithiasis that had resolved. No follow-up was scheduled.

The claimant was then seen three times in the next month at the prison infirmary, each time with flank pain and hematuria. She was again returned to the same emergency department less than 6 weeks from her first presentation with flank pain and dark urine. Another CT scan was performed, showing left hydronephrosis with non-obstructing calculi in the lower pole. The findings were consistent with a left ureteropelvic junction obstruction. The emergency medicine physician consulted with a urologist, who recommended outpatient urology follow-up.

Physicians: Follow-up not recommended

The treating physicians at the prison denied ever being informed that urology follow-up was recommended, yet admitted that there is an ongoing obligation of treating physicians to review previous treatment of a patient in order to provide ongoing medical care. The treating physicians further denied seeing a copy of the CT scan report from the hospital.

After another dozen complaints of flank pain and hematuria over about 2 years, the claimant finally saw a urologist and was diagnosed with urothelial cancer. This diagnosis initially required two surgical procedures including a stent placement and removal of the left kidney, ureter, and bladder cuff. Post-surgical chemotherapy and radiation were commenced and completed. Two years later, the cancer had resurfaced and metastasized into nearby lymph nodes.

The court’s decision in this case points to a number of contributing factors. While not specific to urology, the points transcend multiple fields of medicine.

• the presence of flank pain and hematuria over the course of 2 years, in the setting of CT scans demonstrating hydronephrosis.

The third expert, from a medical oncology perspective, was additionally able to clearly delineate the origin, timing, and spread of the claimant’s cancer, to which there was no rebuttal as the state did not offer an expert witness in this field. Moreover, this expert witness was competent to testify as to the claimant’s diminishment in life expectancy over the course of treatment and the excessive treatment she endured given the delay in diagnosis and treatment.

The case highlights the importance of the quality of physician testimony, and that it be genuine and cooperative. It also points out the asymmetry that existed between the expert witnesses for the two parties. Continuity of care, knowledge of the patient’s medical course and treatment, and perceptions of the patient being difficult were other pitfalls in this case. Ultimately, a large verdict for several years of pain and suffering was awarded to the claimant’s estate.
The UroLift System procedure is FDA-cleared for the treatment of symptoms due to urinary outflow obstruction secondary to BPH, including lateral and median lobe hyperplasia, in men 45 years of age or older. Results and patient experience may vary. Most common adverse events reported include hematuria, dysuria, micturition urgency, pelvic pain, and urge incontinence. Most symptoms were mild to moderate in severity and resolved within 2 to 4 weeks after the procedure. Consult the Instructions for Use (IFU) for more information.

©2018 NeoTract, Inc. All rights reserved. MAC00901-01 Rev A

*I am a urologist.
*I am a patient.

“My IPSS went from 23 to 3, and I’m thoroughly satisfied with the results."

Peter J. Walter, M.D., F.A.C.S. Western New York Urology Associates and UROLIFT® SYSTEM PATIENT

MAIN REASONS I CHOSE THE UROLIFT® SYSTEM AND RECOMMEND IT TO MY PATIENTS

Rapid relief and recovery in days, not months2-4
Lowest catheter rate of the leading BPH procedures4
The only BPH treatment with no new, sustained erectile or ejaculatory dysfunction2,3
The only BPH procedure that does not destroy tissue
Proven durability through 5 years5
25 Peer-reviewed publications, 2 randomized studies
Simple, typically, one time, in-office treatment

To learn more about My Story, visit www.info.UroLift.com/UT
Check out the data at UroLift.com

The UroLift System procedure is FDA-cleared for the treatment of symptoms due to urinary outflow obstruction secondary to BPH, including lateral and median lobe hyperplasia, in men 45 years of age or older. Results and patient experience may vary. Most common adverse events reported include hematuria, dysuria, micturition urgency, pelvic pain, and urge incontinence. Most symptoms were mild to moderate in severity and resolved within 2 to 4 weeks after the procedure. Consult the Instructions for Use (IFU) for more information.

*Dr. Walter is UroLift faculty and a paid consultant for NeoTract|Teleflex

©2018 NeoTract, Inc. All rights reserved. MAC00901-01 Rev A
StoneSmart™
The forum to advance the science of endourology

Visit StoneSmart
Watch a case

This month’s case

Robotic Surgery in Urology
Adam G. Kaplan, MD

Join the discussion

Visit UrologyTimes.com/StoneSmart