were collected from each center and evaluated. Nomogram-predicted probabilities for the presence of unfavorable pathological parameters (extracapsular extension, seminal vesicle invasion and lymph node involvement), and the 5-year freedom from recurrence were compared with actual patient outcomes. Areas under the receiver operating characteristic curves (AUC) were determined for each variable, to assess the predictive accuracy of the nomograms applied.

Results: The MSKCC prostate cancer nomograms showed superior accuracy for all parameters studied, as compared with the JHH predictive tables. AUC values for organ confined disease, seminal vesicle invasion and lymph node involvement were calculated as: 0.763; 0.750; 0.756 and 0.868; 0.787; 0.874 for JHH and MSKCC nomograms, respectively. The AUC values for 5-year freedom from recurrent disease were: 0.751; 0.812; 0.813 and 0.894 for pre- and postoperative JHH and MSKCC nomograms, respectively.

**Conclusions:** Despite the potential for heterogeneity in patient selection and management, most predictions demonstrated high concordance with actual observations. All studied nomograms showed reasonable predictive values for the final pathological features, like organ confined disease, seminal vesicle invasion and lymph node involvement, and for the 5-year freedom from recurrent disease. This multi-institutional study showed that each of the predictive tools studied could be used in Bulgarian patients with comparable accuracy. Compared with the JHH tables, the MSKCC prostate cancer nomograms showed higher predictive accuracy and should be therefore preferred.

#### S10

# DELAY OF ZOLEDRONIC ACID TREATMENT IN PATIENTS WITH PROSTATE CANCER WHO REQUIRE ONGOING DENTAL WORK

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**Introduction & Objectives:** Bisphosphonates reduce and delay skeletal-related events in prostate cancer patients with bone metastases, preserving patient functional independence and quality of life. However, patients that need oral care may not be suitable candidates for immediate treatment initiation because of the possibility of bisphosphonate-related osteonecrosis of the jaws (ONJ). Aim of this study was to assess the incidence of dental problems which could delay zoledronic acid treatment.

**Material & Methods:** 60 patients with advanced prostate cancer that fulfilled the study inclusion criteria were treated from July 2007 to April 2010. They all underwent a thorough pre-treatment dental assessment, including a panoramic jaw radiograph, to detect potential dental and periodontal morbidity. Patients who required surgical procedures were advised to delay the zoledronic acid infusion until invasive procedures have been completed and oral tissues have fully healed. All patients were treated by an oral maxillofacial surgeon or a hospital dentist. Follow up included monitoring of oral hygiene status for an overall three year period.

Results: 22 patients needed invasive oral care (tooth extraction, alveolar surgery, jaw bone debridement, peripheral or total ostectomy, free fibula vascularized graft) in an OR environment and support [18] or intubation [4] anesthesia. 7 patients using removable dentures had mucosal lesions (excisional biopsy and closure [4]) and 5 had periodontal disease (scaling [3], deep scaling [2]). 26 patients (45%) started zoledronic acid treatment immediately, while the remaining 34 (55%) with a mean delay of 3 months (1.5-6). No patient in this group revealed persistent ONJ, with a mean surveillance period of 14 months (6-33).

**Conclusions:** Comprehensive dental examination is a must for advanced prostate cancer patients before initiation of zoledronic acid treatment. Patients with a challenging dental situation should have dental – oral care before initiation of these drugs. Since benefits or risks of postponing bisphosphonate therapy have not been yet statistically evaluated to date, decision to defer bisphosphonate treatment must be made by the treating urologist in consultation with an oral specialist.

#### S11

## COMBINED ANESTHESIA DURING TRUS PROSTATE BIOPSY

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Introduction & Objectives: Although the importance of anesthesia during TRUS prostate biopsy is universally accepted, there is an ongoing conflict on what is the best way to achieve it. The last few years the periprostatic nerve block (PNB) has been established as the gold standard but its ability to prevent the pain from the insertion and manipulation of the probe in the anus is questioned. Combining the PNB with a locally administered analgesic cream is assumed to become the new gold standard. We tested this hypothesis by testing prilocain-lidocaine (PL) and glyceril-trinitrate (GTN).

Material & Methods: The study included 90 patients that had clinical suspicion for prostate cancer and were scheduled for a TRUS prostate biopsy. They were randomized into 3 groups. Group 1 received only PNB where as groups 2 and

3 received a combination of PNB plus GTN or PL respectively. With the use of a 10-point visual analog scale pain at 3 steps of the procedure was evaluated (VAS1=insertion of probe and measurement of prostate volume, VAS2=biopsy and VAS3= pain 30min after the procedure). Complications were recorded.

Results: The three groups were comparable in patient age, prostate volume and PSA. Patients in Group 1 had mean age of 64,7 ± 8,2 SD, mean prostate volume of 44,9 ± 15,6 SD and mean PSA value of 8,8 ± 4,3 SD. The respective values were  $63.2 \pm 10$ SD,  $29.6 \pm 17.3$ SD and  $8.1 \pm 4.7$  SD for Group 2 and  $67.3 \pm 7.5$  SD,  $51.8 \pm 26.3$  SD,  $11.7 \pm 5.9$  SD for group 3. VAS1 was significantly less in groups 2 and 3 compared to group 1 (p=0,23 and p<0,00 respectively). There was no difference between Groups 2 and 3 (p= 0,139). Group 3 presented smaller VAS2 values compared to Groups 1 and 2. This was significant between groups 2 and 3 (p=0,034) and almost significant between groups 1 and 3 (p=0.089). Group 3 also presented smaller VAS3 values than the other two groups. Further analysis of the differences of VAS1 values in subgroups of patients with respect to age and prostate volume showed that men under 65 years had significantly lower VAS1 in Groups 2 and 3 compared to Group 1 (p=0,007 and p=0,003 respectively) and that men with prostate volume over 40cc in group 3 had significantly less VAS1 compared to the same subgroup of patients in groups 1 and 2 (p<0,00 and p=0,016 respectively). Patients in groups 1 and 3 reported no complications. Two patients in group2 reported headache and two reported transient dizziness.

**Conclusions:** The combination of PNB with either PL or GTN provides better pain control during the insertion of the probe compared to PNB alone. PL also contributes to the analgesic effect of PNB during the biopsy. The analgesic effect of PL and GTN is higher in younger men but PL also proves to have a positive analgesic effect in men with large prostate. PL proves to be safer than GTN. The cost and time that is needed for application of combined anesthesia are acceptable comparing to the better pain control that is provided.

#### S12

## INCIDENCE OF PROSTATIC URETHRAL INVOLVEMENT IN RADICAL CYSTOPROSTATECTOMY SPECIMEN

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**Introduction & Objectives:** The objective of this study is to verify the incidence of prostatic urthral involvement in patients who underwent radical cystoprostatectomy for invasive bladder carcinoma.

Material & Methods: We have retrospectively reviewed patients who underwent radical cystoprostatectomy for infiltrative bladder tumors in period between 2004 and 2009 year, 94 men with bladder cancer underwent radical cystoprostatectomy at Urology Clinic-University of Sarajevo Clinics Centre. Mean age of patients was 67 years, with age limits ranging between 48 and 79 years. Pathohystological evaluation was used for all specimens from RCP.

**Results:** We found prostatic urethral involvement was evident in 14.6%. Of the 34% patients with carcinoma in situ in the bladder 31.3% had concomitant prostatic urethral involvement with carcinoma, whereas only 4.5% no evidence of carcinoma in situ had prostatic urethral involvement. Likewise 18 of the 94 patients (16,9%) with multifocal tumors had concomitant prostatic urethral involvement with carcinoma, whereas only 3 (2,8%) with no evidence of multifocality had prostatic urethral involvement. 9,57% of cystoprostatectomy specimens in patients with bladder cancer also contained incidental prostate cancer. This result was much lower than overall mean frequency of incidentally detected prostate cancer in other series of cystoprostatectomy cases (range, 23%-68%).

**Conclusions:** Patients having this risk factor TCC, prostatic urethra involvemt should be distinguished from candidates who are suitable for neobladder replacement. Otherwise, preoperative anterior urethral wash cytology or multiple cold punch biopsies can be used to rule out tumor extension to the anterior urethra.

### S13

# MAY THE HIGH SERUM LEVEL OF TESTOSTERONE MANDATE ADJUSTMENT OF PSA VALUE IN HEALTHY MEN?

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**Introduction & Objectives:** To evaluate the relationship between serum testosterone levels and Prostate specific antigen(PSA) values in healthy men with PSA values less than 4ng/ml.

Material & Methods: The study comprised 179 healthy men with mean age 59,19+12 years who visited our hospital for routine check up. The inclusion criteria; normal urine analysis and culture, normal renal and liver function test, normal digital rectal examination and PSA serum level less than 4ng/ml. The patients were divided into two subgroups according to PSA values; patients with PSA values less than 2,5 (group 1,160 pateints), patients with PSA values 2,5-4 ng/ml (group 2, 19 patients). The relationship between PSA serum levels and testosterone were investigated in both groups. Also the mean values of serum testosterone level were calculated for patients with age less than 50 year-old and compared to that of patients older than 50.

**Results:** In overall patients the mean value for serum PSA values and total testosterone level were 1.27+0.88 ng/ml and 404, +158,86 ng/dl respectively. Data on patients in the subgroups are in table1. No correlation was detected between serum PSA values and testosterone serum levels neither in the overall patients nor the subgroups. However weak positive correlation between age of the patients and testosterone levels and PSA values were detected. The mean values of testosterone for patients with ages more than or equal to 50 and for those patients with ages less than 50 were 417,01+163,35ng/dl and 344,16+120,21 ng/dl respectively (p=0.02). Table 1. A comparison between the variables of both groups

	Group I	Group II
Patients(n)	160	19
Age(year)(mean+SD)	58.44+12.12	66.29+8.15
TPSA (ng/ml)(mean+SD)	1.05+0.56	3.38+0.42
Testosterone (ng/dl)(mean+SD)	401,46+1.57	432,35+1.71 (p=0.59)*

\*No significant difference was found between testosterone levels

**Conclusions:** Although testosterone have documented importance in the control and progression of prostate cancer, no similar impact was detected for the same hormone on serum PSA level. Therefore we suggest that there is no need for adjustment of PSA serum PSA level according to testosterone level in healthy men with PSA values less than 4ng/ml. Further studies including large number of patients should be carried out to confirm the findings of our studies.

#### S14

## PROGRESSION OF PATIENTS WITH LOCALIZED PROSTATE CANCER IN ACTIVE SURVEILLANCE

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Introduction & Objectives: With effective screening methods patients with prostate cancer are beingdiagnosed at earlier ages. Some of these patients are willing to maintain normal functions withoutexposed to adverse effects of treatment. In this case, excessive treatment or miss treatment is adilemma. Active surveillance may be a reasonable compromise for this dilemma.

Material & Methods: Total of 64 patients who met the criteria (tPSA <10 & ≤2 sample & ≤cT2c& Gleason ≤3+3) included in the active surveillance. 32 patients who had at least one repeat biopsyat 6 month were included in this study. Mean age of patients were 66 (53-82). As a routine, tPSAmeasurements every 3 months, digital rectal examination (DRE) every 6 months and repeat biopsy wasrecommended. Patients' mean tPSA follow-up was 22.06 months (8-56), mean repeat biopsy time was17.3 months (8-35). Of the patients 53% (n=17/32) were using 5 alpha-reductase inhibitors (5-ARI).tPSA increase (the lowest tPSA value after drug started was considered as initial tPSA in patients on5-ARI) and progression in biopsy were evaluated. Increase in number of focus and/or biopsy GleasonScore in any repeat biopsy was considered as biopsy increase. Definitive treatment (DT) was done inpatients who had progress in repeat biopsy.

**Results:** tPSA increased in 15.6% (n=5/32) of the patients with initial tPSA (tPSA0) 0-4 ng/ml. tPSAincreased in 37% (n=10/32) of the patients with tPSA0>4 ng/ml. Biopsy progressed in 34.4% (n=11/32) of the patients. Biopsy progression was more in patients who did not use 5-ARI; 23.5% (n=4/17)vs 47% (n=7/15) (p=0.07). The progression rate in biopsy increased with increasing clinical stage. Increase in T1a-b, T1c, and T2 was 0%, 30.4% and 50%, respectively (p=0.461). DT (RRP/EBRT)rate was 20% in tPSA0<4 ng/ml (n=1/5), and 30% (n=8/27) in tPSA0>4 ng/ml (p=0.432). DT rateincreased with increasing clinical stage; 0% (n=0/1) in T1a-b, 21.7% (n=5/23) in T1c and 50% (n=4/8)in T2 (p=0.253). At the time of DT non of these patients had lymph node or distant organ metastasis.

**Conclusions:** Active Surveillance is a safe method in localized prostate cancer. Biopsy progress ismore in patients who are not using 5-ARI. Because of the short mean follow-up period and the limitednumber of patients results of the multicenter randomized studies should be waited.

### S15

#### DOES ASAP NECESSITATES IMMEDIATE RE-BIOPSY?

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**Introduction & Objectives:** To propound the cancer rates of our TRUS guided prostate biopsies and to investigate the importance of second biopsies of ASAP + patients.

**Results:** Patients' ages were between 37 and 84 (mean:63.3± 7.6) years. According to pathologic results of initial biopsies, 1441 have non-cancerous pathology where as 465 reported as cancer. Our cancer detecting rate was 23,5%. Of the 1978 TRUS guided prostate biopsy performed patients, 72 (3,6%) were ASAP+. From these, 49 of them accepted an immediate second biopsy and 18 (36,7%) were diagnosed to have cancer and 4 (9%) ASAP, again. The rest of the

previously ASAP+ patients (n: 27; 55,1%) had benign pathology in the 2<sup>nd</sup> one. As a result of second biopsy for ASAP, we were able to increase our cancer detection rate by 1%.

Conclusions: There is a parallelism of our cancer detection rate with TRUS guided prostate biopsies between world and our clinic. Also ASAP detection rate is also concordant with the literature. Our cancer detection rates of second biopsies for the ASAP+ patients are not different from standard TRUS biopsy indications. Because of this one can think that, is immediate second biopsy indicated for ASAP+ patients or to wait with the PSA parameters and a second biopsy when necessary. Thus, decision making for timing of re-biopsy should not only based on the findings derived from previous biyopsy in these patients. PSA trend is still important in search of decision.

#### S16

# OUR EXPERIENCE WITH OPEN RADICAL PROSTATECTOMY THROUGH A 6 CM INCISION FOR THE TREATMENT OF LOCALIZED PROSTATE CANCER

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**Introduction & Objectives:** Surgical expertise has decreased the complication rates of radical prostatectomy and improved cancer cure. Considerable experience with retropubic open radical prostatectomy enabled us to perform the operation with a smaller incision

Material & Methods: In a two years period, from January 2008 to December 2009, 100 patients (group S) with localized prostate cancer underwent a retropubic radical prostatectomy through a 6 cm skin incision. Another group (W) consisted of 90 individuals, who had an operation with a wider incision of 15 cm in our department before January 2008. Retrospective analysis was performed on the demographic data, the operative and immediate postoperative characteristics as well as on the oncological outcomes of the patients.

**Results:** The mean preoperative PSA value was 7.8 +/- 3.4, the Gleason score did not exceed 7, the mean age 68 +/- 7.3 years and the mean BMI 25 +/- 4. The operative time changes in haemoglobin concentrations, durations of hospitalization, positive margin rates and overall complication rates were comparable in both groups. The perioperative need of analgesics was significantly lower compared to the other group, and consisted of intravenous use of NSAIDs on the operative day and per os paracetamol during the first three postoperative days. All patients were mobilized and fed early after the surgery and the median length of hospital stay was 6 days. The urethral catheter was removed on the 12th postoperative day. The oncological and functional outcomes as far as continence and erectile preservation are concerned were comparable to the "best-in-class" values for retropubic radical prostatectomy reported in the literature.

**Conclusions:** The retropubic radical prostatectomy performed through a 6cm skin incision is a safe and effective procedure for the treatment of localized prostate cancer. Our experience demonstrates that most of the patients' expectations created by minimally invasive surgical techniques can be met with this small skin incision without the disadvantages of cost and prolonged operative time.

### S17

#### NEUROVASCULAR BUNDLE INVOLVEMENT CAN NOT BE ASSESSED ACCURATELY WITH ROUTINE PREOPERATIVE EVALUATION IN PROSTATE CANCER PATIENTS

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Introduction & Objectives: The aim of our study was to evaluate the effect of nerve sparing surgery on the surgical margin status at radical prostatectomy(RP). Material & Methods: Eighty-eight patients underwent bilateral nerve sparing RP. All patients underwent a bilateral nerve sparing surgery followed by excision of the ipsilateral neurovascular bundle(s) (NVB), uni- or bilaterally on the tumor side, separately. Pathological findings of NVB were correlated with preoperative serum PSA levels, DRE and preoperative TRUS-Bx findings as well as tumor characteristrics on specimen pathology (Gleason score, distance between tumor and prostatic capsule, presence of tumor multifocality, extracapsular penetration, ECE, and perineural invasion, PI).

Results: Mean patient age and preopartive serum PSA were 63.8±6.2 (49-76) and 12.9±9.4 ng/mL (2.4-45.5), respectively. DRE suggested nodules on 34 patients (38.6%). Uni- and bilateral NVB resections were performed on 40 (45.5%) and 48 patients (54.5%) as per TRUS-Bx pathology findings, respectively. On final pathology capsular penetration was present in 49 (55.7%), Capsular invasion in 11 patients (12.5%) patients. In the remaining 28 patients (31.8%), the distance between tumor and prostatic capsule was <1mm in 8 and >1mm in 17 patients. No tumor was detected on final pathology in 3 patients (3.4%). There were single tumor foci in 58 patients (65.9%), whereas in 19 (21.6%) and 8(9.1%) patients two or more foci were noted, respectively. PI was detected in 65 patients (73.9%). NVB involvement were detected in only 7(8%) patients, six of whom had bilateral NVB resections. There were no difficulty on dissecting the NVB off of the prostate