

conducted evaluating demographic characteristic of each patient, intraoperative and postoperative parameters. We analyzed the number of resections, number of total recurrences, time of recurrences, and histopathology details. The population was divided into two main groups: treated and untreated with 5-ARIs. Patients were treated with dutasteride for lower urinary tract symptoms due to prostatic hyperplasia (mean treatment time 16.8 months). The patients were followed according to EAU follow-up guidelines for NMIBC. Mean follow-up time was 29.5 months (range 24–50 months).

Results: No significant differences were observed among the different groups at baseline. The group treated with 5-ARIs presented a lower rate of recurrences (14.78%) than the untreated group (37.11%). Regarding the mean number of recurrences statistically significant difference was observed between the untreated ($1.944 \pm \text{SD } 0.141$) and the treated group ($1.235; \pm \text{SD } 0.206$; p -value: 0.0066), respectively. Furthermore, evaluating the recurrences, the 5-ARIs group showed a lower T stage when compared to the untreated group (p -value = 0.037). No significant differences were obtained regarding the grade of the recurrences (p -value = 0.756).

Discussion: Long-term treatment with 5-alpha-reductase inhibitors might play a role in reducing the risk of tumour recurrence and pT and extension of the lesions. Starting from this experience, a long-term, randomized prospective study could definitively assess the possible role of this widely used drugs in NMIBC.

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Bladder cancer and aploidentical bone marrow transplant with immunotherapy: Which is the relationship?

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Aim of the study: Lymphocytes T replete Aploidentical Transplantation (AT) after bone marrow ablation by radiotherapy and chemotherapy is the gold standard treatment for haematological cancer when an allogeneic transplantation is necessary. Nevertheless, this type of AT is affected by high rate of recurrence and potentially lethal infections. For this reason, an immunotherapy including an inoculation of lymphocytes T-regulator and T-conventional was added in order to decrease the risk of transplant rejection and the Graft versus host disease leading to survival improvement. Primary aim was to analyze the incidence of secondary urological neoplasms in patients undergone bone marrow transplant from Hla aploidentical donor for haematological cancer. Secondary aim was to investigate the potential relationship between bone marrow transplant from Hla aploidentical donor and secondary urological malignancies.

Materials and methods: Patients undergone AT with lymphocytes T regulator and T-conventional were prospectively enrolled from September 2008 to December 2018. Those who had previous or synchronous malignancies were excluded. The demographic and pathological data were analyzed focusing on the age at the time of tumor diagnosis, the haematological disease that led to bone marrow transplantation, the timing between the transplantation and the urological tumor diagnosis, the histological type, the immunosuppressive regimen, any episode of rejection, the age and sex of the donor, any early and late complication and finally the cancer specific survival related to haematological and urological cancer. For statistical analysis, the software SPSS ver. 21 (SPSS Inc., Chicago, IL, USA) assuming significance cut-off value $P < 0.05$.

Results: All data were resumed in table. 179 patients (86 female and 93 male) were included. Of these, 17 (24%) underwent TURB for bladder cancer. Histologic examination revealed 16 low-grade urothelial carcinoma and one case of recurrence of lymphatic acute leukemia with atypical localization. These secondary bladder neoplasms arose after mean time of 30.7 months (3–77) from bone marrow

transplantation. The Wilcoxon test revealed that the patients undergoing bone marrow transplantation had a significant correlation with the development of bladder cancer ($p = 0.011$).

Age group	18-34 y	34-49 y	50-65 y
n.° patient	48 (26.8%)	60 (33.5 %)	71 (39.7%)
Ematologic disease	34 LMA 13 LLA 1 LH	36 LMA 18 LLA 4 LH 2 MM	53 LMA 13 LLA 1 LH 4 MM
Follow-up	32.2 months (1-119)	32.95 months (1-113)	25.76 months (1-111)
secondary malignancy	0 (0%)	0 (0%)	17 (24%)
Time secondary malignancy			30.7 months (3-77)

Discussion: To our knowledge, the incidence of urological tumor secondary to bone marrow transplantation for haematological cancer was evaluated for the first time in Literature. We found a significant correlation between AT with lymphocytes T regulator and T-conventional and the development of bladder cancer.

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Comparison of 2 newly developed bladder cancer tests in the follow up of patients with non muscle invasive bladder cancer (NMIBC)

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Aim of the study: Cystoscopy is the most efficient method currently available for the diagnosis of primary or recurrent Bladder cancer (BC), but it is invasive and causes significant discomfort to the patient. Furthermore, flat tumors or carcinoma in situ may be difficult to detect. Urinary cytology is not invasive and very effective in diagnosing high grade lesions but it has a low sensitivity in low grade tumours. The limitations of both, cytology and cystoscopy, for monitoring patients with bladder cancer led to the development of new urine tests for the early detection of BC. The aim of this study was to compare the diagnostic value of two newly developed urine tests, the mRNA based Xpert BC Monitor and the DNA methylation based Bladder Epicheck in patients under follow-up after TUR.

Materials and methods: 230 patients (median age 73 yrs, range 43–90) under follow up for NMIBC were studied prospectively. Samples were analyzed with the Bladder Epicheck Test, the Xpert BC Monitor and voided urinary cytology. Subsequently to urine collection, the patient underwent cystoscopy and if cystoscopically positive, a TUR-B. Cytologies were evaluated according to the Paris System of reporting cytology. For the Bladder Epicheck Test a software calculates the EpiScore, a number between 0 and 100 representing the overall methylation level of the sample. If the EpiScore is equal or above 60 it is considered positive. The results of the Xpert BC Monitor are interpreted by the GeneXpert® Instrument System and given as LDA totals and Analyte Results on the Test Report. A cut-off is set at a LDA of >0.5 . Sensitivity, specificity, PPV and NPV of Bladder Epicheck, Xpert BC Monitor and cytology were calculated using cystoscopy/histology as gold standard.

Results: 9.3% of the patients had to be excluded due to insufficient DNA in the Bladder Epicheck Test. 53 out of 230 remaining patients had histologically verified BC of the bladder, 33 low grade (LG) and 20 high grade (HG); 177/230 patients were negative cystoscopically and/or histologically. Of the 53 patients with BC, 31 (58.5%) were found positive for Bladder Epicheck and 34 (64.1%) for Xpert BC Monitor and 15 (28.3%) for cytology. The sensitivity of Bladder Epicheck increased from 45.5% for LG to 80% in HG tumours, whereas the sensitivity of