

**APPENDIX I.** Univariate analysis of Patient Health Questionnaire scores with demographic data

	PCS			MCS		
	No.	Score	P value	No.	Score	P value
Overall	198	51.2 ± 6.44	-	198	49.0 ± 9.00	-
Sex						
Female	91	50.3 ± 6.55	0.072	91	48.4 ± 9.64	0.354
Male	107	52.0 ± 6.28		107	49.6 ± 8.43	
Cancer type						
Non-haematological	66	50.2 ± 6.17	0.104	66	49.5 ± 8.52	0.642
Haematological	132	51.7 ± 6.53		132	48.8 ± 9.26	
Surgery						
No	134	51.6 ± 6.47	0.210	134	48.8 ± 9.26	0.588
Yes	64	50.4 ± 6.35		64	49.5 ± 8.50	
External effect						
No	42	51.9 ± 5.20	0.018	42	48.7 ± 8.26	0.280
Yes	22	47.5 ± 7.39		22	51.1 ± 8.91	
Radiotherapy						
No	143	51.7 ± 5.88	0.068	143	49.8 ± 8.61	0.100
Yes	53	49.8 ± 7.74		53	47.4 ± 9.66	
Chemotherapy						
No	21	51.8 ± 5.79	0.633	21	48.9 ± 8.75	0.886
Yes	175	51.1 ± 6.56		175	49.2 ± 8.99	
Relapse history						
No	188	51.2 ± 6.44	0.873	188	48.9 ± 9.04	0.510
Yes	10	50.9 ± 6.88		10	50.9 ± 8.49	
Education level						
Secondary or below	64	50.7 ± 5.57	0.411	64	49.4 ± 8.84	0.683
College/university or above	130	51.5 ± 6.92		130	48.8 ± 9.22	
Occupation						
Unemployed	14	53.1 ± 6.86	0.264	14	46.9 ± 11.78	0.353
Employed/student/housewife	183	51.1 ± 6.42		183	49.2 ± 8.80	
Sexual history						
No	118	51.6 ± 6.44	0.412	118	48.8 ± 9.18	0.766
Yes	78	50.9 ± 6.14		78	49.2 ± 8.85	
Reproductive history						
No	180	51.3 ± 6.47	0.301	180	49.0 ± 9.15	0.688
Yes	15	53.0 ± 3.34		15	48.1 ± 7.69	
Marital status						
Single and never in a relationship	75	51.3 ± 5.74	0.997	75	48.7 ± 8.98	0.616
Single with current or previous relationship	92	51.2 ± 7.30		92	48.8 ± 9.89	
Married	31	51.2 ± 5.44		31	50.5 ± 5.82	
Smoking history						
Non-smoker	143	51.4 ± 6.55	0.679	143	48.9 ± 9.22	0.933
Ex-smoker	11	51.5 ± 5.25		11	49.3 ± 9.72	
Chronic smoker	17	49.9 ± 8.29		17	49.7 ± 7.34	
Alcohol history						
Non-drinker	50	50.4 ± 6.51	0.619	50	50.2 ± 8.67	0.657
Ex-drinker	2	49.8 ± 3.22		2	50.1 ± 2.09	
Social drinker	111	51.6 ± 6.85		111	48.6 ± 9.14	
Regular drinker	8	53.0 ± 4.97		8	46.9 ± 11.14	
		<b>Correlation</b>	<b>P value</b>	<b>Correlation</b>	<b>P value</b>	
Age		-0.159	0.025	0.008	0.908	
Age at diagnosis		-0.170	0.017	-0.012	0.871	
Disease-free year		-0.025	0.729	-0.008	0.913	
BMI		0.112	0.117	0.120	0.094	

Abbreviations: BMI = body mass index; MCS = mental component score; PCS = physical component score; PHQ = Patient Health Questionnaire

## APPENDIX I. (cont'd)

	Rosenberg self-esteem scale			Body image scale		
	No.	Score	P value	No.	Score	P value
Overall	195	29.9 ± 4.25	-	200	5.6 ± 4.45	-
Sex						
Female	88	29.5 ± 3.95	0.184	91	6.3 ± 4.36	0.057
Male	107	30.3 ± 4.47		109	5.1 ± 4.47	
Cancer type						
Non-haematological	65	30.0 ± 4.34	0.840	67	7.1 ± 4.77	0.002
Haematological	130	29.9 ± 4.22		133	4.9 ± 4.11	
Surgery						
No	132	29.8 ± 4.13	0.680	135	4.9 ± 4.09	0.002
Yes	63	30.1 ± 4.52		65	7.1 ± 4.81	
External effect						
No	40	30.2 ± 4.10	0.855	42	7.0 ± 4.52	0.797
Yes	23	30.0 ± 5.26		23	7.3 ± 5.38	
Radiotherapy						
No	144	30.1 ± 4.16	0.389	145	5.2 ± 3.65	0.122
Yes	51	29.5 ± 4.51		53	6.6 ± 6.12	
Chemotherapy						
No	22	30.6 ± 4.57	0.428	22	6.5 ± 4.78	0.352
Yes	173	29.8 ± 4.21		176	5.5 ± 4.44	
Relapse history						
No	185	30.0 ± 4.26	0.077	190	5.6 ± 4.41	0.727
Yes	10	27.6 ± 3.37		10	6.1 ± 5.34	
Education level						
Secondary or below	63	29.3 ± 4.06	0.147	66	4.9 ± 4.42	0.113
College/university or above	128	30.3 ± 4.36		130	6.0 ± 4.45	
Occupation						
Unemployed	14	28.2 ± 4.71	0.127	14	5.4 ± 4.34	0.807
Employed/student/housewife	180	30.0 ± 4.19		185	5.7 ± 4.47	
Sexual history						
No	116	29.8 ± 4.17	0.410	118	5.4 ± 4.51	0.524
Yes	77	30.3 ± 4.34		80	5.9 ± 4.41	
Reproductive history						
No	178	29.9 ± 4.30	0.675	182	5.7 ± 4.56	0.390
Yes	14	30.4 ± 3.59		15	4.7 ± 3.15	
Marital status						
Single and never in a relationship	73	29.7 ± 4.31	0.815	75	5.2 ± 4.39	0.364
Single with current or previous relationship	92	30.1 ± 4.24		94	6.1 ± 4.76	
Married	30	29.7 ± 4.23		31	5.3 ± 3.49	
Smoking history						
Non-smoker	142	30.2 ± 4.32	0.405	144	5.6 ± 4.42	0.672
Ex-smoker	11	29.3 ± 3.38		11	4.8 ± 2.68	
Chronic smoker	15	28.7 ± 4.59		18	6.3 ± 5.94	
Alcohol history						
Non-drinker	50	30.0 ± 4.24	0.997	50	5.2 ± 4.67	0.589
Ex-drinker	2	29.5 ± 2.12		2	4.5 ± 0.71	
Social drinker	109	30.0 ± 4.44		113	5.7 ± 4.18	
Regular drinker	7	29.7 ± 3.30		8	7.4 ± 7.71	
		<b>Correlation</b>	<b>P value</b>		<b>Correlation</b>	<b>P value</b>
Age		0.026	0.722		0.092	0.197
Age at diagnosis		-0.062	0.391		0.260	<0.001
Disease-free year		0.040	0.575		-0.101	0.155
BMI		0.076	0.293		-0.069	0.333

## APPENDIX I. (cont'd)

	PHQ		
	No.	Score	P value
Overall	200	4.8 ± 4.27	-
Sex			
Female	91	5.1 ± 4.16	0.349
Male	109	4.5 ± 4.36	
Cancer type			
Non-haematological	67	5.2 ± 4.00	0.303
Haematological	133	4.6 ± 4.39	
Surgery			
No	135	4.6 ± 4.40	0.397
Yes	65	5.2 ± 3.99	
External effect			
No	42	5.3 ± 4.20	0.705
Yes	23	4.9 ± 3.65	
Radiotherapy			
No	145	4.5 ± 4.20	0.202
Yes	53	5.4 ± 4.47	
Chemotherapy			
No	22	4.7 ± 4.75	0.916
Yes	176	4.8 ± 4.23	
Relapse history			
No	190	4.8 ± 4.28	0.880
Yes	10	4.6 ± 4.30	
Education level			
Secondary or below	66	5.0 ± 4.64	0.628
College/university or above	130	4.7 ± 4.12	
Occupation			
Unemployed	14	5.9 ± 7.19	0.569
Employed/student/housewife	185	4.7 ± 3.99	
Sexual history			
No	118	4.5 ± 3.87	0.266
Yes	80	5.2 ± 4.77	
Reproductive history			
No	182	4.8 ± 4.34	0.430
Yes	15	3.9 ± 3.26	
Marital status			
Single and never in a relationship	75	4.9 ± 4.29	0.826
Single with current or previous relationship	94	4.6 ± 4.32	
Married	31	5.1 ± 4.15	
Smoking history			
Non-smoker	144	4.8 ± 4.52	0.144
Ex-smoker	11	2.8 ± 2.86	
Chronic smoker	18	6.2 ± 4.30	
Alcohol history			
Non-drinker	50	4.9 ± 4.88	0.939
Ex-drinker	2	3.0 ± 4.24	
Social drinker	113	4.9 ± 4.37	
Regular drinker	8	4.5 ± 3.02	
		<b>Correlation</b>	<b>P value</b>
Age		0.023	0.751
Age at diagnosis		0.072	0.310
Disease-free year		0.003	0.971
BMI		-0.121	0.089

**APPENDIX 2.** Multiple regression analysis of various scores with demographic data

	PCS			MCS			Rosenberg self-esteem scale		
	$\beta$	P value	95% CI	$\beta$	P value	95% CI	$\beta$	P value	95% CI
(Constant)	51.46	<0.001	43.02 to 59.91	49.03	<0.001	36.28 to 61.77	28.02	<0.001	22.10 to 33.95
Sex	2.04	0.024	0.27 to 3.81	0.84	0.535	-1.83 to 3.51	0.90	0.158	-0.35 to 2.16
Age	-0.15	0.153	-0.35 to 0.06	0.03	0.868	-0.28 to 0.33	0.09	0.234	-0.06 to 0.24
Age at diagnosis	-0.18	0.058	-0.36 to 0.01	-0.05	0.732	-0.33 to 0.23	-0.10	0.120	-0.23 to 0.03
Haematological cancer	5.08	0.110	-1.16 to 11.33	-0.88	0.854	-10.30 to 8.54	0.72	0.748	-3.69 to 5.13
Surgery type									
Non-external effect surgery	4.82	0.151	-1.78 to 11.43	-0.53	0.916	-10.5 to 9.43	0.82	0.731	-3.86 to 5.49
External effect surgery	1.02	0.755	-5.42 to 7.47	1.48	0.764	-8.24 to 11.2	1.06	0.647	-3.5 to 5.61
Radiotherapy	-1.20	0.266	-3.32 to 0.92	-2.81	0.085	-6.01 to 0.39	-0.78	0.324	-2.33 to 0.77
Chemotherapy	-1.16	0.442	-4.13 to 1.81	0.52	0.819	-3.96 to 5.00	-0.68	0.517	-2.74 to 1.38
Relapse history	0.07	0.974	-3.91 to 4.04	1.74	0.568	-4.26 to 7.74	-2.89	0.044	-5.70 to -0.08
Sexual history	-1.07	0.355	-3.33 to 1.20	-1.09	0.530	-4.51 to 2.33	0.62	0.453	-1.01 to 2.26
Reproductive history	3.91	0.070	-0.32 to 8.14	-3.41	0.293	-9.79 to 2.97	1.67	0.271	-1.32 to 4.66
Marital status									
Single with current or previous relationship	1.46	0.179	-0.68 to 3.6	0.18	0.912	-3.04 to 3.41	0.19	0.803	-1.33 to 1.72
Married	1.77	0.399	-2.37 to 5.91	3.90	0.220	-2.35 to 10.14	-1.73	0.243	-4.65 to 1.19
Body image scale									
	$\beta$	P value	95% CI	$\beta$	P value	95% CI			
(Constant)	1.44	0.631	-4.47 to 7.35	5.45	0.075	-0.55 to 11.44			
Gender	-1.23	0.052	-2.47 to 0.01	-0.70	0.275	-1.96 to 0.56			
Age	0.03	0.641	-0.11 to 0.18	-0.02	0.770	-0.17 to 0.12			
Age of diagnosis	0.22	0.001	0.09 to 0.35	0.07	0.294	-0.06 to 0.20			
Haematological cancer	0.77	0.728	-3.62 to 5.16	-1.26	0.579	-5.71 to 3.20			
Surgery type									
Non-external effect surgery	3.03	0.199	-1.61 to 7.67	-0.53	0.825	-5.24 to 4.18			
External effect surgery	2.46	0.286	-2.07 to 7.00	-1.07	0.648	-5.67 to 3.54			
Radiotherapy	1.31	0.086	-0.19 to 2.80	0.93	0.226	-0.58 to 2.45			
Chemotherapy	0.34	0.742	-1.70 to 2.39	0.62	0.558	-1.46 to 2.69			
Relapse history	0.98	0.491	-1.82 to 3.78	-0.04	0.976	-2.88 to 2.80			
Sexual history	0.29	0.718	-1.29 to 1.87	1.22	0.134	-0.38 to 2.83			
Reproductive history	-1.12	0.458	-4.10 to 1.85	-2.65	0.085	-5.67 to 0.37			
Marital status									
Single with current or previous relationship	0.31	0.686	-1.20 to 1.81	-0.78	0.312	-2.31 to 0.74			
Married	-0.73	0.622	-3.63 to 2.18	0.09	0.950	-2.85 to 3.04			

Abbreviations: 95% CI = 95% confidence interval; MCS = mental component score; PCS = physical component score; PHQ = Patient Health Questionnaire

**APPENDIX 3.** Distribution of Patient Health Questionnaire depressive symptom scale scores\*

	<b>Value</b>
Total score	4.80 ± 4.27
Category, frequency	
Normal range (score 0-4)	108 (54%)
Minimal depressive symptoms (score 5-9)	68 (34%)
Major depression, mild severity (score 10-14)	20 (10%)
Major depression, moderate severity (score 15-19)	2 (1%)
Major depression, severe severity (score ≥20)	2 (1%)

\* Data are shown as mean ± standard deviation or No. (%)