

Urology

1. Staffs and Students (December, 2009)

Professor and Chairman	Kazunori Kihara	
Associate Professor	Satoru Kawakami	
Lecturer	Yasuhisa Fujii,	Hitoshi Masuda
Assistant Professor	Fumitaka Koga, Yasuyuki Sakai, Noboru Numao (~June)	Kazutaka Saito (July~), Yohei Okada,
Hospital Staff	Akihiro Yano, Minato Yokoyama, Manabu Tatokoro, Yoshinobu Komai,	Yasumasa Iimura, Mizuaki Sakura, Soichiro Yoshida, Toshiki Kijima
Graduate Student	Hiroyuki Otsuka, Mizuaki Sakura, Soichiro Yoshida, Toshiki Kijima, Naotaka Fukui, Yasukazu Nakanishi, Hideki Takeshita, Toshihiro Kanda	Masaki Tanaka, Manabu Tatokoro, Yoshinobu Komai, Naoko Kawamura, Sachi Kitayama, Yuichi Kubo, Shuichiro Kobayashi,

2. Purpose of Education

We are committed to offering educational programs to facilitate the development of outstanding academic urologists of the next generation. We believe that one of our missions is to educate students, residents and fellows in the art and science of urology and thereby to train the future leaders in the field. The continuous commitment to clinical and translational research is reflected to publications in international journals, presentations at international meetings and awards, which are listed below.

3. Research Subjects

Clinical Research

- 1) Innovation and establishment of minimally invasive, gasless single port access urological surgery
- 2) Development of optimal 3-dimensional prostate needle biopsy
- 3) Development of nomograms for optimal detection of prostate cancer
- 4) Sequential combination therapy to prolong survival of advanced prostate cancer patients
- 5) Development and establishment of curative and minimally invasive bladder preservation using low-dose chemoradiotherapy plus partial cystectomy
- 6) Development and establishment of minimally invasive, nonischemic nephron-sparing surgery against kidney cancer
- 7) Sequential combination therapy to prolong survival of advanced kidney cancer patients, starting with immunotherapy combined with multiple molecular targeted agents
- 8) Application of diffusion-weighted MRI to diagnosis, assessment of therapeutic effects and monitoring of relapse in urological cancer
- 9) Application of serum C-reactive protein as a prognostic biomarker of urological malignancies and as a marker for surgical invasiveness

Translational Research

- 1) Development of differentiation-inducing therapy against hormone-resistant prostate carcinomas
- 2) Investigation on molecular mechanisms, in particular deregulation of the NO system, underlying voiding and erectile dysfunction to develop rational therapy
- 3) Overcoming therapeutic resistance to chemo- and/or radiotherapy against urological malignancies using novel molecular targeted agents
- 4) Investigation on functional roles of p63 protein in urothelial carcinomas

4. Clinical Services

Our mission is to provide the best urological care to all patients. Besides offering urological practices of the international standard, we are making a continuous effort to improve daily practices. The gasless single port access urological surgery, which we have innovated its concept and developed surgical techniques specific to all urological organs, has been officially approved as medical services provided by the Japanese Governmental Health Insurance System in April 2008. These minimally invasive surgical techniques can be fundamentally applied to all patients having urological malignancies, even those having locally advanced disease and previous histories of abdominal surgery.

5. Publications (International)

Original Article

1. Christensen NB, Kawakami S. Editorial: How to structure research paper. *Int J Urol*, 16:354-5, 2009.
2. Fukushima H, Koga F, Kawakami S, Fujii Y, Yoshida S, Ratovitski E, Trink B, Kihara K. Loss of deltaNp 63alpha promotes invasion of urothelial carcinoma via N - cadherin/Src homology and collagen/extracellular singnal - regulated kinase pathway. *Cancer Res*, 69: 9263-9270, 2009.
3. Iimura Y, Saito K, Fujii Y, Kumagai J, Kawakami S, Komai Y, Yonese J, Fukui I, Kihara K. Development and External Validation of a New Outcome Prediction Model for Patients With Clear Cell Renal Cell Carcinoma Treated With Nephrectomy Based on Preoperative Serum C-Reactive Protein and TNM Classification: The TNM-C Score. *J Urol*.181: 1004-1012, 2009.
4. Ishioka J, Hara S, Isaacs JT, Tomura A, Nishikawa K, Kageyama Y. Suppression of mutant androgen receptors by flutamide. *Int J Urol*. 16(5):516-21, 2009.
5. Kawakami S, Kihara K. Surgical practices for urological tumors: A nation-wide survey in Japan in 2005. *Int J Urol*, 16: 257-62, 2009
6. Kawakami S, Kihara K. Surgical practices for urological tumors: A nation-wide survey in Japan in 2005. *Int J Urol*. 16(4):429, 2009.
7. Kawakami S. Editorial comment. *Int J Urol*, 16:430, 2009
8. Kijima T, Fujii Y, Okubo Y, Yamamoto S, masuda H, Yonese J, Fukui I. Radiotherapy to bone metastases from renal cell carcinoma with or without zoledronate. *BJU Int*, 103: 620-4, 2009.
9. Koga F, Kihara K, Fujii Y, Yoshida S, Saito K, Masuda H, Kageyama Y, Kawakami S. Favourable outcomes of clinical stage T3NOMO bladder cancer patients treated with induction low-dose chemoradiotherapy plus partial or radical cystectomy versus immediate radical cystectomy: a single-institutional retrospective comparative study. *BJU Int*. 104: 189-194, 2009.
10. Komai Y, Fujiwara M., Fujii Y, Mukai H, Yonese J, Kawakami S, Yamamoto S, Migita T, Ishikawa Y, Kurata M., Nakamura T, Fukui I.. Adult Xp11 translocation renal cell carcinoma diagnosed by cytogenetics and immunohistochemistry. *Clin Cancer Res*. 15: 1170-1176, 2009.
11. Kubo Y, Kawakami S, Numao N, Takazawa R, Fujii Y, Masuda H, Tsujii T, Kihara K. Simple and effective local anesthesia for transperineal extended prostate biopsy: Application to the three-dimensional 26-core biopsy. *Int J Urol*. 16(4):420-423, 2009.
12. Masuda H, Michel B. Chancellor, Kihara K, Sakai Y, Koga F, Azuma H, William C. de Groat, Yoshimura N. Effects of cholinesterase inhibition in supraspinal and spinal neural pathways on the micturition reflex in rats. *BJU Int*. 104: 1163-1169, 2009.
13. Masuda H, Ichiyanaagi N, Yokoyama M, Sakai Y, Kihara K, Michel B. Chancellor, William C. de Groat, Yoshimura N. Muscarinic receptor activation in the lumbosacral spinal cord ameliorates bladder irritation in rat cystitis models. *BJU Int*. 104: 1531-1537, 2009.
14. Masuda H, Yano M, Ichiyanaagi N, Kihara K. Significance of nitric oxide and its modulation mechanisms in micturition disorders. *LUTS*. 1: 566-569, 2009.
15. Saito K, Tatokoro M, Fujii Y, Iimura Y, Koga F, Kawakami S, Kihara K. Impact of C-reactive Protein Kinetics on Survival of Patients With Metastatic Renal Cell Carcinoma. *Eur Urol*, 55:1145-53, 2009.
16. Sakai Y, Okuno T, Kijima T, Iwai A, Matsuoka Y, Kawakami S, Kihara K. Simple prophylactic procedure of inguinal hernia after radical retropubic prostatectomy: Isolation of the spermatic cord. *Int J Urol*. 16: 848-851, 2009.
17. Sakura M, Masuda H, Matsuoka Y, Yokoyama M, Kawakami S, Kihara K, Rolipram, a specific type-4 phosphodiesterase inhibitor, inhibits cyclophosphamide-induced haemorrhagic cystitis in rats. *BJU Int*, 103: 264-269, 2009.
18. Suzuki M, Kawakami S, Asano T, Masuda H, Saito K, Koga F, Fujii Y, Kihara K. Safety of transperineal 14-core

- systematic prostate biopsy in diabetic men. *Int J Urol*, 16: 930-935, 2009.
19. Takeshita H, Kawakami S, Fukui I. Profound bicalutamide withdrawal syndrome in a hormone-refractory T4N1 prostate cancer permitting both salvage radiotherapy and cessation of hormonal therapy. *Int J Urol*, 16:337-8, 2009.
 20. Yamamoto S, Kawakami S, Yonese J, Fujii Y, Tsukamoto T, Ohkubo Y, Komai Y, Ishikawa Y, Fukui I. Risk stratification of high-grade prostate cancer treated with antegrade radical prostatectomy with intended wide resection. *Jpn J Clin Oncol*, 39: 387-93, 2009.
 21. Yokoyama M, Fujii Y, Yoshida S, Saito K, Koga F, Masuda H, Kobayashi T, Kawakami S, Kihara K. Discarding antimicrobial prophylaxis for transurethral resection of bladder tumor: A feasibility study. *Int J Urol*, 16: 61-63, 2009.

Review Article

1. Kihara K, Kawakami S, Fujii Y, Masuda H, Koga F. Gasless single port access endoscopic surgery in urology: Minimum incision endoscopic surgery (MIES). *Int J Urol*. 16:791-800, 2009.
2. Koga F, Kihara K, Neckers L. Inhibition of cancer invasion and metastasis by targeting the molecular chaperone heat shock protein 90. *Anticancer Res*. 29(3):797-807, 2009.

Award

1. Numao N. Kawakami S, Fujii Y, Masuda H, Koga F, Sakai Y, Yonese J, Ishikawa Y, Fukui I, Kihara K. Characterization of prostate cancers missed by transrectal 12-core biopsy. "Best Poster Presentation". EAU Annual Congress, Stockholm, 2009/3/20.

Presentations at International Meetings

1. Fujii Y, Yamamoto S, Yonese J, Kawakami S, Suyama T, Komai K, Kijima T, Kihara K, Fukui I. Novel technique to prevent post-radical retropubic prostatectomy inguinal hernia: the processus vaginalis transection method. 104th annual meeting of AUA (AUA 2009). Chicago, USA, 2009/4/28.
2. Iimura Y, Saito K, Fujii Y, Kumagai J, Komai Y, Tatokoro M, Kawakami S, Yonese J, Fukui I, Kihara K. Preoperative C-reactive protein is a significant factor of recurrence prediction model in patients with nonmetastatic clear cell renal cell carcinoma. 104th annual meeting of AUA (AUA 2009). Chicago, USA, 2009/4/28.
3. Kawakami S. Repeat biopsy indicators: Novel nomograms based on extended repeat biopsy. EAU Annual Congress, Stockholm, 2009/3/20.
4. Kihara K, Kawakami S, Fujii Y, Masuda H, Koga F, Saito K. Gasless single port access radical nephrectomy. EAU Annual Congress, Stockholm, 2009/3/19.
5. Komai Y, Fujii Y, Yoshida S, Tatokoro M, Iimura Y, Saito K, Otsuka Y, Kawakami S, Okuno T, Tsujii T, Morimoto S, Toma T, Ando M, Higashi Y, Fukui I, Kihara K. Young age is an independent favorable prognostic factor for cancer-specific survival in localized renal cell carcinoma patients. The 97th annual meeting of the American Urological Association, Chicago, 2009/4/24.
6. Masuda H, Yoshida S, Yokoyama M, Kihara K, De Groat WC, Chancellor MB, Yoshimura N. Time course changes in nitric oxide synthase isoforms in the spinal cord following induction of cystitis in the rats. EAU Annual Congress, Stockholm, 2009/3/19.
7. Masuda H, Sakai S, Numao N, Komai Y, Tatokoro M, Kihara K. Urinary hydrogen peroxide: A probable marker of oxidative stress as a biomarker of cyctitis. EAU Annual Congress, Stockholm, 2009/3/18.
8. Masuda H, Sakai Y, Matsuoka Y, Yokoyama M, Ichiyangi N, Azuma H, Kihara K. Therapeutic effects of phosphodiesterase type 5 inhibitor on bladder blood flow and nitric oxide pathway in the rat urinary bladder after partial outlet obstruction. EAU Annual Congress, Stockholm, 2009/3/19.
9. Numao N, Kawakami S, Fujii Y, Masuda H, Koga F, Sakai Y, Yonese J, Ishikawa Y, Fukui I, Kihara K. Candidate selection for focal targeted therapy with unilateral lobe by three-dimensional 26-core prostate biopsy. EAU Annual Congress, Stockholm, 2009/3/20.
10. Numao N, Kawakami S, Fujii Y, Masuda H, Koga F, Sakai Y, Yonese J, Ishikawa Y, Fukui I, Kihara K. Characterization of prostate cancers missed by transrectal 12-core biopsy. EAU Annual Congress, Stockholm, 2009/3/20.
11. Sakai Y, Masuda H, Numao N, Okada Y, Koga F, Fujii Y, Kawakami S, Kihara K. Relationships among urinary, bowel, sexual and hormonal functions in the elderly: Examinations of baseline data from the expanded prostate cancer index composite (EPIC) study of localized prostate cancer patients cohort. 5th Congress of Asia Pacific Society for the Aging Male, Osaka, 2009/10/16.

12. Tatokoro M, Fujii Y, Matsuoka Y, Komai F, Koga F, Saito K, Masuda H, Kawakami S, Kihara K. Phase II trial combination treatment of interferon-alfa, cimetidine, cyclooxygenase-2 inhibitor, and rennin-angiotensin system inhibitor in advanced renal cell carcinoma. American Society of Clinical Oncology, 2009 Genitourinary Cancers Symposium, USA, 2009/2/
13. Yano A, Fujii Y, Iwai A, Kawakami S, Kageyama Y, Kihara K. Glucocorticoids suppress tumor lymphangiogenesis of prostate cancer cells. EAU Annual Congress, Stockholm, 2009/3/20.
14. Yoshida S, Kawakami S, Numao N, Ishii C, Tanaka H, Saito K, Koga F, Masuda H, Fujii Y, Kihara K. Multi-sequence magnetic resonance imaging prior to prostate biopsy : Correlation analysis using the pathological results of three-dimensional 26-core biopsy. EAU Annual Congress, Stockholm, 2009/3/20.

Invited Lecture and International Symposium

1. Fujii Y, Tatokoro M, Saito K, Kihara K. Immunotherapy in era of targeted agents. The 8th international kidney cancer symposium. Chicago, USA, 2009/9/26.
2. Kawakami S. Prostate cancer diagnosis: Results from the TMDU/CIH Prostate Database. Ochanomizu Prostate Cancer Workshop, Tokyo, 2009/ 9/ 10.
3. Masuda H, Kawakami S, Fujii Y, Koga F, Kihara K. Urgency evaluated by IPSS and OABSS is an independent negative predictor of prostate cancer detection. Nagoya Shinshu Forum 2009, Nagoya, 2009/ 9/12.
4. Masuda H. IPSS irritative subscore is an independent negative predictor of prostate cancer detection. 5th Congress of Asia Pacific Society for the Study of Aging Male, Osaka, 2009