

Appendix B: The benefits, harms, and cost-effectiveness of age-based and risk-stratified screening for prostate cancer with MRI

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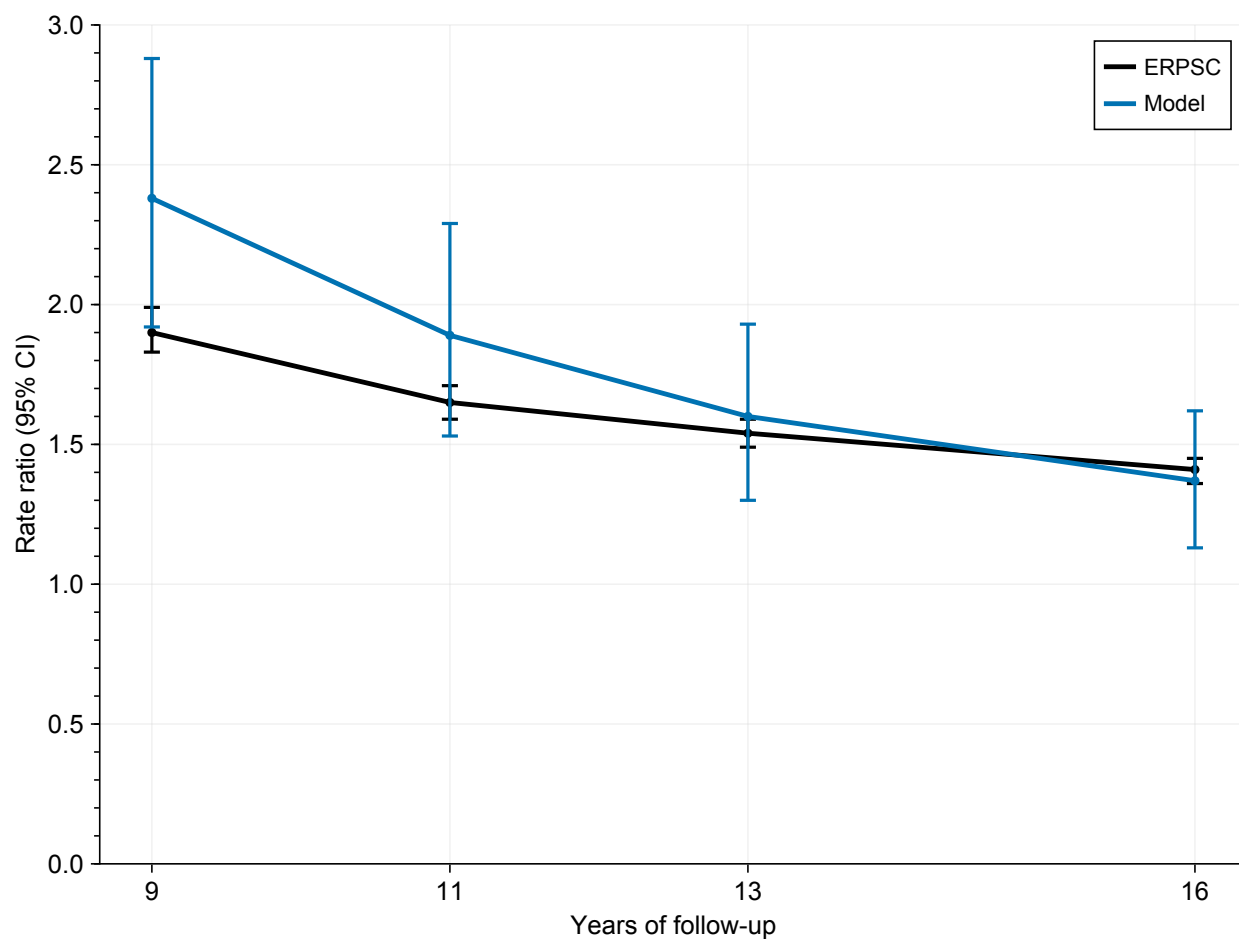
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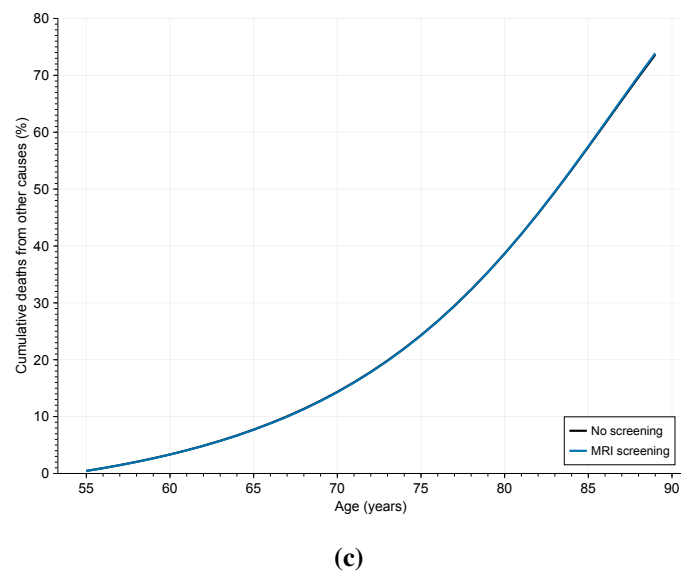
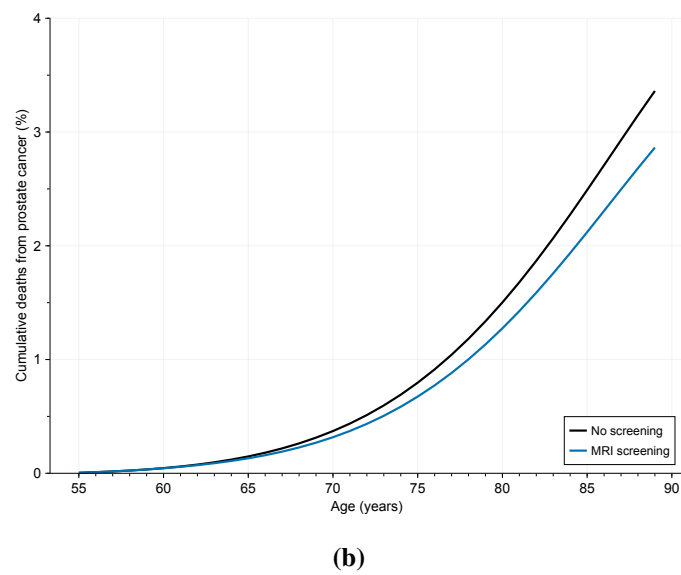
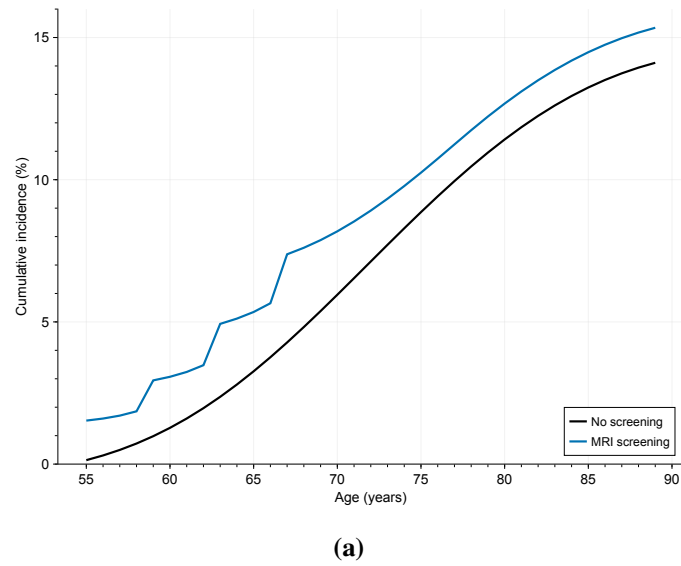
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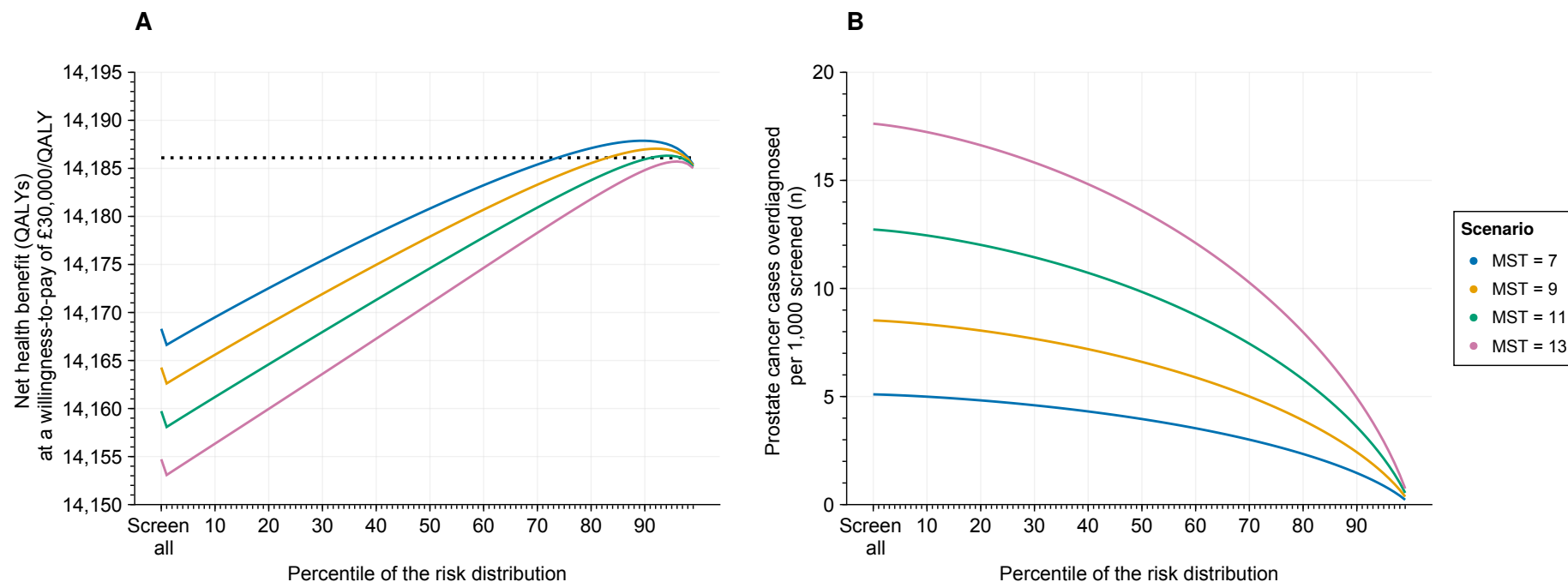
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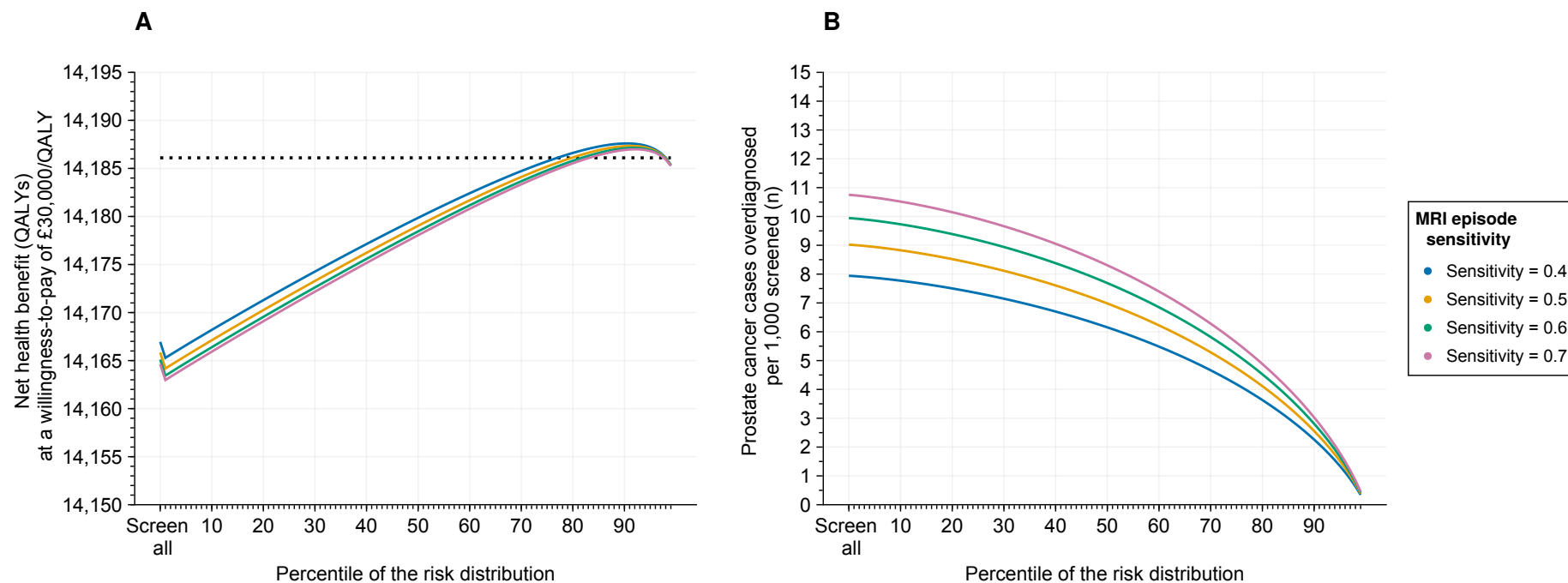
Appendix Figure B.1: Plot showing the rate ratio of prostate cancers detected over 9, 11, 13, and 16 years using our model against that seen in the European Randomized Study of Prostate Cancer Screening (ERPSC). Note, our model follows a single cohort from age 55 onwards, whereas the ERPSC involves a mixed cohort.



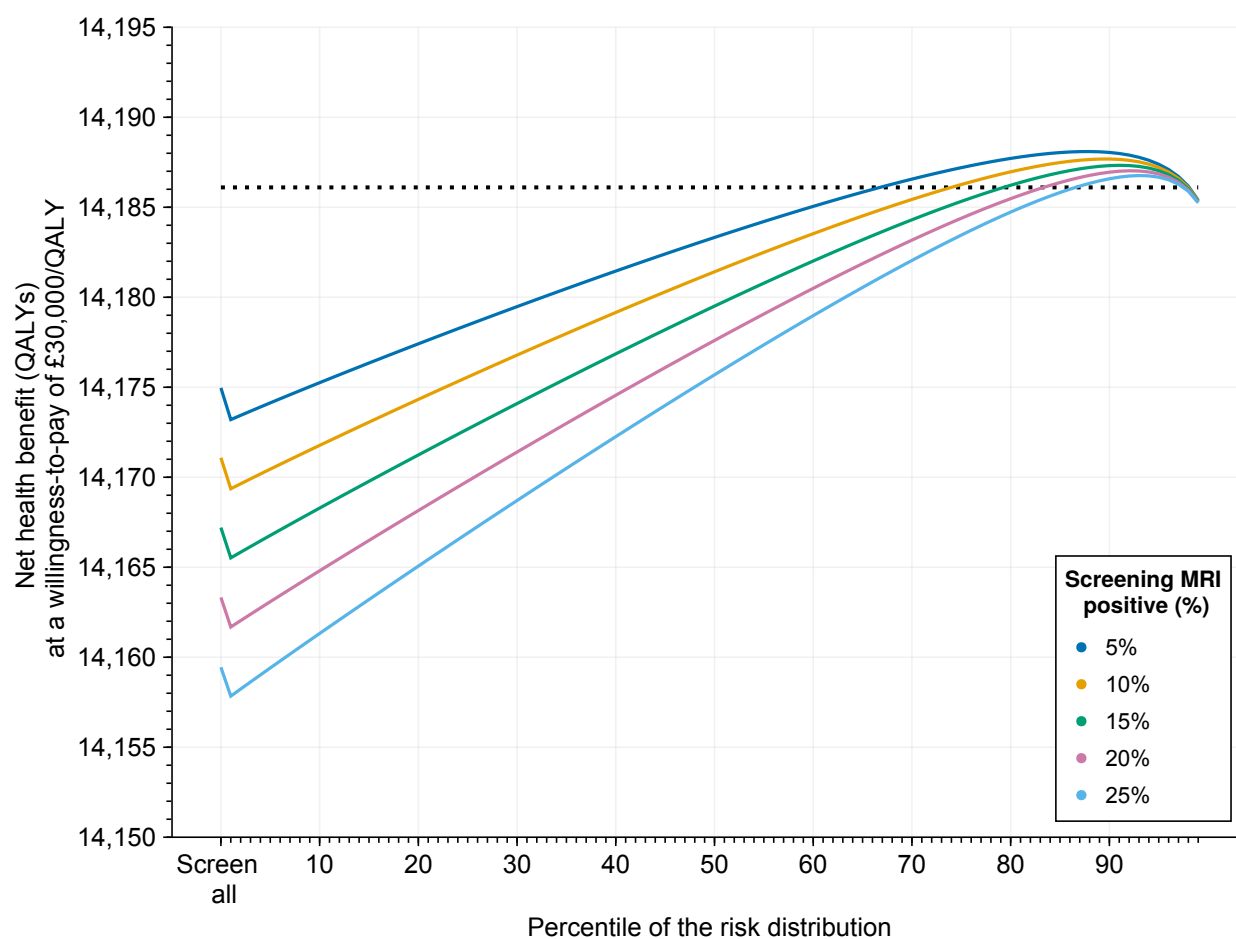
Appendix Figure B.2: Cumulative percentage with prostate cancer (A), dying from prostate cancer (B), and dying from other causes (C) by age for no screening and MRI screening cohorts.



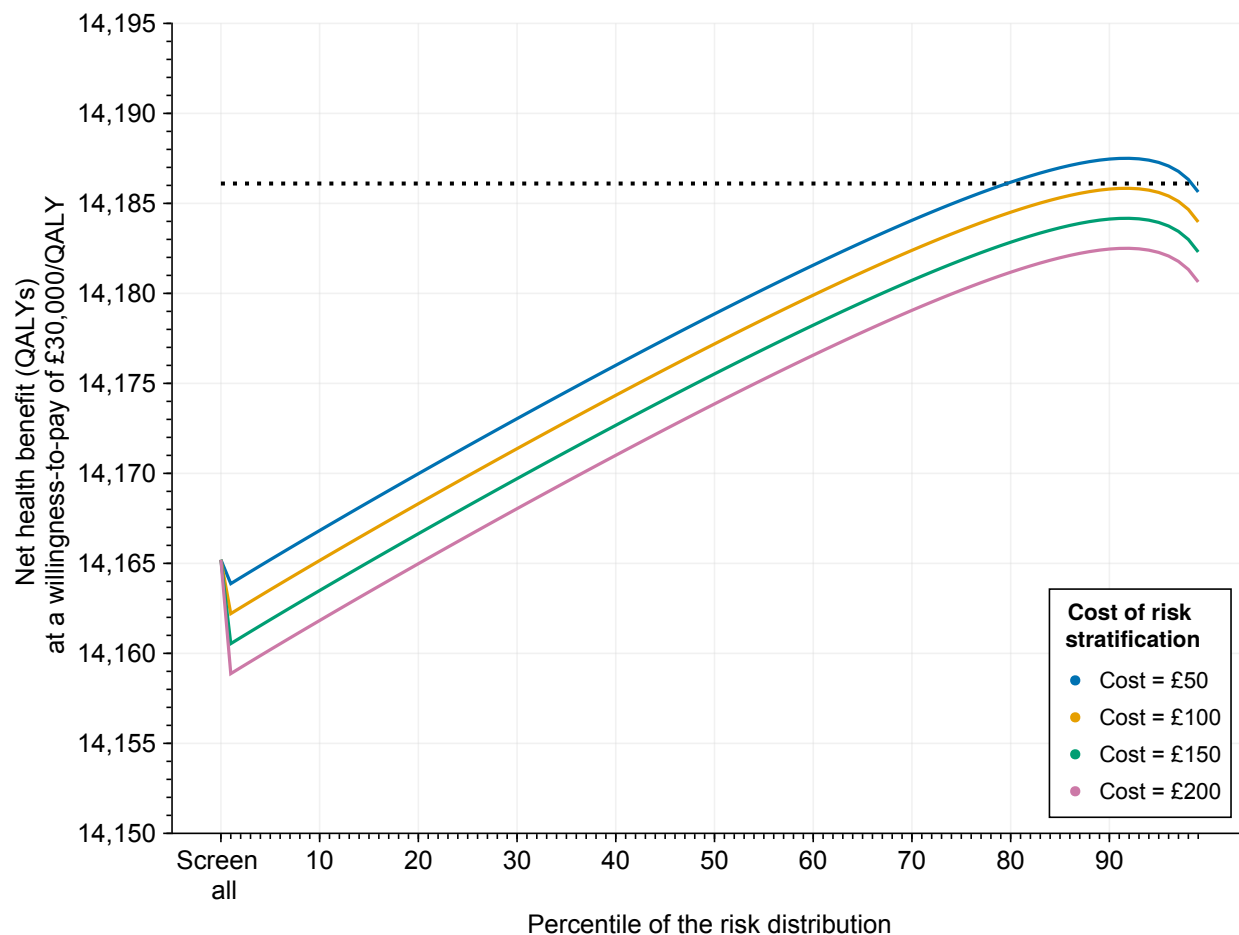
Appendix Figure B.3: Scenario analysis: Impact of varying the mean sojourn time (MST) on the (A) cost-effectiveness of screening and number of cancers overdiagnosed (B) per 1,000 men screened. In sub-figure A the dotted horizontal line represents the net health benefit of no screening; strategies above this line would be considered cost-effective at a willingness-to-pay (WTP) per quality-adjusted life-year (QALY) gained of £30,000. Analyses involved cohorts of 1,000 men followed from age 55–89 years, with screening every 4 years from 55 to 69 years.



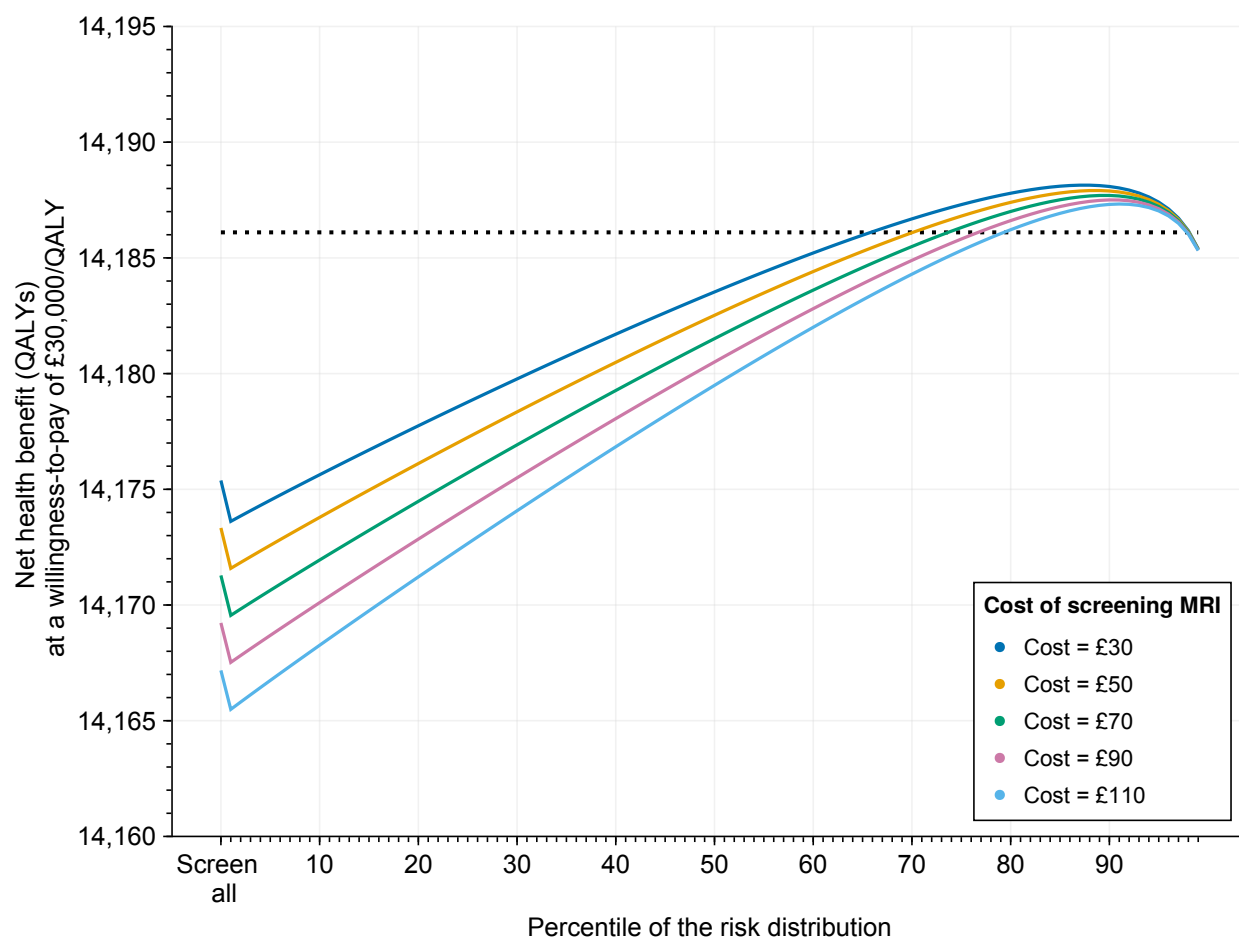
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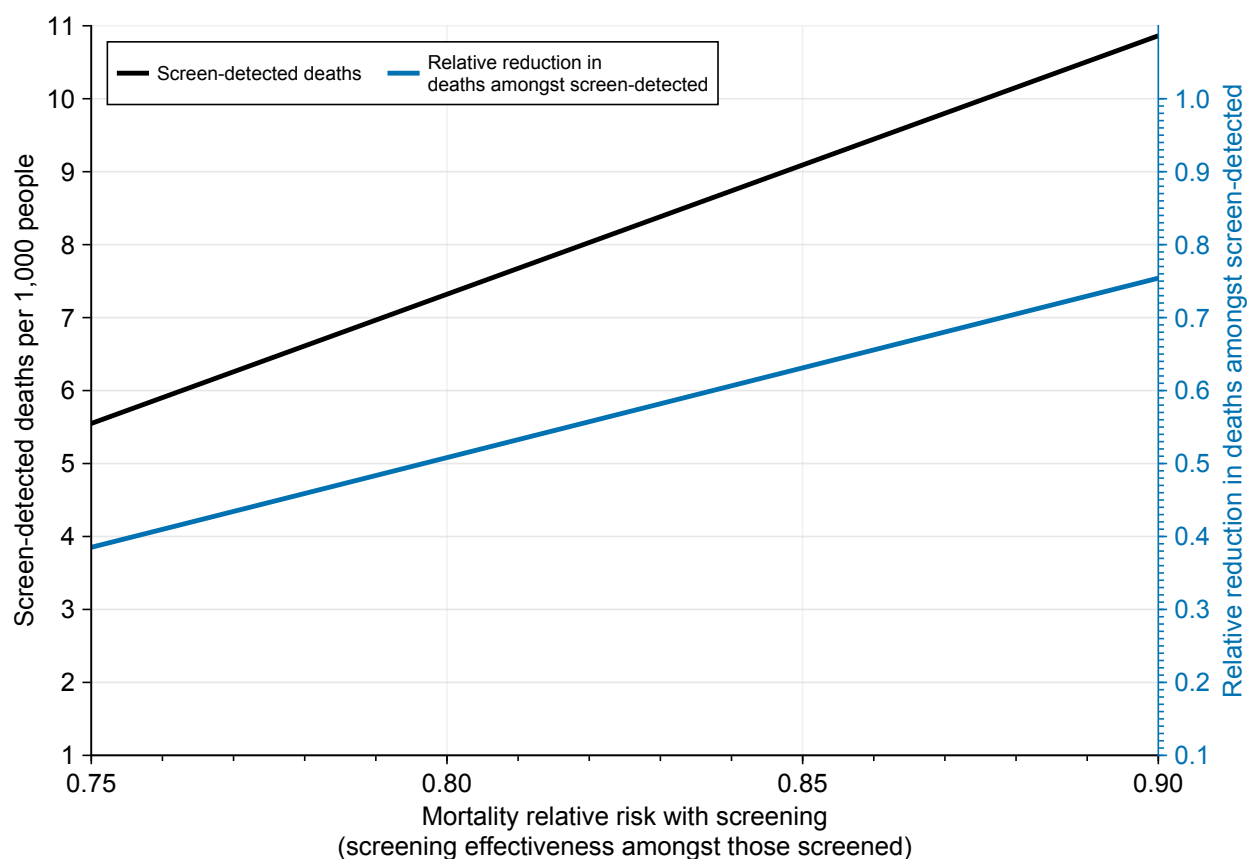
Appendix Figure B.5: Scenario analysis: Impact of varying proportion of screening MRI that test positive on the cost-effectiveness of screening. The dotted horizontal line is the NHB of no screening. Analyses involved cohorts of 1,000 men followed from age 55–89 years, with screening every 4 years from 55 to 69 years



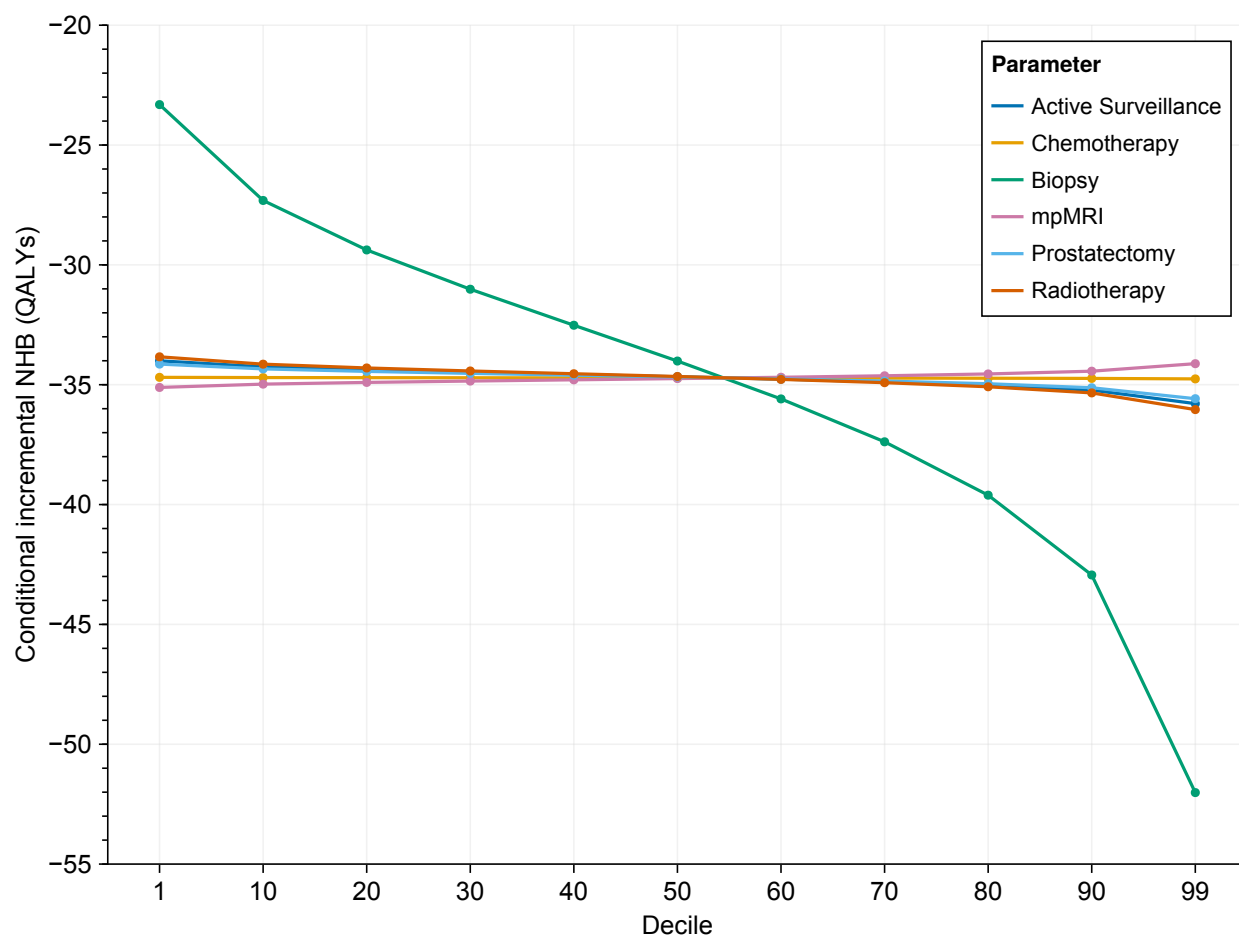
Appendix Figure B.6: Scenario analysis: Impact of varying the cost of risk stratification on the cost-effectiveness of screening. The dotted horizontal line is the NHB of no screening. No screening strategy (age-based or risk-based) would be considered cost-effective at a willingness-to-pay of £30,000 per QALY gained if the cost of risk stratification was $\geq$ £100



Appendix Figure B.7: Scenario analysis: Impact of varying the cost of the screening MRI on the cost-effectiveness of screening. The dotted horizontal line is the NHB of no screening. Analyses involved cohorts of 1,000 men followed from age 55–89 years, with screening every 4 years from 55 to 69 years



Appendix Figure B.8: Mortality reductions amongst those whose cancer was screen-detected in order to observe a particular relative reduction amongst all those who received screening. For example, to observe a 20% reduction in cancer deaths amongst those screened (i.e. screening efficacy), there would be 7.5 deaths per 1,000 amongst the screen-detected (black line). This is equal to a 48% reductions (light blue line) in deaths by comparison with the 14.4 deaths that would be expected amongst the screen-detected individuals were screening to have no impact on mortality.



Appendix Figure B.9: Probabilistic one-way sensitivity analysis [1]. The cost-effectiveness of screening was most sensitive to the cost of biopsy. The insensitivity to the cost of mpMRI suggests that a change of diagnostic pathway to a biparametric MRI in light of the PRIME [2] study will not alter the conclusions of this analysis. Net health benefit (NHB) calculated at a willingness-to-pay of £20,000 per quality-adjusted life-year (QALY).

Appendix Table B.1: Outcomes for age-based and risk-based MRI screening every 4 years from age 55–69 with follow-up to age 89 per 1,000 men

Strategy	Prostate cancers	Screen- detected cancers	Interval cancers	Over- diagnosed cancers	Deaths from prostate cancer	Screening MRI	Diagnostic MRI	Total MRI	Biopsies	Life- years	QALYs	Costs (£)	WTP threshold*
No screening	141	0	0	0	34	0	265	265	177	16,967	14,215	860,616	N/A
MRI screening	153	58	16	10	29	3,704	179	3,883	772	16,987	14,222	1,689,443	119,000
<i>Risk centiles</i>													
1	153	58	16	10	29	3,666	179	3,845	765	16,987	14,222	1,740,728	125,000
2	153	58	16	10	29	3,628	179	3,807	758	16,987	14,222	1,731,912	123,000
3	153	58	16	10	29	3,590	179	3,769	751	16,987	14,222	1,723,108	121,000
4	153	58	16	10	29	3,552	179	3,731	745	16,987	14,222	1,714,315	119,000
5	153	57	16	10	29	3,514	179	3,693	738	16,987	14,222	1,705,530	117,000
6	153	57	16	10	29	3,476	179	3,655	731	16,987	14,222	1,696,751	116,000
7	153	57	16	10	29	3,438	179	3,617	725	16,987	14,222	1,687,978	114,000
8	152	57	16	10	29	3,400	179	3,579	718	16,987	14,222	1,679,209	112,000
9	152	57	16	10	29	3,362	179	3,541	711	16,987	14,222	1,670,445	111,000
10	152	57	16	10	29	3,324	179	3,503	705	16,987	14,222	1,661,685	109,000
11	152	57	15	10	29	3,286	179	3,465	698	16,987	14,222	1,652,928	107,000
12	152	56	15	10	29	3,248	179	3,427	691	16,987	14,222	1,644,174	106,000
13	152	56	15	10	29	3,210	179	3,390	685	16,987	14,222	1,635,423	104,000
14	152	56	15	10	29	3,172	180	3,352	678	16,987	14,222	1,626,675	103,000
15	152	56	15	9	29	3,134	180	3,314	672	16,987	14,222	1,617,929	101,000
16	151	56	15	9	29	3,096	180	3,276	665	16,987	14,222	1,609,186	100,000
17	151	55	15	9	29	3,059	180	3,238	658	16,987	14,222	1,600,445	98,000
18	151	55	15	9	29	3,021	180	3,201	652	16,987	14,222	1,591,706	97,000
19	151	55	15	9	29	2,983	180	3,163	645	16,987	14,222	1,582,969	95,000
20	151	55	15	9	29	2,945	180	3,125	639	16,986	14,222	1,574,234	94,000
21	151	55	15	9	29	2,907	181	3,088	632	16,986	14,222	1,565,501	93,000
22	151	54	15	9	29	2,869	181	3,050	626	16,986	14,222	1,556,769	91,000
23	151	54	15	9	29	2,832	181	3,013	619	16,986	14,222	1,548,039	90,000
24	150	54	15	9	29	2,794	181	2,975	613	16,986	14,222	1,539,311	88,000
25	150	54	15	9	29	2,756	181	2,938	606	16,986	14,222	1,530,585	87,000
26	150	53	15	9	29	2,718	182	2,900	600	16,986	14,222	1,521,860	86,000
27	150	53	14	9	29	2,681	182	2,863	593	16,986	14,222	1,513,137	84,000
28	150	53	14	9	29	2,643	182	2,825	587	16,986	14,222	1,504,415	83,000
29	150	52	14	9	29	2,605	182	2,788	580	16,986	14,222	1,495,695	82,000
30	150	52	14	9	29	2,568	183	2,750	574	16,986	14,222	1,486,977	81,000
31	149	52	14	9	29	2,530	183	2,713	567	16,986	14,222	1,478,260	80,000
32	149	52	14	9	29	2,492	183	2,675	561	16,986	14,222	1,469,545	78,000
33	149	51	14	9	29	2,455	183	2,638	555	16,986	14,222	1,460,831	77,000
34	149	51	14	9	29	2,417	184	2,601	548	16,986	14,222	1,452,119	76,000
35	149	51	14	9	29	2,379	184	2,563	542	16,986	14,222	1,443,409	75,000

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Appendix Table B.1: Outcomes for age-based and risk-based MRI screening every 4 years from age 55–69 with follow-up to age 89 per 1,000 men, continued

Strategy	Prostate cancers	Screen- detected cancers	Interval cancers	Over- diagnosed cancers	Deaths from prostate cancer	Screening MRI	Diagnostic MRI	Total MRI	Biopsies	Life- years	QALYs	Costs (£)	WTP threshold*
36	149	50	14	9	29	2,342	184	2,526	535	16,986	14,222	1,434,700	74,000
37	149	50	14	8	29	2,304	185	2,489	529	16,985	14,222	1,425,994	72,000
38	148	50	14	8	29	2,267	185	2,452	523	16,985	14,222	1,417,289	71,000
39	148	49	13	8	29	2,229	185	2,415	516	16,985	14,222	1,408,586	70,000
40	148	49	13	8	29	2,192	186	2,377	510	16,985	14,222	1,399,885	69,000
41	148	49	13	8	29	2,154	186	2,340	504	16,985	14,222	1,391,187	68,000
42	148	48	13	8	29	2,117	187	2,303	497	16,985	14,222	1,382,490	67,000
43	148	48	13	8	29	2,079	187	2,266	491	16,985	14,222	1,373,796	66,000
44	147	47	13	8	29	2,042	187	2,229	485	16,985	14,222	1,365,104	65,000
45	147	47	13	8	29	2,004	188	2,192	478	16,985	14,222	1,356,414	64,000
46	147	47	13	8	29	1,967	188	2,155	472	16,985	14,222	1,347,728	63,000
47	147	46	13	8	29	1,929	189	2,118	466	16,985	14,222	1,339,044	62,000
48	147	46	13	8	29	1,892	189	2,081	460	16,984	14,222	1,330,362	61,000
49	147	45	12	8	29	1,854	190	2,044	453	16,984	14,222	1,321,684	59,000
50	146	45	12	8	29	1,817	190	2,007	447	16,984	14,222	1,313,010	58,000
51	146	45	12	8	29	1,780	191	1,971	441	16,984	14,222	1,304,338	57,000
52	146	44	12	7	29	1,742	191	1,934	435	16,984	14,222	1,295,671	56,000
53	146	44	12	7	29	1,705	192	1,897	428	16,984	14,222	1,287,007	55,000
54	146	43	12	7	29	1,668	192	1,860	422	16,984	14,222	1,278,347	54,000
55	146	43	12	7	29	1,631	193	1,824	416	16,984	14,222	1,269,692	53,000
56	145	42	11	7	29	1,593	194	1,787	410	16,984	14,222	1,261,042	52,000
57	145	42	11	7	29	1,556	194	1,750	404	16,983	14,222	1,252,396	51,000
58	145	41	11	7	29	1,519	195	1,714	398	16,983	14,222	1,243,756	50,000
59	145	41	11	7	29	1,482	195	1,677	392	16,983	14,222	1,235,121	49,000
60	145	40	11	7	29	1,445	196	1,641	385	16,983	14,222	1,226,493	48,000
61	145	40	11	7	29	1,407	197	1,604	379	16,983	14,222	1,217,871	47,000
62	144	39	11	7	29	1,370	197	1,568	373	16,983	14,222	1,209,256	47,000
63	144	38	10	6	29	1,333	198	1,531	367	16,982	14,222	1,200,648	46,000
64	144	38	10	6	29	1,296	199	1,495	361	16,982	14,222	1,192,048	45,000
65	144	37	10	6	29	1,259	200	1,459	355	16,982	14,222	1,183,457	44,000
66	144	37	10	6	29	1,222	200	1,423	349	16,982	14,222	1,174,876	43,000
67	143	36	10	6	29	1,185	201	1,386	343	16,982	14,222	1,166,304	42,000
68	143	35	10	6	29	1,148	202	1,350	337	16,982	14,222	1,157,744	41,000
69	143	35	9	6	29	1,111	203	1,314	331	16,981	14,222	1,149,194	40,000
70	143	34	9	6	30	1,074	204	1,278	326	16,981	14,222	1,140,658	39,000
71	143	34	9	6	30	1,038	205	1,242	320	16,981	14,222	1,132,135	38,000
72	142	33	9	6	30	1,001	206	1,206	314	16,981	14,222	1,123,628	37,000
73	142	32	9	5	30	964	207	1,171	308	16,981	14,222	1,115,136	37,000
74	142	31	9	5	30	927	208	1,135	302	16,980	14,222	1,106,662	36,000

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Appendix Table B.1: Outcomes for age-based and risk-based MRI screening every 4 years from age 55–69 with follow-up to age 89 per 1,000 men, continued

Strategy	Prostate cancers	Screen- detected cancers	Interval cancers	Over- diagnosed cancers	Deaths from prostate cancer	Screening MRI	Diagnostic MRI	Total MRI	Biopsies	Life- years	QALYs	Costs (£)	WTP threshold*
75	142	31	8	5	30	891	209	1,099	296	16,980	14,221	1,098,208	35,000
76	142	30	8	5	30	854	210	1,064	291	16,980	14,221	1,089,774	34,000
77	142	29	8	5	30	817	211	1,028	285	16,980	14,221	1,081,364	33,000
78	141	28	8	5	30	781	212	993	279	16,979	14,221	1,072,980	32,000
79	141	28	7	5	30	744	213	957	274	16,979	14,221	1,064,624	31,000
80	141	27	7	4	30	708	214	922	268	16,979	14,221	1,056,299	31,000
81	141	26	7	4	30	671	216	887	263	16,978	14,221	1,048,009	30,000
82	141	25	7	4	30	635	217	852	257	16,978	14,221	1,039,757	29,000
83	140	24	6	4	30	599	218	817	252	16,978	14,221	1,031,549	28,000
84	140	23	6	4	30	562	220	782	246	16,978	14,221	1,023,390	27,000
85	140	22	6	4	31	526	221	747	241	16,977	14,220	1,015,286	27,000
86	140	21	6	4	31	490	223	713	236	16,977	14,220	1,007,245	26,000
87	140	20	5	3	31	454	225	678	230	16,976	14,220	999,276	25,000
88	140	19	5	3	31	418	226	644	225	16,976	14,220	991,390	25,000
89	139	18	5	3	31	382	228	610	220	16,976	14,220	983,601	24,000
90	139	17	4	3	31	346	230	576	215	16,975	14,220	975,925	23,000
91	139	15	4	3	31	311	232	543	210	16,975	14,219	968,384	23,000
92	139	14	4	2	31	275	234	510	205	16,974	14,219	961,005	22,000
93	139	13	3	2	32	240	237	477	201	16,974	14,219	953,826	22,000
94	139	11	3	2	32	205	239	444	196	16,973	14,219	946,897	22,000
95	139	10	3	2	32	170	242	412	192	16,972	14,218	940,290	22,000
96	139	8	2	1	32	135	245	380	188	16,972	14,218	934,111	23,000
97	139	7	2	1	32	100	249	349	184	16,971	14,217	928,531	26,000
98	140	5	1	1	33	66	253	319	181	16,970	14,217	923,853	31,000
99	140	3	1	0	33	33	258	290	179	16,969	14,216	920,705	49,000

Main analyses. All strategies followed 1,000 individuals from age 55 through 89. Where relevant, screening was every 4 years between 55 and 69 with MRI. Each centile of the risk distribution is shown.

* Willingness-to-pay (WTP) threshold needed for the strategy to have a >50% probability of having an incremental net health benefit (NHB) greater than that of no screening. For context, the UK National Institute for Health and Care Excellence set thresholds for most interventions at between £20,000–£30,000 to be considered cost-effective.

Abbreviations: MRI, magnetic resonance imaging; QALYs, quality-adjusted life-years.

Appendix Table B.2: Outcomes for age-based and risk-based PSA screening every 4 years from age 55–69 with follow-up to age 89 per 1,000 men

Strategy	Prostate cancers	Screen- detected cancers	Interval cancers	Over- diagnosed cancers	Deaths from prostate cancer	Screening MRI	Diagnostic MRI	Total MRI	Biopsies	Life- years	QALYs	Costs (£)	WTP threshold*
No screening	141	0	0	0	34	0	265	265	177	16,967	14,215	860,616	N/A
PSA screening	162	76	15	18	29	0	777	777	521	16,988	14,216	1,368,958	>200,000
<i>Risk centiles</i>													
1	162	76	15	18	29	0	771	771	516	16,988	14,216	1,424,146	>200,000
2	162	76	15	18	29	0	764	764	512	16,988	14,216	1,419,211	>200,000
3	162	76	15	18	29	0	758	758	508	16,988	14,216	1,414,273	>200,000
4	162	76	14	18	29	0	752	752	503	16,988	14,216	1,409,330	>200,000
5	162	75	14	18	29	0	745	745	499	16,988	14,216	1,404,383	>200,000
6	162	75	14	18	29	0	739	739	495	16,988	14,216	1,399,429	>200,000
7	161	75	14	18	29	0	733	733	491	16,988	14,216	1,394,470	>200,000
8	161	75	14	18	29	0	726	726	487	16,988	14,216	1,389,505	>200,000
9	161	75	14	18	29	0	720	720	482	16,988	14,216	1,384,534	>200,000
10	161	74	14	17	29	0	714	714	478	16,988	14,216	1,379,556	>200,000
11	161	74	14	17	29	0	708	708	474	16,988	14,216	1,374,572	>200,000
12	161	74	14	17	29	0	701	701	470	16,988	14,217	1,369,581	>200,000
13	160	74	14	17	29	0	695	695	466	16,988	14,217	1,364,583	>200,000
14	160	73	14	17	29	0	689	689	462	16,988	14,217	1,359,579	>200,000
15	160	73	14	17	29	0	683	683	457	16,988	14,217	1,354,568	>200,000
16	160	73	14	17	29	0	677	677	453	16,988	14,217	1,349,550	>200,000
17	160	73	14	17	29	0	671	671	449	16,988	14,217	1,344,524	>200,000
18	160	72	14	17	29	0	664	664	445	16,988	14,217	1,339,492	>200,000
19	159	72	14	17	29	0	658	658	441	16,988	14,217	1,334,452	>200,000
20	159	72	14	17	29	0	652	652	437	16,988	14,217	1,329,406	>200,000
21	159	72	14	17	29	0	646	646	433	16,988	14,217	1,324,351	195,000
22	159	71	14	17	29	0	640	640	429	16,988	14,217	1,319,290	190,000
23	159	71	14	17	29	0	634	634	425	16,988	14,217	1,314,221	184,000
24	159	71	13	17	29	0	628	628	421	16,987	14,217	1,309,144	178,000
25	158	70	13	16	29	0	622	622	417	16,987	14,217	1,304,060	173,000
26	158	70	13	16	29	0	616	616	413	16,987	14,217	1,298,968	168,000
27	158	70	13	16	29	0	610	610	409	16,987	14,217	1,293,869	164,000
28	158	69	13	16	29	0	604	604	405	16,987	14,217	1,288,761	160,000
29	158	69	13	16	29	0	598	598	401	16,987	14,217	1,283,646	156,000
30	157	68	13	16	29	0	592	592	397	16,987	14,217	1,278,523	152,000
31	157	68	13	16	29	0	586	586	393	16,987	14,217	1,273,392	147,000
32	157	68	13	16	29	0	580	580	389	16,987	14,217	1,268,253	143,000
33	157	67	13	16	29	0	574	574	385	16,987	14,218	1,263,106	139,000
34	157	67	13	16	29	0	568	568	381	16,987	14,218	1,257,950	135,000
35	156	66	13	16	29	0	563	563	377	16,987	14,218	1,252,787	132,000

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Appendix Table B.2: Outcomes for age-based and risk-based PSA screening every 4 years from age 55–69 with follow-up to age 89 per 1,000 men, continued

Strategy	Prostate cancers	Screen- detected cancers	Interval cancers	Over- diagnosed cancers	Deaths from prostate cancer	Screening MRI	Diagnostic MRI	Total MRI	Biopsies	Life- years	QALYs	Costs (£)	WTP threshold*
36	156	66	13	15	29	0	557	557	373	16,987	14,218	1,247,615	128,000
37	156	66	12	15	29	0	551	551	369	16,987	14,218	1,242,435	125,000
38	156	65	12	15	29	0	545	545	365	16,987	14,218	1,237,246	122,000
39	156	65	12	15	29	0	539	539	361	16,986	14,218	1,232,049	118,000
40	155	64	12	15	29	0	533	533	357	16,986	14,218	1,226,843	115,000
41	155	64	12	15	29	0	528	528	353	16,986	14,218	1,221,629	112,000
42	155	63	12	15	29	0	522	522	350	16,986	14,218	1,216,406	109,000
43	155	63	12	15	29	0	516	516	346	16,986	14,218	1,211,175	106,000
44	154	62	12	15	29	0	510	510	342	16,986	14,218	1,205,934	103,000
45	154	62	12	14	29	0	505	505	338	16,986	14,218	1,200,685	101,000
46	154	61	12	14	29	0	499	499	334	16,986	14,218	1,195,427	98,000
47	154	61	12	14	29	0	493	493	330	16,986	14,218	1,190,161	95,000
48	154	60	11	14	29	0	488	488	327	16,986	14,218	1,184,885	93,000
49	153	59	11	14	29	0	482	482	323	16,985	14,218	1,179,600	90,000
50	153	59	11	14	29	0	477	477	319	16,985	14,218	1,174,306	88,000
51	153	58	11	14	29	0	471	471	315	16,985	14,218	1,169,003	86,000
52	153	58	11	13	29	0	465	465	312	16,985	14,218	1,163,691	83,000
53	152	57	11	13	29	0	460	460	308	16,985	14,218	1,158,370	81,000
54	152	56	11	13	29	0	454	454	304	16,985	14,218	1,153,040	79,000
55	152	56	11	13	29	0	449	449	301	16,985	14,218	1,147,701	77,000
56	152	55	10	13	29	0	443	443	297	16,985	14,218	1,142,353	75,000
57	151	55	10	13	29	0	438	438	293	16,984	14,218	1,136,995	73,000
58	151	54	10	13	29	0	433	433	290	16,984	14,218	1,131,628	71,000
59	151	53	10	12	29	0	427	427	286	16,984	14,219	1,126,253	69,000
60	150	52	10	12	29	0	422	422	283	16,984	14,219	1,120,868	67,000
61	150	52	10	12	29	0	416	416	279	16,984	14,219	1,115,474	65,000
62	150	51	10	12	29	0	411	411	275	16,984	14,219	1,110,072	63,000
63	150	50	10	12	29	0	406	406	272	16,983	14,219	1,104,660	61,000
64	149	50	9	12	29	0	401	401	268	16,983	14,219	1,099,240	59,000
65	149	49	9	11	29	0	395	395	265	16,983	14,219	1,093,812	58,000
66	149	48	9	11	29	0	390	390	261	16,983	14,219	1,088,375	56,000
67	149	47	9	11	29	0	385	385	258	16,983	14,219	1,082,930	55,000
68	148	46	9	11	29	0	380	380	254	16,983	14,219	1,077,477	53,000
69	148	45	9	11	29	0	375	375	251	16,982	14,219	1,072,016	51,000
70	148	45	8	10	29	0	370	370	248	16,982	14,219	1,066,548	50,000
71	147	44	8	10	29	0	365	365	244	16,982	14,219	1,061,073	48,000
72	147	43	8	10	30	0	360	360	241	16,982	14,219	1,055,592	47,000
73	147	42	8	10	30	0	355	355	238	16,981	14,219	1,050,105	45,000
74	146	41	8	10	30	0	350	350	234	16,981	14,219	1,044,613	44,000

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Appendix Table B.2: Outcomes for age-based and risk-based PSA screening every 4 years from age 55–69 with follow-up to age 89 per 1,000 men, continued

Strategy	Prostate cancers	Screen- detected cancers	Interval cancers	Over- diagnosed cancers	Deaths from prostate cancer	Screening MRI	Diagnostic MRI	Total MRI	Biopsies	Life- years	QALYs	Costs (£)	WTP threshold*
75	146	40	8	9	30	0	345	345	231	16,981	14,219	1,039,116	43,000
76	146	39	7	9	30	0	340	340	228	16,981	14,219	1,033,616	41,000
77	146	38	7	9	30	0	336	336	225	16,980	14,219	1,028,113	40,000
78	145	37	7	9	30	0	331	331	222	16,980	14,219	1,022,609	39,000
79	145	36	7	8	30	0	326	326	219	16,980	14,219	1,017,104	37,000
80	145	35	7	8	30	0	322	322	216	16,980	14,219	1,011,602	36,000
81	144	34	6	8	30	0	317	317	213	16,979	14,219	1,006,103	35,000
82	144	32	6	8	30	0	313	313	210	16,979	14,219	1,000,611	34,000
83	144	31	6	7	30	0	309	309	207	16,979	14,219	995,128	33,000
84	143	30	6	7	30	0	304	304	204	16,978	14,219	989,657	32,000
85	143	29	5	7	30	0	300	300	201	16,978	14,219	984,202	31,000
86	143	27	5	6	31	0	296	296	198	16,978	14,219	978,769	30,000
87	142	26	5	6	31	0	292	292	196	16,977	14,219	973,364	29,000
88	142	25	5	6	31	0	288	288	193	16,977	14,219	967,994	28,000
89	142	23	4	5	31	0	285	285	191	16,976	14,218	962,670	27,000
90	141	22	4	5	31	0	281	281	188	16,976	14,218	957,403	26,000
91	141	20	4	5	31	0	278	278	186	16,975	14,218	952,210	26,000
92	141	18	3	4	31	0	274	274	184	16,975	14,218	947,112	25,000
93	141	17	3	4	31	0	271	271	182	16,974	14,218	942,138	25,000
94	140	15	3	3	32	0	269	269	180	16,974	14,218	937,328	25,000
95	140	13	2	3	32	0	266	266	178	16,973	14,218	932,741	25,000
96	140	11	2	2	32	0	264	264	177	16,972	14,217	928,467	26,000
97	140	9	2	2	32	0	263	263	176	16,971	14,217	924,651	29,000
98	140	6	1	1	33	0	262	262	175	16,970	14,216	921,558	35,000
99	140	3	1	1	33	0	262	262	176	16,969	14,216	919,750	55,000

Main analyses. All strategies followed 1,000 individuals from age 55 through 89. Where relevant, screening was every 4 years between 55 and 69 with PSA. Each centile of the risk distribution is shown.

* Willingness-to-pay (WTP) threshold needed for the strategy to have a >50% probability of having an incremental net health benefit (NHB) greater than that of no screening. For context, the UK National Institute for Health and Care Excellence set thresholds for most interventions at between £20,000–£30,000 to be considered cost-effective.

Abbreviations: MRI, magnetic resonance imaging; QALYs, quality-adjusted life-years.

Appendix Table B.3: Scenario analysis: The impact of varying the relative impact of MRI screening every 4 years from age 55–69 on prostate cancer-specific mortality

Strategy	Prostate cancers	Screen-detected cancers	Interval cancers	Over-diagnosed cancers	Deaths from prostate cancer	Screening MRI	Diagnostic MRI	Total MRI	Biopsies	Life-years	QALYs	Costs (£)	WTP threshold*
No screening	141	N/A	N/A	N/A	34	N/A	265	265	177	16,967	14,215	860,616	N/A
RR=0.7													
Screen all	153	58	16	10	25	3,704	179	3,883	772	16,996	14,228	1,671,323	58,000
25th centile	150	54	15	9	25	2,756	181	2,938	606	16,995	14,229	1,513,826	46,000
50th centile	146	45	12	8	26	1,817	190	2,007	447	16,991	14,228	1,298,927	33,000
75th centile	142	31	8	5	28	891	209	1,099	296	16,985	14,225	1,088,613	22,000
90th centile	139	17	4	3	30	346	230	576	215	16,978	14,222	970,707	16,000
RR=0.75													
Screen all	153	58	16	10	27	3,704	179	3,883	772	16,991	14,225	1,680,035	77,000
25th centile	150	54	15	9	27	2,756	181	2,938	606	16,991	14,225	1,521,884	60,000
50th centile	146	45	12	8	27	1,817	190	2,007	447	16,988	14,225	1,305,699	42,000
75th centile	142	31	8	5	29	891	209	1,099	296	16,983	14,223	1,093,227	27,000
90th centile	139	17	4	3	31	346	230	576	215	16,977	14,221	973,216	19,000
RR=0.8													
Screen all	153	58	16	10	29	3,704	179	3,883	772	16,987	14,222	1,689,105	116,000
25th centile	150	54	15	9	28	2,756	181	2,938	606	16,986	14,222	1,530,272	86,000
50th centile	146	45	12	8	29	1,817	190	2,007	447	16,984	14,222	1,312,747	58,000
75th centile	142	31	8	5	30	891	209	1,099	296	16,980	14,222	1,098,029	34,000
90th centile	139	17	4	3	31	346	230	576	215	16,975	14,220	975,827	23,000
RR=0.85													
Screen all	153	58	16	10	30	3,704	179	3,883	772	16,982	14,218	1,698,153	>£200,000
25th centile	150	54	15	9	30	2,756	181	2,938	606	16,982	14,219	1,538,641	145,000
50th centile	146	45	12	8	30	1,817	190	2,007	447	16,981	14,220	1,319,779	88,000
75th centile	142	31	8	5	31	891	209	1,099	296	16,978	14,220	1,102,819	47,000
90th centile	139	17	4	3	32	346	230	576	215	16,974	14,219	978,432	29,000
RR=0.9													
Screen all	153	58	16	10	32	3,704	179	3,883	772	16,978	14,215	1,707,192	>£200,000
25th centile	150	54	15	9	32	2,756	181	2,938	606	16,978	14,216	1,547,001	>£200,000
50th centile	146	45	12	8	31	1,817	190	2,007	447	16,977	14,217	1,326,804	184,000
75th centile	142	31	8	5	32	891	209	1,099	296	16,975	14,218	1,107,605	75,000
90th centile	139	17	4	3	32	346	230	576	215	16,973	14,218	981,034	40,000

Scenario analyses in which the relative reduction with screening was set to between 0.7 and 0.9. Analyses at a relative reduction of 0.8 shown for comparative purposes. Note that the values in 0.8 might differ slightly from baseline analyses where the relative reduction with screening is varied probabilistically with a central estimate of 0.8. All strategies followed 1,000 individuals from age 55 through 89. Where relevant, screening was every 4 years between 55 and 69. The relative impact of screening on mortality is phased in over 10 years to reach maximal impact with gradual waning of effect from 15 years (i.e. the end of the screening period) over the remaining period of follow-up as seen in the ERSPC trial [3].

* Willingness-to-pay (WTP) threshold needed for the strategy to have an incremental net health benefit (NHB) greater than that of no screening. For context, the UK National Institute for Health and Care Excellence set thresholds for most interventions at between £20,000–£30,000 to be considered cost-effective.

Abbreviations: MRI, magnetic resonance imaging; QALYs, quality-adjusted life-years; RR, relative reduction

Appendix Table B.4: Scenario analysis: The impact of varying the mean sojourn time (MST) of a MRI screening programme from age 55–69 every 4 years

Strategy	Prostate cancers	Screen- detected cancers	Interval cancers	Over- diagnosed cancers	Deaths from prostate cancer	Screening MRI	Diagnostic MRI	Total MRI	Biopsies	Life- years	QALYs	Costs (£)	WTP threshold*
No screening	141	N/A	N/A	N/A	34	N/A	265	265	177	16,967	14,215	860,616	N/A
MST=7													
Screen all	150	46	17	5	29	3,725	195	3,920	786	16,986	14,224	1,667,977	86,000
25th centile	147	42	16	5	29	2,775	196	2,971	619	16,985	14,224	1,511,043	66,000
50th centile	144	36	13	4	29	1,833	203	2,036	458	16,984	14,224	1,296,947	46,000
75th centile	140	24	9	3	30	901	217	1,119	304	16,980	14,223	1,087,690	29,000
90th centile	138	13	5	1	31	352	235	587	219	16,975	14,220	970,515	20,000
MST=8													
Screen all	152	51	17	7	29	3,715	190	3,905	781	16,986	14,222	1,682,845	105,000
25th centile	149	47	15	6	29	2,766	191	2,957	615	16,986	14,223	1,524,463	78,000
50th centile	146	40	13	5	29	1,825	199	2,024	454	16,984	14,223	1,307,846	53,000
75th centile	141	27	9	4	30	896	214	1,110	301	16,980	14,222	1,094,673	32,000
90th centile	139	15	5	2	31	349	233	582	218	16,975	14,220	973,999	22,000
MST=9													
Screen all	155	56	16	9	29	3,704	185	3,890	776	16,987	14,221	1,698,927	134,000
25th centile	152	52	15	8	29	2,756	187	2,943	610	16,986	14,222	1,538,993	96,000
50th centile	148	44	13	7	29	1,817	195	2,012	450	16,984	14,222	1,319,663	63,000
75th centile	143	30	8	4	30	890	212	1,102	298	16,980	14,221	1,102,267	37,000
90th centile	140	16	5	2	31	346	232	578	216	16,975	14,220	977,803	24,000
MST=10													
Screen all	158	62	16	11	29	3,693	181	3,874	771	16,987	14,219	1,716,144	187,000
25th centile	155	57	15	10	29	2,746	183	2,929	605	16,986	14,220	1,554,559	125,000
50th centile	150	48	12	8	29	1,808	191	2,000	446	16,984	14,221	1,332,337	78,000
75th centile	144	33	8	6	30	885	209	1,094	296	16,980	14,220	1,110,425	43,000
90th centile	140	18	4	3	31	343	230	573	214	16,975	14,219	981,901	27,000
MST=11													
Screen all	161	67	15	13	29	3,682	177	3,858	766	16,987	14,218	1,734,433	>£200,000
25th centile	157	62	14	12	29	2,735	179	2,914	601	16,987	14,219	1,571,105	180,000
50th centile	152	52	12	10	29	1,799	188	1,987	442	16,985	14,219	1,345,817	102,000
75th centile	146	35	8	7	30	879	206	1,085	293	16,981	14,220	1,119,114	52,000
90th centile	141	19	4	4	31	340	229	568	213	16,976	14,219	986,274	31,000

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Appendix Table B.4: Scenario analysis: The impact of varying the mean sojourn time (MST) of a screening programme every 4 years from age 55–69, continued

Strategy	Prostate cancers	Screen- detected cancers	Interval cancers	Over- diagnosed cancers	Deaths from prostate cancer	Screening MRI	Diagnostic MRI	Total MRI	Biopsies	Life- years	QALYs	Costs (£)	WTP threshold*
MST=12													
Screen all	164	73	15	15	29	3,669	172	3,842	761	16,987	14,216	1,753,709	>£200,000
25th centile	160	67	14	14	28	2,724	175	2,899	596	16,987	14,217	1,588,548	>£200,000
50th centile	154	56	12	12	29	1,790	184	1,974	438	16,985	14,218	1,360,036	146,000
75th centile	147	38	8	8	30	872	204	1,076	290	16,981	14,219	1,128,287	64,000
90th centile	142	21	4	4	31	336	227	564	211	16,976	14,218	990,897	35,000
MST=13													
Screen all	168	78	15	18	29	3,657	168	3,825	756	16,988	14,214	1,773,945	>£200,000
25th centile	163	72	14	16	28	2,712	171	2,883	591	16,987	14,215	1,606,867	>£200,000
50th centile	157	60	11	14	29	1,780	181	1,961	434	16,985	14,217	1,374,974	>£200,000
75th centile	149	41	8	9	30	866	202	1,067	287	16,981	14,218	1,137,932	85,000
90th centile	143	22	4	5	31	333	226	559	210	16,976	14,218	995,762	41,000
MST=14													
Screen all	171	83	14	20	29	3,644	164	3,808	751	16,988	14,212	1,795,043	>£200,000
25th centile	166	77	13	19	28	2,701	167	2,867	587	16,988	14,214	1,625,969	>£200,000
50th centile	159	65	11	16	29	1,770	178	1,948	430	16,986	14,215	1,390,557	>£200,000
75th centile	150	44	7	11	30	859	199	1,058	285	16,981	14,217	1,147,998	121,000
90th centile	143	24	4	6	31	329	224	554	208	16,976	14,218	1,000,843	50,000

Scenario analyses in which the mean sojourn time was set to values between 7 and 14. All strategies followed 1,000 individuals from age 55 through 89. Where relevant, screening was every 4 years between 55 and 69.

* Willingness-to-pay (WTP) threshold needed for the strategy to have an incremental net health benefit (NHB) greater than that of no screening. For context, the UK National Institute for Health and Care Excellence set thresholds for most interventions at between £20,000–£30,000 to be considered cost-effective.

Abbreviations: MRI, magnetic resonance imaging; QALYs, quality-adjusted life-years.

Appendix Table B.5: Scenario analysis: The impact of varying the episode sensitivity of an MRI screening programme every 4 years from age 55–69

Strategy	Prostate cancers	Screen- detected cancers	Interval cancers	Over- diagnosed cancers	Deaths from prostate cancer	Screening MRI	Diagnostic MRI	Total MRI	Biopsies	Life- years	QALYs	Costs (£)	WTP threshold*
No screening	141	N/A	N/A	N/A	34	N/A	265	265	177	16,967	14,215	860,616	N/A
Sensitivity=0.2													
Screen all	145	28	25	5	29	3,744	219	3,963	805	16,985	14,226	1,658,516	69,000
25th centile	143	26	23	5	29	2,793	219	3,012	638	16,985	14,226	1,502,803	54,000
50th centile	140	22	19	4	29	1,848	222	2,070	474	16,983	14,226	1,290,607	39,000
75th centile	138	15	13	3	30	912	231	1,142	315	16,979	14,224	1,084,056	25,000
90th centile	137	8	7	1	31	358	242	600	225	16,974	14,221	969,028	18,000
Sensitivity=0.25													
Screen all	147	33	24	6	29	3,737	214	3,951	801	16,985	14,225	1,666,872	76,000
25th centile	144	31	22	5	29	2,787	214	3,000	633	16,985	14,226	1,510,250	59,000
50th centile	142	26	18	5	29	1,843	217	2,060	470	16,983	14,225	1,296,544	42,000
75th centile	139	18	13	3	30	908	227	1,136	312	16,979	14,223	1,087,724	27,000
90th centile	138	10	7	2	31	356	240	596	224	16,975	14,221	970,755	19,000
Sensitivity=0.3													
Screen all	149	38	23	7	29	3,731	208	3,940	796	16,986	14,224	1,673,569	83,000
25th centile	146	35	21	6	29	2,781	209	2,990	629	16,985	14,225	1,516,231	64,000
50th centile	143	29	18	5	29	1,838	213	2,051	466	16,983	14,224	1,301,326	45,000
75th centile	140	20	12	4	30	905	224	1,129	309	16,979	14,223	1,090,698	28,000
90th centile	138	11	7	2	31	354	239	593	222	16,975	14,220	972,169	20,000
Sensitivity=0.35													
Screen all	150	42	21	7	29	3,726	203	3,929	791	16,986	14,224	1,678,892	90,000
25th centile	147	39	20	7	29	2,776	204	2,980	625	16,985	14,224	1,520,999	69,000
50th centile	144	33	17	6	29	1,834	209	2,043	463	16,984	14,224	1,305,154	48,000
75th centile	140	22	11	4	30	902	222	1,124	307	16,980	14,223	1,093,096	30,000
90th centile	139	12	6	2	31	353	237	590	221	16,975	14,220	973,324	21,000
Sensitivity=0.4													
Screen all	151	46	20	8	29	3,721	198	3,919	787	16,986	14,223	1,682,983	96,000
25th centile	148	42	19	7	29	2,772	199	2,970	621	16,986	14,224	1,524,675	73,000
50th centile	145	36	16	6	29	1,830	205	2,035	459	16,984	14,223	1,308,120	50,000
75th centile	141	24	11	4	30	899	219	1,118	305	16,980	14,222	1,094,972	31,000
90th centile	139	13	6	2	31	351	236	587	220	16,975	14,220	974,240	21,000
Sensitivity=0.45													
Screen all	152	49	19	9	29	3,716	193	3,909	783	16,986	14,223	1,685,964	103,000
25th centile	149	46	18	8	29	2,767	194	2,961	617	16,986	14,223	1,527,365	77,000
50th centile	145	38	15	7	29	1,826	201	2,027	456	16,984	14,223	1,310,304	53,000
75th centile	141	26	10	4	30	897	216	1,113	302	16,980	14,222	1,096,370	32,000
90th centile	139	14	5	2	31	350	234	584	218	16,975	14,220	974,934	22,000

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Appendix Table B.5: Scenario analysis: The impact of varying the episode sensitivity of an MRI screening programme every 4 years from age 55–69, continued

Strategy	Prostate cancers	Screen- detected cancers	Interval cancers	Over- diagnosed cancers	Deaths from prostate cancer	Screening MRI	Diagnostic MRI	Total MRI	Biopsies	Life- years	QALYs	Costs (£)	WTP threshold*
Sensitivity=0.5													
Screen all	153	53	18	9	29	3,712	188	3,900	779	16,986	14,222	1,688,018	109,000
25th centile	150	49	17	8	29	2,763	190	2,952	613	16,986	14,223	1,529,234	81,000
50th centile	146	41	14	7	29	1,823	197	2,020	453	16,984	14,223	1,311,839	55,000
75th centile	142	28	9	5	30	894	213	1,108	300	16,980	14,222	1,097,372	33,000
90th centile	139	15	5	3	31	348	233	581	217	16,975	14,220	975,446	22,000
Sensitivity=0.55													
Screen all	153	56	17	10	29	3,707	183	3,890	775	16,987	14,222	1,689,263	115,000
25th centile	150	51	15	9	29	2,759	185	2,944	609	16,986	14,222	1,530,386	85,000
50th centile	146	43	13	7	29	1,819	193	2,013	449	16,984	14,222	1,312,806	57,000
75th centile	142	29	9	5	30	892	211	1,103	298	16,980	14,222	1,098,028	34,000
90th centile	139	16	5	3	31	347	231	578	216	16,975	14,220	975,800	23,000
Sensitivity=0.6													
Screen all	154	59	16	10	29	3,703	178	3,882	771	16,987	14,221	1,689,821	120,000
25th centile	150	54	14	9	29	2,755	180	2,936	605	16,986	14,222	1,530,930	88,000
50th centile	147	46	12	8	29	1,816	189	2,006	446	16,984	14,222	1,313,294	59,000
75th centile	142	31	8	5	30	890	208	1,098	296	16,980	14,221	1,098,394	35,000
90th centile	139	17	4	3	31	346	230	576	215	16,975	14,220	976,020	23,000
Sensitivity=0.65													
Screen all	154	61	14	10	29	3,700	173	3,873	767	16,987	14,221	1,689,778	124,000
25th centile	151	57	13	10	29	2,752	176	2,928	602	16,986	14,222	1,530,942	91,000
50th centile	147	48	11	8	29	1,813	186	1,999	443	16,984	14,222	1,313,362	61,000
75th centile	142	32	8	5	30	888	206	1,094	294	16,980	14,221	1,098,506	36,000
90th centile	139	18	4	3	31	345	228	573	214	16,975	14,220	976,125	24,000
Sensitivity=0.7													
Screen all	154	64	13	11	29	3,696	168	3,864	763	16,987	14,221	1,689,203	128,000
25th centile	151	59	12	10	29	2,748	171	2,920	598	16,987	14,222	1,530,483	94,000
50th centile	147	50	10	8	29	1,811	182	1,993	440	16,984	14,222	1,313,059	62,000
75th centile	142	34	7	6	30	886	203	1,089	292	16,980	14,221	1,098,393	36,000
90th centile	139	18	4	3	31	344	227	571	213	16,975	14,219	976,128	24,000

Scenario analyses in which the sensitivity of a screening episode was set to values between 20% and 70%. All strategies followed 1,000 individuals from age 55 through 89. Where relevant, screening was every 4 years between 55 and 69.

* Willingness-to-pay (WTP) threshold needed for the strategy to have an incremental net health benefit (NHB) greater than that of no screening. For context, the UK National Institute for Health and Care Excellence set thresholds for most interventions at between £20,000–£30,000 to be considered cost-effective.

Abbreviations: MRI, magnetic resonance imaging; QALYs, quality-adjusted life-years.

Appendix Table B.6: Scenario analysis: Impact of varying uptake of MRI screening every 4 years from age 55–69 with follow-up to age 89

Strategy	Prostate cancers	Screen- detected cancers	Interval cancers	Over- diagnosed cancers	Deaths from prostate cancer	Screening MRI	Diagnostic MRI	Total MRI	Biopsies	Life- years	QALYs	Costs (£)	WTP threshold*
No screening	141	N/A	N/A	N/A	34	N/A	265	265	177	16,967	14,215	860,616	N/A
Uptake=0.5													
Screen all	147	29	8	5	31	1,852	222	2,074	474	16,977	14,218	1,275,029	119,000
25th centile	145	27	7	5	31	1,378	221	1,599	390	16,977	14,219	1,198,203	77,000
50th centile	142	23	6	4	31	909	224	1,132	310	16,976	14,219	1,092,626	48,000
75th centile	139	15	4	3	31	445	232	677	234	16,975	14,219	989,500	27,000
90th centile	138	8	2	1	32	173	243	416	193	16,972	14,218	933,582	20,000
Uptake=0.55													
Screen all	148	32	9	5	31	2,037	218	2,255	504	16,978	14,218	1,316,471	119,000
25th centile	145	29	8	5	31	1,516	217	1,733	412	16,978	14,219	1,231,441	79,000
50th centile	142	25	7	4	31	999	221	1,220	324	16,977	14,220	1,114,664	50,000
75th centile	139	17	5	3	31	490	230	719	240	16,975	14,220	1,000,370	28,000
90th centile	138	9	2	2	32	190	242	432	195	16,972	14,219	937,817	20,000
Uptake=0.6													
Screen all	149	35	10	6	31	2,223	213	2,436	534	16,979	14,219	1,357,912	119,000
25th centile	146	32	9	5	30	1,654	213	1,867	434	16,979	14,220	1,264,679	80,000
50th centile	143	27	7	5	30	1,090	217	1,307	337	16,978	14,220	1,136,702	51,000
75th centile	140	18	5	3	31	534	227	762	246	16,976	14,220	1,011,241	29,000
90th centile	138	10	3	2	32	208	240	448	198	16,973	14,219	942,051	21,000
Uptake=0.65													
Screen all	149	38	10	6	30	2,408	209	2,617	564	16,980	14,219	1,399,353	119,000
25th centile	146	35	10	6	30	1,792	209	2,001	455	16,980	14,220	1,297,918	82,000
50th centile	143	29	8	5	30	1,181	214	1,395	351	16,979	14,220	1,158,741	52,000
75th centile	140	20	5	3	31	579	225	804	252	16,976	14,220	1,022,112	30,000
90th centile	138	11	3	2	32	225	239	464	200	16,973	14,219	946,285	21,000
Uptake=0.7													
Screen all	150	41	11	7	30	2,593	205	2,798	593	16,981	14,219	1,440,795	119,000
25th centile	147	37	10	6	30	1,929	205	2,135	477	16,981	14,220	1,331,156	83,000
50th centile	144	32	9	5	30	1,272	210	1,482	365	16,980	14,221	1,180,779	53,000
75th centile	140	21	6	4	31	623	223	846	259	16,977	14,220	1,032,983	31,000
90th centile	138	12	3	2	32	242	238	480	202	16,973	14,219	950,519	21,000

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Appendix Table B.6: Scenario analysis: Impact of varying uptake of MRI screening every 4 years from age 55–69 with follow-up to age 89, continued

Strategy	Prostate cancers	Screen- detected cancers	Interval cancers	Over- diagnosed cancers	Deaths from prostate cancer	Screening MRI	Diagnostic MRI	Total MRI	Biopsies	Life- years	QALYs	Costs (£)	WTP threshold*
Uptake=0.75													
Screen all	150	43	12	7	30	2,778	201	2,979	623	16,982	14,220	1,482,236	119,000
25th centile	147	40	11	7	30	2,067	201	2,268	498	16,982	14,221	1,364,394	84,000
50th centile	144	34	9	6	30	1,363	207	1,570	378	16,980	14,221	1,202,818	54,000
75th centile	140	23	6	4	30	668	220	888	265	16,977	14,220	1,043,854	32,000
90th centile	139	13	3	2	31	260	237	496	204	16,974	14,219	954,753	22,000

Scenario analyses in which the uptake of a screening episode was set to values between 50% and 75%. All strategies followed 1,000 individuals from age 55 through 89. Where relevant, screening was every 4 years between 55 and 69.

* Willingness-to-pay (WTP) threshold needed for the strategy to have an incremental net health benefit (NHB) greater than that of no screening. For context, the UK National Institute for Health and Care Excellence set thresholds for most interventions at between £20,000–£30,000 to be considered cost-effective.

Abbreviations: MRI, magnetic resonance imaging; QALYs, quality-adjusted life-years.

Appendix Table B.7: Scenario analysis: The impact of varying the age at which screening starts and stops amongst cohorts of 1,000 men followed from age 50–89 years

Strategy	Prostate cancers	Screen-detected cancers	Interval cancers	Over-diagnosed cancers	Deaths from prostate cancer	Screening MRI	Diagnostic MRI	Total MRI	Biopsies	Life-years	QALYs	Costs (£)	WTP threshold*
No screening	142	N/A	N/A	N/A	33	N/A	266	266	178	18,667	15,737	742,288	N/A
Screening: 50-69 years													
Screen all	153	54	15	9	28	4,659	185	4,844	943	18,683	15,743	1,716,699	170,000
25	150	50	14	8	28	3,471	187	3,658	736	18,682	15,743	1,522,686	123,000
50	146	42	12	7	29	2,293	195	2,488	534	18,681	15,743	1,269,935	82,000
75	142	29	8	5	29	1,128	212	1,340	341	18,677	15,743	1,019,804	49,000
90	140	16	4	2	31	441	233	673	233	18,673	15,741	875,616	32,000
Screening: 50-74 years													
Screen all	160	86	32	18	28	6,112	137	6,250	1,167	18,687	15,744	1,903,800	177,000
25	156	79	30	17	28	4,532	143	4,675	893	18,687	15,744	1,660,470	129,000
50	151	66	25	14	29	2,973	159	3,133	630	18,684	15,744	1,359,418	88,000
75	145	44	16	9	29	1,445	189	1,634	381	18,680	15,743	1,062,414	52,000
90	141	24	9	5	31	556	221	777	246	18,675	15,742	891,476	34,000
Screening: 55-69 years													
Screen all	155	57	16	10	28	3,625	183	3,808	760	18,681	15,743	1,426,785	112,000
25	151	53	14	9	28	2,695	185	2,880	598	18,681	15,744	1,306,023	85,000
50	148	44	12	7	28	1,775	194	1,969	442	18,680	15,744	1,126,393	58,000
75	143	30	8	5	29	868	212	1,080	295	18,677	15,743	949,086	36,000
90	140	16	4	3	31	337	233	569	215	18,673	15,741	848,109	25,000
Screening: 55-74 years													
Screen all	158	73	24	14	28	4,378	158	4,536	876	18,684	15,743	1,526,185	121,000
25	154	68	22	13	28	3,246	163	3,409	680	18,683	15,744	1,379,339	91,000
50	150	57	18	11	28	2,130	175	2,305	492	18,681	15,744	1,174,111	62,000
75	145	38	12	7	29	1,035	200	1,234	316	18,678	15,743	971,894	38,000
90	141	21	7	4	31	398	226	624	222	18,673	15,741	856,640	27,000

Scenario analyses in which the age at which screening starts and stops is varied. All analyses follow 1,000 individuals from age 50 to 89 with screening every 4 years, but with different starting and stopping ages. Note that in baseline analyses, screening is from 55-69; this is repeated here but having run the model from 50.

* Willingness-to-pay (WTP) threshold needed for the strategy to have an incremental net health benefit (NHB) greater than that of no screening. For context, the UK National Institute for Health and Care Excellence set thresholds for most interventions at between £20,000–£30,000 to be considered cost-effective.

Abbreviations: MRI, magnetic resonance imaging; QALYs, quality-adjusted life-years; RR, relative reduction

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