

Supplementary Material 1. Search strategy.

PubMed: 1577

#1:anticoagulants [Mesh]

#2: "anticoagulant*" [Title/Abstract] OR "anticoagulant agent*" [Title/Abstract] OR "anticoagulation agent*" [Title/Abstract] OR "indirect thrombin inhibitor*" [Title/Abstract] OR "anticoagulant drug*" [Title/Abstract] OR "Anticoagulant therapy" [Title/Abstract]

#3:heparin [Mesh] OR Fondaparinux [Mesh] OR Heparin, Low-Molecular-Weight [Mesh]

#4:heparin [Title/Abstract] OR enoxaparin* [Title/Abstract] OR dalteparin* [Title/Abstract] OR tinzaparin* [Title/Abstract] OR nadroparin* [Title/Abstract] OR Fondaparinux [Title/Abstract] OR "heparin low molecular weight" [Title/Abstract] OR "heparin low molecular weight" [Title/Abstract] OR "Low Molecular Weight Heparin" [Title/Abstract] OR LMWH [Title/Abstract] OR "Unfractionated heparin" [Title/Abstract] OR UFH [Title/Abstract]

#5:Warfarin [MeSH Terms]

#6:Warfarin [Title/Abstract] OR "vitamin k antagonist*" [Title/Abstract] OR vka* [Title/Abstract]

#7:Dabigatran [MeSH] OR Rivaroxaban [MeSH] OR Factor Xa Inhibitors [MeSH]

#8:dabigatran [Title/Abstract] OR Pradaxa [Title/Abstract] OR rivaroxaban [Title/Abstract] OR Xarelto [Title/Abstract] OR apixaban [Title/Abstract] OR Eliquis [Title/Abstract] OR edoxaban [Title/Abstract] OR Savaysa [Title/Abstract] OR betrixaban [Title/Abstract] OR "factor xa inhibitor*" [Title/Abstract] OR "factor 10a inhibitor*" [Title/Abstract] OR "factor iia inhibitor*" [Title/Abstract] OR "direct thrombin inhibitor*" [Title/Abstract] OR "non vitamin k antagonists oral anticoagulant*" [Title/Abstract] OR "non vitamin k antagonist*" [Title/Abstract] OR noac* [Title/Abstract] OR "direct oral anticoagulant*" [Title/Abstract] OR doac* [Title/Abstract] OR "novel oral anticoagulant*" [Title/Abstract] OR "new oral anticoagulant*" [Title/Abstract] OR "new orally active anticoagulant*" [Title/Abstract] OR bivalirudin [Title/Abstract] OR Argatroban [Title/Abstract]

#9:gastrointestinal hemorrhage [MeSH Terms]

#10: "gastrointestinal hemorrhage" [Title/Abstract] OR "gastrointestinal bleeding" [Title/Abstract] OR GIB [Title/Abstract] OR "gi bleeding" [Title/Abstract] OR "gi hemorrhage" [Title/Abstract] OR "upper gastrointestinal hemorrhage" [Title/Abstract] OR "lower gastrointestinal hemorrhage" [Title/Abstract]

#11:risk factors [MeSH Terms] OR Causality [MeSH Terms] OR probability [MeSH Terms] OR Prognosis [MeSH Terms] OR risk assessment [MeSH Terms]

#12:"risk factor*" [Title/Abstract] OR Causality [Title/Abstract] OR cause* [Title/Abstract] OR probability [Title/Abstract] OR Prognosis [Title/Abstract] OR "risk assessment" [Title/Abstract] OR "Prediction model" [Title/Abstract] OR "Predicting" [Title/Abstract] OR "Predicting risk" [Title/Abstract] OR "Risk prediction" [Title/Abstract] OR "Risk Score" [Title/Abstract] OR "Risk Factor Score" [Title/Abstract] OR "Relative Risk" [Title/Abstract]

#13:#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8

#14:#9 OR #10

#15:#11 OR #12

#16:#13 AND #14 AND #15

Cochrane: 280

#1 MeSH descriptor: [anticoagulants] explode all trees

#2 (Anticoagulant* OR "anticoagulant agent*" OR "Anticoagulation Agent*" OR "indirect thrombin inhibitor*" OR "Anticoagulant Drug*" OR "Anticoagulant therapy"):ti,ab,kw

#3 MeSH descriptor: [heparin] explode all trees

#4 MeSH descriptor: [Fondaparinux] explode all trees

#5 MeSH descriptor: [Heparin, Low-Molecular-Weight] explode all trees

#6 (Heparin OR Enoxaparin* OR dalteparin* OR tinzaparin* OR nadroparin* OR Fondaparinux OR "Heparin, Low-Molecular-Weight" OR "Low Molecular Weight Heparin" OR LMWH OR "Unfractionated heparin" OR UFH):ti,ab,kw

#7:MeSH descriptor: [warfarin] explode all trees

#8:(Warfarin OR "vitamin K antagonist*" OR VKA*):ti,ab,kw

#9:MeSH descriptor: [Dabigatran] explode all trees

#10:MeSH descriptor: [Rivaroxaban] explode all trees

#11:MeSH descriptor: [Factor Xa Inhibitors] explode all trees

#12:("dabigatran" OR "Pradaxa" OR "rivaroxaban" OR "Xarelto" OR "apixaban" OR "Eliquis" OR (Rivaroxaban OR Xarelto OR dabigatran OR Pradaxa OR apixaban OR Eliquis OR edoxaban OR Savaysa OR betrixaban OR "factor Xa inhibitor*" OR "factor 10a inhibitor*" OR "factor Ila inhibitor*" OR "direct thrombin inhibitor*" OR "non-vitamin K antagonists oral anticoagulant*" OR "non-vitamin K antagonist*" OR NOAC* OR "direct oral anticoagulant*" OR DOAC* OR "novel oral anticoagulant*" OR "new oral anticoagulant*" OR new orally active anticoagulant* OR bivalirudin OR Argatroban):ti,ab,kw

#13:MeSH descriptor: [gastrointestinal hemorrhage] explode all trees
 #14:(“gastrointestinal hemorrhage” OR “gastrointestinal bleeding” OR GIB OR “GI bleeding” OR “GI hemorrhage” OR “upper gastrointestinal hemorrhage” OR “lower gastrointestinal hemorrhage”):ti,ab,kw
 #15:MeSH descriptor: [risk factors] explode all trees
 #16: MeSH descriptor:[Causality] explode all trees
 #17:MeSH descriptor:[probability] explode all trees
 #18:MeSH descriptor:[Prognosis] explode all trees
 #19:MeSH descriptor:[risk assessment] explode all trees
 #20:(“risk factor*” OR Causality OR cause* OR probability OR Prognosis OR “risk assessment” OR “Prediction model” OR Predicting OR “Predicting risk” OR “Risk prediction” OR “Risk Score” OR “Risk Factor Score” OR “Relative Risk”):ti,ab,kw
 #21:#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12
 #22:#13 OR #14
 #23:#15 OR #16 OR #17 OR #18 OR #19 OR #20
 #24:#21 AND #22 AND #23
 Web of science: 769
 #1:TS=Anticoagulant* OR “anticoagulant agent*” OR “Anticoagulation Agent*” OR “indirect thrombin inhibitor*” OR “Anticoagulant Drug*” OR “Anticoagulant therapy”
 #2:TS=Heparin OR Enoxaparin* OR dalteparin* OR tinzaparin* OR nadroparin* OR Fondaparinux OR “Heparin, Low-Molecular-Weight” OR “Low Molecular Weight Heparin” OR LMWH OR “Unfractionated heparin” OR UFH
 #3:TS=Warfarin OR “vitamin K antagonist*” OR VKA*
 #4:TS= Rivaroxaban OR Xarelto OR dabigatran OR Pradaxa OR apixaban OR Eliquis OR edoxaban OR Savaysa OR betrixaban OR “factor Xa inhibitor*” OR “factor 10a inhibitor*” OR “factor Ila inhibitor*” OR “direct thrombin inhibitor*” OR “non-vitamin K antagonists oral anticoagulant*” OR “non-vitamin K antagonist*” OR NOAC* OR “direct oral anticoagulant*” OR DOAC* OR “novel oral anticoagulant*” OR “new oral anticoagulant*” OR new orally active anticoagulant* OR bivalirudin OR Argatroban
 #5:TS=“gastrointestinal hemorrhage” OR “gastrointestinal bleeding” OR GIB OR “GI bleeding” OR “GI hemorrhage” OR “upper gastrointestinal hemorrhage” OR “lower gastrointestinal hemorrhage”
 #6:TS=“risk factor*” OR Causality OR cause* OR probability OR Prognosis OR “risk assessment” OR “Prediction model” OR Predicting OR “Predicting risk” OR “Risk prediction” OR “Risk Score” OR “Risk Factor Score” OR “Relative Risk”
 #7:#1 OR #2 OR #3 OR #4
 #8:#7 AND #5 AND #6
 Embase: 10146
 #1 ‘anticoagulant agent’/exp
 #2 anticoagulant*:ti,ab,kw OR ‘anticoagulant agent*’:ti,ab,kw OR ‘anticoagulation agent*’:ti,ab,kw OR ‘indirect thrombin inhibitor*’:ti,ab, kw OR ‘anticoagulant drug*’:ti,ab,kw OR ‘anticoagulant therapy’:ti,ab,kw
 #3 ‘heparin’/exp OR ‘fondaparinux’/exp OR ‘low molecular weight heparin’/exp
 #4heparin:ti,ab,kw OR fondaparinux:ti,ab,kw OR ‘heparin, low-molecular-weight’:ti,ab,kw OR ‘low molecular weight heparin’:ti,ab,kw OR lmwh:ti,ab,kw OR ‘unfractionated heparin’:ti,ab,kw OR ufh:ti,ab,kw OR enoxaparin*:ti,ab,kw OR dalteparin*:ti,ab,kw OR tinzaparin*:ti,ab,kw OR nadroparin*:ti,ab,kw
 #5‘warfarin’/exp
 #6warfarin:ti,ab,kw OR ‘vitamin k antagonist*’:ti,ab,kw OR vka*:ti,ab,kw
 #7 ‘dabigatran’/exp OR ‘rivaroxaban’/exp OR ‘apixaban’/exp OR ‘edoxaban’/exp OR ‘blood clotting factor 10a inhibitor’/exp OR ‘betrixaban’/exp OR ‘bivalirudin’/exp OR ‘argatroban’/exp
 #8rivaroxaban:ti,ab,kw OR xarelto:ti,ab,kw OR dabigatran:ti,ab,kw OR pradaxa:ti,ab,kw OR apixaban:ti,ab,kw OR eliquis:ti,ab,kw OR edoxaban:ti,ab,kw OR savaysa:ti,ab,kw OR betrixaban:ti,ab,kw OR ‘factor xa inhibitor*’:ti,ab,kw OR ‘factor 10a inhibitor*’:ti,ab,kw OR ‘factor iia inhibitor*’:ti,ab,kw OR ‘direct thrombin inhibitor*’:ti,ab,kw OR ‘non-vitamin k antagonists oral anticoagulant*’:ti,ab,kw OR ‘non-vitamin k antagonist*’:ti,ab,kw OR noac*:ti,ab,kw OR ‘direct oral anticoagulant*’:ti,ab,kw OR doac*:ti,ab,kw OR ‘novel oral anticoagulant*’:ti,ab,kw OR ‘new oral anticoagulant*’:ti,ab,kw OR ‘new orally active anticoagulant*’:ti,ab,kw OR bivalirudin:ti,ab,kw OR argatroban:ti,ab,kw
 #9‘gastrointestinal hemorrhage’/exp
 #10‘gastrointestinal hemorrhage’:ti,ab,kw OR ‘gastrointestinal bleeding’:ti,ab,kw OR gib:ti,ab,kw OR ‘gi bleeding’:ti,ab,kw OR ‘gi hemorrhage’:ti,ab,kw OR ‘upper gastrointestinal hemorrhage’:ti,ab,kw OR ‘lower gastrointestinal hemorrhage’:ti,ab,kw
 #11‘risk factor’/exp OR ‘causality’/exp OR ‘probability’/exp OR ‘prognosis’/exp OR ‘risk assessment’/exp
 #12‘risk factor*’:ti,ab,kw OR causality:ti,ab,kw OR cause*:ti,ab,kw OR probability:ti,ab,kw OR prognosis:ti,ab,kw OR ‘risk assess-

ment':ti,ab,kw OR 'prediction model':ti,ab,kw OR predicting:ti,ab,kw OR 'predicting risk':ti,ab,kw OR 'risk prediction':ti,ab,kw OR 'risk score':ti,ab,kw OR 'risk factor score':ti,ab,kw OR 'relative risk':ti,ab,kw
#13:#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8
#14:#9 OR #10
#15:#11 OR #12
#16:#13 AND #14 AND #15