20.4 months; 13 pts were alive at follow up. The intra- and interrater Kappa coefficients of the PS scores were 63–72% and 49–68%. The four assessments of PS were all significantly related to survival. Multivariate analyses showed that sex, ASAT, and each of the four PS scores was an independent prognostic factor. Retrospective scoring of PS is a reproducible and reliable method. Optimal retrospective studies of the effect of multiple prognostic factors should include an assessment of the functional status of the pts.

1161 PUBLICATION

### ALTERNATING CHEMO-RADIOTHERAPY IN BLADDER CANCER: A CONSERVATIVE APPROACH

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Purpose: The aim of this phase II-III study was to determine a bladder sparing treatment in patients with invasive bladder cancer allowing a better quality of life. Objectives were to determine toxicity, disease free and overall survival of an alternated chemo-radiotherapy definitive treatment compare to patients treated with surgery in a previous randomized study.

Methods and materials: 76 patients with muscle invading bladder cancer stage T1G3 through T4 N0 M0 entered in the same chemotherapy regimen (Cisplatin 200 mg/mq and 5-Fluorouracil 200 mg/mq i.v. in 5 days) alternated with different radiotherapy scheduling: the first 18 patients received 2 cycles of 200 cGy/10 fr/12 d each; the second group of 58 patients received 2 cycles of 2500 cGy/10 fr/12 d each (the last 21 patients received Methotrexate 40 mg/mq instead of 5-Fluorouracil).

Results: A clinical complete response was observed in 57 patients (81%), partial response in 7 patients (10%), and a non response in 6 patients (9%). At a median follow-up of 45 months, 33 patients (47%) were alive and free of tumor. The 6 years overall survival and progression free survival was 42% and 40% respectively. Systemic side effects were mild, while a moderate or severe local toxicity was observed in 14 patients and 13 patients (about 20%) respectively.

Conclusion: Our conservative combination treatment allowed sparing in a high rate of patients and a survival comparable to that reported after radical cystectomy.

1162 PUBLICATION ANALYSIS IS OF FAILURE FOLLOWING EXTERNAL BEAM

## RADIATION TREATMENT OF MUSCLE-INVASIVE CARCINOMA OF THE BLADDER

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In a retrospective study 189 patients with muscle-invasive cancer of the urinary bladder were analysed concerning treatment outcome, 5 and 10 years survival rate and some prognostic factors. The factors studied included age, sex, T-stage, nodes involvement, tumor size, histological type, tumor multiplicity and total radiation dose. The actuarial 5-years survival rate was 45.6% and 10-years—33%. 7-years surv. were declined sharply for patients with No—55.2% v/s 18.5% with N (1-3). The difference of surv. rate for T3a v/s T3b of bladder cancer was considerable. The treatment outcome with tumor dose of 70 Gy was improved in comparison with TD of 60 Gy. The most important factors associated with surv. in this radiotherapy group were T-class., N-involvement, size of tumor and ureteric obstruction.

1163 PUBLICATION

# PATTERN OF METASTASES IN RELATION TO CHARACTERISTICS OF PRIMARY TUMOR AND TREATMENT IN PATIENTS (PTS) WITH DISSEMINATED UROTHELIAL CARCINOMA (UC)

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The aim of the present study was to describe the anatomical pattern of recurrence and metastases in 240 pts with UC admitted to Department of Oncology 1976–91, and to analyze the relationship between clinical

and pathological features of the primary invasive tumor and the subsequent pattern of metastases. The study shows that the majority (70%) of the pts with recurrence developed this within two years after initial diagnosis. The most common site of recurrence were local in bladder (65%) and bone metastases (35%) followed by lymph nodes (26%) and lung metastases (20%). The majority (65%) had multiple sites involved. We found similar patterns of metastases in pts with different histology, grade or localization of primary tumor. Younger (<70) male pts had more metastases, especially to bone and liver.

1164 PUBLICATION

#### PROGNOSTIC SIGNIFICANCE OF VARIOUS IMMUNOHISTOCHEMICAL MARKERS IN INVASIVE UROTHELIAL CANCER OF THE BLADDER (UCCB)

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<sup>2</sup>Department of Surgical Pathology, Evangelismos Hospital, Athens, Greece Several immunohistochemical markers were evaluated in 36/54 (69%) pts with invasive UCCB. Our findings were as follows: p21 (C-Ha-ras-1) +ve = 50%; c-erb-B<sub>2</sub> +ve = 69%, p53 +ve = 31%, P-170 glycoprotein +ve = 64%, EGF-r (Epidermal Growth Factor receptor) +ve 69%. The findings were correlated with response to chemotherapy. Overall response & complete response was observed: (a) in 5/18 (28%) & 2/7 (29%) p21 +ve pts compared with 7/18 (39%) & 6/11 (55%) p21 -ve, respectively (P = NS). (b) in 6/25 (24%) & 2/11 (18%) c-erb-B<sub>2</sub> +ve pts compared with 6/11 (55%) & 6/7 (86%) c-erb-B<sub>2</sub> -ve (P < 0.05 & p < 0.001). (c) in 4/11 (36%) & 4/8 (50%) p53 +ve pts compared with 8/25 (32%) & 4/10 (40%) p53 - ve (P = NS) (d) in 8/23 (35%) & 4/12(33%) P-170 +ve pts compared with 4/13 (30%) & 4/6 (66%) P-170 -ve (P = NS) (e) in 8/25 (32%) & 4/11 (36%) EGF-r +ve pts compared with 4/11 (36%) & 4/7 (57%) EGF-r -ve (P = NS). Conclusions: In our small series of pts only c-erb-B2 oncoprotein was correlated with response to chemotherapy.

5 PUBLICATION

## MULTIDRUG RESISTANCE IN BLADDER CANCER: ROLE OF P-GLYCOPROTEIN IN THE RESPONSE TO CHEMOTHERAPY

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The neoadjuvant chemotherapy has a role in invasive bladder cancer (IBC) with regard to reduce the muscle invasion for the tumor and, therefore to obtain better locoregional and to distance control, and also to know the chemosensibility of these tumors.

Objective: To determine the consequence of the p-glycoprotein (p-Gp) expression (immunohistochemical staining with C219 and JSB1 monoclonal antibodies) in IBC biopsies obtained prior to chemotherapy (M-VAC:Methotrexate-Cisplatin-Vinblastine-Doxorubicin or MCAVI:Carboplatin-Vinblastine-Methotrexate) with regard to Clinical and Pathological response (CR-PR) to therapy, observed in the cystectomy specimens.

Results: 22 IBC Received M-VAC and 39 IBC received MCAVI. The p-Gp was observed in the 54.5% of the first group and in the 30% of the second, prior to chemotherapy. The correlation between the p-Gp and the tumour stage and grade was analysed and no significative evidence was found in both groups. In the first group, the 36% that obtained CR and the 88% that didn't obtain RC presented p-Gp (P = 0.03). In this group, the 33% that obtained PR and the 70% that didn't obtain PR expressed p-Gp (P = 0.1 n.s.). In the second group hadn't significative differences in the p-Gp expression with regard to CR and PR.

The p-Gp expression was analyzed in the cystectomy specimens post-chemotherapy. In the first group, the 16% that obtained CR and the 63% that not, browsed p-gp (P=0.06,ns), and the 20% that obtained PR and the 50% that not, also browsed p-gp (P=n.s.). In the second group, the 15% that obtained CR or PR and the 30% that not browsed p-Gp expression (P=n.s.).

There weren't significative correlations between 1a p-Gp and local relapse or metastasis in both groups.

Conclusion: The Clinical and Pathological response are lower in the IBC that presented p-Gp and that received Doxorubicin y Vinblastine. The determination of p-Gp prior to chemotherapy could help to avoid treatments lower effective.