administration. The association between AdjRT and UC recovery was assessed in univariable and multivariable Cox regression analyses after accounting for age at surgery, pre-operative risk groups, nerve-sparing status and year of surgery.

**Results:** Mean age at surgery was 63.3 yrs (median 63.5; range 39-85 yrs). Pre-operative risk groups allowed to identify 528 (47.0%), 460 (41.0%) and 135 (12.0%) patients in the low, intermediate and high risk group, respectively. The 1 and 2-years UC recovery rates were significantly higher for patients not treated with AdjRT, as compared to patients receiving AdjRT (71% vs. 45% and 77% vs. 50%, respectively; p<0.001). When patients were stratified according to D’Amico risk groups, AdjRT did not impact on the rate of UC recovery in low risk patients (Log rank p=0.1), while AdjRT significantly affected the rate of UC recovery in intermediate (1yr: 67% vs. 43%; Log rank p=0.1) and high risk patients (1yr: 47% vs. 32%; 2yr 52% vs. 39%; p=0.042). Data were confirmed at multivariable Cox regression analyses where AdjRT was independently associated to a lower rate of UC recovery (p<0.001), after accounting for patient age, clinical oncologic characteristics, nerve-sparing status and year of surgery. Patients not receiving AdjRT had a 1.6 fold higher probability of recovering full continence (p=0.001).

**Conclusions:** We demonstrated that patients treated with AdjRT have a decreased probability of achieving full continence (no pads) after RP. These results should be taken in account when RP and AdjRT are considered for patients with intermediate or high risk prostate cancer.

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### TIME TO BIOCHEMICAL RECURRENCE IS A STRONG AND INDEPENDENT PREDICTOR OF CSS AND OS IN HIGH-RISK PROSTATE CANCER

**Introduction & Objectives:** Even though more than half of the patients with high-risk prostate cancer develop biochemical recurrence (BCR) after surgery, the outcome of those who fail is not invariably poor. This study aimed to assess the value of time to BCR as a predictor of cancer-specific survival (CSS) and overall survival (OS) in high-risk PCa patients, treated with radical prostatectomy (RP).

**Materials & Methods:** The study included 1584 patients with pre-operative high risk prostate cancer (PSA>20 ng/mL or cT3-T4 or biopsy Gleason 8-10) treated with RP and pelvic LND at 7 tertiary referral centers between 1987 and 2009. Adjuvant and salvage radiotherapy (RT) and hormonal treatment (HT) were administered according to institutional protocols. BCR was defined as PSA>0.2 ng/mL on two subsequent measurements.

**Results:** Mean age at surgery was 65.4 yrs (median 66 yrs; range 41-89). Mean preop PSA was 33.5 ng/mL (median 22.8 ng/mL; range 1-1710 ng/mL). Final Gleason sum was 2-6, 7 and 8-10 in 32.3, 37.7 and 30.0%, respectively. Pathological stage was T2, T3a and T3b in 23.5, 33.0 and 43.5%, respectively. 24.2% had lymph node invasion and 47.5% positive surgical margins. Adjuvant RT and HT were administered in 22.1 and 46.4%, respectively. At a mean follow up of 67.1 months (median 62 months; range 1-206), BCR occurred in 33%. CSS was significantly worse in patients with BCR occurring within 2 years from surgery (n=278, 17.7%), compared to those with BCR occurring beyond 2 years (n=259, 15.3%) (10-year CSS 73.2% vs 85.3%, p=0.0008). When the analysis was repeated for the subgroup of 406 patients who did not receive any (neo-) adjuvant treatment, results were even more pronounced with 10-year CSS of 77.2% for the group of patients with BCR <2 yrs versus 100% for the other groups (p=0.0001). OS of patients with BCR >2 yrs was identical compared to patients who never experienced BCR in follow-up (10-year OS 75.5% vs 81.4%, p=0.83), while OS of patients with BCR <2 yrs was significantly worse (10-year OS 51% vs 81.4%, p=0.001). BCR <2 yrs (p=0.0001, HR 4.5191 (95% CI 2.9494 to 6.9240) was the strongest independent predictor of CSS in the Cox multivariable model, correcting for PSA, pathological stage and Gleason sum, lymph node invasion and surgical margins.

**Conclusions:** Outcome of high risk prostate cancer is not invariably poor. However, about 1 in 5 patients experience biochemical recurrence within 2 years from surgery. This group is at significantly elevated risk for cancer related death, and should be considered for trials assessing aggressive systemic treatment strategies.

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### IS INTRAOPERATIVE RADIATION THERAPY AND RADICAL PROSTATECTOMY BETTER THAN ADJUVANT RADIATION THERAPY AFTER RADICAL PROSTATECTOMY FOR CLINICALLY LOCALIZED ADVANCED PROSTATE CANCER?

**Introduction & Objectives:** Aim of this study was to compare the oncological outcomes of patients with clinically locally advanced prostate cancer (PCa) and

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### DO PATIENTS TREATED WITH RADICAL PROSTATECTOMY FOR LOCALLY ADVANCED PROSTATE CANCER AND PSA >50 MG/ML HAVE A WORSE PROGNOSIS THAN PATIENTS WITH PSA=20 MG/ML?

**Introduction & Objectives:** Aim of this study was to compare the oncological outcomes of patients with clinically locally advanced prostate cancer (PCa) and
Surgical management of locally advanced prostate cancer: a multi-center experience

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Introduction & Objectives: Surgical management of locally advanced prostate cancer is gradually being accepted by the urological community. However, the evidence for this is mainly based on rather small surgical series in highly selected patients. The objective of this study is to present the oncologic outcomes and determine prognostic factors in cancer specific survival (CSS) and overall survival (OS) in the largest multicenter series of cT3a prostate cancer to date.

Materials & Methods: Between 1967 and 2009, 888 patients with clinical T3a prostate cancer underwent RP and bilateral pelvic LND in 8 European tertiary referral centers. All patients had no evidence of nodal disease or distant metastasis on both contrast-enhanced computed tomography of the pelvis and bone scan. The last PSA value obtained prior to prostate biopsies was used in the analysis. Kaplan–Meier analysis was used to calculate CSS and OS. The uni- and multivariate Cox proportional hazard analysis were used to determine the predictive power of clinical and pathological variables in CSS and OS.

Results: Mean follow-up was 64.6 months (range 1 to 206). The mean pre-operative PSA was 29.2 ng/ml (range 0.5 to 1710). Median final Gleason score was 7 (range 3 to 10). One hundred and seventy-four patients (19.6%) were confirmed with organ confined disease (pT2); 625 (70.4%) were pT3 extending 346 (39.0%) with extraprostatic extension only (pT3a) and 279 (31.4%) with seminal vesicle invasion (pT3b); 89 (10.0%) had adjacent structure invasion (pT4). Two hundred and thirteen patients (24.0%) had lymph node involvement. Four hundred and eleven patients (46.3%) had positive surgical margins. Adjuvant therapy was administered to 52.5% (9.8% radiotherapy, 42.7% hormonal therapy). At 5- and 10-year follow-up, CSS was 94.8% and 89.5% and OS was 89.5% and 71.7%, respectively. Multivariate Cox proportional hazard analysis is displayed in the table below.

Table 1

<table>
<thead>
<tr>
<th>Group A</th>
<th>Group B</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-y. survival</td>
<td>10-y. survival</td>
<td>5-y. survival</td>
</tr>
<tr>
<td>OSS</td>
<td>86%</td>
<td>71%</td>
</tr>
<tr>
<td>CSS</td>
<td>92%</td>
<td>83%</td>
</tr>
<tr>
<td>BRFS</td>
<td>63%</td>
<td>89%</td>
</tr>
</tbody>
</table>

Conclusions: RP provided good results in cT3-4 disease. PSA value at diagnosis in our series could not discriminate OSS and CSS, while BRFS was higher for group B (p=0.006). Mean follow-up was 65.3 months (range IQR 46.0–96.5). Table 1 describes OS, CSS and BRFS at 5 and 10 years for Group A and B. Only BRFS was significantly higher for group A vs. group B.

678 THE OUTCOMES OF RADICAL PROSTATECTOMY MONOTHERAPY IN HIGH-RISK PROSTATE CANCER

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Introduction & Objectives: Controversy exists regarding the optimal treatment for patients with clinical high risk prostate cancer (PCa). Recent retrospective series have shown good cancer control when patients are treated with surgery as part of a multimodality approach, especially when specimen confined at pathological assessment. We aimed to investigate the cancer specific survival (CSS) of patients who underwent surgery alone without adjuvant treatment in a multicenter radical prostatectomy (RP) database of patients with high-risk localized PCa.

Materials & Methods: The study included 1584 patients with pre-operative high risk prostate cancer (PSA>20 ng/ml or cT3-4 or biopsy Gleason 8-10) treated with RP and bilateral pelvic LND at 7 tertiary referral centers between 1987 and 2009. Patients were excluded if receiving neo-adjuvant or adjuvant (within 3 months) treatment were excluded from the analysis. Specimen confined disease was defined as pT2-T3a, N0 with negative surgical margins. Biochemical failure (BF) was defined as PSA>0.2 ng/ml on 2 occasions. Salvage therapy was administered according to institutional protocols. The Kaplan-Meier method with Log Rank test was used for the outcome analysis.

Results: 612 patients (38.6%) who underwent RP did not receive any neo-adjuvant or adjuvant therapy. 206 patients were excluded because details on salvage treatment were missing. In total, 406 patients (25.6%) were included in the analysis. Mean age at surgery was 65.2 yrs (median 66 yrs; range 46-79). Mean pre-operative PSA was 23.8 ng/ml (median 21.4 ng/ml; range 1-152 ng/ml). Final Gleason sum was 2-6, 7 and 8 in 40, 43, 37% and 17%, respectively. Pathological stage was T2, T3a and >T3a in 43.8%, 37.6% and 18.5%, respectively. Margins were positive in 24.4%, and lymph nodes were positive in 6.2%. Salvage RT and HT were delivered to 10.8 and 12.9%, respectively. Overall, 273/406 (67.2%) patients in had specimen confined PCa. Interestingly, those patients had an excellent CSS compared to those without specimen confined PCa (10-year CSS=97.1% vs. 87.1%, p=0.02). They were also less likely to receive salvage RT (8.0 vs. 19.2%, p=0.14) and HT (5.1 vs. 28.8%, p=0.0001). Furthermore, patients who experienced BR within 24 months of surgery (n=78, 19.2%) fared significantly worse compared to patients who experienced BR beyond 24 months (n=47, 11.6%) (10-year CSS 77.2% vs. 100%, p=0.0001).

Conclusions: In this selected group of high-risk patients treated with RP and pelvic LND who received no (neo-) adjuvant therapy, CSS survival was excellent. Patients with pT2-3a, N0, RO PCa and biochemical recurrence >2 yrs had a negligible risk of cancer related death.