



Article scientifique

Article

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Appendix

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American Society of Hematology 2021 guidelines on the use of
anticoagulation for thromboprophylaxis in patients with COVID-19

Cuker, Adam; Tseng, Eric K; Nieuwlaat, Robby; Angchaisuksiri, Pantep; Blair, Clifton; Dane, Kathryn;
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Supplement 6: Search Strategy, Anticoagulation Intensity Effect

Coronavirus and antithrombotics Search narrative, 20 August 2020

The following databases were searched in August 2020:

Cochrane COVID-19 study register (20 August 2020) (includes records from ClinicalTrials.gov, WHO ICTRN, and PubMed)

EMBASE (1974 to, 19 August 2020)

Epistemonikos COVID-19 Evidence (20 August 2020) (includes records from Cochrane Database of Systematic Reviews, Pubmed, EMBASE, CINAHL, PsycINFO, LILACS, Database of reviews of Effects, The Campbell Collaboration online library, JBI Database of Systematic Reviews and Implementation Reports, EPPI-Centre Evidence Library)

MEDLINE (1946 to, 19 August 2020)

WHO Global Research Database (COVID-19) (20 August 2020)

COCHRANE COVID-19

(<https://covid-19.cochrane.org/>)

anticoagula* or anti-coagula* or coagulation or thromb* or antithromb* or heparin or LMWH* or dalteparin or enoxaparin or nadroparin or heparinoids or Acenocoumarol or Phenprocoumon or warfarin or ardeparin or tinzaparin or certoparin or reviparin or danaparoid or fluindione or "antivitamin k" or fraxiparin* or enoxaparin* or clexane or klexane or lovenox or fragmin or ardeparin* or normiflo or tinzaparin or logiparin or innohep or certoparin or sandoparin or reviparin or clivarin* or danaproid or danaparoid or organan or antixarin or bemiparin* or hibor or zibor or ivor or badyket or semuloparin or parnaparin or tedelparin or fluxum or lohepa or lowhepa or parvoparin or seleparin* or tedelgliparin or lomoparan or organan or sulodexide or zivor or embolex or xaparin or clivarine or acenocoumarol or sythrom or sinthrome or bivalirudin or angiomas or anglox or previscan or marcumar or marcoumar or "vitamin K antagonist*" or coumadin or marevan or Jantoven or Coumadine or waran or rodex or Hepalean or Calcilean or Calciparine or Liquaemin or Liquemin or Multiparin or Novoheparin or Eparina or Hep-lock or Heparinate or Heparinic acid or Panheprin or Hepalean or Heparin Leo or Heparin Lock or fondaparinux or arixtra or oac or noacs or doac or dabigatran or melagatran or "factor Xa" or "factor 10a" or fXa or xaban* or apixaban or betrixaban or eribaxaban or otamixaban or razaxaban or rivaroxaban or darexaban or edoxaban or Eliquis or "BMS-562247" or argatroban or Acova or PRT054021 or dabigatran or pradaxa or "BIBR 1048" or "BIBR 953" or "DU-176" or Savaysa or Xarelto or "BAY 59 7939" or "BAY 597939" or argatroban or acova

Results: 1,719 citations from 1,637 studies

Embase <1974 to 2020 August 19>, and OVID Medline Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present

Filename: z-COVID_antithrombotics_Medline and EMBASE

- 1 exp Coronaviridae/ (46554)
- 2 exp Coronaviridae Infections/ (47428)
- 3 coronavirus*.mp. or (COVID or "covid-19" or COVID19 or nCoV or hCoV or 19nCoV or 2019nCoV or 2019-nCoV or SARS-CoV-2 or SARS-CoV or SARSCOV2 or SARSCOV-2 or SARS2 or MERS-CoV).ti,ab,kw. (121773)
- 4 (coronavirus* or corona virus* or betacoronavirus* or OC43 or NL63 or 229E or HKU1 or HCoV* or ncov* or covid* or sars-cov* or sarscov* or Sars-coronavirus* or Severe Acute Respiratory Syndrome Coronavirus*).mp. (129276)
- 5 or/1-4 (142198)
- 6 5 not (SARS or SARS-CoV or MERS or MERS-CoV or Middle East respiratory syndrome or camel* or dromedar* or equine or coronary or coronal or covidence* or covidien or influenza virus or HIV or bovine or calves or TGEV or feline or porcine or BCoV or PED or PEDV or PDCoV or FIPV or FCoV or SADS-CoV or canine or CCoV or zoonotic or avian influenza or H1N1 or H5N1 or H5N6 or IBV or murine corona*).mp. (73010)
- 7 ((pneumonia or covid* or coronavirus* or corona virus* or ncov* or 2019-ncov or sars*).mp. or exp pneumonia/) and (Wuhan or Hubei or China or Chinese).mp. (23655)
- 8 (2019-ncov or ncov19 or ncov-19 or 2019-novel CoV or 19nCoV or sars-cov2 or sars-cov-2 or sarscov2 or sarscov-2 or Sars-coronavirus2 or Sars-coronavirus-2 or SARS-like coronavirus* or coronavirus-19 or covid19 or covid-19 or covid 2019 or ((novel or new or nouveau or "19" or "2019") adj2 (CoV or nCoV or covid or coronavirus* or corona virus or Pandemi*2)) or ((covid or covid19 or covid-19) and pandemic*2) or (coronavirus* and pneumonia)).mp. (94463)
- 9 COVID-19.rx,px,ox. or severe acute respiratory syndrome coronavirus 2.os. (18318)
- 10 COVID-19.mp. or severe acute respiratory syndrome coronavirus 2.dj,dq. (80351)
- 11 or/6-10 (118927)
- 12 11 and ((2019* or 202*).dp. or 20190101:20301231.(ep). or "2019".yr. or 202*.yr.) (93289)

13 limit 11 to dd=20191101-20301231 [Limit not valid in Ovid MEDLINE(R),Ovid MEDLINE(R) Daily Update,Ovid MEDLINE(R) In-Process,Ovid MEDLINE(R) Publisher; records were retained] (73039)

14 13 use oemezd (16415)

15 12 or 14 (93307)

Annotation: COVID terms

16 animals/ not humans/ (5628638)

17 nonhuman/ (6274031)

18 exp Animal Experiment/ (2593302)

19 exp Experimental Animal/ (681168)

20 animal model/ (1402535)

21 exp Rodent/ (6807658)

22 (rat or rats or mouse or mice).ti. (2810156)

23 16 or 17 or 18 or 19 or 20 or 21 or 22 (13811545)

24 15 not 23 (83757)

25 24 use oemezd (38064)

Annotation: COVID records on EMBASE (filter only applies to EMBASE)

26 animals/ not humans/ (5628638)

27 exp Animals, Laboratory/ (1558287)

28 exp Animal Experimentation/ (2593302)

29 exp Models, Animal/ (1973822)

30 exp Rodentia/ (6807658)

31 (rat or rats or mouse or mice).ti. (2810156)

32 or/26-31 (10724583)

33 15 not 32 (92033)

34 33 use ppez (45667)

Annotation: COVID records on MEDLINE (filter only applies to MEDLINE)

35 25 or 34 (83731)

Annotation: Covid with animal studies removed...

36 exp Heparin/ or heparin*.mp. or exp heparin derivative/ (323243)

37 exp Heparin, Low-Molecular-Weight/ (75893)

38 dalteparin/ or enoxaparin/ or nadroparin/ or heparinoids/ or Acenocoumarol/ or Phenprocoumon/ or warfarin/ or ardeparin/ or tinzaparin/ or certoparin/ or reviparin/ or danaparoid/ or bemiparin/ or fluindione/ or antivitamin k/ or warfarin/ or fondaparinux/ (162836)

39 (LMWH or LMWHs or low molecular weight heparin or nadroparin or fraxiparin* or enoxaparin* or clexane or klexane or lovenox or dalteparin or fragmin or ardeparin* or normiflo or tinzaparin or logiparin or innohep or certoparin or sandoparin or reviparin or clivarin* or danaproid or danaparoid or organan or antixarin or bemiparin* or hibor or zibor or ivor or badyket or semuloparin or parnaparin or tedelparin or fluxum or lohepa or lowhepa or parvoparin or seleparin* or tedelgliparin or lomoparan or organan or sulodexide or zivor or embolex or xaparin or clivarine or acenocoumarol or sythrom or sinthrome or bemiparin or bivalirudin or angiomax or anglox or fluindione or previscan or phenprocoumon or marcumar or marcoumar or "vitamin K antagonist*" or warfarin or coumadin or marevan or Jantoven or Coumadine or waran or rodex or fondaparinux ro arixtra).mp. (214346)

40 (FR-860 or FR 860 or FR860 or PK-10,169 or PK 10,169 or PK10,169 or PK-10169 or PK 10169 or PK10169 or EMT-967 or EMT 967 or EMT967 or EMT-966 or EMT 966 or EMT966 or CY 216 or CY-216 or CY216 or LMF CY-216 or LMF CY 216 or LMF CY216).mp. (470)

41 (FR-860 or FR 860 or FR860 or PK-10,169 or PK 10,169 or PK10,169 or PK-10169 or PK 10169 or PK10169 or EMT-967 or EMT 967 or EMT967 or EMT-966 or EMT 966 or EMT966 or CY 216 or CY-216 or CY216 or LMF CY-216 or LMF CY 216 or LMF CY216).mp. (470)

42 or/36-41 (437136)

43 exp Heparin/ or "Heparin, Low-Molecular-Weight"/ (227943)

44 (un?fract* adj heparin).mp. (15601)

45 UFH.mp. (6077)

46 ((sodium or alpha) adj1 heparin).mp. (2235)

47 (Hepalean or Calcilean or Calciparine or Liquaemin or Liquemin or Multiparin or Novoheparin or Eparina or Hep-lock or Heparinate or Heparinic acid or Panheprin or Hepalean or Heparin Leo or Heparin Lock).mp. (2277)

48 or/43-47 (231392)
 49 42 or 48 (437300)
 50 34 and 49 (245)
 Annotation: Covid + LMWHs (Medline records)
 51 25 and 49 (469)
 Annotation: COVID + LWMHs (EMBASE records)
 52 50 or 51 (714)
 53 remove duplicates from 52 (538)
 Annotation: COVID + LMWHs (Medline or EMBASE) with duplicates removed
 54 Rivaroxaban/ (21189)
 55 factor Xa Inhibitors/ (8905)
 56 Factor Xa/ or antithrombins/ or Dabigatran/ (41364)
 57 (thrombin and inhib*).mp. (66009)
 58 (oac or noacs or doac).mp. (23221)
 59 (dabigatran or melagatran or factor Xa or factor 10a or fXa or xaban* or apixaban or betrixaban or eribaxaban or otamixaban or razaxaban or rivaroxaban or darexaban or edoxaban or Eliquis or "BMS-562247" or argatroban or Acova or PRT054021 or dabigatran or pradaxa or "BIBR 1048" or "BIBR 953" or "DU-176" or Savaysa or Xarelto or "BAY 59 7939" or "BAY 597939" or argatroban or acova).mp. (65428)
 60 or/54-59 (142061)
 61 34 and 60 (52)
 Annotation: COVID + DOACs (Medline)
 62 Factor Xa Inhibitors.mp. or exp blood clotting factor 10a inhibitor/ (35673)
 63 Factor Xa.mp. or exp blood clotting factor 10a/ (25757)
 64 Antithrombins.mp. or exp antithrombin/ (16976)
 65 exp dabigatran/ or Dabigatran.mp. (21933)
 66 factor 10a.mp. (11884)
 67 fxa.mp. (5331)
 68 xaban*.mp. (71)
 69 (apixaban or Eliquis or "BMS-562247").mp. or exp apixaban/ (16565)
 70 (betrixaban or PRT054021).mp. or exp betrixaban/ (856)
 71 eribaxaban.mp. or exp eribaxaban/ (57)
 72 otamixaban.mp. or exp otamixaban/ (288)
 73 razaxaban.mp. or exp razaxaban/ (155)
 74 (rivaroxaban or Xarelto or "BAY 59 7939" or "BAY 597939").mp. or exp rivaroxaban/ (24527)
 75 darexaban.mp. or exp darexaban/ (271)
 76 (edoxaban or "DU-176" or Savaysa).mp. or exp edoxaban/ (6392)
 77 melagatran.mp. or exp melagatran/ (1227)
 78 (dabigatran or Pradaxa or "BIBR 1048" or "BIBR 953").mp. or exp dabigatran/ (21949)
 79 (argatroban or acova).mp. or argatroban/ (6175)
 80 (noacs or oac or doac).mp. (23221)
 81 (thrombin and inhib*).mp. (66009)
 82 or/62-81 (146261)
 83 25 and 82 (123)
 Annotation: COVID + DOACS (EMBASE)
 84 61 or 83 (175)
 85 remove duplicates from 84 (141)
 Annotation: COVID + DOACs (Medline or Embase) deduplicated
 86 52 or 61 or 83 (783)
 87 86 use ppez (272)
 88 86 use oomezd (511)
 89 remove duplicates from 86 (589)

Epistemonikos COVID-19 Evidence

Prevention or treatment AND Antithrombotic agents

Results: 141 citations

WHO COVID-19 Database (20 August 2020)

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/global-research-on-novel-coronavirus-2019-ncov>

(medline results excluded)

tw:(anticoagula* OR anti-coagula* OR coagulation OR thromb* OR antithromb* OR heparin OR lmwh* OR dalteparin OR enoxaparin OR nadroparin OR heparinoids OR acenocoumarol OR phenprocoumon OR warfarin OR ardeparin OR tinzaparin OR certoparin OR reviparin OR danaparoid OR fluindione OR "antivitamin k" OR fraxiparin* OR enoxaparin* OR clexane OR klexane OR lovenox OR fragmin OR ardeparin* OR normiflo OR tinzaparin OR logiparin OR innohep OR certoparin OR sandoparin OR reviparin OR clivarin* OR danaproid OR danaparoid OR orgaran OR antixarin OR bemiparin* OR hibor OR zibor OR ivor OR badyket OR semuloparin OR parnaparin OR tedelparin OR fluxum OR lohepa OR lowhepa OR parvoparin OR seleparin* OR tedelgliparin OR lomoparan OR orgaran OR sulodexide OR zivor OR embolex OR xaparin OR clivarine OR acenocoumarol OR sythrom OR sinthrome OR bivalirudin OR angiomas OR anglox OR previscan OR marcumar OR marcumar OR "vitamin K antagonist*" OR coumadin OR marevan OR jantoven OR coumadine OR waran OR rodex OR hepalean OR calcilean OR calciparine OR liquaemin OR liquemin OR multiparin OR novoheparin OR eparina OR hep-lock OR heparinate OR heparinic acid OR panheprin OR hepalean OR heparin leo OR heparin lock OR fondaparinux.or arixtra OR oac OR noacs OR doac OR dabigatran OR melagatran OR "factor xa" OR "factor 10a" OR fxa OR xaban* OR apixaban OR betrixaban OR eribaxaban OR otamixaban OR razaxaban OR rivaroxaban OR darexaban OR edoxaban OR eliquis OR "BMS-562247" OR argatroban OR acova OR prt054021 OR dabigatran OR pradaxa OR "BIBR 1048" OR "BIBR 953" OR "DU-176" OR savaysa OR xarelto OR "BAY 59 7939" OR "BAY 597939" OR argatroban OR acova) AND db:("COVIDWHO" OR "ELSEVIER" OR "CNKI_Lanzhou" OR "WPRIM" OR "LILACS")

Results: 1,182 citations
