

# Appendix 1. Assessment of Face, Content, and Construct Validity for Colorectal Cancer Screening Tool

Items	Items	Content validity				Face validity	Interpretation Items
		CVR	CVI	K*	Interpretation K*	IS	
Protection motivation							
Q1	I am going to do the FIT test.	0.8	1	1	Excellent	4.23	Remained
Q2	I am going to do a colonoscopy.	0.8	1	1	Excellent	4.32	Remained
Q3	I have planned to perform the FIT test screening	0.8	1	1	Excellent	3.68	Remained
Q4	I have planned to do screening colonoscopy if needed	0.8	1	1	Excellent	3.68	Remained
Q5	I decided to go to health and treatment centers every 2 years to perform FIT test screening	0.8	1	1	Excellent	4.32	Remained
Q6	I decided to do colonoscopy screening if needed	1	1	1	Excellent	4.9	Remained
Perceived sensitivity							
Q1	I am at risk of colon cancer.	0.8	1	1	Excellent	4.9	Remained
Q2	It is possible that I will get colon cancer in the future.	0.8	0.9	0.89	Excellent	4.32	Remained
Q3	I am confident that I will not get colorectal cancer.	1	1	1	Excellent	5	Remained
Q4	I will not get colorectal cancer because I have no problem	0.8	0.9	0.89	Excellent	4.23	Remained
Q5	God will not, I will not get colorectal cancer	0.8	1	1	Excellent	4.23	Remained
Q6	Because no one in my family has colorectal cancer, I will not get this cancer either.	0.8	1	1	Excellent	4.05	Remained
Q7	I don't think about cancer at all.	1	1	1	Excellent	5	Remained
Perceived severity							
Q1	Colorectal cancer is a severe and dangerous disease.	1	1	1	Excellent	5	Remained
Q2	The physical problems caused by colorectal cancer can be unbearable for me.	0.8	1	1	Excellent	4.9	Remained
Q3	If I get colorectal cancer, I will have problems in terms of my job.	1	1	1	Excellent	4.9	Remained
Q4	If I have colorectal cancer, I will have many problems.	1	1	1	Excellent	4.9	Remained

Q5	If I get colorectal cancer, it will be difficult for me to continue living	0.8	1	1	Excellent	3.68	Remained
Q6	Colorectal cancer can be fatal.	1	1	1	Excellent	4.8	Remained
Q7	My family will suffer if I get colorectal cancer.	0.8	1	1	Excellent	4.05	Remained
Q8	Colorectal cancer is a serious threat to my health.	0.8	1	1	Excellent	4.9	Remained
<b>Perceived reward</b>							
Q1	Not doing the FIT test screening will reduce my worries.	0.8	1	1	Excellent	4.9	Remained
Q2	Not doing a colonoscopy will reduce my worries.	0.8	1	1	Excellent	4.9	Remained
Q3	I will have more peace in life by not doing the FIT test screening	0.8	0.9	0.89	Excellent	4.05	Remained
Q4	By not having a colonoscopy, I will have more peace in my life	0.8	0.9	0.89	Excellent	4.05	Remained
Q5	Not doing colorectal cancer tests (especially colonoscopy) saves me money.	1	1	1	Excellent	5	Remained
Q6	By not getting a colorectal cancer screening I will be more focused on my life	0.8	1	1	Excellent	4.05	Remained
Q7	I will be less stressed by not having colorectal cancer screening	0.8	1	1	Excellent	4.23	Remained
<b>Response cost</b>							
Q1	FIT test screening is time consuming for me.	1	1	1		5	
Q2	It is costly for me to have the FIT test screening.	1	1	1	Excellent	5	Remained
Q3	Because doing the FIT test is disgusting, I don't do it.	1	1	1	Excellent	4.9	Remained
Q4	Colonoscopy screening is too time consuming for me.	1	1	1	Excellent	5	Remained
Q5	It is costly for me to have the Colonoscopy screening.	1	1	1	Excellent	5	Remained
Q6	Because during the colonoscopy, my genital area is seen by the examiner, I am embarrassed to do it.	1	1	1	Excellent	5	Remained

Q7	Because colorectal cancer screening (colonoscopy, FIT test) and its results worry me and my family, I don't do it.	1	1	1	Excellent	5	Remained
Q8	There is no value in participating in the screening program (colonoscopy, FIT test) due to the lack of hope to cure this disease.	1	1	1	Excellent	5	Remained
Q9	Because colorectal cancer screening needs to be repeated, it is difficult for me to do it several times	0.8	1	1	Excellent	4.8	Remained
<b>fear</b>							
Q1	When I think about colorectal cancer, I get worried.	1	1	1	Excellent	5	Remained
Q2	When I think about colorectal cancer, I can't sleep or have disturbed dreams	0.8	0.9	0.89	Excellent	4.8	Remained
Q3	I get anxious when I think about colon cancer.	1	1	1	Excellent	4.9	Remained
Q4	When I think about colorectal cancer, my heart beats faster.	0.8	1	1	Excellent	4.8	Remained
Q5	The thought of colorectal cancer scares me.	0.8	1	1	Excellent	4.9	Remained
Q6	I'm afraid the colorectal screening test will confirm my cancer	1	1	1	Excellent	4.8	Remained
Q7	The high cost of possible colorectal cancer treatment scares me	0.8	1	1	Excellent	3.68	Remained
<b>Self-efficacy</b>							
Q1	I can get colorectal cancer screening even if: the doctor or health worker doesn't give me much information.	1	1	1	Excellent	4.9	Remained
Q2	I can get colorectal cancer screening even if: the people around me don't give me the necessary support.	1	0.9	0.89	Excellent	4.14	Remained
Q3	I can get colorectal cancer screening even if: my family doesn't give me the necessary support	1	0.9	0.89	Excellent	4.14	Remained

Q4	I can get colorectal cancer screening even if: It is hard to do.	1	1	1	Excellent	4.32	Remained
Q5	I can get colorectal cancer screening even if: spend a lot of time	1	1	1	Excellent	5	Remained
Q6	I can get colorectal cancer screening even if: I have to pay for it.	1	1	1	Excellent	5	Remained
Q7	I can get colorectal cancer screening even if: be painful. (colonoscopy)	1	1	1	Excellent	4.32	Remained
Q8	I can get colorectal cancer screening even if: I am very busy	0.8	1	1	Excellent	4.14	Remained
<b>Response efficacy</b>							
Q1	Performing screening (colonoscopy, FIT test) is effective in preventing colorectal cancer	1	1	1	Excellent	5	Remained
Q2	Early detection of colorectal cancer with screening (colonoscopy, FIT test) will reduce cancer growth.	1	1	1	Excellent	5	Remained
Q3	Colorectal cancer screening (colonoscopy, FIT test) allows early diagnosis of this disease.	1	1	1	Excellent	5	Remained
Q4	Early detection of colorectal cancer by screening (colonoscopy, FIT test) increases the chances of successful treatment.	1	1	1	Excellent	5	Remained
Q5	Colorectal cancer screening (colonoscopy, FIT test) reduces the possibility of complications from this cancer.	0.9	0.8	0.79	Excellent	4.9	Remained
Q6	Regular and timely screening of colorectal cancer provides the opportunity to detect cancer in the early stages.	0.9	0.8	0.79	Excellent	4.9	Remained

Appendix 2. Univariate and multivariate skewness and kurtosis (n = 250)

Variables	Skewness	SE_Skewness	Z_Skewness	Kurtosis	SE_Kurtosis	Z_Kurtosis
Q1	-1.319	0.154	-8.563	1.716	0.307	5.592
Q2	-0.055	0.154	-0.357	-1.104	0.307	-3.599
Q3	-0.984	0.154	-6.391	0.126	0.307	0.411
Q4	-0.178	0.154	-1.159	-1.076	0.307	-3.506
Q5	-0.783	0.154	-5.083	-0.392	0.307	-1.279
Q6	-0.390	0.154	-2.535	-1.015	0.307	-3.308
Q7	-0.375	0.154	-2.435	-0.890	0.307	-2.901
Q8	-0.311	0.154	-2.022	-1.131	0.307	-3.687
Q9	0.079	0.154	0.511	-1.373	0.307	-4.475
Q10	-0.430	0.154	-2.792	-1.020	0.307	-3.326
Q11	-0.344	0.154	-2.232	-1.097	0.307	-3.575
Q12	-1.678	0.154	-10.895	3.888	0.307	12.671
Q13	-1.226	0.154	-7.962	1.679	0.307	5.474
Q14	-1.047	0.154	-6.800	0.652	0.307	2.125
Q15	-1.274	0.154	-8.273	1.276	0.307	4.158
Q16	-1.214	0.154	-7.881	1.208	0.307	3.936
Q17	-1.175	0.154	-7.632	1.303	0.307	4.246
Q18	-1.454	0.154	-9.441	3.442	0.307	11.153
Q19	-1.539	0.154	-9.993	2.845	0.307	9.272
Q20	-0.200	0.154	-1.298	-1.267	0.307	-4.128
Q21	-0.227	0.154	-1.475	-1.168	0.307	-3.806
Q22	-0.431	0.154	-2.796	-1.046	0.307	-3.408
Q23	-0.277	0.154	-1.800	-1.071	0.307	-3.490
Q24	-0.016	0.154	-0.106	-1.273	0.307	-4.150
Q25	-0.245	0.154	-1.592	-1.173	0.307	-3.823
Q26	-0.215	0.154	-1.398	-1.215	0.307	-3.961
Q27	-1.088	0.154	-7.063	0.386	0.307	1.260
Q28	-1.483	0.154	-9.630	2.744	0.307	8.945
Q29	-0.909	0.154	-5.902	-0.058	0.307	-0.189
Q30	-0.153	0.154	-0.996	-1.278	0.307	-4.165
Q31	0.330	0.154	2.144	-1.130	0.307	-3.684
Q32	0.048	0.154	0.312	-1.319	0.307	-4.298
Q33	-0.947	0.154	-6.152	0.045	0.307	0.147
Q34	-1.262	0.154	-8.192	1.286	0.307	4.134
Q35	-0.692	0.154	-4.497	-0.549	0.307	-1.791
Q36	-0.967	0.154	-6.278	0.151	0.307	0.492
Q37	-0.100	0.154	-0.651	-1.308	0.307	-4.264
Q38	-0.490	0.154	-3.180	-0.975	0.307	-3.179
Q39	-0.147	0.154	-0.957	-1.241	0.307	-4.046
Q40	-0.921	0.154	-5.978	0.136	0.307	0.444
Q41	-0.389	0.154	-2.527	-1.055	0.307	-3.439
Q42	-0.661	0.154	-4.294	-0.629	0.307	-2.050
Q43	0.149	0.154	0.969	-1.336	0.307	-4.354
Q44	-0.298	0.154	-1.937	-1.218	0.307	-3.969
Q45	-0.350	0.154	-2.272	-1.134	0.307	-3.695
Q46	-0.231	0.154	-1.503	-1.238	0.307	-4.034
Q47	-0.242	0.154	-1.572	-1.228	0.307	-4.004
Q48	0.075	0.154	0.490	-1.352	0.307	-4.408
Q49	-1.139	0.154	-0.905	-1.203	0.307	-3.920
Q50	-0.318	0.154	-2.066	-1.159	0.307	-3.777

Q51	-1.585	0.154	-10.291	4.513	0.307	14.709
Q52	-1.567	0.154	-10.173	3.234	0.307	10.540
Q53	-1.615	0.154	-10.485	3.605	0.307	11.750
Q54	-1.585	0.154	-10.291	4.206	0.307	13.707
Q55	-1.651	0.154	-10.722	4.333	0.307	14.123
Q56	-1.443	0.154	-9.373	3.899	0.307	12.709