Table 1. Internal reliability of the subscales at both time points

Subscale	Baseline		Time 2	
	Cronbach's alpha (raw)	Cronbach's alpha (standardised)	Cronbach's alpha (raw)	Cronbach's alpha (standardised)
Bowel symptoms (non-stoma)	0.78*	0.78*	0.80*	0.80*
Bowel symptoms (stoma)	0.64	0.64	0.81*	0.81*
Pain/discomfort	0.89*	0.89*	0.93*	0.93*
Stoma care	0.65	0.65	0.87*	0.89*
Vaginal symptoms	0.88*	0.88*	0.89*	0.89*

*Acceptable consistency in responses to items within the scales, Cronbach's alpha coefficient ≥ 0.70

Table 2. Test-retest analyses for clinically stable participants

Subscale / Item	Mean (SD) paired difference (Baseline minus time 2)	95% CI	ICC (2,1)	n
Bowel symptoms (non-stoma)	2.16 (13.38)	-0.94 to 5.26	0.81*	74
Bowel symptoms (stoma)	2.38 (11.5)	-8.26 to 13.02	0.96*	7
Pain/discomfort	1.69 (12.91)	-1.14 to 4.53	0.87*	82
Stoma care	-4.76 (28.59)	-31.20 to 21.68	0.59	7
Vaginal symptoms	4.56 (19.85)	-0.75 to 9.88	0.79*	56
Frequent urination	0.00 (22.55)	-4.89 to 4.89	0.71*	84
Keeping clean	-2.41 (23.15)	-7.47 to 2.65	0.68	83
Proximity to toilet	2.78 (23.26)	-2.27 to 7.83	0.69	84
Lower limb oedema	2.78 (18.08)	-1.15 to 6.70	0.72*	84
Planning activities	-1.98 (24.46)	-7.29 to 3.32	0.72*	84

Subscale / Item	Mean (SD) paired difference (Baseline minus time 2)	95% CI	ICC (2,1)	n
Interest in sex	1.27 (15.51)	-2.21 to 4.74	0.84*	79
Sex life	0.88 (18.84)	-3.43 to 5.18	0.90*	76
Pain during intercourse	0.93 (18.53)	-3.43 to 5.28	0.81*	72
Erectile problems	0.00 (14.91)	-6.79 to 6.79	0.92*	21

*Acceptable consistency in responses to items on two repeated assessments, ICC $\geq$0.70

Table 3. Multi-trait scaling

Subscale	Convergent validity (Items correlate >0.40 with own scale)	Discriminant validity (items do not correlate as highly with another scale)[1]
Bowel symptoms (non-stoma)	0.66-0.81	0.16-0.51
Bowel symptoms (stoma)	0.86-0.87	0.16-0.51
Pain/discomfort	0.75-0.86	0.07-0.53
Stoma care	0.74-0.81	0.12-0.79
Vaginal symptoms	0.88-0.91	0.10-0.50

[1] Correlations between scales with overlapping items not produced (Bowel symptoms (non-stoma) and Bowel symptoms (stoma))

Table 4. QLQ-ANL27 scale correlations with conceptually related QLQ-C30 scales

Conceptually related QLQ-C30 subscale	EORTC QLQ ANL27 Bowel symptoms (non-stoma)	EORTC QLQ ANL27 Bowel symptoms (stoma)	EORTC QLQ ANL27 Pain/discomfort
QLQ-C30 Constipation	0.21	-0.34	N/A
QLQ-C30 Diarrhea	0.61*	0.23	N/A
QLQ-C30 Pain	N/A	N/A	0.70*

Conceptually related QLQ-C30 subscale	EORTC QLQ ANL27 Bowel symptoms (non-stoma)	EORTC QLQ ANL27 Bowel symptoms (stoma)	EORTC QLQ ANL27 Pain/discomfort
QLQ-C30 Physical functioning	-0.36	-0.15	N/A
QLQ-C30 Social functioning	-0.40	-0.02	N/A

*Scales are conceptually related to an acceptable level, r$\geq$0.40

Table 5. Known group comparisons

Subscale	Treatment phase (acute vs. early vs. late)	Treatment status (on or off)	Localised or locoregional	Radiotherapy type IMRT or CRT)	Performance status (0 or 1)[1]
Bowel symptoms (non stoma)	ES=0.28 P=0.057	ES=0.17 P=0.365	ES=0.12 P=0.327	ES=0.06 P=0.645	ES=0.25* P=0.055
Pain / discomfort	ES=0.92*** P<0.0001	ES= 0.20* P=0.270	ES=0.03 P=0.818	ES=0.04 P=0.761	ES=0.38* P=0.002
Vaginal symptoms	ES=0.44* P=0.003	ES=0.05 P=0.831	ES=0.01 P=0.950	ES=0.21* P=0.226	ES=0.07 P=0.649

[1]Given that only 14 participants recorded their performance status as 2 or 3, comparisons were only performed for those scoring 0 or 1.

*Small effect size $\geq$0.20

***Large effect size $\geq$0.80

Table 6. Responsiveness to deterioration over time

Subscale[1]	N	Paired mean difference (Baseline minus second)	Lower CI	Upper CI	Baseline SD	Effect Size			P value	Effect size category
Bowel symptoms (non-stoma)	22	-17.9	-27.7	-8.1	26.6	-0.7			0.0011	Moderate deterioration
Pain / discomfort	29	-34.9	-47.0	-22.8	26.8	-1.3			<.0001	Large deterioration
Vaginal symptoms	20	-31.7	-48.7	-14.6	20.2	-1.6			0.0010	Large deterioration

[1]For symptom scales a negative difference means that second timepoint had higher (worse) scores than baseline, while a positive difference means that second timepoint had lower (better) scores than baseline.