

Stage 3 rectal cancer adjuvant management: survival analysis

Clinical summary table

Compared to the adjuvant chemotherapy group, patients in the surveillance group tends to be older and present with better prognostic profile.

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## Setting theme `JAMA`
```

```
## 5 observations missing `adjuvant_management` have been removed. To include these
observations, use `forcats::fct_explicit_na()` on `adjuvant_management` column before
passing to `tbl_summary()`.
```

Characteristic	N	adjuvant_chemo, N = 101	surveillance, N = 75	p- value ¹
Follow up time, Median (IQR)	166	5.12 (2.98 – 6.26)	4.16 (2.37 – 5.41)	0.002
Number of overall death, n (%)	166	18 (19)	9 (13)	0.34
Recurrence free survival time, Median (IQR)	169	4.82 (2.41 – 5.88)	4.14 (2.31 – 5.36)	0.13
Number of disease recurrence, n (%)	176	24 (24)	8 (11)	0.026
Age at diagnosis, Median (IQR)	175	63 (55 – 70)	70 (62 – 78)	<0.001
CRM, n (%)	148			0.007
neg		10 (12)	19 (30)	
pos		74 (88)	45 (70)	
R status, n (%)	167			0.064
R0		78 (84)	70 (95)	
R1		13 (14)	4 (5.4)	
R2		2 (2.2)	0 (0)	

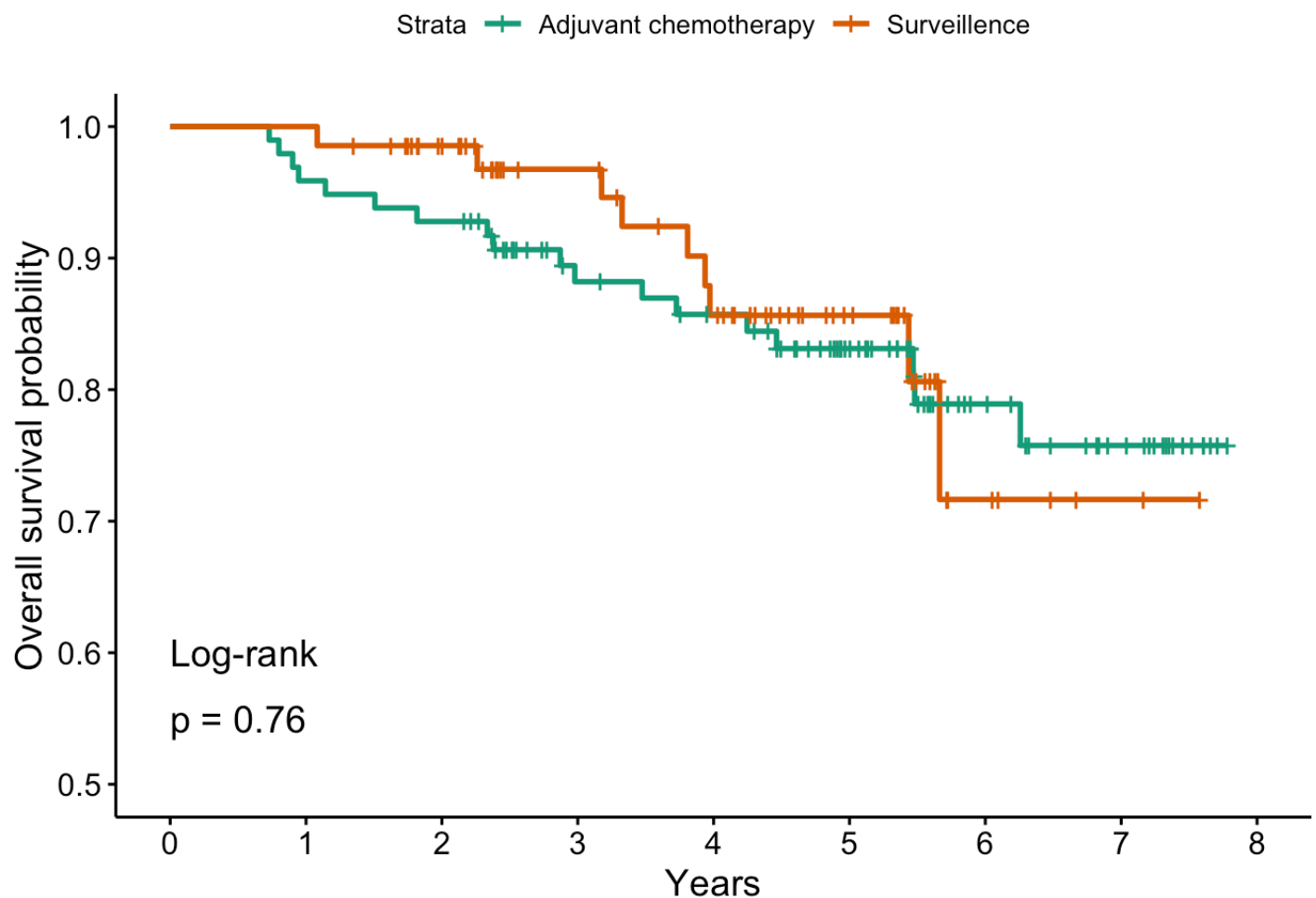
TRG status, n (%)	80			0.90
TRG3		12 (26)	11 (32)	
TRG0		0 (0)	1 (2.9)	
TRG1		5 (11)	3 (8.8)	
TRG2		25 (54)	16 (47)	
TRG4		2 (4.3)	2 (5.9)	
TRG5		2 (4.3)	1 (2.9)	
Distance from anal verge, Median (IQR)	151	3.00 (1.00 – 6.00)	4.00 (2.00 – 6.00)	0.19
EMVI, n (%)	121			<0.001
neg		19 (28)	31 (60)	
pos		50 (72)	21 (40)	
Time between radiotherapy and surgery, Median (IQR)	173	87 (77 – 100)	89 (77 – 118)	0.26
Baseline histological grade, n (%)	166			0.90
G3		12 (13)	10 (14)	
G1		1 (1.1)	0 (0)	
G2		82 (86)	61 (86)	
Cancer staging post surgery, n (%)	172			<0.001
stage_3		32 (32)	9 (12)	
stage_0		8 (8.1)	11 (15)	
stage_1		15 (15)	35 (48)	
stage_2		44 (44)	18 (25)	
Cancer staging post radiotherapy, n (%)	136			0.011

stage_3	34 (44)	18 (31)
stage_0	2 (2.6)	2 (3.4)
stage_1	8 (10)	19 (33)
stage_2	33 (42)	19 (33)
stage_4	1 (1.3)	0 (0)

¹ Wilcoxon rank sum test; Pearson's Chi-squared test; Fisher's exact test

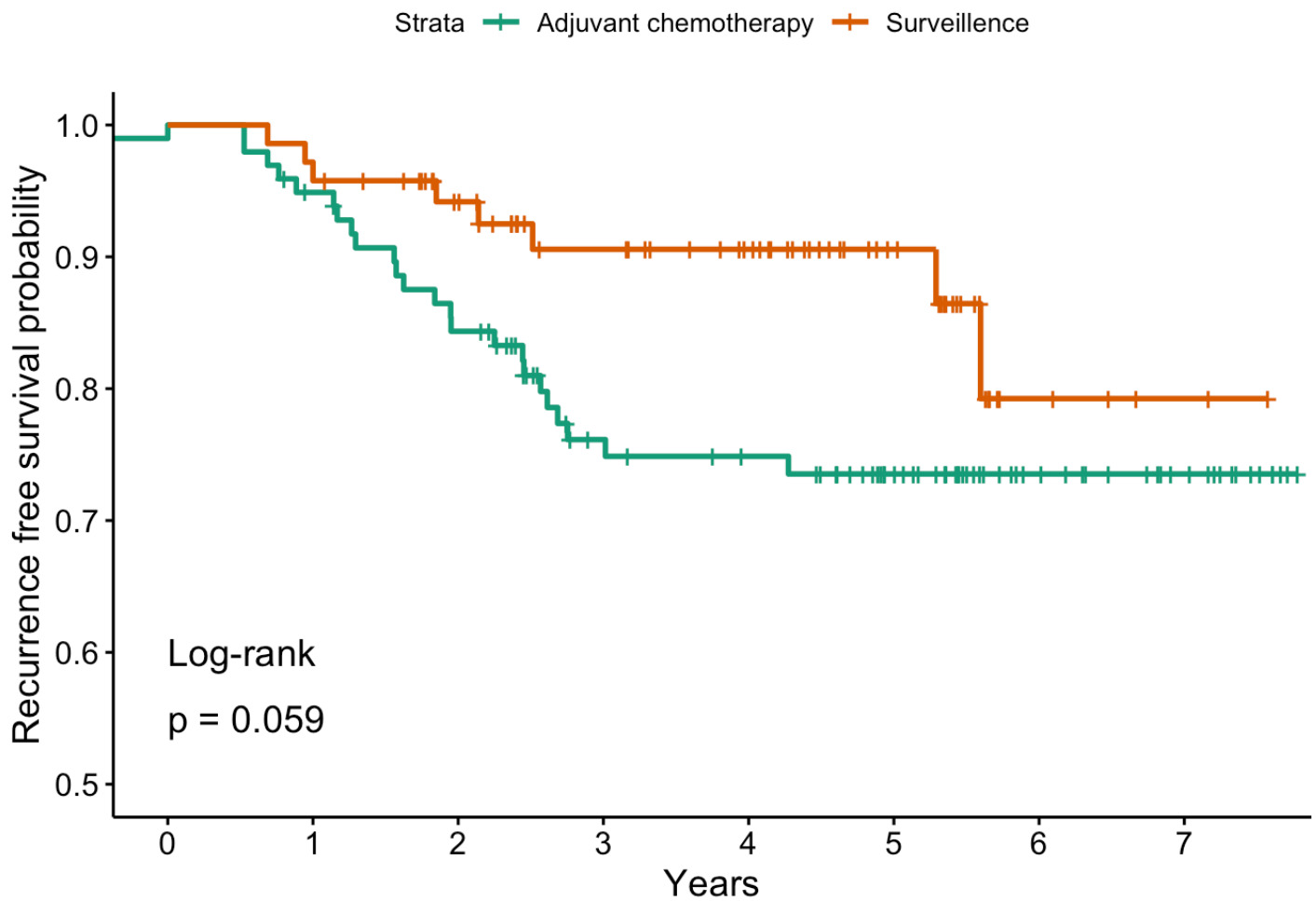
KM Survival curve w.r.t overall survival

Plot KM curve with respect to adjuvant management option: adjuvant chemo vs surveillance

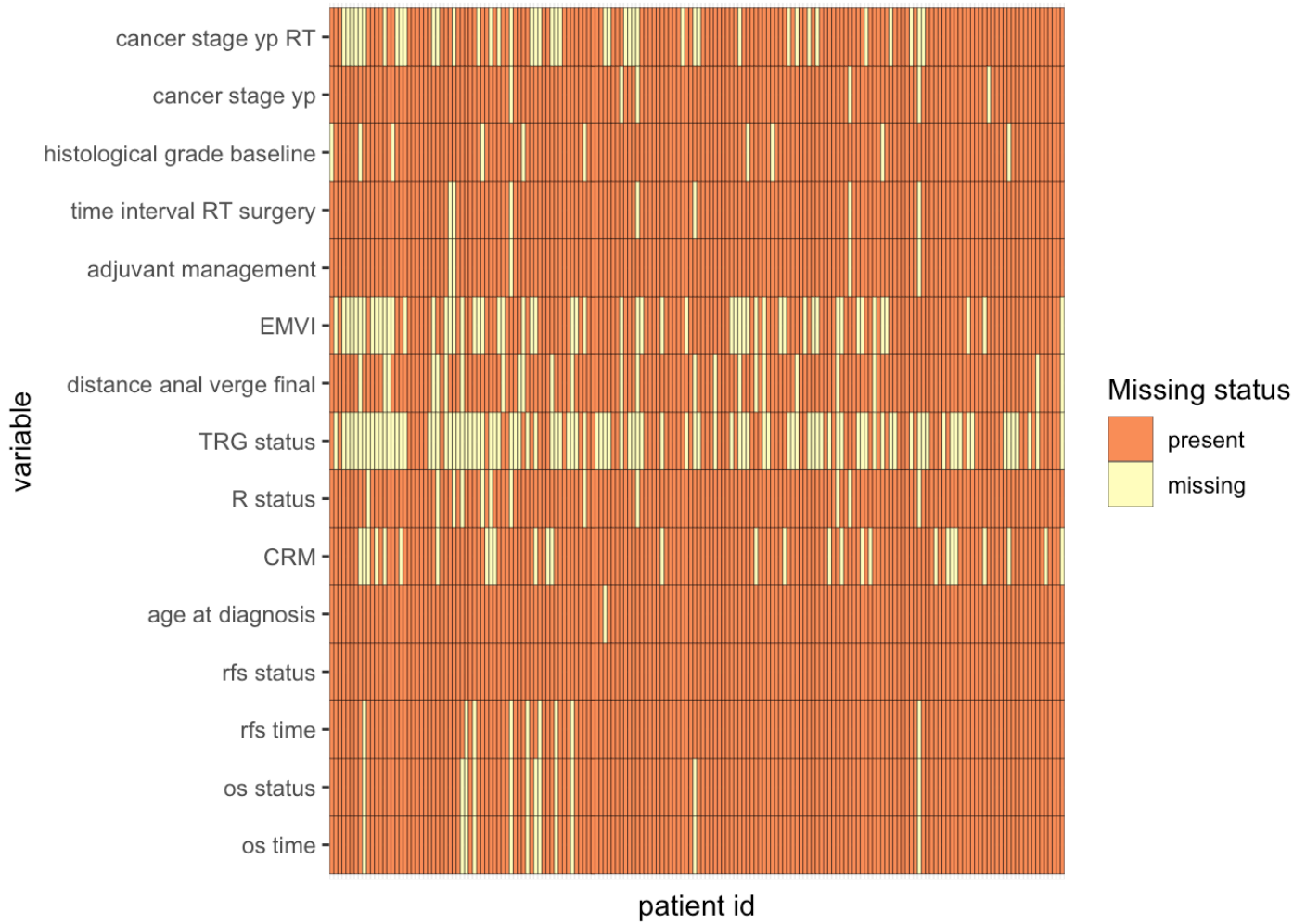


KM Survival curve w.r.t recurrence free survival

Plot KM curve with respect to adjuvant management option: adjuvant chemo vs surveillance



Missing data pattern



Univariate and multivariate cox analysis

Overall survival univariate

Characteristic	N	HR (95% CI) [†]	p-value
Age at diagnosis	168	1.00 (0.96 to 1.03)	0.86
CRM	143		
neg		—	
pos		6.25 (0.84 to 46.3)	0.073
R status	159		
R0		—	
R1		6.97 (3.03 to 16.0)	<0.001

R2		11.3 (1.41 to 90.2)	0.022
TRG status	80		
TRG3		—	
TRG0		0.00 (0.00 to Inf)	>0.99
TRG1		2.06 (0.37 to 11.4)	0.41
TRG2		0.87 (0.25 to 3.10)	0.84
TRG4		0.00 (0.00 to Inf)	>0.99
TRG5		0.00 (0.00 to Inf)	>0.99
Distance from anal verge	147	1.03 (0.89 to 1.19)	0.66
EMVI	117		
neg		—	
pos		0.92 (0.38 to 2.25)	0.85
adjuvant_management	166		
adjuvant_chemo		—	
surveillance		0.88 (0.39 to 1.98)	0.76
Time between radiotherapy and surgery	164	1.00 (1.00 to 1.01)	0.74
Baseline histological grade	159		
G3		—	
G1		0.00 (0.00 to Inf)	>0.99
G2		0.44 (0.18 to 1.05)	0.064
Cancer staging post surgery	164		
stage_3		—	
stage_0		0.42 (0.09 to 1.93)	0.27

stage_1	0.18 (0.04 to 0.84)	0.029
stage_2	0.93 (0.41 to 2.13)	0.87
Cancer staging post radiotherapy	133	
stage_3	—	
stage_0	1.81 (0.22 to 14.7)	0.58
stage_1	1.23 (0.36 to 4.21)	0.74
stage_2	1.29 (0.48 to 3.45)	0.62
stage_4	0.00 (0.00 to Inf)	>0.99

¹ HR = Hazard Ratio, CI = Confidence Interval

Recurrence free survival univariate

Characteristic	N	HR (95% CI) ¹	p-value
Age at diagnosis	171	0.98 (0.95 to 1.01)	0.20
CRM	145		
neg		—	
pos		2.11 (0.64 to 7.00)	0.22
R status	161		
R0		—	
R1		7.19 (3.28 to 15.8)	<0.001
R2		0.00 (0.00 to Inf)	>0.99
TRG status	80		
TRG3		—	
TRG0		0.00 (0.00 to Inf)	>0.99
TRG1		5.03 (1.12 to 22.6)	0.035
TRG2		1.37 (0.35 to 5.30)	0.65

TRG4		0.00 (0.00 to Inf)	>0.99
TRG5		0.00 (0.00 to Inf)	>0.99
Distance from anal verge	148	1.09 (0.95 to 1.25)	0.21
EMVI	118		
neg		—	
pos		1.38 (0.53 to 3.64)	0.51
adjuvant_management	169		
adjuvant_chemo		—	
surveillance		0.47 (0.21 to 1.05)	0.065
Time between radiotherapy and surgery	166	1.00 (0.99 to 1.01)	>0.99
Baseline histological grade	162		
G3		—	
G1		0.00 (0.00 to Inf)	>0.99
G2		0.57 (0.23 to 1.41)	0.23
Cancer staging post surgery	167		
stage_3		—	
stage_0		0.19 (0.02 to 1.45)	0.11
stage_1		0.54 (0.20 to 1.41)	0.21
stage_2		0.94 (0.42 to 2.11)	0.87
Cancer staging post radiotherapy	134		
stage_3		—	
stage_0		1.05 (0.14 to 8.09)	0.96
stage_1		0.82 (0.29 to 2.34)	0.72

stage_2	0.57 (0.22 to 1.44)	0.23
stage_4	0.00 (0.00 to Inf)	>0.99

¹ HR = Hazard Ratio, CI = Confidence Interval

Multi-variate

Characteristic	Overall survival			Recurrence free survival		
	N	HR (95% CI) ¹	p-value	N	HR (95% CI) ¹	p-value
Age at diagnosis	58	0.99 (0.93 to 1.06)	0.78	58	1.05 (0.94 to 1.18)	0.40
CRM	58			58		
neg		—			—	
pos		8,024,408 (0.00 to Inf)	>0.99		0.63 (0.05 to 8.32)	0.73
R status	58			58		
R0		—			—	
R1		35.3 (9.66 to 129)	<0.001		10.0 (0.56 to 181)	0.12
R2		12.3 (1.22 to 124)	0.034		0.00 (0.00 to Inf)	>0.99
TRG status	58			58		
TRG3		—			—	
TRG0		1.00 (1.00 to 1.00)				
TRG1		0.00 (0.00 to Inf)	>0.99		48.1 (2.09 to 1,109)	0.016
TRG2		0.30 (0.08 to 1.13)	0.075		1.16 (0.14 to 9.82)	0.89

TRG4		0.00 (0.00 to Inf)	>0.99		0.00 (0.00 to Inf)	>0.99
TRG5		0.00 (0.00 to Inf)	>0.99		0.00 (0.00 to Inf)	>0.99
Distance from anal verge	58	1.02 (0.81 to 1.29)	0.84	58	1.14 (0.81 to 1.60)	0.44
EMVI	58			58		
neg		—			—	
pos		0.65 (0.18 to 2.37)	0.51		0.88 (0.13 to 6.00)	0.90
adjuvant_management	58			58		
adjuvant_chemo		—			—	
surveillance		0.28 (0.07 to 1.22)	0.090		0.16 (0.02 to 1.44)	0.10
Time between radiotherapy and surgery	58	1.02 (1.00 to 1.03)	0.009	58	1.00 (0.99 to 1.02)	0.55
Baseline histological grade	58			58		
G3		—			—	
G1		1.00 (1.00 to 1.00)				
G2		1.34 (0.24 to 7.43)	0.74		0.29 (0.01 to 16.6)	0.55
Cancer staging post surgery	58			58		
stage_3		—			—	
stage_0		0.00 (0.00 to Inf)	>0.99		0.00 (0.00 to Inf)	>0.99
stage_1		0.97 (0.12 to 7.93)	0.98		2.98 (0.23 to 37.9)	0.40

stage_2		0.99 (0.27 to 3.66)	0.98	0.94 (0.06 to 13.8)	0.96
Cancer staging post radiotherapy	58		58		
stage_3		—		—	
stage_0		1.00 (1.00 to 1.00)			
stage_1		18.3 (4.41 to 76.3)	<0.001	2.17 (0.23 to 20.4)	0.50
stage_2		2.18 (0.57 to 8.25)	0.25	0.64 (0.09 to 4.50)	0.65
stage_4		1.00 (1.00 to 1.00)			

¹ HR = Hazard Ratio, CI = Confidence Interval