

## Appendix

**Table 1a Association of cumulative f-Hb values over the initial 2 rounds and PR - PPV for AN and NNScope – DR of AN and CRC**

**Women aged 50-59**

sum f-Hb µg/gr FIT1+FIT2	Examined	FIT +		Colonoscopy		Advanced adenoma	CRC	PPV AN	DR advanced adenoma	DR CRC	NNScope to detect 1 AN
		N	%	N	%						
<b>0</b>	22,048	460	2.1%	412	89.6%	52	6	14.1%	0.24%	0.03%	7.1
<b>0.1-3.9</b>	12,708	333	2.6%	292	87.7%	52	12	21.9%	0.41%	0.09%	4.6
<b>4-9.9</b>	4,632	197	4.3%	187	94.9%	46	11	30.5%	0.99%	0.24%	3.3
<b>10-14.9</b>	1,097	82	7.5%	78	95.1%	27	3	38.5%	2.46%	0.27%	2.6
<b>15-19.9</b>	513	46	9.0%	40	87.0%	14	2	40.0%	2.73%	0.39%	2.5
<b>≥ 20</b>	153	32	20.9%	26	81.3%	12	2	53.8%	7.84%	1.31%	1.9
<b>Total</b>	41,151	1,150	2.8%	1,035	90.0%	203	36	23.1%	0.49%	0.09%	4.3

**Table 1b Association of cumulative f-Hb values over the initial 2 rounds and PR - PPV for AN and NNScope – DR of AN and CRC**

**Women aged 60-69**

sum f-Hb µg/gr FIT1+FIT2	Examined	FIT +		Colonoscopy		Advanced adenoma	CRC	PPV AN	DR advanced adenoma	DR CRC	NNScope to detect 1 AN
		N	%	N	%						
<b>0</b>	22,226	587	2.6%	491	83.6%	47	11	11.8%	0.21%	0.05%	8.5
<b>0.1-3.9</b>	16,831	588	3.5%	490	83.3%	81	17	20.0%	0.48%	0.10%	5.0
<b>4-9.9</b>	5,712	375	6.6%	328	87.5%	77	7	25.6%	1.35%	0.12%	3.9
<b>10-14.9</b>	1,532	145	9.5%	124	85.5%	37	3	32.3%	2.42%	0.20%	3.1
<b>15-19.9</b>	865	98	11.3%	82	83.7%	21	5	31.7%	2.43%	0.58%	3.2
<b>≥ 20</b>	293	78	26.6%	70	89.7%	28	4	45.7%	9.56%	1.37%	2.2
<b>Total</b>	47,459	1,871	3.9%	1,585	84.7%	291	47	21.3%	0.61%	0.10%	4.7

**Table 1c Association of cumulative f-Hb values over the initial 2 rounds and PR - PPV for AN and NNScope – DR of AN and CRC**  
**Men aged 50-59**

sum f-Hb µg/gr FIT1+FIT2	Examined	FIT +		Colonoscopy		Advanced adenoma	CRC	PPV AN	DR advanced adenoma	DR CRC	NNScope to detect 1 AN
		N	%	N	%						
<b>0</b>	18,040	427	2.4%	376	88.1%	55	7	16.5%	0.30%	0.04%	6.1
<b>0.1-3.9</b>	10,478	344	3.3%	308	89.5%	57	4	19.8%	0.54%	0.04%	5.1
<b>4-9.9</b>	3,905	220	5.6%	194	88.2%	63	3	34.0%	1.61%	0.08%	2.9
<b>10-14.9</b>	1,088	98	9.0%	91	92.9%	40	4	48.4%	3.68%	0.37%	2.1
<b>15-19.9</b>	572	73	12.8%	63	86.3%	33	2	55.6%	5.77%	0.35%	1.8
<b>≥ 20</b>	254	62	24.4%	55	88.7%	25	4	52.7%	9.84%	1.57%	1.9
<b>Total</b>	34,337	1,224	3.6%	1,087	88.8%	273	24	27.3%	0.80%	0.07%	3.7

**Table 1d Association of cumulative f-Hb values over the initial 2 rounds and PR - PPV for AN and NNScope – DR of AN and CRC**  
**Men aged 60-69**

sum f-Hb µg/gr FIT1+FIT2	Examined	FIT +		Colonoscopy		Advanced adenoma	CRC	PPV AN	DR advanced adenoma	DR CRC	NNScope to detect 1 AN
		N	%	N	%						
<b>0</b>	18,265	600	3.3%	514	85.7%	103	11	22.2%	0.56%	0.06%	4.5
<b>0.1-3.9</b>	14,335	630	4.4%	531	84.3%	104	23	23.9%	0.73%	0.16%	4.2
<b>4-9.9</b>	5,466	455	8.3%	389	85.5%	115	15	33.4%	2.10%	0.27%	3.0
<b>10-14.9</b>	1,619	191	11.8%	171	89.5%	57	15	42.1%	3.52%	0.93%	2.4
<b>15-19.9</b>	962	150	15.6%	130	86.7%	55	7	47.7%	5.72%	0.73%	2.1
<b>≥ 20</b>	429	120	28.0%	110	91.7%	46	11	51.8%	10.72%	2.56%	1.9
<b>Total</b>	41,076	2,146	5.2%	1,845	86.0%	480	82	30.5%	1.17%	0.20%	3.3

Table 2 **Association of cumulative f-Hb values over the initial 3 rounds and PR - PPV for AN and NNScope – DR of AN and CRC**  
**Men + women - age 50-69**

sum f-Hb µg/gr FIT1+FIT2+FIT3	Examined	FIT +		Colonoscopy		Advanced adenoma	CRC	PPV AN	DR advanced adenoma	DR CRC	NNScope to detect 1 AN
		N	%	N	%						
<b>0</b>	31562	712	2.3%	652	91.6%	108	12	18.4%	0.3%	0.04%	5.43
<b>0.1-3.9</b>	28996	862	3.0%	732	84.9%	114	20	18.3%	0.4%	0.07%	5.46
<b>4-9.9</b>	13164	687	5.2%	604	87.9%	168	15	30.3%	1.3%	0.11%	3.30
<b>10-14.9</b>	3683	299	8.1%	271	90.6%	77	15	33.9%	2.1%	0.41%	2.95
<b>15-19.9</b>	2011	210	10.4%	186	88.6%	68	6	39.8%	3.4%	0.30%	2.51
<b>≥ 20</b>	1197	218	18.2%	195	89.4%	91	12	52.8%	7.6%	1.00%	1.89
<b>Total</b>	80613	2988	3.7%	2640	88.4%	626	80	26.7%	0.8%	0.10%	3.74

**Table 3.** Predictors of the DR of advanced neoplasia at the fourth FIT

		Advanced neoplasia*		Advanced neoplasia **	
		OR	95%CI	OR	95%CI
<b>GENDER</b>	<b>Women</b>	<b>1</b>		<b>1</b>	
	<b>Men</b>	<b>1.94</b>	1.66-2.26	<b>1.86</b>	1.59-2.17
<b>AGE (years)</b>	<b>50-59</b>	<b>0.87</b>	0.73-1.03	<b>0.90</b>	0.76-1.07
	<b>60-69</b>	<b>1</b>		<b>1</b>	
<b>INTERVAL SINCE LAST FIT (months)</b>	<b>18-22</b>	<b>0.95</b>	0.67-1.35	<b>0.92</b>	0.65-1.32
	<b>23-27</b>	<b>1</b>		<b>1</b>	
	<b>28-32</b>	<b>1.33</b>	1.06-1.66	<b>1.33</b>	1.06-1.67
	<b>33-36</b>	<b>1.64</b>	0.98-2.74	<b>1.72</b>	1.02-2.88
	<b>37-60</b>	<b>1.24</b>	0.63-2.41	<b>1.17</b>	0.60-2.30
<b>Cumulative f-Hb level at previous 2 FIT tests * (FIT1+FIT2) µg Hb /gr faeces</b>	<b>0</b>	<b>1</b>			
	<b>0.1-3.9</b>	<b>1.33</b>	1.09-1.62		
	<b>4-9.9</b>	<b>2.34</b>	1.89-2.89		
	<b>10-14.9</b>	<b>4.21</b>	3.18-5.57		
	<b>15-19.9</b>	<b>7.64</b>	5.69-10.26		
	<b>≥ 20</b>	<b>12.68</b>	8.56-18.56		
<b>Cumulative f-Hb level at previous 3 FIT tests ** (FIT1+FIT2+ FIT3) µg Hb /gr faeces</b>	<b>0</b>			<b>1</b>	
	<b>0.1-3.9</b>			<b>1.32</b>	1.03-1.67
	<b>4-9.9</b>			<b>3.71</b>	2.94-4.67
	<b>10-14.9</b>			<b>6.62</b>	5.03-8.71
	<b>15-19.9</b>			<b>9.81</b>	7.31-13.17
	<b>≥ 20</b>			<b>23.26</b>	17.71-30.53

**Table 4.** Cumulative DR of advanced neoplasia (advanced adenoma or CRC)  
by cumulative f-Hb concentration over 2 consecutive FITs and time since the second FIT

	Men 50-59		Women 50-59		All screenees - 50-59	
$\mu\text{g Hb /gr faeces}$ Months	0 % (95% CI)	$\geq 20$ % (95% CI)	0 % (95% CI)	$\geq 20$ % (95% CI)	0 % (95% CI)	$\geq 20$ % (95% CI)
24	0.07 0.04-0.12	1.05 0.40-1.78	0.04 0.02-0.08	1.26 0.41-3.86	0.05 0.04-0.08	1.13 0.54-2.36
36	0.58 0.48-0.71	15.24 11.82-19.54	0.35 0.28-0.44	14.51 10.35-20.14	0.45 0.39-0.53	14.93 12.20-18.22
48	0.69 0.57-0.83	17.87 14.10-22.50	0.40 0.32-0.50	14.51 10.35-20.14	0.53 0.46-0.61	16.59 13.67-20.06
54	1.91 1.62-2.26	32.75 25.44-41.52	1.12 0.92-1.37	16.69 11.86-23.20	1.48 1.30-1.68	26.85 21.78-32.83

	Men 60-69		Women 60-69		All screenees - 60-69	
$\mu\text{g Hb /gr faeces}$ Months	0 % (95% CI)	$\geq 20$ % (95% CI)	0 % (95% CI)	$\geq 20$ % (95% CI)	0 % (95% CI)	$\geq 20$ % (95% CI)
24	0.12 0.08-0.19	1.86 0.78-4.42	0.02 (0.01-0.06)	1.04 0.26-4.10	0.07 0.05-0.10	1.53 0.73-3.18
36	0.60 0.47-0.66	14.71 10.21-20.94	0.25 0.18-0.35	11.32 6.72-18.73	0.41 0.34-0.50	13.31 9.88-17.31
48	0.75 0.60-0.94	17.00 11.85-24.08	0.37 0.27-0.50	12.82 7.71-20.92	0.54 0.45-0.65	15.28 11.40-20.34
54	1.93 1.47-2.54	24.04 16.51-34.21	0.77 0.59-1.02	20.16 12.18-32.31	1.29 1.05-1.58	26.53 16.06-30.07

**Table 5 Association of cumulative f-Hb values over the initial 2 rounds and PR - PPV for AN and NNScope – DR of AN and CRC**  
**Men + women - age 50-69**  
 (subjects examined in Reggio Emilia after Mach 2010 are excluded)

sum f-Hb µg/gr FIT1+FIT2	Examined	FIT +		Colonoscopy		Advanced adenoma	CRC	PPV AN	DR advanced adenoma	DR CRC	NNScope to detect 1 AN
		N	%	N	%						
<b>0</b>	69,517	1,767	2.5%	1,517	85.9%	216	30	16.2%	0.3%	0.04%	6.2
<b>0.1-3.9</b>	51,931	1,789	3.4%	1,523	85.1%	272	51	21.2%	0.5%	0.10%	4.7
<b>4-9.9</b>	18,386	1,163	6.3%	1,021	87.8%	277	33	30.4%	1.5%	0.18%	3.3
<b>10-14.9</b>	4,909	472	9.6%	422	89.4%	145	23	39.8%	3.0%	0.47%	2.5
<b>15-19.9</b>	2,673	333	12.5%	285	85.6%	108	15	43.2%	4.0%	0.56%	2.3
<b>≥ 20</b>	1,036	262	25.3%	233	88.9%	99	20	51.1%	9.6%	1.93%	2.0
<b>Total</b>	148,452	5,786	3.9%	5,001	86.4%	1117	172	25.8%	0.8%	0.12%	3.9

