

**Appendix****Table 1: Multivariable logistic regression analyses for impact of the invitation time period on the key performance indicators for subsequent invitation round**

Period	FIT participation			FIT positivity			Follow-up colonoscopy			Interval cancers		
	%	OR	95% CI	%	OR	95% CI	%	OR	95% CI	Per 10.000	OR	95% CI
<i>Before</i>	92.3%	REF*		4.1%	REF		87.4%	REF*		7.8	REF	
<i>During</i>	89.3%	0.73	0.72 0.74	3.9%	1.00	0.98 1.03	86.8%	0.89	0.83 0.95	7.0	1.04	0.88 1.23
<i>After</i>	92.0%	1.03	1.01 1.04	3.8%	1.02	1.00 1.03	87.9%	0.91	0.87 0.96	5.7	1.07	0.94 1.22
Period	PPV CRC			PPV AN#			Detection rate CRC			Detection rate AN#		
	%	OR	95% CI	%	OR	95% CI	%	OR	95% CI	%	OR	95% CI
<i>Before</i>	5.3%	REF*		34.7%	REF*		0.19%	REF*		1.25%	REF*	
<i>During</i>	4.6%	0.91	0.81 1.03	31.8%	0.91	0.86 0.96	0.16%	0.90	0.80 1.01	1.09%	0.92	0.88 0.96
<i>After</i>	4.2%	0.91	0.84 0.99	32.0%	0.95	0.92 0.98	0.14%	0.92	0.85 0.99	1.07%	0.97	0.94 1.00

All Odds Ratios are adjusted for confounding variables age, sex and invitation round.

REF\* indicates that the alternative model (including the time period) better fitted the data. Note, all ORs are presented for the alternative model including time period, regardless if it improved the model.

# AN is the combination of colorectal cancer and advanced neoplasia.

Abbreviations: AN (advanced neoplasia), CI (confidence interval), CRC (colorectal cancer), OR (Odds Ratio), PPV (positive predictive value).

**Table 2: Multivariable logistic regression analyses for impact of the invitation interval on the key performance indicators**

Invitation interval (months)	FIT participation			FIT positivity			Participation colonoscopy			Interval cancers		
	%	OR	95% CI	%	OR	95% CI	%	OR	95% CI	*10,000	OR	95% CI
<=24-25	91.6%	REF*		4.1%	REF*		87.3%	REF		7.3	REF	
25-26	91.4%	1.00	0.98 1.02	3.9%	1.04	1.01 1.07	87.0%	0.90	0.83 0.97	6.2	1.11	0.91 1.37
26-27	91.9%	1.06	1.05 1.08	3.8%	1.02	1.00 1.05	87.9%	0.96	0.89 1.03	6.3	1.18	0.98 1.41
27-28	91.9%	1.06	1.04 1.07	3.8%	1.05	1.02 1.08	88.1%	0.98	0.90 1.06	6.6	1.24	1.01 1.53
28-29	92.0%	1.07	1.04 1.09	3.9%	1.05	1.01 1.09	89.0%	1.05	0.94 1.17	7.8	1.41	1.09 1.83
>29	92.4%	1.15	1.11 1.19	3.8%	1.01	0.96 1.05	88.9%	1.10	0.95 1.27	7.3	1.31	0.86 1.98
	PPV CRC			PPV AN#			Detection rate CRC			Detection rate AN		
<=24-25	5.1%	REF		33.9%	REF		0.18%	REF		1.20%	REF	
25-26	4.7%	1.02	0.89 1.17	32.9%	1.02	0.96 1.09	0.16%	1.04	0.92 1.19	1.11%	0.78	0.75 1.09
26-27	4.6%	1.01	0.89 1.14	31.9%	1.01	0.96 1.07	0.15%	1.02	0.91 1.15	1.07%	1.04	0.99 1.07
27-28	3.9%	0.89	0.77 1.02	31.3%	0.98	0.92 1.04	0.13%	0.93	0.81 1.07	1.06%	1.02	0.98 1.08
28-29	4.1%	0.89	0.74 1.08	33.4%	1.05	0.97 1.14	0.14%	0.94	0.78 1.13	1.15%	1.02	0.97 1.16
>29	4.3%	0.92	0.72 1.17	32.8%	1.04	0.94 1.15	0.28%	0.94	0.74 1.19	2.16%	1.09	1.02 1.13

All Odds Ratios are adjusted for confounding variables age, sex and invitation round. \*indicates that the alternative model (including the time period) better fit the data.

Note, all ORs are presented for the alternative model including time period, regardless it improved the model.

# AN is the combination of CRC and AA.

Abbreviations: AN (advanced neoplasia), AA (advanced adenomas), CI (confidence interval), CRC (colorectal cancer), OR (Odds Ratio), PPV (positive predictive value).