ADJUVANT CHEMOTHERAPY FOLLOWING RADICAL CYSTECTOMY: PROPENSITY-SCORE MATCHED EVALUATION OF SURVIVAL OUTCOMES

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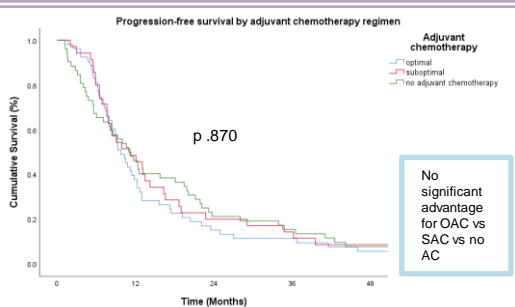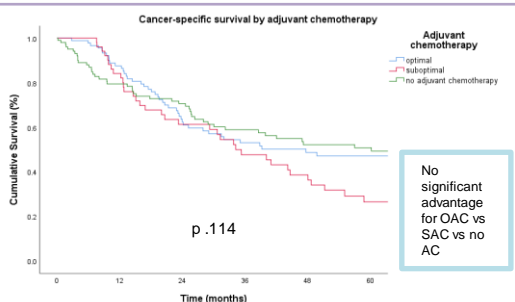[2]Department of Urology, Mayo Clinic, Rochester, MN, USA

BACKGROUND & AIMS

o Adjuvant chemotherapy is recommended in pT3-4 and/or pN1-3 bladder cancer following radical cystectomy (RC). However, its benefit on survival outcomes is still controversial
o Therefore, we aimed : 1) to investigate whether adjuvant chemotherapy may improve survival in pT3-4 and/or pN1-3 bladder cancer; 2) to identify the most effective AC regimens and any predictors of cancer-specific survival (CSS), overall survival (OS) and progression-free survival (PFS)

MATHERIALS & METHODS

o We identified 996 cM0 patients which underwent radical cystectomy for pT3-4 and/or N1-3 at an academic center between 1998-2017. Patients with incomplete data or non-urothelial histology were excluded
o Patients were grouped as follow: 1) optimal adjuvant chemotherapy (OAC): cisplatin-based adjuvant chemotherapy for >3 cycles; 2) suboptimal adjuvant chemotherapy (SAC): cisplatin-based adjuvant chemotherapy for <3 cycles or non-cisplatin based adjuvant chemotherapy; 3) no adjuvant chemotherapy (no AC)
o Propensity score matching by age, sex, neoadjuvant chemotherapy (NAC), pathologic tumor stage, pathologic nodal stage, eGFR and post-operative ECOG selected 92, 53 and 104 patients respectively
o Primary outcomes: CSS, OS, PFS

RESULTS

Variables	Median (IQR) or number (%)			p value
	OAC	SAC	No AC	
Subjects	92	53	104	
Age at RC, years	66.0 (58.3-70.0)	65.0 (59.0-72.5)	63.0 (57.0-73.0)	.84
Gender, female	15 (16.3)	11 (20.8)	16 (15.4)	.686
BMI (kg/m2)	27.6 (24.7-30.1)	27.3 24.6-28.9)	28.5 (26.2-31.8)	.032
ECOG				.006
-> 0	79 (85.9)	46 (86.8)	82 (82.7)	
-> 1+	13 (14.1)	7 (13.2)	18 (17.3)	
NAC	81 (88)	44 (83)	94 (90.4)	.41
Smoking status				.210
-> No	22 (23.9)	21 (39.7)	23 (22.1)	
-> Former	47 (51.1)	21 (39.6)	49 (47.1)	
-> Current	23 (25)	11 (20.8)	32 (30.8)	
pT3-4 disease	70 (76.1)	35 (66)	67 (64.4)	.183
pN1-3 disease	62 (67.4)	38 (71.7)	32 (30.8)	<.0001
No. of nodes removed	21 (8.2-32.8)	21 (11-30)	18.5 (9-28)	.196
No. of positive nodes	2 (1-3.2)	2 (1-4.2)	3 (1-7.8)	.064
Extent of PLND				.269
-> Standard	57 (62)	30 (56.6)	72 (71.3)	
-> Extended	35 (38)	22 (41.5)	28 (27.7)	
-> Super-extended	0 (0)	0 (0)	1 (1)	
LVI	30 (32.6)	12 (22.7)	28 (26.9)	.411
PSM	11 (12)	7 (13.2)	15 (14.4)	.88

Cancer-specific survival by adjuvant chemotherapy

p .114

No significant advantage for OAC vs SAC vs no AC

Progression-free survival by adjuvant chemotherapy regimen

p .870

No significant advantage for OAC vs SAC vs no AC

No significant OS advantage for OAC vs SAC vs no adjuvant chemotherapy regimen (p .335)

PREDICTORS OF SURVIVAL & CONCLUSIONS

o CSS: 1) risk factors: higher age at RC (HR=1.03, p=0.005), NAC (HR 2.1, p=0.007), pT3-4 (HR=2.72, p<0.0001), pN1-3 (HR=1.97, p=0.001), LVI (HR 1.57, p.022); 2) protective factors: OAC (HR=0.61, p=0.022)
o OS: 1) risk factors: higher age at RC (HR=1.03, p=0.001), NAC (HR=2.04, p=0.007), pT3-4 (HR=2.24, p<0.0001), pN1-3 (HR=1.94, p=<0.0001), LVI (HR 1.53, p.021); 2) protective factors: OAC (HR=0.65, p=0.04)
o No significant predictor of PFS was found
o In conclusion, despite the poor prognosis associated to pT3-4 and/or pN1-3 disease, optimal adjuvant chemotherapy (OAC) may improve survival outcomes following RC in selected patients, though it may not affect progression