

Supplementary material has been published as submitted. It has not been copyedited or typeset by Scandinavian Journal of Urology.

Supplementary Tables and Figures

Supplementary Table 1. Tumour and patient characteristics in the study population

	Cystectomy only cohort (n=1967)		NAC cohort (n=308)	
	N	%	N	%
Age Groups				
<50	47	2	11	4
50-59	205	10	44	14
60-69	573	29	153	50
70-79	925	47	99	32
80+	217	11	1	0
Age, mean (SD)	70.0 (8.7)		65.6 (7.4)	
Sex				
Female	531	27	74	24
Males	1,436	73	234	76
CCI				
0	1,227	62	215	70
1	310	16	42	14
2	285	14	39	13
3+	145	7	12	4
Civil Status				
Not married	228	12	46	15
Married	1,145	58	184	60
Divorced	370	19	60	19
Widowed	224	11	18	6
Education				
Low	792	40	100	32
Middle	783	40	144	47
High	375	19	64	21
Missing	17	1	0	0
T stage				
T1	398	20	N/A	N/A
T2	1,300	66	268	87
T3	198	10	29	9
T4a	71	4	11	4
Grade				
G1/G2	212	11	25	8
G3	1,755	89	283	92

NAC – neoadjuvant chemotherapy; SD – standard deviation; CCI – Charlson comorbidity index

Supplementary Table 2. Descriptives of times for total, time to diagnosis and time to treatment for both the cystectomy only and NAC cohorts.

	Range	Mean	SD	Median	25th percentile	75th percentile
Cystectomy only cohort						
Total time	0-21	13.4	4.3	13	10	17
Time to diagnosis	0-20	3.2	2.8	3	1	5
Time to treatment	0-21	10.2	4.1	10	7	13
NAC cohort						
Total time	4-15	10.6	2.8	11	8	13
Time to diagnosis	0-12	2.6	2.3	2	1	4
Time to treatment	2-15	8.0	2.9	8	6	10

All delay times are to the nearest week. SD – standard deviation; NAC – neoadjuvant chemotherapy

Supplementary Table 3. Cystectomy only 'restricted' cohort: Cox regression analysis

		N	Overall survival (OS)				Disease specific survival (DSS)			
			HR	95% CI	HR ^a	95% CI	HR	95% CI	HR ^a	95% CI
Total time	Tertiles (weeks)									
	≤12	151	1.00	Ref.	1.00	Ref.	1.00	Ref.	1.00	Ref.
	13-18	116	0.82	0.59-1.15	0.86	0.61-1.21	0.92	0.61-1.36	0.91	0.61-1.36
	≥19	101	0.78	0.54-1.11	0.78	0.54-1.12	0.73	0.47-1.21	0.73	0.47-1.13
Time to diagnosis	Tertiles (weeks)									
	≤2	157	1.00	Ref.	1.00	Ref.	1.00	Ref.	1.00	Ref.
	3-4	89	0.78	0.54-1.14	0.77	0.52-1.13	0.89	0.58-1.38	0.87	0.56-1.36
	≥5	122	0.92	0.66-1.27	0.97	0.69-1.36	0.98	0.66-1.44	1.01	0.67-1.51
Time to treatment	Delay >12 weeks									
	No	245	1.00	Ref.	1.00	Ref.	1.00	Ref.	1.00	Ref.
	Yes	123	0.73	0.53-1.01	0.75	0.54-1.04	0.73	0.50-1.07	0.76	0.52-1.12
	Tertiles (weeks)									
	≤9	159	1.00	Ref.	1.00	Ref.	1.00	Ref.	1.00	Ref.
	10-13	108	0.96	0.69-1.34	1	0.71-1.40	0.97	0.65-1.42	0.73	0.47-1.14
≥14	101	0.73	0.50-1.06	0.73	0.50-1.08	0.99	0.66-1.48	0.76	0.48-1.19	

HR – Hazard ratio; HR^a- hazard ratio; 95%CI – 95% confidence interval.

Supplementary Table 4. Tumour and patient characteristics in the cystectomy only cohort by total delay time.

	Total delay time (weeks)			
n(%)	<=12	13-18	>=19	Total
<i>N Total</i>	697(35.4)	698(35.5)	572(29.1)	1967
Age P=0.110				
27-64	186(38.8)	147(30.7)	146(30.5)	479
65-74	256(33.2)	284(36.9)	230(29.9)	770
75-89	255(35.5)	267(37.2)	196(27.3)	718
Sex P<0.001				
M	471(32.8)	516(35.9)	449(31.3)	1436
F	226(42.6)	182(34.3)	123(23.2)	531
T stage P<0.001				
T1	107(26.9)	128(32.2)	163(41.0)	398
T2	465(35.8)	484(37.2)	351(27.0)	1300
T3	94(47.5)	66(33.3)	38(19.2)	198
T4	31(43.7)	20(28.2)	20(28.2)	71
CCI P=0.103				
0	449(36.6)	434(35.4)	344(28.0)	1227
1	116(37.4)	104(33.5)	90(29.0)	310
2	94(33.0)	112(39.3)	79(27.7)	285
3+	38(26.2)	48(33.1)	59(40.7)	145
Civil status P=0.914				
Married	401(35.0)	416(36.3)	328(28.6)	1145
Divorced	89(39.0)	62(27.2)	77(33.8)	228
Unmarried	86(38.4)	85(37.9)	53(23.7)	224
Widowed	121(32.7)	135(36.5)	114(30.8)	370
Education P=0.216				
Low	271(33.5)	305(37.7)	233(28.8)	809
Middle	284(36.3)	264(33.7)	235(30.0)	783

High	142(37.9)	129(34.4)	104(27.7)	375
Grade 1, 2 P=0.384				
N	624(35.6)	629(35.8)	502(28.6)	1755
Y	73(34.4)	69(32.5)	70(33.0)	212
PSMAV P=0.617				
Mean (SD)	7.315 (8.909)	7.515 (8.682)	6.924 (7.666)	7.272 (8.482)
Median (IQR)	4.00 (2.00-8.67)	4.00 (2.00-9.67)	4.00 (1.67-10.25)	4.00 (2.00-9.67)
Range	0.00-41.00	0.00-41.00	0.00-41.00	0.00-41.00
<NA>	4	2	2	8

P values are from Chi-squared test, $p < 0.05$ is considered significant. CCI; Charlson Comorbidity Index

Supplementary Table 5. Cystectomy only cohort: Logistic regression analysis for associations with a treatment delay >12 weeks.

	OR	95% CI	OR^a	95% CI	P trend
Age Groups					
<65	1.00	Ref.	1.00	Ref.	<0.001
65-74	1.56	1.23-1.98	1.59	1.24-2.04	
75+	1.42	1.11-1.81	1.53	1.18-1.98	
Sex					
Males	1.00	Ref.	1.00	Ref.	
Females	0.78	0.63-0.96	0.81	0.66-1.01	
CCI					
0	1.00	Ref.	1.00	Ref.	0.176
1	0.99	0.77-1.28	0.94	0.73-1.22	
2	0.97	0.74-1.26	0.92	0.70-1.20	
3+	1.61	1.14-2.27	1.51	1.06-2.14	
Civil Status					
Married	1.00	Ref.	1.00	Ref.	
Divorced	1.16	0.87-1.54	1.34	0.99-1.81	
Unmarried	0.87	0.65-1.17	0.88	0.64-1.20	
Widowed	0.97	0.76-1.23	0.96	0.75-1.23	
Education					
Low	1.00	Ref.	1.00	Ref.	
Middle	0.94	0.77-1.15	0.97	0.79-1.19	
High	0.98	0.76-1.25	1.03	0.80-1.33	
T stage					
T1	1.00	Ref.	1.00	Ref.	
T2	0.48	0.38-0.60	0.46	0.37-0.58	
T3	0.27	0.18-0.39	0.26	0.18-0.39	
T4a	0.41	0.24-0.70	0.40	0.24-0.69	
Grade					
G1/G2	1.06	0.79-1.42	1.09	0.81-1.47	
G3	1.00	Ref.	1.00	Ref.	
PSMAV (tertiles)					
0-2.33	1.00	Ref.	1.00	Ref.	0.005
2.67-6.67	0.81	0.65-1.02	0.82	0.65-1.03	
7-41	1.52	1.22-1.89	1.45	1.15-1.81	

OR – Odds ratio; OR^a- adjusted odds ratio; 95%CI – 95% confidence interval; CCI – Charlson comorbidity index; PSMAV – period specific mean annual volume of cystectomies