

## Appendix

### A. Factors associated with receipt of RT dose $\geq 80$ Gy (n=65) vs. $< 80$ Gy (n=122) in FIGO stage IIIB cervical cancer in Botswana.

Variable	Total Dose $\geq 80$ Gy (n=65) No. Patients (%)	Total Dose $< 80$ Gy (n=122) No. Patients (%)	P value
<b>Weight (kg)<sup>a</sup></b>			
$\geq 60$	33 (59)	41 (41)	0.04
$< 60$	23 (41)	58 (59)	
<b>BMI (kg/m<sup>2</sup>)<sup>a</sup></b>			
$\leq 20$	39 (72)	62 (70)	0.75
$> 20$	15 (28)	27 (30)	
<b>Age (years)</b>			
$\geq 50$ years	31 (48)	58 (47.5)	0.98
$< 50$ years	34 (52)	64 (52.5)	
<b>TTT<sup>b</sup></b>			
$> 3$ Months	31 (60)	59 (65)	0.53
$\leq 3$ Months	21 (40)	32 (35)	
<b>RT Course Length<sup>a</sup></b>			
$\geq 7$ weeks	40 (61.5)	40 (33)	$< 0.01$
$< 7$ weeks	25 (38.5)	81 (67)	
<b>Creatinine (<math>\mu\text{mol/L}</math>)<sup>a</sup></b>			
$> 90$	6 (10)	25 (21)	0.05
$\leq 90$	56 (90)	92 (79)	
<b>KPS</b>			
40-80	18 (28)	36 (30)	0.77
90-100	47 (72)	85 (70)	
<b>HIV Status</b>			
HIV-seropositive	43 (66)	75 (61.5)	0.53
HIV-seronegative	22 (34)	47 (38.5)	
<b>Brachytherapy<sup>a</sup></b>			
Yes	64 (98.5)	56 (46)	$< 0.01$
No	1 (1.5)	66 (54)	
<b>Chemotherapy</b>			
Yes	43 (66)	47 (38.5)	$< 0.01$
No	22 (34)	75 (61.5)	
<b>Treatment Response<sup>c</sup></b>			
Complete	36 (63)	44 (44)	0.02
Non-Complete	21 (37)	56 (56)	
<b>EBRT Boost<sup>a</sup></b>			
Yes	18 (28)	40 (33)	0.47
No	47 (72)	82 (67)	
<b>Hemoglobin (g/dL)<sup>a</sup></b>			
$< 12$ g/dL	48 (80)	91 (81)	0.84
$\geq 12$ g/dL	12 (20)	21 (19)	
<b>Treatment Year</b>			
2013-2015	19 (29)	54 (44)	0.05
2016-2018	46 (71)	68 (56)	

Abbreviations: RT, radiation therapy; BMI, body mass index; TTT, time to treatment; KPS, Karnofsky Performance Score; HIV, human immunodeficiency virus; EBRT, external beam radiation therapy.

<sup>a</sup> Data is incomplete due to individual missing patient data.

<sup>b</sup> TTT is defined as time from pathological defined as the time from biopsy to treatment initiation.

<sup>c</sup> Treatment response is defined as clinically apparent tumor regression on exam.

**B. Factors associated with receipt of Chemotherapy (n=90) vs. No Chemotherapy (n=97) in FIGO stage IIIB cervical cancer in Botswana.**

<b>Variable</b>	<b>Chemotherapy (n=90)</b> No. Patients (%)	<b>None (n=97)</b> No. Patients (%)	<b>P value</b>
<b>BMI (kg/m<sup>2</sup>)<sup>a</sup></b>			
≤20	59 (78)	42 (63)	0.05
>20	17 (22)	25 (37)	
<b>Weight (kg)<sup>a</sup></b>			
≥60	43 (53)	31 (42)	0.16
<60	38 (47)	43 (58)	
<b>Age (years)</b>			
≥50 years	39 (43)	50 (51.5)	0.26
<50 years	51 (57)	47 (48.5)	
<b>TTT<sup>b</sup></b>			
>3 Months	27 (51)	63 (70)	0.02
≤3 Months	26 (49)	27 (30)	
<b>RT Course Length<sup>a</sup></b>			
≥7 weeks	47 (53)	33 (34)	0.01
<7 weeks	42 (47)	64 (66)	
<b>Creatinine (μmol/L)<sup>a</sup></b>			
>90	4 (5)	27 (28)	<0.01
≤90	80 (95)	68 (72)	
<b>KPS</b>			
40-80	23 (26)	31 (32)	0.31
90-100	67 (74)	65 (68)	
<b>Tuberculosis</b>			
Yes	8 (9)	9 (9)	0.93
No	82 (91)	88 (91)	
<b>HIV Status</b>			
Positive	58 (64)	60 (62)	0.71
Negative	32 (36)	37 (38)	
<b>Brachytherapy<sup>a</sup></b>			
Yes	77 (86)	43 (44)	<0.01
No	13 (14)	54 (56)	
<b>Treatment Response<sup>c</sup></b>			
Complete	45 (58)	35 (44)	0.07
Non-Complete	32 (42)	45 (56)	
<b>EBRT Boost<sup>a</sup></b>			
Yes	23 (26)	35 (36)	0.12
No	67 (74)	62 (64)	
<b>Hemoglobin (g/dL)<sup>a</sup></b>			
<12 g/dL	57 (69.5)	82 (91)	<0.01
≥12 g/dL	25 (30.5)	8 (9)	
<b>Treatment Year</b>			
2013-2015	42 (47)	31 (32)	0.04
2016-2018	48 (53)	66 (68)	

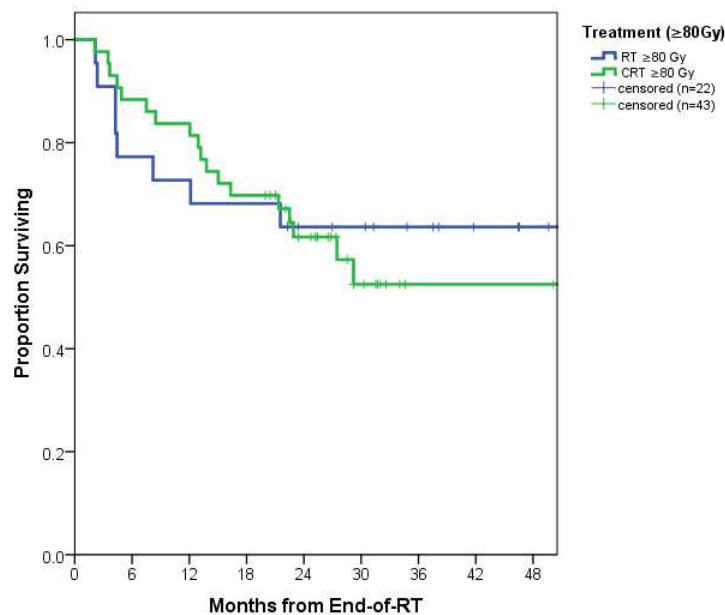
Abbreviations: BMI, body mass index; RT, radiation therapy; TTT, time to treatment; KPS, Karnofsky Performance Score; HIV, human immunodeficiency virus; EBRT, external beam radiation therapy.

<sup>a</sup> Data is incomplete due to individual missing patient data.

<sup>b</sup> TTT is defined as time from pathological defined as the time from biopsy to treatment initiation.

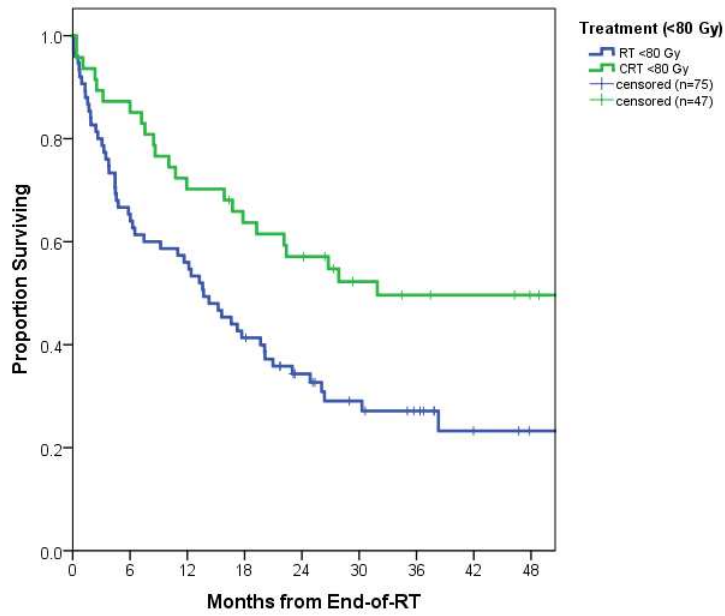
<sup>c</sup> Treatment response is defined as clinically apparent tumor regression on exam.

**C.** Survival outcomes by receipt of chemotherapy for patients receiving adequate RT (total EQD2  $\geq 80$  Gy): CRT (n=43) versus RT alone (n=22). Survival outcomes were similar with or without concurrent chemotherapy: 2-year OS was  $61.7 \pm 7.6\%$  months versus  $57.1 \pm 7.3\%$  (p=0.766)



Abbreviations: RT, radiation therapy; EQD2, dose equivalent of 2 Gy per fraction; CRT, chemoradiation therapy.

**D.** Survival outcomes by receipt of chemotherapy for patients receiving “inadequate RT” (Total EQD2  $< 80$  Gy): Chemo/RT (n=47) versus RT alone (n=75). Two-year OS was significantly improved with the addition of chemotherapy:  $51.9 \pm 14.3\%$  versus  $34.3 \pm 5.5\%$  (p =  $< 0.01$ )



Abbreviations: RT, radiation therapy; EQD2, dose equivalent of 2 Gy per fraction; CRT, chemoradiation therapy.