

Report Supplementary Material 10

Table 7. Faecal immunochemical test sensitivity, specificity, PPV, and NPV for AAs at various thresholds in participants who completed 1-3 tests and had at least one colonic examination performed, by age at invite

Age at invite (years)	FIT threshold (µg/g)	Test	Completed FIT ^a	Tested +ve		AAs ^b		Sensitivity (95% CI)	Specificity (95% CI)	PPV (95% CI)	NPV (95% CI)
						Total cases	FIT +ve cases				
≤ 65	40	1 st	n 2532	n 136	% 5.4	n 202	n 36	% 17.8 (12.8 to 23.8)	% 95.7 (94.8 to 96.5)	% 26.5 (19.3 to 34.7)	% 93.1 (92.0 to 94.1)
		2 nd ^c	2376	107	4.5	166	14	8.4 (4.7 to 13.7)	95.8 (94.9 to 96.6)	13.1 (7.3 to 21.0)	93.3 (92.2 to 94.3)
		3 rd ^d	2173	84	3.9	144	15	10.4 (5.9 to 16.6)	96.6 (95.7 to 97.3)	17.9 (10.4 to 27.7)	93.8 (92.7 to 94.8)
		Cumulative 2 tests ^e	2512	243	9.7	202	50	24.8 (19.0 to 31.3)	91.6 (90.4 to 92.7)	20.6 (15.7 to 26.2)	93.3 (92.2 to 94.3)
		test analysis 3 tests ^f	2416	327	13.5	194	65	33.5 (26.9 to 40.6)	88.2 (86.8 to 89.5)	19.9 (15.7 to 24.6)	93.8 (92.7 to 94.8)
		Programme 2 tests ^g	2532	243	9.6	202	50	24.8 (19.0 to 31.3)	91.7 (90.5 to 92.8)	20.6 (15.7 to 26.2)	93.4 (92.3 to 94.3)
	analysis 3 tests ^h	2532	327	12.9	202	65	32.2 (25.8 to 39.1)	88.8 (87.4 to 90.0)	19.9 (15.7 to 24.6)	93.8 (92.7 to 94.8)	
	30	1 st	2532	160	6.3	202	40	19.8 (14.5 to 26.0)	94.8 (93.9 to 95.7)	25.0 (18.5 to 32.4)	93.2 (92.1 to 94.2)
		2 nd ^c	2353	119	5.1	162	16	9.9 (5.8 to 15.5)	95.3 (94.3 to 96.1)	13.4 (7.9 to 20.9)	93.5 (92.4 to 94.5)
		3 rd ^d	2139	105	4.9	138	20	14.5 (9.1 to 21.5)	95.8 (94.8 to 96.6)	19.0 (12.0 to 27.9)	94.2 (93.1 to 95.2)
		Cumulative 2 tests ^e	2513	279	11.1	202	56	27.7 (21.7 to 34.4)	90.4 (89.1 to 91.5)	20.1 (15.5 to 25.3)	93.5 (92.4 to 94.5)
		test analysis 3 tests ^f	2418	384	15.9	194	76	39.2 (32.3 to 46.4)	86.2 (84.6 to 87.6)	19.8 (15.9 to 24.1)	94.2 (93.1 to 95.2)
		Programme 2 tests ^g	2532	279	11.0	202	56	27.7 (21.7 to 34.4)	90.4 (89.2 to 91.6)	20.1 (15.5 to 25.3)	93.5 (92.4 to 94.5)
	analysis 3 tests ^h	2532	384	15.2	202	76	37.6 (30.9 to 44.7)	86.8 (85.3 to 88.1)	19.8 (15.9 to 24.1)	94.1 (93.1 to 95.1)	
	20	1 st	2532	206	8.1	202	49	24.3 (18.5 to 30.8)	93.3 (92.2 to 94.2)	23.8 (18.1 to 30.2)	93.4 (92.3 to 94.4)

		2nd c	2310	154	6.7	153	16	10.5 (6.1 to 16.4)	93.6 (92.5 to 94.6)	10.4 (6.1 to 16.3)	93.6 (92.5 to 94.6)	
		3rd d	2067	129	6.2	129	19	14.7 (9.1 to 22.0)	94.3 (93.2 to 95.3)	14.7 (9.1 to 22.0)	94.3 (93.2 to 95.3)	
		Cumulative test analysis	2 tests e	2516	360	14.3	202	65	32.2 (25.8 to 39.1)	87.3 (85.8 to 88.6)	18.1 (14.2 to 22.4)	93.6 (92.5 to 94.6)
			3 tests f	2427	489	20.1	194	84	43.3 (36.2 to 50.6)	81.9 (80.2 to 83.4)	17.2 (13.9 to 20.8)	94.3 (93.2 to 95.3)
		Programme analysis	2 tests g	2532	360	14.2	202	65	32.2 (25.8 to 39.1)	87.3 (85.9 to 88.7)	18.1 (14.2 to 22.4)	93.7 (92.6 to 94.7)
			3 tests h	2532	489	19.3	202	84	41.6 (34.7 to 48.7)	82.6 (81.0 to 84.1)	17.2 (13.9 to 20.8)	94.2 (93.1 to 95.2)
	10	1st	2532	321	12.7	202	66	32.7 (26.3 to 39.6)	89.1 (87.7 to 90.3)	20.6 (16.3 to 25.4)	93.8 (92.8 to 94.8)	
		2nd c	2197	212	9.6	136	20	14.7 (9.2 to 21.8)	90.7 (89.3 to 91.9)	9.4 (5.9 to 14.2)	94.2 (93.0 to 95.1)	
		3rd d	1904	177	9.3	110	17	15.5 (9.3 to 23.6)	91.1 (89.7 to 92.4)	9.6 (5.7 to 14.9)	94.6 (93.4 to 95.6)	
		Cumulative test analysis	2 tests e	2518	533	21.2	202	86	42.6 (35.7 to 49.7)	80.7 (79.0 to 82.3)	16.1 (13.1 to 19.5)	94.2 (93.0 to 95.1)
			3 tests f	2437	710	29.1	196	103	52.6 (45.3 to 59.7)	72.9 (71.0 to 74.7)	14.5 (12.0 to 17.3)	94.6 (93.4 to 95.6)
		Programme analysis	2 tests g	2532	533	21.1	202	86	42.6 (35.7 to 49.7)	80.8 (79.2 to 82.4)	16.1 (13.1 to 19.5)	94.2 (93.1 to 95.2)
			3 tests h	2532	710	28.0	202	103	51.0 (43.9 to 58.1)	73.9 (72.1 to 75.7)	14.5 (12.0 to 17.3)	94.6 (93.4 to 95.6)
> 65	40	1st	2667	190	7.1	241	42	17.4 (12.9 to 22.8)	93.9 (92.9 to 94.8)	22.1 (16.4 to 28.7)	92.0 (90.8 to 93.0)	
		2nd c	2461	126	5.1	197	24	12.2 (8.0 to 17.6)	95.5 (94.6 to 96.3)	19.0 (12.6 to 27.0)	92.6 (91.5 to 93.6)	
		3rd d	2256	98	4.3	164	21	12.8 (8.1 to 18.9)	96.3 (95.4 to 97.1)	21.4 (13.8 to 30.9)	93.4 (92.2 to 94.4)	
		Cumulative test analysis	2 tests e	2651	316	11.9	239	66	27.6 (22.0 to 33.7)	89.6 (88.3 to 90.8)	20.9 (16.5 to 25.8)	92.6 (91.5 to 93.6)
			3 tests f	2572	414	16.1	230	87	37.8 (31.5 to 44.4)	86.0 (84.6 to 87.4)	21.0 (17.2 to 25.3)	93.4 (92.2 to 94.4)
		Programme analysis	2 tests g	2667	316	11.8	241	66	27.4 (21.9 to 33.5)	89.7 (88.4 to 90.9)	20.9 (16.5 to 25.8)	92.6 (91.4 to 93.6)
			3 tests h	2667	414	15.5	241	87	36.1 (30.0 to 42.5)	86.5 (85.1 to 87.9)	21.0 (17.2 to 25.3)	93.2 (92.0 to 94.2)
	30	1st	2667	226	8.5	241	48	19.9 (15.1 to 25.5)	92.7 (91.6 to 93.7)	21.2 (16.1 to 27.2)	92.1 (91.0 to 93.1)	
		2nd c	2425	157	6.5	191	34	17.8 (12.7 to 24.0)	94.5 (93.5 to 95.4)	21.7 (15.5 to 28.9)	93.1 (92.0 to 94.1)	
		3rd d	2191	115	5.2	149	24	16.1 (10.6 to 23.0)	95.5 (94.6 to 96.4)	20.9 (13.9 to 29.4)	94.0 (92.9 to 95.0)	
		Cumulative test analysis	2 tests e	2651	383	14.4	239	82	34.3 (28.3 to 40.7)	87.5 (86.1 to 88.8)	21.4 (17.4 to 25.9)	93.1 (92.0 to 94.1)
			3 tests f	2574	498	19.3	231	106	45.9 (39.3 to 52.5)	83.3 (81.7 to 84.8)	21.3 (17.8 to 25.1)	94.0 (92.9 to 95.0)

	Programme analysis	2 tests^g	2667	383	14.4	241	82	34.0 (28.1 to 40.4)	87.6 (86.2 to 88.9)	21.4 (17.4 to 25.9)	93.0 (91.9 to 94.0)	
	analysis	3 tests^h	2667	498	18.7	241	106	44.0 (37.6 to 50.5)	83.8 (82.3 to 85.3)	21.3 (17.8 to 25.1)	93.8 (92.7 to 94.8)	
20		1st	2667	286	10.7	241	62	25.7 (20.3 to 31.7)	90.8 (89.5 to 91.9)	21.7 (17.0 to 26.9)	92.5 (91.3 to 93.5)	
		2nd^c	2367	177	7.5	177	38	21.5 (15.7 to 28.3)	93.7 (92.5 to 94.6)	21.5 (15.7 to 28.3)	93.7 (92.5 to 94.6)	
		3rd^d	2115	138	6.5	131	21	16.0 (10.2 to 23.5)	94.1 (93.0 to 95.1)	15.2 (9.7 to 22.3)	94.4 (93.3 to 95.4)	
		Cumulative test analysis	2 tests^e	2653	463	17.5	239	100	41.8 (35.5 to 48.4)	85.0 (83.5 to 86.4)	21.6 (17.9 to 25.6)	93.7 (92.5 to 94.6)
		test analysis	3 tests^f	2578	601	23.3	231	121	52.4 (45.7 to 59.0)	79.5 (77.9 to 81.2)	20.1 (17.0 to 23.6)	94.4 (93.3 to 95.4)
		Programme analysis	2 tests^g	2667	463	17.4	241	100	41.5 (35.2 to 48.0)	85.0 (83.6 to 86.4)	21.6 (17.9 to 25.6)	93.6 (92.5 to 94.6)
	analysis	3 tests^h	2667	601	22.5	241	121	50.2 (43.7 to 56.7)	80.2 (78.6 to 81.8)	20.1 (17.0 to 23.6)	94.2 (93.1 to 95.2)	
10		1st	2667	421	15.8	241	81	33.6 (27.7 to 40.0)	86.0 (84.5 to 87.3)	19.2 (15.6 to 23.3)	92.9 (91.7 to 93.9)	
		2nd^c	2232	229	10.3	158	45	28.5 (21.6 to 36.2)	91.1 (89.8 to 92.3)	19.7 (14.7 to 25.4)	94.4 (93.3 to 95.3)	
		3rd^d	1933	170	8.8	106	25	23.6 (15.9 to 32.8)	92.1 (90.7 to 93.3)	14.7 (9.7 to 20.9)	95.4 (94.3 to 96.3)	
		Cumulative test analysis	2 tests^e	2653	650	24.5	239	126	52.7 (46.2 to 59.2)	78.3 (76.6 to 79.9)	19.4 (16.4 to 22.6)	94.4 (93.3 to 95.3)
		test analysis	3 tests^f	2583	820	31.7	232	151	65.1 (58.6 to 71.2)	71.5 (69.7 to 73.4)	18.4 (15.8 to 21.2)	95.4 (94.3 to 96.3)
		Programme analysis	2 tests^g	2667	650	24.4	241	126	52.3 (45.8 to 58.7)	78.4 (76.7 to 80.0)	19.4 (16.4 to 22.6)	94.3 (93.2 to 95.3)
	analysis	3 tests^h	2667	820	30.7	241	151	62.7 (56.2 to 68.8)	72.4 (70.6 to 74.2)	18.4 (15.8 to 21.2)	95.1 (94.0 to 96.1)	

PPV, positive predictive value; NPV, negative predictive value; AA, advanced adenoma; FIT, faecal immunochemical test; +ve, positive; CI, confidence interval.

- Participants were not included as invited to any subsequent tests following a FIT positive test at the specified threshold.
- Advanced adenomas were defined as adenomas (namely an adenoma, serrated adenoma, or mixed hyperplastic/dysplastic adenoma) which satisfied at least one of the following criteria: (1) ≥ 10 mm in size or (2) tubulovillous or villous histology or (3) high grade dysplasia.
- The round at which a participant completed their second FIT; for a particular participant this could be round 2 or round 3.
- The round at which a participant completed their third FIT; equivalent to round 3 in participants who completed FIT at both prior rounds.
- Includes participants who completed at least two rounds of FIT or who were FIT positive at round 1; participants were classed as positive if FIT was positive at either of the first two rounds at which they completed FIT.
- Includes participants who completed all three rounds of FIT or who were FIT positive at any round; participants were classed as positive if FIT was positive at any of the three rounds.

- g. Includes participants who completed at least one round of FIT; participants were classed as positive if FIT was positive at either of the first two rounds at which they completed FIT.
- h. Includes participants who completed at least one round of FIT; participants were classed as positive if FIT was positive at any of the three rounds.