acinar proliferation as well as prostatic intraepithelial neoplasia. 14 (36.8%) patients in ASAP group were later diagnosed as prostate cancer, 6 (23.1%) patients in PIN group were later diagnosed as prostate cancer, and 100% patients in ASAP+PIN group were later diagnosed as prostate cancer.

Conclusion: Patients with a diagnosis of ASAP or extensive high grade PIN during prostate biopsy had a higher chance of developing prostate cancer, especially for patients with a simultaneous diagnosis of ASAP + PIN in the same biopsy. These patients should receive second time biopsy during follow up. Most cancer of the cancer in these patients could be detected within twice re-biopsy.

**IPD08:**

**NEW CIRCULATING TUMOR CELLS (CTCs) EVALUATION METHOD IN PROSTATE CANCER**

Takehiko Nakasato 1, Michio Naoe 1, Kazuko Tujiyama 1, Yuki Matui 1, Kazuhiro Oshinomi 1, Jun Morita 1, Kohzo Fuji 1, Yoshio Ogawa M.D 1, Masayuki Ishige 1, Kousoke Osawa 2, Masaharu Matuzaki 2. 1Department of Urology, Showa University School of Medicine, Tokyo, Japan; 2On-chip Biotechnologies Co., Ltd, Japan

**Purpose:** AR-V7 is one of a splicing variant of the Androgen receptor (AR). It cause castration resistant prostate cancer (CRPC). In contrast, CTCs is expected as a predictive factor for patient’s prognosis and as a biomarker of the disease.

CellSearch is the only FDA approval method as an evaluation of CTCs ensuring the quantitative evaluation. This methodology is depending on the expression of EpCAM and CRK. However, the decrease expression of EpCAM and CRK caused by Epithelial-Mesenchymal Transition (EMT) can be an obstacle to CTC detection.

In recent years, AdnaTest is used for the evaluation of CRPC. It captures CTC depending on EpCAM and Her2 expression on cancer cells, then assess the presence of AR-V7 mRNA. But, this method is semi-quantitative and also depending on expression of EpCAM.

We consider it is important to know the number of ARV-7 positive cells accurately. Because, CTCs of each prostate cancer patients are heterogeneous.

The aim of our study is to establish a new method of improved detection rate of EpCAM and CK-negative cells (i.e EMT cells), ensure the quantitative evaluation and assess the number of AR-V7-positive cells.

**Materials and Methods:**

LNCap was used as hormone sensitive prostate cancer (HSPC) model, and Vcap, PC3 and Du145 were used as CRPC model. Peripheral blood mononuclear cell (PBMC) and VMRC-RCW (Renal cell carcinoma cell) were used as negative control.

CK and EpCAM antibodies were used as CTC-specific antibodies. PSA, PSMA and AR-FL antibody were used as prostate-specific antibodies, cells which show positivities for those antibodies within peripheral blood were considered as CTCs. In addition, vimentin antibody was used for the purpose of evaluating the EMT cells.

AR-V7 antibody was used as a biomarker for prostate cancer. On-chip sort was used for quantitative assessment of CTCs.

**Conclusion:** Negativity of CK-Ab for LNCap and EpCam-Ab for PC3 may indicate that EMT occurs in LNCap and PC3. Positivity of PSMA-Ab, PSA-Ab and AR-FL-Ab for LNCap indicates the possibility of improving the detection rate of CTC. Positivity of AR-V7-Ab for Vcap and low positivity for LNCap were likely to be the evaluation of new biomarkers in CTC studies.

**IPD09:**

**THE IMPACT OF TUMOR LOCATIONS ON LOCAL RECURRENCES IN PROSTATE CANCER PATIENTS RECEIVING CRYOABLATION**

Shih-Chun Hung, Chung-Hsin Chen, Yeong-Shiau Pu. Department of Urology, National Taiwan University Hospital, National Taiwan University College of Medicine, Taipei, Taiwan

**Purpose:** To evaluate the impact of tumor locations on local recurrences in prostate cancer patient who received cryoablation

**Materials and Methods:** A total 255 patients with prostate cancer who received primary cryoablation in National Taiwan University Hospital between January 2008 and December 2012 were enrolled. During follow-up, biochemical failure (Phoenix criteria) would trigger prostate biopsies. Local recurrence refers to pathologically proven prostate cancer in prostate and seminal vesicles. The prostate was defined into eight areas: left lateral (LL), left medial (LM), left apex (LA), right lateral (RL), right medial (RM), right apex (RA), anterior and midline posterior (PM). The seminal vesicles also defined as one area each: left seminal vesicle (LSV), right seminal vesicle (RSV). We analyzed the prostate cancer recurrence rate of each area after primary cryoablation.

**Results:** A total of 46 (18.0%) patients had local recurrences during a median follow-up duration of 5 years. In the primary tumor areas, local recurrence rates were 7.1% (RM), 3.4% (RA), 2.4% (RVS), 2.6% (LSV), 1.1% (LM), 2.1% (LL), and 0 (RL, anterior, PM, LA). For the areas with negative results for malignancy in pre-operative prostate biopsies, local recurrence rates were 2.4% (RVS), 1.1% (RL) and 0 (other areas). For patients whose anterior and PM areas were not routinely examined in pre-operative prostate biopsy, local recurrence rates were 3.3% (anterior) and 1.7% (PM). Multivariate analysis revealed higher tumor stages, and tumor locations at RM, and anterior areas were associated with higher risk of local recurrence. Those patients with previously proved cancer distribution at the right medial had highest recurrence rate at this area.

**Conclusion:** Limited to the nature of cryoablation and preservation of vital organs nearby, tumor locations in prostate would interfere with the successful rate of prostate cryoablation. To improve oncological outcomes, detailed and accurate tumor locations is essential for prostate patients who plan to receive cryoablation.

**IPD10:**

**THE ONCOLOGICAL OUTCOMES AND SURVEILLANCE POLICY OF TESTICULAR CANCER: 6-YEAR SINGLE CENTER EXPERIENCE IN TAIWAN**

Yung-Ting Cheng, Kuo-How Huang, Yeong-Shiau Pu. Department of Urology, National Taiwan University Hospital, Taiwan

**Purpose:** We investigated the treatment outcome of testicular cancer in Taiwan, given globally rise in incidence in recent decades.

**Materials and Methods:** From February 2010 to October 2015, we retrospectively collected patients with the confirmed diagnosis of testicular cancer. Clinical data, pathological details and treatment outcomes were analyzed by reviewing medical records.

**Results:** A total of 81 patients with testicular cancer were enrolled; 40 (49.4%) had seminoma and 41 (50.6%) had non-semimoma germ cell cancer. The median age was 51 years old in seminoma and 30 years old in non-seminoma group. The staging in seminoma group was I-II (66%) and III-IV (34%). The staging in non-seminoma group was I-II (36%) and III-IV (63%). The staging in non-seminoma group was I-II (36%) and III-IV (63%).

**Conclusion:** Our study provided the latest evidence on oncological outcomes of testicular cancer. Active Surveillance in stage I testicular cancer yielded good prognosis and served as a treatment option.