

Department of Urology

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General Summary

We performed both basic and clinical research in the following areas: oncology, involving such sites as the kidney, bladder, prostate and testes; anatomy, physiology, and pharmacology of the bladder and urethra; imaging and radiology; infections and inflammation of the genitourinary tract, such as interstitial cystitis and prostatitis; infertility; andrology and sexual function; urolithiasis; technology and instruments, such as laparoscopy; transplantation; neurourology; and female urology, such as benign prostatic hyperplasia, overactive bladder, neurogenic bladder, stress urinary incontinence, and pelvic floor prolapse.

Research Activities

Basic research

We performed several studies to elucidate the biology of urological malignancies, the mechanisms of voiding, and the pathophysiology of interstitial cystitis. Most studies have been presented at the annual meetings of the Japanese Urological Association and the American Urological Association. These projects are as follows;

- 1) Establishment and biological analysis of our new prostate cancer model, named JDCaP, derived from a Japanese patient
- 2) Study of the incidence of latent prostate cancer
- 3) Analysis of circulating tumor cells in castration-resistant prostate cancer
- 4) Stem cell therapy for the treatment of interstitial cystitis, stress urinary incontinence and underactive bladder

Clinical research

Several clinical studies have been investigated in our institution. The results of several studies have already been reported at the annual meetings of the Japanese Urological Association and the American Urological Association.

- 1) Prospective study of the efficacy of the sacral epidural block versus the pelvic plexus block for transrectal prostate needle biopsy
- 2) Clinical study of sentinel lymph-node dissection for prostate and bladder cancer
- 3) Analyses of urine markers including cytokines, chemokines and growth factors in patients with interstitial cystitis

Publications

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- Kimura T, Egawa S, Uemura H.** Personalized peptide vaccines and their relation to other therapies in urological cancer. *Nat Rev Urol.* 2017; **14**: 501-10.
- Sato S, Takahashi H, Kimura T, Egawa S, Furusato B, Ikegami M.** Clinicopathological importance of anterior prostate cancer in Japanese Men. *Pathol Int.* 2017; **67**: 156-62.
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- Urabe F, Kimura T, Shimomura T, Onume H, Yamamoto T, Sasaki H, Miki J, Kuruma H, Miki K, Egawa S.** Prospective comparison of the efficacy of caudal versus periprostatic nerve block, both with intrarectal local anesthesia, during transrectal ultrasonography-guided prostatic needle biopsy. *Scand J Urol.* 2017; **51**: 245-50.
- Urabe F, Kimura T, Miki J, Shimizu K, Kishimoto K, Egawa S.** Estimated glomerular filtration rate on postoperative day 1 is associated with renal functional outcome after percutaneous renal cryoablation for renal tumors. *Int J Urol.* 2017; **24**: 553-4.