

## 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

1. 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 were 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) Adipose stem cell therapy for the treatment of interstitial cystitis, stress urinary incontinence, and underactive bladder

2. Clinical research: Several clinical studies have been performed 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 cancers
- 3) Comparison of cytokines, chemokines, and growth factors in patients with interstitial cystitis, overactive bladder, and chronic bacterial cystitis

### Publications

**Furuta A, Suzuki Y, Kimura S, Asano K, Egawa S, Yoshimura N.** Noradrenergic mechanisms controlling urethra smooth and striated

muscle function in urethral continence reflex in rats. *Low Urin Tract Symptoms*. 2015; **7**: 155-61.  
**Kimura T, Sasaki H, Akazawa K, Egawa S.**

Gonadotropin-releasing hormone antagonist: a real advantage? *Urol Oncol.* 2015; **33**: 322-8.

**Sasaki H, Klotz LH, Sugar LM, Kiss A, Venkateswaran V.** A combination of desmopressin and docetaxel inhibit cell proliferation and invasion mediated by urokinase-type plasminogen activator (uPA) in human prostate cancer cells. *Biochem Biophys Res Commun.* 2015; **464**: 848-54.

**Sasaki H, Kido M, Miki K, Aoki M, Takahashi H, Dokiya T, Yamanaka H, Fukushima M,**

**Egawa S.** Results off central pathology review of prostatic biopsies in a contemporary series from a phase III, multicenter, randomized controlled trial (SHIP0804). *Pathol Int.* 2015; **65**: 177-82.

**Ishii G, Naruoka T, Kasai K, Hata K, Omono H, Suzuki M, Kimura T, Egawa S.** High pressure balloon dilation for vesicourethral anastomotic strictures after radical prostatectomy. *BMC urol.* 2015; **15**: 62.