PROGNOSTIC VALUE OF NEW HISTOPATHOLOGIC CLASSIFICATION (WHO 2004) IN PATIENTS WITH TaT1 BLADDER CANCER

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Abstract

Prognostic value of new histopathologic classification (WHO 2004) in patiens with TaT1 bladder cancer

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Aim. The aim of our study was to assess prognostic value of WHO 2004 histopathological classification in patiens with TaT1 bladder tumours.

Methods. A total of 561 consecutive subjects with primarily diagnosed superficial bladder cancer were enrolled in the prospective study. The mean age of the patient population was 67 years, the mean follow-up was 38 months. Selected tumour risk factors (tumour stage, grade and multiplicity) were evaluated. The tissue samples were taken by means of transurethral resection (TUR-BT), all the tumours were histologicaly verified. The disease free survival functions were compared by the means of Log-Rank test and Wilcoxon generalised test. The Kaplan-Meier method of the survival function estimation was used.

Statistical analysis was performed using the SPSS 13.0 software. The level of significance was set at p=0,05.

Results. T1 tumour was present in 215 (43 %), Ta in 291 (55 %) and CIS in 10 (2 %) patients. Tumour grade was then evaluated: G1 was present in 150 (29 %), G2 in 259 (51 %) and G3 in 102 (20 %) patients. Multiple tumour was present in 239 (44 %) cases. Using new classification, 116 (40 %) patients had high grade (HG), 158 (55 %) low grade (LG) papilary urothelial carcinoma and 13 (5 %) patiens had PUNLMP.

Tumour multiplicity (p=0,0001) as well as tumor grade (p=0,01) were independent prognostic factors of recurrence free survival. In G1 tumours, the recurrence free survival was not significantly different between PUNLMP and LG carcinoma (p=0,09). In G2 tumours, the recurrence free survival was not significantly different between LG and HG carcinoma (p=0,3). Significant risk factor of progression free survival was tumour stage, grade and CIS (p=0,001). The progression free survival differed in G2 tumours comparing LG versus HG carcinoma, although the difference was not signifiant (p=0,14).

Conclusions. Our results corelate with literature. The WHO 2004 clasification may have additional prognostic value, particularly in G2 tumours. We plan to enlarge the group of patients and the follow-up to bring more valuable data.

The study was supported by grant from PRVOUK P27/LF1/1.

Introduction

Traditionaly, bladder carcinomas have been graded according to WHO 1973 classification (G1, G2, G3). In 2004 the new classification has been published, that employs specific cytologic and architectural criteria. The new classification differentiates between PUNLMP and low-grade and high-grade non-invasive papillary urothelial carcinomas. By eliminating ambiguous G2 category, the use of new classificaion should theoreticaly result in more uniform diagnoses of tumours that are better stratified according to risk potential.

Materials and methods

A total of 561 consecutive subjects (397 males (70 %), 164 females (30 %)) with primarily diagnosed superficial bladder cancer were enrolled in the prospective study. The mean age of the patient population was 67,5 years, with a range of 18 – 90 years. The mean follow-up was 38 months.

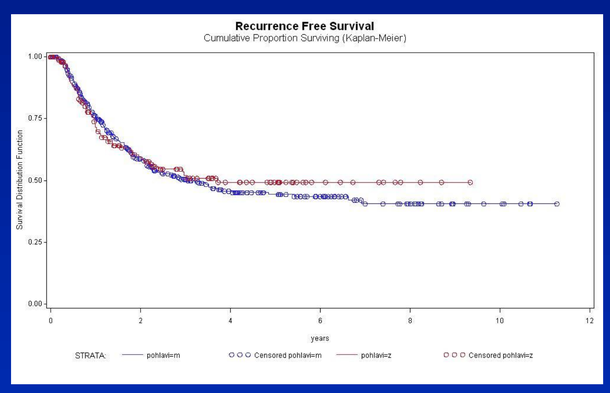
Tumour risk factors (tumour stage and grade) were evaluated using old (WHO 1973) and new (WHO 2004) classification. The tissue samples were taken by means of transurethral resection (TUR-BT), all the tumours were histologicaly verified. The disease free survival functions were compared by the means of Log-Rank test and Wilcoxon generalised test. The Kaplan-Meier method of the survival function estimation was used.

Statistical analysis was performed using the SPSS 13.0 software. The level of significance was set at p=0,05.

	N	Recurrence	Progression
TIS	10 (2 %)	3	2
Ta	291 (55 %)	116	7
T1	215 (43 %)	94	20
G1	150 (29 %)	55	2
G2	259 (51 %)	116	14
G3	102 (20 %)	39	13
PUNLMP	13 (5 %)	1	0
LG	158 (55 %)	55	2
HG	116 (40 %)	40	8
Total	561	213	29

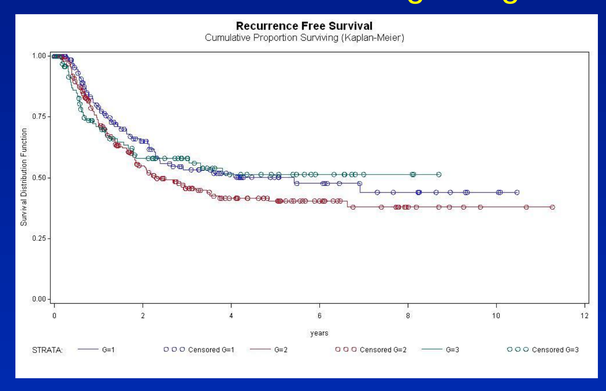
Results

Recurrence free survival – multiplicity



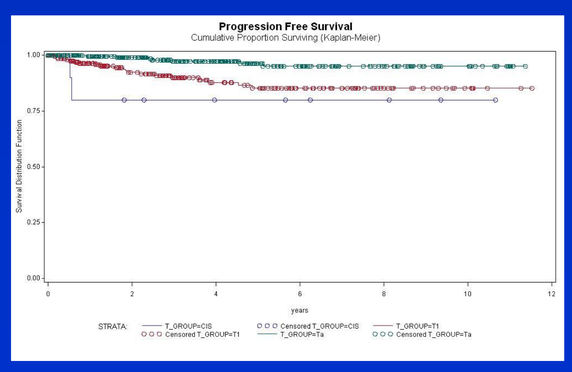
Log-Rank p= 0.0001

Recurrence free survival – grading



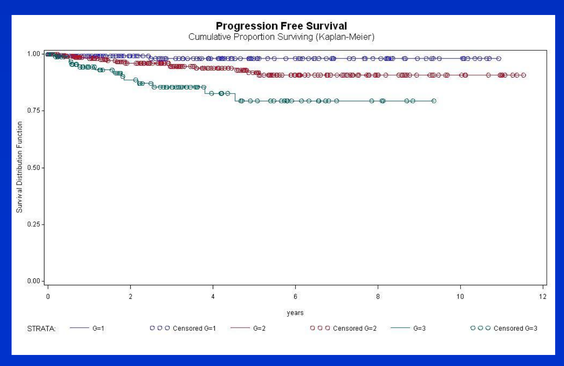
Log-Rank p= 0.01

Progression free survival – staging



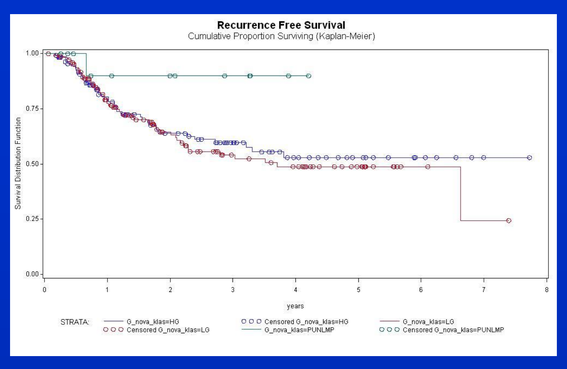
Wilcoxon p= 0,0009

Progression free survival – grading



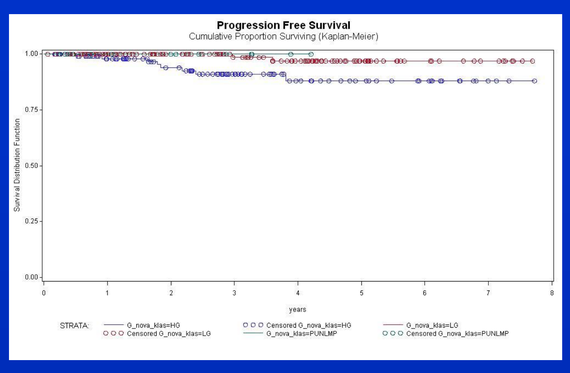
Wilcoxon p= 0,0002

Recurrence free survival – new clasification



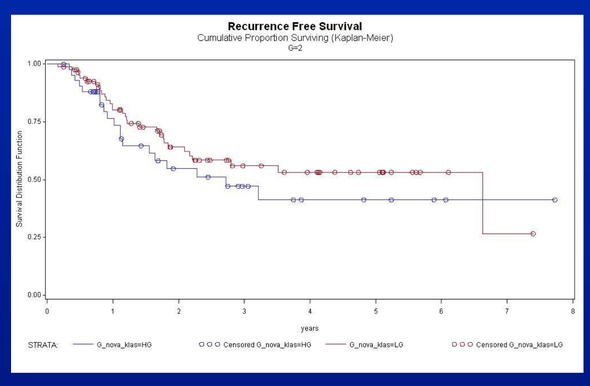
Log-Rank p= 0,21

Progression free survival – new clasification



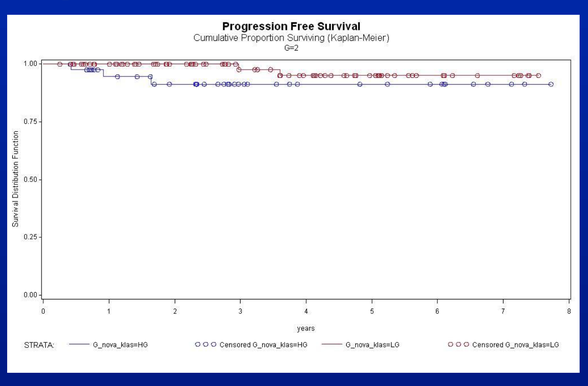
Log-Rank p= 0,03

Recurrence free survival – G2



Log-Rank p= 0.3

Progression free survival – G2



Log-Rank p= 0.14

Conclusions

Our results show corelation with the literature. The WHO 2004 classification may add some prognostic information, particularly in G2 tumours. The WHO 1973 classification should still be used. We plan to enlarge the group of patients and the follow-up to bring more valuable data.

The study was supported by grants from PRVOUK P27/LF1/1.