

Table e1: Parameter values for ordinal logistic model fits for the dose-response relationship for rectal cancer. Values in brackets indicate 95% confidence intervals. p-values are from likelihood ratio comparison with basic model.

Model	$b_{0,TRG1}$	$b_{0,TRG2}$	$b_{0,TRG3}$	b_1	$b_{\text{clinical variable}}$
Basic model, 3 response levels	-3.93 (-5.79;-2.18)	-3.08 (-4.87;-1.39)	0.09 (-1.59;1.70)	0.0427 (0.0153;0.0712)	-
3 response levels + age [years]	-3.97 (-6.63;-1.40)	-3.12 (-5.72;-0.62)	0.05 (-2.48;2.42)	0.0426 (0.0148;0.0701)	-0.0007 (-0.0283;0.0303) p=0.9643
3 response levels + gender [male/female]*	-3.94 (-5.75;-2.20)	-3.09 (-4.82;-1.39)	0.08 (-1.59;1.67)	0.0422 (-0.0708;0.0130)	0.061 (-0.457;0.585) p=0.8231
3 response levels + tumour stage [T3/T4]†	-3.66 (-5.54;-1.68)	-2.80 (-4.64;-0.88)	0.38 (-1.43;2.19)	0.0394 (0.0091;0.0683)	-0.518 (-1.201;0.193) p=0.1613
3 response levels + nodal stage [N0/N1-2]††	-2.97 (-5.14;-0.89)	-2.10 (-4.22;-0.06)	1.09 (-0.98;3.05)	0.0365 (0.0072;0.0659)	-0.724 (-1.455; 0.018) p=0.0391
3 response levels + tumour size [cm ³]	-3.38 (-5.34;-1.50)	-2.52 (-4.38;-0.68)	0.69 (-1.19;2.42)	0.0397 (0.0109;0.0683)	-0.0068 (-0.0139; -0.0002) p=0.0399

* Gender included as a binary variable, with male=0 and female=1. † Tumour stage included as a binary variable, with T3=0 and T4=1. †† Nodal stage included as a binary variable, with N0=0 and N1/N2=1.