Supplementary material for Foo M, et al. Impact of advancing age on treatment and outcomes in anal cancer. Acta Oncol 2014;53:909–16.

Supplementary Figure A1–A2. Overall survival by age group, using age cut-offs of >75 years and >80 years for Group 3.

Supplementary Figure B1–B2. Local-recurrence free survival by age group, using age cut-offs of >75 years and >80 years for Group 3.

(C1) **(C2)**

Supplementary Figure C1–C2. Disease-free survival by age group, using age cut-offs of >75 years and >80 years for Group 3.

Supplementary Table I. Baseline patient characteristics using age cut-off > 75 and > 80 years.

	All patients (n = 284)	Age < 50 (n = 51)	Age 50–75 yrs (n = 175)	Age > 75 yrs (n = 58)	p-value for association with age group	Age > 80 yrs (n = 25)
	N (%) or median (range)	N (%) or median (range)	% [95% CI] or median (range)	% [95% CI] or median (range)		% [95% CI] or median (range)
Age at diagnosis	62 years (27–89)	43 (27–49)	61 (50–74)	79 (75–89)	< 0.0001	82 (80–89)
Female	187 (66%)	39 (76%)	109 (62%)	39 (67%)	0.36	17 (68%)
Tumor site					0.26	
Anal margin/verge	35 (12%)	9 (18%)	21 (12%)	5 (9%)		1 (4%)
Anal canal	192 (68%)	34 (67%)	119 (68%)	39 (67%)		16 (64%)
Both	57 (20%)	8 (16%)	35 (20%)	14 (24%)		8 (32%)
Primary tumor diameter (cm)	4 (0.5–14)	3 (1–14)	4 (0.5–10)	3.8 (1–10)	0.42	4.0 (1–10)
T stage					0.20	
T1	69 (24%)	17 (33%)	40 (23%)	12 (21%)		3 (12%)
T2	135 (48%)	18 (35%)	88 (50%)	29 (50%)		14 (56%)
T3	35 (12%)	4 (8%)	22 (13%)	9 (16%)		3 (12%)
T4	42 (15%)	11 (22%)	23 (13%)	8 (14%)		5 (20%)
Tx	3 (1%)	1 (2%)	2 (1%)			
N stage					0.80	
N0	230 (81%)	43 (84%)	137 (78%)	50 (86%)		21 (84%)
N1	6 (2%)	6 (12%)	6 (3%)	4 (7%)		2 (8%)
N2	28 (10%)	2 (4%)	18 (10%)	4 (7%)		2 (8%)
N3	20 (7%)		14 (8%)			
AJCC Stage (7th edition)					0.24	
I	66 (23%)	17 (34%)	37 (21%)	12 (21%)		3 (12%)
II	135 (48%)	17 (34%)	87 (50%)	31 (53%)		14 (56%)
III	29 (10%)	8 (16%)	14 (8%)	7 (12%)		4 (16%)
IV	51 (18%)	8 (16%)	35 (20%)	8 (14%)		4 (16%)
Missing	3	1	2			

Supplementary Table II. Treatment characteristics using age cut-offs > 75 and > 80 years.

	All patients (n = 284)	Age < 50 (n = 51)	Age 50–75 yrs (n = 175)	Age > 75 yrs (n = 58)	p-value for association with age group	Age > 80 yrs (n = 25)
	N (%) or median (range)	N (%) or median (range)	% [95% CI] or median (range)	% [95% CI] or median (range)		% [95% CI] or median (range)
Planned RT dose (Gy)	54 (45–66)	54 (50–66)	54 (45–66)	54 (45–60)	0.46	54 (45–54)
Actual RT duration (days)	39 (7–89)	41 (19–82)	39 (7–74)	42 (22–89)	0.61	43 (22–73)
Completed CRT	270 (95%)	51 (100%)	167 (95%)	52 (90%)	0.01	23 (92%)
Required unplanned RT break	90 (32%)	20 (39%)	51 (29%)	19 (33%)	0.52	11 (44%)
Unplanned break days*	11 (2–47)	10 (5–30)	13 (3–30)	11 (2–47)	0.10	10 (2–32)
5-FU regimen					0.91	
One course	18 (6%)	2 (4%)	14 (8%)	2 (4%)		1 (5%)
Two course	124 (45%)	24 (47%)	78 (45%)	22 (41%)		10 (45%)
Protracted venous infusion	110 (40%)	20 (39%)	64 (37%)	26 (48%)		9 (41%)
5-FU chemotherapy						
Required dose reduction						
Course 1	3 (3%)	0	1 (1%)	2 (11%)	0.05	2 (25%)
Course 2	14 (16%)	4 (22%)	8 (14%)	2 (13%)	0.42	2 (29%)
MMC chemotherapy						
Received 1 dose of MMC	245 (86%)	45 (88%)	151 (86%)	49 (84%)	0.57	20 (80%)

* applicable only to patients whom had a RT break.

Supplementary Table III. Acute toxicity requiring treatment break using age cut-off > 75 and > 80 years.

	All patients (n = 284) N (%)	Age < 50 (n = 51) N (%)	Age 50–75 yrs (n = 175) % [95% CI] or median (range)	Age > 75 yrs (n = 58) % [95% CI] or median (range)	p-value for association with age group	Age > 80 yrs (n = 25) % [95% CI] or median (range)
Skin toxicity	63 (22%)	16 (31%)	37 (21%)	10 (17%)	0.08	4 (16%)
Diarrhea	5 (2%)	0	1 (1%)	4 (7%)	0.004	3 (12%)
Hematologic	2 (1%)	0	2 (1%)	0	0.94	0
Combination	19 (7%)	4 (8%)	10 (6%)	5 (9%)	0.83	4 (16%)
Other	8 (3%)	0 (0%)	6 (3%)	2 (3%)	0.30	2 (8%)

Supplementary Table IV. Patterns of recurrence[^] and colostomy using age cut-off > 75 and > 80 years.

	All patients	Age < 50	Age 50–75 yrs	Age > 75 yrs	Age > 80 yrs
Any recurrence	54	9	35	10	3
Local recurrence	24	4	16	4	3
Pelvic nodal recurrence	5	2	2	1	0
Inguinal nodal recurrence	9	2	6	1	0
Combination loco-regional recurrence*	5	0	4	1	0
Distant recurrence	17	2	10	5	0
Number with colostomy	38	5	27	6	2

[^] patients may have a combination of loco-regional and distant recurrences; *patients with any combination of local, pelvic and/or inguinal nodal recurrence.