

SURVEILLANCE OF BARRETT'S ESOPHAGUS

SUPPLEMENTARY TABLES AND FIGURES

Supplementary Table 1. Search strategy for PICO Question 1: Role of endoscopic surveillance in patients with non-dysplastic Barrett's esophagus

Ovid Medline

N = 394

1. barrett esophagus/
2. (barrett* adj2 (esophag* or oesophag* OR epithelium OR metaplasia* OR syndrome)).mp
3. 1 or 2
4. 3 and ((cancer* or dysplas* or adenocarcinoma* or carcinom* or tumor* OR tumour*).mp. or esophageal neoplasms/ or (exp Neoplasms/ and exp Esophagus/))
5. 4 and ((screen* or surveil* or monitor* or predispos* or progress* or detect*).mp or exp Diagnosis/ OR diagnosis.fs or exp Mass Screening/)
6. 5 and ((follow* or prognos* or risk* or outcome*).mp. or exp Treatment Outcome/ or exp Prognosis/)
7. 6 and ((week* or month* or annual* or year* or time or timing).mp. or exp Time Factors/)
8. review.pt. and (medline or medlars or embase or pubmed or cochrane or (scisearch or psychinfo or psycinfo) or (psychlit or psyclit) or cinahl or ((hand adj2 search\$) or (manual\$ adj2 search\$)) or (electronic database\$ or bibliographic database\$ or computeri?ed database\$ or online database\$) or (pooling or pooled or mantel haenszel) or (peto or dersimonian or der simonian or fixed effect)).tw,sh.
9. exp "Systematic Review"/ or meta-analysis.pt. or meta-analysis.sh. or (meta-analys\$ or meta analys\$ or metaanalys\$).tw,sh. or (systematic\$ adj5 review\$).tw,sh. or (systematic\$ adj5 overview\$).tw,sh. or (quantitativ\$ adj5 review\$).tw,sh. or (quantitativ\$ adj5 overview\$).tw,sh. or (quantitativ\$ adj5 synthesis\$).tw,sh. or (methodologic\$ adj5 review\$).tw,sh. or (methodologic\$ adj5 overview\$).tw,sh. or (integrative research review\$ or research integration).tw.
10. "randomized controlled trial".pt. or (random\$ or placebo\$ or single blind\$ or double blind\$ or triple blind\$).ti,ab.
11. exp cohort studies/ or cohort\$.tw. or controlled clinical trial.pt. or exp case-control studies/ or (case\$ and series).tw.
12. epidemiologic methods/
13. limit 12 to yr="1966-1989"
14. (clinical study or clinical trial, all or clinical trial, phase i or clinical trial, phase ii or clinical trial, phase iii or clinical trial, phase iv or clinical trial or comparative study or controlled clinical trial or evaluation studies or meta analysis or multicenter study or observational study or pragmatic clinical trial or randomized controlled trial or systematic reviews).pt.
15. or/8-11,13-14
16. 7 and 15
17. (animals not humans).sh
18. 16 not 17
19. (retraction of publication or retracted publication).pt.
20. 18 not 19
21. Remove duplicates from 20
22. limit 21 to dt="20170901-20250117"

Embase.com

N = 100

1. 'barrett esophagus'/exp OR ((barrett* NEAR/2 (esophag* OR oesophag* OR epithelium OR metaplasia* OR syndrome)):ti,ab,kw)
2. #1 AND ('esophagus tumor'/exp OR ('neoplasm'/exp AND 'esophagus'/exp) OR (cancer* or dysplas* or adenocarcinoma* or carcinom* or tumor* or tumour*)):ti,ab,kw)

3. #2 AND ('diagnosis'/exp OR 'mass screening'/exp OR (screen* or surveil* or monitor* or predispos* or progress* or detect*):ti,ab,kw)
4. #3 AND ('prognosis'/exp OR 'evaluation and follow up'/exp OR (follow* or prognos* or risk* or outcome*):ti,ab,kw)
5. #4 AND ('time factor'/exp OR (week* or month* or annual* or year* or time or timing):ti,ab,kw)
6. 'review'/exp OR ((literature NEAR/3 review*):ti,ab) OR 'systematic review'/exp OR 'meta analysis'/exp OR (medline or medlars or embase or pubmed or cinahl or amed or psychlit or psyclit or psychinfo or psycinfo or scisearch or cochrane):ti,ab OR (systematic* NEAR/2 (review* OR overview)):ti,ab OR (meta-anal* OR "meta anal*" OR metaanal* OR metanal*):ti,ab
7. (random* or placebo* or single blind* or double blind* or triple blind*):ti,ab
8. 'cohort analysis'/exp OR 'longitudinal study'/exp OR 'prospective study'/exp OR 'follow up'/exp OR 'case control study'/exp OR 'case study'/exp OR (cohort* OR (case* AND series) OR (case* AND control*)):ti,ab,kw
9. 'clinical trial'/exp OR 'clinical study'/exp OR 'controlled clinical trial'/exp OR 'multicenter study'/exp OR 'phase 1 clinical trial'/exp OR 'phase 2 clinical trial'/exp OR 'phase 3 clinical trial'/exp OR 'phase 4 clinical trial'/exp OR 'comparative study'/exp
10. #6 OR #7 OR #8 OR #9
11. #5 AND #10
12. 'animal'/exp NOT 'human'/exp
13. #11 NOT #12
14. 'retraction'/exp OR 'retraction notice'/exp
15. #13 NOT #14
16. #15 AND [01-09-2017]/sd NOT [18-01-2025]/sd
17. #16 AND [article]/lim AND [english]/lim
18. #17 NOT [medline]/lim NOT 'case report'/exp

Web of Science -- Science Citation Index

N = 316

1. TS=(barrett* NEAR/2 (esophag* OR oesophag* OR epithelium OR metaplasia* OR syndrome))
2. TS=(cancer* or dysplas* or adenocarcinoma* or carcinom* or tumor* OR tumour*)
3. TS=(screen* or surveil* or monitor* or predispos* or progress* or detect*)
4. TS=(follow* or prognos* or risk* or outcome*)
5. TS=(week* or month* or annual* or year* or time or timing)
6. #5 AND #4 AND #3 AND #2 AND #1
7. TS=(randomised OR randomized OR randomisation OR randomization OR placebo* OR (random* AND (allocat* OR assign*)) OR (blind* AND (single OR double OR treble OR triple))) OR (TS=(trial* OR cohort* OR meta-analysis OR prospective* OR retrospectiv* OR observation*) AND DT=(Article OR Review)) NOT TS=(animal or animals or pisces or fish or fishes or catfish or catfishes or sheatfish or silurus or arius or heteropneustes or clarias or gariepinus or fathead minnow or fathead minnows or pimephales or promelas or cichlidae or trout or trouts or char or chars or salvelinus or salmo or oncorhynchus or guppy or guppies or millionfish or poecilia or goldfish or goldfishes or carassius or auratus or mullet or mullets or mugil or curema or shark or sharks or cod or cods or gadus or morhua or carp or carps or cyprinus or carpio or killifish or eel or eels or anguilla or zander or sander or lucioperca or stizostedion or turbot or turbots or psetta or flatfish or flatfishes or plaice or pleuronectes or platessa or tilapia or tilapias or oreochromis or sarotherodon or common sole or dover sole or solea or zebrafish or zebrafishes or danio or rerio or seabass or dicentrarchus or labrax or morone or lamprey or lampreys or petromyzon or pumpkinseed or pumpkinseeds or lepomis or gibbosus or herring or clupea or harengus or amphibia or amphibian or amphibians or anura or salientia or frog or frogs or rana or toad or toads or bufo or xenopus or laevis or bombina or epidalea or calamita or salamander or salamanders or newt or newts or triturus or reptilia or reptile or reptiles or bearded dragon or pogona or vitticeps or iguana or iguanas or lizard or lizards or anguis fragilis or turtle or turtles or snakes or snake or aves or bird or birds or quail or quails or coturnix or bobwhite or colinus or virginianus or poultry or poultries or fowl or fowls or chicken or chickens or gallus or zebra finch or taeniopygia or guttata or canary or canaries or serinus or canaria or parakeet or parakeets or grasskeet or parrot or parrots or psittacine or psittacines or shelduck or tadorna or goose or geese or branta or leucopsis or woodlark or lullula or flycatcher or ficedula or hypoleuca or dove or doves or geopelia or cuneata or

duck or ducks or greylag or graylag or anser or harrier or circus pygargus or red knot or great knot or calidris or canutus or godwit or limosa or lapponica or meleagris or gallopavo or jackdaw or corvus or monedula or ruff or philomachus or pugnax or lapwing or peewit or plover or vanellus or swan or cygnus or columbianus or bewickii or gull or chroicocephalus or ridibundus or albifrons or great tit or parus or aythya or fuligula or streptopelia or risoria or spoonbill or platalea or leucorodia or blackbird or turdus or merula or blue tit or cyanistes or pigeon or pigeons or columba or pintail or anas or starling or sturnus or owl or athene noctua or pochard or ferina or cockatiel or nymphiacus or hollandicus or skylark or alauda or tern or sterna or teal or crecca or oystercatcher or haematopus or ostralegus or shrew or shrews or sorex or araneus or crocidura or russula or european mole or talpa or chiroptera or bat or bats or eptesicus or serotinus or myotis or dasynceme or daubentonii or pipistrelle or pipistrellus or cat or cats or felis or catus or feline or dog or dogs or canis or canine or canines or otter or otters or lutra or badger or badgers or meles or fitchew or fitch or foudmart or foulmart or ferrets or ferret or polecat or polecats or mustela or putorius or weasel or weasels or fox or foxes or vulpes or common seal or phoca or vitulina or grey seal or halichoerus or horse or horses or equus or equine or equidae or donkey or donkeys or mule or mules or pig or pigs or swine or swines or hog or hogs or boar or boars or porcine or piglet or piglets or sus or scrofa or llama or llamas or lama or glama or deer or deers or cervus or elaphus or cow or cows or bos taurus or bos indicus or bovine or bull or bulls or cattle or bison or bisons or sheep or sheeps or ovis aries or ovine or lamb or lambs or mouflon or mouflons or goat or goats or capra or caprine or chamois or rupicapra or leporidae or lagomorpha or lagomorph or rabbit or rabbits or oryctolagus or cuniculus or laprine or hares or lepus or rodentia or rodent or rodents or murinae or mouse or mice or mus or musculus or murine or woodmouse or apodemus or rat or rats or rattus or norvegicus or guinea pig or guinea pigs or cavia or porcellus or hamster or hamsters or mesocricetus or cricetus or gerbil or gerbils or jird or jirds or meriones or unguiculatus or jerboa or jerboas or jaculus or chinchilla or chinchillas or beaver or beavers or castor fiber or castor canadensis or sciuridae or squirrel or squirrels or sciurus or chipmunk or chipmunks or marmot or marmots or marmota or suslik or susliks or spermophilus or cynomys or cottonrat or cottonrats or sigmodon or vole or voles or microtus or myodes or glareolus or primate or primates or prosimian or prosimians or lemur or lemurs or lemuridae or loris or bush baby or bush babies or bushbaby or bushbabies or galago or galagos or anthropoidea or anthropoids or simian or simians or monkey or monkeys or marmoset or marmosets or callithrix or cebuella or tamarin or tamarins or saguinus or leontopithecus or squirrel monkey or squirrel monkeys or saimiri or night monkey or night monkeys or owl monkey or owl monkeys or douroucoulis or aotus or spider monkey or spider monkeys or ateles or baboon or baboons or papio or rhesus monkey or macaque or macaca or mulatta or cynomolgus or fascicularis or green monkey or green monkeys or chlorocebus or vervet or vervets or pygerythrus or hominoidea or ape or apes or hylobatidae or gibbon or gibbons or siamang or siamangs or nomascus or symphalangus or hominidae or orangutan or orangutans or pongo or chimpanzee or chimpanzees or pan troglodytes or bonobo or bonobos or pan paniscus or gorilla or gorillas or troglodytes)

8. #7 AND #6
9. DT=(Retracted Publication OR Retraction)
10. #8 NOT #9
11. #10 AND LA=(English)
12. #11 with 2017-09-01 to 2025-01-17 (Index Date)

PubMed

N = 422

((("Barrett Esophagus"[Mesh] OR (barrett*[tw] AND (esophag*[tw] OR oesophag*[tw] OR epithelium[tw] OR metaplasia*[tw] OR syndrome[tw]))) AND ("Esophageal Neoplasms"[Mesh] OR ("Neoplasms"[Mesh] AND "Esophagus"[Mesh]) OR cancer*[tw] OR dysplas*[tw] OR adenocarcinoma*[tw] OR carcinom*[tw] OR tumor*[tw] OR tumour*[tw]) AND ("Diagnosis"[Mesh] OR "diagnosis" [Subheading] OR "Mass Screening"[Mesh] OR screen*[tw] OR surveil*[tw] OR monitor*[tw] OR predispos*[tw] OR progress*[tw] OR detect*[tw]) AND ("Treatment Outcome"[Mesh] OR "Prognosis"[Mesh] OR follow*[tw] OR prognos*[tw] OR risk*[tw] OR outcome*[tw]) AND ("Time Factors"[Mesh] OR week*[tw] OR month*[tw] OR annual*[tw] OR year*[tw] OR time[tw] OR timing[tw])) AND ((review[pt] AND (medline[tw] OR medlars[tw] OR embase[tw] OR pubmed[tw] OR cochrane[tw] OR scisearch[tw] OR psychinfo[tw] OR psycinfo[tw] OR psychlit[tw] OR psyclit[tw] OR cinahl[tw] OR (hand[tw] AND search*[tw]) OR (manual*[tw] AND search*[tw]) OR "electronic database*" [tw] OR "bibliographic database*" [tw] OR "computerized database*" [tw] OR "online database*" [tw] OR pooling[tw] OR pooled[tw] OR "mantel haenszel" [tw] OR peto[tw] OR dersimonian[tw] OR

"der simonian"[tw] OR "fixed effect"[tw])) OR "Systematic Review" [Publication Type] OR "Meta-Analysis" [Publication Type] or ((systematic*[tw] OR quantitativ*[tw] OR methodologic*[tw] OR integrative*[tw]) AND (review*[tw] OR overview*[tw] OR synthesis[tw])) OR ("randomized controlled trial"[pt] OR random*[tw] OR placebo*[tw] OR "single blind*" [tw] OR "double blind*" [tw] OR "triple blind*" [tw]) OR ("Case-Control Studies"[MESH:NOEXP] OR "Matched-Pair Analysis"[MESH:NOEXP] OR "case control"[TIAB] OR "cohort studies"[MESH:NOEXP] OR "longitudinal studies"[MESH:NOEXP] OR "follow-up studies"[MESH:NOEXP] OR "prospective studies"[MESH:NOEXP] OR "retrospective studies"[MESH:NOEXP] OR cohort[TIAB] OR longitudinal[TIAB] OR prospective[TIAB] OR "Cross-Sectional Studies"[MESH:NOEXP] OR Prevalence[MESH:NOEXP] OR "association study"[TIAB:~2] OR "association studies"[TIAB:~2] OR "ecological studies"[TIAB] OR "ecological study"[TIAB] OR cross-sectional[TIAB] OR prevalence[TIAB] OR transversal[TIAB] OR association[TI] OR associations[TI])) AND ("2017/09/01"[Date - Entry] : "3000"[Date - Entry]) NOT ("Animals"[Mesh] NOT "Humans"[Mesh]) NOT ("Retracted Publication"[pt] OR "Retraction of Publication"[pt])

Supplementary Table 2. Search strategy for PICO 2. Role of chromoendoscopy in Barrett's esophagus patients undergoing surveillance endoscopy – neoplasia detection rates between chromoendoscopy plus white-light endoscopy versus white-light endoscopy alone

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N = 462

('chromoendoscopy'/exp OR 'acetic acid'/exp OR 'indigo carmine'/exp OR 'methylene blue'/exp OR 'congo red'/exp OR 'crystal violet'/exp OR 'phenolsulfonphthalein'/exp OR 'coloring agent'/exp OR 'chromogenic substrate'/exp OR 'iodide'/exp OR 'white light endoscopy'/exp OR 'acetic acid':ab,ti OR indigo:ab,ti OR carmine:ab,ti OR indicarmine:ab,ti OR indicamine:ab,ti OR indigocarmine:ab,ti OR indigotin*:ab,ti OR 'methylene blue':ab,ti OR 'astrazone blue':ab,ti OR 'basic blue 9':ab,ti OR 'carminum coeruleum':ab,ti OR 'methylthionine chloride':ab,ti OR 'methylthioninium chloride':ab,ti OR 'swiss blue':ab,ti OR phenolsulfonphthalein:ab,ti OR 'congo red':ab,ti OR 'direct red':ab,ti OR 'gentian violet':ab,ti OR 'phenol red':ab,ti OR 'crystal violet':ab,ti OR 'cristal violet':ab,ti OR 'gentian tincture':ab,ti OR meroxylan:ab,ti OR methylrosaniline:ab,ti OR 'hexamethyl violet':ab,ti OR lugol*:ab,ti OR iodine:ab,ti OR 'coloring agent*':ab,ti OR 'colouring agent*':ab,ti OR 'colorant agent*':ab,ti OR chromoendoscop*:ab,ti OR (chromo NEXT/1 endoscop*):ab,ti OR chromoscop*:ab,ti OR ('narrow band' NEXT/1 imag*):ab,ti OR (narrowband NEXT/1 imag*):ab,ti OR nbi:ab,ti OR autofluoresc*:ab,ti OR trimodal:ab,ti OR 'fujinon intelligent':ab,ti OR 'fuji intelligent':ab,ti OR FICE:ab,ti OR 'endoscopic vital stain*':ab,ti OR 'tissue dye*':ab,ti OR 'tissue stain*':ab,ti OR 'white light':ab,ti OR ("i-scan" NEAR/5 (OE OR "optical enhancement")):ab,ti) AND ('Barrett esophagus'/exp OR 'esophagus tumor'/exp OR ((esophag* OR oesophag*) NEAR/3 (tumor* OR tumour* OR 'pre-malignan*' OR premalignant* OR malignan* OR neoplasm* OR neoplasia* OR cancer* OR dysplas* OR carcinoma* OR adenocarcinoma* OR precancer* OR 'pre-cancer' OR metaplas* OR barrett*)):ab,ti OR (barrett* NEXT/1 (syndrome OR ulcer* OR epithelium)):ab,ti OR (columnar* AND (esophagus OR oesophagus)):ab,ti OR endobrachyoesophag*:ab,ti) AND ([01-01-2017]/sd NOT [01-01-2025]/sd) AND (('randomized controlled trial'/exp OR 'controlled clinical trial'/de OR random*:ti,ab,tt OR 'randomization'/de OR 'intermethod comparison'/de OR placebo:ti,ab,tt OR compare:ti,tt OR compared:ti,tt OR comparison:ti,tt OR ((evaluated:ab OR evaluate:ab OR evaluating:ab OR assessed:ab OR assess:ab) AND (compare:ab OR compared:ab OR comparing:ab OR comparison:ab)) OR ((open NEXT/1 label):ti,ab,tt) OR (((double OR single OR doubly OR singly) NEXT/1 (blind OR blinded OR blindly)):ti,ab,tt) OR 'double blind procedure'/de OR ((parallel NEXT/1 group*):ti,ab,tt) OR crossover:ti,ab,tt OR 'cross over':ti,ab,tt OR (((assign* OR match OR matched OR allocation) NEAR/6 (alternate OR group OR groups OR intervention OR interventions OR patient OR patients OR subject OR subjects OR participant OR participants)):ti,ab,tt) OR assigned:ti,ab,tt OR allocated:ti,ab,tt OR ((controlled NEAR/8 (study OR design OR trial)):ti,ab,tt) OR volunteer:ti,ab,tt OR volunteers:ti,ab,tt OR 'human experiment'/de OR trial:ti,tt) NOT (((random* NEXT/1 sampl* NEAR/8 ('cross section*' OR questionnaire* OR survey OR surveys OR database OR databases)):ti,ab,tt) NOT ('comparative study'/de OR 'controlled study'/de OR 'randomised controlled':ti,ab,tt OR 'randomized controlled':ti,ab,tt OR 'randomly assigned':ti,ab,tt) OR 'cross-sectional study'/de NOT ('randomized controlled trial'/exp OR 'controlled clinical study'/de OR 'controlled study'/de OR 'randomised controlled':ti,ab,tt OR 'randomized controlled':ti,ab,tt OR 'control group':ti,ab,tt OR 'control groups':ti,ab,tt) OR (('case control*':ti,ab,tt AND random*:ti,ab,tt) NOT ('randomised controlled':ti,ab,tt OR 'randomized controlled':ti,ab,tt)) OR 'systematic review':ti,tt NOT (trial:ti,tt OR study:ti,tt)) OR (nonrandom*:ti,ab,tt NOT random*:ti,ab,tt) OR 'random field*':ti,ab,tt OR ('random cluster' NEAR/4 sampl*):ti,ab,tt OR (review:ab AND review:it NOT trial:ti,tt) OR ('we searched':ab AND (review:ti,tt OR review:it)) OR 'update review':ab OR (databases NEAR/5 searched):ab OR ((rat:ti,tt OR rats:ti,tt OR mouse:ti,tt OR mice:ti,tt OR swine:ti,tt OR porcine:ti,tt OR murine:ti,tt OR sheep:ti,tt OR lambs:ti,tt OR pigs:ti,tt OR piglets:ti,tt OR rabbit:ti,tt OR rabbits:ti,tt OR cat:ti,tt OR cats:ti,tt OR dog:ti,tt OR dogs:ti,tt OR cattle:ti,tt OR bovine:ti,tt OR monkey:ti,tt OR monkeys:ti,tt OR trout:ti,tt OR marmoset*:ti,tt) AND 'animal experiment'/de) OR ('animal experiment'/de NOT ('human experiment'/de OR 'human'/de))))

Cochrane Library

N = 151

1. MeSH descriptor: [Acetic Acid] explode all trees
2. MeSH descriptor: [Indigo Carmine] explode all trees
3. MeSH descriptor: [Methylene Blue] explode all trees
4. MeSH descriptor: [Congo Red] explode all trees
5. MeSH descriptor: [Gentian Violet] explode all trees
6. MeSH descriptor: [Phenolsulfonphthalein] explode all trees

7. MeSH descriptor: [Coloring Agents] explode all trees
8. MeSH descriptor: [Chromogenic Compounds] explode all trees
9. MeSH descriptor: [Iodides] explode all trees
10. ("acetic acid" OR indigo OR carmine OR indicarmine OR indicamine OR indigocarmine OR indigotin* OR "methylene blue" OR "astrazone blue" OR "basic blue 9" OR "carminum coeruleum" OR "methylthionine chloride" OR "methylthioninium chloride" OR "swiss blue" OR phenolsulfonphthalein OR "congo red" OR "direct red" OR "gentian violet" OR "phenol red" OR "crystal violet" OR "cristal violet" OR "gentian tincture" OR meroxylan OR methylrosaniline OR "hexamethyl violet" OR lugol* OR iodine OR ((coloring OR colouring OR colorant) NEXT agent*) OR chromoendoscop* OR (chromo NEXT endoscop*) OR chromoscop* OR ("narrow band" NEXT imag*) OR (narrowband NEXT imag*) OR nbi OR autofluoresc* OR trimodal OR "fujinon intelligent" OR "fuji intelligent" OR FICE OR ("endoscopic vital" NEXT stain*) OR (tissue NEXT (dye* OR stain*)) OR "white light" OR ("i-scan" NEAR/5 (OE OR "optical enhancement"))):ti,ab,kw
11. {OR #1-#10}
12. MeSH descriptor: [Barrett Esophagus] explode all trees
13. MeSH descriptor: [Esophageal Neoplasms] explode all trees
14. (((esophag* OR oesophag*) NEAR/3 (tumor* OR tumour* OR (pre NEXT malignan*) OR premalignant* OR malignan* OR neoplasm* OR neoplasia* OR cancer* OR dysplas* OR carcinoma* OR adenocarcinoma* OR precancer* OR (pre NEXT cancer*) OR metaplas* OR barrett*)):ti,ab,kw
15. ((barrett* NEXT (syndrome OR ulcer* OR epithelium))):ti,ab,kw
16. ((columnar* AND (esophagus OR oesophagus))):ti,ab,kw
17. (endobrachyoesophag*):ti,ab,kw
18. {OR #12-#17}
19. #11 AND #18
20. MeSH descriptor: [Animals] explode all trees
21. MeSH descriptor: [Humans] explode all trees
22. #20 NOT #21
23. #19 NOT #22
24. Limit 2017-present

Ovid Medline

N = 522

1. exp Acetic Acid/
2. exp Indigo Carmine/
3. exp Methylene Blue/
4. exp Congo Red/
5. exp Gentian Violet/
6. exp Phenolsulfonphthalein/
7. exp Coloring Agents/
8. exp Chromogenic Compounds/
9. exp Iodides/
10. ("acetic acid" OR indigo OR carmine OR indicarmine OR indicamine OR indigocarmine OR indigotin* OR "methylene blue" OR "astrazone blue" OR "basic blue 9" OR "carminum coeruleum" OR "methylthionine chloride" OR "methylthioninium chloride" OR "swiss blue" OR phenolsulfonphthalein OR "congo red" OR "direct red" OR "gentian violet" OR "phenol red" OR "crystal violet" OR "cristal violet" OR "gentian tincture" OR meroxylan OR methylrosaniline OR "hexamethyl violet" OR lugol* OR iodine OR ((coloring OR colouring OR colorant) adj agent*) OR chromoendoscop* OR (chromo adj endoscop*) OR chromoscop* OR ("narrow band" adj imag*) OR (narrowband adj imag*) OR nbi OR autofluoresc* OR trimodal OR "fujinon intelligent" OR "fuji intelligent" OR FICE OR ("endoscopic vital" adj stain*) OR (tissue adj (dye* OR stain*)) OR ("i-scan" adj5 (OE OR "optical enhancement")) OR "white light").tw,kw.
11. OR/1-10
12. exp Barrett Esophagus/
13. exp Esophageal Neoplasms/

14. ((esophag* or oesophag*) adj3 (tumor* or tumour* or (pre adj malignan*) or premalignant* or malignan* or neoplasm* or neoplasia* or cancer* or dysplas* or carcinoma* or adenocarcinoma* or precancer* or (pre adj cancer*) or metaplas* or barrett*)).tw,kw.
15. (barrett* adj (syndrome or ulcer* or epithelium)).tw,kw.
16. (columnar* and (esophagus or oesophagus)).tw,kw.
17. endobrachyoesophag*.tw,kw.
18. 12 or 13 or 14 or 15 or 16 or 17
19. 11 and 18
20. exp randomized controlled trial/
21. controlled clinical trial.pt.
22. (randomized or randomised).ab.
23. placebo.ab.
24. drug therapy.fs.
25. randomly.ab.
26. trial.ab.
27. groups.ab.
28. 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27
29. exp animals/ not humans.sh.
30. 28 not 29
31. 19 not 30
32. limit 31 to yr="2017-Current"
33. remove duplicates from 32

PubMed

N = 219

((("Acetic Acid"[MeSH] OR "Indigo Carmine"[MeSH] OR "Methylene Blue"[MeSH] OR "Congo Red"[MeSH] OR "Gentian Violet"[MeSH] OR "Phenolsulfonphthalein"[MeSH] OR "Coloring Agents"[MeSH] OR "Chromogenic Compounds"[MeSH] OR "Iodides"[MeSH] OR ("acetic acid"[tw] OR indigo[tw] OR carmine[tw] OR indicarmine[tw] OR indicamine[tw] OR indigocarmin[tw] OR indigotin*[tw] OR "methylene blue"[tw] OR "astrazone blue"[tw] OR "basic blue 9"[tw] OR "carminum coeruleum"[tw] OR "methylthionine chloride"[tw] OR "methylthioninium chloride"[tw] OR "swiss blue"[tw] OR phenolsulfonphthalein[tw] OR "congo red"[tw] OR "direct red"[tw] OR "gentian violet"[tw] OR "phenol red"[tw] OR "crystal violet"[tw] OR "cristal violet"[tw] OR "gentian tincture"[tw] OR meroxylan[tw] OR methylrosaniline[tw] OR "hexamethyl violet"[tw] OR lugol*[tw] OR iodine[tw] OR ((coloring[tw] OR colouring[tw] OR colorant[tw]) AND agent*[tw]) OR chromoendoscop*[tw] OR (chromo[tw] AND endoscop*[tw]) OR chromoscop*[tw] OR ("narrow band"[tw] AND imag*[tw]) OR (narrowband[tw] AND imag*[tw]) OR nbi[tw] OR autofluoresc*[tw] OR trimodal[tw] OR "fujinon intelligent"[tw] OR "fuji intelligent"[tw] OR FICE[tw] OR ("endoscopic vital"[tw] AND stain*[tw]) OR (tissue[tw] AND (dye*[tw] OR stain*[tw])) OR ("i-scan"[tw] AND (OE[tw] OR "optical enhancement"[tw])) OR "white light"[tw])) AND ("Barrett Esophagus"[MeSH] OR "Esophageal Neoplasms"[MeSH] OR ((esophag*[tw] OR oesophag*[tw]) AND (tumor*[tw] OR tumour*[tw] OR pre-malignan*[tw] OR premalignant*[tw] OR malignan*[tw] OR neoplasm*[tw] OR neoplasia*[tw] OR cancer*[tw] OR dysplas*[tw] OR carcinoma*[tw] OR adenocarcinoma*[tw] OR precancer*[tw] OR pre-cancer*[tw] OR metaplas*[tw] OR barrett*[tw])) OR (barrett*[tw] AND (syndrome[tw] OR ulcer*[tw] OR epithelium[tw])) OR (columnar*[tw] AND (esophagus[tw] OR oesophagus[tw])) OR endobrachyoesophag*[tw])) AND ((randomized controlled trial[pt] OR controlled clinical trial[pt] OR randomized[tiab] OR randomised[tiab] OR placebo[tiab] OR drug therapy[sh] OR randomly[tiab] OR groups[tiab] OR trial[tiab]) NOT (animals[mh] NOT humans[mh])) AND (2017/1/1:3000/12/12[pdat]))

Supplementary Table 3. Search strategy for PICO 3 – Role of adjunctive sampling techniques – wide area transepithelial sampling (WATS-3D) plus structured biopsy protocol versus structured biopsy protocol alone

Ovid Medline

N = 25

- exp Barrett Esophagus/
- exp Esophageal Neoplasms/
- (barrett* adj3 (esophag* or oesophag*)).mp.
- ((esophag* or oesophag*) adj3 dysplas*).mp.
- ((esophag* or oesophag*) adj3 (neoplas* or adenocarcinoma* or cancer* or tumor* or tumour*)).mp.
- exp Precancerous Conditions/ and exp Esophagus/
- or/1-6
- wats.ti,ab,kw. or transepitheli*.mp. or "trans-epithelia".mp.
- 7 and 8
- (area adj3 sampl*).mp.
- 7 and 10
- 9 or 11
- ((transepitheli* or "trans-epithelia") adj3 (sampl* or area or biops*)).mp.
- ("WATS-3D" or WATS3D).mp.
- or/12-14
- limit 15 to year="2021-Current"

Embase.com

N = 55

- 'barrett esophagus'/exp
- 'esophagus tumor'/exp
- (barrett* NEAR/3 (esophag* OR oesophag*)):ti,ab,kw
- ((esophag* or oesophag*) NEAR/3 dysplas*):ti,ab,kw
- ((esophag* or oesophag*) NEAR/3 (neoplas* or adenocarcinoma* or cancer* or tumor* OR tumour*)):ti,ab,kw
- 'precancer'/exp AND 'esophagus'/exp
- #1 OR #2 OR #3 OR #4 OR #5 OR #6
- wats:ti,ab,kw OR transepitheli*:ti,ab,kw OR 'trans-epithelia*':ti,ab,kw
- #7 AND #8
- (area NEAR/3 sampl*):ti,ab,kw
- #7 AND #10
- ((transepitheli* or "trans-epithelia") NEAR/3 (sampl* or area or biops*)):ti,ab,kw
- ("WATS-3D" or WATS3D):ti,ab,kw
- #12 OR #13 OR #14
- #15 AND [2021-2025]/py

Cochrane CENTRAL

N = 6

- MeSH descriptor: [Barrett Esophagus] explode all trees
- MeSH descriptor: [Esophageal Neoplasms] explode all trees
- ((barrett* NEAR/3 (esophag* or oesophag*)):ti,ab,kw
- (((esophag* or oesophag*) NEAR/3 dysplas*)):ti,ab,kw
- (((esophag* or oesophag*) NEAR/3 (neoplas* or adenocarcinoma* or cancer* or tumor* or tumour*)):ti,ab,kw
- MeSH descriptor: [Precancerous Conditions] explode all trees
- MeSH descriptor: [Esophagus] explode all trees
- #6 AND #7
- #1 OR #2 OR #3 OR #4 OR #5 OR #8
- ((wats OR transepitheli* OR (trans NEXT epitheli*)):ti,ab,kw

- #9 AND #10
- ((area NEAR/3 sampl*)):ti,ab,kw
- #9 AND #12
- #11 OR #13
- (((transepitheli* or (trans NEXT epithelia*)) NEAR/3 (sampl* or area or biops*)):ti,ab,kw
- (WATS-3D OR WATS3D):ti,ab,kw
- #14 OR #15 OR #16
- Publication year: 2021-Present

PubMed

N = 24

((("Barrett Esophagus"[MeSH] OR "Esophageal Neoplasms"[Mesh] OR "barrett esophagus"[Title/Abstract:~3] OR "barrett oesophagus"[Title/Abstract:~3] OR "barretts esophagus"[Title/Abstract:~3] OR "barretts oesophagus"[Title/Abstract:~3] OR "barrett's esophagus"[Title/Abstract:~3] OR "barrett's oesophagus"[Title/Abstract:~3] OR "esophagus dysplasia"[Title/Abstract:~3] OR "esophageal dysplasia"[Title/Abstract:~3] OR "oesophagus dysplasia"[Title/Abstract:~3] OR "oesophageal dysplasia"[Title/Abstract:~3] OR "esophagus dysplastic"[Title/Abstract:~3] OR "esophageal dysplastic"[Title/Abstract:~3] OR "oesophagus dysplastic"[Title/Abstract:~3] OR "oesophageal dysplastic"[Title/Abstract:~3] OR "esophagus neoplasm"[Title/Abstract:~3] OR "esophageal neoplasm"[Title/Abstract:~3] OR "oesophagus neoplasm"[Title/Abstract:~3] OR "oesophageal neoplasm"[Title/Abstract:~3] OR "esophagus neoplasms"[Title/Abstract:~3] OR "esophageal neoplasms"[Title/Abstract:~3] OR "oesophagus neoplasms"[Title/Abstract:~3] OR "oesophageal neoplasms"[Title/Abstract:~3] OR "esophagus adenocarcinoma"[Title/Abstract:~3] OR "esophageal adenocarcinoma"[Title/Abstract:~3] OR "oesophagus adenocarcinoma"[Title/Abstract:~3] OR "oesophageal adenocarcinoma"[Title/Abstract:~3] OR "esophagus cancer"[Title/Abstract:~3] OR "esophageal cancer"[Title/Abstract:~3] OR "oesophagus cancer"[Title/Abstract:~3] OR "oesophageal cancer"[Title/Abstract:~3] OR "esophagus tumor"[Title/Abstract:~3] OR "esophageal tumor"[Title/Abstract:~3] OR "oesophagus tumor"[Title/Abstract:~3] OR "oesophageal tumor"[Title/Abstract:~3] OR "esophagus tumors"[Title/Abstract:~3] OR "esophageal tumors"[Title/Abstract:~3] OR "oesophagus tumors"[Title/Abstract:~3] OR "oesophageal tumors"[Title/Abstract:~3] OR "esophagus tumour"[Title/Abstract:~3] OR "esophageal tumour"[Title/Abstract:~3] OR "oesophagus tumour"[Title/Abstract:~3] OR "oesophageal tumour"[Title/Abstract:~3] OR "esophagus tumours"[Title/Abstract:~3] OR "esophageal tumours"[Title/Abstract:~3] OR "oesophagus tumours"[Title/Abstract:~3] OR "oesophageal tumours"[Title/Abstract:~3] OR ("Precancerous Conditions"[MeSH] AND "Esophagus"[MeSH])) AND (wats[tw] OR transepitheli*[tw] OR "trans-epitheli*" [tw] OR "area sample"[Title/Abstract:~3] OR "area sampling"[Title/Abstract:~3])) OR ("trans-epithelial sample"[Title/Abstract:~3] OR "transepithelial sample"[Title/Abstract:~3] OR "trans-epithelial sampling"[Title/Abstract:~3] OR "transepithelial sampling"[Title/Abstract:~3] OR "trans-epithelial area"[Title/Abstract:~3] OR "transepithelial area"[Title/Abstract:~3] OR "trans-epithelial biopsy"[Title/Abstract:~3] OR "transepithelial biopsy"[Title/Abstract:~3] OR "trans-epithelial biopsies"[Title/Abstract:~3] OR "transepithelial biopsies"[Title/Abstract:~3] OR "WATS-3D"[tw] OR WATS3D[tw]) AND ("2021/01/01"[Date - Publication] : "3000"[Date - Publication])

Scopus

N = 41

((INDEXTERMS("Barrett Esophagus" OR "Esophagus Tumor" OR "Esophageal Neoplasms") OR TITLE-ABS-KEY(barrett* W/3 (esophag* OR oesophag*)) OR TITLE-ABS-KEY((esophag* OR oesophag*) W/3 dysplas*) OR TITLE-ABS-KEY((esophag* OR oesophag*) W/3 (neoplas* OR adenocarcinoma* OR cancer* OR tumor* OR tumour*)) OR ((INDEXTERMS("Precancerous Conditions" OR "Precancer")) AND (INDEXTERMS("Esophagus")))) AND (TITLE-ABS-KEY(wats OR transepitheli* OR "trans-epitheli*") OR TITLE-ABS-KEY(area W/3 sampl*)) OR (TITLE-ABS-KEY((transepitheli* OR "trans-epithelia*") W/3 (sampl* OR area OR biops*)) OR TITLE-ABS-KEY("WATS-3D" OR WATS3D)) AND PUBYEAR > 2020

Web of Science

N = 38

- TS=(barrett* NEAR/3 (esophag* OR oesophag*))
- TS=((esophag* OR oesophag*) NEAR/3 dysplas*)

- TS=((esophag* or oesophag*) NEAR/3 (neoplas* or adenocarcinoma* or cancer* or tumor* or tumour*))
- #3 OR #2 OR #1
- TS=(wats OR transepitheli* OR "trans-epithelia*")
- #5 AND #4
- TS=(area NEAR/3 sampl*)
- #7 AND #4
- #6 OR #8
- TS=((transepitheli* or "trans-epithelia*") NEAR/3 (sampl* or area or biops*))
- TS=("WATS-3D" or WATS3D)
- #9 OR #10 OR #11
- #12 AND PY=(2021-2025)

Supplementary Table 4. Search strategy for PICO 4 and 5 – The role of biomarkers (p53 and TissueCypher) in predicting progression in patients with Barrett’s esophagus undergoing surveillance endoscopy

Embase.com

N = 460

1. 'barrett esophagus'/exp
2. (barrett* NEAR/2 (esophag* OR oesophag* OR syndrome OR ulcer OR epithelium OR metaplasia*)):ti,ab,kw
3. ((columnar NEAR/4 esophagus):ti,ab,kw) OR endobrachyoesophage:ti,ab,kw OR endobrachyoesophagus:ti,ab,kw
4. #1 OR #2 OR #3
5. 'tumor marker'/exp
6. (tissuecypher OR p53 OR (('tissue system' OR 'tissue systems') NEAR/2 (pathology OR test*)) OR barregen OR 'tsp-9' OR esopredict OR tp53 OR 'dna methylation marker*' OR 'methylation based assay' OR 'methylation biomarker*'):ti,ab,kw
7. 'protein p53'/exp
8. (barregen OR tissuecypher):dn
9. #5 OR #6 OR #7 OR #8
10. #4 AND #9
11. 'animal'/exp NOT 'human'/exp
12. #10 NOT #11
13. editorial:it OR note:it OR 'case report':ti
14. #12 NOT #13
15. #14 AND [01-08-2017]/sd NOT [01-01-2025]/sd

PubMed

N = 177

((("Barrett Esophagus"[MeSH] OR (barrett*[tw] AND (esophag*[tw] OR oesophag*[tw] OR syndrome[tw] OR ulcer[tw] OR epithelium[tw] OR metaplasia*[tw])) OR ("columnar esophagus"[Title/Abstract:~4] OR endobrachyoesophagus[tw] OR endobrachyoesophage[tw])) AND ("Biomarkers, Tumor"[Mesh] OR tissuecypher[tw] OR P53[tw] OR "tissue systems test"[Title/Abstract:~2] OR "tissue systems tests"[Title/Abstract:~2] OR "tissue systems pathology"[Title/Abstract:~2] OR "TSP-9"[tw] OR BarreGEN[tw] OR Esopredict[tw] OR "DNA methylation marker*" [tw] OR "methylation based assay"[tw] OR "methylation biomarker*" [tw] OR TP53[tw])) NOT ("Animals"[MeSH] not "Humans"[MeSH]) NOT ("case report"[ti] OR "editorial"[pt]) AND ("2017/08/01"[Date - Entry] : "3000"[Date - Entry])

Ovid Medline

N = 157

1. exp Barrett Esophagus/
2. (barrett* adj2 (esophag* or oesophag* or syndrome or ulcer or epithelium or metaplasia*)).tw,kw.
3. ((columnar adj4 esophagus) or endobrachyoesophage or endobrachyoesophagus).tw,kw.
4. or/1-3
5. Biomarkers, Tumor/
6. (tissuecypher OR p53 OR ("tissue system" OR "tissue systems") adj2 (pathology OR test*)) OR barregen OR "tsp-9" OR esopredict OR tp53 OR "dna methylation marker*" OR "methylation based assay" OR "methylation biomarker*").tw,kw.
7. 5 or 6
8. 4 and 7
9. (editorial OR "case reports").pt
10. exp Animals/ not exp Humans/
11. or/9-10
12. 8 not 11
13. limit 12 to dt="20170801-20241231"

Cochrane Library

N = 26

1. MeSH descriptor: [Barrett Esophagus] explode all trees
2. (barrett* NEAR/2 (esophag* or oesophag* or syndrome or ulcer or epithelium or metaplasia*)):ti,ab,kw
3. ((columnar NEAR/4 esophagus) or endobrachyoesophage or endobrachyoesophagus):ti,ab,kw
4. {OR #1-#3}
5. MeSH descriptor: [Biomarkers, Tumor] explode all trees
6. ((tissuecypher OR p53 OR ("tissue system" OR "tissue systems") NEAR/2 (pathology OR test*)) OR barregen OR "tsp-9" OR esopredict OR tp53 OR ("dna methylation" NEXT marker*) OR "methylation based assay" OR (methylation NEXT biomarker*)):ti,ab,kw
7. #5 OR #6
8. #4 AND #7
9. MeSH descriptor: [Animals] explode all trees
10. MeSH descriptor: [Humans] explode all trees
11. #9 NOT #10
12. #8 NOT #11
13. Limit: 01/08/2017-12/09/2024

Web of Science Core Collection

N = 191

1. TS=(barrett* NEAR/2 (esophag* or oesophag* or syndrome or ulcer or epithelium or metaplasia*))
2. TS=((columnar NEAR/4 esophagus) or endobrachyoesophage or endobrachyoesophagus)
3. #2 OR #1
4. TS=(tissuecypher OR p53 OR ("tissue system" OR "tissue systems") NEAR/2 (pathology OR test*)) OR barregen OR "tsp-9" OR esopredict OR tp53 OR "dna methylation marker*" OR "methylation based assay" OR "methylation biomarker*")
5. #4 AND #3
6. #5 AND LD=(2017-08-01/2024-09-12)

Supplementary Table 5. Search strategy for PICO 6 and 7 - The role of chemopreventive strategies in the prevention of neoplastic progression in patients with Barrett's esophagus

Embase.com

N = 925

('Barrett esophagus'/exp OR 'esophagus tumor'/exp OR ((esophag* OR oesophag*) NEAR/3(tumor* OR tumour* OR 'pre-malignan*' OR premalignant* OR malignan* OR neoplasm* OR neoplasia* OR cancer* OR dysplas* OR carcinoma* OR adenocarcinoma* OR precancer* OR 'pre-cancer' OR metaplas* OR barrett*)):ab,ti OR (barrett* NEXT/1 (syndrome OR ulcer* OR epithelium)):ab,ti OR (columnar* AND (esophagus OR oesophagus)):ab,ti OR endobrachyoesophag*:ab,ti) AND ('proton pump inhibitor'/exp OR ((PPI OR PPIs) NOT ("protein-protein" NEXT/1 interaction)):ab,ti OR ("proton pump" OR "proton-pump") NEXT/1 (inhibitor OR inhibitors)):ab,ti OR 'omeprazole'/exp OR 'esomeprazole'/exp OR 'lansoprazole'/exp OR 'dexlansoprazole'/exp OR 'rabeprazole'/exp OR 'pantoprazole'/exp OR (omeprazole OR prilosec OR esomeprazole OR nexium OR lansoprazole OR prevacid OR zoton OR dexlansoprazole OR dexilant OR kapidex OR rabeprazole OR aciphex OR pantoprazole OR protonix):ab,ti) AND (('randomized controlled trial'/exp OR 'controlled clinical trial'/de OR random*:ti,ab,tt OR 'randomization'/de OR 'intermethod comparison'/de OR placebo:ti,ab,tt OR compare:ti,tt OR compared:ti,tt OR comparison:ti,tt OR ((evaluated:ab OR evaluate:ab OR evaluating:ab OR assessed:ab OR assess:ab) AND (compare:ab OR compared:ab OR comparing:ab OR comparison:ab)) OR ((open NEXT/1 label):ti,ab,tt) OR (((double OR single OR doubly OR singly) NEXT/1 (blind OR blinded OR blindly)):ti,ab,tt) OR 'double blind procedure'/de OR ((parallel NEXT/1 group*):ti,ab,tt) OR crossover:ti,ab,tt OR 'cross over':ti,ab,tt OR (((assign* OR match OR matched OR allocation) NEAR/6 (alternate OR group OR groups OR intervention OR interventions OR patient OR patients OR subject OR subjects OR participant OR participants)):ti,ab,tt) OR assigned:ti,ab,tt OR allocated:ti,ab,tt OR ((controlled NEAR/8 (study OR design OR trial)):ti,ab,tt) OR volunteer:ti,ab,tt OR volunteers:ti,ab,tt OR 'human experiment'/de OR trial:ti,tt) NOT (((random* NEXT/1 sampl* NEAR/8 ('cross section*' OR questionnaire* OR survey OR surveys OR database OR databases)):ti,ab,tt) NOT ('comparative study'/de OR 'controlled study'/de OR 'randomised controlled':ti,ab,tt OR 'randomized controlled':ti,ab,tt OR 'randomly assigned':ti,ab,tt) OR 'cross-sectional study'/de NOT ('randomized controlled trial'/exp OR 'controlled clinical study'/de OR 'controlled study'/de OR 'randomised controlled':ti,ab,tt OR 'randomized controlled':ti,ab,tt OR 'control group':ti,ab,tt OR 'control groups':ti,ab,tt) OR (('case control*':ti,ab,tt AND random*:ti,ab,tt) NOT ('randomised controlled':ti,ab,tt OR 'randomized controlled':ti,ab,tt)) OR ('systematic review':ti,tt NOT (trial:ti,tt OR study:ti,tt)) OR (nonrandom*:ti,ab,tt NOT random*:ti,ab,tt) OR 'random field*':ti,ab,tt OR ('random cluster' NEAR/4 sampl*):ti,ab,tt OR (review:ab AND review:it NOT trial:ti,tt) OR ('we searched':ab AND (review:ti,tt OR review:it)) OR 'update review':ab OR (databases NEAR/5 searched):ab OR ((rat:ti,tt OR rats:ti,tt OR mouse:ti,tt OR mice:ti,tt OR swine:ti,tt OR porcine:ti,tt OR murine:ti,tt OR sheep:ti,tt OR lambs:ti,tt OR pigs:ti,tt OR piglets:ti,tt OR rabbit:ti,tt OR rabbits:ti,tt OR cat:ti,tt OR cats:ti,tt OR dog:ti,tt OR dogs:ti,tt OR cattle:ti,tt OR bovine:ti,tt OR monkey:ti,tt OR monkeys:ti,tt OR trout:ti,tt OR marmoset*:ti,tt) AND 'animal experiment'/de) OR ('animal experiment'/de NOT ('human experiment'/de OR 'human'/de)))) NOT (('child'/exp OR 'infant'/exp OR 'adolescent'/exp) NOT 'adult'/exp)

Cochrane Library

N = 222

25. MeSH descriptor: [Barrett Esophagus] explode all trees
26. MeSH descriptor: [Esophageal Neoplasms] explode all trees
27. (((esophag* OR oesophag*) NEAR/3 (tumor* OR tumour* OR (pre NEXT malignan*) OR premalignant* OR malignan* OR neoplasm* OR neoplasia* OR cancer* OR dysplas* OR carcinoma* OR adenocarcinoma* OR precancer* OR (pre NEXT cancer*) OR metaplas* OR barrett*)):ti,ab,kw
28. (((barrett* NEXT (syndrome OR ulcer* OR epithelium))):ti,ab,kw
29. (((columnar* AND (esophagus OR oesophagus))):ti,ab,kw
30. (endobrachyoesophag*):ti,ab,kw
31. {OR #1-#6}
32. MeSH descriptor: [Proton Pump Inhibitors] explode all trees
33. ((PPI OR PPIs) NOT ("protein-protein" NEXT interaction)):ti,ab,kw
34. (("proton pump" OR "proton-pump") NEAR/1 (inhibitor OR inhibitors)):ti,ab,kw
35. MeSH descriptor: [Omeprazole] explode all trees
36. (omeprazole OR prilosec):ti,ab,kw

37. MeSH descriptor: [Esomeprazole] explode all trees
38. (esomeprazole or nexium):ti,ab,kw
39. MeSH descriptor: [Lansoprazole] explode all trees
40. (lansoprazole or prevacid or zoton):ti,ab,kw
41. MeSH descriptor: [Dexlansoprazole] explode all trees
42. (dexlansoprazole or dexilant or kapidex):ti,ab,kw
43. MeSH descriptor: [Rabeprazole] explode all trees
44. (rabeprazole or aciphex):ti,ab,kw
45. MeSH descriptor: [Pantoprazole] explode all trees
46. (pantoprazole or protonix):ti,ab,kw
47. {OR #8-#22}
48. #7 AND #23
49. MeSH descriptor: [Animals] explode all trees
50. MeSH descriptor: [Humans] explode all trees
51. #25 NOT #26
52. #24 NOT #28
53. MeSH descriptor: [Child] explode all trees
54. MeSH descriptor: [Infant] explode all trees
55. MeSH descriptor: [Adolescent] explode all trees
56. {OR #29-#31}
57. MeSH descriptor: [Adult] explode all trees
58. #32 NOT #33
59. #28 NOT #34

Ovid Medline

N = 736

1. exp Barrett Esophagus/
2. exp Esophageal Neoplasms/
3. ((esophag* or oesophag*) adj3 (tumor* or tumour* or (pre adj malignan*) or premalignant* or malignan* or neoplasm* or neoplasia* or cancer* or dysplas* or carcinoma* or adenocarcinoma* or precancer* or (pre adj cancer*) or metaplas* or barrett*)).tw,kw.
4. (barrett* adj (syndrome or ulcer* or epithelium)).tw,kw.
5. (columnar* and (esophagus or oesophagus)).tw,kw.
6. endobrachyoesophag*.tw,kw.
7. or/1-6
8. exp Proton Pump Inhibitors/
9. ((PPI or PPIs) not "protein-protein interaction*").tw,kw.
10. (("proton pump" or "proton-pump") adj1 (inhibitor or inhibitors)).tw,kw.
11. exp Omeprazole/
12. (omeprazole or prilosec).tw,kw.
13. exp Esomeprazole/
14. (esomeprazole or nexium).tw,kw.
15. exp Lansoprazole/
16. (lansoprazole or prevacid or zoton).tw,kw.
17. exp Dexlansoprazole/
18. (dexlansoprazole or dexilant or kapidex).tw,kw.
19. exp Rabeprazole/
20. (rabeprazole or aciphex).tw,kw.
21. exp Pantoprazole/
22. (pantoprazole or protonix).tw,kw.
23. or/8-22
24. 7 and 23
25. exp Animals/ not exp Humans/

26. 24 not 25
27. (exp Child/ or exp Infant/ or exp Adolescent/) not exp Adult/
28. 26 not 27
29. remove duplicates from 28
30. exp randomized controlled trial/
31. controlled clinical trial.pt.
32. (randomized or randomised).ab.
33. placebo.ab.
34. drug therapy.fs.
35. randomly.ab.
36. trial.ab.
37. groups.ab.
38. or/30-37
39. 29 and 38

PubMed

N = 974

("Barrett Esophagus"[MeSH] OR "Esophageal Neoplasms"[MeSH] OR ((esophag*[tw] OR oesophag*[tw]) AND (tumor*[tw] OR tumour*[tw] OR pre-malignan*[tw] OR premalignant*[tw] OR malignan*[tw] OR neoplasm*[tw] OR neoplasia*[tw] OR cancer*[tw] OR dysplas*[tw] OR carcinoma*[tw] OR adenocarcinoma*[tw] OR precancer*[tw] OR pre-cancer*[tw] OR metaplas*[tw] OR barrett*[tw])) OR (barrett*[tw] AND (syndrome[tw] OR ulcer*[tw] OR epithelium[tw])) OR (columnar*[tw] AND (esophagus[tw] OR oesophagus[tw])) OR endobrachyoesophag*[tw]) AND ("Proton Pump Inhibitors" [Pharmacological Action] OR "Proton Pump Inhibitors"[Mesh] OR "Omeprazole"[Mesh] OR "Esomeprazole"[Mesh] OR "Lansoprazole"[Mesh] OR "Dexlansoprazole"[Mesh] OR "Rabeprazole"[Mesh] OR "Pantoprazole"[Mesh] OR omeprazole[tw] or prilosec[tw] OR esomeprazole[tw] or nexium[tw] OR lansoprazole[tw] or prevacid[tw] or zoton[tw] OR dexlansoprazole[tw] or dexilant[tw] or kapidex[tw] OR rabeprazole[tw] or aciphex[tw] OR pantoprazole[tw] or protonix[tw] OR ((PPI[tw] or PPIs[tw]) not "protein-protein interaction*" [tw]) OR (("proton pump"[tw] or "proton-pump"[tw]) AND (inhibitor[tw] or inhibitors[tw]))) AND ((randomized controlled trial[pt] OR controlled clinical trial[pt] OR randomized[tiab] OR randomised[tiab] OR placebo[tiab] OR drug therapy[sh] OR randomly[tiab] OR groups[tiab] OR trial[tiab]) NOT (animals[mh] NOT humans[mh]))

Supplementary Table 6. Search strategy for PICO 8 – The role of endoscopic surveillance in patients with columnar lined esophagus <1 cm with intestinal metaplasia without neoplasia

Ovid Medline

N = 591

1. barrett esophagus/
2. (barrett* adj2 (esophag* or oesophag* OR epithelium OR metaplasia* OR syndrome)).mp
3. 1 or 2
4. 3 and ((cancer* or dysplas* or adenocarcinoma* or carcinom*).mp. or esophageal neoplasms/ or (exp Neoplasms/ and exp Esophagus/))
5. 4 and ((screen* or surveil* or monitor* or predispos* or progress* or detect*).mp or exp Diagnosis/ OR diagnosis.fs or exp Mass Screening/)
6. 5 and ((follow* or prognos* or risk* or outcome*).mp. or exp Treatment Outcomes/ or exp Prognosis/)
7. 6 and ((week* or month* or annual* or year* or time or timing).mp. or exp Time Factors/)
8. 7 and (length OR "irregular z line?" OR "mm" OR "cm" OR short OR "ultra-short" OR "ultra short").mp.
9. review.pt. and (medline or medlars or embase or pubmed or cochrane or (scisearch or psychinfo or psycinfo) or (psychlit or psyclit) or cinahl or ((hand adj2 search\$) or (manual\$ adj2 search\$)) or (electronic database\$ or bibliographic database\$ or computeri?ed database\$ or online database\$) or (pooling or pooled or mantel haenszel) or (peto or dersimonian or der simonian or fixed effect)).tw,sh.
10. exp "Systematic Review"/ or meta-analysis.pt. or meta-analysis.sh. or (meta-analys\$ or meta analys\$ or metaanalys\$).tw,sh. or (systematic\$ adj5 review\$).tw,sh. or (systematic\$ adj5 overview\$).tw,sh. or (quantitativ\$ adj5 review\$).tw,sh. or (quantitativ\$ adj5 overview\$).tw,sh. or (quantitativ\$ adj5 synthesis\$).tw,sh. or (methodologic\$ adj5 review\$).tw,sh. or (methodologic\$ adj5 overview\$).tw,sh. or (integrative research review\$ or research integration).tw.
11. "randomized controlled trial".pt. or (random\$ or placebo\$ or single blind\$ or double blind\$ or triple blind\$).ti,ab.
12. exp cohort studies/ or cohort\$.tw. or controlled clinical trial.pt. or exp case-control studies/ or (case\$ and series).tw.
13. epidemiologic methods/
14. limit 13 to yr="1966-1989"
15. (clinical study or clinical trial, all or clinical trial, phase i or clinical trial, phase ii or clinical trial, phase iii or clinical trial, phase iv or clinical trial or comparative study or controlled clinical trial or evaluation studies or meta analysis or multicenter study or observational study or pragmatic clinical trial or randomized controlled trial or systematic reviews).pt.
16. or/9-12,14-15
17. 8 and 16
18. (exp Child/ or exp Infant/ or exp Adolescent/) not exp Adult/
19. 17 not 18
20. (animals not humans).sh
21. 19 not 20
22. (retraction of publication or retracted publication).pt.
23. 21 not 22
24. Remove duplicates from 23

Embase.com

N = 448

1. 'barrett esophagus'/exp OR ((barrett* NEAR/2 (esophag* OR oesophag* OR epithelium OR metaplasia* OR syndrome)):ti,ab,kw)
2. 'neoplasm'/exp AND 'esophagus'/exp OR 'esophagus cancer'/exp OR cancer*:ti,ab,kw OR dysplas*:ti,ab,kw OR adenocarcinoma*:ti,ab,kw OR carcinom*:ti,ab,kw
3. 'monitoring'/exp OR 'diagnosis'/exp OR 'mass screening'/exp OR screen*:ti,ab,kw OR surveil*:ti,ab,kw OR monitor*:ti,ab,kw OR predispos*:ti,ab,kw OR progress*:ti,ab,kw OR detect*:ti,ab,kw
4. 'treatment outcome'/exp OR 'prognosis'/exp OR follow*:ti,ab,kw OR prognos*:ti,ab,kw OR risk*:ti,ab,kw OR outcome*:ti,ab,kw

5. 'time factor'/exp OR week*:ti,ab,kw OR month*:ti,ab,kw OR annual*:ti,ab,kw OR year*:ti,ab,kw OR time:ti,ab,kw OR timing:ti,ab,kw
6. length:ti,ab,kw OR 'irregular z line?':ti,ab,kw OR 'mm':ti,ab,kw OR 'cm':ti,ab,kw OR short:ti,ab,kw OR 'ultra-short':ti,ab,kw OR 'ultra short':ti,ab,kw
7. #1 AND #2 AND #3 AND #4 AND #5 AND #6
8. ('randomized controlled trial'/exp OR 'controlled clinical trial'/de OR random*:ti,ab,tt OR 'randomization'/de OR 'intermethod comparison'/de OR placebo:ti,ab,tt OR compare:ti,tt OR compared:ti,tt OR comparison:ti,tt OR ((evaluated:ab OR evaluate:ab OR evaluating:ab OR assessed:ab OR assess:ab) AND (compare:ab OR compared:ab OR comparing:ab OR comparison:ab)) OR ((open NEXT/1 label):ti,ab,tt) OR (((double OR single OR doubly OR singly) NEXT/1 (blind OR blinded OR blindly)):ti,ab,tt) OR 'double blind procedure'/de OR ((parallel NEXT/1 group*):ti,ab,tt) OR crossover:ti,ab,tt OR 'cross over':ti,ab,tt OR (((assign* OR match OR matched OR allocation) NEAR/6 (alternate OR group OR groups OR intervention OR interventions OR patient OR patients OR subject OR subjects OR participant OR participants)):ti,ab,tt) OR assigned:ti,ab,tt OR allocated:ti,ab,tt OR ((controlled NEAR/8 (study OR design OR trial)):ti,ab,tt) OR volunteer:ti,ab,tt OR volunteers:ti,ab,tt OR 'human experiment'/de OR trial:ti,tt) NOT (((('random* NEXT/1 sampl* NEAR/8 ('cross section*' OR questionnaire* OR survey OR surveys OR database OR databases)):ti,ab,tt) NOT ('comparative study'/de OR 'controlled study'/de OR 'randomised controlled':ti,ab,tt OR 'randomized controlled':ti,ab,tt OR 'randomly assigned':ti,ab,tt) OR 'cross-sectional study'/de) NOT ('randomized controlled trial'/exp OR 'controlled clinical study'/de OR 'controlled study'/de OR 'randomised controlled':ti,ab,tt OR 'randomized controlled':ti,ab,tt OR 'control group':ti,ab,tt OR 'control groups':ti,ab,tt) OR ('case control*':ti,ab,tt AND random*:ti,ab,tt NOT ('randomised controlled':ti,ab,tt OR 'randomized controlled':ti,ab,tt)) OR ('systematic review':ti,tt NOT (trial:ti,tt OR study:ti,tt)) OR (nonrandom*:ti,ab,tt NOT random*:ti,ab,tt) OR 'random field*':ti,ab,tt OR (('random cluster' NEAR/4 sampl*):ti,ab,tt) OR (review:ab AND review:it NOT trial:ti,tt) OR ('we searched':ab AND (review:ti,tt OR review:it)) OR 'update review':ab OR ((databases NEAR/5 searched):ab) OR ((rat:ti,tt OR rats:ti,tt OR mouse:ti,tt OR mice:ti,tt OR swine:ti,tt OR porcine:ti,tt OR murine:ti,tt OR sheep:ti,tt OR lambs:ti,tt OR pigs:ti,tt OR piglets:ti,tt OR rabbit:ti,tt OR rabbits:ti,tt OR cat:ti,tt OR cats:ti,tt OR dog:ti,tt OR dogs:ti,tt OR cattle:ti,tt OR bovine:ti,tt OR monkey:ti,tt OR monkeys:ti,tt OR trout:ti,tt OR marmoset*:ti,tt) AND 'animal experiment'/de) OR ('animal experiment'/de NOT ('human experiment'/de OR 'human'/de)))
9. #7 AND #8
10. #9 NOT [medline]/lim
11. ('child'/exp OR 'infant'/exp OR 'adolescent'/exp) NOT 'adult'/exp
12. #10 NOT #11
13. 'animals'/exp NOT 'humans'/exp
14. #12 NOT #13
15. 'retraction'/exp OR 'retraction notice'/exp
16. #14 NOT #15

Cochrane Library

N = 131

1. MeSH descriptor: [Barrett Esophagus] explode all trees
2. ((barrett* NEAR/2 (esophag* or oesophag* OR epithelium OR metaplasia* OR syndrome))):ti,ab,kw
3. #1 OR #2
4. (cancer* or dysplas* or adenocarcinoma* or carcinom*):ti,ab,kw
5. MeSH descriptor: [Esophageal Neoplasms] explode all trees
6. MeSH descriptor: [Neoplasms] explode all trees
7. MeSH descriptor: [Esophagus] explode all trees
8. #4 OR #5 OR (#6 AND #7)
9. ((screen* or surveil* or monitor* or predispos* or progress* or detect*)):ti,ab,kw
10. MeSH descriptor: [Diagnosis] explode all trees
11. MeSH descriptor: [Mass Screening] explode all trees
12. MeSH descriptor: [] explode all trees and with qualifier(s): [diagnosis - DI]
13. #9 OR #10 OR #11 OR #12
14. (follow* or prognos* or risk* or outcome*):ti,ab,kw

15. MeSH descriptor: [Treatment Outcome] explode all trees
16. MeSH descriptor: [Prognosis] explode all trees
17. #14 OR #15 OR #16
18. (week* or month* or annual* or year* or time or timing):ti,ab,kw
19. MeSH descriptor: [Time Factors] explode all trees
20. #18 OR #19
21. (length OR "irregular z line" OR "mm" OR "cm" OR short OR "ultra-short" OR "ultra short"):ti,ab,kw
22. #3 AND #8 AND #13 AND #17 AND #20 AND #21
23. MeSH descriptor: [Child] explode all trees
24. MeSH descriptor: [Infant] explode all trees
25. MeSH descriptor: [Adolescent] explode all trees
26. #23 OR #24 OR #25
27. MeSH descriptor: [Adult] explode all trees
28. #26 NOT #27
29. #22 NOT #28
30. MeSH descriptor: [Animals] explode all trees
31. MeSH descriptor: [Humans] explode all trees
32. #30 NOT #31
33. #29 NOT #32

Supplementary Table 7. Evidence to decision making table for PICO 1: What is the role of endoscopic surveillance versus no surveillance in patients with non-dysplastic Barrett's esophagus

QUESTION

Should surveillance vs. no surveillance be used for individuals with NDBE?	
POPULATION:	Patients with NDBE
INTERVENTION:	surveillance

ASSESSMENT

Problem		
Is the problem a priority?		
JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
☐ No ☐ Probably no ☐ Probably yes ☒ Yes ☐ Varies ☐ Don't know		
Desirable Effects		
How substantial are the desirable anticipated effects?		
JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
☐ Trivial ☒ Small ☐ Moderate ☐ Large ☐ Varies ☐ Don't know		Between small and moderate, 80% of the guideline panel voted
Undesirable Effects		
How substantial are the undesirable anticipated effects?		
JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
☒ Trivial ☐ Small ☐ Moderate ☐ Large ☐ Varies ☐ Don't know		
Certainty of evidence		
What is the overall certainty of the evidence of effects?		
JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
☐ Very low ☒ Low ☐ Moderate ☐ High ☐ No included studies		

Values

Is there important uncertainty about or variability in how much people value the main outcomes?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Important uncertainty or variability ● Possibly important uncertainty or variability ○ Probably no important uncertainty or variability ○ No important uncertainty or variability		

Balance of effects

Does the balance between desirable and undesirable effects favor the intervention or the comparison?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Favors the comparison ○ Probably favors the comparison ○ Does not favor either the intervention or the comparison ● Probably favors the intervention ○ Favors the intervention ○ Varies ○ Don't know		

Resources required

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Large costs ● Moderate costs ○ Negligible costs and savings ○ Moderate savings ○ Large savings ○ Varies ○ Don't know		

Certainty of evidence of required resources

What is the certainty of the evidence of resource requirements (costs)?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Very low ○ Low ○ Moderate ○ High ● No included studies		

Cost effectiveness

Does the cost-effectiveness of the intervention favor the intervention or the comparison?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Favors the comparison ○ Probably favors the comparison ○ Does not favor either the intervention or the comparison ● Probably favors the intervention ○ Favors the intervention ○ Varies ○ No included studies		

Equity

What would be the impact on health equity?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Reduced ○ Probably reduced ○ Probably no impact ○ Probably increased ○ Increased ○ Varies ● Don't know		

Acceptability

Is the intervention acceptable to key stakeholders?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ No ○ Probably no ○ Probably yes ● Yes ○ Varies ○ Don't know		

Feasibility

Is the intervention feasible to implement?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ No ○ Probably no ○ Probably yes ● Yes ○ Varies ○ Don't know		

Supplementary Table 8. Evidence to decision making table for PICO 2: Should adult patients with Barrett’s esophagus undergo screening or surveillance endoscopy using high-definition white-light endoscopy plus chromoendoscopy versus white-light endoscopy alone?

QUESTION

Should Chromoendoscopy (standard or virtual) plus high-definition white light endoscopy vs. White light endoscopy be used for BE patients undergoing surveillance?

POPULATION: BE patients undergoing surveillance

INTERVENTION: Chromoendoscopy (standard or virtual) plus high-definition white light endoscopy

COMPARISON: White light endoscopy

ASSESSMENT

Problem

Is the problem a priority?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ No ○ Probably no ○ Probably yes ● Yes ○ Varies ○ Don't know		

Desirable Effects

How substantial are the desirable anticipated effects?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Trivial ○ Small ● Moderate ○ Large ○ Varies ○ Don't know		small to moderate

Undesirable Effects

How substantial are the undesirable anticipated effects?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
● Trivial ○ Small ○ Moderate ○ Large ○ Varies ○ Don't know		additional time spent additional equipments

Certainty of evidence

What is the overall certainty of the evidence of effects?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Very low ○ Low ● Moderate ○ High ○ No included studies		

Values

Is there important uncertainty about or variability in how much people value the main outcomes?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Important uncertainty or variability ○ Possibly important uncertainty or variability ○ Probably no important uncertainty or variability ● No important uncertainty or variability		

Balance of effects

Does the balance between desirable and undesirable effects favor the intervention or the comparison?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Favors the comparison ○ Probably favors the comparison ○ Does not favor either the intervention or the comparison ○ Probably favors the intervention ● Favors the intervention ○ Varies ○ Don't know		

Resources required

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Large costs ○ Moderate costs ● Negligible costs and savings ○ Moderate savings ○ Large savings ○ Varies ○ Don't know		

Certainty of evidence of required resources

What is the certainty of the evidence of resource requirements (costs)?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Very low ○ Low ○ Moderate ○ High ● No included studies		

Cost effectiveness

Does the cost-effectiveness of the intervention favor the intervention or the comparison?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Favors the comparison ○ Probably favors the comparison ○ Does not favor either the intervention or the comparison ○ Probably favors the intervention ○ Favors the intervention ○ Varies ● No included studies		

Equity

What would be the impact on health equity?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Reduced ○ Probably reduced ● Probably no impact ○ Probably increased ○ Increased ○ Varies ○ Don't know		

Acceptability

Is the intervention acceptable to key interest-holders?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ No ○ Probably no ○ Probably yes ● Yes ○ Varies ○ Don't know		

Feasibility

Is the intervention feasible to implement?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ No ○ Probably no ○ Probably yes ● Yes ○ Varies ○ Don't know		

Supplementary Table 9. Evidence to decision making table for PICO 3: Role of adjunctive sampling techniques (WATS-3D) in BE patients undergoing screening or surveillance – neoplasia detection rates between WATS-3D plus structured biopsy protocol versus structured biopsy protocol alone

QUESTION

Should WATS-3D + FB vs. FB be used for adults with BE ?	
POPULATION:	Adults with BE
INTERVENTION:	WATS-3D plus structured biopsy protocol
COMPARISON:	structured biopsy protocol alone

ASSESSMENT

Problem		
Is the problem a priority?		
JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
☐ No ☐ Probably no ☐ Probably yes ☒ Yes ☐ Varies ☐ Don't know		
Desirable Effects		
How substantial are the desirable anticipated effects?		
JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
☒ Trivial ☐ Small ☐ Moderate ☐ Large ☐ Varies ☐ Don't know		
Undesirable Effects		
How substantial are the undesirable anticipated effects?		
JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
☐ Trivial ☐ Small ☒ Moderate ☐ Large ☐ Varies ☐ Don't know		small to moderate

Certainty of evidence

What is the overall certainty of the evidence of effects?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
● Very low ○ Low ○ Moderate ○ High ○ No included studies		

Values

Is there important uncertainty about or variability in how much people value the main outcomes?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Important uncertainty or variability ● Possibly important uncertainty or variability ○ Probably no important uncertainty or variability ○ No important uncertainty or variability		

Balance of effects

Does the balance between desirable and undesirable effects favor the intervention or the comparison?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Favors the comparison ● Probably favors the comparison ○ Does not favor either the intervention or the comparison ○ Probably favors the intervention ○ Favors the intervention ○ Varies ○ Don't know		

Resources required

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Large costs ● Moderate costs ○ Negligible costs and savings ○ Moderate savings ○ Large savings ○ Varies ○ Don't know		

Certainty of evidence of required resources

What is the certainty of the evidence of resource requirements (costs)?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Very low ○ Low ○ Moderate ○ High ● No included studies		

Cost effectiveness

Does the cost-effectiveness of the intervention favor the intervention or the comparison?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Favors the comparison ○ Probably favors the comparison ○ Does not favor either the intervention or the comparison ○ Probably favors the intervention ○ Favors the intervention ○ Varies ● No included studies		in discusson maybe cost -effective for GERD control

Equity

What would be the impact on health equity?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Reduced ● Probably reduced ○ Probably no impact ○ Probably increased ○ Increased ○ Varies ○ Don't know		

Acceptability

Is the intervention acceptable to key interest-holders?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ No ○ Probably no ● Probably yes ○ Yes ○ Varies ○ Don't know		

Feasibility

Is the intervention feasible to implement?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ No ○ Probably no ● Probably yes ○ Yes ○ Varies ○ Don't know		

Supplementary Table 10. Evidence to decision making table for PICO 5: Role of chemopreventive strategies – proton pump inhibitor therapy to prevent neoplastic progression in patients with Barrett’s esophagus

QUESTION

Should Acid suppression vs. no treatment be used for Barrett's esophagus ?	
POPULATION:	Barrett's esophagus
INTERVENTION:	Acid suppression
COMPARISON:	no treatment

ASSESSMENT

Problem		
Is the problem a priority?		
JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
☐ No ☐ Probably no ☐ Probably yes ☒ Yes ☐ Varies ☐ Don't know		
Desirable Effects		
How substantial are the desirable anticipated effects?		
JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
☐ Trivial ☐ Small ☒ Moderate ☐ Large ☐ Varies ☐ Don't know		
Undesirable Effects		
How substantial are the undesirable anticipated effects?		
JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
☒ Trivial ☐ Small ☐ Moderate ☐ Large ☐ Varies ☐ Don't know		

Certainty of evidence

What is the overall certainty of the evidence of effects?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Very low ● Low ○ Moderate ○ High ○ No included studies		

Values

Is there important uncertainty about or variability in how much people value the main outcomes?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Important uncertainty or variability ○ Possibly important uncertainty or variability ● Probably no important uncertainty or variability ○ No important uncertainty or variability		

Balance of effects

Does the balance between desirable and undesirable effects favor the intervention or the comparison?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Favors the comparison ○ Probably favors the comparison ○ Does not favor either the intervention or the comparison ● Probably favors the intervention ○ Favors the intervention ○ Varies ○ Don't know		

Resources required

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Large costs ○ Moderate costs ● Negligible costs and savings ○ Moderate savings ○ Large savings ○ Varies ○ Don't know		small

Certainty of evidence of required resources

What is the certainty of the evidence of resource requirements (costs)?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Very low ○ Low ○ Moderate ● High ○ No included studies		

Cost effectiveness

Does the cost-effectiveness of the intervention favor the intervention or the comparison?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Favors the comparison ○ Probably favors the comparison ○ Does not favor either the intervention or the comparison ○ Probably favors the intervention ○ Favors the intervention ○ Varies ● No included studies		

Equity

What would be the impact on health equity?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ Reduced ○ Probably reduced ● Probably no impact ○ Probably increased ○ Increased ○ Varies ○ Don't know		

Acceptability

Is the intervention acceptable to key interest-holders?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ No ○ Probably no ○ Probably yes ● Yes ○ Varies ○ Don't know		

Feasibility

Is the intervention feasible to implement?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
○ No ○ Probably no ○ Probably yes ● Yes ○ Varies ○ Don't know		

Supplementary Table 11. Evidence to decision making table for PICO 4: Role of p53 assessment in patients with Barrett’s esophagus undergoing endoscopic surveillance

QUESTION

What is the role of p53 assessment in patients with Barrett’s esophagus undergoing endoscopic surveillance? Is p53 assessment superior to the grade of dysplasia in predicting progression in patients with Barrett’s esophagus?	
POPULATION:	Patients with NDBE, LGD and IND
INTERVENTION:	p53 staining in addition to structured biopsy

ASSESSMENT

Problem Is the problem a priority?		
JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
☐ No ☐ Probably no ☐ Probably yes ☒ Yes ☐ Varies ☐ Don't know		
Test accuracy How accurate is the test?		
JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
☒ Very inaccurate ☐ Inaccurate ☐ Accurate ☐ Very accurate ☐ Varies ☐ Don't know		Ranging from very inaccurate to inaccurate
Desirable Effects How substantial are the desirable anticipated effects?		
JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
☐ Trivial ☐ Small ☐ Moderate ☐ Large ☐ Varies ☒ Don't know		NDBE Given the very inaccurate test performance, the course of action based on results are unknown: - if the positive test would require endoscopic eradication therapy or shorten surveillance interval - if a negative results would either increase surveillance interval to 5 years or stop surveillance IND and LGD - If a positive test may result in endoscopic eradication therapy or further shortening surveillance interval - If a negative test would result in increasing surveillance interval

Undesirable Effects

How substantial are the undesirable anticipated effects?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
☐ Trivial ☐ Small ☐ Moderate ☐ Large ☐ Varies ☒ Don't know		NDBE 3/1000 will stop surveillance and will have progression 149 will have additional EGDs Impact on patient anxiety and quality of life related to a FP test False re-assurance on a FN test LGD 2/1000 would be miss diagnosed as negatives and will not get endoscopic eradication therapy or scheduled surveillance 315/1000 may get recommended endoscopic eradication therapy when surveillance would have sufficed

Certainty of the evidence of test accuracy

What is the overall certainty of the evidence of test accuracy?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
☒ Very low ☐ Low ☐ Moderate ☐ High ☐ No included studies		

Certainty of the evidence of test's effects

What is the overall certainty of the evidence for any critical or important direct benefits, adverse effects or burden of the test?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
☐ Very low ☒ Low ☐ Moderate ☐ High ☐ No included studies		

Certainty of the evidence of management's effects

What is the overall certainty of the evidence of effects of the management that is guided by the test results?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
☒ Very low ☐ Low ☐ Moderate ☐ High ☐ No included studies		

Certainty of the evidence of test result/management

How certain is the link between test results and management decisions?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
☒ Very low ☐ Low ☐ Moderate ☐ High ☐ No included studies		

Certainty of effects

What is the overall certainty of the evidence of effects of the test?

JUDGEMENT

RESEARCH EVIDENCE

ADDITIONAL CONSIDERATIONS

- Very low
- Low
- Moderate
- High
- No included studies

Values

Is there important uncertainty about or variability in how much people value the main outcomes?

JUDGEMENT

RESEARCH EVIDENCE

ADDITIONAL CONSIDERATIONS

- Important uncertainty or variability
- Possibly important uncertainty or variability
- Probably no important uncertainty or variability
- No important uncertainty or variability

Balance of effects

Does the balance between desirable and undesirable effects favor the intervention or the comparison?

JUDGEMENT

RESEARCH EVIDENCE

ADDITIONAL CONSIDERATIONS

- Favors the comparison
- Probably favors the comparison
- Does not favor either the intervention or the comparison
- Probably favors the intervention
- Favors the intervention
- Varies
- Don't know

Resources required

JUDGEMENT

RESEARCH EVIDENCE

ADDITIONAL CONSIDERATIONS

- Large costs
- Moderate costs
- Negligible costs and savings
- Moderate savings
- Large savings
- Varies
- Don't know

test cost is \$500-\$1000 per test

Certainty of evidence of required resources

What is the certainty of the evidence of resource requirements (costs)?

JUDGEMENT

RESEARCH EVIDENCE

ADDITIONAL CONSIDERATIONS

- Very low
- Low
- Moderate
- High
- No included studies

Cost effectiveness

Does the cost-effectiveness of the intervention favor the intervention or the comparison?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
☐ Favors the comparison ☐ Probably favors the comparison ☐ Does not favor either the intervention or the comparison ☐ Probably favors the intervention ☐ Favors the intervention ☐ Varies ☒ No included studies		

Equity

What would be the impact on health equity?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
☐ Reduced ☐ Probably reduced ☐ Probably no impact ☐ Probably increased ☐ Increased ☐ Varies ☒ Don't know		

Acceptability

Is the intervention acceptable to key interest-holders?

JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
☐ No ☐ Probably no ☒ Probably yes ☐ Yes ☐ Varies ☐ Don't know		

Feasibility

Is the intervention feasible to implement?

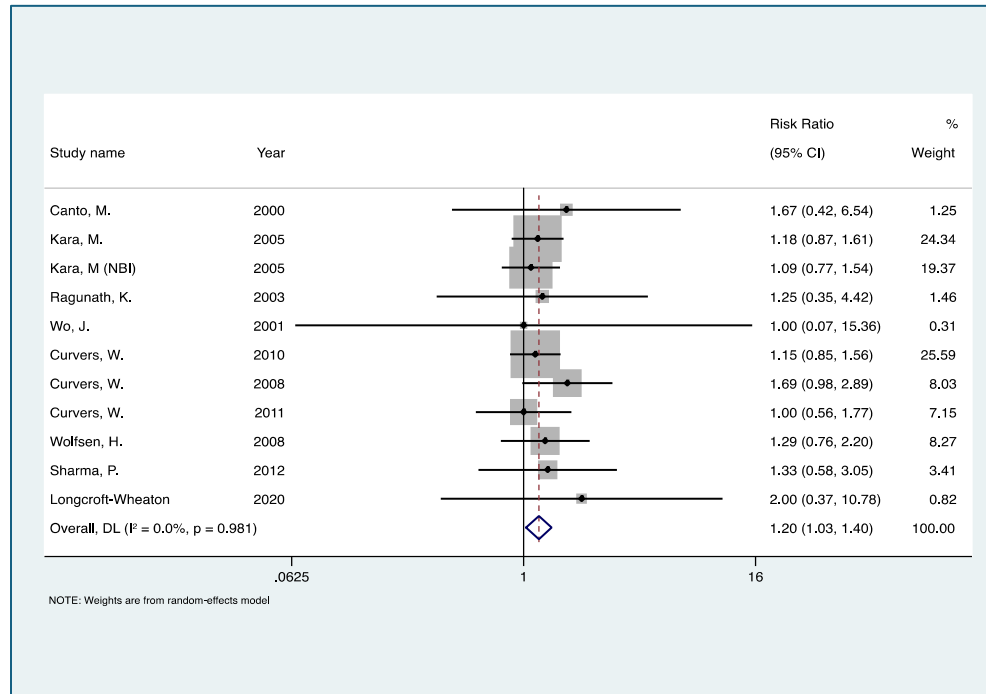
JUDGEMENT	RESEARCH EVIDENCE	ADDITIONAL CONSIDERATIONS
☐ No ☐ Probably no ☒ Probably yes ☐ Yes ☐ Varies ☐ Don't know		

SURVEILLANCE OF BARRETT'S ESOPHAGUS

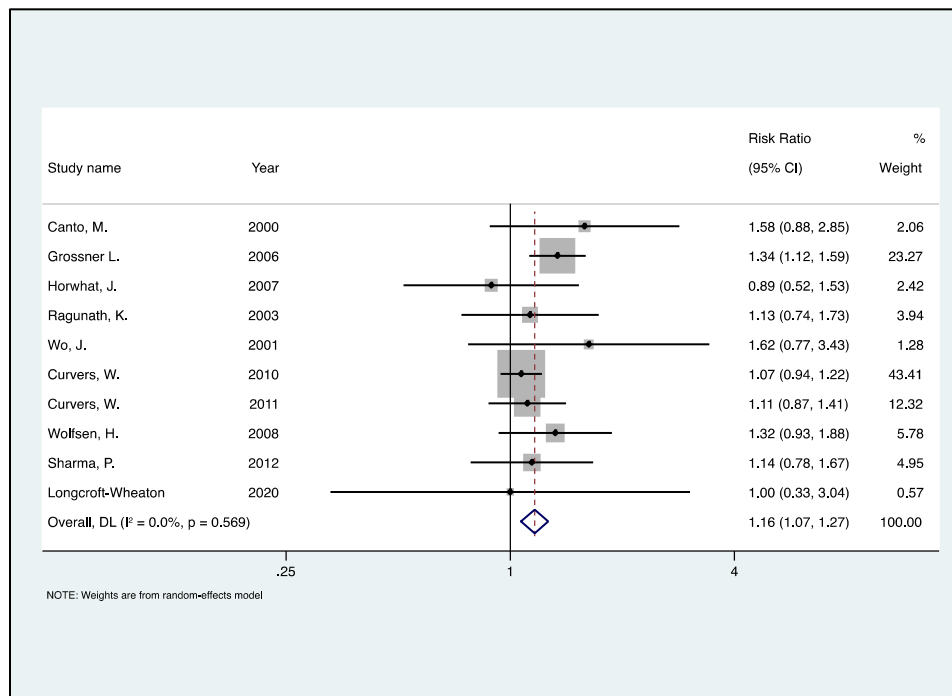
SUPPLEMENTARY FIGURES

Supplementary Figure 1: Forest plot of incremental neoplasia detection using chromoendoscopy plus high-definition white light endoscopy compared with white light endoscopy alone

a. HGD/EAC detection (overall)

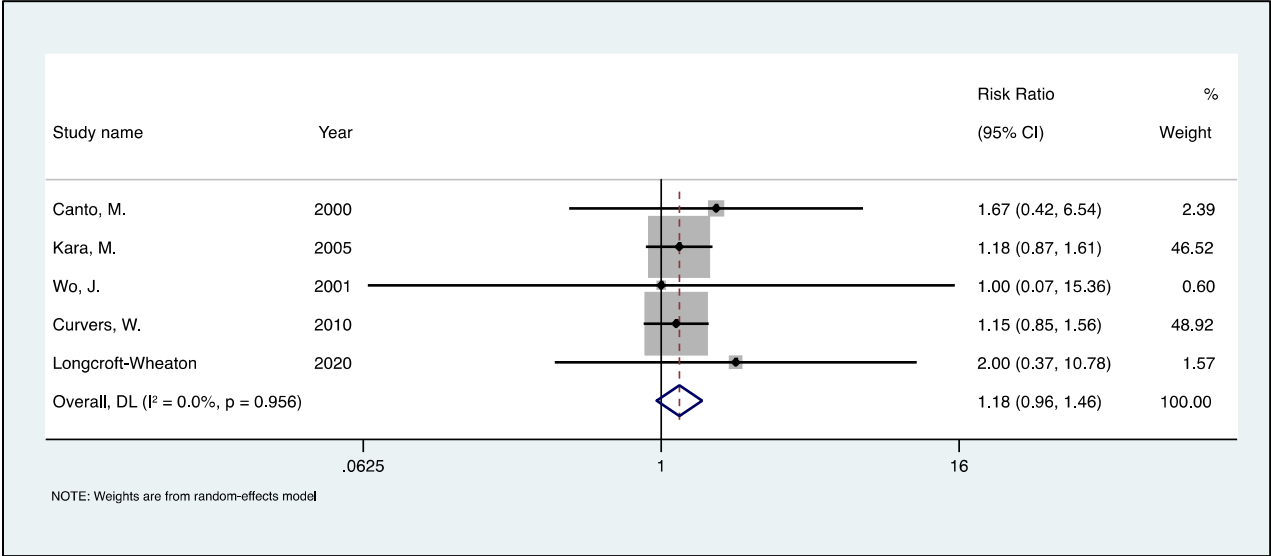


b. Detection of LGD/HGD/EAC (overall)

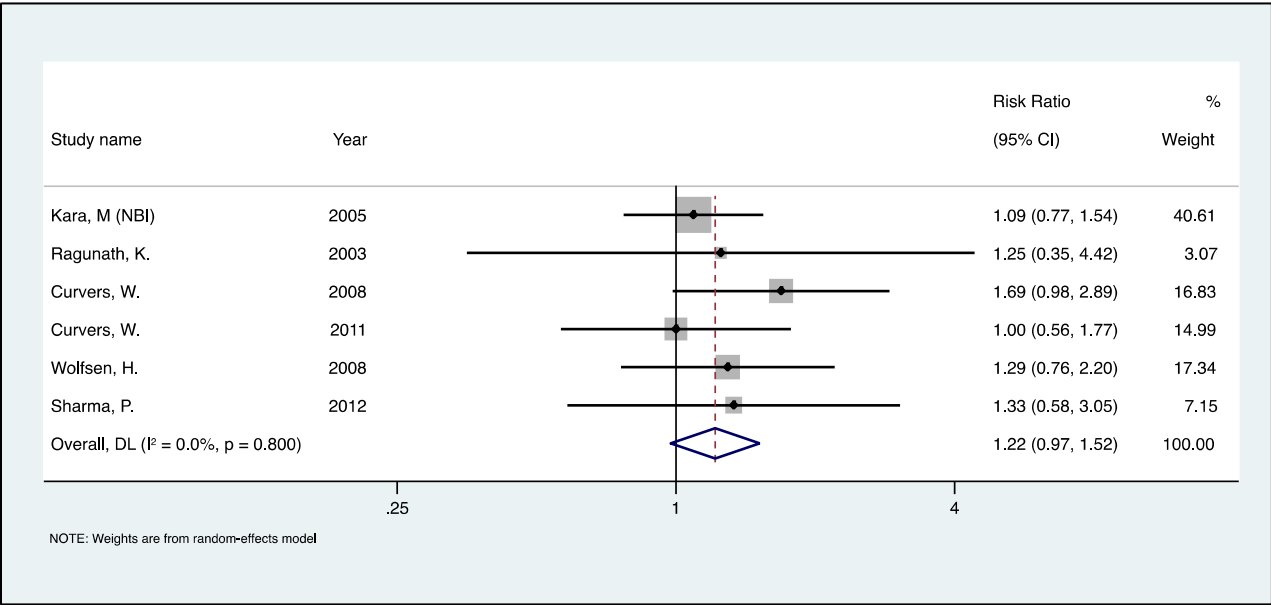


Supplementary Figure 2: Forest plot of incremental neoplasia detection using chromoendoscopy plus high-definition white light endoscopy compared with white light endoscopy alone

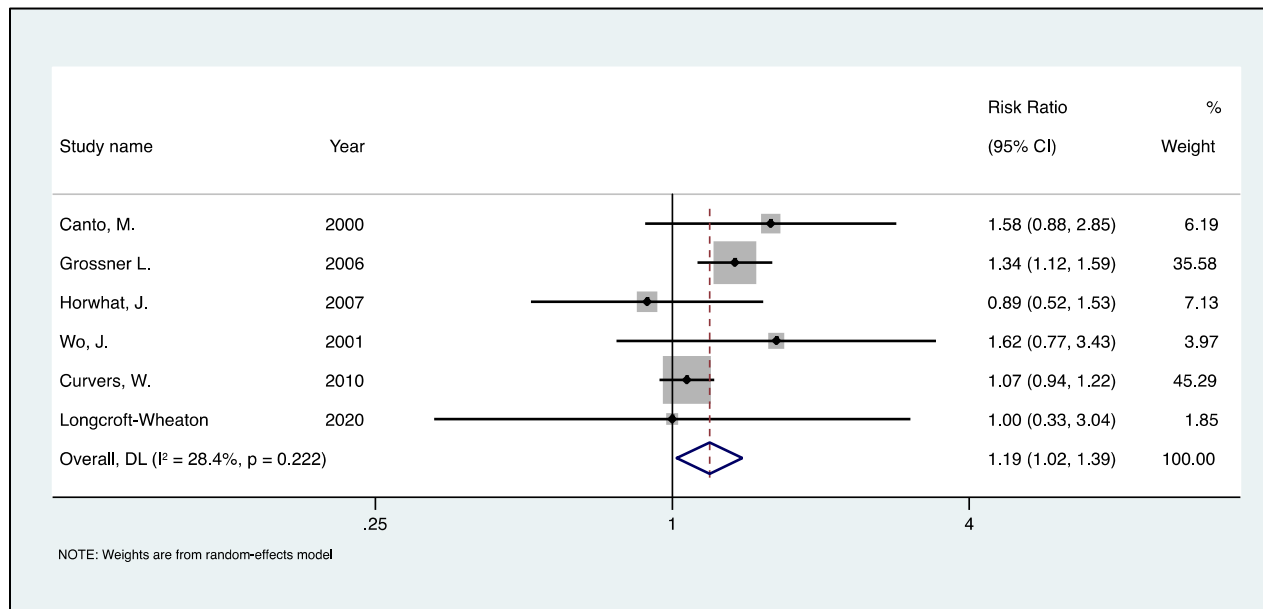
a. Detection of HGD/EAC with dye-based chromoendoscopy



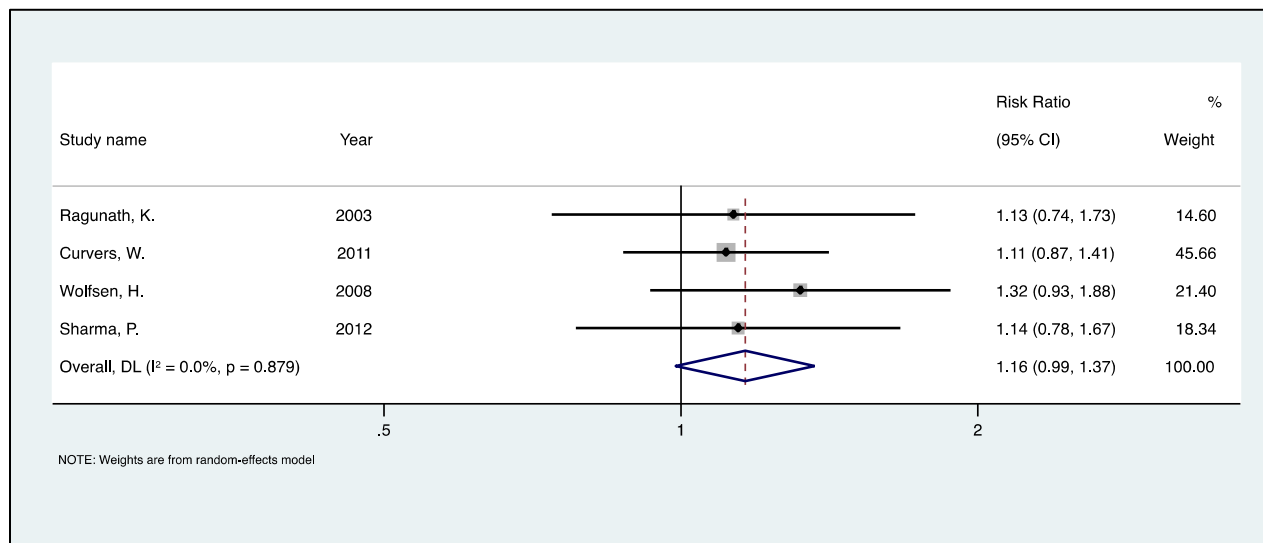
b. Detection of HGD/EAC with virtual chromoendoscopy



c. Detection of LGD/HGD/EAC with dye-based chromoendoscopy

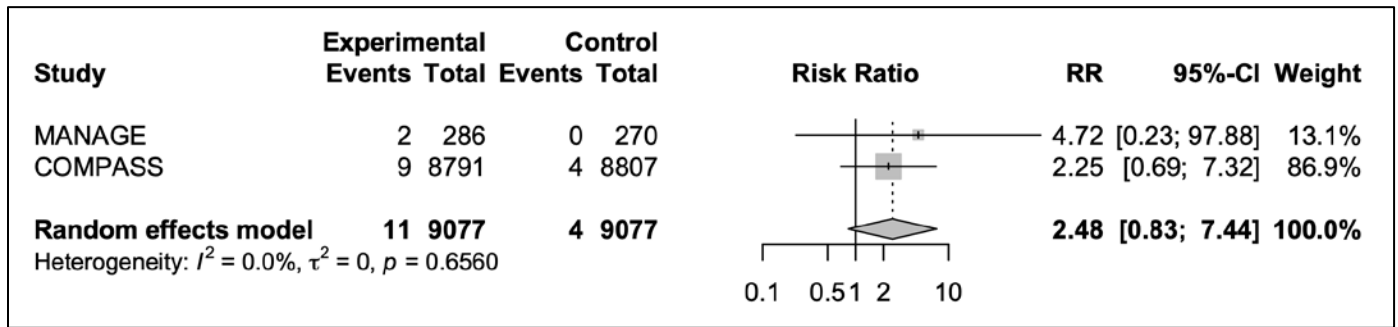


d. Detection of LGD/HGD/EAC with virtual chromoendoscopy

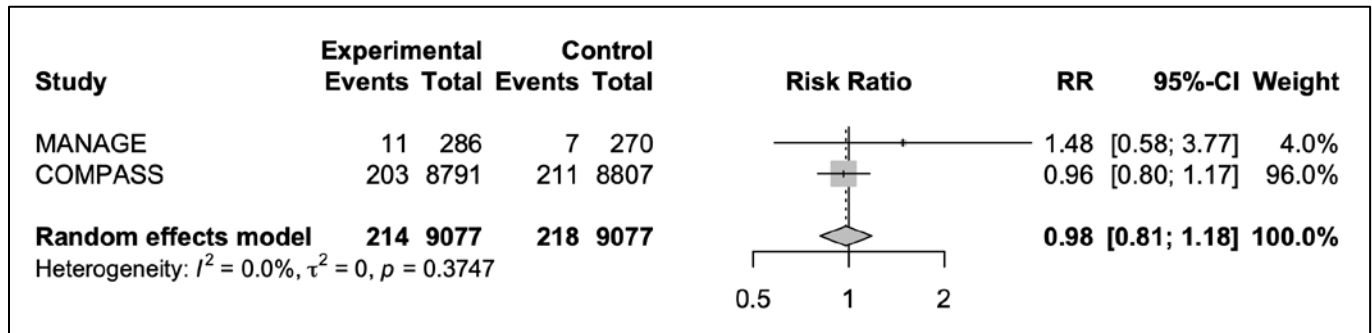


Supplementary Figure 3: Forest plot of pooled analysis on adverse events related to PPI therapy

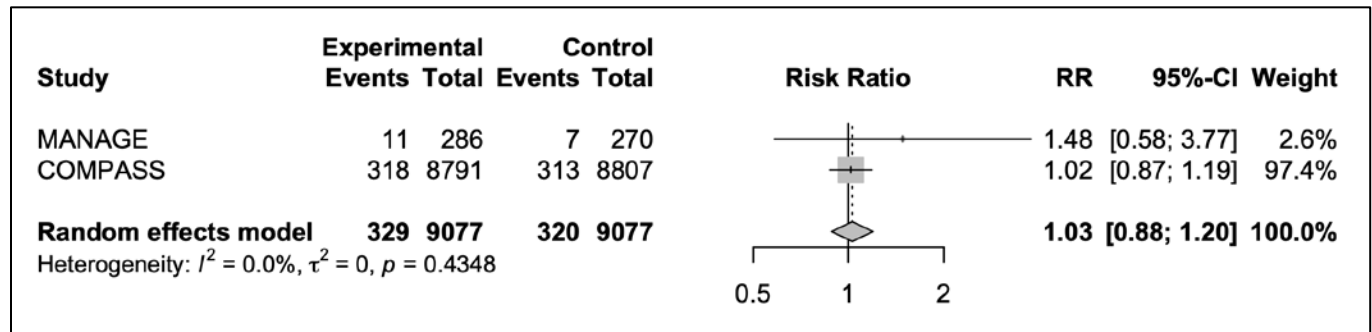
A. Clostridium difficile infection



B. Fracture

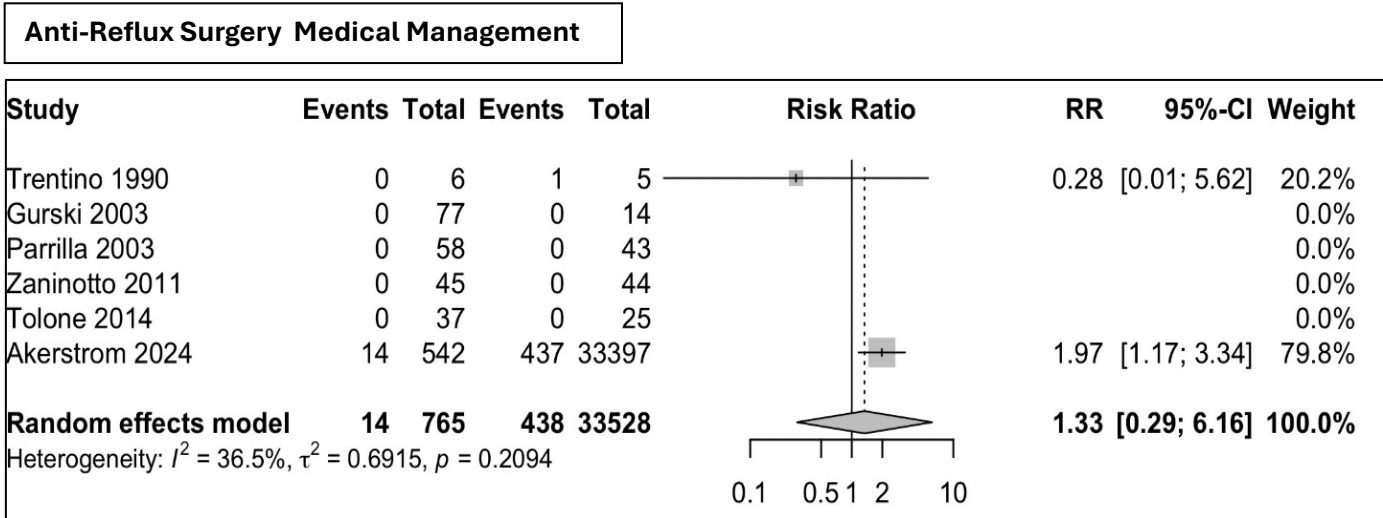


C. Pneumonia



Supplementary Figure 4: Forest plots for pooled outcome of progression to EAC and HGD/EAC comparing anti-reflux surgery versus medical management.

a. EAC



b. HGD/EAC

