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Version: Supplemental Material

## Article:

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https://doi.org/10.1158/1940-6207.capr-20-0620

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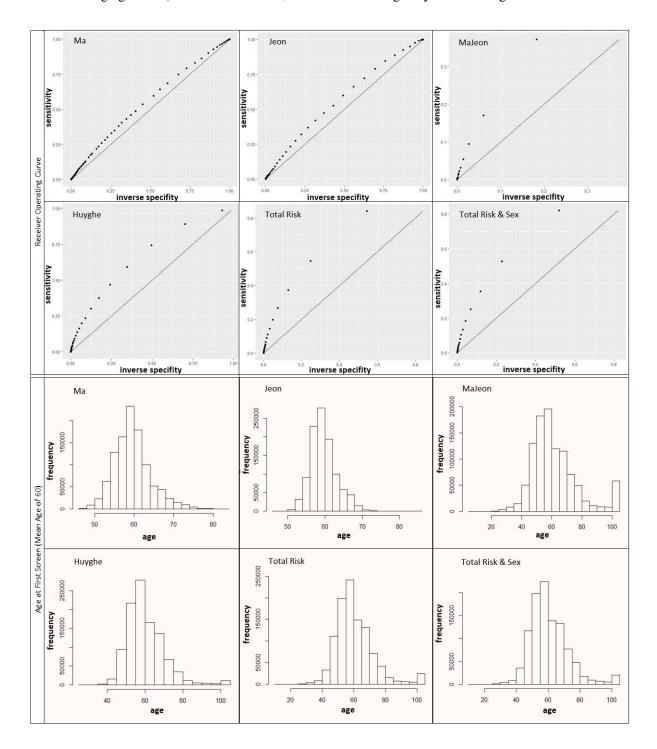
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## Takedown

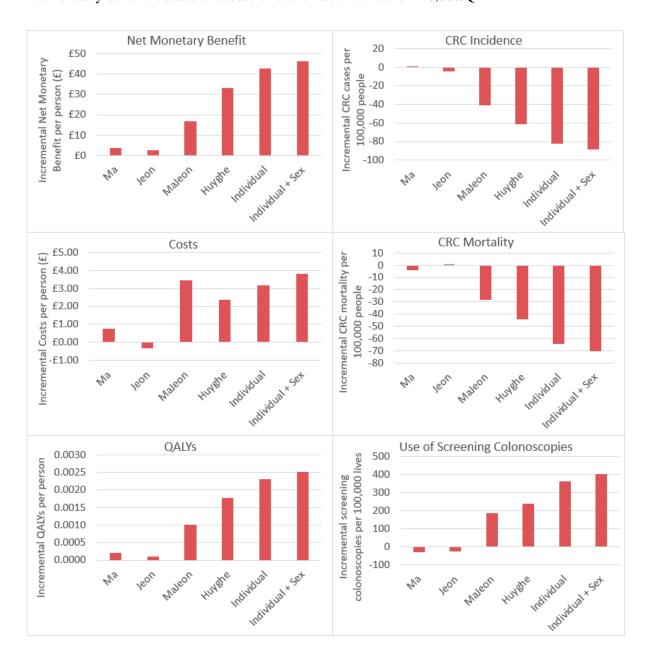
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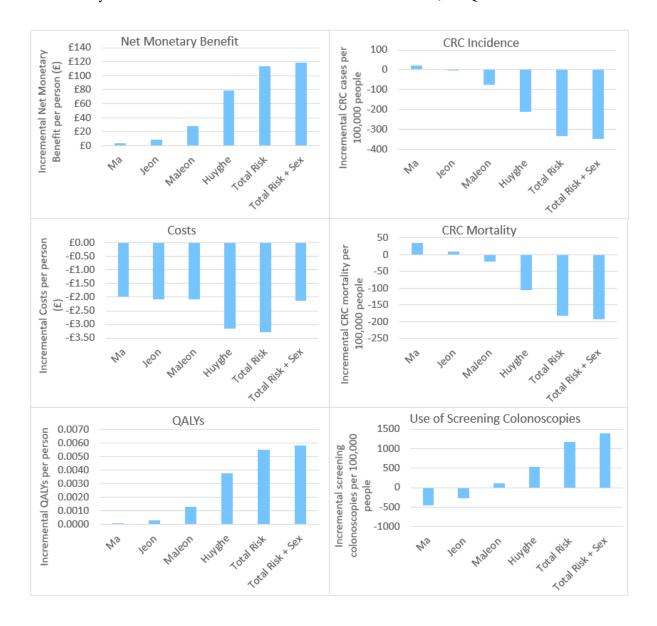
Supplementary Figure 1: Receiver Operating Curves and FIT starting age distribution (based on a mean starting age of 60) for each risk score, based on assessing 10-year risk at age 40.



Supplementary Figure 2: Incremental outcomes for risk-stratification (based on a mean screening start age of 50), compared to screening start age of 50 for the entire population using FIT120. Incremental net monetary benefit is based on a cost-effectiveness threshold of £20,000/QALY.



Supplementary Figure 3: Incremental outcomes for risk-stratification (based on a mean screening start age of 60), compared to screening start age of 60 for the entire population using FIT20. Incremental net monetary benefit is based on a cost-effectiveness threshold of £20,000/QALY.



Supplementary Table 1: Values used in the model for FIT sensitivity and specificity (first round of screening).

FIT Threshold	Age	Sex	Sensitivity to CRC	Sensitivity to High Risk Adenoma	Sensitivity to Low Risk Adenoma	Specificity
FIT120	60	Male	0.354	0.104	0.020	0.996
		Female	0.156	0.085	0.011	0.997
	50	Male	0.356	0.080	0.014	0.998
		Female	0.144	0.074	0.008	0.998
FIT20	60	Male	0.410	0.249	0.080	0.976
		Female	0.211	0.229	0.049	0.979
FIT Faecal In	nmunocher	nical Test; CRC Col	orectal Cancer			

Supplementary Table 2: Full set of incremental outcomes for risk-stratification based on a mean FIT120 screening start age of 50, compared to screening everyone with FIT120 at age 50.

Risk Score		Ma	Jeon	MaJeon	Huyghe	Total Risk	Total Risk
							+ Sex
Total Costs per	М	£0.78	-£0.34	£3.46	£2.35	£3.15	£3.82
person	L	-£19	-£21	-£16	-£20	-£20	-£20
	U	£20	£19	£26	£26	£27	£27
<b>CRC Treatment</b>	М	£0.54	-£0.49	-£1.23	-£1.87	-£2.51	-£2.38
Costs per person	L	-£20	-£23	-£23	-£26	-£27	-£28
	U	£20	£20	£22	£21	£23	£23
Screen &	М	£0.23	£0.15	£4.69	£4.22	£5.67	£6.20
Surveillance Costs	L	-£5	-£5	-£1	-£1	£0	£0
per person	U	£5	£5	£10	£10	£12	£13
QALYs per person	Μ	0.0002	0.0001	0.0010	0.0018	0.0023	0.0025
	L	-0.0048	-0.0043	-0.0044	-0.0036	-0.0038	-0.0035
	U	0.0050	0.0045	0.0059	0.0075	0.0087	0.0090
NMB per person	Μ	£3.53	£2.48	£16.91	£33.15	£42.79	£46.32
(£20,000/QALY	L	-£91	-£86	-£88	-£75	-£75	-£68
Threshold)	U	£96	£90	£112	£140	£171	£180
NMB per person	Μ	£5.68	£3.55	£27.10	£50.90	£65.76	£71.38
(£30,000/QALY	L	-£139	-£129	-£133	-£118	-£110	-£109
Threshold)	U	£149	£136	£172	£209	£257	£269
MJC per person	М	£4.98	£3.50	£23.86	£46.76	£60.36	£65.33
(£20,000/QALY	L	-£129	-£121	-£124	-£106	-£106	-£96
Threshold)	U	£136	£127	£158	£198	£241	£253
MJC per person	М	£8.01	£5.00	£38.23	£71.80	£92.76	£100.69
(£30,000/QALY	L	-£196	-£182	-£187	-£167	-£155	-£153
Threshold)	U	£210	£192	£243	£295	£363	£380
Prob. cost-effective		53%	53%	64%	73%	75%	78%
(£20,000/QALY)							
Prob. cost-effective		53%	52%	66%	74%	75%	78%
(£30,000/QALY)							
CRC Incidence per	М	1	-5	-41	-61	-83	-89
100,000 people	L	-1106	-1098	-1201	-1242	-1324	-1363
	U	1092	1050	1082	1121	1157	1165
CRC Mortality per	М	-4	0	-28	-44	-64	-70
100,000 people	L	-483	-462	-518	-560	-616	-611
	U	460	458	450	456	471	460
FIT screening invites	М	-0.035	-0.031	0.572	0.044	0.012	0.035
per person	L	-0.058	-0.055	0.546	0.006	-0.091	-0.072
	U	-0.012	-0.008	0.596	0.082	0.093	0.125
Screening	М	-28	-26	188	237	360	403
colonoscopies per	L	-785	-782	-485	-517	-458	-362
100,000 people	U	723	728	916	1019	1206	1272

Supplementary Table 3: Full set of incremental outcomes for risk-stratification based on a mean FIT20 screening start age of 60, compared to screening everyone with FIT20 at age 60.

Total Costs per person         N	Risk
person         L         -£23         -£20         -£23         -£26         -£25           CRC Treatment         M         -£2.78         -£2.67         -£7.46         -£14.36         -£20.08         -£2           Costs per person         L         -£24         -£22         -£30         -£40         -£44           Screen &         M         £0.82         £0.60         £5.37         £11.22         £16.79         £1           Surveillance Costs         L         -£5         -£5         -£5         £0         £5         £9           per person         W         £6         £6         £12         £18         £25           QALYs per person         M         0.0001         0.0003         0.0013         0.0038         0.0055         0.0           L         -0.0043         -0.0037         -0.0029         -0.0007         0.0004         0.0         0.0001         0.0001         0.0057         0.0091         0.0113         0.0           NMB per person         M         £3.77         £8.36         £28.10         £79.03         £113.32         £11         £11         £11         £11         £11         £16.93         £11         £25         £24	2.13
CRC Treatment         M         -£2.78         -£2.67         -£7.46         -£14.36         -£20.08         -£2           Costs per person         L         -£24         -£22         -£30         -£40         -£44           Screen &         M         £0.82         £0.60         £5.37         £11.22         £16.79         £1           Surveillance Costs         L         -£5         -£5         £0         £5         £9         £1           Per person         W         £0.0001         0.0003         0.0013         0.0038         0.0055         £25           QALYs per person         M         0.0001         0.0003         0.0013         0.0038         0.0055         £25           QALYs per person         M         £3.77         £8.36         £28.10         £79.03         £113.32         £11           Quit Double Person         M         £3.77         £8.36         £28.10         £79.03         £113.32         £11           Hombil Per person         M         £4.68         £117         £181         £225           NMB per person         M         £4.68         £11.50         £41.11         £116.97         £168.33         £17           Kg30,000/QA	-£26
Costs per person         L         -£24 bit         -£22 bit         -£30 bit         -£40 bit         -£44 bit         -£45 bit         -£25 bit         -£50 bit	£21
U	20.48
Screen &         M         £0.82         £0.60         £5.37         £11.22         £16.79         £1           Surveillance Costs per person         L         -£5         -£5         £6         £12         £18         £25           QALYs per person         M         0.0001         0.0003         0.0013         0.0038         0.0055         0.0           L         -0.0043         -0.0037         -0.0029         -0.0007         0.0004         0.0           NMB per person         M         £3.77         £8.36         £28.10         £79.03         £113.32         £11           ftreshold)         U         £86         £86         £117         £181         £225           NMB per person         M         £4.68         £11.50         £41.11         £116.97         £168.33         £17           ftreshold)         U         £127         £120         £109         £87         £17         £166           MJC per person         M         £5.32         £11.79         £39.64         £111.48         £159.85         £16           f£20,000/QALY         L         £110         £103         £81         £20         £16           fhreshold)         U	-£47
Surveillance Costs per person         L brack for the person         L brack for the person         L brack for the person         E feature for the person         E featu	£5
Der person         U         £6         £6         £12         £18         £25           QALYs per person         M         0.0001         0.0003         0.0013         0.0038         0.0055         0.00           L         -0.0043         -0.0037         -0.0029         -0.0007         0.0004         0.00           NMB per person         M         £3.77         £8.36         £28.10         £79.03         £113.32         £11           (£20,000/QALY         L         -£78         -£73         -£57         -£14         £11           Threshold)         U         £86         £86         £117         £181         £225           NMB per person         M         £4.68         £11.50         £41.11         £116.97         £168.33         £17           Hreshold)         U         £120         -£109         -£87         -£17         £16           MJC per person         M         £5.32         £11.79         £39.64         £111.48         £159.85         £16           (£20,000/QALY         L         -£110         -£103         -£81         -£20         £16           Threshold)         U         £121         £165         £256         £3	L8.36
QALYs per person         M         0.0001         0.0003         0.0013         0.0038         0.0055         0.0           L         -0.0043         -0.0037         -0.0029         -0.0007         0.0004         0.0           NMB per person         M         £3.77         £8.36         £28.10         £79.03         £113.32         £11           (£20,000/QALY         L         -£78         -£73         -£57         -£14         £11           Threshold)         U         £86         £86         £117         £181         £225           NMB per person         M         £4.68         £11.50         £41.11         £116.97         £168.33         £17           £30,000/QALY         L         -£120         -£109         -£87         -£17         £166           Threshold)         U         £127         £126         £172         £271         £336           MJC per person         M         £5.32         £11.79         £39.64         £111.48         £159.85         £16           £20,000/QALY         L         -£110         -£103         -£81         -£20         £16           Threshold)         U         £179         £177         £243	£11
L   -0.0043   -0.0037   -0.0029   -0.0007   0.0004   0.0004   0.0041   0.0057   0.0091   0.0113   0.0091   0.0113   0.0113   0.0091   0.0113   0.0091   0.0113   0.0113   0.0091   0.0113   0.0113   0.0091   0.0113   0.0113   0.0091   0.0113   0.0113   0.0091   0.0113   0.0113   0.0091   0.0113   0.0113   0.0001   0.0113   0.0113   0.0001   0.0113   0.0113   0.0113   0.0001   0.	£28
NMB per person         W         £3.77         £8.36         £28.10         £79.03         £113.32         £11           (£20,000/QALY         L         -£78         -£73         -£57         -£14         £11           Threshold)         U         £86         £86         £117         £181         £225           NMB per person         M         £4.68         £11.50         £41.11         £116.97         £168.33         £17           £30,000/QALY         L         -£120         -£109         -£87         -£17         £16           Threshold)         U         £127         £126         £172         £271         £336           MJC per person         M         £5.32         £11.79         £39.64         £111.48         £159.85         £16           £20,000/QALY         L         -£110         -£103         -£81         -£20         £16           Threshold)         U         £121         £121         £165         £256         £317           MJC per person         M         £6.59         £16.22         £58.00         £165.00         £237.45         £24           (£30,000/QALY)         L         -£169         -£154         -£123	0058
NMB per person	.0007
(£20,000/QALY         L         -£78         -£73         -£57         -£14         £11           Threshold)         U         £86         £86         £117         £181         £225           NMB per person         M         £4.68         £11.50         £41.11         £116.97         £168.33         £17           (£30,000/QALY         L         -£120         -£109         -£87         -£17         £16         £17           Threshold)         U         £127         £126         £172         £271         £336           MJC per person         M         £5.32         £11.79         £39.64         £111.48         £159.85         £16           (£20,000/QALY         L         -£110         -£103         -£81         -£20         £16           Threshold)         U         £121         £125         £256         £317           MJC per person         M         £6.59         £16.22         £58.00         £165.00         £237.45         £24           (£30,000/QALY         L         -£169         -£154         -£123         -£24         £22           Threshold)         U         £179         £177         £243         £382         £474 <td>.0118</td>	.0118
Threshold)         U         £86         £86         £117         £181         £225           NMB per person         M         £4.68         £11.50         £41.11         £116.97         £168.33         £17           (£30,000/QALY         L         -£120         -£109         -£87         -£17         £16           Threshold)         U         £127         £126         £172         £271         £336           MJC per person         M         £5.32         £11.79         £39.64         £111.48         £159.85         £16           (£20,000/QALY         L         -£110         -£103         -£81         -£20         £16           Threshold)         U         £121         £165         £256         £317           MJC per person         M         £6.59         £16.22         £58.00         £165.00         £237.45         £24           (£30,000/QALY         L         -£169         -£154         -£123         -£24         £22           Threshold)         U         £179         £177         £243         £382         £474           Prob. cost-effective         53%         57%         74%         94%         99%           (£30	L8.45
NMB per person         M         £4.68         £11.50         £41.11         £116.97         £168.33         £17           (£30,000/QALY         L         -£120         -£109         -£87         -£17         £16         £17           Threshold)         U         £127         £126         £172         £271         £336         £16           MJC per person         M         £5.32         £11.79         £39.64         £111.48         £159.85         £16           (£20,000/QALY         L         -£110         -£103         -£81         -£20         £16           Threshold)         U         £121         £121         £165         £256         £317           MJC per person         M         £6.59         £16.22         £58.00         £165.00         £237.45         £24           (£30,000/QALY         L         -£169         -£154         -£123         -£24         £22           Threshold)         U         £179         £177         £243         £382         £474           Prob. cost-effective         54%         57%         74%         95%         99%           (£30,000/QALY)         E3%         57%         74%         94% <t< th=""><th>£20</th></t<>	£20
(£30,000/QALY         L         -£120         -£109         -£87         -£17         £16           Threshold)         U         £127         £126         £172         £271         £336           MJC per person         M         £5.32         £11.79         £39.64         £111.48         £159.85         £16           (£20,000/QALY         L         -£110         -£103         -£81         -£20         £16           Threshold)         U         £121         £165         £256         £317           MJC per person         M         £6.59         £16.22         £58.00         £165.00         £237.45         £24           (£30,000/QALY         L         -£169         -£154         -£123         -£24         £22           Threshold)         U         £179         £177         £243         £382         £474           Prob. cost-effective         54%         57%         74%         95%         99%           (£20,000/QALY)         E         53%         57%         74%         94%         99%           (£30,000/QALY)         E         -3         -75         -212         -335           100,000 people         L         -1147 <td>£233</td>	£233
Threshold)         U         £127         £126         £172         £271         £336           MJC per person         M         £5.32         £11.79         £39.64         £111.48         £159.85         £166           (£20,000/QALY         L         -£110         -£103         -£81         -£20         £16           Threshold)         U         £121         £165         £256         £317           MJC per person         M         £6.59         £16.22         £58.00         £165.00         £237.45         £24           (£30,000/QALY)         L         -£169         -£154         -£123         -£24         £22           Threshold)         U         £179         £177         £243         £382         £474           Prob. cost-effective         54%         57%         74%         95%         99%           (£20,000/QALY)         S         57%         74%         94%         99%           (£30,000/QALY)         S         57%         74%         94%         99%           (£30,000/QALY)         S         57%         74%         94%         99%           CRC Incidence per         M         20         -3         -75	76.60
MJC per person         M         £5.32         £11.79         £39.64         £111.48         £159.85         £166           (£20,000/QALY         L         -£110         -£103         -£81         -£20         £16         £16           Threshold)         U         £121         £121         £165         £256         £317           MJC per person         M         £6.59         £16.22         £58.00         £165.00         £237.45         £24           (£30,000/QALY         L         -£169         -£154         -£123         -£24         £22           Threshold)         U         £179         £177         £243         £382         £474           Prob. cost-effective         54%         57%         74%         95%         99%           (£30,000/QALY)         53%         57%         74%         94%         99%           (£30,000/QALY)         53%         57%         74%         94%         99%           CRC Incidence per         M         20         -3         -75         -212         -335           100,000 people         L         -1147         -1104         -1271         -1445         -1614         -1614           U <td>£30</td>	£30
(£20,000/QALY         L         -£110         -£103         -£81         -£20         £16           Threshold)         U         £121         £121         £165         £256         £317           MJC per person         M         £6.59         £16.22         £58.00         £165.00         £237.45         £24           (£30,000/QALY)         L         -£169         -£154         -£123         -£24         £22           Threshold)         U         £179         £177         £243         £382         £474           Prob. cost-effective         54%         57%         74%         95%         99%           (£30,000/QALY)         S3%         57%         74%         94%         99%           (£30,000/QALY)         CRC Incidence per         M         20         -3         -75         -212         -335           100,000 people         L         -1147         -1104         -1271         -1445         -1614         -1614           U         1210         1145         1090         984         923	£357
Threshold)         U         £121         £121         £165         £256         £317           MJC per person         M         £6.59         £16.22         £58.00         £165.00         £237.45         £24           (£30,000/QALY)         L         -£169         -£154         -£123         -£24         £22           Threshold)         U         £179         £177         £243         £382         £474           Prob. cost-effective         54%         57%         74%         95%         99%           (£30,000/QALY)         53%         57%         74%         94%         99%           (£30,000/QALY)         CRC Incidence per         M         20         -3         -75         -212         -335           100,000 people         L         -1147         -1104         -1271         -1445         -1614         -1614           U         1210         1145         1090         984         923         -1614	57.08
Threshold)         U         £121         £121         £165         £256         £317           MJC per person         M         £6.59         £16.22         £58.00         £165.00         £237.45         £24           (£30,000/QALY)         L         -£169         -£154         -£123         -£24         £22           Threshold)         U         £179         £177         £243         £382         £474           Prob. cost-effective         54%         57%         74%         95%         99%           (£30,000/QALY)         53%         57%         74%         94%         99%           (£30,000/QALY)         CRC Incidence per         M         20         -3         -75         -212         -335           100,000 people         L         -1147         -1104         -1271         -1445         -1614         -1614           U         1210         1145         1090         984         923         -1614	£28
(£30,000/QALY         L         -£169         -£154         -£123         -£24         £22           Threshold)         U         £179         £177         £243         £382         £474           Prob. cost-effective (£20,000/QALY)         54%         57%         74%         95%         99%           Prob. cost-effective (£30,000/QALY)         53%         57%         74%         94%         99%           CRC Incidence per Incide	£329
(£30,000/QALY         L         -£169         -£154         -£123         -£24         £22           Threshold)         U         £179         £177         £243         £382         £474           Prob. cost-effective (£20,000/QALY)         54%         57%         74%         95%         99%           Prob. cost-effective (£30,000/QALY)         53%         57%         74%         94%         99%           CRC Incidence per Incide	19.12
Threshold)         U         £179         £177         £243         £382         £474           Prob. cost-effective (£20,000/QALY)         54%         57%         74%         95%         99%           Prob. cost-effective (£30,000/QALY)         53%         57%         74%         94%         99%           CRC Incidence per Incid	£43
Prob. cost-effective (£20,000/QALY)         54%         57%         74%         95%         99%           Prob. cost-effective (£30,000/QALY)         53%         57%         74%         94%         99%           CRC Incidence per 100,000 people         M         20         -3         -75         -212         -335           100,000 people         L         -1147         -1104         -1271         -1445         -1614           U         1210         1145         1090         984         923	£503
(£20,000/QALY)         53%         57%         74%         94%         99%           (£30,000/QALY)         CRC Incidence per         M         20         -3         -75         -212         -335           100,000 people         L         -1147         -1104         -1271         -1445         -1614         -1614           U         1210         1145         1090         984         923	99%
(£30,000/QALY)         V         20         -3         -75         -212         -335           100,000 people         L         -1147         -1104         -1271         -1445         -1614         -1614           U         1210         1145         1090         984         923	
CRC Incidence per 100,000 people         M         20         -3         -75         -212         -335           100,000 people         L         -1147         -1104         -1271         -1445         -1614         -1614           U         1210         1145         1090         984         923	98%
100,000 people     L     -1147     -1104     -1271     -1445     -1614     -       U     1210     1145     1090     984     923	
U 1210 1145 1090 984 923	-347
U 1210 1145 1090 984 923	-1605
CRC Mortality per         M         34         10         -21         -106         -182	886
	-193
<b>100,000</b> people   L   -480   -469   -536   -622   -709	-733
U 582 524 500 420 351	328
<b>FIT screening invites</b> M 0.016 -0.024 0.253 0.020 0.027 0	0.049
	0.018
	0.112
Screening         M         -457         -274         119         526         1166	1397
colonoscopies per   L   -1536   -1339   -1006   -762   -107	137
	2722

Supplementary Table 4: Full set of incremental outcomes for a scenario in which screening uptake is reduced by 25%. Risk-stratification based on a mean FIT120 screening start age of 60 is compared to screening everyone with FIT120 at age 60.

Risk Score		Ма	Jeon	MaJeon	Huyghe	Total Risk	Total Risk + Sex
Total Costs per person	М	-£1.97	-£1.82	-£1.24	-£0.03	£2.00	£2.52
	L	-£17	-£17	-£16	-£16	-£16	-£15
	U	£13	£13	£14	£16	£20	£22
<b>CRC Treatment Costs</b>	М	-£2.11	-£1.58	-£2.44	-£4.91	-£5.38	-£5.69
per person	L	-£18	-£17	-£18	-£22	-£24	-£25
	U	£14	£14	£13	£12	£13	£14
Screen & Surveillance	М	£0.14	-£0.24	£1.19	£4.88	£7.38	£8.21
Costs per person	L	-£3	-£4	-£2	£1	£3	£4
	U	£4	£3	£5	£9	£12	£14
QALYs per person	М	0.0000	0.0001	0.0004	0.0019	0.0028	0.0031
	L	-0.0033	-0.0031	-0.0030	-0.0017	-0.0011	-0.0008
	U	0.0033	0.0033	0.0038	0.0060	0.0077	0.0078
NMB per person	М	£1.33	£3.80	£9.74	£37.75	£54.60	£59.20
(£20,000/QALY	L	-£61	-£55	-£56	-£31	-£21	-£14
Threshold)	U	£68	£68	£77	£119	£146	£150
NMB per person	М	£1.01	£4.78	£13.98	£56.61	£82.90	£90.06
(£30,000/QALY	L	-£91	-£86	-£82	-£50	-£31	-£20
Threshold)	U	£101	£102	£115	£179	£224	£232
MJC per person	М	£1.87	£5.36	£13.73	£53.25	£77.02	£83.51
(£20,000/QALY	L	-£86	-£77	-£79	-£43	-£29	-£19
Threshold)	U	£95	£96	£109	£168	£206	£211
MJC per person	М	£1.42	£6.75	£19.72	£79.85	£116.94	£127.04
(£30,000/QALY	L	-£128	-£122	-£116	-£70	-£43	-£28
Threshold)	U	£142	£144	£162	£252	£315	£327
Prob. cost-effective (£20,000/QALY)		50%	54%	61%	86%	93%	93%
Prob. cost-effective		50%	54%	61%	87%	93%	93%
(£30,000/QALY)		30%				93/6	93%
CRC Incidence per	М	6	3	-13	-102	-147	-163
100,000 people	L	-978	-932	-1010	-1121	-1236	-1228
	U	995	971	979	895	909	877
CRC Mortality per	М	30	21	12	-56	-102	-115
100,000 people	L	-405	-394	-411	-498	-553	-579
	U	458	426	438	384	329	344
FIT screening invites	М	-0.176	-0.221	-0.160	-0.139	-0.115	-0.081
per person	L	-0.200	-0.239	-0.186	-0.173	-0.177	-0.146
	U	-0.154	-0.200	-0.132	-0.103	-0.053	-0.020
Screening	М	-229	-200	-134	228	489	601
colonoscopies per	L	-807	-779	-725	-412	-187	-55
100,000 people	U	365	357	473	933	1161	1289

Supplementary Table 5: Incremental cost-effectiveness outcomes for risk-stratification based on a mean FIT120 screening start age of 60, compared to screening everyone with FIT120 at age 60, using a discount rate of 1.5%. Note that clinical and resource use outcomes are not discounted so are identical to those shown in Table 2 of the main results.

Risk Score		Ма	Jeon	MaJeon	Huyghe	Total Risk	Total Risk
							+ Sex
Total Costs per	M	-£1.42	-£1.24	-£0.68	£1.24	£3.00	£3.64
person	L	-£11	-£11	-£10	-£9	-£9	-£8
	U	£8	£8	£9	£12	£15	£16
CRC Treatment	M	-£1.79	-£1.27	-£2.01	-£3.26	-£3.73	-£3.82
Costs per person	L	-£12	-£11	-£12	-£14	-£16	-£16
	U	£8	£9	£8	£8	£9	£8
Screen &	M	£0.37	£0.03	£1.33	£4.51	£6.72	£7.46
<b>Surveillance Costs</b>	L	-£2	-£2	-£1	£2	£3	£4
per person	U	£3	£2	£4	£8	£10	£12
QALYs per person	М	0.0000	0.0001	0.0003	0.0013	0.0020	0.0022
	L	-0.0018	-0.0016	-0.0015	-0.0007	-0.0002	-0.0003
	U	0.0019	0.0019	0.0023	0.0037	0.0048	0.0048
NMB per person	М	£1.01	£2.70	£7.00	£25.31	£36.62	£39.69
(£20,000/QALY	L	-£33	-£30	-£29	-£16	-£9	-£5
Threshold)	U	£39	£37	£49	£69	£91	£91
NMB per person	М	£0.81	£3.42	£10.16	£38.59	£56.43	£61.36
(£30,000/QALY	L	-£49	-£45	-£42	-£23	-£10	-£6
Threshold)	U	£58	£53	£71	£106	£140	£139
MJC per person	М	£1.65	£4.39	£11.41	£41.23	£59.66	£64.66
(£20,000/QALY	L	-£54	-£49	-£47	-£27	-£15	-£9
Threshold)	U	£63	£61	£79	£112	£148	£148
MJC per person	М	£1.32	£5.58	£16.56	£62.85	£91.93	£99.95
(£30,000/QALY	L	-£80	-£74	-£68	-£38	-£16	-£10
Threshold)	U	£94	£87	£115	£173	£229	£226
Prob cost-effective		50%	56%	63%	88%	95%	95%
(£20,000/QALY)							
Prob cost-effective		49%	56%	62%	88%	95%	95%
(£30,000/QALY)							

Supplementary Table 6: Incremental cost-effectiveness outcomes for risk-stratification based on a mean FIT120 screening start age of 60, compared to screening everyone with FIT120 at age 60, using a discount rate of 5%. Note that clinical and resource use outcomes are not discounted so are identical to those shown in Table 2 of the main results.

Total Costs per person  CRC Treatment Costs per person  Screen & Surveillance Costs	M L U M L U	-£8.19 -£45 £29 -£6.68 -£46 £33 -£1.51 -£11	-£6.54 -£45 £33 -£4.86 -£46 £35 -£1.68	-£8.18 -£47 £31 -£9.05 -£51 £33 £0.87	-£10.16 -£48 £29 -£18.98 -£59 £24 £8.82	-£10.08 -£54 £34 -£24.27 -£70 £22	+ Sex -£9.52 -£51 £33 -£25.77 -£68 £19
CRC Treatment Costs per person Screen &	L U M L U	-£45 £29 -£6.68 -£46 £33 -£1.51	-£45 £33 -£4.86 -£46 £35 -£1.68	-£47 £31 -£9.05 -£51 £33	-£48 £29 -£18.98 -£59 £24	-£54 £34 -£24.27 -£70 £22	-£51 £33 -£25.77 -£68
CRC Treatment Costs per person Screen &	U M L U M L	£29 -£6.68 -£46 £33 -£1.51	£33 -£4.86 -£46 £35 -£1.68	£31 -£9.05 -£51 £33	£29 -£18.98 -£59 £24	£34 -£24.27 -£70 £22	£33 -£25.77 -£68
Costs per person Screen &	M L U M L	-£6.68 -£46 £33 -£1.51	-£4.86 -£46 £35 -£1.68	-£9.05 -£51 £33	-£18.98 -£59 £24	-£24.27 -£70 £22	-£25.77 <i>-£68</i>
Costs per person Screen &	L U M L	-£46 £33 -£1.51	-£46 £35 -£1.68	-£51 £33	-£59 £24	-£70 £22	-£68
Screen &	U M L	£33 -£1.51	£35 -£1.68	£33	£24	£22	
	M L	-£1.51	-£1.68				£10
	L	1		£0.87	to 0.3		119
Surveillance Costs	_	-£11			LO.ŏZ	£14.19	£16.25
	U		-£11	-£9	-£1	£3	£5
per person		£8	£7	£10	£20	£27	£29
QALYs per person	М	-0.0007	0.0000	0.0009	0.0058	0.0087	0.0096
	L	-0.0098	-0.0094	-0.0091	-0.0048	-0.0026	-0.0022
	U	0.0097	0.0097	0.0114	0.0169	0.0212	0.0222
NMB per person	М	-£6.23	£6.07	£26.30	£125.93	£184.21	£202.11
(£20,000/QALY	L	-£190	-£179	-£166	-£84	-£47	-£22
Threshold)	U	£196	£199	£233	£345	£424	£452
NMB per person	Μ	-£13.44	£5.83	£35.36	£183.81	£271.27	£298.41
(£30,000/QALY	L	-£290	-£272	-£255	-£132	-£68	-£52
Threshold)	U	£296	£301	£344	£517	£639	£675
MJC per person	М	-£7.23	£7.04	£30.52	£146.14	£213.78	£234.56
(£20,000/QALY	L	-£220	-£208	-£193	-£97	-£55	-£26
Threshold)	U	£227	£231	£271	£400	£492	£525
MJC per person	М	-£15.59	£6.76	£41.04	£213.32	£314.82	£346.31
(£30,000/QALY	L	-£336	-£316	-£296	-£153	-£79	-£60
Threshold)	U	£344	£350	£399	£600	£742	£783
Prob cost-effective		46%	53%	57%	87%	95%	95%
(£20,000/QALY)							
Prob cost-effective		45%	52%	56%	86%	95%	95%
(£30,000/QALY)							

Supplementary Table 7: Full set of incremental outcomes by sex for risk-stratification based on a mean FIT120 screening start age of 60, compared to screening everyone with FIT120 at age 60.

Risk Score		Ma	Jeon	MaJeon	Huyghe	Total Risk	Total Risk + Sex
Males							
Total Costs per	М	-£3.40	-£3.23	-£2.76	-£0.42	£1.59	£6.31
person	L	-£33	-£31	-£32	-£31	-£33	-£30
	U	£25	£23	£28	£31	£39	£40
CRC Treatment	М	-£4.47	-£2.84	-£5.57	-£7.94	-£10.87	-£11.96
Costs per person	L	-£34	-£32	-£35	-£42	-£49	-£52
	U	£24	£25	£26	£27	£26	£26
Screen &	М	£1.07	-£0.39	£2.81	£7.53	£12.46	£18.27
Surveillance	L	-£6	-£7	-£4	£0	£3	£8
Costs per person	U	£8	£7	£10	£17	£23	£30
QALYs per person	М	0.0002	0.0000	0.0009	0.0029	0.0047	0.0061
	L	-0.0060	-0.0055	-0.0048	-0.0037	-0.0026	-0.0016
	U	0.0062	0.0062	0.0077	0.0101	0.0134	0.0152
NMB per person	М	£7.32	£4.03	£20.01	£59.22	£91.56	£114.95
(£20,000/QALY	L	-£115	-£107	-£92	-£66	-£53	-£31
Threshold)	U	£132	£118	£149	£205	£262	£302
NMB per person	М	£9.27	£4.42	£28.64	£88.62	£138.14	£175.58
(£30,000/QALY	L	-£174	-£158	-£141	-£99	-£82	-£45
Threshold)	U	£197	£179	£218	£304	£391	£456
MJC per person	М	M	£5.68	£28.23	£83.53	£129.16	£162.15
(£20,000/QALY	L	-£162	-£151	-£130	-£94	-£74	-£43
Threshold)	U	£186	£166	£210	£289	£370	£427
MJC per person	M	£13.08	£6.24	£40.39	£125.01	£194.86	£247.67
(£30,000/QALY	L	-£245	-£223	-£198	-£140	-£115	-£63
Threshold)	U	£278	£253	£307	£429	£552	£643
CRC Incidence	М	-3	19	-29	-132	-229	-321
per 100,000	L	-1878	-1758	-1879	-2021	-2175	-2310
people	U	1867	1837	1878	1728	1734	1625
CRC Mortality	М	44	41	20	-65	-134	-219
per 100,000	L	-707	-685	-754	-808	-945	-1039
people	U	849	788	822	697	639	555
FIT screening	М	-0.008	-0.203	0.019	-0.121	0.008	0.930
invites per	L	-0.049	-0.263	-0.040	-0.226	-0.150	0.771
person	U	0.032	-0.151	0.076	-0.002	0.166	1.085
Screening	М	-334	-345	-170	317	820	1455
colonoscopies	L	-1543	-1577	-1308	-873	-413	50
per 100,000	U	920	856	1141	1565	2226	2856
people							
Females			Т		Т	Т	Т
Total Costs per	М	£0.45	£0.41	£0.17	-£2.85	£1.36	-£1.11
person	L	-£21	-£18	-£20	£6	-£20	-£23
	U	£20	£19	£19	£7	£23	£21
CRC Treatment	М	£0.09	-£0.68	-£1.31	-£4.91	-£6.37	-£5.29
Costs per person	L	-£22	-£21	-£22	-£28	-£29	-£28
	U	£21	£18	£18	£18	£17	£18

г			i	1			
Screen &	М	£0.36	£1.09	£1.48	£6.15	£7.73	£4.18
Surveillance	L	-£4	-£3	-£3	£1	£2	-£1
Costs per person	U	£5	£5	£6	£12	£14	£10
QALYs per person	М	0.0000	0.0003	0.0005	0.0024	0.0031	0.0024
	L	-0.0042	-0.0042	-0.0045	-0.0027	-0.0019	-0.0029
	U	0.0042	0.0049	0.0058	0.0082	0.0093	0.0084
NMB per person	М	£0.34	£5.90	£9.94	£45.79	£60.22	£49.59
(£20,000/QALY	L	-£84	-£77	-£87	-£46	-£36	-£48
Threshold)	U	£81	£92	£109	£158	£182	£169
NMB per person	М	£0.74	£9.05	£15.00	£69.30	£91.01	£73.83
(£30,000/QALY	L	-£125	-£119	-£130	-£71	-£51	-£73
Threshold)	U	£124	£141	£163	£237	£279	£250
MJC per person	М	£0.48	£8.32	£14.03	£64.59	£84.95	£69.95
(£20,000/QALY	L	-£119	-£109	-£123	-£65	-£50	-£68
Threshold)	U	£115	£129	£153	£223	£257	£239
MJC per person	М	£1.04	£12.76	£21.16	£97.75	£128.38	£104.14
(£30,000/QALY	L	-£177	-£167	-£184	-£101	-£72	-£103
Threshold)	U	£174	£199	£230	£334	£394	£353
CRC Incidence	М	7	-21	-28	-137	-183	-123
per 100,000	L	-1228	-1281	-1267	-1436	-1522	-1497
people	U	1205	1220	1252	1202	1196	1254
CRC Mortality	М	-7	-21	-25	-108	-145	-98
per 100,000	L	-559	<i>-575</i>	-600	-712	-774	-731
people	U	546	535	569	492	468	542
FIT screening	М	0.039	0.146	0.049	0.186	0.094	-0.721
invites per	L	0.014	0.095	-0.002	0.082	-0.080	-0.891
person	U	0.064	0.192	0.101	0.282	0.262	-0.551
Screening	М	-8	126	87	493	642	303
colonoscopies	L	<i>-795</i>	-648	-776	-310	-194	-476
per 100,000	U	778	895	893	1383	1490	1148
people							