

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 clarify 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 interstitial cystitis, stress urinary incontinence, and underactive bladder

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 cancer and bladder cancer
3. Analyses of urine markers, including cytokines, chemokines, and growth factors, in patients with interstitial cystitis

Publications

- Hatano T, Atsuta M, Inaba H, Endo K, Egawa S.** Effect of everolimus treatment for renal angiomyolipoma associated with tuberous sclerosis complex: an evaluation based on tumor density. *Int J Clin Oncol.* 2018 Jun; **23**: 547–52.
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- Kimura T, Egawa S.** Epidemiology of prostate cancer in Asian countries. *Int J Urol.* 2018; **25**: 524–31.
- Sasaki H, Kimura S, Shimada H, Murakami M, Yanagisawa T, Atsuta M, Matsuura T, Yokawa Y, Ishida K, Egawa S.** Outcomes of laparoscopic resection of urachal remnants followed by novel umbilicoplasty. *Int Urol Nephrol.* 2018; **50**: 2167–72.
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- Murakami M, Kiyota H, Kasai K, Bando S, Kira S, Koide H, Yamada H, Kimura T, Egawa S.** Antimicrobial prophylaxis for transurethral resection of bladder tumor: A retrospective comparison of preoperative single-dose administration of piperacillin and tazobactam/piperacillin. *Journal of Infection and Chemotherapy.* 2018; **24**: 954–7.
- Mori K, Kimura T, Ito K, Onuma H, Tanaka M, Matsuura T, Kurokawa G, Iwatani K, Inaba Y, Sakanaka K, Sasaki H, Miki J, Shimomura T, Miki K, Egawa S.** Earlier use of androgen receptor-axis-targeted drugs may improve overall survival in patients with non-metastatic castration-resistant prostate cancer. *The Prostate* 2018; **78**: 766–72.
- Ito K, Kimura T, Onuma H, Tabata R, Shimomura T, Miki K, Tomita M, Egawa S.** Does docetaxel prolong survival of patients with non-metastatic castration-resistant prostate cancer? *Prostate.* 2018; **78**: 498–505.
- Usuba W, Urabe F, Yamamoto Y, Matsuzaki J, Sasaki H, Ichikawa M, Takizawa S, Aoki Y, Niida S, Kato K, Egawa S, Chikaraishi T, Fujimoto H, Ochiya T.** Circulating miRNA panels for specific and early detection in bladder cancer. *Cancer Sci.* 2019; **110**: 408–19. Epub 2018 Dec 12.
- Fukuokaya W, Kim S, Natsuyama T, Matsuzaki K, Shiomi H, Kitoh H, Utsumi N, Kurosaki H, Inoue M, Akakura K.** Significance of prostate-specific antigen kinetics after three-dimensional conformal radiotherapy with androgen deprivation therapy in patients with localized prostate cancer. *Int J Clin Oncol.* 2018; **23**: 361–7.

Reviews and Books

- Urabe F, Kosaka N, Kimura T, Egawa S, Ochiya T.** Extracellular vesicles: Toward a clinical application in urological cancer treatment. *Int J Urol.* 2018; **25**: 533–43.