SUPPLEMENTARY ONLINE CONTENT

Knudsen AB, Zauber AG, Rutter CM, et al. Estimation of benefits, burden, and harms of colorectal cancer screening strategies: modeling study for the US Preventive Services Task Force. *JAMA*. doi:10.1001/jama.2016.6828.

An interactive resource for many of the figures shown in the text and in this Supplement is available at https://resources.cisnet.cancer.gov/projects/#crcr/uspstf/

List of eTables

List of eFigures

eTable 1. Comparison of natural history model structures.

Property	SimCRC	MISCAN	CRC-SPIN
Adenoma risk			
Mechanism	Logistic function	Poisson process	Poisson process
Risk varies:			
Randomly across individuals	Yes	Yes	Yes
Systematically with age and sex	Yes	Yes	Yes
Systematically with race and birth-year cohort	Yes	Yes	No
Adenoma growth			
Mechanism	Time in each size category	Time in each size category	Growth curve
Size modeled as continuous	No	No	Yes
Risk varies:			
Randomly across individuals	Yes	Yes	Yes
Systematically with location	Yes[a]	No	Yes[a]
Transition times correlated across size categories	No	Yes	Yes
Transition to preclinical colorectal cancer			
Mechanism	Logistic function	Overall transition probability	Adenoma size at transition
Risk varies:			
Randomly across adenomas by size within individuals	Yes	No[b]	Yes
Systematically with:			
Sex	Yes	No	Yes
Age	Yes	Yes[c]	No
Race and other risk factors	Yes	No	No
Adenoma size	No	Yes	Yes
Location	Yes[a]	No	Yes[a]
Transition times correlated across preclinical stages	No	Yes	Not applicable
Transition to clinical colorectal cancer			
Mechanism	Time to transition	Time to transition	Time to transition
Transition times:			
Vary randomly across colorectal cancers within individuals	Yes	Yes	Yes
Vary systematically with:			
Sex and race	No	Yes	No
Location	Yes[d]	Yes[d]	Yes[d]
Correlated with duration of preclinical colorectal cancer	No	Yes	No

CRC-SPIN indicates Colorectal Cancer Simulated Population Model for Incidence and Natural History; MISCAN, Microsimulation Screening Analysis; SimCRC, Simulation Model of Colorectal Cancer.

[a] Varies by proximal colon, distal colon and rectum for SimCRC and by colon and rectum for CRC-SPIN.

[b] The probability of transition is 0 for all non-progressive adenomas and for adenomas 1-5 mm, 0.3 for progressive adenomas 6-9 mm, and 1 for progressive adenomas ≥10 mm.

[c] The probability that an adenoma is progressive depends on age.

[d] Varies by proximal colon, distal colon and rectum for SimCRC and MISCAN and by colon and rectum for CRC-SPIN.

eTable 2. FIT test characteristics (per person) by cutoff for positivity.

Analysis FIT cutoff for positivity Test characteristic	Value	Source
Base-case and sensitivity analyses		
100 ng or more of Hb per mL of buffer (≥20 μg Hb/g of feces)		Imperiale et al, 2014[1]
Specificity	0.964	
Sensitivity for adenomas 1-5 mm	0.076[a]	
Sensitivity for adenomas 6-9 mm		
Sensitivity for adenomas ≥10 mm	0.238[b]	
Sensitivity for colorectal cancer	0.738	
Sensitivity analysis		
50 ng or more of Hb per mL of buffer (≥10 μg Hb/g of feces)		
Specificity	0.92	de Wijkerslooth et al, 2012[2] and by assumption
Sensitivity for adenomas 1-5 mm	0.11[a]	de Wijkerslooth et al, 2012[2] and by assumption
Sensitivity for adenomas 6-9 mm		
Sensitivity for adenomas ≥10 mm	0.35[b]	de Wijkerslooth et al, 2012[2]
Sensitivity for colorectal cancer	0.88	de Wijkerslooth et al, 2012[2]

FIT indicates fecal immunochemical test; Hb, hemoglobin.

[a] Sensitivity for persons with non-advanced adenomas. For persons with 1-5 mm adenomas, we assume that the sensitivity of the test is equal to the positivity rate in persons without adenomas (ie, 1 – specificity). The sensitivity for persons with 6-9 mm adenomas is chosen such that the weighted average sensitivity for persons with 1-5 mm and with 6-9 mm adenoma(s) is equal to that for non-advanced adenomas.

[b] Sensitivity for persons with advanced adenomas (ie, adenomas ≥10 mm and/or adenomas with advanced histology). Sensitivity was not reported for the subset of persons with ≥10 mm adenomas.

eTable 3a. Outcomes with colonoscopy screening strategies that vary by the ages to begin and end screening and screening interval: **SimCRC**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening interval	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[a]	LY with CRC	LYG[b]	Reductions[b] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	70	70	2	70	28	608	0	0	0
COL 45-75 y															
5 y	0	0	0	4,995	0	2,012	2	7,009	19	7	1	124	312	91	95
10 y	0	0	0	3,053	0	1,797	3	4,853	16	9	2	160	303	87	92
15 y	0	0	0	2,383	0	1,621	5	4,009	15	13	3	197	288	82	88
COL 45-80 y															
5 y	0	0	0	5,302	0	2,035	2	7,339	21	6	1	123	313	91	95
10 y	0	0	0	3,053	0	1,797	3	4,853	16	9	2	160	303	87	92
15 y	0	0	0	2,383	0	1,621	5	4,009	15	13	3	197	288	82	88
COL 45-85 y															
5 y	0	0	0	5,505	0	2,045	1	7,552	22	6	1	123	313	91	95
10 y	0	0	0	3,281	0	1,821	3	5,104	19	9	2	160	303	87	93
15 y	0	0	0	2,383	0	1,621	5	4,009	15	13	3	197	288	82	88
COL 50-75 y															
5 y	0	0	0	4,116	0	1,838	4	5,959	18	10	3	185	285	86	91
10 y	0	0	0	2,388	0	1,612	6	4,007	14	13	4	216	275	81	87
15 y	0	0	0	1,761	0	1,416	11	3,187	12	17	5	246	260	75	81
COL 50-80 y															
5 y	0	0	0	4,424	0	1,861	3	6,289	20	9	2	184	286	87	92
10 y	0	0	0	2,738	0	1,663	4	4,405	17	12	3	214	277	83	89
15 y	0	0	0	2,152	0	1,498	6	3,656	16	15	4	245	265	78	86
COL 50-85 y															
5 y	0	0	0	4,627	0	1,872	3	6,502	22	9	2	183	286	87	92
10 y	0	0	0	2,738	0	1,663	4	4,405	17	12	3	214	277	83	89
15 y	0	0	0	2,152	0	1,498	6	3,656	16	15	4	245	265	78	86
COL 55-75 y															
5 y	0	0	0	3,297	0	1,622	7	4,926	18	14	4	261	250	80	85
10 y	0	0	0	2,161	0	1,466	8	3,635	16	16	5	285	243	76	83
15 y	0	0	0	1,632	0	1,325	11	2,968	13	20	6	307	233	72	79
COL 55-80 y															
5 y	0	0	0	3,605	0	1,644	6	5,256	20	14	4	260	251	80	86
10 y	0	0	0	2,161	0	1,466	8	3,635	16	16	5	285	243	76	83
15 y	0	0	0	1,632	0	1,325	11	2,968	13	20	6	307	233	72	79
COL 55-85 y															
5 y	0	0	0	3,807	0	1,655	6	5,468	21	14	4	260	251	80	86
10 y	0	0	0	2,389	0	1,491	7	3,887	18	16	4	285	243	77	84
15 y	0	0	0	1,888	0	1,365	9	3,262	17	19	5	308	234	73	81

COL indicates colonoscopy; CRC, colorectal cancer; CTC, computed tomographic colonography; LY, life-years; LYG, LY gained compared with no screening; SIG, flexible sigmoidoscopy; SimCRC, Simulation Model of CRC.

[a] Including deaths from complications of screening.

[b] Compared with no screening.

eTable 3b. Outcomes with colonoscopy screening strategies that vary by the ages to begin and end screening and screening interval: **MISCAN**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening interval	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[a]	LY with CRC	LYG[b]	Reductions[b] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	67	67	1	67	28	565	0	0	0
COL 45-75 y															
5 y	0	0	0	4,826	0	2,156	7	6,989	18	20	4	298	281	70	86
10 y	0	0	0	2,967	0	1,953	9	4,928	16	23	5	337	262	65	82
15 y	0	0	0	2,328	0	1,780	12	4,119	15	26	6	367	244	60	77
COL 45-80 y															
5 y	0	0	0	5,158	0	2,172	6	7,337	20	19	4	297	282	71	87
10 y	0	0	0	2,967	0	1,953	9	4,928	16	23	5	337	262	65	82
15 y	0	0	0	2,328	0	1,780	12	4,119	15	26	6	367	244	60	77
COL 45-85 y															
5 y	0	0	0	5,384	0	2,176	6	7,566	21	19	4	297	282	71	87
10 y	0	0	0	3,211	0	1,965	8	5,185	18	23	5	338	263	65	83
15 y	0	0	0	2,328	0	1,780	12	4,119	15	26	6	367	244	60	77
COL 50-75 y															
5 y	0	0	0	3,982	0	1,958	8	5,948	18	21	5	326	264	68	84
10 y	0	0	0	2,316	0	1,774	11	4,101	15	25	6	360	248	62	79
15 y	0	0	0	1,723	0	1,615	16	3,353	13	29	8	381	228	57	73
COL 50-80 y															
5 y	0	0	0	4,315	0	1,974	7	6,296	20	21	4	326	265	69	85
10 y	0	0	0	2,671	0	1,805	9	4,485	17	24	5	360	251	64	81
15 y	0	0	0	2,104	0	1,663	12	3,779	16	27	6	384	234	59	77
COL 50-85 y															
5 y	0	0	0	4,541	0	1,978	7	6,525	21	21	4	326	266	69	85
10 y	0	0	0	2,671	0	1,805	9	4,485	17	24	5	360	251	64	81
15 y	0	0	0	2,104	0	1,663	12	3,779	16	27	6	384	234	59	77
COL 55-75 y															
5 y	0	0	0	3,211	0	1,702	10	4,923	17	24	6	366	238	64	80
10 y	0	0	0	2,108	0	1,577	12	3,697	15	27	7	390	226	60	76
15 y	0	0	0	1,596	0	1,467	15	3,079	14	29	8	407	214	56	72
COL 55-80 y															
5 y	0	0	0	3,544	0	1,718	9	5,271	19	24	5	365	239	65	81
10 y	0	0	0	2,108	0	1,577	12	3,697	15	27	7	390	226	60	76
15 y	0	0	0	1,596	0	1,467	15	3,079	14	29	8	407	214	56	72
COL 55-85 y															
5 y	0	0	0	3,770	0	1,722	9	5,500	20	23	5	365	239	65	81
10 y	0	0	0	2,353	0	1,590	11	3,954	17	26	6	392	227	60	77
15 y	0	0	0	1,858	0	1,488	13	3,359	16	29	7	410	216	56	74

COL indicates colonoscopy; CRC, colorectal cancer; CTC, computed tomographic colonography; LY, life-years; LYG, LY gained compared with no screening; MISCAN, Microsimulation Screening Analysis; SIG, flexible sigmoidoscopy.

[a] Including deaths from complications of screening.

[b] Compared with no screening.

eTable 3c. Outcomes with colonoscopy screening strategies that vary by the ages to begin and end screening and screening interval: **CRC-SPIN**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening interval	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[a]	LY with CRC	LYG[b]	Reductions[b] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	72	72	2	72	27	610	0	0	0
COL 45-75 y															
5 y	0	0	0	4,974	0	2,062	3	7,039	19	4	1	53	297	95	96
10 y	0	0	0	3,038	0	1,863	4	4,906	17	6	2	72	289	92	94
15 y	0	0	0	2,372	0	1,704	6	4,081	16	8	2	96	279	89	91
COL 45-80 y															
5 y	0	0	0	5,308	0	2,085	2	7,395	21	3	1	51	297	96	97
10 y	0	0	0	3,038	0	1,863	4	4,906	17	6	2	72	289	92	94
15 y	0	0	0	2,372	0	1,704	6	4,081	16	8	2	96	279	89	91
COL 45-85 y															
5 y	0	0	0	5,532	0	2,096	2	7,630	23	3	1	50	298	96	97
10 y	0	0	0	3,286	0	1,889	3	5,178	19	5	1	71	290	93	95
15 y	0	0	0	2,372	0	1,704	6	4,081	16	8	2	96	279	89	91
COL 50-75 y															
5 y	0	0	0	4,120	0	1,870	4	5,995	19	6	2	95	279	92	94
10 y	0	0	0	2,376	0	1,666	7	4,049	15	9	3	117	270	88	90
15 y	0	0	0	1,751	0	1,496	11	3,258	13	13	4	143	257	82	85
COL 50-80 y															
5 y	0	0	0	4,455	0	1,892	4	6,351	21	5	1	93	280	93	94
10 y	0	0	0	2,746	0	1,713	5	4,464	18	7	2	111	273	90	93
15 y	0	0	0	2,154	0	1,568	7	3,728	17	9	3	132	264	87	90
COL 50-85 y															
5 y	0	0	0	4,678	0	1,905	3	6,586	22	5	1	93	280	93	95
10 y	0	0	0	2,746	0	1,713	5	4,464	18	7	2	111	273	90	93
15 y	0	0	0	2,154	0	1,568	7	3,728	17	9	3	132	264	87	90
COL 55-75 y															
5 y	0	0	0	3,322	0	1,637	7	4,966	18	9	3	155	251	87	89
10 y	0	0	0	2,168	0	1,501	8	3,677	16	11	3	170	245	85	88
15 y	0	0	0	1,630	0	1,374	11	3,015	14	14	4	188	236	81	84
COL 55-80 y															
5 y	0	0	0	3,656	0	1,660	6	5,322	20	9	3	153	252	88	90
10 y	0	0	0	2,168	0	1,501	8	3,677	16	11	3	170	245	85	88
15 y	0	0	0	1,630	0	1,374	11	3,015	14	14	4	188	236	81	84
COL 55-85 y															
5 y	0	0	0	3,879	0	1,672	6	5,557	22	8	3	153	253	89	91
10 y	0	0	0	2,416	0	1,525	7	3,949	19	10	3	168	246	86	89
15 y	0	0	0	1,902	0	1,413	9	3,324	17	12	4	185	239	83	86

COL indicates colonoscopy; CRC, colorectal cancer; CRC-SPIN, CRC Simulated Population Model for Incidence and Natural History; CTC, computed tomographic colonography; LY, life-years; LYG, LY gained compared with no screening; SIG, flexible sigmoidoscopy.

[a] Including deaths from complications of screening.

[b] Compared with no screening.

eTable 4a. Outcomes with HSgFOBT screening strategies that vary by the ages to begin and end screening and screening interval: **SimCRC**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening interval	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[a]	LY with CRC	LYG[b]	Reductions[b] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	70	70	2	70	28	608	0	0	0
HSgFOBT 45-75 y															
1 y	15,590	0	0	0	1,337	1,220	7	2,564	11	18	4	292	288	74	86
2 y	10,349	0	0	0	920	936	11	1,867	9	27	6	400	263	61	78
3 y	7,749	0	0	0	706	757	16	1,479	8	34	8	464	237	52	70
HSgFOBT 45-80 y															
1 y	16,862	0	0	0	1,450	1,256	5	2,711	12	17	3	293	292	76	89
2 y	11,061	0	0	0	989	963	8	1,960	10	26	5	405	268	63	82
3 y	8,360	0	0	0	767	782	12	1,561	9	33	7	471	243	53	74
HSgFOBT 45-85 y															
1 y	17,756	0	0	0	1,530	1,275	4	2,808	14	17	3	295	293	76	90
2 y	11,820	0	0	0	1,062	986	6	2,054	11	26	5	410	271	63	84
3 y	8,932	0	0	0	826	803	9	1,639	10	33	7	479	246	53	77
HSgFOBT 50-75 y															
1 y	12,914	0	0	0	1,130	1,090	9	2,230	11	22	5	350	261	69	82
2 y	8,388	0	0	0	764	819	14	1,597	9	31	7	447	235	56	73
3 y	6,456	0	0	0	604	664	18	1,286	7	37	10	505	212	47	66
HSgFOBT 50-80 y															
1 y	14,193	0	0	0	1,244	1,127	7	2,377	12	20	4	351	265	71	85
2 y	9,462	0	0	0	867	861	10	1,738	10	29	6	454	243	58	78
3 y	7,125	0	0	0	673	697	14	1,383	9	36	8	513	220	49	71
HSgFOBT 50-85 y															
1 y	15,090	0	0	0	1,324	1,146	5	2,476	13	20	4	353	266	71	86
2 y	9,970	0	0	0	917	877	8	1,801	11	29	6	458	245	59	80
3 y	7,565	0	0	0	717	712	12	1,441	9	36	8	519	222	49	73
HSgFOBT 55-75 y															
1 y	10,357	0	0	0	932	931	13	1,876	10	27	7	420	226	62	76
2 y	6,897	0	0	0	649	698	17	1,364	8	35	9	506	204	50	68
3 y	5,014	0	0	0	484	545	23	1,052	7	42	12	548	178	40	58
HSgFOBT 55-80 y															
1 y	11,637	0	0	0	1,047	969	10	2,025	12	25	6	420	231	64	79
2 y	7,622	0	0	0	720	728	13	1,461	9	34	8	511	209	51	72
3 y	5,872	0	0	0	572	588	17	1,177	8	40	10	559	188	43	65
HSgFOBT 55-85 y															
1 y	12,539	0	0	0	1,127	989	8	2,125	13	25	5	422	232	64	81
2 y	8,390	0	0	0	795	752	11	1,558	11	34	7	517	212	52	74
3 y	6,352	0	0	0	623	607	14	1,244	9	40	9	566	191	43	67

COL indicates colonoscopy; CRC, colorectal cancer; CTC, computed tomographic colonography; HSgFOBT, high-sensitivity guaiac-based fecal occult blood test; LY, life-years; LYG, LY gained compared with no screening; SIG, flexible sigmoidoscopy; SimCRC, Simulation Model of CRC.

[a] Including deaths from complications of screening.

[b] Compared with no screening.

eTable 4b. Outcomes with HSgFOBT screening strategies that vary by the ages to begin and end screening and screening interval: **MISCAN**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening interval	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[a]	LY with CRC	LYG[b]	Reductions[b] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	67	67	1	67	28	565	0	0	0
HSgFOBT 45-75 y															
1 y	15,562	0	0	0	1,303	1,314	13	2,630	11	32	7	464	247	52	75
2 y	10,351	0	0	0	897	995	18	1,909	9	40	9	548	217	40	67
3 y	7,719	0	0	0	685	799	23	1,508	8	45	11	587	190	32	59
HSgFOBT 45-80 y															
1 y	16,849	0	0	0	1,410	1,337	10	2,757	12	31	6	468	252	53	78
2 y	11,071	0	0	0	960	1,015	15	1,990	10	39	8	555	223	41	70
3 y	8,129	0	0	0	724	813	21	1,557	9	45	11	595	195	33	61
HSgFOBT 45-85 y															
1 y	17,782	0	0	0	1,487	1,349	9	2,845	13	31	6	471	254	53	80
2 y	11,855	0	0	0	1,029	1,030	13	2,072	11	39	8	563	226	41	72
3 y	8,750	0	0	0	782	829	17	1,628	9	45	10	607	199	32	65
HSgFOBT 50-75 y															
1 y	12,927	0	0	0	1,103	1,169	14	2,287	11	34	8	487	232	49	73
2 y	8,408	0	0	0	745	870	21	1,636	9	42	10	564	200	37	63
3 y	6,302	0	0	0	574	697	25	1,296	8	47	12	598	175	30	55
HSgFOBT 50-80 y															
1 y	14,223	0	0	0	1,211	1,194	12	2,416	12	33	7	492	237	51	76
2 y	9,497	0	0	0	842	901	16	1,759	10	41	9	575	209	39	68
3 y	7,106	0	0	0	649	726	21	1,395	9	46	11	613	184	31	61
HSgFOBT 50-85 y															
1 y	15,161	0	0	0	1,289	1,206	10	2,505	13	33	6	495	239	51	78
2 y	10,024	0	0	0	888	912	14	1,814	11	41	8	581	211	39	70
3 y	7,408	0	0	0	677	733	19	1,430	9	46	11	619	186	30	62
HSgFOBT 55-75 y															
1 y	10,427	0	0	0	913	984	17	1,913	11	37	9	520	206	45	69
2 y	6,940	0	0	0	634	729	22	1,386	9	44	11	588	178	33	60
3 y	4,912	0	0	0	462	568	29	1,059	7	50	14	611	152	26	50
HSgFOBT 55-80 y															
1 y	11,733	0	0	0	1,022	1,011	14	2,047	12	36	8	524	212	46	72
2 y	7,678	0	0	0	701	752	19	1,472	9	44	10	596	184	35	64
3 y	5,773	0	0	0	544	603	23	1,170	8	49	12	628	163	27	56
HSgFOBT 55-85 y															
1 y	12,679	0	0	0	1,101	1,024	12	2,137	13	35	7	527	214	47	74
2 y	8,478	0	0	0	772	769	16	1,557	11	44	9	605	188	35	66
3 y	6,359	0	0	0	599	618	20	1,238	9	49	11	639	166	27	59

COL indicates colonoscopy; CRC, colorectal cancer; CTC, computed tomographic colonography; HSgFOBT, high-sensitivity guaiac-based fecal occult blood test; LY, life-years; LYG, LY gained compared with no screening; MISCAN, Microsimulation Screening Analysis; SIG, flexible sigmoidoscopy.

[a] Including deaths from complications of screening.

[b] Compared with no screening.

eTable 4c. Outcomes with HSgFOBT screening strategies that vary by the ages to begin and end screening and screening interval: **CRC-SPIN**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening interval	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[a]	LY with CRC	LYG[b]	Reductions[b] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	72	72	2	728	27	610	0	0	0
HSgFOBT 45-75 y															
1 y	15,706	0	0	0	1,322	1,253	11	2,586	11	16	4	190	265	78	85
2 y	10,412	0	0	0	908	970	17	1,895	10	24	7	278	233	66	75
3 y	7,792	0	0	0	695	791	24	1,510	8	31	9	338	202	56	65
HSgFOBT 45-80 y															
1 y	17,036	0	0	0	1,435	1,283	8	2,726	13	14	3	185	270	81	88
2 y	11,148	0	0	0	974	994	15	1,983	11	22	6	275	238	69	78
3 y	8,417	0	0	0	753	814	21	1,588	9	29	8	334	208	59	69
HSgFOBT 45-85 y															
1 y	17,991	0	0	0	1,517	1,300	6	2,823	14	13	3	184	273	82	90
2 y	11,945	0	0	0	1,048	1,015	12	2,075	12	21	5	274	242	71	81
3 y	9,012	0	0	0	811	834	18	1,663	10	28	7	334	214	61	72
HSgFOBT 50-75 y															
1 y	13,026	0	0	0	1,121	1,120	12	2,253	11	18	5	237	247	75	82
2 y	8,448	0	0	0	755	851	21	1,626	9	28	8	322	212	61	70
3 y	6,498	0	0	0	594	696	27	1,317	8	34	10	374	183	53	61
HSgFOBT 50-80 y															
1 y	14,364	0	0	0	1,234	1,152	10	2,395	12	16	4	231	252	77	85
2 y	9,554	0	0	0	857	890	16	1,763	10	25	6	316	221	66	76
3 y	7,184	0	0	0	661	728	23	1,412	9	32	9	371	192	56	66
HSgFOBT 50-85 y															
1 y	15,321	0	0	0	1,316	1,169	8	2,493	14	15	3	230	255	79	87
2 y	10,089	0	0	0	906	904	14	1,824	11	24	6	316	223	67	78
3 y	7,643	0	0	0	704	741	21	1,466	10	31	8	371	195	57	69
HSgFOBT 55-75 y															
1 y	10,467	0	0	0	927	957	16	1,899	11	22	6	298	219	69	77
2 y	6,959	0	0	0	643	727	23	1,394	9	31	9	374	187	57	66
3 y	5,053	0	0	0	477	574	31	1,082	7	39	12	423	156	46	55
HSgFOBT 55-80 y															
1 y	11,806	0	0	0	1,041	989	13	2,043	12	20	5	292	224	72	81
2 y	7,706	0	0	0	712	755	20	1,487	10	29	8	370	194	59	70
3 y	5,932	0	0	0	563	615	26	1,204	9	36	10	416	167	51	61
HSgFOBT 55-85 y															
1 y	12,765	0	0	0	1,124	1,008	11	2,143	13	19	5	291	227	73	83
2 y	8,513	0	0	0	787	777	17	1,581	11	28	7	370	198	61	73
3 y	6,429	0	0	0	613	633	23	1,269	10	34	10	415	171	52	64

COL indicates colonoscopy; CRC, colorectal cancer; CRC-SPIN, CRC Simulated Population Model for Incidence and Natural History; CTC, computed tomographic colonography; HSgFOBT, high-sensitivity guaiac-based fecal occult blood test; LY, life-years; LYG, LY gained compared with no screening; SIG, flexible sigmoidoscopy.

[a] Including deaths from complications of screening.

[b] Compared with no screening.

eTable 5a. Outcomes with FIT screening strategies that vary by the ages to begin and end screening and screening interval: **SimCRC**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening interval	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[a]	LY with CRC	LYG[b]	Reductions[b] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	70	70	2	70	28	608	0	0	0
FIT 45-75 y															
1 y	19,196	0	0	0	898	1,073	8	1,979	10	20	4	311	287	72	85
2 y	11,580	0	0	0	591	797	12	1,401	8	29	6	429	262	58	77
3 y	8,387	0	0	0	452	640	16	1,108	7	36	9	493	236	49	69
FIT 45-80 y															
1 y	20,838	0	0	0	982	1,109	5	2,096	11	18	3	312	292	74	89
2 y	12,407	0	0	0	641	825	9	1,475	9	28	5	434	268	60	81
3 y	8,963	0	0	0	490	661	13	1,164	7	35	8	500	242	50	73
FIT 45-85 y															
1 y	21,998	0	0	0	1,042	1,128	4	2,174	12	18	3	315	294	74	90
2 y	13,293	0	0	0	696	848	6	1,550	10	28	5	441	271	60	83
3 y	9,631	0	0	0	537	682	9	1,229	9	35	7	510	246	50	76
FIT 50-75 y															
1 y	15,778	0	0	0	770	959	10	1,739	10	23	5	367	260	67	81
2 y	9,326	0	0	0	500	700	15	1,215	7	33	8	470	234	53	72
3 y	6,887	0	0	0	391	562	19	971	6	39	10	527	212	44	65
FIT 50-80 y															
1 y	17,426	0	0	0	855	996	7	1,858	11	22	4	368	265	69	85
2 y	10,572	0	0	0	576	741	10	1,327	9	31	6	478	243	56	78
3 y	7,694	0	0	0	446	595	14	1,055	8	37	8	538	220	46	70
FIT 50-85 y															
1 y	18,589	0	0	0	915	1,016	5	1,937	12	21	4	370	267	70	86
2 y	11,165	0	0	0	613	757	8	1,377	10	31	6	482	245	56	79
3 y	8,111	0	0	0	475	608	11	1,095	8	37	8	544	223	46	72
FIT 55-75 y															
1 y	12,502	0	0	0	645	820	13	1,478	9	28	7	434	226	60	76
2 y	7,616	0	0	0	436	601	17	1,053	7	37	9	524	204	48	68
3 y	5,306	0	0	0	320	464	24	807	6	43	12	564	178	38	58
FIT 55-80 y															
1 y	14,163	0	0	0	731	858	10	1,599	11	26	6	435	231	62	79
2 y	8,455	0	0	0	487	630	14	1,131	8	35	8	530	210	49	72
3 y	6,258	0	0	0	385	504	17	907	7	42	10	577	190	41	65
FIT 55-85 y															
1 y	15,332	0	0	0	792	879	8	1,679	12	26	5	437	233	63	81
2 y	9,350	0	0	0	544	654	11	1,208	10	35	7	537	214	50	74
3 y	6,837	0	0	0	427	523	14	965	8	41	9	586	193	41	67

COL indicates colonoscopy; CRC, colorectal cancer; CTC, computed tomographic colonography; FIT, fecal immunochemical test with a positivity cutoff of ≥100 ng of hemoglobin (Hb) per mL of buffer (≥20 μg Hb/g of feces); LY, life-years; LYG, LY gained compared with no screening; SIG, flexible sigmoidoscopy; SimCRC, Simulation Model of CRC.

[a] Including deaths from complications of screening.

[b] Compared with no screening.

eTable 5b. Outcomes with FIT screening strategies that vary by the ages to begin and end screening and screening interval: **MISCAN**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening interval	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[a]	LY with CRC	LYG[b]	Reductions[b] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	67	67	1	67	28	565	0	0	0
FIT 45-75 y															
1 y	19,256	0	0	0	869	1,112	14	1,995	10	34	7	486	247	49	74
2 y	11,595	0	0	0	574	830	19	1,423	8	42	10	571	216	37	65
3 y	8,377	0	0	0	440	671	24	1,134	7	47	12	608	191	30	58
FIT 45-80 y															
1 y	20,955	0	0	0	945	1,136	11	2,091	11	33	6	490	254	51	78
2 y	12,438	0	0	0	617	849	16	1,482	9	41	9	579	222	38	69
3 y	8,836	0	0	0	467	683	21	1,171	8	46	11	616	196	30	61
FIT 45-85 y															
1 y	22,193	0	0	0	999	1,148	9	2,156	12	32	6	494	256	51	80
2 y	13,363	0	0	0	665	864	13	1,542	10	41	8	589	226	38	72
3 y	9,534	0	0	0	508	699	17	1,224	8	47	10	629	200	30	65
FIT 50-75 y															
1 y	15,843	0	0	0	745	997	15	1,757	10	35	8	504	231	47	72
2 y	9,342	0	0	0	486	735	21	1,243	8	44	11	582	200	35	62
3 y	6,795	0	0	0	376	593	26	995	7	48	13	613	176	28	55
FIT 50-80 y															
1 y	17,552	0	0	0	822	1,021	12	1,855	11	34	7	509	238	49	76
2 y	10,613	0	0	0	553	765	16	1,334	9	42	9	594	210	36	68
3 y	7,693	0	0	0	429	620	21	1,070	8	47	11	630	186	29	61
FIT 50-85 y															
1 y	18,796	0	0	0	877	1,034	10	1,921	11	34	6	512	240	49	78
2 y	11,233	0	0	0	585	775	14	1,375	9	42	8	601	213	36	70
3 y	8,032	0	0	0	449	627	19	1,096	8	48	10	636	188	29	62
FIT 55-75 y															
1 y	12,586	0	0	0	626	847	18	1,490	9	38	9	531	206	43	68
2 y	7,644	0	0	0	424	628	23	1,075	8	45	11	599	179	32	59
3 y	5,250	0	0	0	311	493	29	833	6	50	14	621	153	24	50
FIT 55-80 y															
1 y	14,313	0	0	0	704	873	14	1,592	10	37	8	536	213	45	72
2 y	8,501	0	0	0	470	650	19	1,139	8	45	10	608	186	33	63
3 y	6,204	0	0	0	368	525	23	917	7	49	12	639	165	26	57
FIT 55-85 y															
1 y	15,566	0	0	0	760	887	12	1,659	11	36	7	539	215	45	74
2 y	9,437	0	0	0	519	666	16	1,201	9	45	9	617	190	33	66
3 y	6,859	0	0	0	408	540	20	967	8	50	11	651	169	25	60

COL indicates colonoscopy; CRC, colorectal cancer; CTC, computed tomographic colonography; FIT, fecal immunochemical test with a positivity cutoff of ≥100 ng of hemoglobin (Hb) per mL of buffer (≥20 μg Hb/g of feces); LY, life-years; LYG, LY gained compared with no screening; MISCAN, Microsimulation Screening Analysis; SIG, flexible sigmoidoscopy.

[a] Including deaths from complications of screening.

[b] Compared with no screening.

eTable 5c. Outcomes with FIT screening strategies that vary by the ages to begin and end screening and screening interval: **CRC-SPIN**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening interval	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[a]	LY with CRC	LYG[b]	Reductions[b] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	72	72	2	72	27	610	0	0	0
FIT 45-75 y															
1 y	18,733	0	0	0	927	1,225	11	2,163	11	17	4	213	263	76	83
2 y	11,439	0	0	0	613	922	19	1,554	9	27	7	307	228	63	73
3 y	8,327	0	0	0	467	743	26	1,235	8	34	10	364	196	53	63
FIT 45-80 y															
1 y	20,348	0	0	0	1,010	1,256	8	2,274	12	15	3	209	269	79	87
2 y	12,260	0	0	0	661	947	16	1,624	10	25	6	303	233	65	76
3 y	8,907	0	0	0	504	762	23	1,289	8	32	9	364	203	55	66
FIT 45-85 y															
1 y	21,506	0	0	0	1,071	1,273	7	2,351	13	14	3	208	271	80	89
2 y	13,148	0	0	0	716	968	13	1,697	11	23	5	304	239	67	80
3 y	9,577	0	0	0	549	783	19	1,351	9	31	8	363	208	57	70
FIT 50-75 y															
1 y	15,444	0	0	0	798	1,088	13	1,899	11	20	5	259	244	72	81
2 y	9,241	0	0	0	519	805	22	1,346	9	30	8	348	207	58	68
3 y	6,857	0	0	0	404	649	28	1,081	7	37	11	399	178	49	59
FIT 50-80 y															
1 y	17,062	0	0	0	883	1,120	10	2,013	12	18	4	254	250	75	85
2 y	10,476	0	0	0	594	843	17	1,454	10	27	7	344	218	62	74
3 y	7,660	0	0	0	458	681	24	1,163	8	34	10	396	187	53	64
FIT 50-85 y															
1 y	18,224	0	0	0	945	1,138	8	2,091	13	17	4	254	253	77	87
2 y	11,071	0	0	0	631	858	15	1,504	11	26	6	344	220	64	76
3 y	8,084	0	0	0	486	694	22	1,201	9	33	9	396	191	54	67
FIT 55-75 y															
1 y	12,290	0	0	0	672	923	16	1,611	10	24	6	318	217	67	76
2 y	7,575	0	0	0	453	683	24	1,160	8	34	10	398	183	53	64
3 y	5,301	0	0	0	330	532	33	895	7	41	13	444	152	43	52
FIT 55-80 y															
1 y	13,929	0	0	0	759	957	13	1,729	12	22	5	313	224	70	80
2 y	8,410	0	0	0	504	712	21	1,237	9	31	8	393	190	56	68
3 y	6,254	0	0	0	395	573	27	995	8	38	11	438	164	47	59
FIT 55-85 y															
1 y	15,093	0	0	0	821	977	11	1,809	13	21	5	311	226	71	82
2 y	9,309	0	0	0	561	734	18	1,313	10	30	7	393	196	58	72
3 y	6,836	0	0	0	436	591	24	1,051	9	36	10	437	168	49	63

COL indicates colonoscopy; CRC, colorectal cancer; CRC-SPIN, CRC Simulated Population Model for Incidence and Natural History; CTC, computed tomographic colonography; FIT, fecal immunochemical test with a positivity cutoff of ≥100 ng of hemoglobin (Hb) per mL of buffer (≥20 μg Hb/g of feces); LY, life-years; LYG, LY gained compared with no screening; SIG, flexible sigmoidoscopy.

[a] Including deaths from complications of screening.

[b] Compared with no screening.

eTable 6a. Outcomes with FIT-DNA screening strategies that vary by the ages to begin and end screening and screening interval: **SimCRC**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening interval	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[a]	LY with CRC	LYG[b]	Reductions[b] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	70	70	2	70	28	608	0	0	0
FIT-DNA 45-75 y															
1 y	13,372	0	0	0	1,576	1,397	6	2,978	12	14	3	218	298	81	89
3 y	7,158	0	0	0	906	1,012	10	1,928	9	23	5	346	274	67	81
5 y	5,233	0	0	0	692	835	13	1,539	8	30	7	420	247	57	74
FIT-DNA 45-80 y															
1 y	14,415	0	0	0	1,703	1,432	4	3,139	13	12	2	216	301	82	91
3 y	7,746	0	0	0	986	1,045	6	2,037	11	22	4	348	280	69	85
5 y	5,621	0	0	0	751	860	9	1,621	10	29	6	426	252	58	78
FIT-DNA 45-85 y															
1 y	15,145	0	0	0	1,791	1,451	3	3,245	15	12	2	216	301	83	92
3 y	8,217	0	0	0	1,052	1,067	4	2,124	12	21	4	352	282	70	87
5 y	5,882	0	0	0	792	874	7	1,674	11	29	6	431	253	58	79
FIT-DNA 50-75 y															
1 y	11,041	0	0	0	1,332	1,261	8	2,601	12	17	4	277	271	76	85
3 y	5,990	0	0	0	783	907	11	1,701	9	26	6	397	250	63	78
5 y	4,391	0	0	0	601	748	15	1,364	8	33	8	461	224	53	71
FIT-DNA 50-80 y															
1 y	12,096	0	0	0	1,460	1,297	6	2,763	13	15	3	275	274	78	88
3 y	6,543	0	0	0	861	941	8	1,809	10	25	5	399	255	65	81
5 y	4,781	0	0	0	662	774	11	1,447	9	32	7	467	229	54	74
FIT-DNA 50-85 y															
1 y	12,826	0	0	0	1,549	1,316	5	2,870	14	15	3	275	275	79	88
3 y	6,961	0	0	0	918	959	6	1,884	11	24	5	403	257	65	83
5 y	5,043	0	0	0	703	788	9	1,500	10	32	7	472	230	54	75
FIT-DNA 55-75 y															
1 y	8,846	0	0	0	1,101	1,094	11	2,206	11	21	6	349	237	69	80
3 y	4,668	0	0	0	636	764	15	1,415	9	31	8	456	214	55	71
5 y	3,576	0	0	0	512	642	18	1,171	8	37	10	508	194	47	65
FIT-DNA 55-80 y															
1 y	9,880	0	0	0	1,228	1,131	9	2,367	13	20	5	347	240	71	82
3 y	5,410	0	0	0	740	810	11	1,561	10	29	7	459	222	58	76
5 y	3,970	0	0	0	573	669	14	1,255	9	36	9	515	199	49	69
FIT-DNA 55-85 y															
1 y	10,618	0	0	0	1,317	1,150	8	2,475	14	20	5	348	241	72	83
3 y	5,801	0	0	0	795	829	9	1,634	11	29	6	463	223	59	77
5 y	4,233	0	0	0	614	683	12	1,310	10	36	8	520	200	48	70

COL indicates colonoscopy; CRC, colorectal cancer; CTC, computed tomographic colonography; FIT-DNA, fecal immunochemical test with a DNA stool test; LY, life-years; LYG, LY gained compared with no screening; SIG, flexible sigmoidoscopy; SimCRC, Simulation Model of CRC.

[a] Including deaths from complications of screening.

[b] Compared with no screening.

eTable 6b. Outcomes with FIT-DNA screening strategies that vary by the ages to begin and end screening and screening interval: **MISCAN**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening interval	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[a]	LY with CRC	LYG[b]	Reductions[b] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	67	67	1	67	28	565	0	0	0
FIT-DNA 45-75 y															
1 y	13,328	0	0	0	1,531	1,501	11	3,044	12	27	6	390	261	59	79
3 y	7,086	0	0	0	878	1,071	16	1,965	10	36	8	505	231	45	71
5 y	5,219	0	0	0	674	881	21	1,576	9	42	10	557	206	37	64
FIT-DNA 45-80 y															
1 y	14,398	0	0	0	1,651	1,523	9	3,183	13	26	5	390	265	61	82
3 y	7,445	0	0	0	922	1,085	14	2,022	10	36	8	509	235	46	73
5 y	5,612	0	0	0	727	900	17	1,644	10	41	9	566	211	38	67
FIT-DNA 45-85 y															
1 y	15,178	0	0	0	1,738	1,534	8	3,280	14	26	5	391	267	62	83
3 y	7,990	0	0	0	990	1,101	12	2,103	11	35	7	515	238	47	75
5 y	5,883	0	0	0	763	909	16	1,688	10	42	9	572	212	38	69
FIT-DNA 50-75 y															
1 y	11,025	0	0	0	1,295	1,355	12	2,662	12	28	6	412	246	57	77
3 y	5,779	0	0	0	740	956	18	1,714	9	38	9	519	215	43	67
5 y	4,380	0	0	0	586	794	22	1,402	9	43	11	569	193	35	62
FIT-DNA 50-80 y															
1 y	12,108	0	0	0	1,417	1,377	10	2,804	13	27	6	413	250	59	80
3 y	6,481	0	0	0	828	985	14	1,828	11	37	8	527	223	45	72
5 y	4,776	0	0	0	640	813	19	1,472	9	43	10	579	198	36	65
FIT-DNA 50-85 y															
1 y	12,888	0	0	0	1,504	1,388	9	2,901	14	27	5	414	252	59	81
3 y	6,745	0	0	0	861	993	13	1,867	11	37	7	530	224	45	73
5 y	5,048	0	0	0	677	822	17	1,516	10	43	9	584	200	36	67
FIT-DNA 55-75 y															
1 y	8,874	0	0	0	1,076	1,162	14	2,252	12	31	7	447	221	53	73
3 y	4,509	0	0	0	604	806	21	1,431	9	41	10	542	190	39	63
5 y	3,574	0	0	0	500	679	24	1,203	8	45	12	585	172	32	58
FIT-DNA 55-80 y															
1 y	9,943	0	0	0	1,196	1,186	12	2,394	13	30	7	447	226	55	76
3 y	5,260	0	0	0	699	841	17	1,557	10	39	9	550	199	41	68
5 y	3,974	0	0	0	555	699	20	1,275	9	45	11	594	178	33	62
FIT-DNA 55-85 y															
1 y	10,733	0	0	0	1,285	1,197	11	2,493	14	30	6	448	227	56	77
3 y	5,771	0	0	0	763	856	15	1,634	11	39	8	556	202	41	70
5 y	4,248	0	0	0	593	709	19	1,320	10	45	10	600	179	33	63

COL indicates colonoscopy; CRC, colorectal cancer; CTC, computed tomographic colonography; FIT-DNA, fecal immunochemical test with a DNA stool test; LY, life-years; LYG, LY gained compared with no screening; MISCAN, Microsimulation Screening Analysis; SIG, flexible sigmoidoscopy.

[a] Including deaths from complications of screening.

[b] Compared with no screening.

eTable 6c. Outcomes with FIT-DNA screening strategies that vary by the ages to begin and end screening and screening interval: **CRC-SPIN**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening interval	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[a]	LY with CRC	LYG[b]	Reductions[b] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	72	72	2	72	27	610	0	0	0
FIT-DNA 45-75 y															
1 y	12,989	0	0	0	1,588	1,526	7	3,122	13	11	3	133	279	85	89
3 y	7,061	0	0	0	922	1,136	15	2,073	10	20	6	235	244	72	79
5 y	5,195	0	0	0	704	942	21	1,667	9	27	8	299	212	62	70
FIT-DNA 45-80 y															
1 y	14,025	0	0	0	1,716	1,556	5	3,278	14	9	2	128	283	87	92
3 y	7,650	0	0	0	1,002	1,164	12	2,178	11	18	5	231	250	74	82
5 y	5,586	0	0	0	762	965	18	1,745	10	25	7	297	218	65	73
FIT-DNA 45-85 y															
1 y	14,768	0	0	0	1,809	1,573	4	3,386	15	8	2	127	284	88	93
3 y	8,124	0	0	0	1,069	1,184	10	2,263	13	17	4	229	253	76	84
5 y	5,850	0	0	0	803	979	16	1,798	11	25	7	296	220	66	75
FIT-DNA 50-75 y															
1 y	10,745	0	0	0	1,348	1,371	9	2,729	13	13	4	178	261	82	87
3 y	5,927	0	0	0	800	1,011	17	1,827	10	23	7	278	226	68	76
5 y	4,370	0	0	0	612	837	23	1,473	9	30	9	337	195	58	66
FIT-DNA 50-80 y															
1 y	11,795	0	0	0	1,478	1,401	7	2,886	14	11	3	173	265	84	89
3 y	6,476	0	0	0	876	1,040	14	1,931	11	21	6	273	232	71	79
5 y	4,762	0	0	0	672	862	20	1,554	10	28	8	334	200	61	70
FIT-DNA 50-85 y															
1 y	12,542	0	0	0	1,571	1,418	6	2,994	15	11	3	173	266	85	91
3 y	6,903	0	0	0	935	1,058	12	2,005	12	20	5	272	235	72	81
5 y	5,028	0	0	0	713	875	18	1,606	11	27	8	333	203	62	72
FIT-DNA 55-75 y															
1 y	8,647	0	0	0	1,121	1,182	12	2,315	12	17	5	239	234	77	82
3 y	4,640	0	0	0	652	847	21	1,520	10	28	8	335	197	62	69
5 y	3,570	0	0	0	522	713	26	1,261	9	33	10	383	172	53	62
FIT-DNA 55-80 y															
1 y	9,673	0	0	0	1,250	1,212	10	2,471	14	15	4	235	238	79	85
3 y	5,379	0	0	0	756	890	17	1,663	11	25	7	328	206	66	75
5 y	3,967	0	0	0	582	738	23	1,343	10	32	9	380	177	56	65
FIT-DNA 55-85 y															
1 y	10,427	0	0	0	1,343	1,230	9	2,582	15	14	4	233	239	80	86
3 y	5,774	0	0	0	812	907	15	1,734	12	24	6	327	209	67	77
5 y	4,235	0	0	0	624	752	21	1,397	11	31	9	380	180	57	67

COL indicates colonoscopy; CRC, colorectal cancer; CRC-SPIN, CRC Simulated Population Model for Incidence and Natural History; CTC, computed tomographic colonography; FIT-DNA, fecal immunochemical test with a DNA stool test; LY, life-years; LYG, LY gained compared with no screening; SIG, flexible sigmoidoscopy.

[a] Including deaths from complications of screening.

[b] Compared with no screening.

eTable 7a. Outcomes with SIG screening strategies that vary by the ages to begin and end screening and screening interval: **SimCRC**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening interval	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[a]	LY with CRC	LYG[b]	Reductions[b] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	70	70	2	70	28	608	0	0	0
SIG 45-75 y															
5 y	0	4,912	0	0	873	1,153	13	2,039	11	20	6	250	251	72	77
10 y	0	3,196	0	0	625	935	18	1,578	9	26	8	303	225	63	70
SIG 45-80 y															
5 y	0	5,258	0	0	939	1,178	11	2,128	12	19	6	250	253	73	79
10 y	0	3,196	0	0	625	935	18	1,578	9	26	8	303	225	63	70
SIG 45-85 y															
5 y	0	5,489	0	0	982	1,190	11	2,183	13	19	6	251	253	73	80
10 y	0	3,485	0	0	689	959	16	1,664	11	25	8	306	226	64	71
SIG 50-75 y															
5 y	0	4,111	0	0	761	1,044	15	1,820	10	23	7	299	227	67	74
10 y	0	2,480	0	0	503	820	22	1,345	8	30	10	345	200	58	64
SIG 50-80 y															
5 y	0	4,459	0	0	827	1,069	14	1,910	11	22	7	299	229	69	75
10 y	0	2,910	0	0	599	867	18	1,484	10	28	9	345	205	60	68
SIG 50-85 y															
5 y	0	4,691	0	0	871	1,082	13	1,965	12	22	7	299	229	69	76
10 y	0	2,910	0	0	599	867	18	1,484	10	28	9	345	205	60	68
SIG 55-75 y															
5 y	0	3,342	0	0	651	909	18	1,578	10	27	9	359	196	61	68
10 y	0	2,277	0	0	492	753	22	1,267	9	32	11	394	177	55	62
SIG 55-80 y															
5 y	0	3,692	0	0	718	935	17	1,669	11	26	8	359	198	63	70
10 y	0	2,277	0	0	492	753	22	1,267	9	32	11	394	177	55	62
SIG 55-85 y															
5 y	0	3,926	0	0	762	948	16	1,725	12	26	8	360	199	63	70
10 y	0	2,569	0	0	557	777	20	1,354	11	31	10	396	179	55	63

COL indicates colonoscopy; CRC, colorectal cancer; CTC, computed tomographic colonography; LY, life-years; LYG, LY gained compared with no screening; SIG, flexible sigmoidoscopy; SimCRC, Simulation Model of CRC.

[a] Including deaths from complications of screening.

[b] Compared with no screening.

eTable 7b. Outcomes with SIG screening strategies that vary by the ages to begin and end screening and screening interval: **MISCAN**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening interval	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[a]	LY with CRC	LYG[b]	Reductions[b] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	67	67	1	67	28	565	0	0	0
SIG 45-75 y															
5 y	0	4,572	0	0	929	1,588	15	2,533	12	28	7	367	234	58	74
10 y	0	3,030	0	0	706	1,398	18	2,122	12	31	9	397	213	53	68
SIG 45-80 y															
5 y	0	4,893	0	0	991	1,606	14	2,611	13	27	7	367	236	59	75
10 y	0	3,030	0	0	706	1,398	18	2,122	12	31	9	397	213	53	68
SIG 45-85 y															
5 y	0	5,112	0	0	1,027	1,612	13	2,653	14	27	7	368	236	59	75
10 y	0	3,298	0	0	762	1,412	17	2,191	13	31	8	400	214	53	69
SIG 50-75 y															
5 y	0	3,807	0	0	820	1,450	16	2,287	12	29	8	386	221	56	72
10 y	0	2,356	0	0	592	1,268	21	1,881	11	33	10	412	201	50	65
SIG 50-80 y															
5 y	0	4,129	0	0	882	1,468	15	2,365	13	28	7	387	223	57	73
10 y	0	2,746	0	0	680	1,303	18	2,001	12	32	9	414	205	52	68
SIG 50-85 y															
5 y	0	4,349	0	0	919	1,474	14	2,408	14	28	7	388	224	57	74
10 y	0	2,746	0	0	680	1,303	18	2,001	12	32	9	414	205	52	68
SIG 55-75 y															
5 y	0	3,092	0	0	715	1,265	18	1,998	12	31	9	415	200	53	68
10 y	0	2,155	0	0	575	1,141	20	1,736	11	34	10	435	185	49	64
SIG 55-80 y															
5 y	0	3,416	0	0	777	1,284	16	2,077	13	31	8	416	202	54	70
10 y	0	2,155	0	0	575	1,141	20	1,736	11	34	10	435	185	49	64
SIG 55-85 y															
5 y	0	3,637	0	0	814	1,290	16	2,120	13	31	8	416	202	54	70
10 y	0	2,425	0	0	631	1,156	19	1,806	12	34	10	438	186	49	65

COL indicates colonoscopy; CRC, colorectal cancer; CTC, computed tomographic colonography; LY, life-years; LYG, LY gained compared with no screening; MISCAN, Microsimulation Screening Analysis; SIG, flexible sigmoidoscopy.

[a] Including deaths from complications of screening.

[b] Compared with no screening.

eTable 7c. Outcomes with SIG screening strategies that vary by the ages to begin and end screening and screening interval: **CRC-SPIN**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening interval	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[a]	LY with CRC	LYG[b]	Reductions[b] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	72	72	2	72	27	610	0	0	0
SIG 45-75 y															
5 y	0	5,128	0	0	759	883	27	1,669	9	28	10	265	193	60	63
10 y	0	3,256	0	0	546	776	29	1,351	8	31	11	293	180	56	60
SIG 45-80 y															
5 y	0	5,535	0	0	816	902	25	1,743	10	27	9	261	196	62	65
10 y	0	3,256	0	0	546	776	29	1,351	8	31	11	293	180	56	60
SIG 45-85 y															
5 y	0	5,817	0	0	855	913	24	1,792	11	26	9	260	196	63	66
10 y	0	3,580	0	0	602	796	27	1,425	10	30	10	291	183	59	62
SIG 50-75 y															
5 y	0	4,298	0	0	656	810	28	1,493	9	30	10	291	181	59	62
10 y	0	2,515	0	0	438	690	33	1,161	7	34	12	324	165	52	55
SIG 50-80 y															
5 y	0	4,705	0	0	712	829	26	1,567	10	28	10	287	184	61	64
10 y	0	2,983	0	0	519	725	29	1,273	9	31	11	314	171	56	60
SIG 50-85 y															
5 y	0	4,987	0	0	752	839	25	1,616	10	28	9	286	184	62	65
10 y	0	2,983	0	0	519	725	29	1,273	9	31	11	314	171	56	60
SIG 55-75 y															
5 y	0	3,494	0	0	556	716	30	1,301	9	32	11	329	163	56	59
10 y	0	2,324	0	0	424	637	32	1,093	8	34	12	349	153	52	55
SIG 55-80 y															
5 y	0	3,902	0	0	614	735	28	1,377	9	30	11	324	166	58	61
10 y	0	2,324	0	0	424	637	32	1,093	8	34	12	349	153	52	55
SIG 55-85 y															
5 y	0	4,184	0	0	653	745	27	1,425	10	30	10	323	167	58	62
10 y	0	2,649	0	0	481	657	30	1,168	9	33	11	347	155	54	58

COL indicates colonoscopy; CRC, colorectal cancer; CRC-SPIN, CRC Simulated Population Model for Incidence and Natural History; CTC, computed tomographic colonography; LY, life-years; LYG, LY gained compared with no screening; SIG, flexible sigmoidoscopy.

[a] Including deaths from complications of screening.

[b] Compared with no screening.

eTable 8a. Outcomes with SIG+HSgFOBT screening strategies that vary by the ages to begin and end screening and screening interval: **SimCRC**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening intervals[a]	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[b]	LY with CRC	LYG[c]	Reductions[c] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	70	70	2	70	28	608	0	0	0
SIG+HSgFOBT 45-75 y															
10 y, 1 y	13,505	2,288	0	0	1,549	1,431	6	2,986	12	13	3	208	297	81	89
10 y, 2 y	8,963	2,507	0	0	1,231	1,296	6	2,534	11	16	4	245	290	78	87
5 y, 2 y	8,223	3,834	0	0	1,368	1,395	6	2,768	12	14	3	218	294	80	89
5 y, 3 y	6,136	4,084	0	0	1,240	1,340	7	2,587	12	15	4	229	289	79	87
SIG+HSgFOBT 45-80 y															
10 y, 1 y	14,574	2,427	0	0	1,669	1,463	4	3,136	14	12	2	207	300	83	91
10 y, 2 y	9,534	2,596	0	0	1,299	1,318	5	2,622	12	15	3	245	293	79	89
5 y, 2 y	8,787	4,094	0	0	1,465	1,424	4	2,893	13	13	3	217	297	82	90
5 y, 3 y	6,609	4,368	0	0	1,335	1,370	5	2,710	13	14	3	230	292	80	89
SIG+HSgFOBT 45-85 y															
10 y, 1 y	15,322	2,537	0	0	1,755	1,482	3	3,239	15	12	2	208	301	83	92
10 y, 2 y	10,153	2,754	0	0	1,387	1,341	4	2,731	14	15	3	247	294	79	90
5 y, 2 y	9,291	4,277	0	0	1,543	1,442	3	2,988	14	13	2	218	298	82	91
5 y, 3 y	6,964	4,561	0	0	1,402	1,386	4	2,792	14	14	3	231	293	80	90
SIG+HSgFOBT 50-75 y															
10 y, 1 y	11,100	1,926	0	0	1,312	1,297	8	2,616	12	16	4	265	271	77	85
10 y, 2 y	7,212	2,042	0	0	1,022	1,158	9	2,190	11	19	5	298	262	72	82
5 y, 2 y	6,689	3,211	0	0	1,162	1,262	8	2,431	12	17	4	274	267	76	85
5 y, 3 y	5,099	3,425	0	0	1,069	1,216	8	2,294	12	18	5	284	263	74	83
SIG+HSgFOBT 50-80 y															
10 y, 1 y	12,172	2,091	0	0	1,438	1,332	6	2,776	13	15	3	264	274	78	88
10 y, 2 y	8,100	2,283	0	0	1,151	1,203	6	2,360	13	18	4	299	267	75	86
5 y, 2 y	7,423	3,473	0	0	1,275	1,295	6	2,576	13	16	4	274	270	77	87
5 y, 3 y	5,559	3,699	0	0	1,161	1,246	7	2,413	13	17	4	284	265	76	85
SIG+HSgFOBT 50-85 y															
10 y, 1 y	12,922	2,188	0	0	1,521	1,350	5	2,875	15	15	3	264	274	79	88
10 y, 2 y	8,502	2,345	0	0	1,199	1,215	6	2,420	13	18	4	300	268	75	86
5 y, 2 y	7,818	3,651	0	0	1,342	1,311	5	2,658	14	16	4	275	271	78	87
5 y, 3 y	5,893	3,892	0	0	1,226	1,262	6	2,494	14	17	4	285	266	76	86
SIG+HSgFOBT 55-75 y															
10 y, 1 y	8,817	1,625	0	0	1,096	1,135	10	2,241	12	21	6	334	237	71	80
10 y, 2 y	5,898	1,790	0	0	894	1,027	11	1,932	11	23	6	362	231	67	78
5 y, 2 y	5,432	2,622	0	0	983	1,104	11	2,097	12	21	6	342	233	69	79
5 y, 3 y	4,013	2,788	0	0	893	1,058	12	1,963	11	22	6	350	229	68	78
SIG+HSgFOBT 55-80 y															
10 y, 1 y	9,891	1,749	0	0	1,212	1,167	9	2,387	13	20	5	333	240	72	82
10 y, 2 y	6,471	1,858	0	0	958	1,048	10	2,016	12	22	6	363	233	68	80
5 y, 2 y	5,985	2,877	0	0	1,079	1,134	9	2,221	13	20	5	342	236	71	81

eTable 8a. Outcomes with SIG+HSgFOBT screening strategies that vary by the ages to begin and end screening and screening interval: **SimCRC (continued)**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening intervals[a]	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[b]	LY with CRC	LYG[c]	Reductions[c] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
SIG+HSgFOBT 55-80 y (continued)															
5 y, 3 y	4,568	3,067	0	0	995	1,091	9	2,095	13	21	6	351	232	69	80
SIG+HSgFOBT 55-85 y															
10 y, 1 y	10,643	1,861	0	0	1,299	1,186	8	2,493	14	19	5	334	241	73	83
10 y, 2 y	7,097	2,022	0	0	1,049	1,072	8	2,129	13	22	5	365	234	69	81
5 y, 2 y	6,501	3,056	0	0	1,157	1,152	8	2,317	14	20	5	343	237	71	82
5 y, 3 y	4,891	3,253	0	0	1,058	1,106	9	2,173	14	21	5	352	233	70	81

COL indicates colonoscopy; CRC, colorectal cancer; CTC, computed tomographic colonography; HSgFOBT, high-sensitivity guaiac-based fecal occult blood test; LY, life-years; LYG, LY gained compared with no screening; SIG, flexible sigmoidoscopy; SimCRC, Simulation Model of CRC.

[a] The first interval listed is for SIG and the second interval listed is for HSgFOBT.

[b] Including deaths from complications of screening.

[c] Compared with no screening.

eTable 8b. Outcomes with SIG+HSgFOBT screening strategies that vary by the ages to begin and end screening and screening interval: **MISCAN**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening intervals[a]	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[b]	LY with CRC	LYG[c]	Reductions[c] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	67	67	1	67	28	565	0	0	0
SIG+HSgFOBT 45-75 y															
10 y, 1 y	13,058	2,016	0	0	1,525	1,676	10	3,212	13	26	6	385	260	60	80
10 y, 2 y	8,259	2,090	0	0	1,166	1,520	13	2,698	12	29	7	417	246	56	76
5 y, 2 y	7,406	3,400	0	0	1,312	1,663	12	2,987	13	27	6	383	253	60	78
5 y, 3 y	5,505	3,717	0	0	1,216	1,651	12	2,879	13	27	6	383	251	59	78
SIG+HSgFOBT 45-80 y															
10 y, 1 y	14,103	2,016	0	0	1,609	1,686	9	3,304	14	26	5	387	262	61	81
10 y, 2 y	8,795	2,090	0	0	1,210	1,527	11	2,748	13	29	6	421	248	56	77
5 y, 2 y	7,880	3,649	0	0	1,401	1,684	10	3,095	14	26	6	385	256	61	80
5 y, 3 y	5,769	3,957	0	0	1,285	1,668	11	2,963	14	27	6	385	253	60	79
SIG+HSgFOBT 45-85 y															
10 y, 1 y	14,915	2,161	0	0	1,704	1,698	8	3,410	15	26	5	389	264	61	82
10 y, 2 y	9,400	2,249	0	0	1,294	1,541	10	2,845	14	29	6	425	249	56	79
5 y, 2 y	8,399	3,782	0	0	1,466	1,690	9	3,165	14	26	5	387	257	61	81
5 y, 3 y	6,170	4,142	0	0	1,351	1,677	10	3,037	14	27	6	387	254	60	80
SIG+HSgFOBT 50-75 y															
10 y, 1 y	10,562	1,633	0	0	1,276	1,525	12	2,814	13	28	6	403	245	58	77
10 y, 2 y	6,594	1,677	0	0	972	1,387	15	2,374	12	31	7	431	231	53	73
5 y, 2 y	5,947	2,882	0	0	1,129	1,525	12	2,667	13	28	7	401	240	58	77
5 y, 3 y	4,462	3,146	0	0	1,058	1,517	13	2,587	13	28	7	400	238	58	76
SIG+HSgFOBT 50-80 y															
10 y, 1 y	11,686	1,844	0	0	1,414	1,554	10	2,977	14	27	6	405	249	60	80
10 y, 2 y	7,423	1,908	0	0	1,093	1,419	12	2,524	13	30	7	435	236	55	77
5 y, 2 y	6,666	3,079	0	0	1,225	1,542	11	2,778	14	27	6	403	243	59	78
5 y, 3 y	4,963	3,362	0	0	1,139	1,533	11	2,683	14	28	6	402	240	58	78
SIG+HSgFOBT 50-85 y															
10 y, 1 y	12,442	1,844	0	0	1,475	1,558	9	3,042	15	27	5	407	250	60	80
10 y, 2 y	7,811	1,908	0	0	1,125	1,422	11	2,558	13	30	6	437	237	55	77
5 y, 2 y	7,009	3,248	0	0	1,284	1,550	10	2,844	14	27	6	405	243	59	79
5 y, 3 y	5,154	3,526	0	0	1,183	1,539	11	2,733	14	28	6	403	241	58	78
SIG+HSgFOBT 55-75 y															
10 y, 1 y	8,346	1,506	0	0	1,100	1,348	13	2,461	13	30	7	429	222	55	74
10 y, 2 y	5,368	1,544	0	0	871	1,240	15	2,126	12	32	8	452	212	52	71
5 y, 2 y	4,866	2,339	0	0	964	1,330	14	2,308	13	30	8	428	217	55	73
5 y, 3 y	3,459	2,549	0	0	888	1,321	15	2,225	12	31	8	427	214	54	72
SIG+HSgFOBT 55-80 y															
10 y, 1 y	9,391	1,506	0	0	1,184	1,358	12	2,554	13	29	7	432	224	56	76
10 y, 2 y	5,901	1,544	0	0	915	1,247	14	2,176	12	32	8	455	214	52	72
5 y, 2 y	5,334	2,588	0	0	1,053	1,351	13	2,417	14	30	7	430	220	56	75

eTable 8b. Outcomes with SIG+HSgFOBT screening strategies that vary by the ages to begin and end screening and screening interval: **MISCAN (continued)**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening intervals[a]	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[b]	LY with CRC	LYG[c]	Reductions[c] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
SIG+HSgFOBT 55-80 y (continued)															
5 y, 3 y	4,010	2,822	0	0	990	1,345	13	2,347	13	30	7	430	218	55	74
SIG+HSgFOBT 55-85 y															
10 y, 1 y	10,210	1,651	0	0	1,280	1,371	11	2,662	14	29	6	434	225	56	77
10 y, 2 y	6,506	1,703	0	0	999	1,262	13	2,273	13	32	7	459	215	52	74
5 y, 2 y	5,855	2,722	0	0	1,118	1,358	12	2,488	14	29	7	432	221	56	76
5 y, 3 y	4,368	2,969	0	0	1,043	1,351	12	2,406	14	30	7	432	219	55	75

COL indicates colonoscopy; CRC, colorectal cancer; CTC, computed tomographic colonography; HSgFOBT, high-sensitivity guaiac-based fecal occult blood test; LY, life-years; LYG, LY gained compared with no screening; MISCAN, Microsimulation Screening Analysis; SIG, flexible sigmoidoscopy.

[a] The first interval listed is for SIG and the second interval listed is for HSgFOBT.

[b] Including deaths from complications of screening.

[c] Compared with no screening.

eTable 8c. Outcomes with SIG+HSgFOBT screening strategies that vary by the ages to begin and end screening and screening interval: **CRC-SPIN**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening intervals[a]	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[b]	LY with CRC	LYG[c]	Reductions[c] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	72	72	2	72	27	610	0	0	0
SIG+HSgFOBT 45-75 y															
10 y, 1 y	13,791	2,301	0	0	1,519	1,419	8	2,946	12	12	3	136	275	84	88
10 y, 2 y	9,157	2,532	0	0	1,191	1,253	11	2,455	11	15	4	174	261	79	84
5 y, 2 y	8,525	3,926	0	0	1,315	1,306	11	2,632	12	14	4	163	264	80	85
5 y, 3 y	6,375	4,199	0	0	1,176	1,221	13	2,410	11	17	5	182	253	77	82
SIG+HSgFOBT 45-80 y															
10 y, 1 y	14,951	2,448	0	0	1,639	1,447	6	3,092	14	10	2	133	279	86	91
10 y, 2 y	9,778	2,626	0	0	1,261	1,272	10	2,543	12	14	4	172	264	81	86
5 y, 2 y	9,153	4,211	0	0	1,411	1,333	9	2,753	13	13	3	158	268	82	87
5 y, 3 y	6,904	4,516	0	0	1,269	1,246	11	2,526	12	15	4	178	257	79	84
SIG+HSgFOBT 45-85 y															
10 y, 1 y	15,779	2,568	0	0	1,729	1,460	5	3,194	15	9	2	130	281	87	92
10 y, 2 y	10,461	2,798	0	0	1,350	1,287	8	2,645	14	13	3	169	267	82	88
5 y, 2 y	9,734	4,418	0	0	1,493	1,346	7	2,846	14	12	3	156	270	84	89
5 y, 3 y	7,319	4,735	0	0	1,339	1,261	9	2,609	13	14	4	176	259	81	86
SIG+HSgFOBT 50-75 y															
10 y, 1 y	11,376	1,940	0	0	1,288	1,283	10	2,581	12	14	4	178	258	81	85
10 y, 2 y	7,386	2,062	0	0	989	1,121	14	2,125	11	18	5	217	241	75	80
5 y, 2 y	6,949	3,297	0	0	1,113	1,180	13	2,305	12	17	5	202	246	77	82
5 y, 3 y	5,314	3,531	0	0	1,010	1,107	15	2,132	11	19	6	220	237	74	79
SIG+HSgFOBT 50-80 y															
10 y, 1 y	12,537	2,115	0	0	1,414	1,314	8	2,735	13	12	3	173	261	83	88
10 y, 2 y	8,339	2,318	0	0	1,116	1,162	11	2,288	12	16	4	209	248	78	84
5 y, 2 y	7,774	3,585	0	0	1,227	1,212	10	2,449	13	15	4	196	251	80	85
5 y, 3 y	5,837	3,836	0	0	1,101	1,136	12	2,249	12	17	5	215	241	77	82
SIG+HSgFOBT 50-85 y															
10 y, 1 y	13,372	2,220	0	0	1,500	1,327	7	2,834	15	11	3	172	263	84	90
10 y, 2 y	8,790	2,386	0	0	1,166	1,171	9	2,346	13	15	4	208	250	79	86
5 y, 2 y	8,228	3,786	0	0	1,296	1,224	9	2,529	14	14	4	195	252	81	87
5 y, 3 y	6,218	4,056	0	0	1,168	1,148	11	2,327	13	16	4	213	242	78	84
SIG+HSgFOBT 55-75 y															
10 y, 1 y	9,070	1,642	0	0	1,075	1,120	13	2,207	12	17	5	234	231	76	81
10 y, 2 y	6,061	1,815	0	0	862	991	16	1,869	11	21	6	264	218	71	77
5 y, 2 y	5,674	2,700	0	0	940	1,032	15	1,987	11	20	6	255	221	73	78
5 y, 3 y	4,183	2,881	0	0	838	961	18	1,817	11	22	7	271	211	69	75
SIG+HSgFOBT 55-80 y															
10 y, 1 y	10,238	1,773	0	0	1,194	1,147	11	2,351	13	16	4	229	235	78	84
10 y, 2 y	6,685	1,888	0	0	929	1,010	14	1,953	12	19	6	263	221	73	79

eTable 8c. Outcomes with SIG+HSgFOBT screening strategies that vary by the ages to begin and end screening and screening interval: **CRC-SPIN (continued)**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening intervals[a]	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[b]	LY with CRC	LYG[c]	Reductions[c] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
SIG+HSgFOBT 55-80 y (continued)															
5 y, 2 y	6,289	2,980	0	0	1,035	1,059	13	2,107	12	18	5	250	225	75	81
5 y, 3 y	4,815	3,191	0	0	941	994	15	1,950	12	20	6	265	216	72	78
SIG+HSgFOBT 55-85 y															
10 y, 1 y	11,070	1,896	0	0	1,284	1,161	9	2,454	14	15	4	228	237	80	85
10 y, 2 y	7,374	2,067	0	0	1,020	1,025	12	2,057	13	18	5	260	224	75	82
5 y, 2 y	6,885	3,182	0	0	1,117	1,073	11	2,201	14	17	5	248	226	76	82
5 y, 3 y	5,190	3,403	0	0	1,006	1,006	14	2,025	13	19	5	264	218	73	79

COL indicates colonoscopy; CRC, colorectal cancer; CRC-SPIN, CRC Simulated Population Model for Incidence and Natural History; CTC, computed tomographic colonography; HSgFOBT, high-sensitivity guaiac-based fecal occult blood test; LY, life-years; LYG, LY gained compared with no screening; SIG, flexible sigmoidoscopy.

[a] The first interval listed is for SIG and the second interval listed is for HSgFOBT.

[b] Including deaths from complications of screening.

[c] Compared with no screening.

eTable 9a. Outcomes with SIG+FIT screening strategies that vary by the ages to begin and end screening and screening interval: **SimCRC**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening intervals[a]	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[b]	LY with CRC	LYG[c]	Reductions[c] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	70	70	2	70	28	608	0	0	0
SIG+FIT 45-75 y															
10 y, 1 y	16,427	2,553	0	0	1,197	1,357	6	2,560	12	13	3	214	298	81	89
10 y, 2 y	9,933	2,750	0	0	976	1,232	6	2,214	11	16	4	253	290	77	87
5 y, 2 y	8,998	4,258	0	0	1,154	1,352	6	2,511	12	14	3	222	294	80	89
5 y, 3 y	6,508	4,422	0	0	1,077	1,306	6	2,389	11	15	4	234	289	78	87
SIG+FIT 45-80 y															
10 y, 1 y	17,761	2,662	0	0	1,281	1,386	4	2,670	13	12	2	214	300	82	91
10 y, 2 y	10,573	2,807	0	0	1,020	1,249	5	2,274	12	16	3	254	292	78	89
5 y, 2 y	9,635	4,546	0	0	1,238	1,381	4	2,623	13	13	3	222	297	81	90
5 y, 3 y	6,977	4,727	0	0	1,157	1,334	5	2,496	13	14	3	235	292	80	89
SIG+FIT 45-85 y															
10 y, 1 y	18,715	2,804	0	0	1,355	1,405	3	2,763	14	12	2	214	301	83	92
10 y, 2 y	11,285	3,001	0	0	1,098	1,273	3	2,374	13	15	3	257	294	78	90
5 y, 2 y	10,192	4,742	0	0	1,302	1,398	3	2,702	14	13	2	223	298	82	91
5 y, 3 y	7,372	4,931	0	0	1,215	1,350	4	2,569	14	14	3	236	293	80	90
SIG+FIT 50-75 y															
10 y, 1 y	13,393	2,097	0	0	1,014	1,225	8	2,248	11	17	4	271	270	76	85
10 y, 2 y	7,942	2,196	0	0	810	1,097	10	1,917	10	20	5	306	262	71	82
5 y, 2 y	7,296	3,559	0	0	991	1,225	8	2,224	11	17	4	278	267	75	85
5 y, 3 y	5,367	3,700	0	0	934	1,185	8	2,127	11	18	5	288	263	74	83
SIG+FIT 50-80 y															
10 y, 1 y	14,761	2,320	0	0	1,125	1,265	6	2,395	13	15	3	270	274	78	88
10 y, 2 y	8,960	2,494	0	0	925	1,144	6	2,076	12	18	4	307	267	74	86
5 y, 2 y	8,109	3,846	0	0	1,085	1,257	6	2,347	13	16	4	278	270	77	87
5 y, 3 y	5,887	3,997	0	0	1,016	1,214	6	2,237	12	17	4	289	266	75	85
SIG+FIT 50-85 y															
10 y, 1 y	15,698	2,396	0	0	1,184	1,280	5	2,469	14	15	3	270	275	78	88
10 y, 2 y	9,412	2,534	0	0	957	1,154	5	2,116	13	18	4	308	268	74	86
5 y, 2 y	8,557	4,041	0	0	1,143	1,272	5	2,419	14	16	4	279	271	77	87
5 y, 3 y	6,217	4,202	0	0	1,071	1,229	6	2,305	13	17	4	290	267	76	86
SIG+FIT 55-75 y															
10 y, 1 y	10,553	1,817	0	0	874	1,080	10	1,965	11	21	5	339	238	70	80
10 y, 2 y	6,468	1,956	0	0	733	981	11	1,725	11	23	6	368	231	67	78
5 y, 2 y	5,893	2,893	0	0	846	1,071	11	1,928	11	22	6	346	234	69	79
5 y, 3 y	4,200	3,003	0	0	789	1,031	12	1,832	11	23	6	353	229	68	78
SIG+FIT 55-80 y															
10 y, 1 y	11,892	1,902	0	0	954	1,107	9	2,069	12	20	5	339	240	71	82
10 y, 2 y	7,111	1,997	0	0	774	997	10	1,781	11	23	6	370	233	67	80
5 y, 2 y	6,514	3,178	0	0	930	1,101	9	2,039	12	21	5	346	236	70	81

eTable 9a. Outcomes with SIG+FIT screening strategies that vary by the ages to begin and end screening and screening interval: **SimCRC (continued)**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening intervals[a]	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[b]	LY with CRC	LYG[c]	Reductions[c] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
SIG+FIT 55-80 y (continued)															
5 y, 3 y	4,803	3,305	0	0	877	1,063	9	1,950	12	22	6	354	233	69	80
SIG+FIT 55-85 y															
10 y, 1 y	12,853	2,053	0	0	1,030	1,128	8	2,166	14	20	5	340	241	72	83
10 y, 2 y	7,830	2,197	0	0	854	1,022	8	1,884	13	22	5	372	235	68	81
5 y, 2 y	7,087	3,372	0	0	994	1,118	8	2,119	14	20	5	347	237	71	82
5 y, 3 y	5,168	3,505	0	0	933	1,079	8	2,020	13	21	5	356	233	69	81

COL indicates colonoscopy; CRC, colorectal cancer; CTC, computed tomographic colonography; FIT, fecal immunochemical test with a positivity cutoff of ≥100 ng of hemoglobin (Hb) per mL of buffer (≥20 μg Hb/g of feces); LY, life-years; LYG, LY gained compared with no screening; SIG flexible sigmoidoscopy; SimCRC, Simulation Model of CRC.

[a] The first interval listed is for SIG and the second interval listed is for FIT.

[b] Including deaths from complications of screening.

[c] Compared with no screening.

eTable 9b. Outcomes with SIG+FIT screening strategies that vary by the ages to begin and end screening and screening interval: **MISCAN**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening intervals[a]	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[b]	LY with CRC	LYG[c]	Reductions[c] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	67	67	1	67	28	565	0	0	0
SIG+FIT 45-75 y															
10 y, 1 y	15,711	2,397	0	0	1,196	1,620	10	2,826	13	26	5	388	262	60	80
10 y, 2 y	9,206	2,381	0	0	946	1,478	12	2,436	12	30	7	421	248	56	76
5 y, 2 y	8,154	3,824	0	0	1,126	1,641	11	2,779	13	27	6	384	255	60	79
5 y, 3 y	5,868	4,014	0	0	1,068	1,630	12	2,710	13	27	6	385	252	59	78
SIG+FIT 45-80 y															
10 y, 1 y	17,016	2,397	0	0	1,249	1,627	9	2,885	13	26	5	390	265	61	82
10 y, 2 y	9,822	2,381	0	0	972	1,483	11	2,467	12	29	6	425	250	56	78
5 y, 2 y	8,691	4,106	0	0	1,205	1,662	10	2,877	14	26	5	386	258	61	81
5 y, 3 y	6,154	4,274	0	0	1,131	1,647	10	2,788	13	27	6	387	254	60	79
SIG+FIT 45-85 y															
10 y, 1 y	18,030	2,585	0	0	1,328	1,640	8	2,976	14	26	5	392	266	61	83
10 y, 2 y	10,518	2,571	0	0	1,042	1,498	10	2,550	13	29	6	429	252	56	79
5 y, 2 y	9,272	4,264	0	0	1,255	1,668	9	2,931	14	26	5	388	259	61	81
5 y, 3 y	6,588	4,476	0	0	1,186	1,656	9	2,851	14	27	5	390	256	60	80
SIG+FIT 50-75 y															
10 y, 1 y	12,642	1,903	0	0	1,004	1,474	12	2,490	12	28	6	406	246	58	77
10 y, 2 y	7,306	1,886	0	0	793	1,349	15	2,157	11	31	7	434	232	53	73
5 y, 2 y	6,523	3,221	0	0	983	1,505	12	2,501	13	28	6	402	241	58	77
5 y, 3 y	4,737	3,380	0	0	940	1,498	13	2,451	13	28	7	402	239	58	76
SIG+FIT 50-80 y															
10 y, 1 y	14,039	2,177	0	0	1,121	1,504	9	2,635	14	27	5	408	251	60	80
10 y, 2 y	8,260	2,164	0	0	898	1,383	11	2,291	13	30	6	438	238	55	77
5 y, 2 y	7,328	3,453	0	0	1,060	1,522	11	2,592	13	27	6	404	244	59	79
5 y, 3 y	5,284	3,625	0	0	1,008	1,514	11	2,534	13	28	6	404	241	58	78
SIG+FIT 50-85 y															
10 y, 1 y	14,983	2,177	0	0	1,159	1,507	9	2,675	14	27	5	409	252	60	81
10 y, 2 y	8,706	2,164	0	0	917	1,385	11	2,313	13	30	6	441	239	55	78
5 y, 2 y	7,717	3,646	0	0	1,111	1,530	10	2,650	14	27	6	406	245	59	79
5 y, 3 y	5,491	3,802	0	0	1,048	1,520	11	2,579	14	28	6	406	242	58	78
SIG+FIT 55-75 y															
10 y, 1 y	9,903	1,743	0	0	891	1,308	13	2,212	12	30	7	431	223	55	75
10 y, 2 y	5,908	1,728	0	0	731	1,211	15	1,957	12	32	8	454	213	51	71
5 y, 2 y	5,303	2,601	0	0	844	1,313	14	2,171	12	30	7	430	218	55	73
5 y, 3 y	3,653	2,729	0	0	799	1,306	15	2,121	12	31	8	428	215	54	72
SIG+FIT 55-80 y															
10 y, 1 y	11,214	1,743	0	0	944	1,316	12	2,272	13	29	7	434	225	56	76
10 y, 2 y	6,524	1,728	0	0	757	1,217	14	1,988	12	32	8	458	215	52	73
5 y, 2 y	5,839	2,884	0	0	924	1,334	12	2,270	13	30	7	432	221	56	75

eTable 9b. Outcomes with SIG+FIT screening strategies that vary by the ages to begin and end screening and screening interval: **MISCAN (continued)**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening intervals[a]	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[b]	LY with CRC	LYG[c]	Reductions[c] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
SIG+FIT 55-80 y (continued)															
5 y, 3 y	4,251	3,027	0	0	885	1,330	13	2,228	13	30	7	432	219	55	75
SIG+FIT 55-85 y															
10 y, 1 y	12,233	1,931	0	0	1,024	1,329	11	2,364	14	29	6	436	227	56	77
10 y, 2 y	7,222	1,919	0	0	828	1,232	12	2,072	13	32	7	462	217	52	74
5 y, 2 y	6,422	3,043	0	0	974	1,340	12	2,326	14	29	7	433	222	56	76
5 y, 3 y	4,641	3,194	0	0	929	1,335	12	2,277	14	30	7	433	220	55	75

COL indicates colonoscopy; CRC, colorectal cancer; CTC, computed tomographic colonography; FIT, fecal immunochemical test with a positivity cutoff of ≥100 ng of hemoglobin (Hb) per mL of buffer (≥20 μg Hb/g of feces); LY, life-years; LYG, LY gained compared with no screening; MISCAN, Microsimulation Screening Analysis; SIG, flexible sigmoidoscopy.

[a] The first interval listed is for SIG and the second interval listed is for FIT.

[b] Including deaths from complications of screening.

[c] Compared with no screening.

eTable 9c. Outcomes with SIG+FIT screening strategies that vary by the ages to begin and end screening and screening interval: **CRC-SPIN**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening intervals[a]	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[b]	LY with CRC	LYG[c]	Reductions[c] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	72	72	2	72	27	610	0	0	0
SIG+FIT 45-75 y															
10 y, 1 y	16,356	2,523	0	0	1,188	1,409	9	2,606	12	12	3	149	274	83	88
10 y, 2 y	10,007	2,741	0	0	952	1,232	12	2,196	11	16	4	188	259	78	83
5 y, 2 y	9,231	4,307	0	0	1,109	1,289	11	2,410	12	15	4	174	262	79	84
5 y, 3 y	6,720	4,506	0	0	1,019	1,203	14	2,236	11	17	5	193	251	76	81
SIG+FIT 45-80 y															
10 y, 1 y	17,748	2,637	0	0	1,275	1,435	6	2,717	13	11	3	145	278	85	90
10 y, 2 y	10,688	2,802	0	0	999	1,250	10	2,259	12	15	4	185	262	79	85
5 y, 2 y	9,927	4,619	0	0	1,192	1,315	9	2,516	13	13	3	169	266	81	87
5 y, 3 y	7,238	4,841	0	0	1,097	1,228	11	2,336	12	16	4	189	255	78	84
SIG+FIT 45-85 y															
10 y, 1 y	18,755	2,786	0	0	1,350	1,448	5	2,804	14	10	2	143	280	86	92
10 y, 2 y	11,451	3,007	0	0	1,075	1,264	8	2,347	13	14	3	184	265	81	88
5 y, 2 y	10,558	4,837	0	0	1,259	1,328	7	2,594	14	13	3	168	268	83	89
5 y, 3 y	7,695	5,071	0	0	1,157	1,242	10	2,409	13	15	4	187	258	79	86
SIG+FIT 50-75 y															
10 y, 1 y	13,404	2,079	0	0	1,012	1,267	11	2,289	12	15	4	190	256	79	85
10 y, 2 y	8,033	2,192	0	0	792	1,098	15	1,905	11	19	6	229	239	73	79
5 y, 2 y	7,506	3,611	0	0	949	1,163	13	2,125	11	17	5	212	244	76	81
5 y, 3 y	5,559	3,780	0	0	880	1,089	15	1,984	11	19	6	228	235	73	78
SIG+FIT 50-80 y															
10 y, 1 y	14,812	2,307	0	0	1,120	1,300	8	2,428	13	13	3	184	261	82	88
10 y, 2 y	9,098	2,500	0	0	903	1,139	11	2,053	12	17	4	222	246	77	84
5 y, 2 y	8,405	3,922	0	0	1,044	1,193	10	2,248	13	15	4	207	249	79	85
5 y, 3 y	6,144	4,108	0	0	961	1,116	13	2,090	12	18	5	224	239	75	81
SIG+FIT 50-85 y															
10 y, 1 y	15,814	2,389	0	0	1,183	1,313	7	2,502	14	12	3	184	263	83	89
10 y, 2 y	9,591	2,544	0	0	937	1,147	10	2,094	13	16	4	221	248	78	85
5 y, 2 y	8,906	4,138	0	0	1,103	1,205	9	2,317	13	15	4	206	251	80	86
5 y, 3 y	6,516	4,338	0	0	1,016	1,129	11	2,157	13	17	5	223	241	77	83
SIG+FIT 55-75 y															
10 y, 1 y	10,606	1,808	0	0	868	1,105	13	1,986	12	18	5	244	230	75	81
10 y, 2 y	6,569	1,961	0	0	710	970	16	1,697	11	22	6	274	217	70	77
5 y, 2 y	6,100	2,945	0	0	808	1,014	16	1,838	11	21	6	264	219	71	77
5 y, 3 y	4,355	3,077	0	0	738	944	18	1,700	10	23	7	279	209	68	74
SIG+FIT 55-80 y															
10 y, 1 y	12,010	1,898	0	0	952	1,131	11	2,094	13	16	4	240	234	77	84
10 y, 2 y	7,255	2,005	0	0	756	989	14	1,759	11	20	6	272	220	72	78
5 y, 2 y	6,780	3,254	0	0	891	1,041	13	1,945	12	19	5	259	223	74	80

eTable 9c. Outcomes with SIG+FIT screening strategies that vary by the ages to begin and end screening and screening interval: **CRC-SPIN (continued)**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening intervals[a]	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[b]	LY with CRC	LYG[c]	Reductions[c] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
SIG+FIT 55-80 y (continued)															
5 y, 3 y	5,033	3,409	0	0	826	977	15	1,818	12	21	6	273	215	71	77
SIG+FIT 55-85 y															
10 y, 1 y	13,025	2,056	0	0	1,030	1,144	9	2,183	14	15	4	239	236	79	85
10 y, 2 y	8,023	2,217	0	0	835	1,003	12	1,850	13	19	5	272	223	73	81
5 y, 2 y	7,427	3,468	0	0	959	1,055	12	2,025	13	18	5	258	226	75	82
5 y, 3 y	5,451	3,634	0	0	884	988	14	1,886	13	20	6	272	216	72	79

COL indicates colonoscopy; CRC, colorectal cancer; CRC-SPIN, CRC Simulated Population Model for Incidence and Natural History; CTC, computed tomographic colonography; FIT, fecal immunochemical test with a positivity cutoff of ≥100 ng of hemoglobin (Hb) per mL of buffer (≥20 μg Hb/g of feces); LY, life-years; LYG, LY gained compared with no screening; SIG, flexible sigmoidoscopy.

[a] The first interval listed is for SIG and the second interval listed is for FIT.

[b] Including deaths from complications of screening.

[c] Compared with no screening.

eTable 10a. Outcomes with CTC screening strategies that vary by the ages to begin and end screening and screening interval: **SimCRC**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening interval	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[a]	LY with CRC	LYG[b]	Reductions[b] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	70	70	2	70	28	608	0	0	0
CTC 45-75 y															
5 y	0	0	4,879	0	860	1,267	6	2,133	11	13	3	202	290	81	88
10 y	0	0	3,167	0	633	1,056	9	1,698	10	19	5	266	267	73	82
CTC 45-80 y															
5 y	0	0	5,214	0	927	1,295	4	2,226	12	12	3	201	293	82	90
10 y	0	0	3,167	0	633	1,056	9	1,698	10	19	5	266	267	73	82
CTC 45-85 y															
5 y	0	0	5,436	0	971	1,309	4	2,284	13	12	3	202	293	83	90
10 y	0	0	3,444	0	703	1,085	7	1,795	12	19	5	268	269	74	84
CTC 50-75 y															
5 y	0	0	4,069	0	758	1,161	8	1,927	11	16	4	254	265	77	85
10 y	0	0	2,458	0	512	934	14	1,460	9	23	7	308	239	67	75
CTC 50-80 y															
5 y	0	0	4,405	0	825	1,189	6	2,021	12	15	4	253	267	78	86
10 y	0	0	2,874	0	617	989	10	1,615	11	21	6	308	245	70	80
CTC 50-85 y															
5 y	0	0	4,627	0	870	1,203	6	2,079	13	15	4	253	268	79	87
10 y	0	0	2,874	0	617	989	10	1,615	11	21	6	308	245	70	80
CTC 55-75 y															
5 y	0	0	3,295	0	658	1,025	11	1,694	11	21	6	321	231	71	79
10 y	0	0	2,250	0	512	870	14	1,396	10	25	7	362	214	64	74
CTC 55-80 y															
5 y	0	0	3,631	0	726	1,054	9	1,788	12	19	5	319	233	72	81
10 y	0	0	2,250	0	512	870	14	1,396	10	25	7	362	214	64	74
CTC 55-85 y															
5 y	0	0	3,854	0	770	1,068	9	1,847	13	19	5	320	234	72	81
10 y	0	0	2,528	0	583	899	12	1,494	12	25	7	365	216	65	76

COL indicates colonoscopy; CRC, colorectal cancer; CTC, computed tomographic colonography; LY, life-years; LYG, LY gained compared with no screening; SIG, flexible sigmoidoscopy; SimCRC, Simulation Model of CRC.

[a] Including deaths from complications of screening.

[b] Compared with no screening.

eTable 10b. Outcomes with CTC screening strategies that vary by the ages to begin and end screening and screening interval: **MISCAN**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening interval	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[a]	LY with CRC	LYG[b]	Reductions[b] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	67	67	1	67	28	565	0	0	0
CTC 45-75 y															
5 y	0	0	4,990	0	788	1,130	15	1,933	10	32	7	428	239	53	73
10 y	0	0	3,211	0	561	896	21	1,478	9	39	10	490	197	42	63
CTC 45-80 y															
5 y	0	0	5,357	0	846	1,148	12	2,006	11	30	7	429	244	54	76
10 y	0	0	3,211	0	561	896	21	1,478	9	39	10	490	197	42	63
CTC 45-85 y															
5 y	0	0	5,609	0	885	1,156	11	2,052	12	30	6	431	245	55	78
10 y	0	0	3,515	0	617	913	18	1,548	10	39	10	497	200	42	65
CTC 50-75 y															
5 y	0	0	4,171	0	690	1,037	16	1,743	10	33	8	443	226	51	72
10 y	0	0	2,485	0	456	812	26	1,293	8	41	12	496	184	39	58
CTC 50-80 y															
5 y	0	0	4,539	0	747	1,056	13	1,817	11	32	7	445	230	53	75
10 y	0	0	2,927	0	538	847	20	1,405	9	39	10	505	194	41	65
CTC 50-85 y															
5 y	0	0	4,792	0	787	1,065	12	1,864	11	31	7	446	231	53	76
10 y	0	0	2,927	0	538	847	20	1,405	9	39	10	505	194	41	65
CTC 55-75 y															
5 y	0	0	3,388	0	594	911	18	1,523	10	35	9	466	204	48	68
10 y	0	0	2,284	0	446	750	24	1,220	9	41	11	511	172	39	59
CTC 55-80 y															
5 y	0	0	3,759	0	653	930	15	1,598	11	33	8	467	208	50	71
10 y	0	0	2,284	0	446	750	24	1,220	9	41	11	511	172	39	59
CTC 55-85 y															
5 y	0	0	4,014	0	692	939	14	1,646	11	33	8	468	209	50	72
10 y	0	0	2,590	0	503	768	21	1,292	10	41	11	518	175	39	62

COL indicates colonoscopy; CRC, colorectal cancer; CTC, computed tomographic colonography; LY, life-years; LYG, LY gained compared with no screening; MISCAN, Microsimulation Screening Analysis; SIG, flexible sigmoidoscopy.

[a] Including deaths from complications of screening.

[b] Compared with no screening.

eTable 10c. Outcomes with CTC screening strategies that vary by the ages to begin and end screening and screening interval: **CRC-SPIN**.

Strategy	Outcomes per 1,000 persons free of diagnosed cancer at age 40 years														
Modality, age to begin-end Screening interval	Screening tests				Follow-up COLs	Surveillance COLs	COLs for symptoms	Total COLs	Compli-cations	CRC cases	CRC deaths[a]	LY with CRC	LYG[b]	Reductions[b] (%)	
	Stool tests	SIGs	CTCs	COLs										CRC incidence	CRC mortality
No screening	0	0	0	0	0	0	72	72	2	72	27	610	0	0	0
CTC 45-75 y															
5 y	0	0	5,106	0	769	1,027	11	1,807	10	14	4	142	264	81	84
10 y	0	0	3,239	0	569	905	15	1,488	10	18	6	186	244	75	79
CTC 45-80 y															
5 y	0	0	5,491	0	832	1,052	9	1,892	11	12	3	136	268	84	87
10 y	0	0	3,239	0	569	905	15	1,488	10	18	6	186	244	75	79
CTC 45-85 y															
5 y	0	0	5,753	0	875	1,065	7	1,948	12	11	3	134	269	85	89
10 y	0	0	3,545	0	636	932	12	1,579	12	16	5	181	247	78	83
CTC 50-75 y															
5 y	0	0	4,254	0	674	967	13	1,654	10	16	5	176	248	78	82
10 y	0	0	2,500	0	460	825	19	1,304	9	22	7	223	224	69	73
CTC 50-80 y															
5 y	0	0	4,638	0	737	992	10	1,739	11	13	4	169	252	81	85
10 y	0	0	2,948	0	555	874	14	1,442	11	18	5	210	234	76	80
CTC 50-85 y															
5 y	0	0	4,900	0	781	1,006	9	1,795	12	13	4	168	254	83	87
10 y	0	0	2,948	0	555	874	14	1,442	11	18	5	210	234	76	80
CTC 55-75 y															
5 y	0	0	3,438	0	583	877	15	1,475	10	18	6	225	224	74	78
10 y	0	0	2,296	0	459	788	18	1,265	9	22	7	255	209	70	74
CTC 55-80 y															
5 y	0	0	3,822	0	646	902	13	1,560	11	16	5	220	228	77	81
10 y	0	0	2,296	0	459	788	18	1,265	9	22	7	255	209	70	74
CTC 55-85 y															
5 y	0	0	4,084	0	689	915	11	1,616	12	15	5	217	230	79	83
10 y	0	0	2,602	0	525	815	15	1,356	11	19	6	252	212	73	77

COL indicates colonoscopy; CRC, colorectal cancer; CRC-SPIN, CRC Simulated Population Model for Incidence and Natural History; CTC, computed tomographic colonography; LY, life-years; LYG, LY gained compared with no screening; SIG, flexible sigmoidoscopy.

[a] Including deaths from complications of screening.

[b] Compared with no screening.

eTable 11. Outcomes and efficiency ratios for stool-based screening strategies[a] with an age to begin screening of 50 or 55 years. Strategies are ordered by the number of colonoscopies required.

Model/strategy	Outcomes per 1,000 40-year-olds									Efficiency ratio[b] (ΔCOL/ΔLYG)
Modality, age to begin-age to end (y), interval (y)	Stool tests	SIGs	CTCs	COLs	LYG	Compli-cations	CRC deaths averted	ΔCOL	ΔLYG	
SimCRC										
FIT 55-75, 3	5,306	0	0	807	178	6	16	—	—	—
FIT 55-80, 3	6,258	0	0	907	190	7	18	ND	ND	Dominated[W]
FIT 55-85, 3	6,837	0	0	965	193	8	19	ND	ND	Dominated[W]
FIT 50-75, 3	6,887	0	0	971	212	6	18	164	34	5
HSgFOBT 55-75, 3	5,014	0	0	1,052	178	7	16	ND	ND	Dominated[S]
FIT 55-75, 2	7,616	0	0	1,053	204	7	19	ND	ND	Dominated[S]
FIT 50-80, 3	7,694	0	0	1,055	220	8	20	84	9	10
FIT 50-85, 3	8,111	0	0	1,095	223	8	20	39	2	17[c]
FIT 55-80, 2	8,455	0	0	1,131	210	8	20	ND	ND	Dominated[S]
FIT-DNA 55-75, 5	3,576	0	0	1,171	194	8	18	ND	ND	Dominated[S]
HSgFOBT 55-80, 3	5,872	0	0	1,177	188	8	18	ND	ND	Dominated[S]
FIT 55-85, 2	9,350	0	0	1,208	214	10	21	ND	ND	Dominated[S]
FIT 50-75, 2	9,326	0	0	1,215	234	7	20	160	14	12
HSgFOBT 55-85, 3	6,352	0	0	1,244	191	9	19	ND	ND	Dominated[S]
FIT-DNA 55-80, 5	3,970	0	0	1,255	199	9	19	ND	ND	Dominated[S]
HSgFOBT 50-75, 3	6,456	0	0	1,286	212	7	18	ND	ND	Dominated[S]
FIT-DNA 55-85, 5	4,233	0	0	1,310	200	10	20	ND	ND	Dominated[S]
FIT 50-80, 2	10,572	0	0	1,327	243	9	22	112	9	13
HSgFOBT 55-75, 2	6,897	0	0	1,364	204	8	19	ND	ND	Dominated[S]
FIT-DNA 50-75, 5	4,391	0	0	1,364	224	8	20	ND	ND	Dominated[S]
FIT 50-85, 2	11,165	0	0	1,377	245	10	22	50	2	24[c]
HSgFOBT 50-80, 3	7,125	0	0	1,383	220	9	20	ND	ND	Dominated[S]
FIT-DNA 55-75, 3	4,668	0	0	1,415	214	9	20	ND	ND	Dominated[S]
HSgFOBT 50-85, 3	7,565	0	0	1,441	222	9	20	ND	ND	Dominated[S]
FIT-DNA 50-80, 5	4,781	0	0	1,447	229	9	21	ND	ND	Dominated[S]
HSgFOBT 55-80, 2	7,622	0	0	1,461	209	9	20	ND	ND	Dominated[S]
FIT 55-75, 1	12,502	0	0	1,478	226	9	21	ND	ND	Dominated[S]
FIT-DNA 50-85, 5	5,043	0	0	1,500	230	10	21	ND	ND	Dominated[S]
HSgFOBT 55-85, 2	8,390	0	0	1,558	212	11	21	ND	ND	Dominated[S]
FIT-DNA 55-80, 3	5,410	0	0	1,561	222	10	21	ND	ND	Dominated[S]
HSgFOBT 50-75, 2	8,388	0	0	1,597	235	9	20	ND	ND	Dominated[S]
FIT 55-80, 1	14,163	0	0	1,599	231	11	22	ND	ND	Dominated[S]
FIT-DNA 55-85, 3	5,801	0	0	1,634	223	11	22	ND	ND	Dominated[S]
FIT 55-85, 1	15,332	0	0	1,679	233	12	23	ND	ND	Dominated[S]
FIT-DNA 50-75, 3	5,990	0	0	1,701	250	9	22	ND	ND	Dominated[W]
HSgFOBT 50-80, 2	9,462	0	0	1,738	243	10	22	ND	ND	Dominated[S]
FIT 50-75, 1	15,778	0	0	1,739	260	10	23	413	17	24[c]
HSgFOBT 50-85, 2	9,970	0	0	1,801	245	11	22	ND	ND	Dominated[S]
FIT-DNA 50-80, 3	6,543	0	0	1,809	255	10	23	ND	ND	Dominated[S]
FIT 50-80, 1	17,426	0	0	1,858	265	11	24	531	22	24
HSgFOBT 55-75, 1	10,357	0	0	1,876	226	10	21	ND	ND	Dominated[S]
FIT-DNA 50-85, 3	6,961	0	0	1,884	257	11	23	ND	ND	Dominated[S]
FIT 50-85, 1	18,589	0	0	1,937	267	12	24	79	2	50
HSgFOBT 55-80, 1	11,637	0	0	2,025	231	12	22	ND	ND	Dominated[S]
HSgFOBT 55-85, 1	12,539	0	0	2,125	232	13	23	ND	ND	Dominated[S]
FIT-DNA 55-75, 1	8,846	0	0	2,206	237	11	22	ND	ND	Dominated[S]
HSgFOBT 50-75, 1	12,914	0	0	2,230	261	11	23	ND	ND	Dominated[S]
FIT-DNA 55-80, 1	9,880	0	0	2,367	240	13	23	ND	ND	Dominated[S]
HSgFOBT 50-80, 1	14,193	0	0	2,377	265	12	24	ND	ND	Dominated[S]
FIT-DNA 55-85, 1	10,618	0	0	2,475	241	14	23	ND	ND	Dominated[S]
HSgFOBT 50-85, 1	15,090	0	0	2,476	266	13	24	ND	ND	Dominated[S]
FIT-DNA 50-75, 1	11,041	0	0	2,601	271	12	24	664	4	155[c]
FIT-DNA 50-80, 1	12,096	0	0	2,763	274	13	25	826	7	112
FIT-DNA 50-85, 1	12,826	0	0	2,870	275	14	25	107	1	116

eTable 11. Outcomes and efficiency ratios for stool-based screening strategies[a] with an age to begin screening of 50 or 55 years (continued).

Model/strategy	Outcomes per 1,000 40-year-olds									Efficiency ratio[b] (ΔCOL/ΔLYG)
Modality, age to begin-age to end (y), interval (y)	Stool tests	SIGs	CTCs	COLs	LYG	Compli-cations	CRC deaths averted	ΔCOL	ΔLYG	
MISCAN										
FIT 55-75, 3	5,250	0	0	833	153	6	14	—	—	—
FIT 55-80, 3	6,204	0	0	917	165	7	16	84	11	7[c]
FIT 55-85, 3	6,859	0	0	967	169	8	17	134	15	9[c]
FIT 50-75, 3	6,795	0	0	995	176	7	15	162	23	7
HSgFOBT 55-75, 3	4,912	0	0	1,059	152	7	14	ND	ND	Dominated[S]
FIT 50-80, 3	7,693	0	0	1,070	186	8	17	75	10	8
FIT 55-75, 2	7,644	0	0	1,075	179	8	16	ND	ND	Dominated[S]
FIT 50-85, 3	8,032	0	0	1,096	188	8	17	26	2	12[c]
FIT 55-80, 2	8,501	0	0	1,139	186	8	18	ND	ND	Dominated[S]
HSgFOBT 55-80, 3	5,773	0	0	1,170	163	8	16	ND	ND	Dominated[S]
FIT 55-85, 2	9,437	0	0	1,201	190	9	18	ND	ND	Dominated[W]
FIT-DNA 55-75, 5	3,574	0	0	1,203	172	8	16	ND	ND	Dominated[S]
HSgFOBT 55-85, 3	6,359	0	0	1,238	166	9	16	ND	ND	Dominated[S]
FIT 50-75, 2	9,342	0	0	1,243	200	8	17	173	15	12[c]
FIT-DNA 55-80, 5	3,974	0	0	1,275	178	9	17	ND	ND	Dominated[S]
HSgFOBT 50-75, 3	6,302	0	0	1,296	175	8	15	ND	ND	Dominated[S]
FIT-DNA 55-85, 5	4,248	0	0	1,320	179	10	18	ND	ND	Dominated[S]
FIT 50-80, 2	10,613	0	0	1,334	210	9	19	264	24	11
FIT 50-85, 2	11,233	0	0	1,375	213	9	19	40	3	16
HSgFOBT 55-75, 2	6,940	0	0	1,386	178	9	17	ND	ND	Dominated[S]
HSgFOBT 50-80, 3	7,106	0	0	1,395	184	9	17	ND	ND	Dominated[S]
FIT-DNA 50-75, 5	4,380	0	0	1,402	193	9	17	ND	ND	Dominated[S]
HSgFOBT 50-85, 3	7,408	0	0	1,430	186	9	17	ND	ND	Dominated[S]
FIT-DNA 55-75, 3	4,509	0	0	1,431	190	9	17	ND	ND	Dominated[S]
HSgFOBT 55-80, 2	7,678	0	0	1,472	184	9	18	ND	ND	Dominated[S]
FIT-DNA 50-80, 5	4,776	0	0	1,472	198	9	18	ND	ND	Dominated[S]
FIT 55-75, 1	12,586	0	0	1,490	206	9	19	ND	ND	Dominated[S]
FIT-DNA 50-85, 5	5,048	0	0	1,516	200	10	19	ND	ND	Dominated[S]
HSgFOBT 55-85, 2	8,478	0	0	1,557	188	11	18	ND	ND	Dominated[S]
FIT-DNA 55-80, 3	5,260	0	0	1,557	199	10	19	ND	ND	Dominated[S]
FIT 55-80, 1	14,313	0	0	1,592	213	10	20	ND	ND	Dominated[W]
FIT-DNA 55-85, 3	5,771	0	0	1,634	202	11	19	ND	ND	Dominated[S]
HSgFOBT 50-75, 2	8,408	0	0	1,636	200	9	18	ND	ND	Dominated[S]
FIT 55-85, 1	15,566	0	0	1,659	215	11	21	ND	ND	Dominated[W]
FIT-DNA 50-75, 3	5,779	0	0	1,714	215	9	19	ND	ND	Dominated[S]
FIT 50-75, 1	15,843	0	0	1,757	231	10	20	383	18	21[c]
HSgFOBT 50-80, 2	9,497	0	0	1,759	209	10	19	ND	ND	Dominated[S]
HSgFOBT 50-85, 2	10,024	0	0	1,814	211	11	19	ND	ND	Dominated[S]
FIT-DNA 50-80, 3	6,481	0	0	1,828	223	11	20	ND	ND	Dominated[S]
FIT 50-80, 1	17,552	0	0	1,855	238	11	21	481	25	19
FIT-DNA 50-85, 3	6,745	0	0	1,867	224	11	20	ND	ND	Dominated[S]
HSgFOBT 55-75, 1	10,427	0	0	1,913	206	11	19	ND	ND	Dominated[S]
FIT 50-85, 1	18,796	0	0	1,921	240	11	22	66	2	27
HSgFOBT 55-80, 1	11,733	0	0	2,047	212	12	20	ND	ND	Dominated[S]
HSgFOBT 55-85, 1	12,679	0	0	2,137	214	13	20	ND	ND	Dominated[S]
FIT-DNA 55-75, 1	8,874	0	0	2,252	221	12	20	ND	ND	Dominated[S]
HSgFOBT 50-75, 1	12,927	0	0	2,287	232	11	20	ND	ND	Dominated[S]
FIT-DNA 55-80, 1	9,943	0	0	2,394	226	13	21	ND	ND	Dominated[S]
HSgFOBT 50-80, 1	14,223	0	0	2,416	237	12	21	ND	ND	Dominated[S]
FIT-DNA 55-85, 1	10,733	0	0	2,493	227	14	21	ND	ND	Dominated[S]
HSgFOBT 50-85, 1	15,161	0	0	2,505	239	13	22	ND	ND	Dominated[S]
FIT-DNA 50-75, 1	11,025	0	0	2,662	246	12	21	741	6	120[c]
FIT-DNA 50-80, 1	12,108	0	0	2,804	250	13	22	883	10	85[c]
FIT-DNA 50-85, 1	12,888	0	0	2,901	252	14	22	980	12	83

eTable 11. Outcomes and efficiency ratios for stool-based screening strategies[a] with an age to begin screening of 50 or 55 years (continued).

Model/strategy	Outcomes per 1,000 40-year-olds									Efficiency ratio[b] (ΔCOL/ΔLYG)
Modality, age to begin-age to end (y), interval (y)	Stool tests	SIGs	CTCs	COLs	LYG	Compli-cations	CRC deaths averted	ΔCOL	ΔLYG	
CRC-SPIN										
FIT 55-75, 3	5,301	0	0	895	152	7	14	—	—	—
FIT 55-80, 3	6,254	0	0	995	164	8	16	99	12	8[c]
FIT 55-85, 3	6,836	0	0	1,051	168	9	17	ND	ND	Dominated[W]
FIT 50-75, 3	6,857	0	0	1,081	178	7	16	186	26	7
HSgFOBT 55-75, 3	5,053	0	0	1,082	156	7	15	ND	ND	Dominated[S]
FIT 55-75, 2	7,575	0	0	1,160	183	8	17	79	5	15[c]
FIT 50-80, 3	7,660	0	0	1,163	187	8	17	82	9	9[c]
FIT 50-85, 3	8,084	0	0	1,201	191	9	18	120	13	10[c]
HSgFOBT 55-80, 3	5,932	0	0	1,204	167	9	16	ND	ND	Dominated[S]
FIT 55-80, 2	8,410	0	0	1,237	190	9	18	ND	ND	Dominated[S]
FIT-DNA 55-75, 5	3,570	0	0	1,261	172	9	16	ND	ND	Dominated[S]
HSgFOBT 55-85, 3	6,429	0	0	1,269	171	10	17	ND	ND	Dominated[S]
FIT 55-85, 2	9,309	0	0	1,313	196	10	19	ND	ND	Dominated[W]
HSgFOBT 50-75, 3	6,498	0	0	1,317	183	8	16	ND	ND	Dominated[S]
FIT-DNA 55-80, 5	3,967	0	0	1,343	177	10	18	ND	ND	Dominated[S]
FIT 50-75, 2	9,241	0	0	1,346	207	9	18	265	29	9
HSgFOBT 55-75, 2	6,959	0	0	1,394	187	9	18	ND	ND	Dominated[S]
FIT-DNA 55-85, 5	4,235	0	0	1,397	180	11	18	ND	ND	Dominated[S]
HSgFOBT 50-80, 3	7,184	0	0	1,412	192	9	18	ND	ND	Dominated[S]
FIT 50-80, 2	10,476	0	0	1,454	218	10	20	108	10	10
HSgFOBT 50-85, 3	7,643	0	0	1,466	195	10	18	ND	ND	Dominated[S]
FIT-DNA 50-75, 5	4,370	0	0	1,473	195	9	18	ND	ND	Dominated[S]
HSgFOBT 55-80, 2	7,706	0	0	1,487	194	10	19	ND	ND	Dominated[S]
FIT 50-85, 2	11,071	0	0	1,504	220	11	20	49	2	24[c]
FIT-DNA 55-75, 3	4,640	0	0	1,520	197	10	19	ND	ND	Dominated[S]
FIT-DNA 50-80, 5	4,762	0	0	1,554	200	10	19	ND	ND	Dominated[S]
HSgFOBT 55-85, 2	8,513	0	0	1,581	198	11	20	ND	ND	Dominated[S]
FIT-DNA 50-85, 5	5,028	0	0	1,606	203	11	19	ND	ND	Dominated[S]
FIT 55-75, 1	12,290	0	0	1,611	217	10	20	ND	ND	Dominated[S]
HSgFOBT 50-75, 2	8,448	0	0	1,626	212	9	19	ND	ND	Dominated[S]
FIT-DNA 55-80, 3	5,379	0	0	1,663	206	11	20	ND	ND	Dominated[S]
FIT 55-80, 1	13,929	0	0	1,729	224	12	21	ND	ND	Dominated[W]
FIT-DNA 55-85, 3	5,774	0	0	1,734	209	12	21	ND	ND	Dominated[S]
HSgFOBT 50-80, 2	9,554	0	0	1,763	221	10	20	ND	ND	Dominated[S]
FIT 55-85, 1	15,093	0	0	1,809	226	13	22	ND	ND	Dominated[W]
HSgFOBT 50-85, 2	10,089	0	0	1,824	223	11	21	ND	ND	Dominated[S]
FIT-DNA 50-75, 3	5,927	0	0	1,827	226	10	20	ND	ND	Dominated[W]
HSgFOBT 55-75, 1	10,467	0	0	1,899	219	11	21	ND	ND	Dominated[S]
FIT 50-75, 1	15,444	0	0	1,899	244	11	22	445	26	17
FIT-DNA 50-80, 3	6,476	0	0	1,931	232	11	21	ND	ND	Dominated[S]
FIT-DNA 50-85, 3	6,903	0	0	2,005	235	12	22	ND	ND	Dominated[S]
FIT 50-80, 1	17,062	0	0	2,013	250	12	23	114	6	18
HSgFOBT 55-80, 1	11,806	0	0	2,043	224	12	22	ND	ND	Dominated[S]
FIT 50-85, 1	18,224	0	0	2,091	253	13	23	78	3	26
HSgFOBT 55-85, 1	12,765	0	0	2,143	227	13	22	ND	ND	Dominated[S]
HSgFOBT 50-75, 1	13,026	0	0	2,253	247	11	22	ND	ND	Dominated[S]
FIT-DNA 55-75, 1	8,647	0	0	2,315	234	12	22	ND	ND	Dominated[S]
HSgFOBT 50-80, 1	14,364	0	0	2,395	252	12	23	ND	ND	Dominated[S]
FIT-DNA 55-80, 1	9,673	0	0	2,471	238	14	23	ND	ND	Dominated[S]
HSgFOBT 50-85, 1	15,321	0	0	2,493	255	14	23	402	1	318[c]
FIT-DNA 55-85, 1	10,427	0	0	2,582	239	15	23	ND	ND	Dominated[S]
FIT-DNA 50-75, 1	10,745	0	0	2,729	261	13	23	638	7	87[c]
FIT-DNA 50-80, 1	11,795	0	0	2,886	265	14	24	795	11	70[c]
FIT-DNA 50-85, 1	12,542	0	0	2,994	266	15	24	903	13	69

eTable 11. Outcomes and efficiency ratios for stool-based screening strategies[a] with an age to begin screening of 50 or 55 years (continued).

COL indicates colonoscopy; CRC, colorectal cancer; CRC-SPIN, CRC Simulated Population Model for Incidence and Natural History; CTC, computed tomographic colonography; FIT, fecal immunochemical test with positivity cutoff of ≥100 ng of hemoglobin (Hb) per mL of buffer (≥20 μg Hb/g of feces); FIT-DNA, multitarget stool DNA test (fecal immunochemical test with a DNA stool test); HSgFOBT, high-sensitivity guaiac-based fecal occult blood test; LYG, life-years gained compared with no screening; MISCAN, Microsimulation Screening Analysis; ND, indicates ΔCOL and ΔLYG are not defined because the strategy was not an efficient or near-efficient option; S, strategy is strongly dominated (ie, another strategy within the modality requires fewer colonoscopies and provides more LYG [eFigure 2]); SIG, flexible sigmoidoscopy; SimCRC, Simulation Model of CRC; W, strategy is weakly dominated (ie, another more burdensome strategy within the modality provides more LYG but requires fewer additional colonoscopies per additional LYG to achieve those gains [eFigure 2]) and does not meet the criterion for near-efficiency; ΔCOL, incremental number of colonoscopies compared with the next-most effective non-dominated strategy; ΔLYG, incremental number of LYG compared with the next-most effective non-dominated strategy; — indicates the default strategy (ie, the least burdensome and least effective strategy).

[a] FIT, FIT-DNA, HSgFOBT.

[b] Due to rounding, efficiency ratio may not equal ΔCOL/ΔLYG.

[c] Strategy is near-efficient (ie, it is weakly dominated and its LYG are within 98% of the efficient frontier).

eTable 12. Outcomes and efficiency ratios for strategies combining SIG and stool testing[a] with an age to begin screening of 50 or 55 years. Strategies are ordered by the number of colonoscopies required.

Model/strategy	Outcomes per 1,000 40-year-olds									Efficiency ratio[b] (ΔCOL/ΔLYG)
Modality, age to begin-age to end (y), SIG interval_ stool test interval (y)	Stool tests	SIGs	CTCs	COLs	LYG	Compli-cations	CRC deaths averted	ΔCOL	ΔLYG	
SimCRC										
SIG+FIT 55-75, 10_2	6,468	1,956	0	1,725	231	11	22	—	—	—
SIG+FIT 55-80, 10_2	7,111	1,997	0	1,781	233	11	22	ND	ND	Dominated[W]
SIG+FIT 55-75, 5_3	4,200	3,003	0	1,832	229	11	22	ND	ND	Dominated[S]
SIG+FIT 55-85, 10_2	7,830	2,197	0	1,884	235	13	23	ND	ND	Dominated[W]
SIG+FIT 50-75, 10_2	7,942	2,196	0	1,917	262	10	23	192	31	6
SIG+FIT 55-75, 5_2	5,893	2,893	0	1,928	234	11	22	ND	ND	Dominated[S]
SIG+HSgFOBT 55-75, 10_2	5,898	1,790	0	1,932	231	11	22	ND	ND	Dominated[S]
SIG+FIT 55-80, 5_3	4,803	3,305	0	1,950	233	12	22	ND	ND	Dominated[S]
SIG+HSgFOBT 55-75, 5_3	4,013	2,788	0	1,963	229	11	22	ND	ND	Dominated[S]
SIG+FIT 55-75, 10_1	10,553	1,817	0	1,965	238	11	22	ND	ND	Dominated[S]
SIG+HSgFOBT 55-80, 10_2	6,471	1,858	0	2,016	233	12	22	ND	ND	Dominated[S]
SIG+FIT 55-85, 5_3	5,168	3,505	0	2,020	233	13	23	ND	ND	Dominated[S]
SIG+FIT 55-80, 5_2	6,514	3,178	0	2,039	236	12	23	ND	ND	Dominated[S]
SIG+FIT 55-80, 10_1	11,892	1,902	0	2,069	240	12	23	ND	ND	Dominated[S]
SIG+FIT 50-80, 10_2	8,960	2,494	0	2,076	267	12	24	159	5	31
SIG+HSgFOBT 55-80, 5_3	4,568	3,067	0	2,095	232	13	22	ND	ND	Dominated[S]
SIG+HSgFOBT 55-75, 5_2	5,432	2,622	0	2,097	233	12	22	ND	ND	Dominated[S]
SIG+FIT 50-85, 10_2	9,412	2,534	0	2,116	268	13	24	40	1	56[c]
SIG+FIT 55-85, 5_2	7,087	3,372	0	2,119	237	14	23	ND	ND	Dominated[S]
SIG+FIT 50-75, 5_3	5,367	3,700	0	2,127	263	11	23	ND	ND	Dominated[S]
SIG+HSgFOBT 55-85, 10_2	7,097	2,022	0	2,129	234	13	23	ND	ND	Dominated[S]
SIG+FIT 55-85, 10_1	12,853	2,053	0	2,166	241	14	23	ND	ND	Dominated[S]
SIG+HSgFOBT 55-85, 5_3	4,891	3,253	0	2,173	233	14	23	ND	ND	Dominated[S]
SIG+HSgFOBT 50-75, 10_2	7,212	2,042	0	2,190	262	11	23	ND	ND	Dominated[S]
SIG+HSgFOBT 55-80, 5_2	5,985	2,877	0	2,221	236	13	23	ND	ND	Dominated[S]
SIG+FIT 50-75, 5_2	7,296	3,559	0	2,224	267	11	24	ND	ND	Dominated[S]
SIG+FIT 50-80, 5_3	5,887	3,997	0	2,237	266	12	24	ND	ND	Dominated[S]
SIG+HSgFOBT 55-75, 10_1	8,817	1,625	0	2,241	237	12	22	ND	ND	Dominated[S]
SIG+FIT 50-75, 10_1	13,393	2,097	0	2,248	270	11	24	172	3	54[c]
SIG+HSgFOBT 50-75, 5_3	5,099	3,425	0	2,294	263	12	23	ND	ND	Dominated[S]
SIG+FIT 50-85, 5_3	6,217	4,202	0	2,305	267	13	24	ND	ND	Dominated[S]
SIG+HSgFOBT 55-85, 5_2	6,501	3,056	0	2,317	237	14	23	ND	ND	Dominated[S]
SIG+FIT 50-80, 5_2	8,109	3,846	0	2,347	270	13	24	ND	ND	Dominated[S]
SIG+HSgFOBT 50-80, 10_2	8,100	2,283	0	2,360	267	13	24	ND	ND	Dominated[S]
SIG+HSgFOBT 55-80, 10_1	9,891	1,749	0	2,387	240	13	23	ND	ND	Dominated[S]
SIG+FIT 50-80, 10_1	14,761	2,320	0	2,395	274	13	25	320	7	48
SIG+HSgFOBT 50-80, 5_3	5,559	3,699	0	2,413	265	13	24	ND	ND	Dominated[S]
SIG+FIT 50-85, 5_2	8,557	4,041	0	2,419	271	14	24	ND	ND	Dominated[S]
SIG+HSgFOBT 50-85, 10_2	8,502	2,345	0	2,420	268	13	24	ND	ND	Dominated[S]
SIG+HSgFOBT 50-75, 5_2	6,689	3,211	0	2,431	267	12	24	ND	ND	Dominated[S]
SIG+FIT 50-85, 10_1	15,698	2,396	0	2,469	275	14	25	73	1	92
SIG+HSgFOBT 55-85, 10_1	10,643	1,861	0	2,493	241	14	23	ND	ND	Dominated[S]
SIG+HSgFOBT 50-85, 5_3	5,893	3,892	0	2,494	266	14	24	ND	ND	Dominated[S]
SIG+HSgFOBT 50-80, 5_2	7,423	3,473	0	2,576	270	13	24	ND	ND	Dominated[S]
SIG+HSgFOBT 50-75, 10_1	11,100	1,926	0	2,616	271	12	24	ND	ND	Dominated[S]
SIG+HSgFOBT 50-85, 5_2	7,818	3,651	0	2,658	271	14	24	ND	ND	Dominated[S]
SIG+HSgFOBT 50-80, 10_1	12,172	2,091	0	2,776	274	13	25	ND	ND	Dominated[S]
SIG+HSgFOBT 50-85, 10_1	12,922	2,188	0	2,875	274	15	25	ND	ND	Dominated[S]

eTable 12. Outcomes and efficiency ratios for strategies combining SIG and stool testing[a] with an age to begin screening of 50 or 55 years (continued).

Model/strategy	Outcomes per 1,000 40-year-olds									Efficiency ratio[b]
Modality, age to begin-age to end (y), SIG interval_ stool test interval (y)	Stool tests	SIGs	CTCs	COLs	LYG	Compli-cations	CRC deaths averted	ΔCOL	ΔLYG	(ΔCOL/ΔLYG)
MISCAN										
SIG+FIT 55-75, 10_2	5,908	1,728	0	1,957	213	12	20	—	—	—
SIG+FIT 55-80, 10_2	6,524	1,728	0	1,988	215	12	20	31	2	15[c]
SIG+FIT 55-85, 10_2	7,222	1,919	0	2,072	217	13	21	ND	ND	Dominated[W]
SIG+FIT 55-75, 5_3	3,653	2,729	0	2,121	215	12	20	ND	ND	Dominated[S]
SIG+HSgFOBT 55-75, 10_2	5,368	1,544	0	2,126	212	12	20	ND	ND	Dominated[S]
SIG+FIT 50-75, 10_2	7,306	1,886	0	2,157	232	11	20	201	20	10
SIG+FIT 55-75, 5_2	5,303	2,601	0	2,171	218	12	20	ND	ND	Dominated[S]
SIG+HSgFOBT 55-80, 10_2	5,901	1,544	0	2,176	214	12	20	ND	ND	Dominated[S]
SIG+FIT 55-75, 10_1	9,903	1,743	0	2,212	223	12	21	ND	ND	Dominated[S]
SIG+HSgFOBT 55-75, 5_3	3,459	2,549	0	2,225	214	12	20	ND	ND	Dominated[S]
SIG+FIT 55-80, 5_3	4,251	3,027	0	2,228	219	13	21	ND	ND	Dominated[S]
SIG+FIT 55-80, 5_2	5,839	2,884	0	2,270	221	13	21	ND	ND	Dominated[S]
SIG+FIT 55-80, 10_1	11,214	1,743	0	2,272	225	13	21	ND	ND	Dominated[S]
SIG+HSgFOBT 55-85, 10_2	6,506	1,703	0	2,273	215	13	20	ND	ND	Dominated[S]
SIG+FIT 55-85, 5_3	4,641	3,194	0	2,277	220	14	21	ND	ND	Dominated[S]
SIG+FIT 50-80, 10_2	8,260	2,164	0	2,291	238	13	21	134	6	24
SIG+HSgFOBT 55-75, 5_2	4,866	2,339	0	2,308	217	13	20	ND	ND	Dominated[S]
SIG+FIT 50-85, 10_2	8,706	2,164	0	2,313	239	13	22	21	1	27[c]
SIG+FIT 55-85, 5_2	6,422	3,043	0	2,326	222	14	21	ND	ND	Dominated[S]
SIG+HSgFOBT 55-80, 5_3	4,010	2,822	0	2,347	218	13	21	ND	ND	Dominated[S]
SIG+FIT 55-85, 10_1	12,233	1,931	0	2,364	227	14	21	ND	ND	Dominated[S]
SIG+HSgFOBT 50-75, 10_2	6,594	1,677	0	2,374	231	12	20	ND	ND	Dominated[S]
SIG+HSgFOBT 55-85, 5_3	4,368	2,969	0	2,406	219	14	21	ND	ND	Dominated[S]
SIG+HSgFOBT 55-80, 5_2	5,334	2,588	0	2,417	220	14	21	ND	ND	Dominated[S]
SIG+FIT 50-75, 5_3	4,737	3,380	0	2,451	239	13	21	ND	ND	Dominated[S]
SIG+HSgFOBT 55-75, 10_1	8,346	1,506	0	2,461	222	13	21	ND	ND	Dominated[S]
SIG+HSgFOBT 55-85, 5_2	5,855	2,722	0	2,488	221	14	21	ND	ND	Dominated[S]
SIG+FIT 50-75, 10_1	12,642	1,903	0	2,490	246	12	22	199	8	24
SIG+FIT 50-75, 5_2	6,523	3,221	0	2,501	241	13	21	ND	ND	Dominated[S]
SIG+HSgFOBT 50-80, 10_2	7,423	1,908	0	2,524	236	13	21	ND	ND	Dominated[S]
SIG+FIT 50-80, 5_3	5,284	3,625	0	2,534	241	13	22	ND	ND	Dominated[S]
SIG+HSgFOBT 55-80, 10_1	9,391	1,506	0	2,554	224	13	21	ND	ND	Dominated[S]
SIG+HSgFOBT 50-85, 10_2	7,811	1,908	0	2,558	237	13	21	ND	ND	Dominated[S]
SIG+FIT 50-85, 5_3	5,491	3,802	0	2,579	242	14	22	ND	ND	Dominated[S]
SIG+HSgFOBT 50-75, 5_3	4,462	3,146	0	2,587	238	13	21	ND	ND	Dominated[S]
SIG+FIT 50-80, 5_2	7,328	3,453	0	2,592	244	13	22	ND	ND	Dominated[S]
SIG+FIT 50-80, 10_1	14,039	2,177	0	2,635	251	14	22	144	5	31
SIG+FIT 50-85, 5_2	7,717	3,646	0	2,650	245	14	22	ND	ND	Dominated[S]
SIG+HSgFOBT 55-85, 10_1	10,210	1,651	0	2,662	225	14	21	ND	ND	Dominated[S]
SIG+HSgFOBT 50-75, 5_2	5,947	2,882	0	2,667	240	13	21	ND	ND	Dominated[S]
SIG+FIT 50-85, 10_1	14,983	2,177	0	2,675	252	14	23	41	1	59
SIG+HSgFOBT 50-80, 5_3	4,963	3,362	0	2,683	240	14	22	ND	ND	Dominated[S]
SIG+HSgFOBT 50-85, 5_3	5,154	3,526	0	2,733	241	14	22	ND	ND	Dominated[S]
SIG+HSgFOBT 50-80, 5_2	6,666	3,079	0	2,778	243	14	22	ND	ND	Dominated[S]
SIG+HSgFOBT 50-75, 10_1	10,562	1,633	0	2,814	245	13	21	ND	ND	Dominated[S]
SIG+HSgFOBT 50-85, 5_2	7,009	3,248	0	2,844	243	14	22	ND	ND	Dominated[S]
SIG+HSgFOBT 50-80, 10_1	11,686	1,844	0	2,977	249	14	22	ND	ND	Dominated[S]
SIG+HSgFOBT 50-85, 10_1	12,442	1,844	0	3,042	250	15	22	ND	ND	Dominated[S]

eTable 12. Outcomes and efficiency ratios for strategies combining SIG and stool testing[a] with an age to begin screening of 50 or 55 years (continued).

Model/strategy	Outcomes per 1,000 40-year-olds									Efficiency ratio[b] (ΔCOL/ΔLYG)
Modality, age to begin-age to end (y), SIG interval_ stool test interval (y)	Stool tests	SIGs	CTCs	COLs	LYG	Compli-cations	CRC deaths averted	ΔCOL	ΔLYG	
CRC-SPIN										
SIG+FIT 55-75, 10_2	6,569	1,961	0	1,697	217	11	20	—	—	—
SIG+FIT 55-75, 5_3	4,355	3,077	0	1,700	209	10	20	ND	ND	Dominated[S]
SIG+FIT 55-80, 10_2	7,255	2,005	0	1,759	220	11	21	62	3	20[c]
SIG+HSgFOBT 55-75, 5_3	4,183	2,881	0	1,817	211	11	20	ND	ND	Dominated[S]
SIG+FIT 55-80, 5_3	5,033	3,409	0	1,818	215	12	21	ND	ND	Dominated[S]
SIG+FIT 55-75, 5_2	6,100	2,945	0	1,838	219	11	21	ND	ND	Dominated[S]
SIG+FIT 55-85, 10_2	8,023	2,217	0	1,850	223	13	22	ND	ND	Dominated[W]
SIG+HSgFOBT 55-75, 10_2	6,061	1,815	0	1,869	218	11	21	ND	ND	Dominated[S]
SIG+FIT 55-85, 5_3	5,451	3,634	0	1,886	216	13	21	ND	ND	Dominated[S]
SIG+FIT 50-75, 10_2	8,033	2,192	0	1,905	239	11	21	208	22	9
SIG+FIT 55-80, 5_2	6,780	3,254	0	1,945	223	12	21	ND	ND	Dominated[S]
SIG+HSgFOBT 55-80, 5_3	4,815	3,191	0	1,950	216	12	21	ND	ND	Dominated[S]
SIG+HSgFOBT 55-80, 10_2	6,685	1,888	0	1,953	221	12	21	ND	ND	Dominated[S]
SIG+FIT 50-75, 5_3	5,559	3,780	0	1,984	235	11	21	ND	ND	Dominated[S]
SIG+FIT 55-75, 10_1	10,606	1,808	0	1,986	230	12	22	ND	ND	Dominated[S]
SIG+HSgFOBT 55-75, 5_2	5,674	2,700	0	1,987	221	11	21	ND	ND	Dominated[S]
SIG+FIT 55-85, 5_2	7,427	3,468	0	2,025	226	13	22	ND	ND	Dominated[S]
SIG+HSgFOBT 55-85, 5_3	5,190	3,403	0	2,025	218	13	21	ND	ND	Dominated[S]
SIG+FIT 50-80, 10_2	9,098	2,500	0	2,053	246	12	22	148	7	20
SIG+HSgFOBT 55-85, 10_2	7,374	2,067	0	2,057	224	13	22	ND	ND	Dominated[S]
SIG+FIT 50-80, 5_3	6,144	4,108	0	2,090	239	12	22	ND	ND	Dominated[S]
SIG+FIT 55-80, 10_1	12,010	1,898	0	2,094	234	13	22	ND	ND	Dominated[S]
SIG+FIT 50-85, 10_2	9,591	2,544	0	2,094	248	13	23	42	1	31[c]
SIG+HSgFOBT 55-80, 5_2	6,289	2,980	0	2,107	225	12	22	ND	ND	Dominated[S]
SIG+FIT 50-75, 5_2	7,506	3,611	0	2,125	244	11	22	ND	ND	Dominated[S]
SIG+HSgFOBT 50-75, 10_2	7,386	2,062	0	2,125	241	11	21	ND	ND	Dominated[S]
SIG+HSgFOBT 50-75, 5_3	5,314	3,531	0	2,132	237	11	21	ND	ND	Dominated[S]
SIG+FIT 50-85, 5_3	6,516	4,338	0	2,157	241	13	22	ND	ND	Dominated[S]
SIG+FIT 55-85, 10_1	13,025	2,056	0	2,183	236	14	23	ND	ND	Dominated[S]
SIG+HSgFOBT 55-85, 5_2	6,885	3,182	0	2,201	226	14	22	ND	ND	Dominated[S]
SIG+HSgFOBT 55-75, 10_1	9,070	1,642	0	2,207	231	12	22	ND	ND	Dominated[S]
SIG+FIT 50-80, 5_2	8,405	3,922	0	2,248	249	13	23	195	3	65[c]
SIG+HSgFOBT 50-80, 5_3	5,837	3,836	0	2,249	241	12	22	ND	ND	Dominated[S]
SIG+HSgFOBT 50-80, 10_2	8,339	2,318	0	2,288	248	12	23	ND	ND	Dominated[S]
SIG+FIT 50-75, 10_1	13,404	2,079	0	2,289	256	12	23	237	9	25
SIG+HSgFOBT 50-75, 5_2	6,949	3,297	0	2,305	246	12	22	ND	ND	Dominated[S]
SIG+FIT 50-85, 5_2	8,906	4,138	0	2,317	251	13	23	ND	ND	Dominated[S]
SIG+HSgFOBT 50-85, 5_3	6,218	4,056	0	2,327	242	13	22	ND	ND	Dominated[S]
SIG+HSgFOBT 50-85, 10_2	8,790	2,386	0	2,346	250	13	23	ND	ND	Dominated[S]
SIG+HSgFOBT 55-80, 10_1	10,238	1,773	0	2,351	235	13	22	ND	ND	Dominated[S]
SIG+FIT 50-80, 10_1	14,812	2,307	0	2,428	261	13	24	139	5	27
SIG+HSgFOBT 50-80, 5_2	7,774	3,585	0	2,449	251	13	23	ND	ND	Dominated[S]
SIG+HSgFOBT 55-85, 10_1	11,070	1,896	0	2,454	237	14	23	ND	ND	Dominated[S]
SIG+FIT 50-85, 10_1	15,814	2,389	0	2,502	263	14	24	74	2	43
SIG+HSgFOBT 50-85, 5_2	8,228	3,786	0	2,529	252	14	23	ND	ND	Dominated[S]
SIG+HSgFOBT 50-75, 10_1	11,376	1,940	0	2,581	258	12	23	ND	ND	Dominated[S]
SIG+HSgFOBT 50-80, 10_1	12,537	2,115	0	2,735	261	13	24	ND	ND	Dominated[S]
SIG+HSgFOBT 50-85, 10_1	13,372	2,220	0	2,834	263	15	24	332	1	449

eTable 12. Outcomes and efficiency ratios for strategies combining SIG and stool testing[a] with an age to begin screening of 50 or 55 years (continued).

COL indicates colonoscopy; CRC, colorectal cancer; CRC-SPIN, CRC Simulated Population Model for Incidence and Natural History; CTC, computed tomographic colonography; FIT, fecal immunochemical test with positivity cutoff of ≥100 ng of hemoglobin (Hb) per mL of buffer (≥20 μg Hb/g of feces); HSgFOBT, high-sensitivity guaiac-based fecal occult blood test; LYG, life-years gained compared with no screening; MISCAN, Microsimulation Screening Analysis; ND, indicates ΔCOL and ΔLYG are not defined because the strategy was not an efficient or near-efficient option; S, strategy is strongly dominated (ie, another strategy within the modality requires fewer colonoscopies and provides more LYG [eFigure 2]); SIG, flexible sigmoidoscopy; SimCRC, Simulation Model of CRC; W, strategy is weakly dominated (ie, another more burdensome strategy within the modality provides more LYG but requires fewer additional colonoscopies per additional LYG to achieve those gains [eFigure 2]) and does not meet the criterion for near-efficiency; ΔCOL, incremental number of colonoscopies compared with the next-most effective non-dominated strategy; ΔLYG, incremental number of LYG compared with the next-most effective non-dominated strategy. — indicates the default strategy (ie, the least burdensome and least effective strategy).

[a] SIG+FIT, SIG+HSgFOBT.

[b] Due to rounding, efficiency ratio may not equal ΔCOL/ΔLYG.

[c] Strategy is near-efficient (ie, it is weakly dominated and its LYG are within 98% of the efficient frontier).

eTable 13. Outcomes for CRC screening strategies with screening from ages 50 to 75 years and the recommendable strategies[a] by model (shaded) when the colonoscopy strategy with a 5-year interval is the benchmark strategy. Within a class of screening modalities, strategies are ordered by the number of colonoscopies required.

Model	Outcomes per 1,000 40-year-olds									
Modality, age to begin-age to end (y), interval[b] (y)	Stool tests	SIGs	CTCs	COLs	LYG	Compli-cations	CRC deaths averted	Efficiency ratio[c]	Efficiency ratio < benchmark	LYG ≥90% of benchmark
SimCRC										
Colonoscopy										
COL 50-75, 5	0	0	0	5,959	285	18	25	188	Benchmark strategy	
Stool test										
FIT 50-75, 3	6,887	0	0	971	212	6	18	5	Yes	No
FIT 50-75, 2	9,326	0	0	1,215	234	7	20	12	Yes	No
HSgFOBT 50-75, 3	6,456	0	0	1,286	212	7	18	Dominated[S]	ND	No
FIT-DNA 50-75, 5	4,391	0	0	1,364	224	8	20	Dominated[S]	ND	No
HSgFOBT 50-75, 2	8,388	0	0	1,597	235	9	20	Dominated[S]	ND	No
FIT-DNA 50-75, 3	5,990	0	0	1,701	250	9	22	Dominated[W]	ND	No
FIT 50-75, 1	15,778	0	0	1,739	260	10	23	24[d]	Yes[e]	Yes[e]
HSgFOBT 50-75, 1	12,914	0	0	2,230	261	11	23	Dominated[S]	ND	Yes
FIT-DNA 50-75, 1	11,041	0	0	2,601	271	12	24	155[d]	Yes	Yes
Sigmoidoscopy										
SIG 50-75, 10	0	2,480	0	1,345	200	8	18	3	Yes	No
SIG 50-75, 5	0	4,111	0	1,820	227	10	21	18	Yes	No
Sigmoidoscopy + stool test										
SIG+FIT 50-75, 10_2	7,942	2,196	0	1,917	262	10	23	6	Yes[e]	Yes[e]
SIG+FIT 50-75, 5_3	5,367	3,700	0	2,127	263	11	23	Dominated[S]	ND	Yes
SIG+HSgFOBT 50-75, 10_2	7,212	2,042	0	2,190	262	11	23	Dominated[S]	ND	Yes
SIG+FIT 50-75, 5_2	7,296	3,559	0	2,224	267	11	24	Dominated[S]	ND	Yes
SIG+FIT 50-75, 10_1	13,393	2,097	0	2,248	270	11	24	54[d]	Yes	Yes
SIG+HSgFOBT 50-75, 5_3	5,099	3,425	0	2,294	263	12	23	Dominated[S]	ND	Yes
SIG+HSgFOBT 50-75, 5_2	6,689	3,211	0	2,431	267	12	24	Dominated[S]	ND	Yes
SIG+HSgFOBT 50-75, 10_1	11,100	1,926	0	2,616	271	12	24	Dominated[S]	ND	Yes
Computed tomographic colonography										
CTC 50-75, 10	0	0	2,458	1,460	239	9	21	3	Yes	No
CTC 50-75, 5	0	0	4,069	1,927	265	11	24	18	Yes	Yes
MISCAN										
Colonoscopy										
COL 50-75, 5	0	0	0	5,948	264	18	23	114	Benchmark strategy	
Stool test										
FIT 50-75, 3	6,795	0	0	995	176	7	15	7	Yes	No
FIT 50-75, 2	9,342	0	0	1,243	200	8	17	12[d]	Yes	No
HSgFOBT 50-75, 3	6,302	0	0	1,296	175	8	15	Dominated[S]	ND	No
FIT-DNA 50-75, 5	4,380	0	0	1,402	193	9	17	Dominated[S]	ND	No
HSgFOBT 50-75, 2	8,408	0	0	1,636	200	9	18	Dominated[S]	ND	No
FIT-DNA 50-75, 3	5,779	0	0	1,714	215	9	19	Dominated[S]	ND	No
FIT 50-75, 1	15,843	0	0	1,757	231	10	20	21[d]	Yes	No
HSgFOBT 50-75, 1	12,927	0	0	2,287	232	11	20	Dominated[S]	ND	No
FIT-DNA 50-75, 1	11,025	0	0	2,662	246	12	21	120[d]	No	Yes

eTable 13. Outcomes for CRC screening strategies with screening from ages 50 to 75 years and the recommendable strategies[a] by model (shaded) when the colonoscopy strategy with a 5-year interval is the benchmark strategy (continued).

Model	Outcomes per 1,000 40-year-olds									
Modality, age to begin-age to end (y), interval[b] (y)	Stool tests	SIGs	CTCs	COLs	LYG	Compli-cations	CRC deaths averted	Efficiency ratio[c]	Efficiency ratio < benchmark	LYG ≥90% of benchmark
MISCAN (continued)										
Sigmoidoscopy										
SIG 50-75, 10	0	2,356	0	1,881	201	11	18	9	Yes	No
SIG 50-75, 5	0	3,807	0	2,287	221	12	20	20	Yes	No
Sigmoidoscopy + stool test										
SIG+FIT 50-75, 10_2	7,306	1,886	0	2,157	232	11	20	10	Yes	No
SIG+HSgFOBT 50-75, 10_2	6,594	1,677	0	2,374	231	12	20	Dominated[S]	ND	No
SIG+FIT 50-75, 5_3	4,737	3,380	0	2,451	239	13	21	Dominated[S]	ND	Yes
SIG+FIT 50-75, 10_1	12,642	1,903	0	2,490	246	12	22	24	Yes	Yes
SIG+FIT 50-75, 5_2	6,523	3,221	0	2,501	241	13	21	Dominated[S]	ND	Yes
SIG+HSgFOBT 50-75, 5_3	4,462	3,146	0	2,587	238	13	21	Dominated[S]	ND	Yes
SIG+HSgFOBT 50-75, 5_2	5,947	2,882	0	2,667	240	13	21	Dominated[S]	ND	Yes
SIG+HSgFOBT 50-75, 10_1	10,562	1,633	0	2,814	245	13	21	Dominated[S]	ND	Yes
Computed tomographic colonography										
CTC 50-75, 10	0	0	2,485	1,293	184	8	16	6	Yes	No
CTC 50-75, 5	0	0	4,171	1,743	226	10	20	11	Yes	No
CRC-SPIN										
Colonoscopy										
COL 50-75, 5	0	0	0	5,995	279	19	25	273	Benchmark strategy	
Stool test										
FIT 50-75, 3	6,857	0	0	1,081	178	7	16	7	Yes	No
HSgFOBT 50-75, 3	6,498	0	0	1,317	183	8	16	Dominated[S]	ND	No
FIT 50-75, 2	9,241	0	0	1,346	207	9	18	9	Yes	No
FIT-DNA 50-75, 5	4,370	0	0	1,473	195	9	18	Dominated[S]	ND	No
HSgFOBT 50-75, 2	8,448	0	0	1,626	212	9	19	Dominated[S]	ND	No
FIT-DNA 50-75, 3	5,927	0	0	1,827	226	10	20	Dominated[W]	ND	No
FIT 50-75, 1	15,444	0	0	1,899	244	11	22	17	Yes	No
HSgFOBT 50-75, 1	13,026	0	0	2,253	247	11	22	Dominated[S]	ND	No
FIT-DNA 50-75, 1	10,745	0	0	2,729	261	13	23	87[d]	Yes	Yes
Sigmoidoscopy										
SIG 50-75, 10	0	2,515	0	1,161	165	7	15	6	Yes	No
SIG 50-75, 5	0	4,298	0	1,493	181	9	16	22	Yes	No
Sigmoidoscopy + stool test										
SIG+FIT 50-75, 10_2	8,033	2,192	0	1,905	239	11	21	9	Yes	No
SIG+FIT 50-75, 5_3	5,559	3,780	0	1,984	235	11	21	Dominated[S]	ND	No
SIG+FIT 50-75, 5_2	7,506	3,611	0	2,125	244	11	22	Dominated[S]	ND	No
SIG+HSgFOBT 50-75, 10_2	7,386	2,062	0	2,125	241	11	21	Dominated[S]	ND	No
SIG+HSgFOBT 50-75, 5_3	5,314	3,531	0	2,132	237	11	21	Dominated[S]	ND	No
SIG+FIT 50-75, 10_1	13,404	2,079	0	2,289	256	12	23	25	Yes	Yes
SIG+HSgFOBT 50-75, 5_2	6,949	3,297	0	2,305	246	12	22	Dominated[S]	ND	No
SIG+HSgFOBT 50-75, 10_1	11,376	1,940	0	2,581	258	12	23	Dominated[S]	ND	Yes
Computed tomographic colonography										
CTC 50-75, 10	0	0	2,500	1,304	224	9	20	3	Yes	No
CTC 50-75, 5	0	0	4,254	1,654	248	10	22	14	Yes	No

eTable 13. Outcomes for CRC screening strategies with screening from ages 50 to 75 years and the recommendable strategies[a] by model (shaded) when the colonoscopy strategy with a 5-year interval is the benchmark strategy (continued).

COL indicates colonoscopy; CRC, colorectal cancer; CRC-SPIN, CRC Simulated Population Model for Incidence and Natural History; CTC, computed tomographic colonography; FIT, fecal immunochemical test with positivity cutoff of ≥100 ng of hemoglobin (Hb) per mL of buffer (≥20 μg Hb/g of feces); FIT-DNA, multitarget stool DNA test (fecal immunochemical test with a DNA stool test); HSgFOBT, high-sensitivity guaiac-based fecal occult blood test; LYG, life-years gained compared with no screening; MISCAN, Microsimulation Screening Analysis; ND, indicates efficiency ratio is not defined because the strategy is not efficient or near-efficient; S, strategy is strongly dominated (ie, another strategy within the modality requires fewer colonoscopies and provides more LYG [eFigure 2]); SIG, flexible sigmoidoscopy; SimCRC, Simulation Model of CRC; W, strategy is weakly dominated (ie, another more burdensome strategy within the modality provides more LYG but requires fewer additional colonoscopies per additional LYG to achieve those gains [eFigure 2]) and does not meet the criterion for near-efficiency.

[a] The final set of model-recommendable strategies for this alternative benchmark are those recommendable by at least 2 models: COL 5 y (benchmark); FIT-DNA 1 y; and SIG 10 y + FIT 1 y.

[b] In cases where 2 screening intervals are listed (noted as X_Y), the first interval listed is for SIG and the second interval listed is for the stool test.

[c] Efficiency ratios (ΔCOL/ΔLYG) are from the within-class analysis of all strategies with an age to begin screening 50 or 55 years and age to end screening 75, 80, or 85 years. See eTables 11-12 and 17-19.

[d] Indicates the strategy is near-efficient (ie, it is weakly dominated and its LYG are within 98% of the within-class efficient frontier).

[e] This strategy was not among the recommendable strategies with this model because an alternative within-class strategy also met the criteria for being a recommendable strategy and provided more LYG.

eTable 14. Sensitivity analysis: Percent change in outcomes compared to the base-case analysis for the set of model-recommendable strategies[a] using the worst-case and best-case sets of test characteristics,[b] by model.

	Percent change in outcomes from base-case assumptions, by model					
	SimCRC		MISCAN		CRC-SPIN	
Modality Age to begin-age to end (y), interval (y)	Worst Case	Best Case	Worst Case	Best Case	Worst Case	Best Case
COL 50-75, 10						
Colonoscopies	-1%	1%	-1%	1%	-1%	1%
Non-colonoscopy tests	0%	0%	0%	0%	0%	0%
Life-years gained	-1%	2%	-2%	3%	-2%	2%
Complications	-1%	1%	-1%	0%	-1%	1%
Colorectal cancer deaths averted	-1%	2%	-2%	2%	-1%	1%
FIT 50-75, 1						
Colonoscopies	-5%	5%	-4%	3%	-5%	5%
Non-colonoscopy tests	1%	-1%	1%	-1%	2%	-2%
Life-years gained	-4%	4%	-6%	6%	-5%	5%
Complications	-5%	4%	-3%	2%	-5%	4%
CRC deaths averted	-4%	4%	-5%	5%	-4%	4%
SIG+FIT 50-75, 10_1[c]						
Colonoscopies	-3%	3%	-2%	2%	-4%	4%
Non-colonoscopy tests	1%	-1%	1%	-1%	2%	-2%
Life-years gained	-2%	3%	-4%	4%	-3%	3%
Complications	-3%	3%	-2%	1%	-4%	3%
Colorectal cancer deaths averted	-2%	3%	-3%	5%	-3%	3%
CTC 50-75, 5						
Colonoscopies	-4%	5%	-3%	3%	-3%	3%
Non-colonoscopy tests	1%	-1%	1%	-1%	1%	-1%
Life-years gained	-4%	4%	-5%	7%	-4%	4%
Complications	-3%	4%	-2%	2%	-2%	2%
Colorectal cancer deaths averted	-3%	4%	-5%	6%	-4%	3%

COL indicates colonoscopy; CRC-SPIN, Colorectal Cancer Simulated Population Model for Incidence and Natural History; CTC, computed tomographic colonography; FIT, fecal immunochemical test with a positivity cutoff of ≥100 ng of hemoglobin (Hb) per mL of buffer (≥20 µg Hb/g of feces); MISCAN, Microsimulation Screening Analysis; SIG, flexible sigmoidoscopy; SimCRC, Simulation Model of CRC.

[a] With age to begin screening of 50 years and age to end screening of 75 years and the colonoscopy strategy with a 10-year interval as the benchmark.

[b] See Table 1 for base-case, best-case, and worst-case sets of test characteristics.

[c] The first interval listed is for SIG and the second interval listed is for FIT.

eTable 15. Sensitivity analysis: Outcomes for the benchmark and stool-based screening strategies[a] with screening from ages 50 to 75 years and the recommendable stool-based strategies by model (shaded) after the inclusion of FIT strategies with a lower cutoff for positivity. Within a class of screening modalities, strategies are ordered by the number of colonoscopies required.

Model/strategy	Outcomes per 1,000 40-year-olds							Efficiency ratio[b]	Efficiency ratio < benchmark	LYG ≥90% of benchmark
Screening modality, age to begin-age to end (y), interval (y)	Stool tests	SIGs	CTCs	COLs	LYG	Compli-cations	CRC deaths averted			
SimCRC										
Colonoscopy										
COL 50-75, 10	0	0	0	4,007	275	14	24	55	Benchmark strategy	
Stool test										
FIT 50-75, 3	6,887	0	0	971	212	6	18	5	Yes	No
FIT 50-75, 2	9,326	0	0	1,215	234	7	20	12	Yes	No
HSgFOBT 50-75, 3	6,456	0	0	1,286	212	7	18	Dominated[S]	ND	No
FIT-DNA 50-75, 5	4,391	0	0	1,364	224	8	20	Dominated[S]	ND	No
FIT50 50-75, 3	6,339	0	0	1,404	237	8	20	Dominated[S]	ND	No
HSgFOBT 50-75, 2	8,388	0	0	1,597	235	9	20	Dominated[S]	ND	No
FIT-DNA 50-75, 3	5,990	0	0	1,701	250	9	22	Dominated[S]	ND	Yes
FIT50 50-75, 2	8,189	0	0	1,711	253	9	22	Dominated[S]	ND	Yes
FIT 50-75, 1	15,778	0	0	1,739	260	10	23	24[c]	Yes	Yes
HSgFOBT 50-75, 1	12,914	0	0	2,230	261	11	23	Dominated[S]	ND	Yes
FIT50 50-75, 1	12,485	0	0	2,326	268	11	24	289[c]	No	Yes
FIT-DNA 50-75, 1	11,041	0	0	2,601	271	12	24	Dominated[S]	ND	Yes
MISCAN										
Colonoscopy										
COL 50-75, 10	0	0	0	4,101	248	15	22	39	Benchmark strategy	
Stool test										
FIT 50-75, 3	6,795	0	0	995	176	7	15	7	Yes	No
FIT 50-75, 2	9,342	0	0	1,243	200	8	17	12[c]	Yes	No
HSgFOBT 50-75, 3	6,302	0	0	1,296	175	8	15	Dominated[S]	ND	No
FIT-DNA 50-75, 5	4,380	0	0	1,402	193	9	17	Dominated[S]	ND	No
FIT50 50-75, 3	6,148	0	0	1,437	200	8	17	Dominated	ND	No
HSgFOBT 50-75, 2	8,408	0	0	1,636	200	9	18	Dominated[S]	ND	No
FIT-DNA 50-75, 3	5,779	0	0	1,714	215	9	19	Dominated[S]	ND	No
FIT 50-75, 1	15,843	0	0	1,757	231	10	20	21[c]	Yes	Yes
FIT50 50-75, 2	8,164	0	0	1,774	220	10	19	Dominated[S]	ND	No
HSgFOBT 50-75, 1	12,927	0	0	2,287	232	11	20	Dominated	ND	Yes
FIT50 50-75, 1	12,425	0	0	2,399	242	12	21	265[c]	No	Yes
FIT-DNA 50-75, 1	11,025	0	0	2,662	246	12	21	Dominated	ND	Yes
CRC-SPIN										
Colonoscopy										
COL 50-75, 10	0	0	0	4,049	270	15	24	65	Benchmark strategy	
Stool test										
FIT 50-75, 3	6,857	0	0	1,081	178	7	16	7	Yes	No
HSgFOBT 50-75, 3	6,498	0	0	1,317	183	8	16	Dominated[S]	ND	No
FIT 50-75, 2	9,241	0	0	1,346	207	9	18	9	Yes	No
FIT-DNA 50-75, 5	4,370	0	0	1,473	195	9	18	Dominated[S]	ND	No
FIT50 50-75, 3	6,322	0	0	1,478	208	9	18	Dominated[S]	ND	No

eTable 15. Sensitivity analysis: Outcomes for the benchmark and stool-based screening strategies[a] with screening from ages 50 to 75 years and the recommendable stool-based strategies by model (shaded) after the inclusion of FIT strategies with a lower cutoff for positivity (continued).

Model/strategy	Outcomes per 1,000 40-year-olds							Efficiency ratio[b]	Efficiency ratio < benchmark	LYG ≥90% of benchmark
Screening modality, age to begin-age to end (y), interval (y)	Stool tests	SIGs	CTCs	COLs	LYG	Compli-cations	CRC deaths averted			
CRC-SPIN (continued)										
Stool test										
HSgFOBT 50-75, 2	8,448	0	0	1,626	212	9	19	Dominated[S]	ND	No
FIT50 50-75, 2	8,143	0	0	1,784	230	10	20	Dominated[W]	Yes	No
FIT-DNA 50-75, 3	5,927	0	0	1,827	226	10	20	Dominated[S]	ND	No
FIT 50-75, 1	15,444	0	0	1,899	244	11	22	17	Yes	Yes
HSgFOBT 50-75, 1	13,026	0	0	2,253	247	11	22	Dominated[S]	ND	Yes
FIT50 50-75, 1	12,339	0	0	2,392	255	11	23	208[c]	No	Yes
FIT-DNA 50-75, 1	10,745	0	0	2,729	261	13	23	Dominated[S]	ND	Yes

COL indicates colonoscopy; CRC, colorectal cancer; CRC-SPIN, CRC Simulated Population Model for Incidence and Natural History; CTC, computed tomographic colonography; FIT, fecal immunochemical test with a positivity cutoff of ≥100 ng of hemoglobin (Hb) per mL of buffer (≥20 µg Hb/g of feces); FIT50, fecal immunochemical test with a positivity cutoff of ≥50 ng of Hb per mL of buffer (≥10 µg Hb/g of feces); FIT-DNA, multitarget stool DNA test (fecal immunochemical test with a DNA stool test); HSgFOBT, high-sensitivity guaiac-based fecal occult blood test; LYG, life-years gained compared with no screening; MISCAN, Microsimulation Screening Analysis; ND, indicates efficiency ratio is not defined because the strategy is not efficient or near-efficient; S, strategy is strongly dominated (ie, another strategy within the modality requires fewer colonoscopies and provides more LYG [eFigure 2]); SIG, flexible sigmoidoscopy; SimCRC, Simulation Model of CRC; W, strategy is weakly dominated (ie, another more burdensome strategy within the modality provides more LYG gained but requires fewer additional colonoscopies per additional LYG to achieve those gains [eFigure 2]) and does not meet the criterion for near-efficiency; ΔCOL, incremental number of colonoscopies compared with the next-most effective non-dominated strategy; ΔLYG, incremental number of LYG compared with the next-most effective non-dominated strategy.

[a] FIT, FIT50, FIT-DNA, and HSgFOBT.

[b] Efficiency ratios (ΔCOL/ΔLYG) are from the within-class analysis of all strategies with an age to begin screening of 50 or 55 years and age to end screening of 75, 80, or 85 years and the benchmark strategy of COL 50-75, 10. See eTables 17 and 20.

[c] Indicates the strategy is near-efficient (ie, it is weakly dominated and its LYG are within 98% of the within-class efficient frontier).

eTable 16. Sensitivity analysis: Outcomes for CTC strategies with screening from ages 50 to 75 years, using the number of cathartic bowel preparations required as the measure of screening burden. With this measure, CTC every 5 years is not a model-recommendable strategy because its efficiency ratio exceeds that of the benchmark strategy. CTC every 10 years is not a model-recommendable strategy because the life-years gained are less than 90% of the benchmark strategy.

Model/strategy	Outcomes per 1,000 40-year-olds						Efficiency ratio (ΔcPREP / ΔLYG)[b]	Efficiency ratio < benchmark	LYG ≥90% of benchmark
Screening modality, age to begin-age to end (y), interval (y)	CTCs	COLs	cPREPs[a]	LYG	Compli-cations	CRC deaths averted			
SimCRC									
Colonoscopy									
COL 50-75, 10	0	4,007	4,007	275	14	24	55	Benchmark strategy	
Computed tomographic colonography									
CTC 50-75, 10	2,458	1,460	3,406	239	9	21	11	Yes	No
CTC 50-75, 5	4,069	1,927	5,238	265	11	24	71	No	Yes
MISCAN									
Colonoscopy									
COL 50-75, 10	0	4,101	4,101	248	15	22	39	Benchmark strategy	
Computed tomographic colonography									
CTC 50-75, 10	2,485	1,293	3,323	184	8	16	23	Yes	No
CTC 50-75, 5	4,171	1,743	5,224	226	10	20	45	No	Yes
CRC-SPIN									
Colonoscopy									
COL 50-75, 10	0	4,049	4,049	270	15	24	65	Benchmark strategy	
Computed tomographic colonography									
CTC 50-75, 10	2,500	1,304	3,344	224	9	20	16	Yes	No
CTC 50-75, 5	4,254	1,654	5,234	248	10	22	95	No	Yes

cPREPs indicates procedures with cathartic bowel preparation (ie, CTCs and colonoscopies); COL, colonoscopy; CRC, colorectal cancer; CRC-SPIN, CRC Simulated Population Model for Incidence and Natural History; CTC, computed tomographic colonography; LYG, life-years gained compared with no screening; MISCAN, Microsimulation Screening Analysis; SimCRC, Simulation Model of CRC; ΔcPREP, incremental number of procedures requiring cathartic bowel preparation compared with the next-most effective non-dominated strategy; ΔLYG, incremental number of LYG compared with the next-most effective non-dominated strategy.

[a] We assumed a follow-up colonoscopy, if required, is performed on the same day as the CTC. As a result, for CTC strategies, the number of cathartic bowel preparations is less than the sum of the number of CTCs and colonoscopies.

[b] Efficiency ratios are from the within-class analysis of all strategies with an age to begin screening of 50 or 55 years and age to end screening of 75, 80, or 85 years and the benchmark strategy of COL 50-75, 10 (shaded). See eTables 17 and 21.

eTable 17. Outcomes and efficiency ratios for colonoscopy screening strategies with an age to begin screening of 50 or 55 years. Strategies are ordered by the number of colonoscopies required.

Model/strategy	Outcomes over a lifetime per 1,000 40-year-olds									Efficiency ratio[a] (ΔCOL/ΔLYG)
Modality, age to begin-age to end (y), interval (y)	Stool tests	SIGs	CTCs	COLs	LYG	Compli-cations	CRC deaths averted	ΔCOL	ΔLYG	
SimCRC										
COL 55-75, 15	0	0	0	2,968	233	13	22	--	--	--
COL 50-75, 15	0	0	0	3,187	260	12	23	220	27	8
COL 55-85, 15	0	0	0	3,262	234	17	23	ND	ND	Dominated[S]
COL 55-75, 10	0	0	0	3,635	243	16	23	ND	ND	Dominated[S]
COL 50-80, 15	0	0	0	3,656	265	16	24	468	5	91[b]
COL 55-85, 10	0	0	0	3,887	243	18	23	ND	ND	Dominated[S]
COL 50-75, 10	0	0	0	4,007	275	14	24	820	15	55
COL 50-80, 10	0	0	0	4,405	277	17	25	398	2	166
COL 55-75, 5	0	0	0	4,926	250	18	24	ND	ND	Dominated[S]
COL 55-80, 5	0	0	0	5,256	251	20	24	ND	ND	Dominated[S]
COL 55-85, 5	0	0	0	5,468	251	21	24	ND	ND	Dominated[S]
COL 50-75, 5	0	0	0	5,959	285	18	25	1,554	8	188
COL 50-80, 5	0	0	0	6,289	286	20	26	330	1	513
COL 50-85, 5	0	0	0	6,502	286	22	26	213	<1	1,661
MISCAN										
COL 55-75, 15	0	0	0	3,079	214	14	20	--	--	--
COL 50-75, 15	0	0	0	3,353	228	13	20	275	14	19
COL 55-85, 15	0	0	0	3,359	216	16	21	ND	ND	Dominated[S]
COL 55-75, 10	0	0	0	3,697	226	15	21	ND	ND	Dominated[S]
COL 50-80, 15	0	0	0	3,779	234	16	21	ND	ND	Dominated[W]
COL 55-85, 10	0	0	0	3,954	227	17	21	ND	ND	Dominated[S]
COL 50-75, 10	0	0	0	4,101	248	15	22	747	19	39
COL 50-80, 10	0	0	0	4,485	251	17	23	384	3	116[b]
COL 55-75, 5	0	0	0	4,923	238	17	22	ND	ND	Dominated[S]
COL 55-80, 5	0	0	0	5,271	239	19	22	ND	ND	Dominated[S]
COL 55-85, 5	0	0	0	5,500	239	20	22	ND	ND	Dominated[S]
COL 50-75, 5	0	0	0	5,948	264	18	23	1,847	16	114
COL 50-80, 5	0	0	0	6,296	265	20	24	348	1	236
COL 50-85, 5	0	0	0	6,525	266	21	24	229	<1	1,146
CRC-SPIN										
COL 55-75, 15	0	0	0	3,015	236	14	22	--	--	--
COL 50-75, 15	0	0	0	3,258	257	13	23	243	21	12
COL 55-85, 15	0	0	0	3,324	239	17	23	ND	ND	Dominated[S]
COL 55-75, 10	0	0	0	3,677	245	16	23	ND	ND	Dominated[S]
COL 50-80, 15	0	0	0	3,728	264	17	24	470	7	72[b]
COL 55-85, 10	0	0	0	3,949	246	19	24	ND	ND	Dominated[S]
COL 50-75, 10	0	0	0	4,049	270	15	24	792	12	65
COL 50-80, 10	0	0	0	4,464	273	18	25	414	3	126
COL 55-75, 5	0	0	0	4,966	251	18	24	ND	ND	Dominated[S]
COL 55-80, 5	0	0	0	5,322	252	20	24	ND	ND	Dominated[S]
COL 55-85, 5	0	0	0	5,557	253	22	24	ND	ND	Dominated[S]
COL 50-75, 5	0	0	0	5,995	279	19	25	1,532	6	273
COL 50-80, 5	0	0	0	6,351	280	21	25	356	1	367
COL 50-85, 5	0	0	0	6,586	280	22	25	235	<1	947

COL indicates colonoscopy; CRC, colorectal cancer; CRC-SPIN, CRC Simulated Population Model for Incidence and Natural History; CTC, computed tomographic colonography; LYG, life-years gained compared with no screening; MISCAN, Microsimulation Screening Analysis; ND, indicates ΔCOL and ΔLYG are not defined because the strategy was not an efficient or near-efficient option; S, strategy is strongly dominated (ie, another strategy within the modality requires fewer colonoscopies and provides more LYG [eFigure 2]); SIG, flexible sigmoidoscopy; SimCRC, Simulation Model of CRC; W, strategy is weakly dominated (ie, another more burdensome strategy within the modality provides more LYG but requires fewer additional colonoscopies per additional LYG to achieve those gains [eFigure 2]) and does not meet the criterion for near-efficiency; ΔCOL, incremental number of colonoscopies compared with the next-most effective non-dominated strategy; ΔLYG, incremental number of LYG compared with the next-most effective non-dominated strategy.

[a] Due to rounding, efficiency ratio may not equal ΔCOL/ΔLYG.

[b] Indicates the strategy is near-efficient (ie, it is weakly dominated and its LYG are within 98% of the within-class efficient frontier).

eTable 18. Outcomes and efficiency ratios for flexible sigmoidoscopy screening strategies with an age to begin screening of 50 or 55 years. Strategies are ordered by the number of colonoscopies required.

Model/strategy	Outcomes per 1,000 40-year-olds									Efficiency ratio[a] (ΔCOL/ΔLYG)
Modality, age to begin-age to end (y), interval (y)	Stool tests	SIGs	CTCs	COLs	LYG	Compli-cations	CRC deaths averted	ΔCOL	ΔLYG	
SimCRC										
SIG 55-75, 10	0	2,277	0	1,267	177	9	17	--	--	--
SIG 50-75, 10	0	2,480	0	1,345	200	8	18	78	23	3
SIG 55-85, 10	0	2,569	0	1,354	179	11	18	ND	ND	Dominated[S]
SIG 50-80, 10	0	2,910	0	1,484	205	10	19	139	5	28[b]
SIG 55-75, 5	0	3,342	0	1,578	196	10	19	ND	ND	Dominated[S]
SIG 55-80, 5	0	3,692	0	1,669	198	11	20	ND	ND	Dominated[S]
SIG 55-85, 5	0	3,926	0	1,725	199	12	20	ND	ND	Dominated[S]
SIG 50-75, 5	0	4,111	0	1,820	227	10	21	475	27	18
SIG 50-80, 5	0	4,459	0	1,910	229	11	21	90	2	43
SIG 50-85, 5	0	4,691	0	1,965	229	12	21	56	1	99
MISCAN										
SIG 55-75, 10	0	2,155	0	1,736	185	11	18	--	--	--
SIG 55-85, 10	0	2,425	0	1,806	186	12	18	ND	ND	Dominated[W]
SIG 50-75, 10	0	2,356	0	1,881	201	11	18	144	16	9
SIG 55-75, 5	0	3,092	0	1,998	200	12	19	ND	ND	Dominated[S]
SIG 50-80, 10	0	2,746	0	2,001	205	12	19	120	4	28[b]
SIG 55-80, 5	0	3,416	0	2,077	202	13	19	ND	ND	Dominated[S]
SIG 55-85, 5	0	3,637	0	2,120	202	13	20	ND	ND	Dominated[S]
SIG 50-75, 5	0	3,807	0	2,287	221	12	20	406	20	20
SIG 50-80, 5	0	4,129	0	2,365	223	13	20	78	2	37
SIG 50-85, 5	0	4,349	0	2,408	224	14	21	42	<1	101
CRC-SPIN										
SIG 55-75, 10	0	2,324	0	1,093	153	8	15	--	--	--
SIG 50-75, 10	0	2,515	0	1,161	165	7	15	68	12	6
SIG 55-85, 10	0	2,649	0	1,168	155	9	15	ND	ND	Dominated[S]
SIG 50-80, 10	0	2,983	0	1,273	171	9	16	113	6	18
SIG 55-75, 5	0	3,494	0	1,301	163	9	16	ND	ND	Dominated[S]
SIG 55-80, 5	0	3,902	0	1,377	166	9	16	ND	ND	Dominated[S]
SIG 55-85, 5	0	4,184	0	1,425	167	10	17	ND	ND	Dominated[S]
SIG 50-75, 5	0	4,298	0	1,493	181	9	16	220	10	22
SIG 50-80, 5	0	4,705	0	1,567	184	10	17	74	3	28
SIG 50-85, 5	0	4,987	0	1,616	184	10	17	49	1	71

COL indicates colonoscopy; CRC, colorectal cancer; CRC-SPIN, CRC Simulated Population Model for Incidence and Natural History; CTC, computed tomographic colonography; LYG, life-years gained compared with no screening; MISCAN, Microsimulation Screening Analysis; ND, indicates ΔCOL and ΔLYG are not defined because the strategy was not an efficient or near-efficient option; S, strategy is strongly dominated (ie, another strategy within the modality requires fewer colonoscopies and provides more LYG [eFigure 2]); SIG, flexible sigmoidoscopy; SimCRC, Simulation Model of CRC; W, strategy is weakly dominated (ie, another more burdensome strategy within the modality provides more LYG but requires fewer additional colonoscopies per additional LYG to achieve those gains [eFigure 2]) and does not meet the criterion for near-efficiency; ΔCOL, incremental number of colonoscopies compared with the next-most effective non-dominated strategy; ΔLYG, incremental number of LYG compared with the next-most effective non-dominated strategy.

[a] Due to rounding, efficiency ratio may not equal ΔCOL/ΔLYG.

[b] Indicates the strategy is near-efficient (ie, it is weakly dominated and its LYG are within 98% of the within-class efficient frontier).

eTable 19. Outcomes and efficiency ratios for CTC screening strategies with an age to begin screening of 50 or 55 years. Strategies are ordered by the number of colonoscopies required.

Model/strategy	Outcomes per 1,000 40-year-olds									Efficiency ratio[a] (ΔCOL/ΔLYG)
Modality, age to begin-age to end (y), interval (y)	Stool tests	SIGs	CTCs	COLs	LYG	Compli-cations	CRC deaths averted	ΔCOL	ΔLYG	
SimCRC										
CTC 55-75, 10	0	0	2,250	1,396	214	10	21	--	--	--
CTC 50-75, 10	0	0	2,458	1,460	239	9	21	64	25	3
CTC 55-85, 10	0	0	2,528	1,494	216	12	21	ND	ND	Dominated[S]
CTC 50-80, 10	0	0	2,874	1,615	245	11	22	155	6	26[b]
CTC 55-75, 5	0	0	3,295	1,694	231	11	22	ND	ND	Dominated[S]
CTC 55-80, 5	0	0	3,631	1,788	233	12	23	ND	ND	Dominated[S]
CTC 55-85, 5	0	0	3,854	1,847	234	13	23	ND	ND	Dominated[S]
CTC 50-75, 5	0	0	4,069	1,927	265	11	24	467	26	18
CTC 50-80, 5	0	0	4,405	2,021	267	12	24	94	2	44
CTC 50-85, 5	0	0	4,627	2,079	268	13	24	58	1	111
MISCAN										
CTC 55-75, 10	0	0	2,284	1,220	172	9	16	--	--	--
CTC 55-85, 10	0	0	2,590	1,292	175	10	17	ND	ND	Dominated[W]
CTC 50-75, 10	0	0	2,485	1,293	184	8	16	73	12	6
CTC 50-80, 10	0	0	2,927	1,405	194	9	18	112	10	12[b]
CTC 55-75, 5	0	0	3,388	1,523	204	10	19	230	20	12[b]
CTC 55-80, 5	0	0	3,759	1,598	208	11	20	305	24	13[b]
CTC 55-85, 5	0	0	4,014	1,646	209	11	20	ND	ND	Dominated[W]
CTC 50-75, 5	0	0	4,171	1,743	226	10	20	450	42	11
CTC 50-80, 5	0	0	4,539	1,817	230	11	21	74	4	16
CTC 50-85, 5	0	0	4,792	1,864	231	11	21	47	1	37
CRC-SPIN										
CTC 55-75, 10	0	0	2,296	1,265	209	9	20	--	--	--
CTC 50-75, 10	0	0	2,500	1,304	224	9	20	39	15	3
CTC 55-85, 10	0	0	2,602	1,356	212	11	21	ND	ND	Dominated[S]
CTC 50-80, 10	0	0	2,948	1,442	234	11	21	138	10	14[b]
CTC 55-75, 5	0	0	3,438	1,475	224	10	21	ND	ND	Dominated[S]
CTC 55-80, 5	0	0	3,822	1,560	228	11	22	ND	ND	Dominated[S]
CTC 55-85, 5	0	0	4,084	1,616	230	12	22	ND	ND	Dominated[S]
CTC 50-75, 5	0	0	4,254	1,654	248	10	22	350	24	14
CTC 50-80, 5	0	0	4,638	1,739	252	11	23	85	4	23
CTC 50-85, 5	0	0	4,900	1,795	254	12	23	56	2	29

COL indicates colonoscopy; CRC, colorectal cancer; CRC-SPIN, CRC Simulated Population Model for Incidence and Natural History; CTC, computed tomographic colonography; LYG, life-years gained compared with no screening; MISCAN, Microsimulation Screening Analysis; ND, indicates ΔCOL and ΔLYG are not defined because the strategy was not an efficient or near-efficient option; S, strategy is strongly dominated (ie, another strategy within the modality requires fewer colonoscopies and provides more LYG [eFigure 2]); SIG, flexible sigmoidoscopy; SimCRC, Simulation Model of CRC; W, strategy is weakly dominated (ie, another more burdensome strategy within the modality provides more LYG but requires fewer additional colonoscopies per additional LYG to achieve those gains [eFigure 2]) and does not meet the criterion for near-efficiency; ΔCOL, incremental number of colonoscopies compared with the next-most effective non-dominated strategy; ΔLYG, incremental number of LYG compared with the next-most effective non-dominated strategy.

[a] Due to rounding, efficiency ratio may not equal ΔCOL/ΔLYG.

[b] Indicates the strategy is near-efficient (ie, it is weakly dominated and its LYG are within 98% of the within-class efficient frontier).

eTable 20. Sensitivity analysis: Outcomes and efficiency ratios for stool-based screening strategies[a] with an age to begin screening of 50 or 55 years, with the inclusion of FIT strategies with a cutoff for positivity of ≥50 ng of hemoglobin (Hb) per mL of buffer (≥10 µg Hb/g of feces). Strategies are ordered by the number of colonoscopies required.

Model/strategy	Outcomes per 1,000 40-year-olds									Efficiency ratio[b] (ΔCOL/ΔLYG)
Screening modality, age to begin-age to end (y), interval (y)	Stool tests	SIGs	CTCs	COLs	LYG	Compli-cations	CRC deaths averted	ΔCOL	ΔLYG	
SimCRC										
FIT 55-75, 3	5,306	0	0	807	178	6	16	--	--	--
FIT 55-80, 3	6,258	0	0	907	190	7	18	ND	ND	Dominated[W]
FIT 55-85, 3	6,837	0	0	965	193	8	19	ND	ND	Dominated[W]
FIT 50-75, 3	6,887	0	0	971	212	6	18	164	34	5
HSgFOBT 55-75, 3	5,014	0	0	1,052	178	7	16	ND	ND	Dominated[S]
FIT 55-75, 2	7,616	0	0	1,053	204	7	19	ND	ND	Dominated[S]
FIT 50-80, 3	7,694	0	0	1,055	220	8	20	84	9	10
FIT 50-85, 3	8,111	0	0	1,095	223	8	20	39	2	17[c]
FIT 55-80, 2	8,455	0	0	1,131	210	8	20	ND	ND	Dominated[S]
FIT50 55-75, 3	4,923	0	0	1,158	202	7	18	ND	ND	Dominated[S]
FIT-DNA 55-75, 5	3,576	0	0	1,171	194	8	18	ND	ND	Dominated[S]
HSgFOBT 55-80, 3	5,872	0	0	1,177	188	8	18	ND	ND	Dominated[S]
FIT 55-85, 2	9,350	0	0	1,208	214	10	21	ND	ND	Dominated[S]
FIT 50-75, 2	9,326	0	0	1,215	234	7	20	160	14	12
HSgFOBT 55-85, 3	6,352	0	0	1,244	191	9	19	ND	ND	Dominated[S]
FIT-DNA 55-80, 5	3,970	0	0	1,255	199	9	19	ND	ND	Dominated[S]
HSgFOBT 50-75, 3	6,456	0	0	1,286	212	7	18	ND	ND	Dominated[S]
FIT50 55-80, 3	5,751	0	0	1,289	212	9	20	ND	ND	Dominated[S]
FIT-DNA 55-85, 5	4,233	0	0	1,310	200	10	20	ND	ND	Dominated[S]
FIT 50-80, 2	10,572	0	0	1,327	243	9	22	112	9	13
FIT50 55-85, 3	6,207	0	0	1,359	214	10	21	ND	ND	Dominated[S]
HSgFOBT 55-75, 2	6,897	0	0	1,364	204	8	19	ND	ND	Dominated[S]
FIT-DNA 50-75, 5	4,391	0	0	1,364	224	8	20	ND	ND	Dominated[S]
FIT 50-85, 2	11,165	0	0	1,377	245	10	22	50	2	24[c]
HSgFOBT 50-80, 3	7,125	0	0	1,383	220	9	20	ND	ND	Dominated[S]
FIT50 50-75, 3	6,339	0	0	1,404	237	8	20	ND	ND	Dominated[S]
FIT-DNA 55-75, 3	4,668	0	0	1,415	214	9	20	ND	ND	Dominated[S]
HSgFOBT 50-85, 3	7,565	0	0	1,441	222	9	20	ND	ND	Dominated[S]
FIT-DNA 50-80, 5	4,781	0	0	1,447	229	9	21	ND	ND	Dominated[S]
HSgFOBT 55-80, 2	7,622	0	0	1,461	209	9	20	ND	ND	Dominated[S]
FIT50 55-75, 2	6,725	0	0	1,470	221	9	21	ND	ND	Dominated[S]
FIT 55-75, 1	12,502	0	0	1,478	226	9	21	ND	ND	Dominated[S]
FIT-DNA 50-85, 5	5,043	0	0	1,500	230	10	21	ND	ND	Dominated[S]
FIT50 50-80, 3	6,978	0	0	1,505	244	9	22	ND	ND	Dominated[S]
HSgFOBT 55-85, 2	8,390	0	0	1,558	212	11	21	ND	ND	Dominated[S]
FIT-DNA 55-80, 3	5,410	0	0	1,561	222	10	21	ND	ND	Dominated[S]
FIT50 50-85, 3	7,411	0	0	1,567	246	10	22	ND	ND	Dominated[W]
FIT50 55-80, 2	7,422	0	0	1,570	226	10	21	ND	ND	Dominated[S]
HSgFOBT 50-75, 2	8,388	0	0	1,597	235	9	20	ND	ND	Dominated[S]
FIT 55-80, 1	14,163	0	0	1,599	231	11	22	ND	ND	Dominated[S]

eTable 20. Sensitivity analysis: Outcomes and efficiency ratios for stool-based screening strategies[a] with an age to begin screening of 50 or 55 years, with the inclusion of FIT strategies with a cutoff for positivity of ≥50 ng of hemoglobin (Hb) per mL of buffer (≥10 μg Hb/g of feces) (continued).

Model/strategy	Outcomes per 1,000 40-year-olds									Efficiency ratio[b] (ΔCOL/ΔLYG)
Screening modality, age to begin-age to end (y), interval (y)	Stool tests	SIGs	CTCs	COLs	LYG	Compli-cations	CRC deaths averted	ΔCOL	ΔLYG	
SimCRC (continued)										
FIT-DNA 55-85, 3	5,801	0	0	1,634	223	11	22	ND	ND	Dominated[S]
FIT50 55-85, 2	8,160	0	0	1,670	228	11	22	ND	ND	Dominated[S]
FIT 55-85, 1	15,332	0	0	1,679	233	12	23	ND	ND	Dominated[S]
FIT-DNA 50-75, 3	5,990	0	0	1,701	250	9	22	ND	ND	Dominated[W]
FIT50 50-75, 2	8,189	0	0	1,711	253	9	22	ND	ND	Dominated[W]
HSgFOBT 50-80, 2	9,462	0	0	1,738	243	10	22	ND	ND	Dominated[S]
FIT 50-75, 1	15,778	0	0	1,739	260	10	23	413	17	24[c]
HSgFOBT 50-85, 2	9,970	0	0	1,801	245	11	22	ND	ND	Dominated[S]
FIT-DNA 50-80, 3	6,543	0	0	1,809	255	10	23	ND	ND	Dominated[S]
FIT50 50-80, 2	9,225	0	0	1,858	260	11	23	ND	ND	Dominated[S]
FIT 50-80, 1	17,426	0	0	1,858	265	11	24	531	22	24
HSgFOBT 55-75, 1	10,357	0	0	1,876	226	10	21	ND	ND	Dominated[S]
FIT-DNA 50-85, 3	6,961	0	0	1,884	257	11	23	ND	ND	Dominated[S]
FIT50 50-85, 2	9,713	0	0	1,923	261	11	24	ND	ND	Dominated[S]
FIT 50-85, 1	18,589	0	0	1,937	267	12	24	79	2	50
FIT50 55-75, 1	10,000	0	0	1,964	234	11	22	ND	ND	Dominated[S]
HSgFOBT 55-80, 1	11,637	0	0	2,025	231	12	22	ND	ND	Dominated[S]
FIT50 55-80, 1	11,222	0	0	2,116	238	12	23	ND	ND	Dominated[S]
HSgFOBT 55-85, 1	12,539	0	0	2,125	232	13	23	ND	ND	Dominated[S]
FIT-DNA 55-75, 1	8,846	0	0	2,206	237	11	22	ND	ND	Dominated[S]
FIT50 55-85, 1	12,085	0	0	2,218	239	13	23	ND	ND	Dominated[S]
HSgFOBT 50-75, 1	12,914	0	0	2,230	261	11	23	ND	ND	Dominated[S]
FIT50 50-75, 1	12,485	0	0	2,326	268	11	24	389	1	289[c]
FIT-DNA 55-80, 1	9,880	0	0	2,367	240	13	23	ND	ND	Dominated[S]
HSgFOBT 50-80, 1	14,193	0	0	2,377	265	12	24	ND	ND	Dominated[S]
FIT-DNA 55-85, 1	10,618	0	0	2,475	241	14	23	ND	ND	Dominated[S]
HSgFOBT 50-85, 1	15,090	0	0	2,476	266	13	24	ND	ND	Dominated[S]
FIT50 50-80, 1	13,711	0	0	2,477	272	12	24	540	5	104[c]
FIT50 50-85, 1	14,568	0	0	2,577	273	14	25	640	6	100
FIT-DNA 50-75, 1	11,041	0	0	2,601	271	12	24	ND	ND	Dominated[S]
FIT-DNA 50-80, 1	12,096	0	0	2,763	274	13	25	186	1	182[c]
FIT-DNA 50-85, 1	12,826	0	0	2,870	275	14	25	292	2	151
MISCAN										
FIT 55-75, 3	5,250	0	0	833	153	6	14	--	--	--
FIT 55-80, 3	6,204	0	0	917	165	7	16	84	11	7[c]
FIT 55-85, 3	6,859	0	0	967	169	8	17	134	15	9[c]
FIT 50-75, 3	6,795	0	0	995	176	7	15	162	23	7
HSgFOBT 55-75, 3	4,912	0	0	1,059	152	7	14	ND	ND	Dominated[S]
FIT 50-80, 3	7,693	0	0	1,070	186	8	17	75	10	8

eTable 20. Sensitivity analysis: Outcomes and efficiency ratios for stool-based screening strategies[a] with an age to begin screening of 50 or 55 years, with the inclusion of FIT strategies with a cutoff for positivity of ≥50 ng of hemoglobin (Hb) per mL of buffer (≥10 μg Hb/g of feces) (continued).

Model/strategy	Outcomes per 1,000 40-year-olds									Efficiency ratio[b] (ΔCOL/ΔLYG)
Screening modality, age to begin-age to end (y), interval (y)	Stool tests	SIGs	CTCs	COLs	LYG	Compli-cations	CRC deaths averted	ΔCOL	ΔLYG	
MISCAN (continued)										
FIT 55-75, 2	7,644	0	0	1,075	179	8	16	ND	ND	Dominated[S]
FIT 50-85, 3	8,032	0	0	1,096	188	8	17	26	2	12[c]
FIT 55-80, 2	8,501	0	0	1,139	186	8	18	ND	ND	Dominated[S]
HSgFOBT 55-80, 3	5,773	0	0	1,170	163	8	16	ND	ND	Dominated[S]
FIT50 55-75, 3	4,790	0	0	1,190	175	8	16	ND	ND	Dominated[S]
FIT 55-85, 2	9,437	0	0	1,201	190	9	18	ND	ND	Dominated[W]
FIT-DNA 55-75, 5	3,574	0	0	1,203	172	8	16	ND	ND	Dominated[S]
HSgFOBT 55-85, 3	6,359	0	0	1,238	166	9	16	ND	ND	Dominated[S]
FIT 50-75, 2	9,342	0	0	1,243	200	8	17	173	15	12[c]
FIT-DNA 55-80, 5	3,974	0	0	1,275	178	9	17	ND	ND	Dominated[S]
HSgFOBT 50-75, 3	6,302	0	0	1,296	175	8	15	ND	ND	Dominated[S]
FIT50 55-80, 3	5,614	0	0	1,304	186	9	18	ND	ND	Dominated[S]
FIT-DNA 55-85, 5	4,248	0	0	1,320	179	10	18	ND	ND	Dominated[S]
FIT 50-80, 2	10,613	0	0	1,334	210	9	19	264	24	11
FIT50 55-85, 3	6,175	0	0	1,374	189	10	18	ND	ND	Dominated[S]
FIT 50-85, 2	11,233	0	0	1,375	213	9	19	40	3	16
HSgFOBT 55-75, 2	6,940	0	0	1,386	178	9	17	ND	ND	Dominated[S]
HSgFOBT 50-80, 3	7,106	0	0	1,395	184	9	17	ND	ND	Dominated[S]
FIT-DNA 50-75, 5	4,380	0	0	1,402	193	9	17	ND	ND	Dominated[S]
HSgFOBT 50-85, 3	7,408	0	0	1,430	186	9	17	ND	ND	Dominated[S]
FIT-DNA 55-75, 3	4,509	0	0	1,431	190	9	17	ND	ND	Dominated[S]
FIT50 50-75, 3	6,148	0	0	1,437	200	8	17	ND	ND	Dominated[S]
HSgFOBT 55-80, 2	7,678	0	0	1,472	184	9	18	ND	ND	Dominated[S]
FIT-DNA 50-80, 5	4,776	0	0	1,472	198	9	18	ND	ND	Dominated[S]
FIT 55-75, 1	12,586	0	0	1,490	206	9	19	ND	ND	Dominated[S]
FIT50 55-75, 2	6,724	0	0	1,516	198	9	18	ND	ND	Dominated[S]
FIT-DNA 50-85, 5	5,048	0	0	1,516	200	10	19	ND	ND	Dominated[S]
FIT50 50-80, 3	6,920	0	0	1,540	208	9	19	ND	ND	Dominated[S]
HSgFOBT 55-85, 2	8,478	0	0	1,557	188	11	18	ND	ND	Dominated[S]
FIT-DNA 55-80, 3	5,260	0	0	1,557	199	10	19	ND	ND	Dominated[S]
FIT50 50-85, 3	7,209	0	0	1,575	210	10	19	ND	ND	Dominated[S]
FIT 55-80, 1	14,313	0	0	1,592	213	10	20	ND	ND	Dominated[W]
FIT50 55-80, 2	7,430	0	0	1,603	203	10	19	ND	ND	Dominated[S]
FIT-DNA 55-85, 3	5,771	0	0	1,634	202	11	19	ND	ND	Dominated[S]
HSgFOBT 50-75, 2	8,408	0	0	1,636	200	9	18	ND	ND	Dominated[S]
FIT 55-85, 1	15,566	0	0	1,659	215	11	21	ND	ND	Dominated[W]
FIT50 55-85, 2	8,195	0	0	1,690	207	11	20	ND	ND	Dominated[S]
FIT-DNA 50-75, 3	5,779	0	0	1,714	215	9	19	ND	ND	Dominated[S]
FIT 50-75, 1	15,843	0	0	1,757	231	10	20	383	18	21[c]
HSgFOBT 50-80, 2	9,497	0	0	1,759	209	10	19	ND	ND	Dominated[S]

eTable 20. Sensitivity analysis: Outcomes and efficiency ratios for stool-based screening strategies[a] with an age to begin screening of 50 or 55 years, with the inclusion of FIT strategies with a cutoff for positivity of ≥50 ng of hemoglobin (Hb) per mL of buffer (≥10 μg Hb/g of feces) (continued).

Model/strategy	Outcomes per 1,000 40-year-olds									Efficiency ratio[b] (ΔCOL/ΔLYG)
Screening modality, age to begin-age to end (y), interval (y)	Stool tests	SIGs	CTCs	COLs	LYG	Compli-cations	CRC deaths averted	ΔCOL	ΔLYG	
MISCAN (continued)										
FIT50 50-75, 2	8,164	0	0	1,774	220	10	19	ND	ND	Dominated[S]
HSgFOBT 50-85, 2	10,024	0	0	1,814	211	11	19	ND	ND	Dominated[S]
FIT-DNA 50-80, 3	6,481	0	0	1,828	223	11	20	ND	ND	Dominated[S]
FIT 50-80, 1	17,552	0	0	1,855	238	11	21	481	25	19
FIT-DNA 50-85, 3	6,745	0	0	1,867	224	11	20	ND	ND	Dominated[S]
FIT50 50-80, 2	9,208	0	0	1,899	228	11	20	ND	ND	Dominated[S]
HSgFOBT 55-75, 1	10,427	0	0	1,913	206	11	19	ND	ND	Dominated[S]
FIT 50-85, 1	18,796	0	0	1,921	240	11	22	66	2	27
FIT50 50-85, 2	9,713	0	0	1,956	230	11	21	ND	ND	Dominated[S]
FIT50 55-75, 1	9,995	0	0	2,020	216	11	20	ND	ND	Dominated[S]
HSgFOBT 55-80, 1	11,733	0	0	2,047	212	12	20	ND	ND	Dominated[S]
HSgFOBT 55-85, 1	12,679	0	0	2,137	214	13	20	ND	ND	Dominated[S]
FIT50 55-80, 1	11,239	0	0	2,154	222	12	21	ND	ND	Dominated[S]
FIT50 55-85, 1	12,145	0	0	2,245	223	13	21	ND	ND	Dominated[S]
FIT-DNA 55-75, 1	8,874	0	0	2,252	221	12	20	ND	ND	Dominated[S]
HSgFOBT 50-75, 1	12,927	0	0	2,287	232	11	20	ND	ND	Dominated[S]
FIT-DNA 55-80, 1	9,943	0	0	2,394	226	13	21	ND	ND	Dominated[S]
FIT50 50-75, 1	12,425	0	0	2,399	242	12	21	477	2	265[c]
HSgFOBT 50-80, 1	14,223	0	0	2,416	237	12	21	ND	ND	Dominated[S]
FIT-DNA 55-85, 1	10,733	0	0	2,493	227	14	21	ND	ND	Dominated[S]
HSgFOBT 50-85, 1	15,161	0	0	2,505	239	13	22	ND	ND	Dominated[S]
FIT50 50-80, 1	13,666	0	0	2,530	247	13	22	609	7	89[c]
FIT50 50-85, 1	14,564	0	0	2,620	249	13	22	699	9	81
FIT-DNA 50-75, 1	11,025	0	0	2,662	246	12	21	ND	ND	Dominated[S]
FIT-DNA 50-80, 1	12,108	0	0	2,804	250	13	22	184	2	104[c]
FIT-DNA 50-85, 1	12,888	0	0	2,901	252	14	22	281	3	88
CRC-SPIN										
FIT 55-75, 3	5,301	0	0	895	152	7	14	--	--	--
FIT 55-80, 3	6,254	0	0	995	164	8	16	99	12	8[c]
FIT 55-85, 3	6,836	0	0	1,051	168	9	17	ND	ND	Dominated[W]
FIT 50-75, 3	6,857	0	0	1,081	178	7	16	186	26	7
HSgFOBT 55-75, 3	5,053	0	0	1,082	156	7	15	ND	ND	Dominated[S]
FIT 55-75, 2	7,575	0	0	1,160	183	8	17	79	5	15[c]
FIT 50-80, 3	7,660	0	0	1,163	187	8	17	82	9	9[c]
FIT 50-85, 3	8,084	0	0	1,201	191	9	18	120	13	10[c]
HSgFOBT 55-80, 3	5,932	0	0	1,204	167	9	16	ND	ND	Dominated[S]
FIT50 55-75, 3	4,922	0	0	1,222	179	8	17	ND	ND	Dominated[S]
FIT 55-80, 2	8,410	0	0	1,237	190	9	18	ND	ND	Dominated[S]
FIT-DNA 55-75, 5	3,570	0	0	1,261	172	9	16	ND	ND	Dominated[S]

eTable 20. Sensitivity analysis: Outcomes and efficiency ratios for stool-based screening strategies[a] with an age to begin screening of 50 or 55 years, with the inclusion of FIT strategies with a cutoff for positivity of ≥50 ng of hemoglobin (Hb) per mL of buffer (≥10 μg Hb/g of feces) (continued).

Model/strategy	Outcomes per 1,000 40-year-olds									Efficiency ratio[b] (ΔCOL/ΔLYG)
Screening modality, age to begin-age to end (y), interval (y)	Stool tests	SIGs	CTCs	COLs	LYG	Compli-cations	CRC deaths averted	ΔCOL	ΔLYG	
CRC-SPIN (continued)										
HSgFOBT 55-85, 3	6,429	0	0	1,269	171	10	17	ND	ND	Dominated[S]
FIT 55-85, 2	9,309	0	0	1,313	196	10	19	ND	ND	Dominated[W]
HSgFOBT 50-75, 3	6,498	0	0	1,317	183	8	16	ND	ND	Dominated[S]
FIT-DNA 55-80, 5	3,967	0	0	1,343	177	10	18	ND	ND	Dominated[S]
FIT 50-75, 2	9,241	0	0	1,346	207	9	18	265	29	9
FIT50 55-80, 3	5,754	0	0	1,351	190	9	18	ND	ND	Dominated[S]
HSgFOBT 55-75, 2	6,959	0	0	1,394	187	9	18	ND	ND	Dominated[S]
FIT-DNA 55-85, 5	4,235	0	0	1,397	180	11	18	ND	ND	Dominated[S]
HSgFOBT 50-80, 3	7,184	0	0	1,412	192	9	18	ND	ND	Dominated[S]
FIT50 55-85, 3	6,216	0	0	1,418	194	10	19	ND	ND	Dominated[S]
FIT 50-80, 2	10,476	0	0	1,454	218	10	20	108	10	10
HSgFOBT 50-85, 3	7,643	0	0	1,466	195	10	18	ND	ND	Dominated[S]
FIT-DNA 50-75, 5	4,370	0	0	1,473	195	9	18	ND	ND	Dominated[S]
FIT50 50-75, 3	6,322	0	0	1,478	208	9	18	ND	ND	Dominated[S]
HSgFOBT 55-80, 2	7,706	0	0	1,487	194	10	19	ND	ND	Dominated[S]
FIT 50-85, 2	11,071	0	0	1,504	220	11	20	49	2	24[c]
FIT-DNA 55-75, 3	4,640	0	0	1,520	197	10	19	ND	ND	Dominated[S]
FIT50 55-75, 2	6,705	0	0	1,529	205	9	19	ND	ND	Dominated[S]
FIT-DNA 50-80, 5	4,762	0	0	1,554	200	10	19	ND	ND	Dominated[S]
FIT50 50-80, 3	6,961	0	0	1,574	216	10	20	ND	ND	Dominated[S]
HSgFOBT 55-85, 2	8,513	0	0	1,581	198	11	20	ND	ND	Dominated[S]
FIT-DNA 50-85, 5	5,028	0	0	1,606	203	11	19	ND	ND	Dominated[S]
FIT 55-75, 1	12,290	0	0	1,611	217	10	20	ND	ND	Dominated[S]
FIT50 55-80, 2	7,407	0	0	1,625	211	10	20	ND	ND	Dominated[S]
HSgFOBT 50-75, 2	8,448	0	0	1,626	212	9	19	ND	ND	Dominated[S]
FIT50 50-85, 3	7,404	0	0	1,635	218	11	20	ND	ND	Dominated[S]
FIT-DNA 55-80, 3	5,379	0	0	1,663	206	11	20	ND	ND	Dominated[S]
FIT50 55-85, 2	8,159	0	0	1,723	215	12	21	ND	ND	Dominated[S]
FIT 55-80, 1	13,929	0	0	1,729	224	12	21	ND	ND	Dominated[W]
FIT-DNA 55-85, 3	5,774	0	0	1,734	209	12	21	ND	ND	Dominated[S]
HSgFOBT 50-80, 2	9,554	0	0	1,763	221	10	20	ND	ND	Dominated[S]
FIT50 50-75, 2	8,143	0	0	1,784	230	10	20	ND	ND	Dominated[W]
FIT 55-85, 1	15,093	0	0	1,809	226	13	22	ND	ND	Dominated[S]
HSgFOBT 50-85, 2	10,089	0	0	1,824	223	11	21	ND	ND	Dominated[S]
FIT-DNA 50-75, 3	5,927	0	0	1,827	226	10	20	ND	ND	Dominated[S]
HSgFOBT 55-75, 1	10,467	0	0	1,899	219	11	21	ND	ND	Dominated[S]
FIT 50-75, 1	15,444	0	0	1,899	244	11	22	445	26	17
FIT50 50-80, 2	9,183	0	0	1,926	238	11	22	ND	ND	Dominated[S]
FIT-DNA 50-80, 3	6,476	0	0	1,931	232	11	21	ND	ND	Dominated[S]
FIT50 50-85, 2	9,684	0	0	1,989	241	12	22	ND	ND	Dominated[S]

eTable 20. Sensitivity analysis: Outcomes and efficiency ratios for stool-based screening strategies[a] with an age to begin screening of 50 or 55 years, with the inclusion of FIT strategies with a cutoff for positivity of ≥50 ng of hemoglobin (Hb) per mL of buffer (≥10 µg Hb/g of feces) (continued).

Model/strategy	Outcomes per 1,000 40-year-olds									Efficiency ratio[b] (ΔCOL/ΔLYG)
Screening modality, age to begin-age to end (y), interval (y)	Stool tests	SIGs	CTCs	COLs	LYG	Compli-cations	CRC deaths averted	ΔCOL	ΔLYG	
CRC-SPIN (continued)										
FIT-DNA 50-85, 3	6,903	0	0	2,005	235	12	22	ND	ND	Dominated[S]
FIT 50-80, 1	17,062	0	0	2,013	250	12	23	114	6	18
FIT50 55-75, 1	9,915	0	0	2,018	228	11	21	ND	ND	Dominated[S]
HSgFOBT 55-80, 1	11,806	0	0	2,043	224	12	22	ND	ND	Dominated[S]
FIT 50-85, 1	18,224	0	0	2,091	253	13	23	78	3	26
HSgFOBT 55-85, 1	12,765	0	0	2,143	227	13	22	ND	ND	Dominated[S]
FIT50 55-80, 1	11,146	0	0	2,165	233	12	22	ND	ND	Dominated[S]
HSgFOBT 50-75, 1	13,026	0	0	2,253	247	11	22	ND	ND	Dominated[S]
FIT50 55-85, 1	12,037	0	0	2,267	235	14	23	ND	ND	Dominated[S]
FIT-DNA 55-75, 1	8,647	0	0	2,315	234	12	22	ND	ND	Dominated[S]
FIT50 50-75, 1	12,339	0	0	2,392	255	11	23	301	1	208[c]
HSgFOBT 50-80, 1	14,364	0	0	2,395	252	12	23	ND	ND	Dominated[S]
FIT-DNA 55-80, 1	9,673	0	0	2,471	238	14	23	ND	ND	Dominated[S]
HSgFOBT 50-85, 1	15,321	0	0	2,493	255	14	23	ND	ND	Dominated[S]
FIT50 50-80, 1	13,575	0	0	2,537	260	13	23	446	7	69[c]
FIT-DNA 55-85, 1	10,427	0	0	2,582	239	15	23	ND	ND	Dominated[S]
FIT50 50-85, 1	14,460	0	0	2,638	262	14	24	547	9	62
FIT-DNA 50-75, 1	10,745	0	0	2,729	261	13	23	ND	ND	Dominated[S]
FIT-DNA 50-80, 1	11,795	0	0	2,886	265	14	24	249	3	96[c]
FIT-DNA 50-85, 1	12,542	0	0	2,994	266	15	24	357	4	83

COL indicates colonoscopy; CRC, colorectal cancer; CRC-SPIN, CRC Simulated Population Model for Incidence and Natural History; CTC, computed tomographic colonography; FIT, fecal immunochemical test with a positivity cutoff of ≥100 ng of hemoglobin (Hb) per mL of buffer (≥20 µg Hb/g of feces); FIT50, fecal immunochemical test with a positivity cutoff of ≥50 ng of Hb per mL of buffer (≥10 µg Hb/g of feces); FIT-DNA, multitarget stool DNA test (fecal immunochemical test with a DNA stool test); HSgFOBT, high-sensitivity guaiac-based fecal occult blood test; LYG, life-years gained compared with no screening; MISCAN, Microsimulation Screening Analysis; ND, indicates ΔCOL and ΔLYG are not defined because the strategy was not an efficient or near-efficient option; S, strategy is strongly dominated (ie, another strategy within the modality requires fewer colonoscopies and provides more LYG [eFigure 2]); SIG, flexible sigmoidoscopy; SimCRC, Simulation Model of CRC; W, strategy is weakly dominated (ie, another more burdensome strategy within the modality provides more LYG gained but requires fewer additional colonoscopies per additional LYG to achieve those gains [eFigure 2]) and does not meet the criterion for near-efficiency; ΔCOL, incremental number of colonoscopies compared with the next-most effective non-dominated strategy; ΔLYG, incremental number of LYG compared with the next-most effective non-dominated strategy.

[a] FIT, FIT50, FIT-DNA, and HSgFOBT.

[b] Due to rounding, efficiency ratio may not equal ΔCOL/ΔLYG.

[c] Indicates the strategy is near-efficient (ie, it is weakly dominated and its LYG are within 98% of the within-class efficient frontier).

eTable 21. Sensitivity analysis: Outcomes and efficiency ratios for CTC screening strategies with an age to begin screening of 50 or 55 years, using the number of procedures requiring cathartic bowel preparation as the measure of the burden of screening. Persons with a positive CTC are assumed to undergo same-day follow-up colonoscopy, thereby eliminating the need for an additional bowel preparation. Strategies are ordered by the number of colonoscopies required.

Model/strategy	Outcomes per 1,000 40-year-olds								Efficiency ratio[a] (ΔcPREP/ΔLYG)
Modality, age to begin-age to end (y), interval (y)	CTCs	COLs	cPREPs	LYG	Compli-cations	CRC deaths averted	ΔcPREP	ΔLYG	
SimCRC									
CTC 55-75, 10	2,250	1,396	3,134	214	10	21	--	--	--
CTC 50-75, 10	2,458	1,460	3,406	239	9	21	272	25	11
CTC 55-85, 10	2,528	1,494	3,439	216	12	21	ND	ND	Dominated[S]
CTC 50-80, 10	2,874	1,615	3,872	245	11	22	571	6	96[b]
CTC 55-75, 5	3,295	1,694	4,331	231	11	22	ND	ND	Dominated[S]
CTC 55-80, 5	3,631	1,788	4,694	233	12	23	ND	ND	Dominated[S]
CTC 55-85, 5	3,854	1,847	4,931	234	13	23	ND	ND	Dominated[S]
CTC 50-75, 5	4,069	1,927	5,238	265	11	24	1,832	26	71
CTC 50-80, 5	4,405	2,021	5,600	267	12	24	362	2	168
CTC 50-85, 5	4,627	2,079	5,836	268	13	24	236	1	451
MISCAN									
CTC 55-75, 10	2,284	1,220	3,058	172	9	16	--	--	--
CTC 50-75, 10	2,485	1,293	3,323	184	8	16	265	12	23
CTC 55-85, 10	2,590	1,292	3,379	175	10	17	ND	ND	Dominated[S]
CTC 50-80, 10	2,927	1,405	3,793	194	9	18	553	10	57[b]
CTC 55-75, 5	3,388	1,523	4,317	204	10	19	1,133	20	58[b]
CTC 55-80, 5	3,759	1,598	4,704	208	11	20	ND	ND	Dominated[W]
CTC 55-85, 5	4,014	1,646	4,967	209	11	20	ND	ND	Dominated[W]
CTC 50-75, 5	4,171	1,743	5,224	226	10	20	1,901	42	45
CTC 50-80, 5	4,539	1,817	5,608	230	11	21	384	4	85
CTC 50-85, 5	4,792	1,864	5,869	231	11	21	261	1	207
CRC-SPIN									
CTC 55-75, 10	2,296	1,265	3,102	209	9	20	--	--	--
CTC 50-75, 10	2,500	1,304	3,344	224	9	20	242	15	16
CTC 55-85, 10	2,602	1,356	3,432	212	11	21	ND	ND	Dominated[S]
CTC 50-80, 10	2,948	1,442	3,836	234	11	21	492	10	51
CTC 55-75, 5	3,438	1,475	4,330	224	10	21	ND	ND	Dominated[S]
CTC 55-80, 5	3,822	1,560	4,736	228	11	22	ND	ND	Dominated[S]
CTC 55-85, 5	4,084	1,616	5,011	230	12	22	ND	ND	Dominated[S]
CTC 50-75, 5	4,254	1,654	5,234	248	10	22	1,398	15	95
CTC 50-80, 5	4,638	1,739	5,640	252	11	23	406	4	108
CTC 50-85, 5	4,900	1,795	5,914	254	12	23	274	2	142

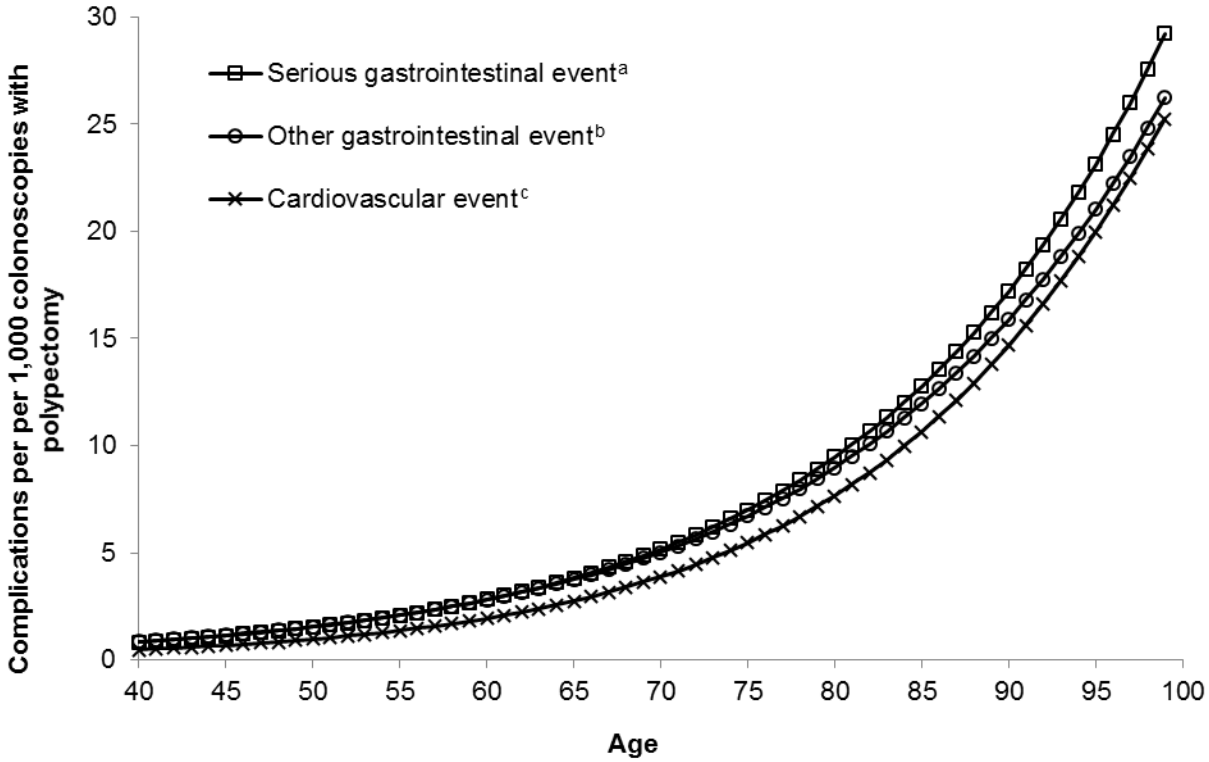
cPREP indicates procedures with cathartic bowel preparation (ie, CTCs and colonoscopies); COL, colonoscopy; CRC, colorectal cancer; CRC-SPIN, CRC Simulated Population Model for Incidence and Natural History; CTC, computed tomographic colonography; LYG, life-years gained compared with no screening; MISCAN, Microsimulation Screening Analysis; ND, indicates ΔCOL and ΔLYG are not defined because the strategy was not an efficient or near-efficient option; S, strategy is strongly dominated (ie, another strategy within the modality requires fewer colonoscopies and provides more LYG [eFigure 2]); SimCRC, Simulation Model of CRC; W, strategy is weakly dominated (ie, another more burdensome strategy within the modality provides more LYG but requires fewer additional colonoscopies per additional LYG to achieve those gains [eFigure 2]) and does not meet the criterion for near-efficiency; ΔcPREP, incremental number of procedures requiring cathartic bowel preparation compared with the next-most effective non-dominated strategy; ΔLYG, incremental number of LYG compared with the next-most effective non-dominated strategy.

[a] Due to rounding, efficiency ratio may not equal ΔcPREP/ΔLYG.

[b] Indicates the strategy is near-efficient (ie, it is weakly dominated and its LYG are within 98% of the within-class efficient frontier).

eFigure 1. Age-specific risks of complications from colonoscopy with polypectomy used in the analysis. Complications include serious gastrointestinal events, other gastrointestinal events, and cardiovascular events.

We assume that the only harms from screening arise from a colonoscopy with polypectomy, whether it be for screening, follow-up, or surveillance, or for the diagnosis of a symptomatic cancer. We assume no risk of harms from stool-based tests, flexible sigmoidoscopy, or computed tomographic colonography, nor from bowel preparation.[3] The risks of complications from colonoscopy are from an analysis by van Hees et al.,[4] which was an extension of an analysis by Warren et al.[5] In those studies, colonoscopy without polypectomy was not associated with an excess risk of complications, relative to a matched control group that did not have colonoscopy.



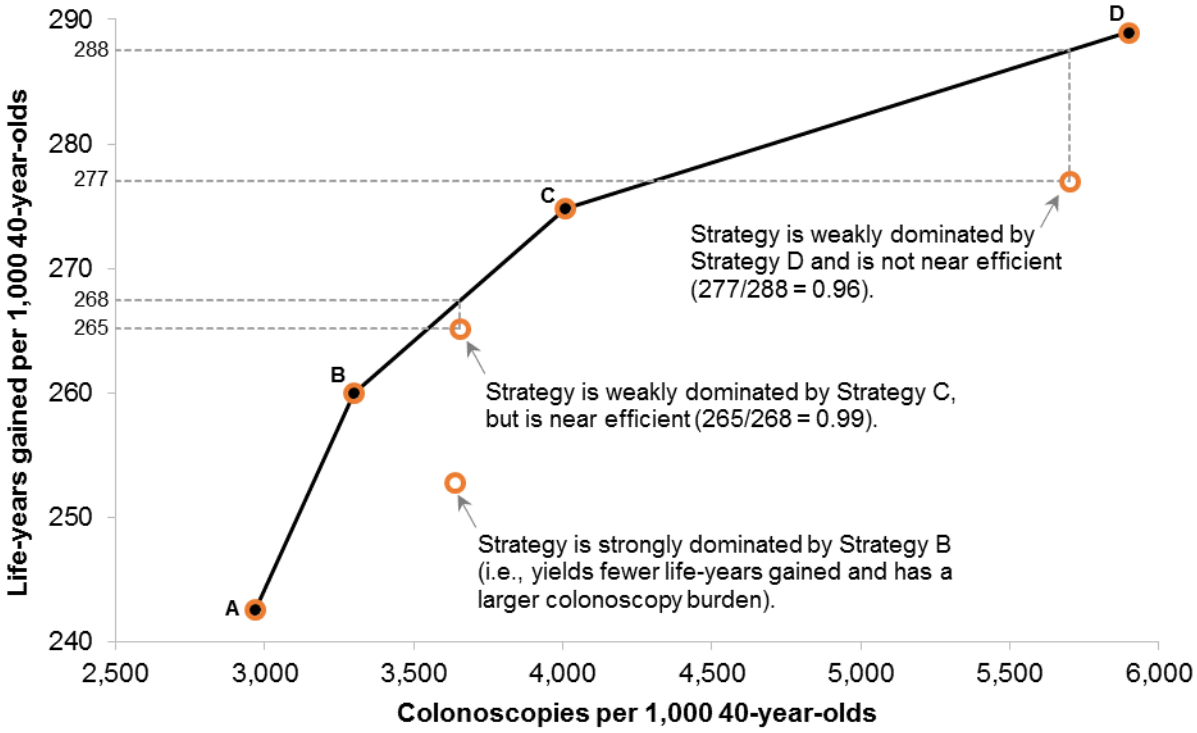
[a] Perforations, gastrointestinal bleeding or transfusions. Excess risk per colonoscopy with polypectomy = 1/[exp(9.27953 − 0.06105 × Age) + 1] − 1/[exp(10.78719 − 0.06105 × Age) + 1].

[b] Paralytic ileus, nausea and vomiting, dehydration, abdominal pain. Excess risk per colonoscopy with polypectomy = 1/[exp(8.81404 − 0.05903 × Age) + 1] − 1/[exp(9.61197 − 0.05903 × Age) + 1].

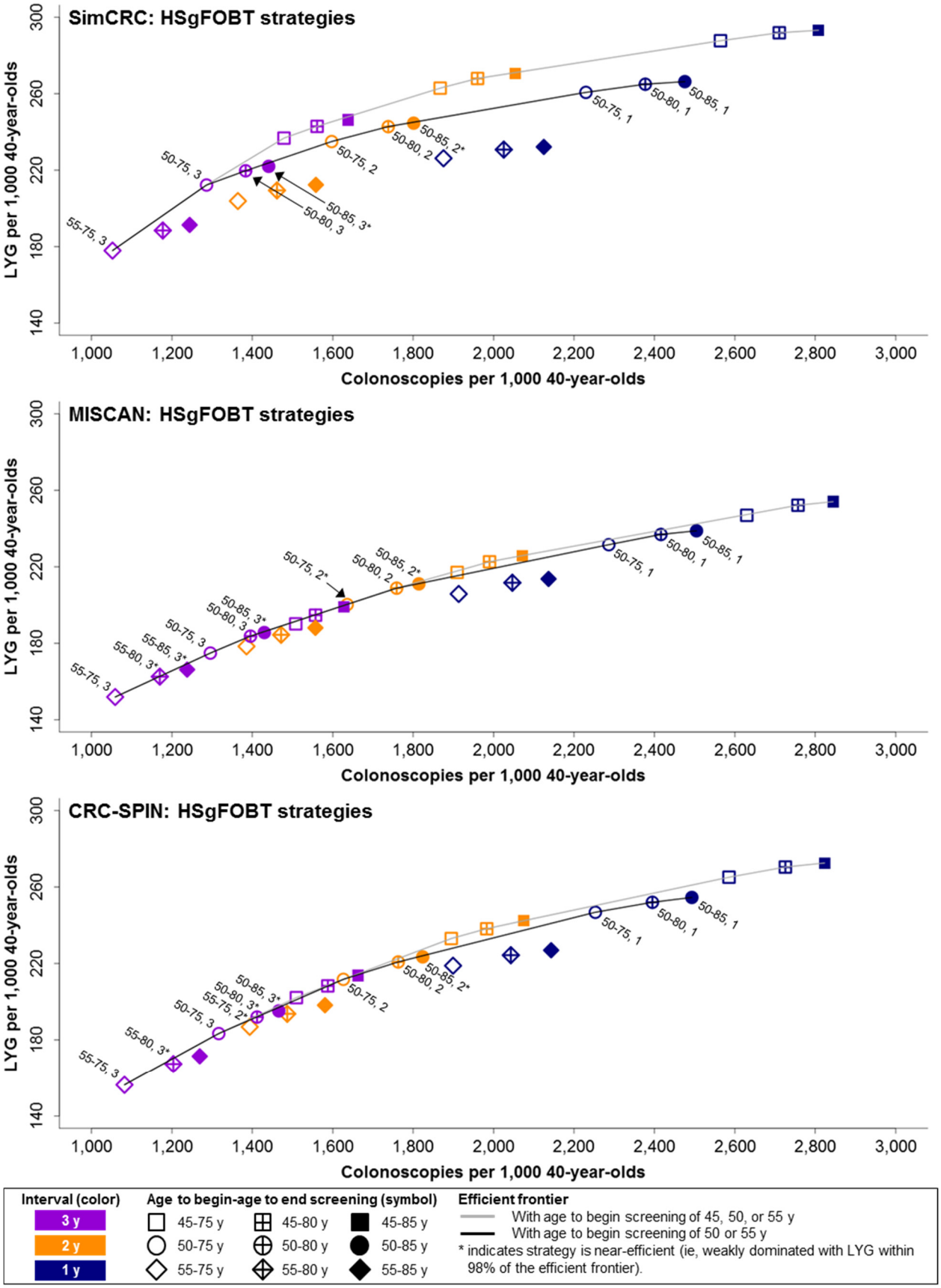
[c] Myocardial infarction or angina, arrhythmias, congestive heart failure, cardiac or respiratory arrest, syncope, hypotension, or shock. Excess risk per colonoscopy with polypectomy = 1/[exp(9.09053 − 0.07056 × Age) + 1] − 1/[exp(9.38297 − 0.07056 × Age) + 1].

eFigure 2. Example of the assessment of near-efficiency for weakly dominated strategies.

Each strategy is represented by a point on the graph below. The solid black line is the efficient frontier connecting the efficient strategies (ie, strategies A-D); strategies that fall below the line are dominated. The lower annotated strategy is strongly dominated, that is, it yields fewer life-years gained and has a larger colonoscopy burden than Strategy B. The annotated strategy in the middle is weakly dominated; that is, another more burdensome strategy, Strategy C, provides more LYG but requires fewer additional colonoscopies per additional LYG to achieve those gains. However, we deem it "near-efficient" because it meets our criterion for having life-years gained within 98% of the efficient frontier. The upper annotated strategy is weakly dominated and is not "near-efficient" because its life-years gained are less than 98% of the efficient frontier. Near-efficiency was only assessed for weakly dominated strategies.

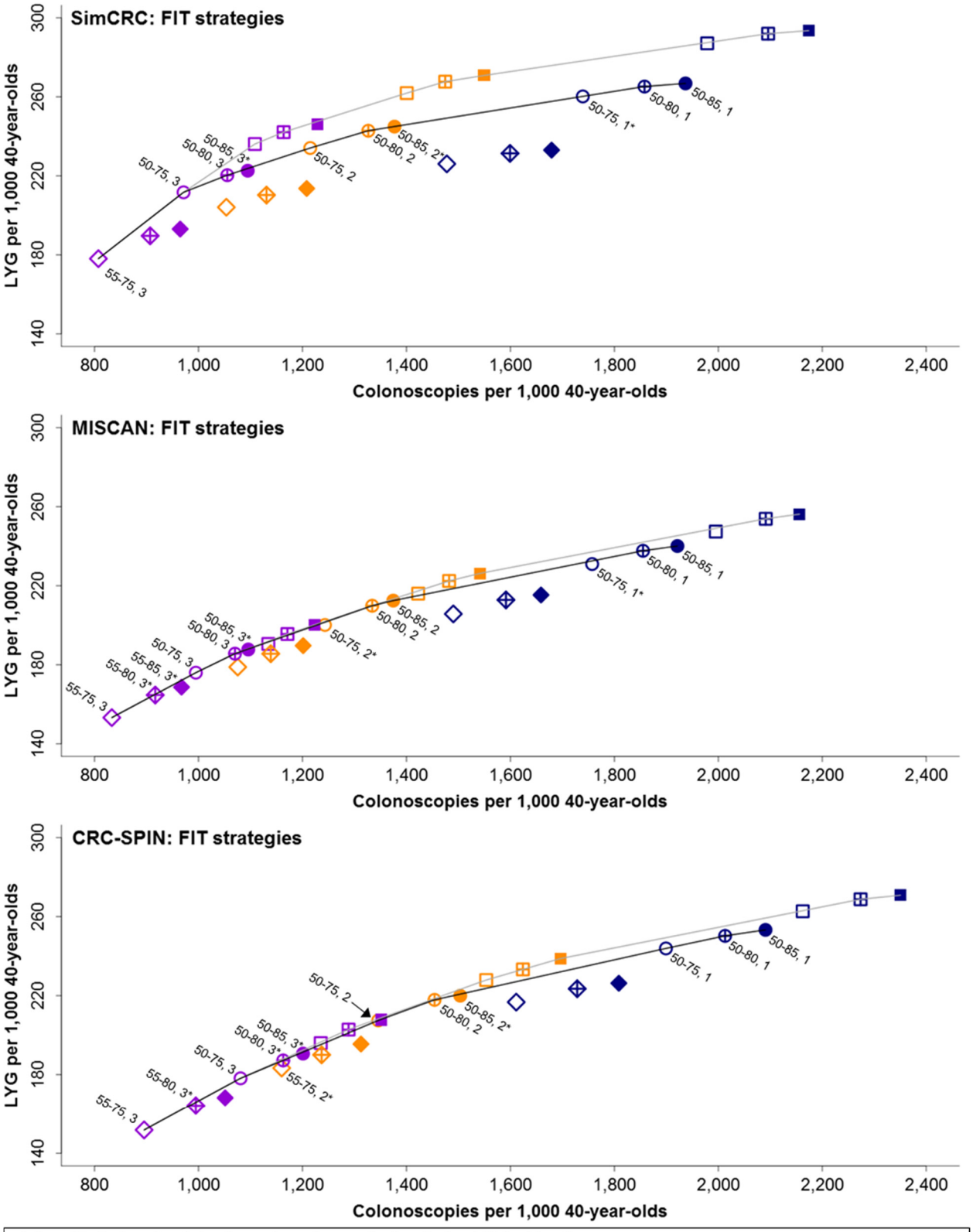


eFigure 3. Lifetime number of colonoscopies and LYG for a cohort of 40-year-olds for HSgFOBT screening strategies. Strategies varied by age to begin, age to end, and screening interval. Efficient and near-efficient strategies with an age to begin of 50 or 55 years are labeled.



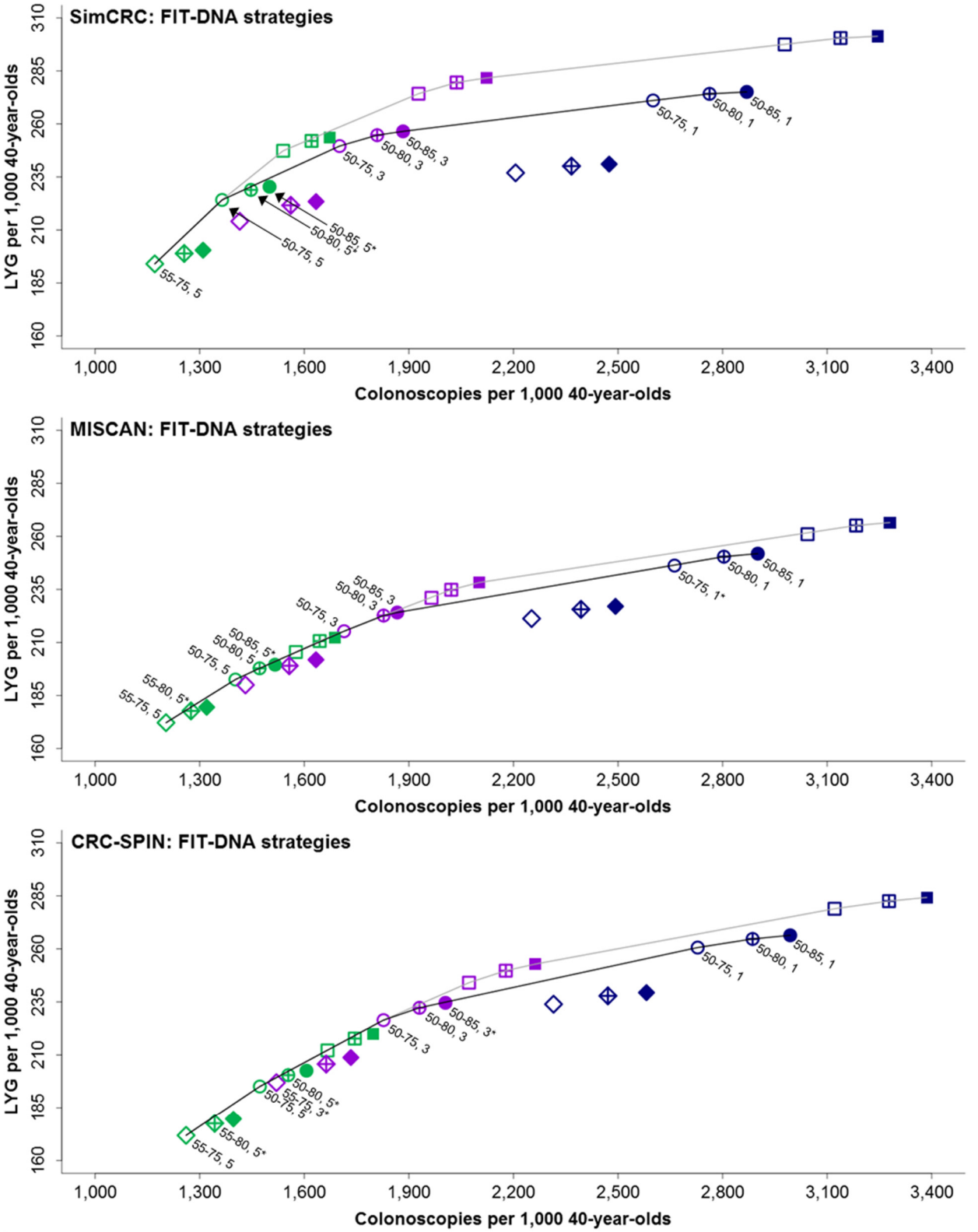
CRC-SPIN indicates Colorectal Cancer Simulated Population Model for Incidence and Natural History; HSgFOBT, high-sensitivity guaiac-based fecal occult blood test; LYG, life-years gained compared with no screening; MISCAN, Microsimulation Screening Analysis; SimCRC, Simulation Model of Colorectal Cancer. An interactive version of this figure is available at https://resources.cisnet.cancer.gov/projects/#crcr/uspstf/figures?figure=efig_3.

eFigure 4. Lifetime number of colonoscopies and LYG for a cohort of 40-year-olds for FIT screening strategies. Strategies varied by age to begin, age to end, and screening interval. Efficient and near-efficient strategies with an age to begin of 50 or 55 years are labeled.



CRC-SPIN indicates Colorectal Cancer (CRC) Simulated Population Model for Incidence and Natural History; FIT, fecal immunochemical test with a positivity cutoff of ≥100 ng of hemoglobin (Hb) per mL of buffer (≥20 µg Hb/g of feces); LYG, life-years gained compared with no screening; MISCAN, Microsimulation Screening Analysis; SimCRC, Simulation Model of CRC.
An interactive version of this figure is available at https://resources.cisnet.cancer.gov/projects/#crcr/uspstf/figures?figure=efig_4.

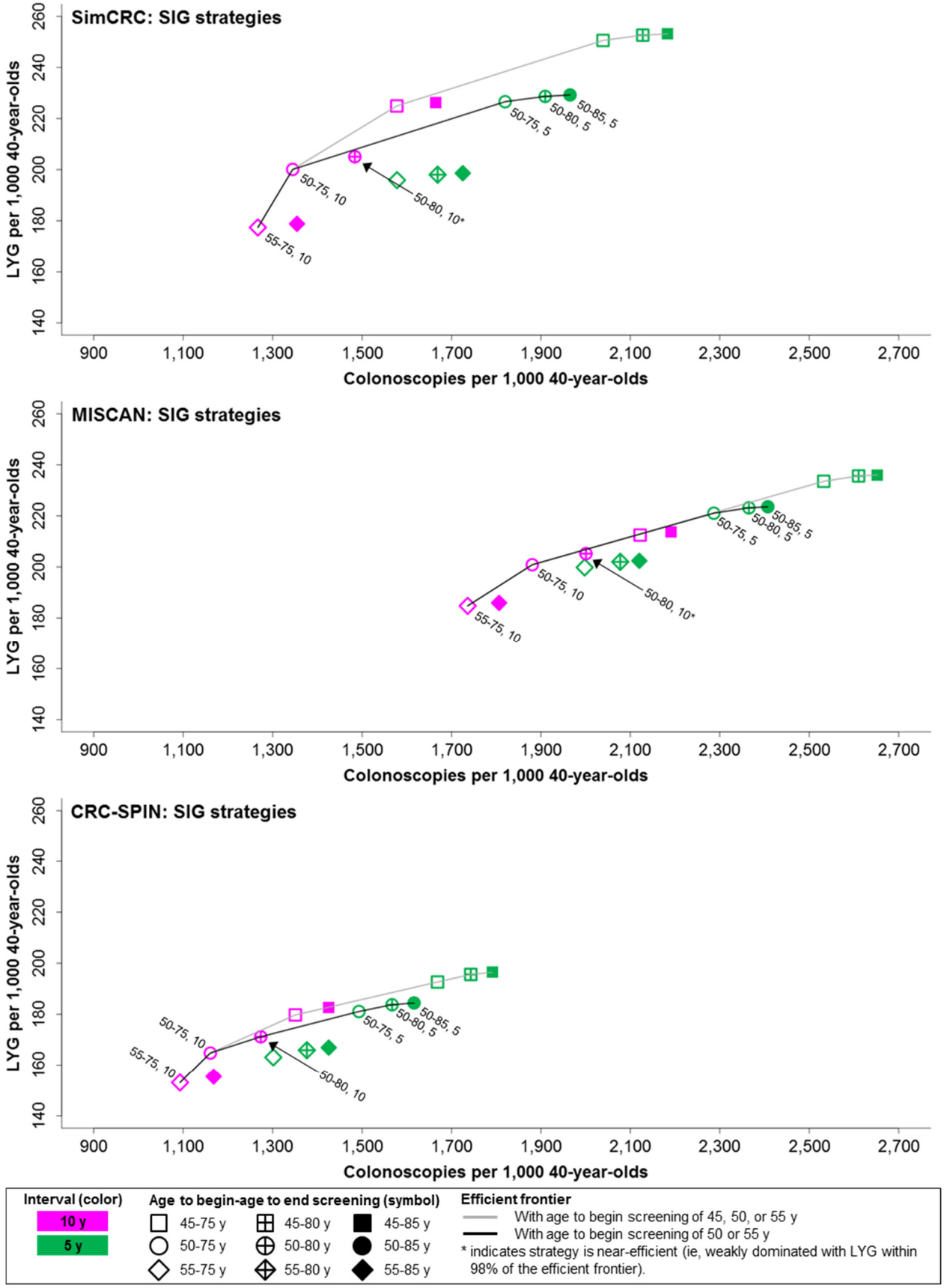
eFigure 5. Lifetime number of colonoscopies and LYG for a cohort of 40-year-olds for FIT-DNA screening strategies. Strategies varied by age to begin, age to end, and screening interval. Efficient and near-efficient strategies with an age to begin of 50 or 55 years are labeled.



CRC-SPIN indicates Colorectal Cancer (CRC) Simulated Population Model for Incidence and Natural History; FIT-DNA, multitarget stool DNA test (fecal immunochemical test with a DNA stool test); LYG, life-years gained compared with no screening; MISCAN, Microsimulation Screening Analysis; SimCRC, Simulation Model of CRC.

An interactive version of this figure is available at https://resources.cisnet.cancer.gov/projects/#crcr/uspstf/figures?figure=efig_5.

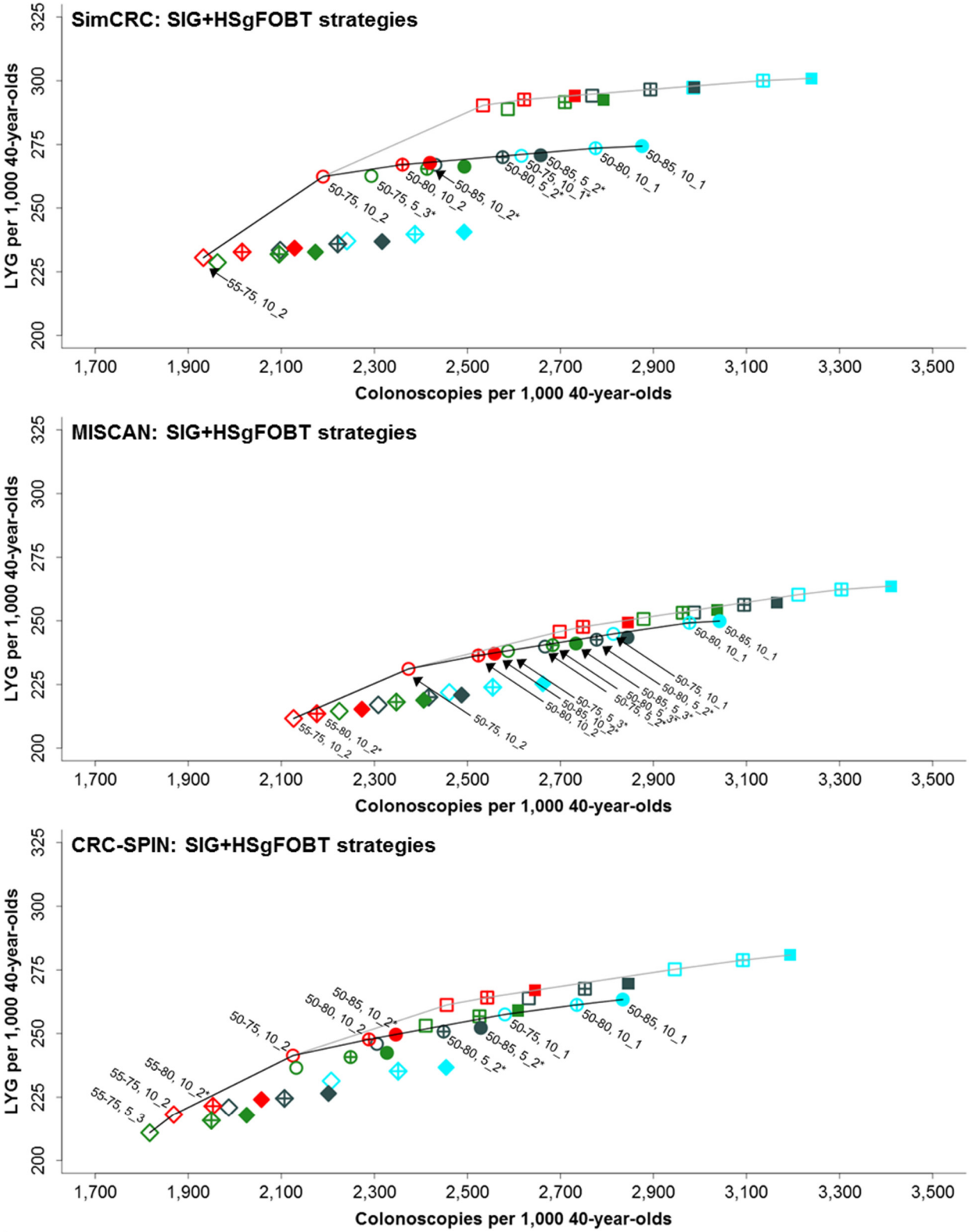
eFigure 6. Lifetime number of colonoscopies and LYG for a cohort of 40-year-olds for SIG screening strategies. Strategies varied by age to begin, age to end, and screening interval. Efficient and near-efficient strategies with an age to begin of 50 or 55 years are labeled.



CRC-SPIN indicates Colorectal Cancer (CRC) Simulated Population Model for Incidence and Natural History; LYG, life-years gained compared with no screening; MISCAN, Microsimulation Screening Analysis; SIG indicates flexible sigmoidoscopy; SimCRC, Simulation Model of CRC.

An interactive version of this figure is available at https://resources.cisnet.cancer.gov/projects/#crcr/uspstf/figures?figure=efig_6.

eFigure 7. Lifetime number of colonoscopies and LYG for a cohort of 40-year-olds for SIG+HSgFOBT screening strategies. Strategies varied by age to begin, age to end, and screening interval.[a] Efficient and near-efficient strategies with an age to begin of 50 or 55 years are labeled.

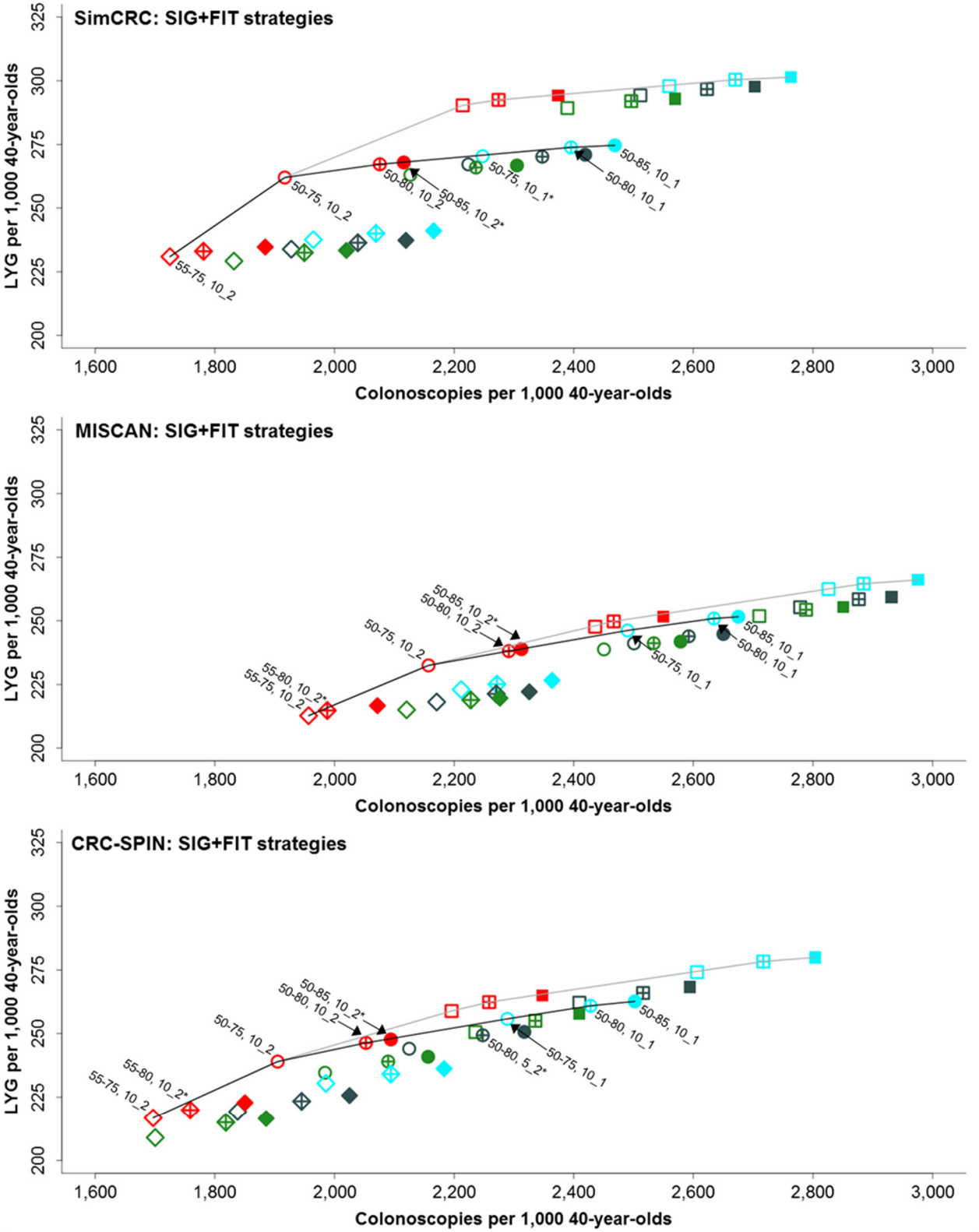


CRC-SPIN indicates Colorectal Cancer (CRC) Simulated Population Model for Incidence and Natural History; HSgFOBT, high-sensitivity guaiac-based fecal occult blood test; LYG, life-years gained compared with no screening; MISCAN, Microsimulation Screening Analysis; SIG, flexible sigmoidoscopy; SimCRC, Simulation Model of CRC.

An interactive version of this figure is available at https://resources.cisnet.cancer.gov/projects/#crcr/uspstf/figures?figure=efig_7.

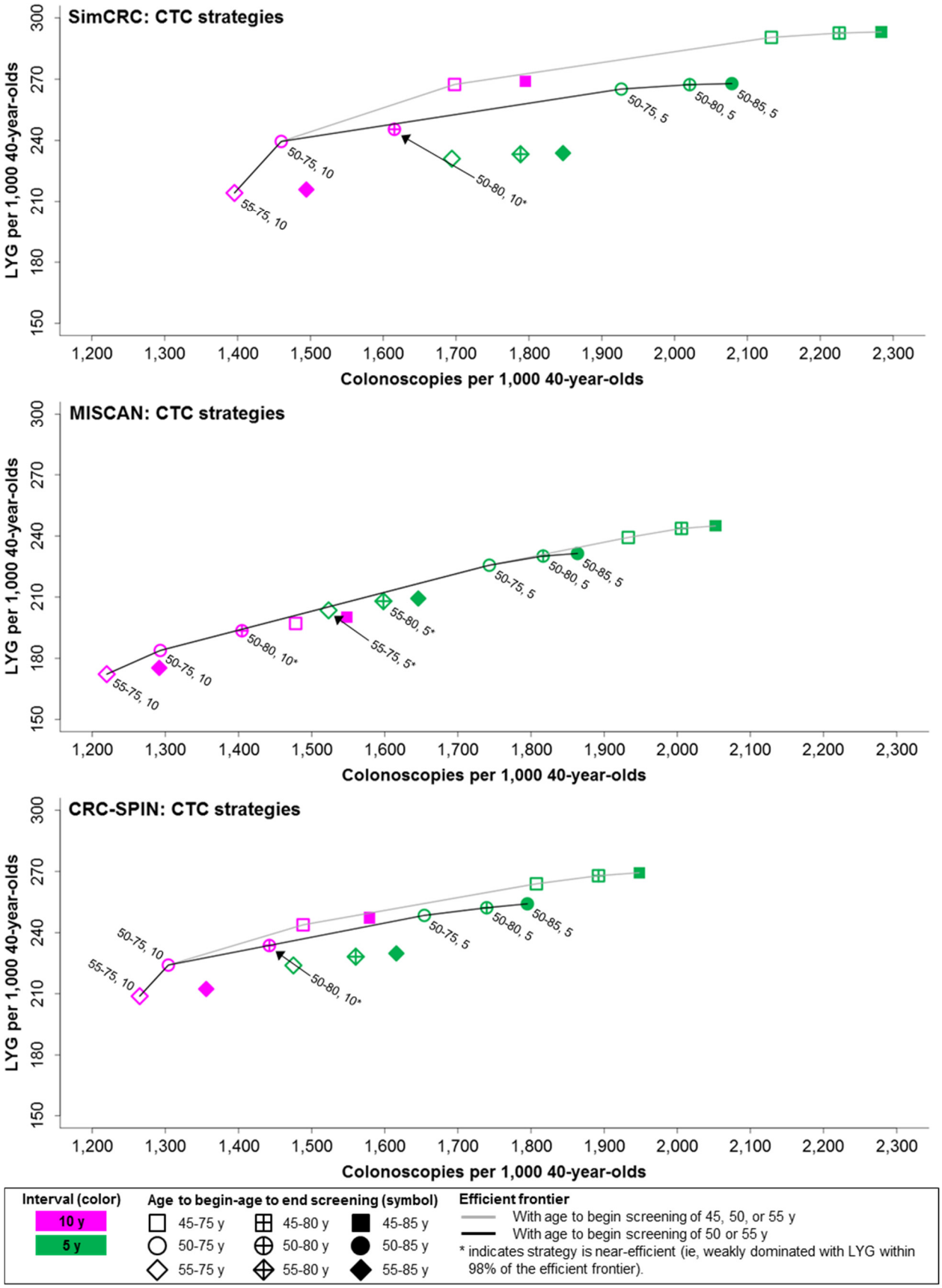
[a] The first interval is for SIG and the second interval is for HSgFOBT.

eFigure 8. Lifetime number of colonoscopies and LYG for a cohort of 40-year-olds for SIG+FIT screening strategies. Strategies varied by age to begin, age to end, and screening interval.[a] Efficient and near-efficient strategies with an age to begin of 50 or 55 years are labeled.



CRC-SPIN, Colorectal Cancer (CRC) Simulated Population Model for Incidence and Natural History; FIT, fecal immunochemical test with a positivity cutoff of ≥100 ng of hemoglobin (Hb) per mL of buffer (≥20 μg Hb/g of feces); LYG, life-years gained compared with no screening; MISCAN, Microsimulation Screening Analysis; SIG, flexible sigmoidoscopy; SimCRC, Simulation Model of CRC.
An interactive version of this figure is available at https://resources.cisnet.cancer.gov/projects/#crcr/uspstf/figures?figure=efig_8.
[a] The first interval is for SIG and the second interval is for FIT.

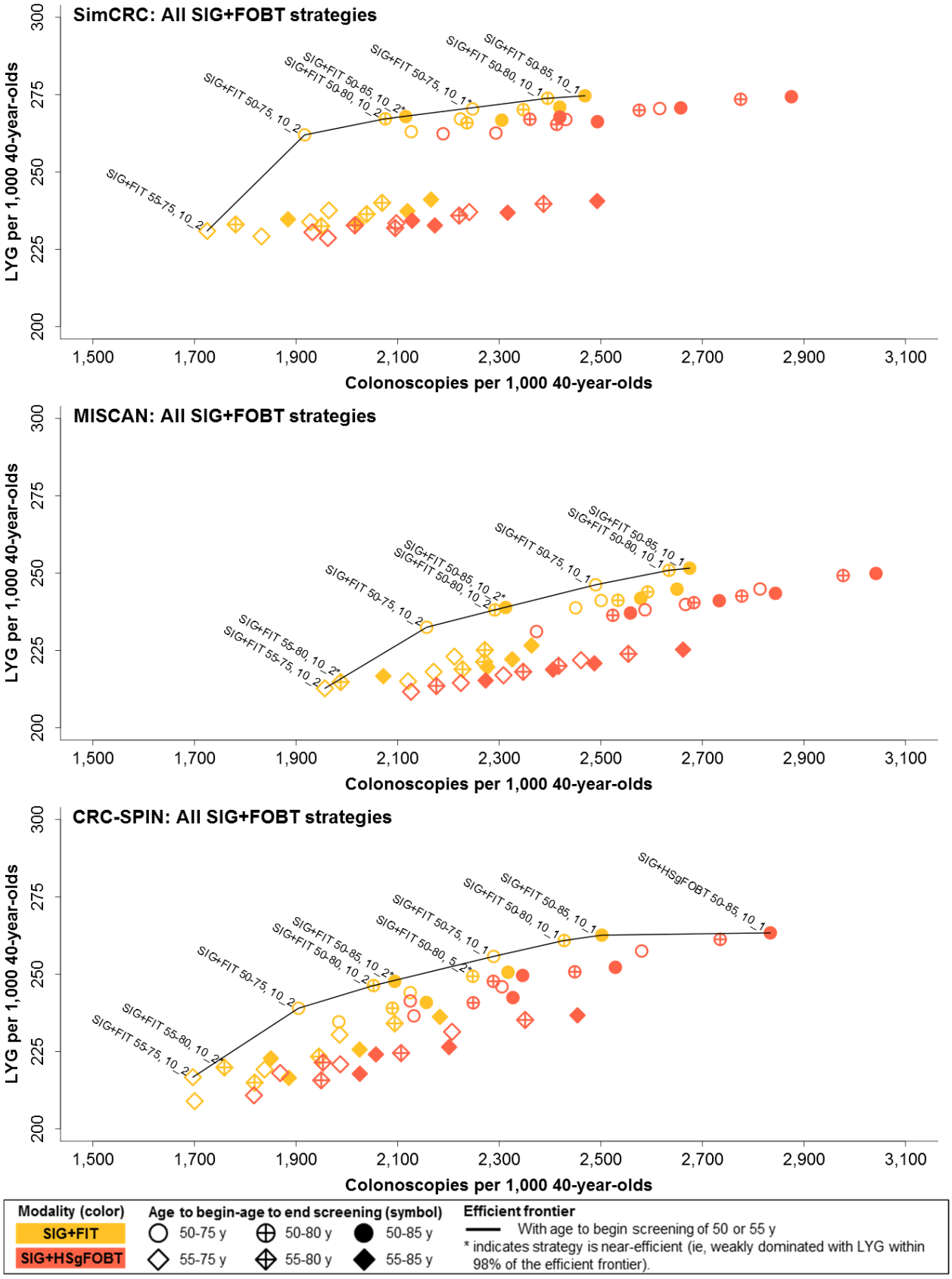
eFigure 9. Lifetime number of colonoscopies and LYG for a cohort of 40-year-olds for CTC screening strategies. Strategies varied by age to begin, age to end, and screening interval. Efficient and near-efficient strategies with an age to begin of 50 or 55 years are labeled.



CRC-SPIN indicates Colorectal Cancer (CRC) Simulated Population Model for Incidence and Natural History; CTC, computed tomographic colonography; LYG, life-years gained compared with no screening; MISCAN, Microsimulation Screening Analysis; SimCRC, Simulation Model of CRC.

An interactive version of this figure is available at https://resources.cisnet.cancer.gov/projects/#crcr/uspstf/figures?figure=efig_9.

eFigure 10. Lifetime number of colonoscopies and LYG for a cohort of 40-year-olds with SIG combined with stool-based testing strategies (SIG+FIT, SIG+HSgFOBT). Strategies varied by age to begin (50 or 55 years only), age to end, and screening interval.[a] Efficient and near-efficient strategies are labeled.



CRC-SPIN indicates Colorectal Cancer (CRC) Simulated Population Model for Incidence and Natural History; FIT, fecal immunochemical test with positivity cutoff of ≥100 ng of hemoglobin (Hb) per mL of buffer (≥20 µg Hb/g of feces); HSgFOBT, high-sensitivity guaiac-based fecal occult blood test; LYG, life-years gained compared with no screening; MISCAN, Microsimulation Screening Analysis; SIG, flexible sigmoidoscopy; SimCRC, Simulation Model of CRC.

An interactive version of this figure is available at https://resources.cisnet.cancer.gov/projects/#crcr/uspstf/figures?figure=efig_10.

[a] The first interval is for SIG and the second interval is for the stool test.

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