

Table S1: Data extraction instrument

Data extraction instrument	
Risk factor (N)	
Contaminated or dirty (N)	
Length of follow-up	
Incidence rate	
SSI	
Population (N)	
Name of surgery procedure	
Design	
Operation urgency	
surgery type (minimally invasive/ open)	
Intervention	
Definition	
Income Group	
WHO region	
Country	
Mid-year	
Data collection time (Year)	
Author (year)	

List of articles included in the study:

22 studies from the USA,¹⁻²² 12 from Spain,²³⁻³⁴ eight from China,³⁵⁻⁴² seven from Japan,⁴³⁻⁴⁹ seven from Brazil,⁵⁰⁻⁵⁶ four from Korea,⁵⁷⁻⁶⁰ four from Canada,⁶¹⁻⁶⁴ three from the UK,⁶⁵⁻⁶⁷ three from Germany,⁶⁸⁻⁷⁰ five international studies,⁷¹⁻⁷⁵ two from each of Sierra Leone,^{76, 77} Israel,^{78, 79} Tanzania,^{80, 81} Norway,^{82, 83} Poland,^{84, 85} and Ethiopia,^{86, 87} and one from each of Thailand,⁸⁸ Croatia,⁸⁹ Vietnam,⁹⁰ Taiwan,⁹¹ Mexico,⁹² Egypt,⁹³ South Africa,⁹⁴ Nepal,⁹⁵ Switzerland,⁹⁶ Netherlands,⁹⁷ Italy,⁹⁸ Ireland,⁹⁹ India,¹⁰⁰ France,¹⁰¹ Ghana,¹⁰² Saudi Arabia,¹⁰³ Myanmar,¹⁰⁴ Kosovo,¹⁰⁵ Belgium,¹⁰⁶ and Turkey.¹⁰⁷

The Critical Appraisal Skills Program (CASP) checklist for appraising cohort and case-control studies was used.¹⁰⁸ The researchers gave numbers for the questions responses as follows: Yes (2); Can't Tell (1); No (0). (Table S2)

Table S2: Characteristics of studies included in this scoping review

Number	Author	Data collection time (Year)	Country	Design	Did the study address a clearly focused issue? (for both case-control and cohort studies)	Did the authors use an appropriate method to answer their question? (for case-control)/ Was the cohort recruited in an acceptable way? (for cohort study)	Were the cases recruited in an acceptable way? (for case-control)/ Was the exposure accurately measured to minimize bias? (for cohort)	Were the controls selected in an acceptable way? (for case-control)/ Was the outcome accurately measured to minimize bias? (for cohort)	Was the exposure accurately measured to minimize bias? (for case-control)/ Have the authors identified all-important confounding factors? (for cohort)	Aside from the experimental intervention, were the groups treated equally? (for case-control)/ Have they taken account of the confounding factors in the design and/or analysis? (for cohort)	Have the authors taken account of the potential confounding factors in the design and/or in their analysis? (for case-control)/ Was the follow-up of subjects complete enough? (for cohort)	How large was the treatment effect? (for case-control)/ Was the follow-up of subjects long enough? (for cohort)	How precise was the estimate of the treatment effect? (for case-control)/ What are the results of this study? (for cohort)	Do you believe the results? (for case-control)/ How precise are the results? (for cohort)	Can the results be applied to the local population? (for case-control)/ Do you believe the results? (for cohort)	Do the results of this study fit with other available evidence? (for case-control)/ Can the results be applied to the local population? (for cohort)	Do the results of this study fit with other available evidence? (for cohort)	What are the implications of this study for practice? (for cohort)
1	Chopra T et al. ¹⁴	2006-2009	USA	Case-control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	Crombe T et al. ¹⁰¹	2004-2013	France	Case-control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3	Di Gennaro F et al. ⁷⁶	2018-2019	Sierra Leone	Case-control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
4	Falvo A et al. ¹⁵	2015-2017	USA	Case-control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
5	Gomaa K et al. ⁹³	2013-2017	Egypt	Case-control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
6	Griffiths J et al. ⁶³	1996-2002	Canada	Case-control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
7	He X et al. ³⁹	2010-2021	China	Case-control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
8	Jeong S J et al. ⁶⁰	2007-2008	Korea	Case-control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
9	Kong B et al. ⁶⁹	not specified	Germany	Case-control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
10	Kvalvic S A et al. ⁸²	2014-2016	Norway	Case-control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
11	Liu S et al. ⁴⁰	2014-2016	China	Case-control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
12	Liu S et al. ⁴¹	2015-2017	China	Case-control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
13	Joseau S et al. ³²	2010-2014	Spain	Case-control	2	2	2	2	2	2	2	2	2	2	2	2	2	2

49	Limón E et al. ²⁸	2007-2011	Spain	Prospective cohort	2	2	1	2	1	2	2	2	2	2	2	2	2	1	2	2
50	Mpogoro F J et al. ⁸⁰	2011-2012	Tanzania	Prospective cohort	2	1	2	2	2	2	1	2	2	2	2	2	2	2	2	2
51	Nguhuni B et al. ⁸¹	NA	Tanzania	Prospective cohort	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2
52	Parámo-Zunzunegui J et al. ²⁹	2017-2018	Spain	Prospective cohort	2	1	2	2	1	2	2	2	2	2	2	1	2	2	2	2
53	Rodríguez-Caravaca G et al. ⁷³	2009-2016	International studies	Prospective cohort	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
54	Sánchez-Santana T et al. ³⁰	2007-2015	Spain	Prospective cohort	2	1	1	2	1	2	2	2	2	2	1	1	2	2	2	2
55	Swart O et al. ⁹⁴	2017	South Africa	Prospective cohort	2	2	1	2	1	2	1	2	2	2	2	2	2	2	2	2
56	Tang R et al. ⁹¹	1995-1998	Taiwan	Prospective cohort	2	2	1	2	1	2	1	0	2	2	2	2	1	2	2	2
57	Theilwall S et al. ⁶⁵	2007-2011	UK	Prospective cohort	2	2	2	2	1	2	1	2	2	2	2	2	2	2	2	2
58	Tran T S et al. ⁹⁰	1997	Veitnan	Prospective cohort	2	2	0	2	1	2	2	2	2	2	2	2	0	2	0	2
59	Utsumi M et al. ⁴³	2003-2007	Japan	Prospective cohort	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
60	Wang Z W et al. ³⁵	2018	China	Prospective cohort	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2
61	Wloch C et al. ⁶⁶	2009	UK	Prospective cohort	2	2	2	2	1	2	2	0	2	2	2	2	2	2	2	1
62	Zejnullahu V A et al. ¹⁰⁵	2018	Kosovo	Prospective cohort	2	2	1	2	1	2	2	2	2	2	2	2	1	2	2	2
63	Araki T et al. ⁴⁴	2009-2010	Japan	Prospective cohort	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2
64	Bicudo-Salomão A et al. ⁵²	2006-2013	Brazil	Prospective cohort	2	2	2	2	1	2	0	0	2	2	2	2	1	2	1	2
65	Bisliangi G et al. ¹⁰⁶	2016-2017	Belgium	Prospective cohort	2	2	2	2	2	2	1	1	2	2	2	2	2	2	2	2
66	Bogdanic B et al. ⁸⁹	2009-2011	Croatia	Prospective cohort	2	2	2	2	1	2	1	2	2	2	2	2	2	2	2	2
67	Delgado-Miguel C et al. ³¹	2017-2018	Spain	Prospective cohort	2	2	2	2	0	2	2	2	2	2	2	2	1	2	1	2
68	Drake T M et al. ⁷⁵	2014	UK and Ireland	Prospective cohort	2	2	2	2	1	2	1	2	2	2	2	2	1	2	2	2
69	Gomila A et al. ²⁵	2011-2014	Spain	Prospective cohort	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
70	Hou T-Y et al. ³⁶	2015-2018	China	Prospective cohort	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2
71	Kleeff J et al. ⁶⁸	2012-2013	Germany	Prospective cohort	2	2	2	2	0	2	0	2	1	2	0	1	2	2	2	2
72	Kudsi O Y et al. ²	2012-2019	USA	Prospective cohort	2	2	2	2	2	2	1	2	2	2	0	2	2	2	2	2
73	Li Z et al. ³⁷	2018-2019	China	Prospective cohort	2	2	2	2	2	2	2	2	2	2	0	2	2	2	2	2
74	Oliveira A C et al. ⁵⁶	2000	Brazil	Prospective cohort	2	2	2	2	1	2	0	1	0	2	1	2	1	2	2	2
75	Opoien H K et al. ⁸³	2003	Norway	Prospective cohort	2	2	2	2	2	0	0	2	2	2	2	0	1	2	2	2
76	Taylor G et al. ⁶¹	1995	Canada	Prospective cohort	2	2	2	2	0	2	2	2	2	2	0	2	1	2	2	2
77	Uchino M et al. ⁴⁵	2008-2011	Japan	Prospective cohort	2	2	2	2	2	2	1	2	2	2	2	2	1	2	2	2
78	Uchino M et al. ⁴⁶	2006-2007	Japan	Prospective cohort	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
79	Hollenbeak C S et al. ²²	1990/1995	USA	Prospective cohort	2	2	2	2	2	1	2	0	2	0	2	1	2	2	2	2
80	Tanner J et al. ⁶⁷	2008	UK	Prospective cohort	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
81	Ruiz-Tovar J et al. ³⁴	2007/2011	Spain	Prospective cohort	2	2	2	2	1	2	0	2	1	0	2	0	2	1	2	2
82	Aktas A et al. ¹⁰⁷	2017-2018	Turkey	Prospective cohort	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
83	Abdi H et al. ⁶²	2006/2016	Canada	Retrospective cohort	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
84	Anandalwar S P et al. ³	2013-2014	USA	Retrospective cohort	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

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