

observation. Contraindications include incontinence, and inflammatory bowel disease. The latter is believed to contribute to a higher incidence of anorectal fistula formation.

**Keywords:** Cryotherapy; urologic neoplasms; prostate-specific antigen (PSA)

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## AB40. Sexual side effects of medical treatment of BPH

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**Abstract:** The medical and surgical management of BPH/LUTS can affect erectile function (EF), cause ejaculatory dysfunction (EjD) or affect libido. Five alpha reductase inhibitors, such as finasteride and dutasteride have good efficacy for benign prostatic hyperplasia, however they have also sexual side effects including loss of libido, erectile dysfunction and decreased ejaculatory volume. Also, alpha adrenergic blockers are well known and standard medical treatment options for BPH/LUTS, and in spite of their high efficacy and low adverse effects, retrograde and diminished ejaculation are potential sexual side effects. Although the prevalence of five alpha reductase inhibitors and alpha adrenergic blockers are not high, their impact on the patients' quality of life must be regarded as important as their efficacy for BPH/LUTS. This lecture will review the effects of these therapies on sexual function.

**Keywords:** Sexual side effects; BPH; LUTS

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## AB41. The preliminary study on shear wave elasticity imaging for diagnosis of pathological types of BPH

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**Objective:** (I) Analyze the relationship of the elastic modulus level of the prostate transition zone and pathological types of BPH by applying the trans-rectal elastography and the pathological types of patients with BPH, in order to diagnose the pathological types of BPH by shear wave elastography, hence to guideline the drug therapy to patients suffered from BPH; (II) find The relationship of elastic modulus level in the transition zone of prostate and pathological types of BPH and clinical parameters of BPH patients, which will provide a new practice basis for the diagnosis and treatment of patients with BPH.

**Methods:** A total of 37 prostatic specimens were collected, these patients were operated by TURP from July 2013 to January 2014 in Central South University Xiangya School of Medicine Affiliated Haikou Hospital, and patient's parameters such as IPSS, tPSA, fPSA were recorded. A total of 37 patients underwent TURS and trans-rectal shear wave elastography to detect the prostatic volume and average elastic modulus of the prostate transition zone. Specimens were HE stained and the pathological types were observed by image-pro plus 6.0. A total of 37 Patients were divided into two groups based on pathological types, Using SPSS 19.0 statistical software to analysis all parameters,

two specimens equal numbers were tested by T-test, comparisons among the three groups were made by one-way analysis of variance (ANOVA) and correlative analysis between two variable quantities were analyzed by Pearson analysis. The ROC (Receiver operating characteristic curve) curve was made according to the elastic modulus level, a elastic modulus cutoff enable the best distinction between stromal hyperplasia and glandular hyperplasia.  $P < 0.05$  was statistically significant for the difference.

**Results:** (I) In the results of HE stained, there are 12 glandular hyperplasia and 25 stromal hyperplasia among 37 patients; (II) the elastic modulus levels of the stromal hyperplasia ( $4.93 \pm 8.318$ ) KPa are higher than glandular hyperplasia ( $24.54 \pm 3.816$ ) KPa, There is significantly different between the two groups ( $F = 3.821$ ,  $P = 0.059$ ,  $t = -4.100$ ,  $P < 0.001$ ); (III) according to the ROC curve analysis, the cutoff point of elastic modulus was determined as 27.45 KPa. AUC = 0.935, Youden's index was 0.753. The sensitivity, specificity, accuracy rate was 92.0%, 83.3%, 89.2%, respectively; (IV) the tPSA levels ( $2.15 \pm 0.769$ ) ng/mL, fPSA levels ( $0.54 \pm 0.292$ ) ng/mL and prostatic volume ( $41.25 \pm 15.233$ ) cm of the stromal hyperplasia of BPH are lower than the tPSA levels ( $4.93 \pm 2.673$ ) ng/mL, fPSA levels ( $1.12 \pm 0.529$ ) and prostatic volume ( $69.05 \pm 13.173$ ) cm of the glandular hyperplasia, There are significantly different between the two groups; (V) the levels of elastic modulus is positive related to IPSS ( $r = 0.468$ ,  $P = 0.004$ ), and negative related to tPSA ( $r = -0.346$ ,  $P = 0.036$ ), fPSA ( $r = -0.421$ ,  $P = 0.009$ ) and prostatic volume ( $r = -0.732$ ,  $P < 0.001$ ).

**Conclusion:** (I) SWE may confirm the pathological types of BPH. A value of 27.45 kPa was determined as the cutoff point in this research; (II) clinical characteristics are different among different pathological types of BPH. BPH patients of stromal hyperplasia have a higher elastic level, smaller volume, higher IPSS and lower PSA. BPH patients of glandular hyperplasia are on the contrary.

**Keywords:** Preliminary study; BPH; SWE

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## AB42. Metabolic evaluation for urinary stone disease

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**Abstract:** Urinary stone disease affects up to 15% of people globally. The etiology of stones may range from nutrition to behavior to genetics. After a first time occurrence of a symptomatic stone, up to 50% of patients may experience another stone within 5 years. Thus, metabolic evaluation for the prevention of stone recurrence can play a major role in reducing the morbidity associated with urinary stones. This session will focus on the means by which we evaluate our nephrolithiasis patients and counsel them based on these results.

**Keywords:** Metabolic evaluation; urinary stone disease; nephrolithiasis patients

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## AB43. Tuning stem cells with mechanobiological signaling

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**Abstract:** For the stem cell activation, it has been demonstrated that biological signaling plays a critical role in regulating stem cell fate, such as the soluble stem cell niche signals (growth factors and cytokines), while recent evidence confirms that regulation of stem cell fate by these soluble factors is strongly influenced by the coexisting insoluble adhesive, mechanical, and topological