

Supplementary Table. 1. Clinical Key Questions

1. What are the high risk factors of peptic ulcer diseases and their complications in patients taking nonsteroidal anti-inflammatory drugs?
 2. In patients with long-term use of nonsteroidal anti-inflammatory drugs, can *Helicobacter pylori* eradication prevent peptic ulcer diseases and their complications?
 3. In high-risk patients who take long-term nonsteroidal anti-inflammatory drugs, can co-administration of proton pump inhibitors prevent peptic ulcer diseases and their complications?
 4. In high-risk patients who take long-term nonsteroidal anti-inflammatory drugs, can co-administration of misoprostol prevent peptic ulcer diseases and their complications?
 5. In high-risk patients who take long-term nonsteroidal anti-inflammatory drugs, can co-administration of histamine-2 receptor blockers prevent peptic ulcer diseases and their complications?
 6. In high-risk patients who take long-term nonsteroidal anti-inflammatory drugs, can replacement of selective cyclooxygenase-2 inhibitors instead of non-selective nonsteroidal anti-inflammatory drugs prevent peptic ulcer diseases and their complications?
 7. In patients who take long-term low dose aspirin with previous history of peptic ulcer disease, can *H. pylori* eradication prevent peptic ulcer diseases and peptic ulcer bleeding?
 8. In patients who take long-term low dose aspirin with previous history of peptic ulcer bleeding, can co-administration of proton pump inhibitors prevent peptic ulcer diseases and peptic ulcer bleeding?
 9. In patients who take long-term low dose aspirin with peptic ulcer bleeding, when is the optimal time of aspirin resumption?
 10. In patients who take long-term anti-coagulants with peptic ulcer bleeding, when is the optimal time of anti-coagulants resumption?
 11. In patients who take anti-coagulants with high risk of peptic ulcer bleeding, can co-administration of anti-peptic ulcer medications prevent upper gastrointestinal bleeding?
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Supplementary Table 2. Selection of Search Terms

Headings	Selection of search terms	
	Mesh	PubMed entry terms
NSAID	“Anti-Inflammatory Agents, Non-Steroidal” [Mesh]	Antiinflammatory Agents, Non Steroidal; Antiinflammatory Agents, Nonsteroidal; Agents,; Nonsteroidal Antiinflammatory; Nonsteroidal Antiinflammatory Agents; Nonsteroidal Anti-Inflammatory Agents; Agents, Nonsteroidal Anti-Inflammatory; Anti-Inflammatory Agents, Nonsteroidal; Nonsteroidal Anti Inflammatory Agents; NSAIDs; Anti; Inflammatory Agents, Nonsteroidal; Non-Steroidal Anti-Inflammatory Agents; Agents, Non-Steroidal Anti-Inflammatory; Non Steroidal Anti Inflammatory Agents; Aspirin-Like Agents; Agents, Aspirin-Like; Aspirin Like Agents; Analgesics, Anti-Inflammatory; Analgesics, Anti Inflammatory; Anti-Inflammatory Analgesics; Anti-Rheumatic Agents, Non-Steroidal; Agents, Non-Steroidal Anti-Rheumatic; Anti Rheumatic Agents, Non Steroidal; Non-Steroidal Anti-Rheumatic Agents; Antirheumatic Agents, Non-Steroidal; Agents, Non-Steroidal Antirheumatic; Antirheumatic Agents, Non Steroidal; Non-Steroidal Antirheumatic Agents
	“Cyclooxygenase 1” [Mesh]	Cyclo-Oxygenase I; Cyclo Oxygenase I; Prostaglandin H Synthase-1; Prostaglandin H Synthase 1; COX-1 Prostaglandin Synthase; COX 1 Prostaglandin Synthase
	“Cyclooxygenase 2” [Mesh]	Prostaglandin Synthase, COX-1; Synthase, COX-1 Prostaglandin; Cyclooxygenase-1 Cyclo-Oxygenase II; Cyclo Oxygenase II; PTGS2; PGHS-2; Prostaglandin H Synthase-2; Prostaglandin H Synthase 2; COX-2 Prostaglandin Synthase; COX 2 Prostaglandin Synthase; Prostaglandin Synthase, COX-2; Synthase, COX-2 Prostaglandin; Cyclo-oxygenase-2
	“Cyclooxygenase 2 Inhibitors” [Mesh]	Inhibitors, Cyclooxygenase 2; Cyclooxygenase-2 Inhibitors; Inhibitors, Cyclooxygenase-2; Coxibs; COX-2 Inhibitors; COX 2 Inhibitors; Inhibitors, COX-2; COX2 Inhibitors; Inhibitors, COX2
	“Cyclooxygenase Inhibitors” [Mesh]	Inhibitors, Cyclo-Oxygenase; Inhibitors, Cyclo Oxygenase; Inhibitors, Cyclooxygenase; Prostaglandin Synthesis Antagonists; Antagonists, Prostaglandin Synthesis; Inhibitors, Prostaglandin-Endoperoxide Synthase; Inhibitors, Prostaglandin Endoperoxide Synthase; Prostaglandin Endoperoxide Synthase Inhibitors; Prostaglandin Synthase Inhibitors; Cyclo-Oxygenase Inhibitors; Cyclo Oxygenase Inhibitors; Inhibitors, Prostaglandin Synthase
	“Ibuprofen” [Mesh]	I.V. Solution, Ibuprofen; Ibuprofen, (+-)-Isomer; Ibuprofen, (R)-Isomer; Ibuprofen, (S)-Isomer; Ibuprofen, Aluminum Salt; Aluminum Salt Ibuprofen; Ibuprofen, Calcium Salt; Calcium Salt Ibuprofen; Ibuprofen, Copper (2+) Salt; Ibuprofen, Magnesium Salt; Magnesium Salt Ibuprofen; Salt Ibuprofen, Magnesium; Ibuprofen, Potassium Salt; Potassium Salt Ibuprofen; Ibuprofen, Sodium Salt; Salt Ibuprofen, Sodium; Sodium Salt Ibuprofen; Ibuprofen, Zinc Salt; Salt Ibuprofen, Zinc; Zinc Salt Ibuprofen; Ibuprofen-Zinc; Ibuprofen Zinc; IP-82; IP 82; IP82; Motrin; Nuprin; Rufen; Salprofen; Trauma-Dolgit Gel; Trauma Dolgit Gel; TraumaDolgit Gel; Brufen
	“Naproxen” [Mesh]	Methoxypropionicin; MNPA; Anaprox; Naprosin; Naprosyn; Proxen; Synflex; Aleve; Naproxen Sodium; Sodium, Naproxen
	“Diclofenac” [Mesh]	Diclophenac; Dicrofenac; Dichlofenal; Diclofenac Sodium; Sodium Diclofenac; Diclofenac, Sodium; Diclonate P; Feloran; Voltarol; Novapirina; Orthofen; Ortofen; Orthophen; SR-38; SR 38; SR38; Voltaren; Diclofenac Potassium; GP-45,840; GP 45,840; GP45,840
	“Indomethacin” [Mesh]	Indometacin; Amuno; Indocid; Metindol; Indomet 140; Indomethacin Hydrochloride; Hydrochloride, Indomethacin; Osmosin; Indocin
	“Ketoprofen” [Mesh]	Benzoylhydratropic Acid; 2-(3-Benzoylphenyl)propionic Acid; Profenid; Alrheumum; Orudis; 19,583 RP; RP, 19,583; RP-19583; RP 19583; RP19583; Alrheumat

Supplementary Table 2. Continued

Headings	Selection of Search Terms	
	Mesh	PubMed Entry Terms
NSAID	"nabumetone" [Supplementary Concept]	Nabumeton; 4-(6-methoxy-2-naphthyl)-2-butanone; Arthrxan; BRL 14777; Gen-Nabumetone; Listran; Relafen; Relif; Relifex; Mebutan; Rhoxal-nabumetone; Apo-Nabumetone; Nabucox
	"oxaprozin" [Supplementary Concept]	4,5-diphenyl-2-oxazolepropionic acid; Danoprox; Wy-21,743; Dayrun; Rhoxal-oxaprozin; Apo-Oxaprozin; Daypro
	"Piroxicam" [Mesh]	CP-16171; CP 16171; CP16171; Feldene
	"Celecoxib" [Mesh]	4-(5-(4-methylphenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl)benzenesulfonamide; Celebrex; SC 58635; 58635, SC; SC-58635; SC58635
	"parecoxib" [Supplementary Concept]	N-(((5-methyl-3-phenylisoxazol-4-yl)-phenyl)sulfonyl)propanamide; N-(((Me-P)-P)S P; parecoxib sodium; N-(((5-methyl-3-phenylisoxazol-4-yl)-phenyl)sulfonyl)propanamine, sodium salt; Dynastat
	"etoricoxib" [Supplementary Concept]	L-791456; MK 0663; MK-0663; Arcoxia
	"tenoxicam" [Supplementary Concept]	4-hydroxy-2-methyl-N-2-pyridyl-2H-thieno(2,3-e)-1,2-thiazine-3-carboxamide 1,1-dioxide; Ro 12-0068; Ro-12-0068; Reutenox; Artriunic; Novo-Tenoxicam; Mobiflex; Tilcotil; Apo-Tenoxicam
	"meloxicam" [Supplementary Concept]	Reumoxicam; meloxicam; Movalis; Uticox; Mobic; Mobicox; Mobec; Masflex; Movicox; Parocin
	"Flurbiprofen" [Mesh]	Fluriproben; 2-Fluoro-alpha-methyl-(1,1'-biphenyl)-4-acetic Acid; Flurbiprofen; Apo-Flurbiprofen; Apo; Flurbiprofen; BTS-18322; BTS 18322; BTS18322; Cebutid; Dobrofen; E-7869; E 7869; E7869; Flugalin; Flurbiprofen Sodium; Sodium, Flurbiprofen; Froben; Froben SR; Neo Artrol; Novo-Flurprofen; Novo; Flurprofen; Nu-Flurbiprofen; Nu Flurbiprofen; Ocuflen; Ocuflur; ratio-Flurbiprofen; ratio Flurbiprofen; Strefen; Ansaïd
	"tiaprofenic acid" [Supplementary Concept]	FC 3001; Flanid; Pierre Fabre brand of tiaprofenic acid; tiaprofenic acid, calcium salt; Nu-Tiaprofenic; Nu-Pharm brand of tiaprofenic acid; PMS-Tiaprofenic; Pharmascience brand of tiaprofenic acid; RU 15060; Surgam; Grünenthal brand of tiaprofenic acid; Florizel brand of tiaprofenic acid; Hoechst brand of; tiaprofenic acid; Surgam SA; Aventis brand of tiaprofenic acid; Apo-Tiaprofenic; Apotex brand of tiaprofenic acid; Novo-Tiaprofenic; Novopharm brand of tiaprofenic acid
	"Diflunisal" [Mesh]	Dolobid; Dolocid; Dolobis; Nu-Diflunisal; Nu Diflunisal; NuDiflunisal; MK-647; MK 647; MK647; Novo; Diflunisal; Novo Diflunisal; NovoDiflunisal; Apo-Diflunisal; Apo Diflunisal; ApoDiflunisal
	"Etodolac" [Mesh]	"Etodolic Acid; Acid, Etodolic; Etodolac, (+)-Isomer; Etodolac, (-)-Isomer; Etodolac, (S)-Isomer; Ultradol; Etodolac, Monosodium Salt, (+) Isomer; Etodolac, Monosodium Salt, (S)-Isomer; Lodine; Ramodar; AY-24,236; AY 24,236; AY24,236; AY-24236; AY 24236; AY24236; Etodolac, Monosodium Salt"
	"salicylsalicylic acid" [Supplementary Concept]	"disalicylic acid; salsalate; Argesic; Disalcid; Salsitab; Upsher-Smith brand of salicylsalicylic acid; Salflex; salicyl salicylate; Saloxium; Arcylate; Mono-Gesic"
	"Sulindac" [Mesh]	"Apo-Sulin; Apo Sulin; Arthrobid; Clinoril; Arthrocine; Klinoril; Sulindal; Chibret; Kenalin; MK-231MK 231; MK231; Novo-Sundac; Novo Sundac; Nu-Sulindac; Nu Sulinda; Aclin; Copal"
	"Tolmetin" [Mesh]	"Tolectin; Tolmetin Sodium, Anhydrous; Anhydrous Tolmetin Sodium; Tolmetin Sodium Anhydrous; Anhydrous, Tolmetin Sodium; Sodium Anhydrous, Tolmetin; McN-2559; McN 2559; McN2559; Tolmetin Sodium; Sodium, Tolmetin; Tolmetin Sodium, Dihydrate; Dihydrate Tolmetin Sodium"

Supplementary Table 2. Continued

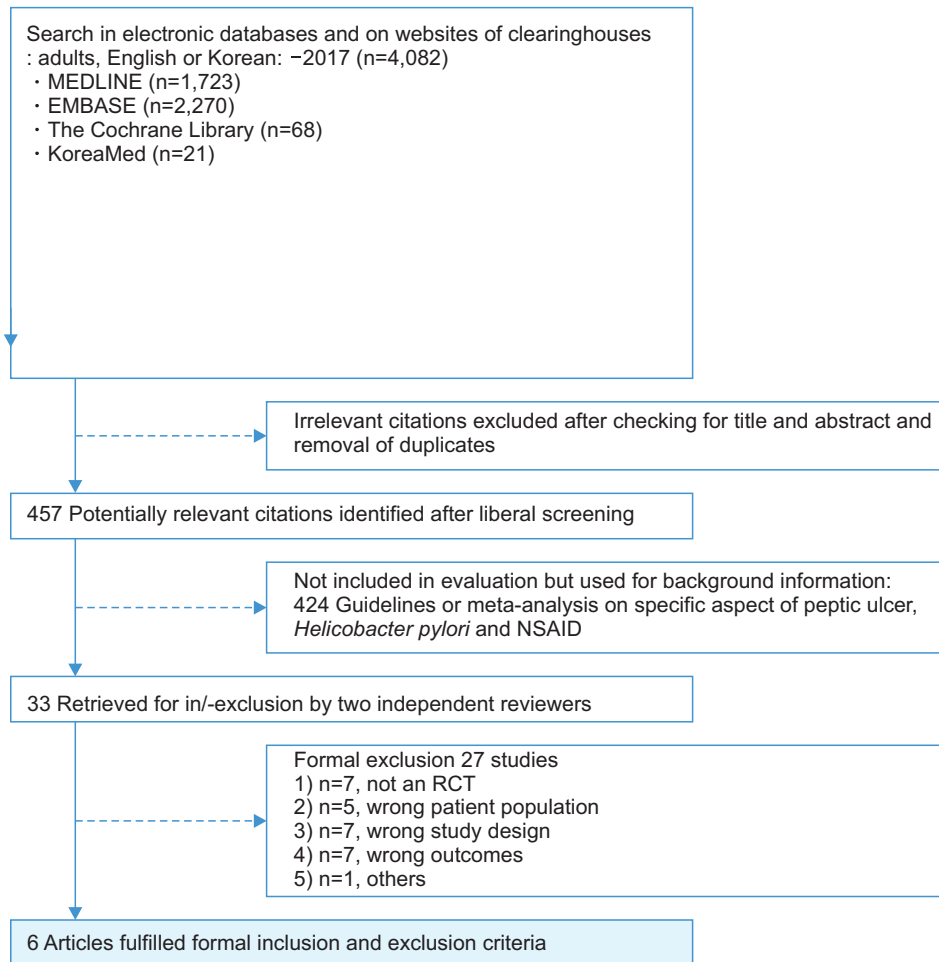
Headings	Selection of Search Terms	
	Mesh	PubMed Entry Terms
Cox-2 inhibitor	“Cyclooxygenase 2 Inhibitors” [Mesh]	“Inhibitors, Cyclooxygenase 2; Cyclooxygenase-2 Inhibitors; Inhibitors, Cyclooxygenase-2; Coxibs; COX-2 Inhibitors; COX 2 Inhibitors; Inhibitors, COX-2; COX2 Inhibitors; Inhibitors, COX2”
	“Celecoxib” [Mesh]	“4-(5-(4-methylphenyl)-3-(trifluoromethyl)-1H-pyrazol-1-yl)benzenesulfonamide; Celebrex; SC 58635; 58635, SC; SC-58635; SC58635”
	“parecoxib” [Supplementary Concept]	“N-(((5-methyl-3-phenylisoxazol-4-yl)-phenyl)sulfonyl)propanamide; N-(((Me-P)-P)S)P; parecoxib sodium; N-(((5-methyl-3-phenylisoxazol-4-yl)-phenyl)sulfonyl)propanamine, sodium salt; Dynastat”
	“etoricoxib” [Supplementary Concept]	“L-791456; MK 0663; MK-0663; Arcoxia”
	“Cyclooxygenase 2” [Mesh]	“Cyclo-Oxygenase II; Cyclo Oxygenase II; PTGS2; PGHS-2; Prostaglandin H Synthase-2; Prostaglandin H Synthase 2; COX-2 Prostaglandin Synthase; COX 2 Prostaglandin Synthase; Prostaglandin Synthase, COX-2; Synthase, COX-2 Prostaglandin; Cyclooxygenase-2”
PPI	“Proton Pump Inhibitors” [Mesh]	Inhibitors, Proton Pump
	“Dexlansoprazole” [Mesh]	“Lansoprazole, R-Isomer; Lansoprazole, R Isomer; R-Isomer Lansoprazole; 2-(((R)-((3-Methyl-4-(2,2,2-trifluoroethoxy)-2-pyridinyl)methyl)sulfinyl)-1H-benzimidazole; R-Lansoprazole; R Lansoprazole; Dexlansoprazole Sesquihydrate; TAK 390MR; TAK-390MR; TAK-390MR; TAK-390; TAK 390; TAK390; Dexilant; T-168390; T 168390; T168390”
	“Esomeprazole” [Mesh]	“Esomeprazole Sodium; Esomeprazole Strontium; Strontium, Esomeprazole; Esomeprazole Magnesium; Nexium; AstraZeneca Brand of Esomeprazole Magnesium; Esomeprazole Potassium; Esomeprazole Strontium Anhydrous”
	“ilaprazole” [Supplementary Concept]	“IY 81149; IY81149; IY-81149”
	“Lansoprazole” [Mesh]	“Lansoprazol; 2-(((3-Methyl-4-(2,2,2-trifluoroethoxy)-2-pyridyl)methyl)sulfinyl)benzimidazole; Lansoprazoles; Bamalite; Tecnobio Brand of Lansoprazole; Lansoprazole Tecnobio Brand; Lansol; Lansoprazole Sodium; Sodium, Lansoprazole; Lanzor; Hoechst Brand of Lansoprazole; Lansoprazole; Hoechst Brand; Prezal; Monolium; Salvar Brand of Lansoprazole; Lansoprazole Salvar Brand; Opiren; Almirall Brand of Lansoprazole; Lansoprazole Almirall Brand; Prevacid; Ogestro; Abbot Brand of Lansoprazole; Lansoprazole Abbot Brand; TAP Brand of Lansoprazole; Lansoprazole TAP Brand; Pro Ulco; Vinas Brand of Lansoprazole; Lansoprazole Vinas Brand; Promeco; Promeco Brand of; Lansoprazole; Lansoprazole Promeco Brand; Takepron; Ulpax; Hormona Brand of Lansoprazole; Lansoprazole Hormona Brand; Zoton; Wyeth Brand of Lansoprazole; Lansoprazole Wyeth Brand; Lederle Brand of Lansoprazole; Lansoprazole Lederle Brand; AG 1749; AG-1749; AG1749; Agopton; Ogest; Takeda Brand of Lansoprazole; Lansoprazole Takeda Brand”
	“Omeprazole” [Mesh]	“Prilosec; Omeprazole Sodium; Sodium, Omeprazole; H 168-68; H 168 68; H 16868; Omeprazole Magnesium; Magnesium, Omeprazole”
	“pantoprazole” [Supplementary Concept]	“SK and F 96022; SKF-96022; SK and F-96022; Protonix; BY 1023; BY-1023; pantoprazole sodium”
	“Rabeprazole” [Mesh]	“2-(((4-(3-methoxypropoxy)-3-methylpyridin-2-yl)methyl)sulfinyl)-1H-benzimidazole; Dexrabeprazole; E 3810; E3810; Pariet; Rabeprazole Sodium; Sodium, Rabeprazole; 1H-Benzimidazole, 2-(((4-(3-methoxypropoxy)-3-methyl-2-pyridinyl)methyl)sulfinyl)-, Sodium Salt; Aciphex; LY-307640; LY 307640; LY307640”

Supplementary Table 2. Continued

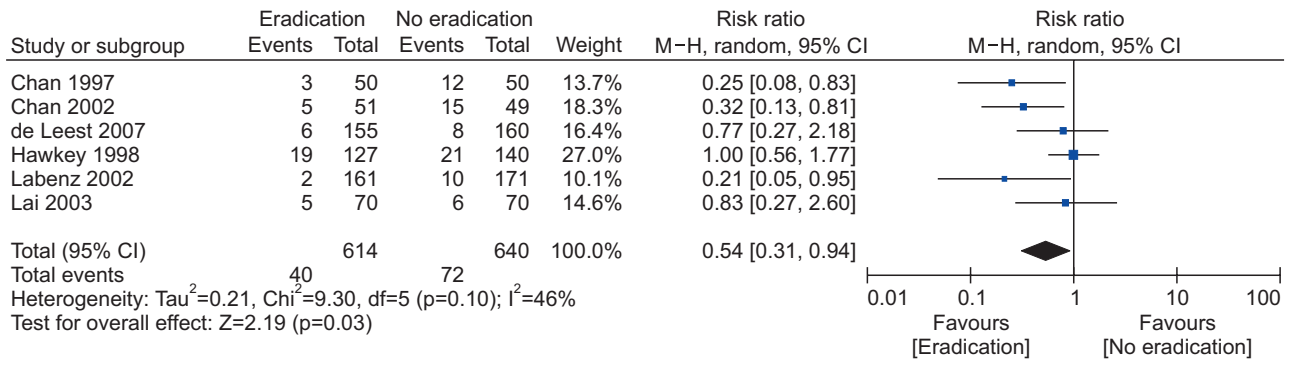
Headings	Selection of Search Terms	
	Mesh	PubMed Entry Terms
Misoprostol	"Misoprostol" [Mesh]	"Novo-Misoprostol; Novo Misoprostol; SC-29333; SC 29333; SC29333; SC-30249; SC 30249; SC30249; Apo-Misoprostol; Apo Misoprostol; Misoprostol, (11beta,13E,16R)-Isomer; Glefos; Misoprostol, (11alpha,13E)-Isomer; Misoprostol, (11alpha,13E,16R)-Isomer; Misoprostol, (11alpha,13Z)-(+)-Isomer; Misoprostol, (11alpha.13E,16S)-Isomer; Misoprostol, (11beta,13E)-(+)-Isomer; Misoprostol, (11beta,13E,16S)-Isomer; Cytotec"
H2-RA	"Histamine H2 Antagonists" [Mesh]	"Receptor Blockaders, H2; Blockaders, Histamine H2 Receptor; Histamine H2 Receptor Blockaders Histamine H2 Blockers; Blockers, Histamine H2; H2 Blockers, Histamine; Receptor Antagonists, Histamine H2; Histamine H2 Receptor Antagonists; Antagonists, Histamine H2; H2 Antagonists, Histamine; H2 Receptor Blockaders; Blockaders, H2 Receptor; Antihistaminics, H2; H2 Antihistaminics"
	"Famotidine" [Mesh]	"YM-11170; YM 11170; YM11170; Pepcid; Famotidine Hydrochloride; MK-208; MK 208; MK208"
	"Cimetidine" [Mesh]	"Biomet; Biomet400; Cimetidine Hydrochloride; Hydrochloride, Cimetidine; Cimetidine HCl; HCl, Cimetidine; Histodil; SK and F-92334; SK and F 92334; SK and F92334; SKF-92334; SKF 92334; SKF92334; Tagamet; Altramet; Eureceptor"
	"Ranitidine" [Mesh]	"Ranitidin; N (2-(((5-((Dimethylamino)methyl)-2-furanyl)methyl)thio)ethyl)-N'-methyl-2-nitro-1,1-ethenediamine; Biotidin; Ranisen; Sostril; Zantac; Zantic; AH-19065; AH 19065; AH19065; Ranitidine Hydrochloride; Hydrochloride, Ranitidine"
	"Nizatidine" [Mesh]	"N-(2-(((2-((Dimethylamino)methyl)-4-thiazolyl)methyl)thio)ethyl)-N'-methyl-2-nitro-1,1-ethenediamine; LY-139037; LY 139037; LY139037; Axid"
	"lafutidine" [Supplementary Concept]	"N-(4-(4-piperidinylmethyl)pyridyl-2-oxy)butenyl-2-(furfurylsulfinyl)acetamide; N-(4-(4-piperidinylmethyl)pyridyl-2-oxy)-(Z)-butenyl-2-(furfurylsulfinyl)acetamide; FRG-8813; FRG 8813"
Antiplatelet agent	"Aspirin" [Mesh]	"Acetylsalicylic Acid; Acid, Acetylsalicylic; 2-(Acetyloxy)benzoic Acid; Acylpyrin; Aloxiprimum; Colfarit; Dispril; Easprin; Ecotrin; Endosprin; Magnecyl; Micristin; Polopirin; Polopiryna; Solprin; Solupsan; Zorprin; Acetysal"
	"clopidogrel" [Supplementary Concept]	"clopidogrel napadisilate; clopidogrel, (+)(S)-isomer; Iscover; PCR 4099; PCR-4099; clopidogrel-Mepha; SC 25989C; SC 25990C; SR 25989; clopidogrel besylate; clopidogrel besilate; clopidogrel hydrochloride; clopidogrel Sandoz; clopidogrel bisulfate; Plavix"
	"Ticlopidine" [Mesh]	"Ticlopidine Hydrochloride; Hydrochloride, Ticlopidine; Ticlodix; Ticlodone; 53-32C; 53 32C; 5332C; Ticlid"
	"Platelet Aggregation Inhibitors" [Mesh]	"Aggregation Inhibitors, Platelet; Inhibitors, Platelet Aggregation; Blood Platelet Antiaggregants; Antiaggregants, Blood Platelet; Platelet Antiaggregants; Antiaggregants, Platelet; Blood Platelet; Aggregation Inhibitors; Platelet Inhibitors; Inhibitors, Platelet; Antiplatelet Agents; Agents, Antiplatelet; Antiplatelet Drugs; Drugs, Antiplatelet; Platelet Antagonists; Antagonists, Platelet; Blood Platelet Antagonists; Antagonists, Blood Platelet"

Supplementary Table 2. Continued

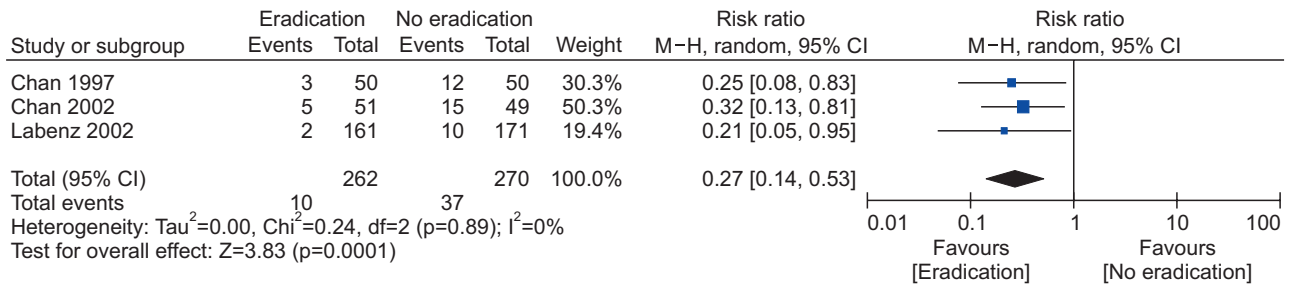
Headings	Selection of Search Terms	
	Mesh	PubMed Entry Terms
Anticoagulant	“Rivaroxaban” [Mesh]	“5-chloro-N-(((5S)-2-oxo-3-(4-(3-oxomorpholin-4-yl)phenyl)-1,3-oxazolidin-5-yl)methyl)thiophene-2-carboxamide; Xarelto; BAY 59-7939; BAY 59 7939; BAY 597939”
	“edoxaban” [Supplementary Concept]	“N-(5-chloropyridin-2-yl)-N'-((1S,2R,4S)-4-(N,N-dimethylcarbamoyl)-2-(5-methyl-4,5,6,7-tetrahydro(1,3)thiazolo(5,4-c)pyridine-2-carboxamido)cyclohexyl)oxamide; N-(5-chloropyridin-2-yl)-N'-((1S,2R,4S)-4-(N,N-dimethylcarbamoyl)-2-(5-methyl-4,5,6,7-tetrahydrothiazolo(5,4-c)pyridine-2-carboxamido)cyclohexyl)ethanediamide p-toluenesulfonate monohydrate; DU-176b; DU-176; edoxaban tosylate”
	“Dabigatran” [Mesh]	“N-((2-(((4-(aminoiminomethyl)phenyl)amino)methyl)-1-methyl-1H-benzimidazol-5-yl)carbonyl)-N-2-pyridinyl-beta-alanine; BIBR 1048; Pradaxa; Dabigatran Etxilate; Etxilate, Dabigatran; Dabigatran Etxilate Mesylate; Etxilate Mesylate, Dabigatran; Mesylate, Dabigatran Etxilate”
	“apixaban” [Supplementary Concept]	“BMS 562247; BMS562247; BMS-562247”
	“Warfarin” [Mesh]	“4-Hydroxy-3-(3-oxo-1-phenylbutyl)-2H-1-benzopyran-2-one; Apo-Warfarin; Al-documar; Gen-Warfarin; Warfant; Coumadin; Marevan; Warfarin Potassium; Potassium, Warfarin; Warfarin Sodium; Sodium, Warfarin; Coumadine; Tedicumar”
	“Anticoagulants” [Mesh]	“Anticoagulation Agents; Agents, Anticoagulation; Anticoagulant Agents; Agents, Anticoagulant; Anticoagulant Drugs; Drugs, Anticoagulant; Anticoagulant; Indirect Thrombin Inhibitors; Inhibitors, Indirect Thrombin; Thrombin Inhibitors, Indirect”
Peptic ulcer hemorrhage	“Peptic ulcer” [Mesh]	Peptic Ulcers; Ulcer, Peptic; Ulcers, Peptic; Gastroduodenal Ulcer; Gastroduodenal Ulcers; Ulcer, Gastroduodenal; Ulcers, Gastroduodenal; Marginal Ulcer; Marginal Ulcers; Ulcer, Marginal; Ulcers, Marginal
	“Stomach Ulcer” [Mesh]	Stomach Ulcers; Ulcer, Stomach; Ulcers, Stomach; Gastric Ulcer; Gastric Ulcers; Ulcer, Gastric; Ulcers, Gastric
	“Duodenal Ulcer” [Mesh]	Ulcer, Duodenal; Ulcers, Duodenal; Curling Ulcer; Ulcer, Curling; Curling's Ulcer; Curlings Ulcer
	“Gastrointestinal emorrhage” [Mesh]	Hemorrhage, Gastrointestinal; Gastrointestinal Hemorrhages; Hematochezia; Hematochezias
	“Peptic Ulcer Hemorrhage” [Mesh]	Hemorrhage, Peptic Ulcer; Peptic Ulcer Hemorrhages; Ulcer Hemorrhage, Peptic
<i>Helicobacter pylori</i>	‘Helicobacter pylori’ [Mesh]	Helicobacter; Gastrospirillum; Campylobacter pylori



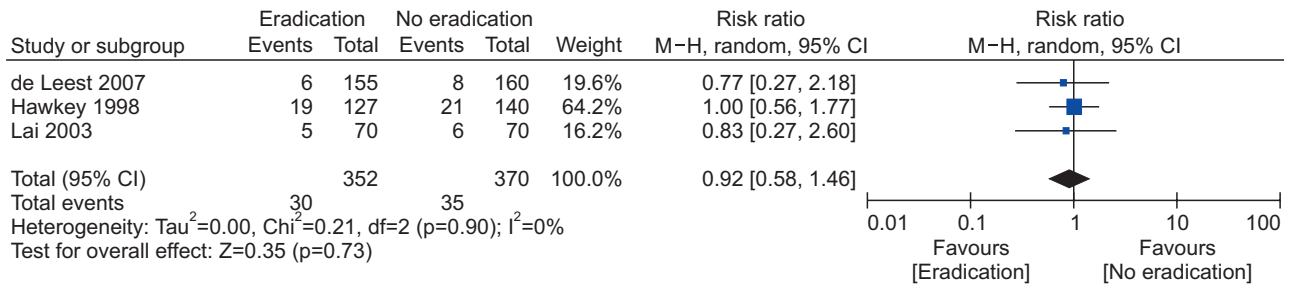
Supplementary Fig. 1. Flowchart of study selection for preventive effect on peptic ulcer by *Helicobacter pylori* eradication in NSAID users. NSAID, nonsteroidal anti-inflammatory drug; RCT, randomized controlled trial.



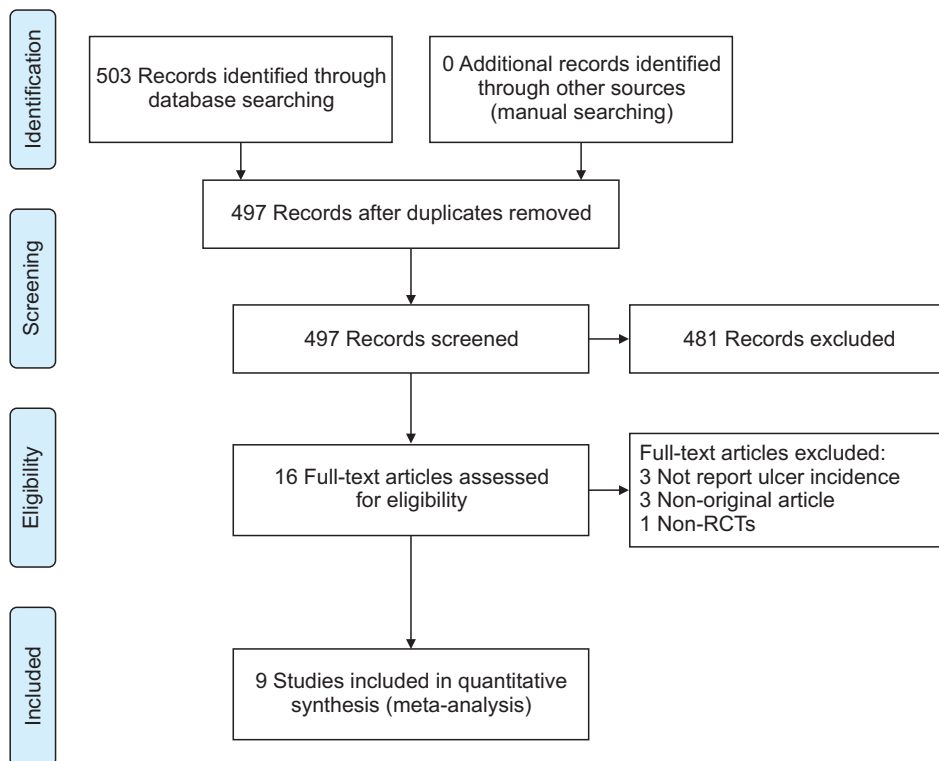
Supplementary Fig. 2. Preventive effect on peptic ulcer by *Helicobacter pylori* eradication in long-term NSAID users: overall group. NSAID, nonsteroidal anti-inflammatory drug; CI, confidence interval; M-H, Mantel Haenszel.



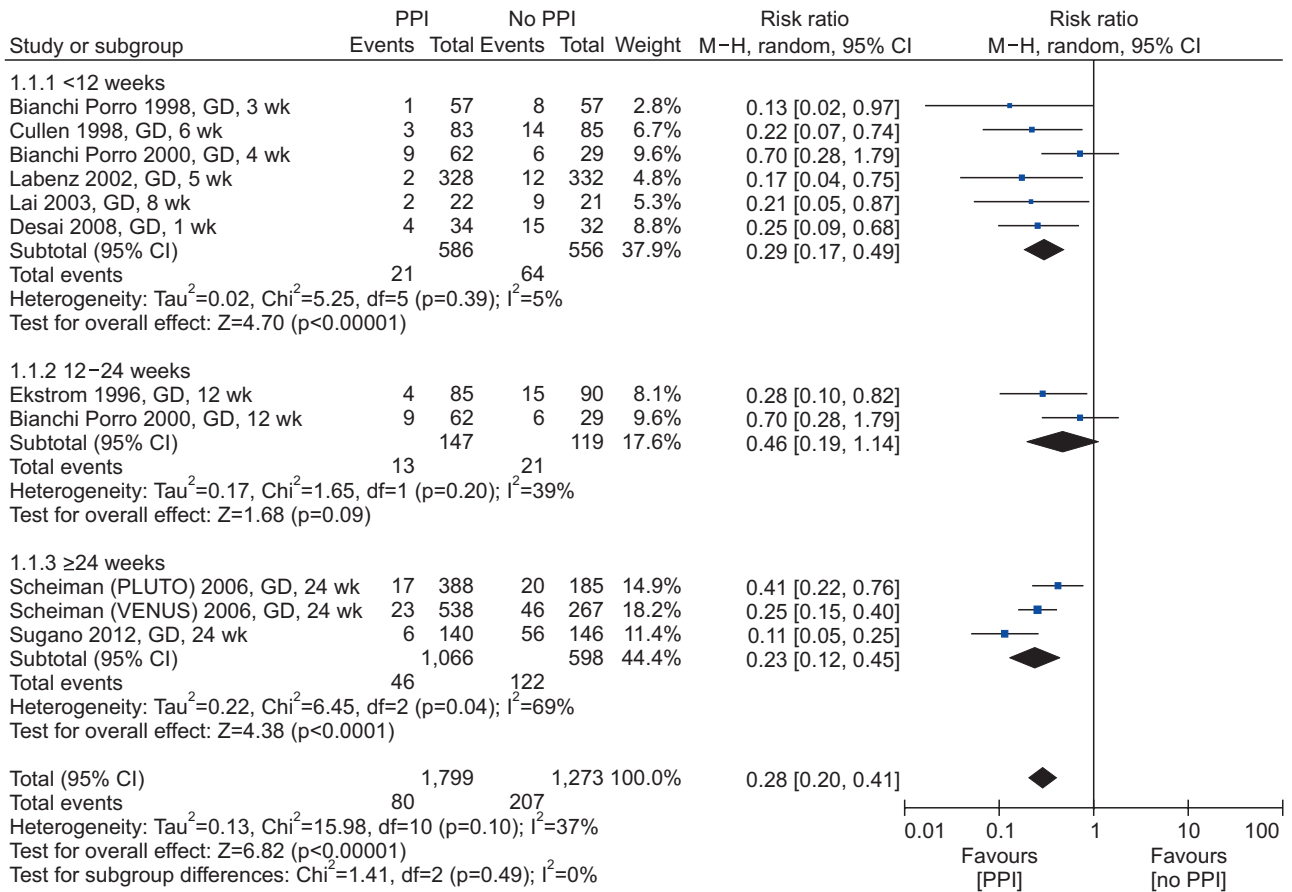
Supplementary Fig. 3. Preventive effect on peptic ulcer by *Helicobacter pylori* eradication in long-term NSAID users: NSAID-naïve patients. NSAID, nonsteroidal anti-inflammatory drug; CI, confidence interval; M-H, Mantel Haenszel.



Supplementary Fig. 4. Preventive effect on peptic ulcer by *Helicobacter pylori* eradication in long-term NSAID users: chronic NSAID users. NSAID, nonsteroidal anti-inflammatory drug; CI, confidence interval; M-H, Mantel Haenszel.

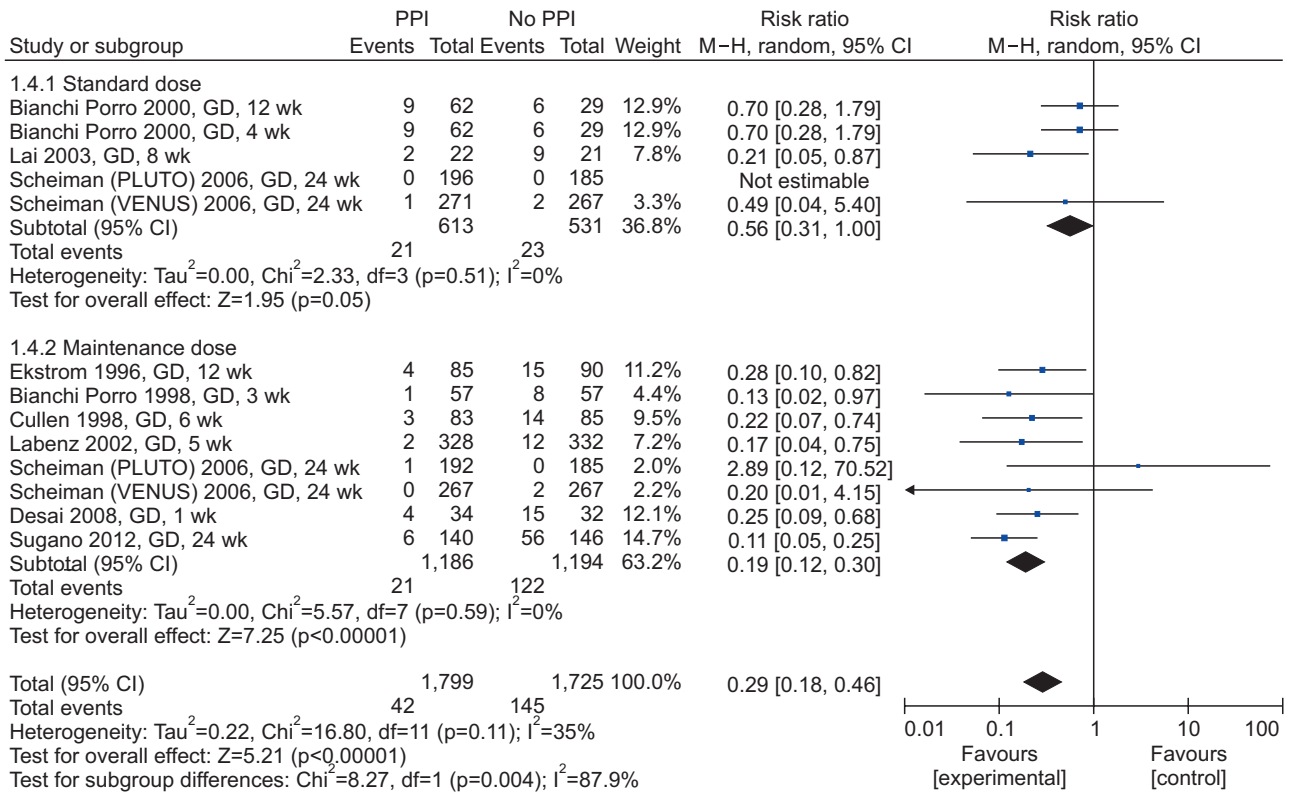


Supplementary Fig. 5. Flowchart of study selection for preventive effect on peptic ulcer by proton pump inhibitors in NSAID users. NSAID, nonsteroidal anti-inflammatory drug; RCT, randomized controlled trial.

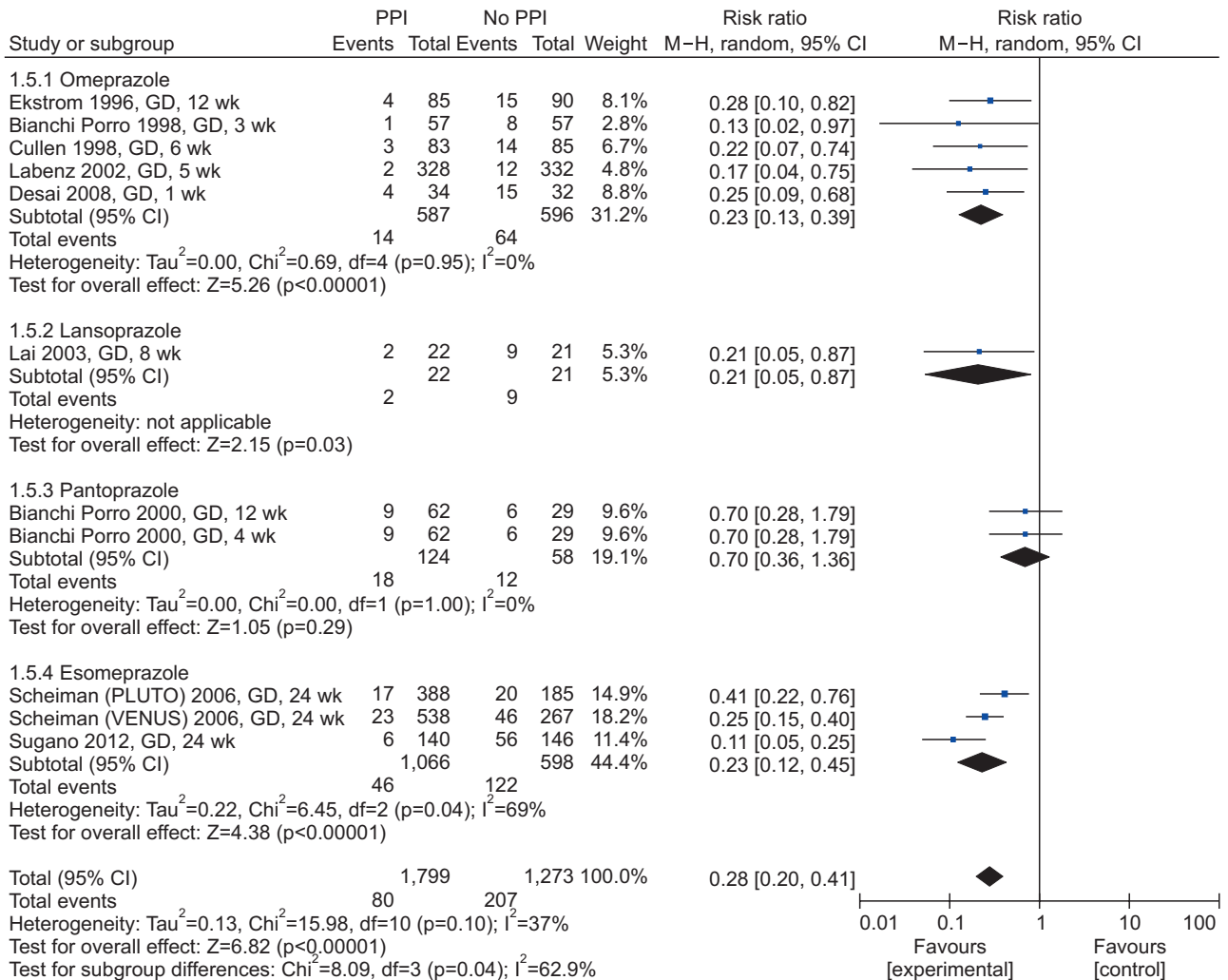


Supplementary Fig. 6. The prevention effect of PPIs for gastroduodenal ulcer in long-term NSAID users. Forest plot, PPI versus placebo (subgroup analysis by assessment timing).

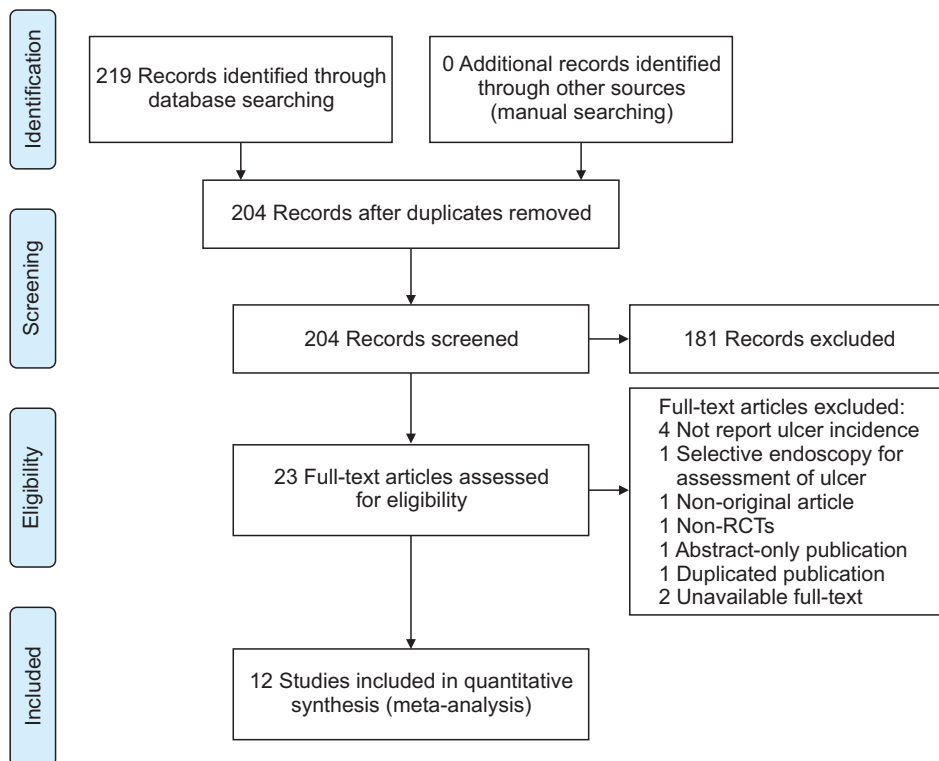
NSAID, nonsteroidal anti-inflammatory drug; PPI, proton-pump inhibitor; CI, confidence interval; M-H, Mantel Haenszel.



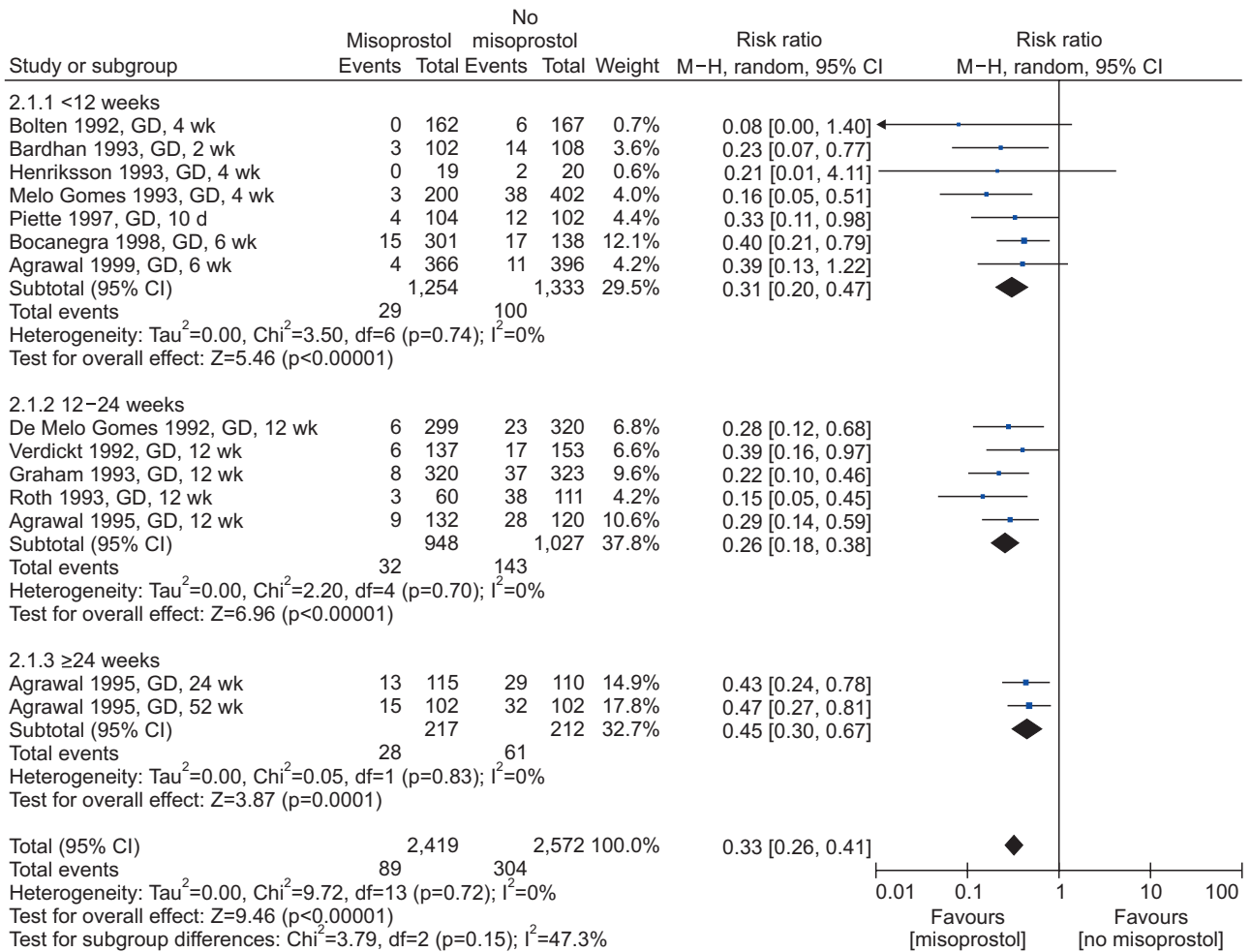
Supplementary Fig. 7. The prevention effect of proton pump inhibitors for gastroduodenal ulcer in long-term NSAID users according to dosage of proton pump inhibitors. Forest plot, PPI versus placebo (subgroup analysis by PPI dosage). NSAID, nonsteroidal anti-inflammatory drug; PPI, proton-pump inhibitor; CI, confidence interval; M-H, Mantel Haenszel.



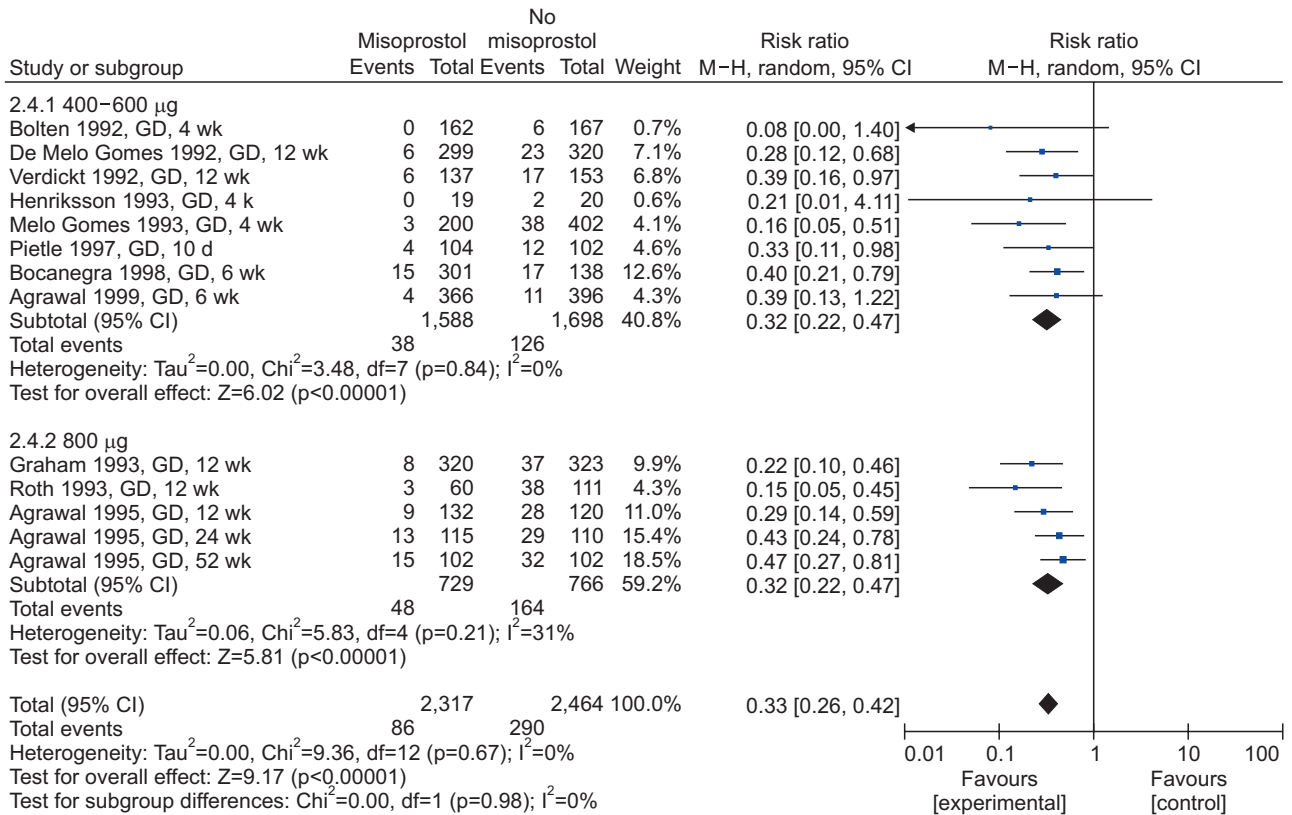
Supplementary Fig. 8. The prevention effect of proton pump inhibitors for gastroduodenal ulcer in long-term NSAID users according to type of proton pump inhibitors. Forest plot, PPI versus placebo (subgroup analysis by type of PPIs). NSAID, nonsteroidal anti-inflammatory drug; PPI, proton-pump inhibitor; CI, confidence interval; M-H, Mantel Haenszel.



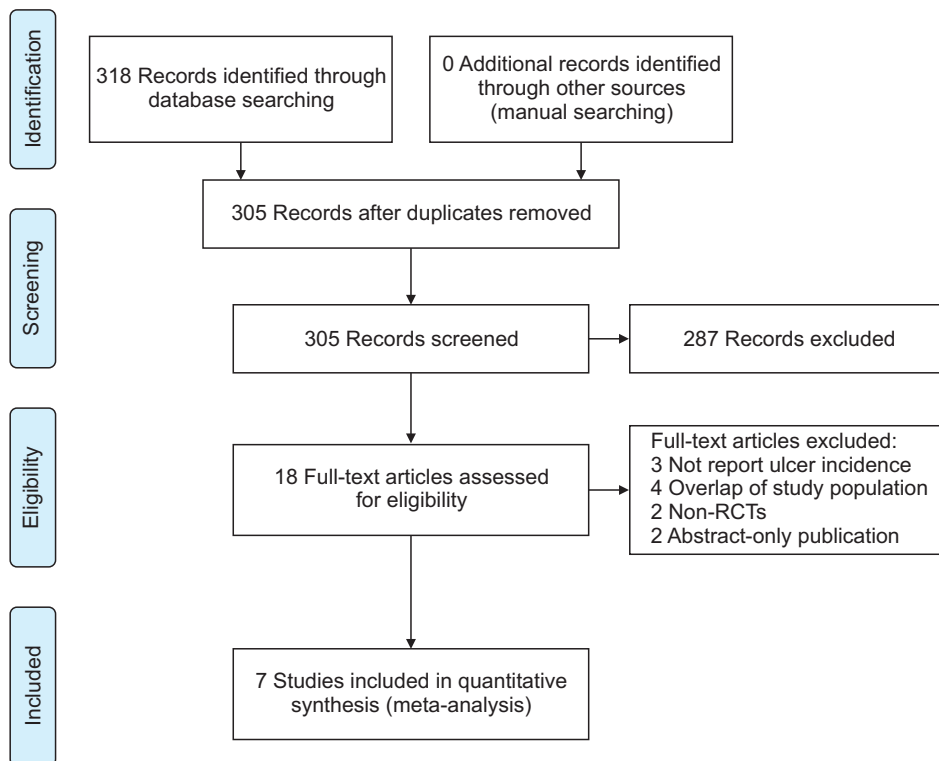
Supplementary Fig. 9. Flowchart of study selection for preventive effect on peptic ulcer by misoprostol in NSAID users. NSAID, nonsteroidal anti-inflammatory drug; RCT, randomized controlled trial.



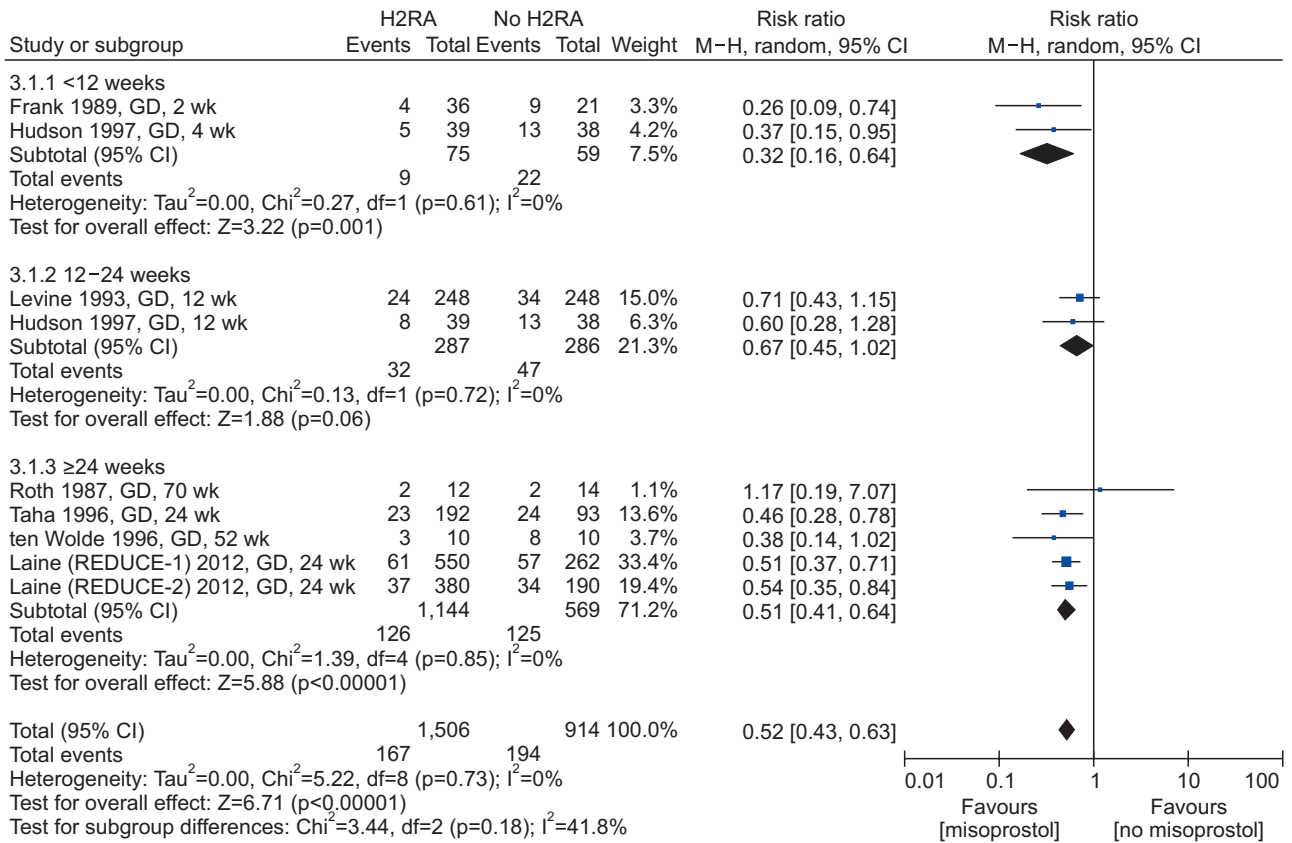
Supplementary Fig. 10. The prevention effect of misoprostol for gastroduodenal ulcer in long-term NSAID users. Forest plot, misoprostol versus placebo (subgroup analysis by assessment timing). NSAID, nonsteroidal anti-inflammatory drug; CI, confidence interval; M-H, Mantel Haenszel.



Supplementary Fig. 11. The prevention effect of misoprostol for gastroduodenal ulcer in long-term NSAID users according to dosage of misoprostol. Forest plot, misoprostol versus placebo (subgroup analysis by misoprostol dosage). NSAID, nonsteroidal anti-inflammatory drug; CI, confidence interval; M-H, Mantel Haenszel.

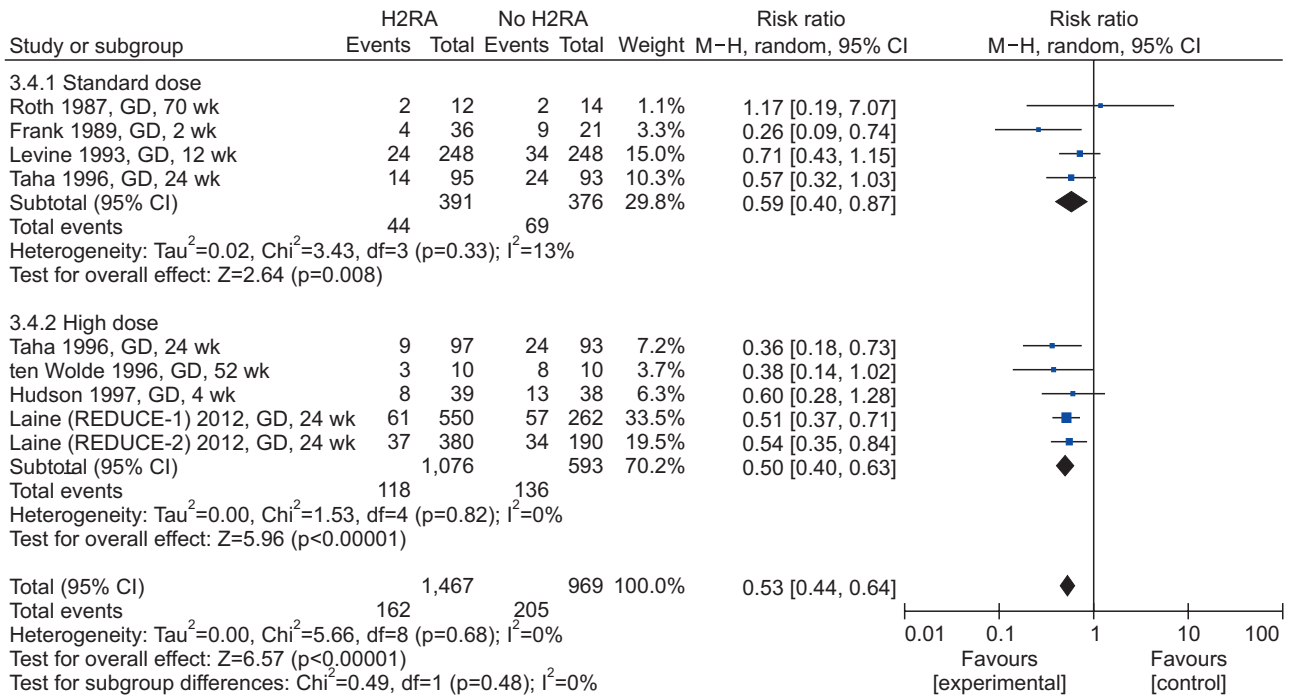


Supplementary Fig. 12. Flowchart of study selection for preventive effect on peptic ulcer by histamine 2 receptor antagonist in NSAID users. NSAID, nonsteroidal anti-inflammatory drug; RCT, randomized controlled trial.



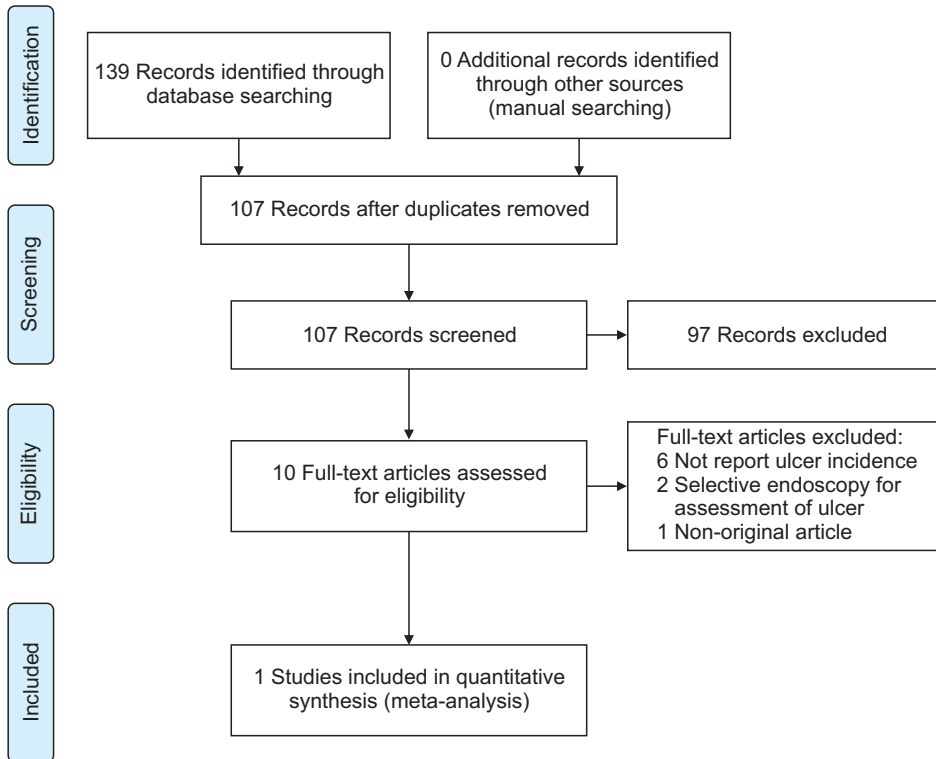
Supplementary Fig. 13. The prevention effect of H2RA for gastroduodenal ulcer in long-term NSAID users. Forest plot, H2RA versus placebo (subgroup analysis by assessment timing).

NSAID, nonsteroidal anti-inflammatory drug; H2RA, histamine-2 receptor antagonist; CI, confidence interval; M-H, Mantel Haenszel.

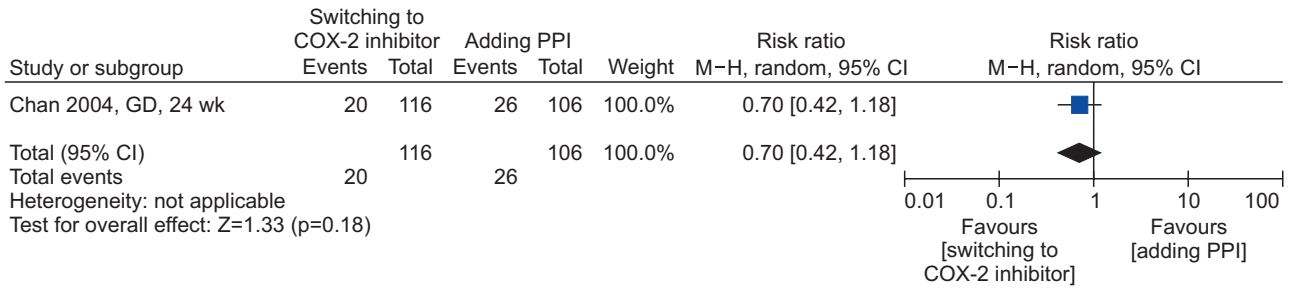


Supplementary Fig. 14. The prevention effect of H2RA for gastroduodenal ulcer in long-term NSAID users according to dosage of H2RA. Forest plot, H2RA versus placebo (subgroup analysis by H2RA dosage).

NSAID, nonsteroidal anti-inflammatory drug; H2RA, histamine-2 receptor antagonist; CI, confidence interval; M-H, Mantel Haenszel.

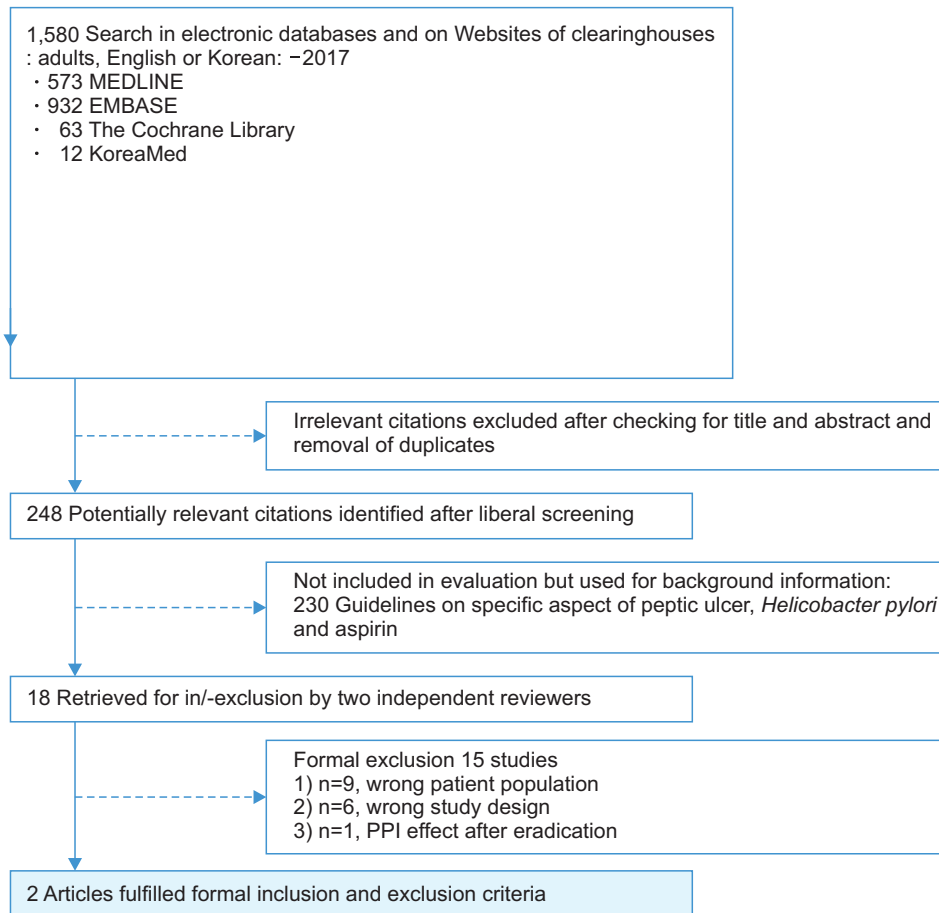


Supplementary Fig. 15. Flowchart of study selection for preventive effect on peptic ulcer between selective COX-2 inhibitors and nonselective COX inhibitors plus PPIs in NSAID users. COX, cyclooxygenase; PPI, proton pump inhibitor; NSAID, nonsteroidal anti-inflammatory drug.

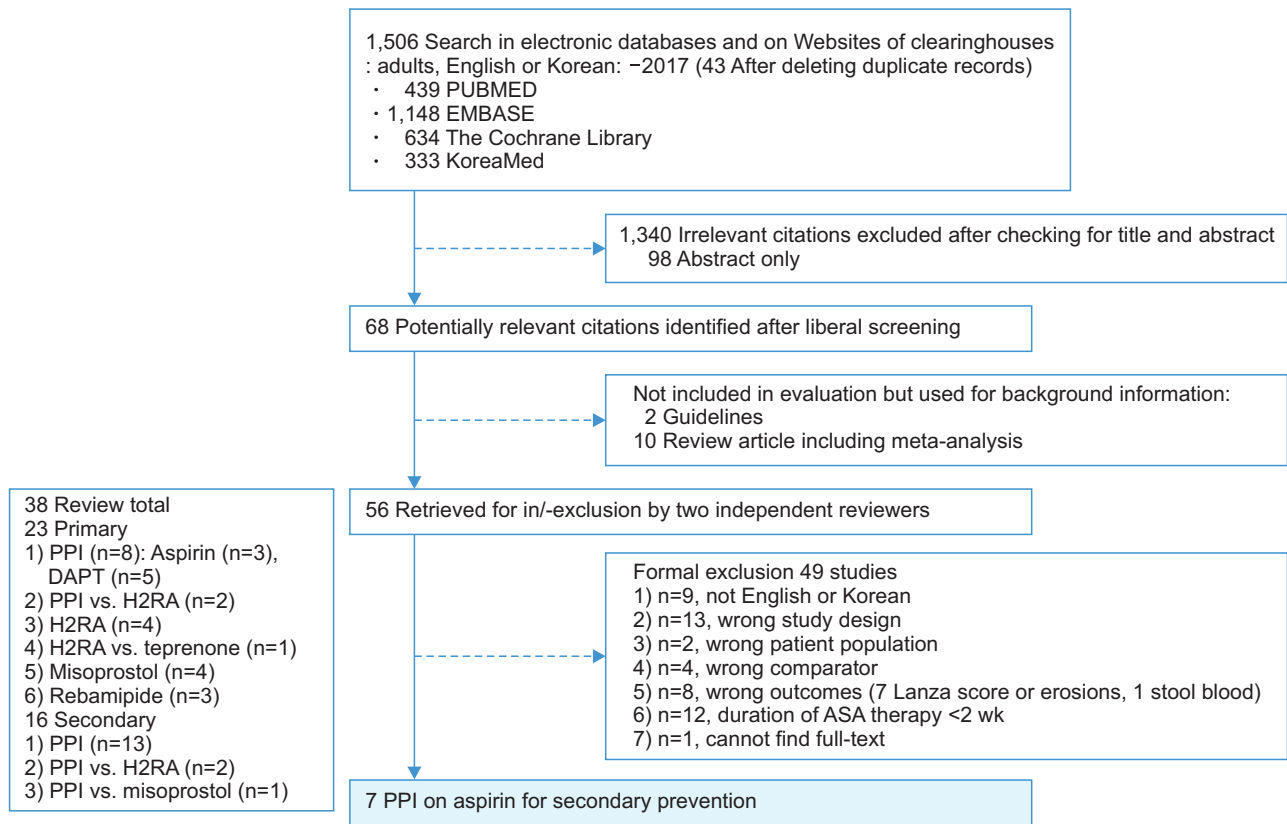


Supplementary Fig. 16. The prevention effect for gastroduodenal ulcer between selective COX-2 inhibitors and nonselective COX inhibitors plus PPIs. Forest plot, COX-2 versus nonselective COX + PPI.

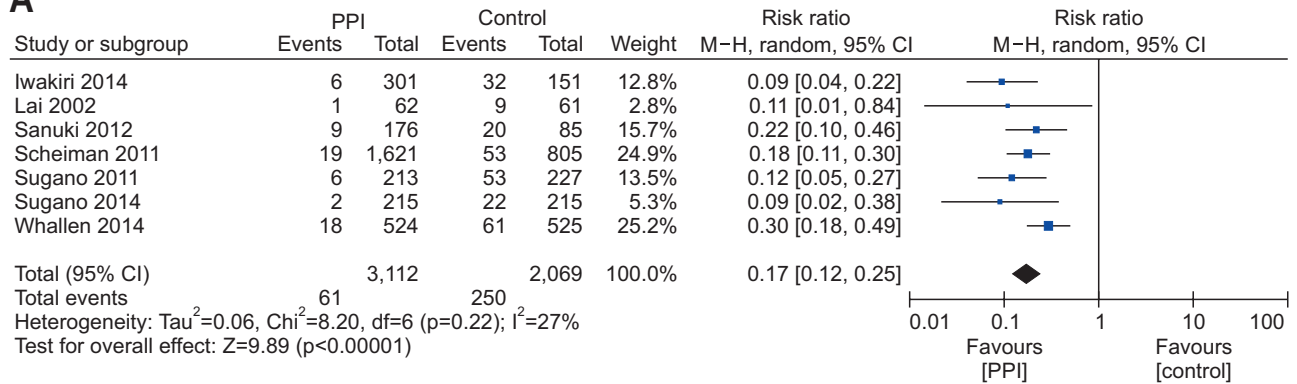
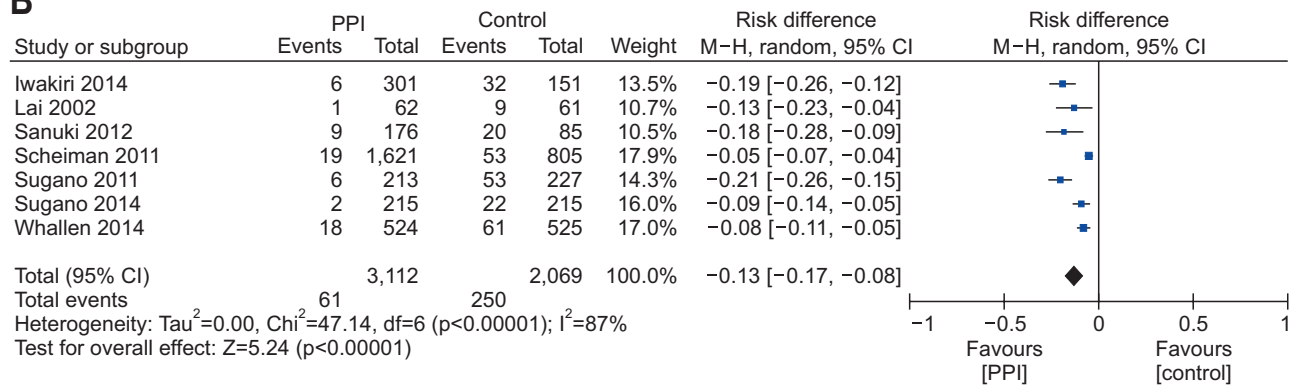
NSAID, nonsteroidal anti-inflammatory drug; COX, cyclooxygenase; PPI, proton pump inhibitor; CI, confidence interval; M-H, Mantel Haenszel.



Supplementary Fig. 17. Flowchart of study selection for preventive effect of complications on peptic ulcer by *Helicobacter pylori* eradication in low dose aspirin users.

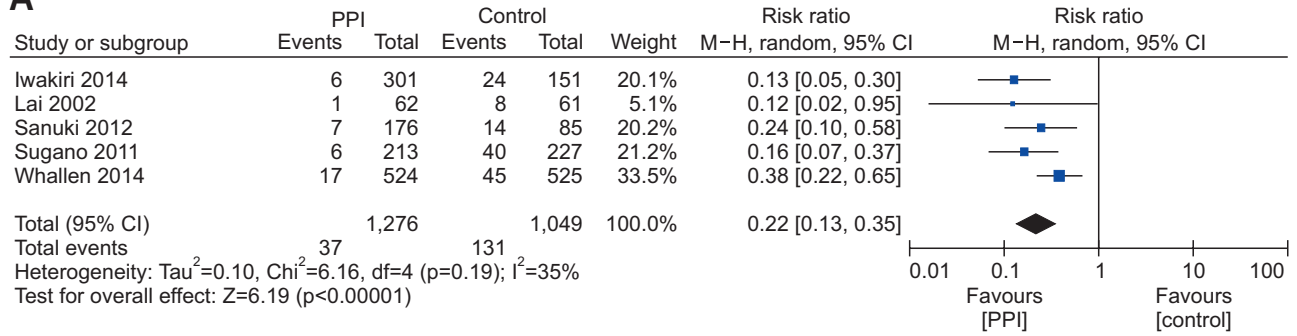


Supplementary Fig. 18. Flowchart of study selection for preventive effect of complications on peptic ulcer by PPI in long-term aspirin users. PPI, proton pump inhibitor; DAPT, dual antiplatelet therapy; H2RA, H2 receptor antagonist; PPI, proton pump inhibitor.

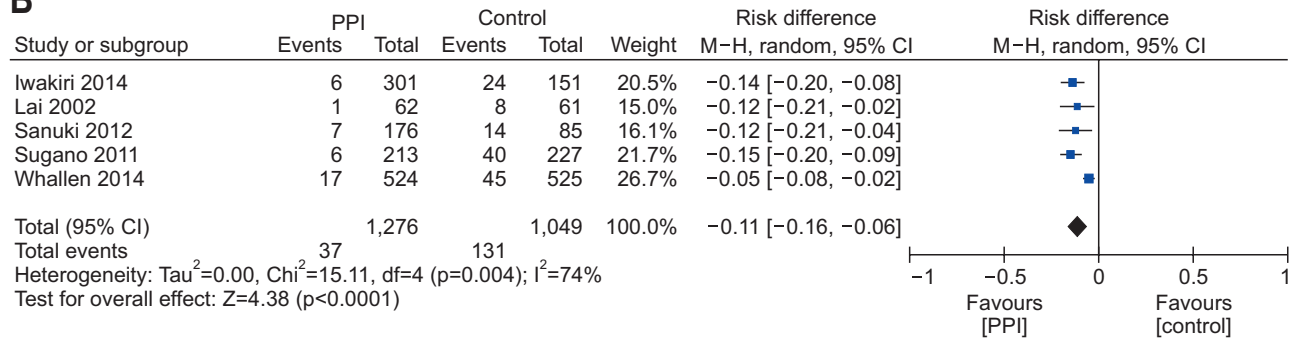
A**B**

Supplementary Fig. 19. The preventive effect of PPIs for peptic ulcer in long-term aspirin users. (A) Odds ratio. (B) Risk difference. PPI, proton pump inhibitor; CI, confidence interval; M-H, Mantel Haenszel.

A

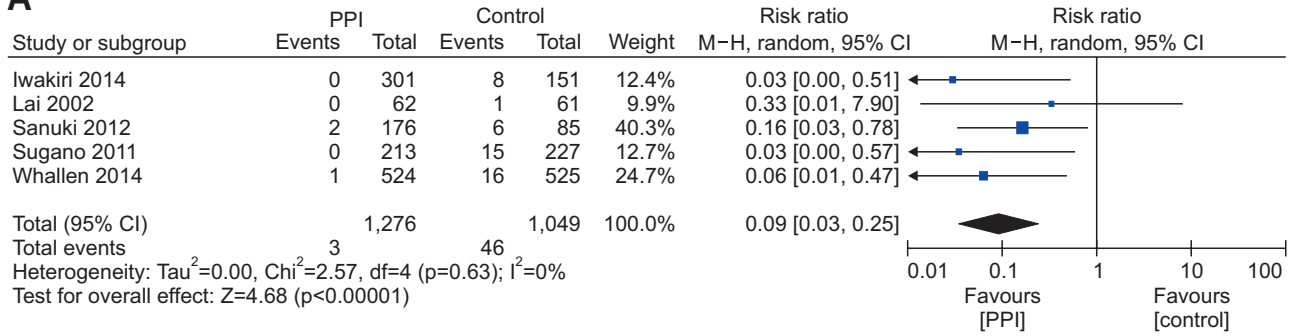


B

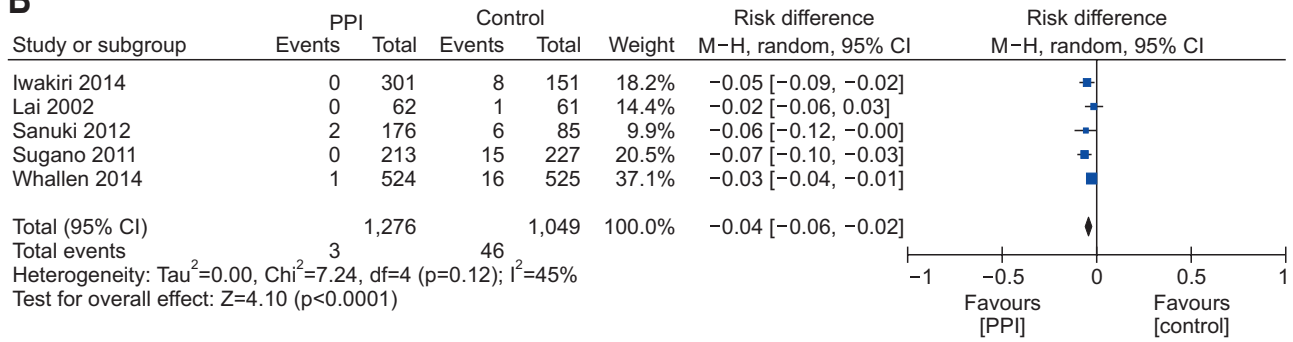


Supplementary Fig. 20. The preventive effect of PPIs for gastric ulcer in long-term aspirin users. (A) Odds ratio. (B) Risk difference. PPI, proton pump inhibitor; CI, confidence interval; M-H, Mantel Haenszel.

A

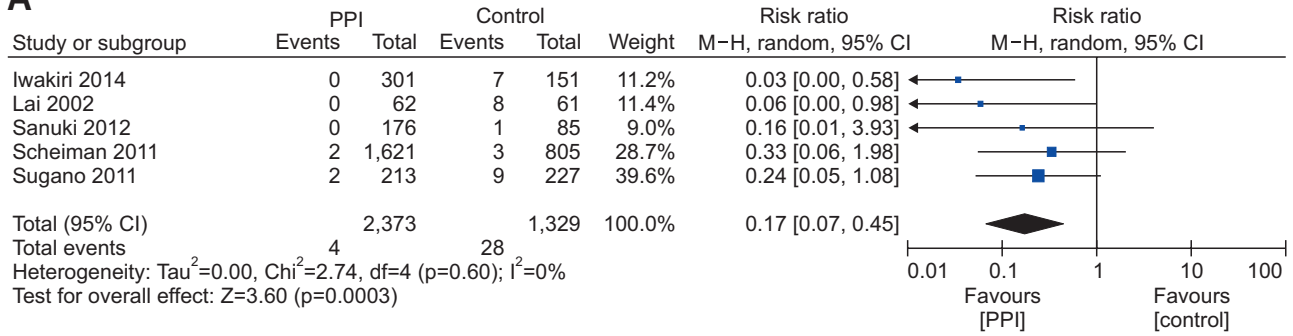


B

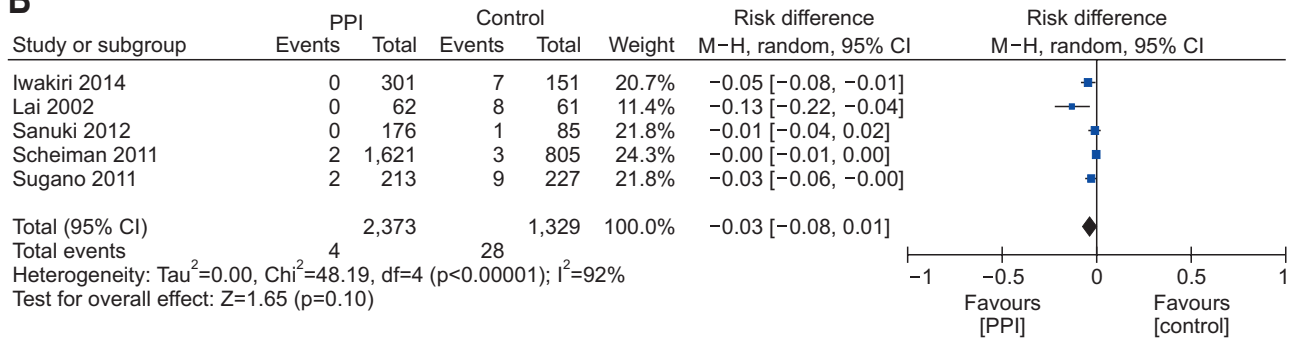


Supplementary Fig. 21. The preventive effect of PPIs for duodenal ulcer in long-term aspirin users. (A) Odds ratio. (B) Risk difference. PPI, proton pump inhibitor; CI, confidence interval; M-H, Mantel Haenszel.

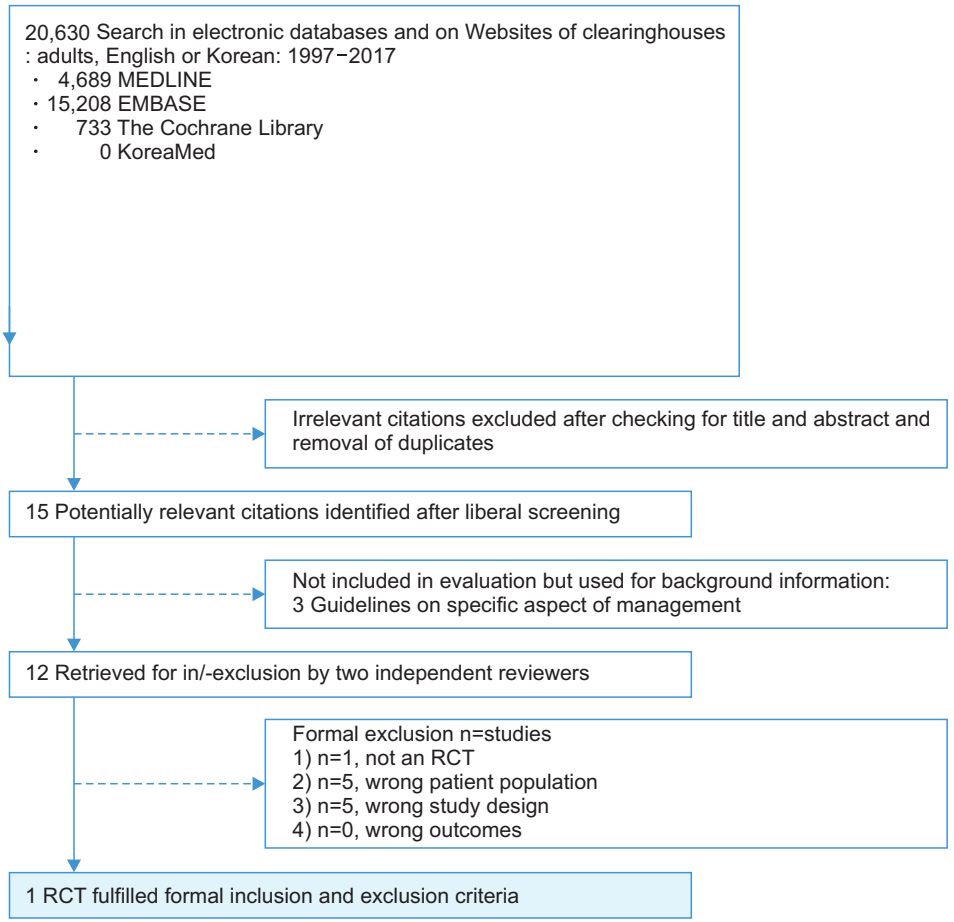
A



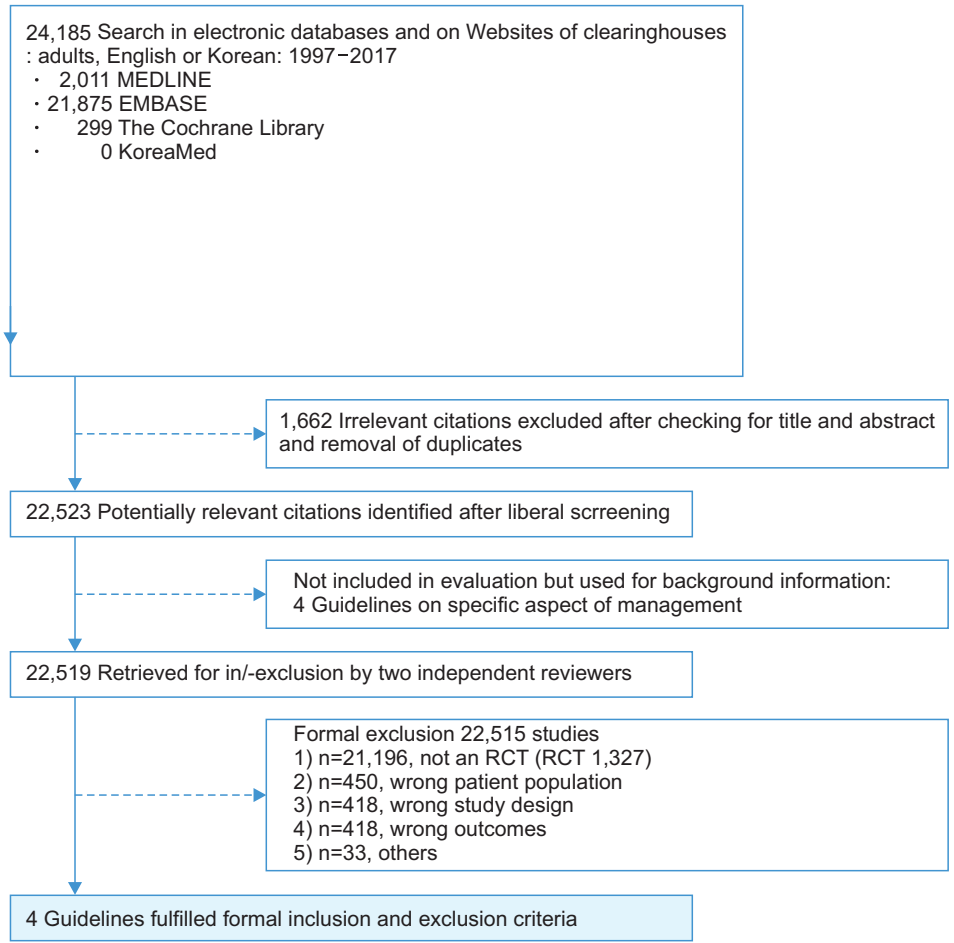
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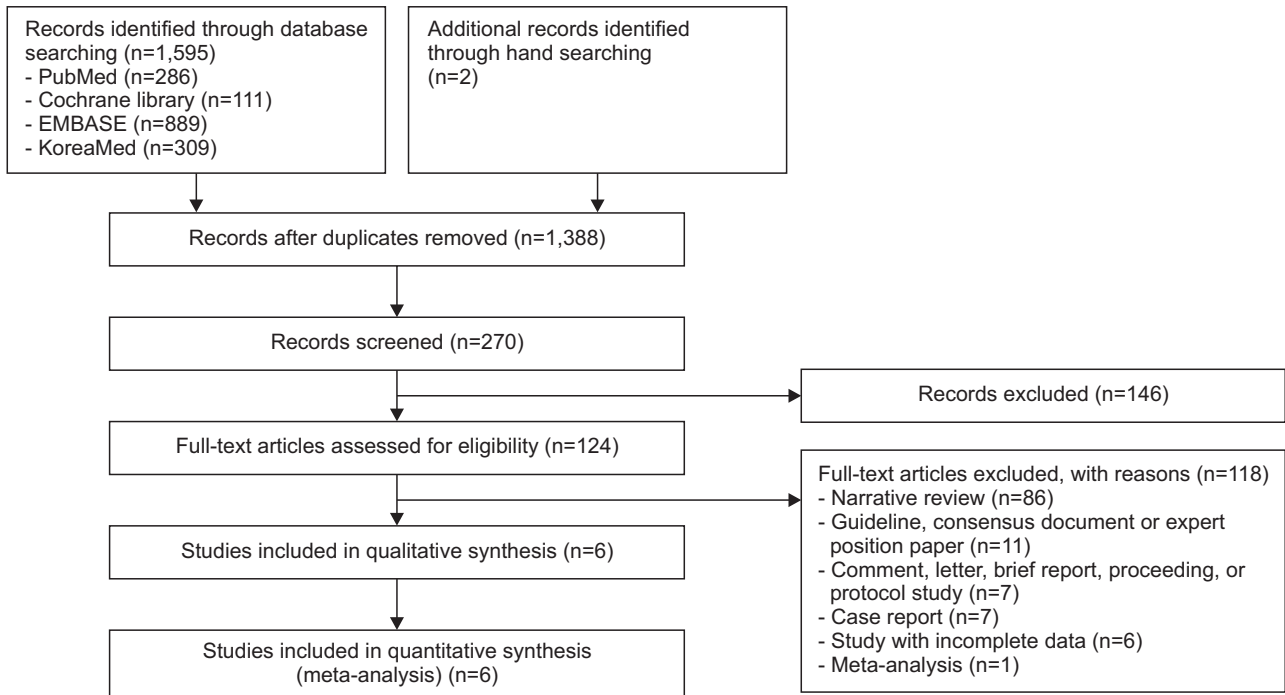
Supplementary Fig. 22. The preventive effect of PPIs for peptic ulcer bleeding in long-term aspirin users. (A) Odds ratio. (B) Risk difference. PPI, proton pump inhibitor; CI, confidence interval; M-H, Mantel Haenszel.



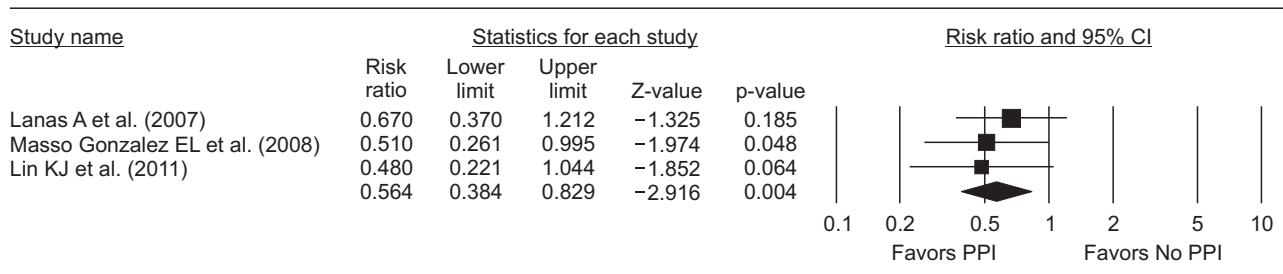
Supplementary Fig. 23. Flowchart of study selection for restarting of antiplatelet agent in antiplatelet user with peptic ulcer bleeding. RCT, randomized controlled trial.



Supplementary Fig. 24. Flowchart of guideline selection for restarting of anticoagulant in long-term anticoagulant user with peptic ulcer bleeding.
RCT, randomized controlled trial.

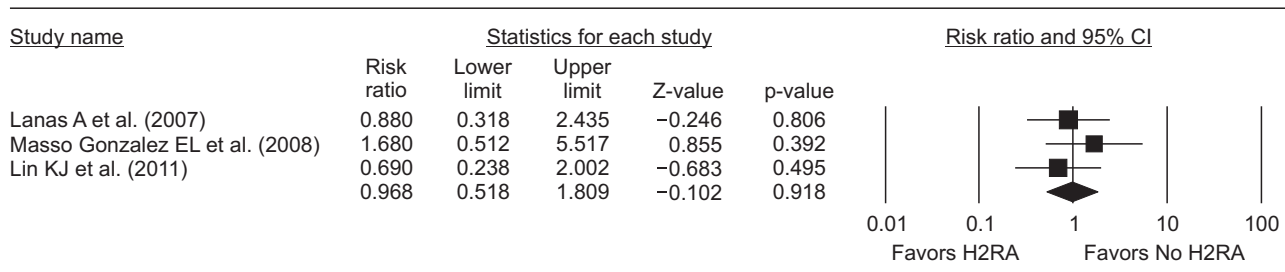


Supplementary Fig. 25. Flowchart of study selection for preventive effect on peptic ulcer bleeding by combination of antiulcer agent in anticoagulant users.



Heterogeneity: $X^2=0.577$, $df=2$ ($p=0.749$); $I^2=0\%$
 Test for overall effect: $Z=-2.916$ ($p=0.004$)

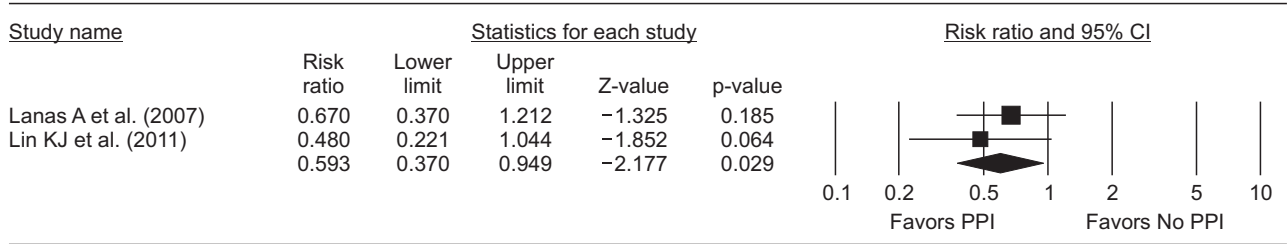
Supplementary Fig. 26. Proton pump inhibitor and dicumarinic-related upper gastrointestinal bleeding. The size of each square is proportional to the study's weight. Diamond is the summary estimate from the pooled studies (random effect model). PPI, proton-pump inhibitor; CI, confidence interval.



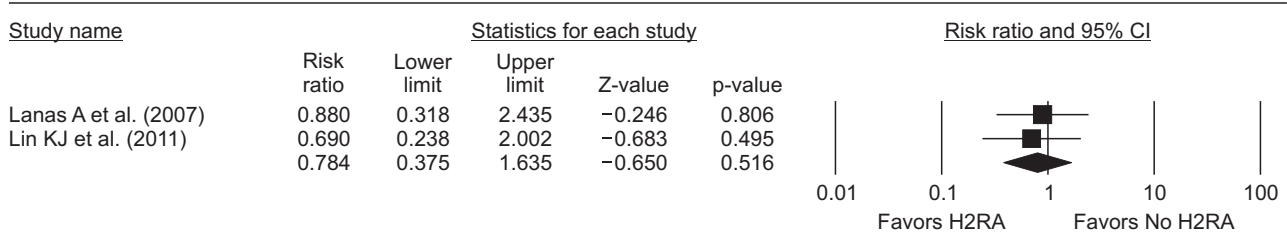
Heterogeneity: $X^2=1.248$, $df=2$ ($p=0.536$); $I^2=0\%$
 Test for overall effect: $Z=-0.102$ ($p=0.918$)

Supplementary Fig. 27. H2RA and dicumarinic-related upper gastrointestinal bleeding. The size of each square is proportional to the study's weight. Diamond is the summary estimate from the pooled studies (random effect model). H2RA, histamine-2 receptor antagonist; CI, confidence interval.

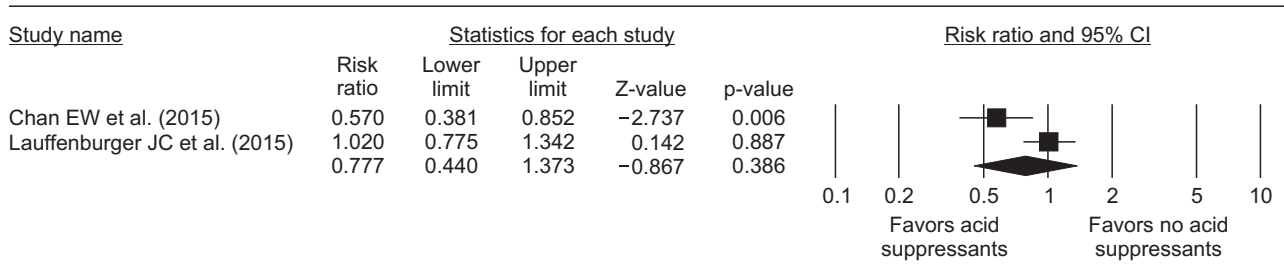
A



B



Supplementary Fig. 28. Sensitivity analysis according to the modifier. (A) PPI and dicumarinic-related upper GIB excluding study by Massó González EL *et al.* (B) H2RA and dicumarinic-related upper GIB excluding study by Massó González EL *et al.* The size of each square is proportional to the study's weight. Diamond is the summary estimate from the pooled studies (random effect model). PPI, proton-pump inhibitor; GIB, gastrointestinal bleeding; H2RA, histamine-2 receptor antagonist; CI, confidence interval.



Heterogeneity: $X^2=5.483$, $df=1$ ($p=0.019$); $I^2=81.761\%$
 Test for overall effect: $Z=-0.867$ ($p=0.386$)

Supplementary Fig. 29. Acid suppressants on dabigatran-related gastrointestinal bleeding. The size of each square is proportional to the study's weight. Diamond is the summary estimate from the pooled studies (random effect model). CI, confidence interval.