Supplementary material

Supplementary Table 1

Summary and main characteristics of the articles excluded from the meta-analysis.

HGD = High Grade Dysplasia

Study	Surgical resection, n	Resected pancreatic cancer/HGD, n	Justification for exclusion
Brentnal et al., 1999[36]	7	0	Incomplete data
Rulyak et al., 2003[37]	12	0	Incomplete data
Kimmey et al., 2002[38]	15	0	Incomplete data
Brune et al., 2010[39]	-	-	Summary of CAPS 1 and CAPS2 studies
Langer et al., 2009[40]	6	0	Updated data in Vasen et al.[9]
Kluijt et al., 2009[41]	2	2	2 cases previously described in Poley's et al.[19]
Schneider et al., 2011[42]	9	2	Updated data in Vasen et al.[9]
Vasen et al., 2011[43]	5	5	Updated data in Vasen et al.[9]
Zubarik et al., 2011[44]	3	1	Patients inclusion criteria
Potjer et al., 2013[45]	18	7	Incomplete data
Bartsch et al., 2013[46]	5	3	Updated data in Vasen et al.[9]

Additional references (Suppl table 1)

36. Brentnall TA, Bronner MP, Byrd DR, et al. Early Diagnosis and Treatment of Pancreatic Dysplasia in Patients with a Family History of Pancreatic Cancer. *Ann Intern Med*. 1999;131:247.

37. Rulyak SJ, Kimmey MB, Veenstra DL, et al. Cost-effectiveness of pancreatic cancer screening in familial pancreatic cancer kindreds. *Gastrointest Endosc*. 2003;57:23–29.

38. Kimmey MB, Bronner MP, Byrd DR, et al. Screening and surveillance for hereditary pancreatic cancer. *Gastrointest Endosc*. 2002;56:S82–86.

39. Brune KA, Lau B, Palmisano E, et al. Importance of Age of Onset in Pancreatic Cancer Kindreds. *J Natl Cancer Inst*. 2010;102:119–126.

40. Langer P, Kann PH, Fendrich V, et al. Five years of prospective screening of high-risk individuals from families with familial pancreatic cancer. *Gut*. 2009;58:1410–1418.

41. Kluijt I, Cats A, Fockens P, et al. Atypical Familial Presentation of FAMMM Syndrome With a High Incidence of Pancreatic Cancer: Case Finding of Asymptomatic Individuals by EUS Surveillance. *J Clin Gastroenterol*. 2009;43:853–857.

42. Schneider R, Slater EP, Sina M, et al. German national case collection for familial pancreatic cancer (FaPaCa): ten years experience. *Fam Cancer*. 2011;10:323–330.

43. Vasen HFA, Wasser M, van Mil A, et al. Magnetic resonance imaging surveillance detects early-stage pancreatic cancer in carriers of a p16-Leiden mutation. *Gastroenterology*. 2011;140:850–856.

44. Zubarik R, Gordon SR, Lidofsky SD, et al. Screening for pancreatic cancer in a high-risk population with serum CA 19-9 and targeted EUS: a feasibility study. *Gastrointest Endosc*. 2011;74:87–95.

45. Potjer TP, Schot I, Langer P, et al. Variation in Precursor Lesions of Pancreatic Cancer among High-Risk Groups. *Clin Cancer Res*. 2013;19:442–449.

46. Bartsch DK, Dietzel K, Bargello M, et al. Multiple small “imaging” branch-duct type intraductal papillary mucinous neoplasms (IPMNs) in familial pancreatic cancer: indicator for concomitant high grade pancreatic intraepithelial neoplasia? *Fam Cancer*. 2013;12:89–96.

Supplementary Table 2

PRISMA checklist

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.	4
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	5
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	5-6
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.	6
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.	6
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	6
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).	6
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.	6
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	6-7

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.	NA
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	8
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.	8

Section/topic	#	Checklist item	Reported on page #
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).	NA
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.	6, 9
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.	9
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).	NA
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 confidence intervals, ideally with a forest plot.	9-10
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	9-10
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	NA
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	10-12
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).	12-15
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).	15
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	16
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.	2