Supplementary material

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both	1
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number	3-4
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known	5-6
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS)	5
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., web address), and, if available, provide registration information including registration number	NA
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale	7
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched	7
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated	7
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis)	7-8
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators	7
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made	7
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis	9
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means)	8-9
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis	9
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies)	9
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta- regression), if done, indicating which were pre-specified	8-9
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram	10
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations	10

Supplementary Table 1 Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) checklist [26]

Supplementary Table 1 (Continued)

Section/topic	#	Checklist item	Reported on page #
TITLE			
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12)	
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and (b) confidence intervals, ideally with a forest plot	22
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency	10-13
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	14
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16])	13
DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers)	14-15
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias)	16
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research	17
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review	None

NA, not available

	Feedback	group	No feedback	group		Odds Ratio	Odds Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% Cl
1.5.1 Prospective - active	e interventi	on group					
Barclay 2008	823	2325	487	2053	8.8%	1.76 [1.54, 2.01]	
Coe 2013	243	520	216	602	6.5%	1.57 [1.23, 1.99]	
Kaminski 2016	785	3286	1082	6217	9.3%	1.49 [1.34, 1.65]	+
Keswani 2015	1419	3639	684	2444	9.2%	1.64 [1.47, 1.84]	+
Rajasekhar 2015	2381	13157	698	4351	9.5%	1.16 [1.05, 1.27]	-
Wallace 2017	3643	8673	2319	7480	10.0%	1.61 [1.51, 1.72]	+
Subtotal (95% CI)		31600		23147	53.2%	1.52 [1.34, 1.73]	•
Total events	9294		5486				
Heterogeneity: Tau ² = 0.02	2; $Chi^2 = 43$	3.62, df =	5 (P < 0.0000	(); $I^2 = 8$	9%		
Test for overall effect: Z =	6.33 (P < 0	.00001)					
1.5.2 Prospective - No ac	tive interv	ention gr	oup				
Abdul–Baki 2015	5424	14899	660	2627	9.5%	1.71 [1.55, 1.87]	+
Gurudu 2018	398	1057	169	555	6.9%	1.38 [1.11, 1.72]	_
Kahi 2013	319	592	153	336	5.9%	1.40 [1.07, 1.83]	_
Kaminski feedback 2016	710	3415	882	4766	9.2%	1.16 [1.04, 1.29]	
Nielsen 2017	39	105	14	100	1.7%	3.63 [1.82, 7.24]	
Otto 2010	123	541	166	850	6.0%	1.21 [0.93, 1.58]	
Sey 2015	338	813	391	1133	7.6%	1.35 [1.12, 1.63]	
Subtotal (95% CI)		21422		10367	46.8%	1.43 [1.20, 1.70]	•
Total events	7351		2435				
Heterogeneity: $Tau^2 = 0.04$	4; Chi ² = 36	5.82, df =	6 (P < 0.0000	(); $I^2 = 8$	4%		
Test for overall effect: Z =	3.99 (P < 0	0.0001)					
Total (95% CI)		53022		33514	100.0%	1.47 [1.33, 1.62]	•
Total events	16645		7921				
Heterogeneity: $Tau^2 = 0.03$	2; Chi ² = 82	2.68, df =	12 (P < 0.000	$001); I^2 =$	85%		0.1 0.2 0.5 1 2 5 10
Test for overall effect: Z =	7.64 (P < 0	.00001)					Favours no feedback Favours feedback
Test for subgroup differen		,	= 1 (P = 0.58)	$1^2 = 0\%$			Favours no reedback Favours reedback

Supplementary Figure 1 Forest plot for pooled analysis of adenoma detection rate based on the type of feedback (active vs. passive) *CI*, *confidence interval*

	Feedback	group	No feedback	group		Odds Ratio	Odds Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% CI
Barclay 2008	823	2325	487	2053	12.7%	1.76 [1.54, 2.01]	
Coe 2013	243	520	216	602	9.1%	1.57 [1.23, 1.99]	
Gurudu 2018	398	1057	169	555	9.7%	1.38 [1.11, 1.72]	
Kaminski 2016	785	3286	1082	6217	13.6%	1.49 [1.34, 1.65]	+
Keswani 2015	1419	3639	684	2444	13.3%	1.64 [1.47, 1.84]	+
Nielsen 2017	39	105	14	100	2.3%	3.63 [1.82, 7.24]	
Rajasekhar 2015	2381	13157	698	4351	13.9%	1.16 [1.05, 1.27]	+
Sey 2015	338	813	391	1133	10.9%	1.35 [1.12, 1.63]	
Wallace 2017	3643	8673	2319	7480	14.6%	1.61 [1.51, 1.72]	+
Total (95% CI)		33575		24935	100.0%	1.52 [1.35, 1.70]	•
Total events	10069		6060				
Heterogeneity: Tau ² =	= 0.02; Chi ²	= 51.79,	df = 8 (P < 0)	.00001); I	² = 85%		
Test for overall effect	Z = 7.18 (F	P < 0.000	001)				0.1 0.2 0.5 i 2 5 10 Favours no feedback Favours feedback

Supplementary Figure 2 Forest plot analysis for adenoma detection rate in prospective studies *CI*, *confidence interval*

	Feedback	group	No feedbac	k group		Odds Ratio	Odds Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% Cl
1.6.1 Aware of data	being collee	ted					
Abdul-Baki 2015	5424	14899	660	2627	10.8%	1.71 [1.55, 1.87]	-
Barclay 2008	823	2325	487	2053	9.7%	1.76 [1.54, 2.01]	-
Coe 2013	243	520	216	602	6.8%	1.57 [1.23, 1.99]	
Rajasekhar 2015	2381	13157	698	4351	10.8%	1.16 [1.05, 1.27]	+
Wallace 2017 Subtotal (95% CI)	3643	8673 39574	2319	7480 17113	11.4% 49.5%	1.61 [1.51, 1.72] 1.54 [1.31, 1.81]	•
Total events	12514		4380				
Heterogeneity: Tau ² =	= 0.03; Chi ²	= 47.32,	df = 4 (P < 0)	.00001); I	$^{2} = 92\%$		
Test for overall effect	Z = 5.24 (F	P < 0.000	01)				
1.6.2 Not aware of d	ata being c	ollected					
Gurudu 2018	398	1057	169	555	7.3%	1.38 [1.11, 1.72]	
Kahi 2013	319	592	153	336	6.1%	1.40 [1.07, 1.83]	
Kaminski 2016	785	3286	1082	6217	10.5%	1.49 [1.34, 1.65]	+
Keswani 2015	1419	3639	684	2444	10.3%	1.64 [1.47, 1.84]	-
Nielsen 2017	39	105	14	100	1.6%	3.63 [1.82, 7.24]	
Otto 2010	123	541	166	850	6.3%	1.21 [0.93, 1.58]	+
Sey 2015 Subtotal (95% CI)	338	813 10033	391	1133 11635	8.2% 50.5%	1.35 [1.12, 1.63] 1.47 [1.32, 1.64]	•
Total events	3421		2659				
Heterogeneity: Tau ² =	= 0.01; Chi ²	= 13.56,	df = 6 (P = 0)	$(.03); I^2 =$	56%		
Test for overall effect	Z = 6.92 (F	P < 0.000	01)				
Total (95% CI)		49607		28748	100.0%	1.51 [1.37, 1.66]	•
Total events	15935		7039				
Heterogeneity: Tau ² =	= 0.02; Chi ²	= 61.17,	df = 11 (P <	0.00001);	$1^2 = 82\%$		0.1 0.2 0.5 1 2 5 1
Test for overall effect							Favours no feedback Favours feedback
Test for subgroup dif	ferences: Ch	$i^2 = 0.21$, df = 1 (P =	$0.65), I^2 =$	0%		ravours no recuback Tavours recuback

Supplementary Figure 3 Forest plot analyzing the effect of awareness of data being collected prior to feedback on adenoma detection rate *Cl*, *confidence interval*

	Feedback		No feedback			Odds Ratio	Odds Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% Cl	M-H, Random, 95% Cl
Abdul-Baki 2015	8072	14899	1227	2627	11.3%	1.35 [1.24, 1.47]	+
Barclay 2008	895	2325	464	2053	10.8%	2.14 [1.88, 2.45]	-
Coe 2013	148	520	124	602	8.5%	1.53 [1.17, 2.02]	
Gurudu 2018	634	1057	266	555	9.7%	1.63 [1.32, 2.00]	
Harewood 2008	38	211	11	85	3.3%	1.48 [0.72, 3.05]	
Imperiali 2007	813	2465	758	2242	10.9%	0.96 [0.85, 1.09]	
Nielsen 2017	53	105	22	100	4.2%	3.61 [1.97, 6.64]	
Otto 2010	206	541	281	850	9.4%	1.25 [0.99, 1.56]	
Sey 2015	421	813	510	1133	10.1%	1.31 [1.10, 1.57]	-
Taber 2008	571	1387	530	1405	10.5%	1.16 [0.99, 1.34]	
Wallace 2017	5290	8673	3665	7480	11.5%	1.63 [1.53, 1.73]	-
Total (95% CI)		32996		19132	100.0%	1.46 [1.25, 1.71]	•
Total events	17141		7858				
Heterogeneity: Tau ² =	= 0.05; Chi ²	= 114.33	8, df = 10 (P <	0.00001); $I^2 = 91$	*	
Test for overall effect						0.1	l 0.2 0.5 1 2 5 10 Favors no feedback Favors feedback

Supplementary Figure 4 Forrest plot for pooled analysis of polyp detection rate *CI, confidence interval*

Criteria	Abdul- Gurudu Baki <i>et al et al</i> [16] [19]	Gurudu et al [16]	Kahi <i>et al</i> [20]	Nielsen <i>et al</i> [22]	Lin et al [23]	Sey et al [17]	Coe et al [25]	Kaminski et al [27]	Barclay et al [7]	Taber <i>et al</i> [31]	Imperiali et al [29]	Coe et al [25]	Kaminski et al [27]	Wallace et al [18]	Harewood et al [30]
Selection															
Representativeness of the exposed cohort	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Selection of the non-exposed cohort	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ascertainment of exposure	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Demonstration that outcome of interest was not present at onset of study	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Comparability of cohorts															
Study controls for age/sex?			*							*		*	*	*	*
Study controls for at least 3 additional risk factors?					*		*	*				*	*	*	*
Outcome															
Assessment of outcome	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Was follow up long enough for outcomes to occur?	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total score	9	9	7	6	7	9	7	7	6	4	9	8	8	8	8

Supplementary Table 2 Quality assessment of included studies based on the Newcastle-Ottawa scale for cohort studies

	Feedback	group	No feedback	group		Odds Ratio	Odds Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% CI
Abdul-Baki 2015	1887	14899	264	2627	27.1%	1.30 [1.13, 1.49]	
Barclay 2008	146	2325	113	2053	12.4%	1.15 [0.89, 1.48]	
Coe 2013	74	520	58	602	6.8%	1.56 [1.08, 2.24]	
Gurudu 2018	77	1057	44	555	6.2%	0.91 [0.62, 1.34]	
Kahi 2013	79	592	38	336	5.5%	1.21 [0.80, 1.82]	
Otto 2010	33	541	64	850	5.0%	0.80 [0.52, 1.23]	
Sey 2015	76	813	78	1133	8.1%	1.39 [1.00, 1.94]	
Wallace 2017	607	8673	449	7480	29.0%	1.18 [1.04, 1.34]	
Total (95% CI)		29420		15636	100.0%	1.20 [1.09, 1.33]	•
Total events	2979		1108				
Heterogeneity: Tau ² =	= 0.01; Chi ²	= 9.46, 0	f = 7 (P = 0.2)	(22); $I^2 = 2$	6%		0.1 0.2 0.5 1 2 5 10
Test for overall effect	Z = 3.57 (F	P = 0.000	4)				0.1 0.2 0.5 1 2 5 10 Favors no feedback Favors feedback

Supplementary Figure 5 Forrest plot for advanced adenoma detection rate pooled analysis *CI, confidence interval*

	Feedback	group	No feedback	group		Odds Ratio	Odds Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Random, 95% CI	M-H, Random, 95% Cl
Gurudu 2018	77	1057	21	555	46.1%	2.00 [1.22, 3.27]	
Kahi 2013	193	592	113	336	53.9%	0.95 [0.72, 1.27]	+
Total (95% CI)		1649		891	100.0%	1.34 [0.65, 2.77]	-
Total events Heterogeneity: Tau ² = Test for overall effect				l); I ² = 8	5%		0.01 0.1 1 10 100 Favors no feedback Favors feedback

Supplementary Figure 6 Forrest plot for serrated sessile adenoma detection rate pooled analysis *CI, confidence interval*