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Citation for final published version:

Gilbert, A., Drinkwater, K., McParland, L., Adams, R., Glynn-Jones, R., Harrison, M., Hawkins, M. A., Sebag-Montefiore, D., Gilbert, D. C. and Muirhead, R. 2020. UK national cohort of anal cancer treated with intensity-modulated radiotherapy: one-year oncological and patient-reported outcomes. *European Journal of Cancer* 128 , pp. 7-16. 10.1016/j.ejca.2019.12.022
filefilefile

Publishers page: <http://dx.doi.org/10.1016/j.ejca.2019.12.022>
<<http://dx.doi.org/10.1016/j.ejca.2019.12.022>>

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Table 1: Patient characteristics and 1-year outcomes

Patient characteristics	Number of patients (n=187)	%
Median age in years (range)	61 (29-90)	
Gender		
<i>Female</i>	135	72.2
<i>Male</i>	52	27.8
T/N stage*		
<i>T1/2N0</i>	65	34.8
<i>T1/2N+</i>	33	17.6
<i>T3/4N0</i>	29	15.5
<i>T3/4N+</i>	58	31.0
<i>Tx</i>	2	1.1
Smoking status		
<i>Current smoker</i>	41	21.9
<i>Non-smoker</i>	109	58.3
<i>Unknown</i>	37	19.8
HIV status		
<i>HIV negative</i>	73	39.0
<i>HIV positive</i>	7	3.7
<i>Test not performed</i>	107	57.2
Disease status at 1 year (n=109)		
<i>Disease free</i>	84	77.1
<i>Local regional recurrence/failure</i>	13	11.9
<i>Metastatic disease</i>	5	4.6
<i>Dead</i>	6	5.5
<i>Alive unknown disease status</i>	2	1.8
Self-reported stoma status at 1 year (n=113)		
<i>Stoma free</i>	97	85.8
<i>Stoma present</i>	16	14.2
<p>* M1 (n=4): All treated with curative intent IMRT; n=1 low paraaortic lymph node and n=1 perineal satellite nodule (encompassed within RT volume); n=1 solitary lung metastasis removed surgically; n=1 no data available on detail of metastatic disease at presentation or at 1-year follow up (T3N0)</p>		

Table 2: Treatment characteristics and PRO completion

Treatment characteristics	Number of patients (n=187)	%
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Radiotherapy technique		
<i>IMRT</i>	81	43.3
<i>Tomotherapy</i>	30	16.0
<i>VMAT / IMAT</i>	76	40.6
Chemotherapy regime		
<i>Mitomycin 5FU</i>	114	61.0
<i>MMC Capecitabine</i>	58	31.0
<i>Other</i>	8	4.3
<i>No chemotherapy</i>	7	3.7
Any G3/4 toxicity		
<i>No G3/4 toxicity</i>	74	39.6
<i>Any G3/4 toxicity</i>	77	41.2
<i>Unknown</i>	36	19.3
PRO completion	Number of patients (n=187) %	
Baseline PRO completion*		
<i>Yes</i>	115	61.5
<i>No</i>	72	38.5
1-year PRO completion*		
<i>Yes</i>	57	30.5
<i>No</i>	130	69.5
* At least one item completed on PRO questionnaires		

Table 3: 1-year oncological outcomes

	Alive N=103 (%)	Dead at 1 year N=6 (%)	Total N (%)
Gender			
<i>Female</i>	73 (97.3%)	2 (2.7%)	75 (100%)
<i>Male</i>	30 (88.2%)	4 (11.8%)	34 (100%)
Age at start of RT			
<i><=62</i>	47 (92.2%)	4 (7.8%)	51 (100%)
<i>>62</i>	56 (96.6%)	2 (3.4%)	58 (100%)
T Stage			
<i>T1/2</i>	60 (98.4%)	1 (1.6%)	61 (100%)
<i>T3/4</i>	41 (89.1%)	5 (10.9%)	46 (100%)
<i>Tx</i>	2 (100%)	0 (0.0%)	2 (100%)
N Stage			
<i>Node negative</i>	55 (96.5%)	2 (3.5%)	57 (100%)
<i>Node positive</i>	48 (92.3%)	4 (7.7%)	52 (100%)
Concurrent chemotherapy			
<i>MMC and 5FU</i>	57 (95.0%)	3 (5.0%)	60 (100%)
<i>MMC and Capecitabine</i>	40 (95.2%)	2 (4.8%)	42 (100%)
<i>None</i>	2 (66.7%)	1 (33.3%)	3 (100%)
<i>Other</i>	4 (100%)	0 (0.0%)	4 (100%)
Radiotherapy technique			
<i>IMRT</i>	45 (95.7%)	2 (4.3%)	47 (100%)
<i>Tomotherapy</i>	11 (100%)	0 (0.0%)	11 (100%)
<i>VMAT / IMAT</i>	47 (92.2%)	4 (7.8%)	51 (100%)
Smoking Status			
<i>Current smoker</i>	14 (77.8%)	4 (22.2%)	18 (100%)
<i>Ex/never smoked</i>	66 (98.5%)	1 (1.5%)	67 (100%)
<i>Unknown</i>	23 (95.8%)	1 (4.2%)	24 (100%)

Table 4: PRO scores at baseline and 1-year follow up, clinical significance in score change, mean and paired differences

	Baseline	1 year follow-up	Significance ¥	Mean differences‡	t-value	Probability (two tailed)	Paired differences [§]	t-value	Probability (two tailed)
EORTC-QLQ C30									
FUNCTION: higher scores = improved function (0-100)									
Global health status§									
Mean (s.d.)	64.0 (25.3)	72.8 (19.5)	I-S	8.9 (1.17, 16.6)	2.27	0.02	-0.37 (-7.03, 6.29)	-0.11	0.91
N	106	55		df 159			45		
Physical functioning§									
Mean (s.d.)	81.1 (22.3)	84.0 (20.7)	I-T	2.9 (-4.11, 9.92)	0.81	0.42	-7.19 (-12.8, -1.54)	-2.56	0.01*
N	110	57		df 165			46		
Role functioning§									
Mean (s.d.)	70.9 (32.1)	81.0 (24.1)	I-M	10.1 (0.58, 19.7)	2.09	0.04	2.12 (-7.69, 11.9)	0.43	0.66
N	111	57		df 166			47		
Emotional functioning§									
Mean (s.d.)	69.5 (25.6)	80.3 (23.1)	I-M	10.8 (2.68, 19.0)	2.62	0.01*	5.06 (-2.83, 12.9)	1.29	0.20

N	106	55		df 159			45			
Cognitive functioning§										
Mean (s.d.)	78.8 (22.6)	84.8 (20.9)	I-S	6.07 (-1.15, 13.3)	1.65	0.10	3.33 (-2.37, 9.04)	1.17	0.24	
N	106	55		df 159			45			
Social functioning§										
Mean (s.d.)	72.9 (30.5)	76.6 (27.1)	I-T	3.41 (-5.95, 13.3)	0.75	0.44	-4.07 (-12.0, 3.85)	-1.03	0.30	
N	106	55		df 159			45			
SYMPTOMS: higher scores = worse symptoms (0-100)										
Fatigue										
Mean (s.d.)	33.6 (29.3)	26.2 (22.8)	I-S	-7.39 (-16.2, 1.46)	-1.64	0.10	0.23 (-7.19, 7.66)	0.06	0.94	
N	110	56		df 164			47			

	Baseline	1 year follow-up	Significance ¥	Mean differences‡	t-value	Probability (two tailed)	Paired differences [§]	t-value	Probability (two tailed)	
Nausea and vomiting										
Mean (s.d.)	9.6 (20.0)	4.09 (10.5)	I-S	-5.51 (-11.1, 0.09)	-1.94	0.05	-1.41 (-4.92, 2.09)	-0.81	0.42	

N	111	57		df 166			47		
Diarrhoea									
Mean (s.d.)	20.1 (31.0)	18.2 (22.9)	I-T	-1.9 (-11.3, 7.4)	-0.41	0.68	3.70 (-7.63, 15.0)	0.65	0.51
N	106	55		df 159			45		
Financial problems									
Mean (s.d.)	22.0 (33.1)	16.3 (23.8)	I-S	-5.64 (-15.5, 4.30)	-1.12	0.26	2.22 (-5.87, 10.3)	0.65	0.51
N	106	55		df 159			45		

	Baseline	1 year follow-up	Significance ¥	Mean differences‡	t-value	Probability (two tailed)	Paired differences [§]	t-value	Probability (two tailed) tailed)
EORTC-QLQ C29									
FUNCTION: higher scores = improved function (0-100)									

Body Image§

Mean (s.d.)	76.7 (28.7)	76.0 (28.9)	D-T	-0.69 (-10.0, 8.62)	-0.14	0.88	-5.81 (-13.4, 1.85)	-1.52	0.13
N	112	56		df 166			43		

Health anxiety§

Mean (s.d.)	46.8 (33.1)	60.7 (29.2)	I-M	13.9 (3.6, 24.2)	2.68	0.008*	12.5 (0.64, 24.5)	2.12	0.03
N	114	56		df 168			45		

Weight worries§

Mean (s.d.)	77.4 (30.8)	75.5 (29.4)	D-T	-1.89 (-11.6, 7.91)	-0.38	0.70	-2.27 (-12.3, 7.83)	-0.45	0.65
N	114	56		df 168			44		

Male libido (sexual interest)§

Mean (s.d.)	32.0 (30.5)	28.8 (27.7)	D-T	-3.16 (-22.5, 16.2)	-0.32	0.74	-3.81e-07 (-29.7, 29.7)	0.00	1.00
N	26	15		df 39			10		

Female libido (sexual interest)§

Mean (s.d.)	12.2 (23.6)	18.9 (26.6)	I-S	6.63 (-3.15, 16.4)	1.34	0.18	5.437 (-7.28, 18.0)	0.86	0.39
N	76	37		df 111			31		

SYMPTOMS: higher scores = worse symptoms (0-100)

Urinary frequency

Mean (s.d.)	38.1 (26.0)	32.7 (22.0)	I-S	-5.4 (-13.4, 2.6)	-1.33	0.19	2.22 (-5.66, 10.1)	0.56	0.57
N	115	56		df 169			45		

Blood/Mucous in stools

Mean (s.d.)	24.8 (26.1)	14.6 (17.9)	I-M	-10.2 (-17.9, -2.5)	-2.63	0.009*	-8.51 (-15.8, -1.15)	-2.33	0.02
N	115	56		df 169			45		

Bowel Frequency

Mean (s.d.)	19.9 (19.4)	20.0 (20.9)	D-T	0.08 (-7.3, 7.4)	0.02	0.98	3.33 (-6.36, 13.0)	0.69	0.48
N	82	45		df 125			35		

	Baseline	1 year follow-up	Significance ¥	Mean differences‡	t-value	Probability (two tailed)	Paired differences ⁵	t-value	Probability (two tailed)
Urinary incontinence									
Mean (s.d.)	9.1 (20.4)	13.1 (21.7)	D-T	4.03 (-2.7, 10.8)	1.18	0.24	8.33 (1.37, 15.2)	2.41	0.02
N	114	56		df 168			44		
Dysuria									
Mean (s.d.)	9.27 (22.7)	2.97	I-S	-6.29 (-12.5,-0.03)	-1.98	0.04	-3.70 (-9.02, 1.62)	-1.40	0.16

N	115	56		df 169			45		
Abdominal pain									
Mean (s.d.)	12.7 (23.4)	9.52 (18.7)	I-T	-3.20 (-10.3, 3.92)	-0.88	0.37	-1.55 (-7.45, 4.35)	-0.53	0.59
N	110	56		df 164			43		
Buttock pain									
Mean (s.d.)		23.3 (25.3)	I-L	-22.4 (-33.0, 11.8)	-4.16	0.0001*	-12.5 (-25.4, 0.26)	-1.97	0.05
	45.6 (36.0)								
N	114	56		df 168			45		
Dry mouth									
Mean (s.d.)	28.2 (34.4)	23.2 (32.9)	I-S	-5.05 (-16.0, 5.91)	-0.91	0.36	-3.03 (-15.1, 9.10)	-0.50	0.61
N	112	56		df 166			44		
Hair loss									
Mean (s.d.)	2.97 (13.4)	5.3 (13.8)	D-T	2.38 (-2.08, 6.85)	1.05	0.29	2.17 (-4.41, 4.41)	0.00	1.00
N	101	56		df 155			38		
Taste change									
Mean (s.d.)	12.0 (26.7)	10.1 (24.5)	I-T	-1.91 (-10.3, 6.54)	-0.44	0.65	2.43 (-5.84, 10.7)	0.59	0.55

N	108	56		df 162			41		
Flatulence									
Mean (s.d.)	36.1 (30.7)	40.2 (28.3)	D-T	4.04 (-7.0, 15.1)	0.73	0.47	6.66 (-5.37, 18.7)	1.12	0.26
N	84	44		df 126			35		
Faecal incontinence									
Mean (s.d.)	17.9 (25.7)	19.3 (27.0)	D-T	1.4 (-8.3, 11.0)	0.28	0.78	5.71 (-6.85, 18.2)	0.92	0.36
N	82	45		df 125			35		
	Baseline	1 year follow-up	Significance ¥	Mean differences†	t-value	Probability (two tailed)	Paired differences[§]	t-value	Probability (two tailed)

Anal sore skin

Mean (s.d.)	29.7 (31.1)	22.7 (30.3)	I-S	-6.90 (-18.3, 4.54)	-1.19	0.23	-0.98 (-13.7, 15.7)	0.13	0.89
N	81	55		df 123			34		

Bowel embarrassment

Mean (s.d.)	19.6 (27.9)	25.2 (31.9)	D-S	5.6 (-5.2, 16.4)	1.02	0.31	9.52 (-2.76, 21.8)	1.57	0.12
N	80	45		df 123			35		

Impotence

Mean (s.d.)	37.2 (43.5)	46.7 (39.4)	D-S	9.5 (-18.1, 37.1)	0.69	0.49	-6.66 (-46.8, 33.5)	-0.37	0.71
N	26	15		df 39			10		

Dyspareunia

Mean (s.d.)	14.5 (27.8)	29.5 (38.0)	D-M	15.0 (-0.6, 30.6)	1.92	0.06	17.9 (0.28, 35.6)	2.21	0.04
N	46	26		df 70			13		

§ Function scores: higher scores = improved function; * P-values with <0.01 significance; ‡Unpaired t-test; §Paired t-test; ¥ Significance - D deterioration; I improvement; S small (5-10); M moderate (10-20); L large (>20); T Trivial (<5)