Report From the Society of Urologic Oncology

Highlights From the Fourth Annual Meeting of the Society of Urologic Oncology, December 5-6, 2003, Bethesda, MD

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The fourth annual meeting of the Society of Urologic Oncology (SUO) was held at the National Institutes of Health in Bethesda, Maryland, from December 5 to 6, 2003. The meeting drew over 100 participants to discuss the state of the art in urologic oncology. Nationally recognized leaders in the field from all over the country presented their insights during the conference. Several interesting presentations were made in both podium and poster formats.

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Selected Feature Presentations

Management of Stage I Testis Cancer

A session on the management of stage I nonseminomatous germ cell testis cancer was moderated by Dr. Paul Lange from the University of Washington. Dr. Joel Sheinfeld spoke about open retroperitoneal lymph node dissection (RPLND) and the long-term follow-up of patients treated at Memorial Sloan-Kettering Cancer Center. Dr. Sheinfeld reported that open RPLND has evolved into a well-tolerated procedure with negligible mortality and minimal morbidity with the development of modified and nerve-sparing surgical templates.

Open RPLND remains the gold standard of treatment, with a cure rate of roughly 95%. The 5% to 10% of patients who have relapse after RPLND have a high cure rate with chemotherapy. Factors predictive of retroperitoneal and/or systemic failure include lymphovascular invasion with the primary tumor, a higher T stage (T2-T4), and a high percentage of embryonal carcinoma.

Dr. Louis Kavoussi spoke on his experience with laparoscopic RPLND at Johns Hopkins. He argued that laparoscopic RPLND is associated with less morbidity and decreases convalescence compared with the open approach and allows for accurate pathologic staging of the retroperitoneum. The open surgical templates could technically be duplicated in

the same fashion by laparoscopic RPLND. In his cohort of patients with a negative laparoscopic RPLND, none have had recurrence in the retroperitoneum with long-term follow-up. One patient with pathologic stage I disease had chest recurrence, but this patient had undergone a traditional open RPLND after hemorrhage necessitated conversion from the laparoscopic technique. The other recurrence was a biochemical recurrence, with a negative abdominal computed tomography (CT) scan. The overall recurrence rate for pathologic stage I disease in patients who underwent completed laparoscopic RPLND was 6.6% (1 of 15).

In the past, laparoscopic RPLND was not completed if nodes were found positive on frozen section. According to Dr. Kavoussi, however, as surgical technique has improved, node dissection is now completed despite the presence of positive nodes. Laparoscopic RPLND continues to evolve, and both Dr. Sheinfeld and Dr. Kavoussi agreed that additional studies are needed to clarify and confirm its role as a therapeutic procedure.

Dr. George Bosl from Memorial Sloan-Kettering Cancer Center discussed the role of primary chemotherapy. According to Dr. Bosl, primary chemotherapy is less invasive than RPLND and is just as effective. Patients with persistently elevated serum tumor markers after radical orchiectomy but with negative CT scans of the chest, abdomen, and pelvis should undergo primary cisplatin-based chemotherapy because systemic disease is likely present. Otherwise, Dr. Bosl asserted, chemotherapy should not be given upfront since those patients would be at a disadvantage if treatment failed. In addition, both the short-term and long-term complications of chemotherapy should be considered, such as cardiovascular risks and the development of leukemia.

According to Dr. George Bosl from the Memorial Sloan-Kettering Cancer Center, primary chemotherapy is less invasive than retroperitoneal lymph node dissection and is just as effective.

Minimally Invasive Therapies: RCC and Upper Tract TCC

A session devoted to the minimally invasive therapies for renal cell carcinoma (RCC) and upper tract transitional cell carcinoma (TCC) was moderated by Dr. Peter Pinto from the National Cancer Institute (NCI). Dr. Jihad Kaouk spoke on the Cleveland Clinic experience with cryosurgical ablation of renal tumors. Although this procedure could be performed either laparoscopically or percutaneously, the Cleveland Clinic prefers to do it by the laparoscopic approach. At a mean follow-up of 16.2 months after laparoscopic cryoablation of 34 peripheral renal tumors in 32 patients, no local or port-site recurrence has developed in any of the patients. CT-guided needle biopsy of the cryoablated tumor was performed in 23 patients at 3 to 6 months and histologic analysis was negative for viable cancer cells in all patients.

Thus far, results in patients with peripheral, small renal tumors have been impressive, with excellent oncologic outcomes. However, careful long-term clinical and radiologic follow-up with sequential magnetic resonance imaging (MRI) and CT scanning complemented by needle biopsy evaluation are important to monitor progress and to allow early detection of any local or systemic recurrence.

Dr. McClellan Walther discussed the role of radiofrequency ablation (RFA) for renal tumors and reported the updated data on the NCI's initial results on RFA of hereditary-based renal tumors using the low-wattage RITA Model 500 electrosurgical generator. From October 1999 to December 2000, a total of 24 ablations were performed in 21 patients with renal tumors, and at 2 months follow-up, a majority of tumors (19 of 24, 79%) ceased to enhance on CT. At a median follow-up of 24 months, 10 ablated tumors (40%) demonstrated contrast enhancement on follow-up CT; 9 of these tumors were surgically removed and pathologically confirmed as viable cancer, and the remaining case was re-treated with RFA using the Radionics system with success based on imaging criteria.

Compared with centrally located tumors, exophytic, cortical tumors appear to respond well to RFA. Therefore, tumor location may play an important role when selecting a suitable candidate, and this may be especially true with low-wattage electrosurgical generators. Since January 2001, the NCI has used a high-wattage 200W generator from Radionics for RFA of small renal tumors. Their experience with the Radionics system, which includes treating 13 centrally located tumors

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with a deep medullary component, has been excellent, with only 1 of 24 ablated tumors showing radiographic evidence of recurrence at 12 months of follow-up.

Dr. Howard Winfield spoke on the laparoscopic management of upper tract TCC. He discussed the different ways to manage the distal ureter and remove the bladder cuff. The "pluck" procedure is performed with the patient in a supine position. Using a standard resectoscope, the ureteral orifice, tunnel, and intramural ureter are resected transurethrally until the perivesical fat is seen, which allows the surgeon to pluck the ureter cephalad out from the pelvis during the laparoscopic nephroureterectomy. However, instances of tumor seeding after a pluck procedure have been reported by several investigators.

The ureteral stent, or open method, is carried out through the placement of an external ureteral stent to facilitate ureteral identification and dissection of the bladder cuff and distal ureter through an open lower abdominal incision at the end of the procedure. Ureteral stent placement with ureteral unroofing uses a ureteral dilating balloon to facilitate unroofing of the ureter and then a ureteral occlusion balloon catheter in preparation for eventual stapling of the bladder cuff, limiting any leakage of urine or spillage of tumor cells into the extraperitoneal space.

The transvesical laparoscopic ureteral dissection, or the Cleveland Clinic method, uses a transurethral Collins knife and 2 transvesical needlescopic instruments to make an incision at the ureteral orifice to dissect the distal 3 cm of the ureter free. An Endoloop (Ethicon Endosurgery, Cincinnati, OH) is used to occlude the distal ureter to prevent tumor cell spillage. He also discussed the transperitoneal laparoscopic unassisted, the transperitoneal hand-assisted, and the retroperitoneal approaches. Long-term data are now emerging, and laparoscopic nephroureterectomy appears to provide similar results to open nephroureterectomy for upper tract TCC.

Dr. Thomas Jarrett spoke on the endoscopic management of upper tract TCC. In general, a retrograde ureteroscopic approach is used for low-volume ureteral and renal tumors and an antegrade percutaneous approach is preferred for larger tumors of the upper ureter or kidney or for those that cannot be adequately manipulated in a retrograde approach because of their location. Multiple series have shown the safety and efficacy of both ureteroscopic and percutaneous treatment of upper tract TCC. In regards to the concern of seeding the percutaneous tract with tumor cells, he presented data from the Long Island Jewish Medical Center (from the largest series to date) that showed no reported occurrences. In addition, the efficacy of adjuvant therapy remains to be established and prospective, randomized trials are needed.

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Molecular Therapeutics: Targets for Screening, Therapy, and Prevention

A session on current molecular therapeutics for prostate and renal cancer was moderated by Dr. Dan Theodorescu from the University of Virginia. Dr. Jianfeng Xu from Wake Forest University spoke about the biology of macrophage scavenger receptor 1 (MSR1) and prostate cancer. Rare germline mutations of the MSR1 gene are reported to be associated with prostate cancer risk in families with hereditary prostate cancer and in patients with nonhereditary prostate cancer. MSR1 has been linked to a wide variety of normal and pathologic processes, including inflammation, innate and adaptive immunity, oxidative stress, and apoptosis. Although the exact role of MSR1 in prostate carcinogenesis is unknown, some or all of these processes have been implicated in the development of prostate cancer. Recent findings showing that the degree of macrophage infiltration is associated with prostate cancer prognosis strengthen the link between MSR1 and prostate cancer.

Dr. Eric Klein from the Cleveland Clinic spoke about the biology of RNaseL and hereditary prostate cancer 1 (HPC1). The RNaseL gene, a strong candidate for the HPC1 allele, encodes a single-stranded specific endoribonuclease involved in the antiviral actions of interferons. RNaseL is activated enzymatically after binding to unusual 5'-phosphorylated, 2',5'-linked oligoadenylates (2-5A), which have been shown to cause apoptosis in cultures of late-stage, metastatic human prostate cancer cell lines DU145, PC3, and LNCaP. RNaseL mutations and some variants have been shown to be deficient in causing apoptosis in response to 2-5A, which is consistent with its possible role in prostate cancer development through allowing tumor cells to escape a potent apoptotic pathway.

Dr. Robert Reiter from UCLA spoke about targeting prostate stem cell antigen (PSCA) as a molecular target for prostate cancer. PSCA is a novel

protein that is overexpressed in prostate cancer and has a restricted pattern of expression. PSCA may prove to be an important clinical tool with respect to individualizing a patient's treatment based on prognosis and the risk of recurrence of disease after local therapy. PSCA may also serve as an effective target antigen for immunotherapy. Potential effective strategies may employ cytotoxic T lymphocytes, monoclonal antibodies, or antibodies conjugated to cytotoxins. PSCA may also serve as a useful research tool for understanding prostate cancer development, and further study of its regulation may lead to a greater understanding of prostate carcinogenesis.

Dr. Georg Bartsch from the University of Innsbruck, Austria, spoke about androgen receptors (ARs) as a therapeutic target for prostate cancer. ARs regulate the expression of genes involved in the proliferation and differentiation of prostate cancer cells. Prostate cancers progress toward therapy resistance in most cases in the presence of functional ARs. There are indications that the expression and function of some AR coactivators (SRC1, TIF2, RAC3 and p300/cyclic adenosine monophosphate response element–binding-protein binding protein) are altered in prostate cancer. Antiandrogenic drugs frequently acquire agonistic properties in the presence of mutated ARs. In addition, androgen-signaling pathway activity increases during long-term androgen ablation. AR coactivator complexes overexpressed in prostate cancer and involved in the regulation of mitogenic and antiapoptotic responses might be targets for novel prostate cancer therapies. ARs could also be targeted in chemoprevention trials in early stages of prostate carcinogenesis, as it is known that various food ingredients down-regulate its expression.

Dr. Marston Linehan from the NCI discussed targeting various renal cancer genes for therapy. There are a number of known proteins believed to be under the control of the VHL gene product (pVHL), which are implicated in the development of RCC. The VHL complex targets a protein called hypoxia-inducible factor 1α (HIF-1α) for ubiquitin-mediated degradation. HIF-1α is a protein that controls the transcription of a number of downstream genes, such as vascular endothelial growth factor (VEGF), the glucose transporter GLUT-1, platelet-derived growth factor (PDGF), transforming growth factor-α (TGF-α), erythropoietin, and carbonic anhydrase 9 (CA9) and 12.

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Inactivation of pVHL is an early, causal event in a significant percentage of clear cell–type RCC, and preclinical studies indicate that restoring pVHL function in pVHL-defective RCC cells is sufficient to suppress tumorigenesis. Because inhibition of HIF target genes is necessary for tumor suppression by pVHL, there is a strong rationale for developing therapies directed against HIF or its downstream targets in RCC. These include paracrine-acting angiogenic factors such as the VEGF and PDGF, which are thought to stimulate endothelial cells and supporting pericytes, respectively, as well as autocrine growth factors such as TGF-α. These 3 growth factors bind to membrane-bound receptors that become active as tyrosine kinases on ligand binding. Treatment with a VEGF-neutralizing antibody led to delayed disease progression in a cohort of patients with metastatic RCC in a randomized phase II trial and is now being tested in phase III.

A number of drugs that inhibit the tyrosine kinase activity of the VEGF receptor KDR and the PDGF receptor are currently being tested in human renal cancer patients. Examples include PTK787 and SU11248. In addition, recent studies indicate that the mTOR inhibitor rapamycin and the histone deacetylase inhibitors, such as trichostatin A, also lead to down-regulation of VEGF in tumor cell lines and might be tested in this setting as well. Treatments aimed at VEGF and/or PDGF might also be combined with agents such as gefitinib (Iressa; AstraZeneca Pharmaceuticals, Wilmington, DE) that inhibit epidermal growth factor receptor (EGFR), which is the receptor for TGF-α. Also, there is evidence for molecular crosstalk between EGFR signaling and HIF, and therefore, drugs that inhibit EGFR might be additive or synergistic with drugs that inhibit other HIF targets. Another HIF target, CA9, encodes an RCC antigen previously called G250. Antibodies might be used to localize tumors and, in time, as therapeutics.

In addition, the recent results of molecular targeting with STI-571 (Gleevec, Novartis Pharmaceuticals Corp, East Hanover, NJ) in chronic myelogenous leukemia and gastrointestinal stromal tumor are considered by many to provide "proof of principle" that molecular targeting in cancer is no longer a hypothetical possibility for the distant future. Dr. Walter Stadler spoke about current therapies that molecularly target kidney cancer. The identification of a number of receptor tyrosine kinase inhibitors has

created recent excitement in the treatment of metastatic kidney cancer. Many of these drugs have multiple potential targets that have anti-tumor as well as anti-angiogenic effects. Interesting preliminary data is available from 3 drugs: PTK-787, Bay 43-9006, and SU11248. Bay 34-9006 is a novel signal transduction inhibitor with potent activity against Raf kinase. The Raf-MEK-ERK pathway is involved in tumor growth, and c-Raf has a central role in endothelial cell signaling from both VEGF- and EGFR-stimulated pathways. This drug is also a direct inhibitor of both VEGF and PDGF receptors. In a recent clinical trial of 50 kidney cancer patients, only 30% of patients progressed within the first 12 weeks, 24% of patients had at least a 25% shrinkage of their metastatic tumor mass, and approximately another 40% of patients had stable disease. The therapy was fairly well tolerated and had an acceptable toxicity profile for long-term administration. Similar data has been reported for PGK-787, in which 7% of patients had a partial response, 12% of patients had a minor response, and 60% of patients had stable disease. In addition, there may be some evidence that MRI methods may be a pharmacodynamic or predictive marker for these types of agents. Further studies are needed to determine whether these drugs will improve survival and/or quality of life and whether the available drugs are equivalent.

Late-Breaking Developments

This year the SUO hosted 2 sessions of late-breaking developments. In the first session, Dr. Zohar Dotan presented new data on the controversial subject of neoadjuvant hormonal therapy before radical prostatectomy. Dr. Dotan reported the outcomes in 3591 men treated with prostatectomy for localized prostate cancer in a single institution, 678 (18%) of whom first underwent neoadjuvant hormonal therapy. The patients were evaluated for local and distant progression. Dr. Dotan reported that local progression was predicted by preoperative prostate-specific antigen (PSA) level, presence of extracapsular extension, pathologic Gleason score, and the interval between prostatectomy and biochemical recurrence. Similarly, metastatic progression was predicted by pathologic Gleason score, PSA value at biochemical recurrence, and PSA doubling time. Although associated with lower rates of positive surgical margins, neoadjuvant hormonal therapy was not associated with decreased local or metastatic progression overall or for any high-risk groups.

Dr. Freedland demonstrated that obesity was an independent predictor of early biochemical failure following radical prostatectomy.

Also presenting in the late-breaking developing session was Dr. Paul Schellhammer. Dr. Schellhammer reported the results of the Provenge trial, a randomized, placebo-controlled trial testing antigen-presenting cell immunotherapy for patients with androgen-independent prostate cancer. Dr. Schellhammer described the results of the final intent-to-treat analysis, which demonstrated that the effect of the immunotherapy on time to disease progression approached significance (P = .061). The greatest benefit from immunotherapy was derived in patients with Gleason scores of 7 or less. In this patient population, treatment with immunotherapy led to greater time to disease progression (P = .001) and time to disease-related pain onset (P = .016). Patients with Gleason scores greater than 7 derived no benefit from Provenge. Dr. Schelhammer also announced that a phase III trial of Provenge for patients with Gleason scores less than 8 and androgen-independent prostate cancer was open to accrual.

The sessions also included an interesting presentation by Dr. John Trachtenberg, who reported the results of a phase I/II clinical trial of photodynamic therapy with WST09 for patients in whom external-beam radiation for prostate cancer failed. Dr. Trachtenberg explained that WST09 is an intravascular photosensitizer, which, when activated by laser light, eradicates tumors by destroying their blood supply. The prostate glands of patients were exposed to the laser light via a modified brachytherapy template following intravenous infusion of the drug. Reporting preliminary results with 15 patients in whom external-beam radiotherapy had failed, Dr. Trachtenberg demonstrated linear dose–plasma concentration relationships, complete washout of the drug from plasma (2 hours) and urine (168 hours) after treatment, and MRI evidence of lesion formation for some of the treated patients. Results of new trials evaluating efficacy of this medication in cases of radiation failure are eagerly anticipated.

Poster Session

A total of 88 posters were presented at the meeting. Posters were presented on numerous topics within urologic oncology, including prostate, bladder, and renal cancer. Many aspects of urologic oncology were addressed, including surgical techniques, screening modalities, treatment outcomes, molecular and clinical risk factors, and basic scientific investigations of

the etiology, pathogenesis, and possible treatments of these malignancies. Three of these posters were subsequently recognized as the most exemplary posters at the conference.

The first award was given to Dr. Stephen Freedland for his poster entitled "Obesity is an independent predictor of biochemical failure following radical prostatectomy." Dr. Freedland examined data from over 1000 patients treated with radical prostatectomy between 1988 and 2002 at 5 different institutions. He reported that obesity was associated with higher biopsy and pathologic grade tumors but with a decreased risk of seminal vesicle invasion. Dr. Freedland also demonstrated that obesity was an independent predictor of early biochemical failure following radical prostatectomy.

Another award recipient was Dr. Vasantha Srikantan, who evaluated the role of hepsin in metastatic prostate cancer. She stably transfected PC-3, DU145, and LNCaP prostate cancer cell lines with the hepsin gene and demonstrated that these transfected cells had a dramatic reduction in cell growth, cell invasion, and soft agar colony formation. She further reported the results of gene chip experiments, which demonstrated that hepsin may be involved in the regulation of genes important in coagulation, G2/M phase of the cell cycle, cell differentiation, and angiogenesis.

Also recognized for presenting an outstanding poster was Dr. Daniel Cohen. Dr. Cohen reported on the use of the membrane glycoprotein ß2-glycoprotein 1 as a treatment for prostate cancer in a murine model. He injected TRAMP-C2RE3 prostate cancer cells into the prostates of mice and then treated the mice with 1 of 4 therapies: control, ß2-glycoprotein 1, docetaxel, and a combination of the glycoprotein and docetaxel. Dr. Cohen demonstrated that, in mice, treatment with either the glycoprotein or docetaxel resulted in a 50% reduction in tumor burden versus control and treatment with a combination of the 2 drugs resulted in a 77% reduction in tumor burden versus control and a 54% reduction versus either individual treatment alone.

Young Urologic Oncologists Forum

A new addition to the SUO annual meeting this year was the Young

Main Points

- Open retroperitoneal lymph node dissection remains the gold standard of treatment for stage I testis cancer, with a cure rate of roughly 95%, and a high cure rate is seen with chemotherapy in the remaining group. As surgical technique has improved, node dissection is now completed despite the presence of positive nodes.
- Cryoablation for peripheral, small renal tumors has been met with success thus far, but careful follow-up is indicated; as for radiofrequency ablation of renal tumors, exophytic, cortical tumors appear to respond better than centrally located renal tumors, meaning that tumor location may play an important role in patient selection, especially when low-wattage electrosurgical generators are used.
- Instances of tumor seeding after a pluck procedure for management of upper tract transitional cell carcinoma have been reported, whereas data presented on the open, ureteral stent method as well as both ureteroscopic and percutaneous treatments showed less association with this event.
- Presentations on potential novel therapies for prostate cancer included one from the Cleveland Clinic that described a link between RNaseL and hereditary prostate cancer, research from UCLA stating that prostate stem cell antigen may serve as an effective target antigen for immunotherapy, and data from Austria indicating androgen receptors may become a target. Likewise, drugs that inhibit the tyrosine kinase activity of vascular endothelial growth factor receptors and the platelet-derived growth factor receptor are currently being tested in human renal cancer patients.
- Late-breaking developments presented at the meeting comprised data on neoadjuvant hormonal therapy before radical prostatectomy; the Provenge trial of antigen-presenting cell immunotherapy for patients with androgen-independent prostate cancer; and photodynamic therapy with WST09, an intravascular photosensitizer used in cases of external-beam radiation failure. Further trials of these treatments are eagerly awaited.
- Among the most notable posters were those of Dr. Stephen Freedland, who demonstrated that obesity was an independent predictor of early biochemical failure following radical prostatectomy; Dr. Vasantha Srikantan, who evaluated the role of hepsin in metastatic prostate cancer; and Dr. Daniel Cohen, who reported on the potential of ß2-glycoprotein 1 used with and without docetaxel in a mouse model of prostate cancer.
- The new and exciting Young Urologic Oncologists Forum portion of the meeting included data on laparoscopic radical prostatectomy outcomes, salvage radiotherapy, and a novel urinary test for prostate cancer detection, the measurement of alpha-methylacyl-CoA racemase.

Urologic Oncologists Forum (YUO). This part of the conference was dedicated to presentation of research by residents, fellows, and junior faculty. This mini-conference, carried out during the second afternoon of the SUO meeting, was opened with a keynote address by Dr. Peter Scardino of Memorial Sloan-Kettering Cancer Center. Dr. Scardino emphasized the importance of learning and maintaining surgical skills while pursuing a career as a scientific investigator. He also presented examples of excellent role models for young and aspiring urologic oncologists, including Drs. Donald Skinner, James Montie, and Dan Theodorescu. This inspirational talk was then followed by overviews of cooperative groups such as the Southwest Oncology Group and the American College of Surgeons Oncology Group.

The presentation of research during the YUO was divided into clinical and basic science sessions. During the clinical session, Dr. Andrew Stephenson presented data on response rates to salvage radiotherapy for recurrence of PSA level elevation following radical prostatectomy for prostate cancer. Referring to a study population of 537 patients with PSA recurrence, Dr. Stephenson demonstrated a 5-year progression-free probability of 36% and a complete response rate of 66% following salvage radiotherapy. Using a multivariate analysis, Dr. Stephenson reported that pretreatment PSA level above 2 ng/mL, negative surgical margins, Gleason sum of 8 to 10, and PSA level doubling time of 10 months or less were all predictors of progression following salvage radiotherapy.

Also presenting during the clinical session, Dr. Karim Touijer reported on the Memorial Sloan-Kettering experience with 100 laparoscopic radical prostatectomies. In this patient population, the mean preoperative PSA level was 6.2 ng/mL and the mean biopsy Gleason score was 6.4. Preoperative TNM stage was reported to be T1b, T1c, T2a, T2b, T2c, and T3a in 1, 69, 18, 3, 7, and 2 patients, respectively. Dr. Touijer reported a positive surgical margin rate of 9% (6.4% for pT2 cancers and 19% for pT3 malignancies) and concluded that laparoscopic radical prostatectomy provides satisfactory local tumor control while including the caveat that, of course, biochemical recurrence still needs to be assessed in this patient population.

The basic science portion of the YUO also included several interesting presentations. Dr. Hyung Kim reported on a molecular profiling of protein expression in patients with metastatic RCC. Dr. Kim relied on a custom tissue microarray constructed from tumors of patients with metastatic RCC and a patient database containing the clinical information for these patients to demonstrate the independent clinical factors impacting disease-specific survival in this patient population. Demonstrating CA9, p53, vimentin, and Eastern Cooperative Oncology Group Performance Status to be the most important risk factors according to a multivariate analysis, Dr. Kim then created a nomogram using these risk factors, which, he reported, was more predictive of disease-specific survival than any of the currently accepted clinical markers and staging systems.

Also presenting at the basic science section of the YUO, Dr. Craig Rogers reported on a novel urinary test for prostate cancer detection, measurement of alpha-methylacyl-CoA racemase (AMACR). Using post-biopsy urine specimens from 26 patients with suspected prostate cancer, Dr. Rogers demonstrated AMACR level to be 100% sensitive and 67% specific in detecting prostate cancer in these patients. Dr. Rogers concluded that this novel test can help stratify patients with negative biopsy results into risk groups that could guide post-biopsy regimens. These presentations, as well as many others, made the YUO an exciting, interactive forum for the future leaders in urologic oncology.

Huggins Medal Presentation and Lecture

A highlight of the SUO this year was the presentation of the Huggins Medal to Dr. Patrick Walsh. After graciously accepting the award, Dr. Walsh provided a history of the evolution of the radical retropubic prostatectomy as a treatment for prostate cancer. Dr. Walsh began by describing the crude early versions of the surgical procedure, which was limited by poor anatomic knowledge and thus led to poor outcomes. Dr. Walsh proceeded to describe the anatomic discoveries that he made, which shaped the procedure as it is known today. Noting the significant improvements in cancer-specific survival, potency, and continence, Dr. Walsh expected radical prostatectomy to remain the gold standard for the treatment of prostate cancer.

Overall, the fourth annual meeting of the SUO was a great success. The enthusiastic participation of both the established leaders in the field and young scientists made the meeting extremely interesting and beneficial for all urologic oncologists. We eagerly await next year's meeting. ■