

## Supplement 4: Search Strategies

## Recommendations 1-2: Anticoagulation in symptomatic and asymptomatic DVT/PE

### Recommendation 8a and b: Antithrombin replacement therapy

### Recommendation 13: LMWH vs VKA

### Recommendation 14: Provoked DVT or PE

### Recommendation 15: Unprovoked DVT or PE

OVERVIEW	
Interface:	Ovid
Database:	Medline, and Medline In-Process & Other Non-Indexed Citations (1946-present)
Study Types:	Randomized controlled trials and Observational studies
Search Strategy: search terms [number of results]	
1	exp adolescent/ (1870435)
2	(adolescens\$ or teen\$ or youth\$ or young or juvenile? or minors or highschool\$).ti,ab,jx. (736657)
3	exp child/ (1774964)
4	(child\$ or schoolchild\$ or "school age" or "school aged" or preschool\$ or toddler\$ or kid? or kindergar\$ or boy? or girl?).ti,ab,jx. (1373876)
5	exp infant/ (1067518)
6	(infan\$ or neonat\$ or newborn\$ or baby or babies).ti,ab,jx. (675209)
7	exp pediatrics/ (53305)
8	exp puberty/ (16879)
9	(p?ediatric\$ or pubert\$ or prepubert\$ or pubescen\$ or prepubescen\$).ti,ab,jx. (342436)
10	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (4186979)
Annotation: PED	
11	exp antithrombin/ or Antithrombins.mp. (5918)
12	thrombin inhibitor/ or thrombin inhibitor.mp. (2827)
13	Factor Xa Inhibitors.mp. or exp blood clotting factor 10a inhibitor/ (4171)
14	rivaroxaban/ or dabigatran etexilate/ or apixaban/ or edoxaban/ or betrixaban/ or ximelagatran/ or Darexaban/ or Otamixaban/ or Razaxaban/ or Bivalirudin/ or Desirudin/ or Lepirudin/ or Melagatran/ (3627)
15	(rivaroxaban or Xarelto or apixaban or Eliquis or dabigatran etexilate or Edoxaban or Savaysa or Betrixaban or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatrovan or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b).mp. (8525)
16	(TSOAC\$ or NOAC\$ or DOAC\$).ti,ab,kw. (2541)
17	((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direc\$ adj anticoagulant\$)).mp. (11977)
18	((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) adj3 oral anticoagulant*).mp. (4835)
19	(factor Xa adj2 (antag* or inhibit*)).mp. (5209)
20	or/11-19 (25874)
21	exp 4 hydroxycoumarin/ or exp 4 hydroxycoumarin derivative/ (22513)
22	warfarin/ (17788)

23 acenocoumarol/ (1264)  
24 coumarin/ or coumarin derivative/ (12900)  
25 phenindione/ (872)  
26 dicoumarol derivative/ or dicoumarol/ (2191)  
27 phenprocoumon/ (923)  
28 phepromaron/ (0)  
29 ethyl biscouacetate/ (393)  
30 fluindione/ or difenacoum/ or coumatetralyl/ (0)  
31 vitamin K antagonist.mp. or antivitamin K/ (1994)  
32 (4 hydroxycoumarin or warfarin or acenocoumarol or nicoumalone or  
sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon  
or phepromaron or ethyl-biscouacetate or phenindione or Diphenadione or  
Ticloamarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or  
Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or  
coumatetralyl).mp. (35238)  
33 or/21-32 (48791)  
34 exp anticoagulant agent/ (202641)  
35 Anticoagula\$.mp. (114975)  
36 34 or 35 (239143)  
37 exp Platelet Aggregation/ (31520)  
38 Aspirin/ (42403)  
39 Aminosalicyclic Acids/ (3979)  
40 triflusal/ (0)  
41 Phosphodiesterase inhibitors/ (11992)  
42 Dipyridamole/ (7535)  
43 cilostazol/ (0)  
44 Thienopyridines/ (200)  
45 clopidogrel/ (0)  
46 prasugrel/ (1113)  
47 Ticlopidine/ (9679)  
48 Abciximab/ (0)  
49 Eptifibatide/ (0)  
50 Tirofiban/ (0)  
51 (Platelet Aggregation or Aspirin or Aminosalicyclic Acids or Triflusal  
or Cilostazol or dipyridamole or Clopidogrel or Prasugrel or Ticlopidine or  
Tirofiban or Abciximab or Eptifibatide).mp. (130934)  
52 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or  
49 or 50 or 51 (142343)  
53 (fondaparinux or Arixtra).mp. (1816)  
54 exp Heparin/ (61927)  
55 (un?fract\* adj heparin).mp. (5557)  
56 UFH.mp. (1973)  
57 ((sodium or alpha) adj1 heparin).mp. (924)  
58 (Hepalean or Calcilean or Calciparine or Liquaemin or Liquemin or  
Multipartin or Novoheparin or Eparina or Hep-lock or Heparinate or Heparinic  
acid or Panheprin or Hepalean or Heparin Leo or Heparin Lock).mp. (542)  
59 or/54-58 (63947)  
60 exp heparin derivative/ or heparin\*.mp. (99160)  
61 nadroparin/ (468)  
62 enoxaparin/ (3125)  
63 dalteparin/ (841)  
64 ardeparin/ (0)  
65 tinzaparin/ (0)  
66 certoparin/ (0)  
67 reviparin/ (0)

68 danaparoid/ (0)  
69 (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 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).mp. (16072)  
70 (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. (128)  
71 or/60-70 (102648)  
72 20 or 33 or 36 or 52 or 53 or 59 or 71 (406224)  
73 10 and 72 (36196)  
74 exp vein thrombosis/ (0)  
75 exp Venous Thromboembolism/ (8347)  
76 exp 'lung embolism'/ (0)  
77 Thrombophlebitis/ (21392)  
78 (PE or DVT or VTE).mp. (48649)  
79 ((Pulmon\$ or vein or venous or lung) adj (Emboli\$ or thromb\$)).mp. (104377)  
80 (thrombus\* or thrombotic\* or thrombolic\* or thromboemboli\* or thrombos\* or embol\*).mp. (364542)  
81 (((deep or thromb\* or stasis) adj2 (vein\* or venous)) or (blood flow stasis or blood clot)).mp. (77520)  
82 or/74-81 (406714)  
83 exp Asymptomatic Diseases/ (5217)  
84 (asymptomatic or (asymptomatic adj2 (Vein adj thromb\*))) or (asymptomatic adj (pulmonary or lung) adj (embolism or emboli)).mp. (138985)  
85 83 or 84 (138985)  
86 82 or 85 (537842)  
87 exp anticoagulant agent/ (202641)  
88 Anticoagula\$.mp. (114975)  
89 87 or 88 (239143)  
90 82 or 85 or 89 (704505)  
91 73 and 90 (24319)  
92 clinical study/ (2893)  
93 exp case control study/ (922999)  
94 family study/ (0)  
95 longitudinal study/ (116549)  
96 prospective study/ (475467)  
97 cross-sectional study/ (268692)  
98 cohort analysis/ (225391)  
99 follow-up/ (0)  
100 cohort\*.ti,ab. (464612)  
101 cohort\*.ti,ab. (464612)  
102 (cohort adj (study or studies or analys\*)).ti,ab. (162386)  
103 case control.ti,ab. (108615)  
104 ((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic\*) adj (study or studies)).ti,ab. (208667)  
105 ((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys\* or cohort\*)).ti,ab. (1184790)

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106 92 or 93 or 94 or 95 or 96 or 97 or 98 or 99 or 100 or 101 or 102 or
103 or 104 or 105 (2478366)
107 random*.ti,ab. (983751)
108 trial.ti,ab. (506989)
109 factorial*.ti,ab. (25764)
110 (crossover* or cross over*).ti,ab. (78180)
111 ((doubl* or singl*) adj blind*).ti,ab. (153300)
112 (assign* or allocat* or volunteer* or placebo*).ti,ab. (701012)
113 placebo.ab. (189979)
114 crossover procedure/ (0)
115 single blind procedure/ (0)
116 randomized controlled trial/ (463543)
117 double blind procedure/ (0)
118 or/107-117 (1753365)
119 animals/ not humans/ (4437393)
120 nonhuman/ (0)
121 exp Animal Experiment/ (8717)
122 exp Experimental Animal/ (0)
123 animal model/ (38504)
124 exp Rodent/ (3034487)
125 (rat or rats or mouse or mice).ti. (1262464)
126 119 or 120 or 121 or 122 or 123 or 124 or 125 (5237344)
127 118 not 126 (1551165)
128 106 or 118 (3859012)
129 91 and 128 (7257)
130 129 not 126 (7187)
131 91 and 127 (2394)
132 130 not 131 (4793)

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OVERVIEW	
Interface:	Ovid
Database:	Embase (1974-present)
Study	Randomized controlled trials and observational studies
Types:	
Search Strategy: search terms [number of results]	
1	exp adolescent/ (1494066)
2	(adolescen\$ or teen\$ or youth\$ or young or juvenile? or minors or highschool\$).ti,ab,jx. (956095)
3	exp child/ (2548124)
4	(child\$ or schoolchild\$ or "school age" or "school aged" or preschool\$ or toddler\$ or kid? or kindergar\$ or boy? or girl?).ti,ab,jx. (1811850)
5	exp infant/ (1000204)
6	(infan\$ or neonat\$ or newborn\$ or baby or babies).ti,ab,jx. (843432)
7	exp pediatrics/ (99753)
8	exp puberty/ (39356)
9	(p?ediatric\$ or pubert\$ or prepubert\$ or pubescen\$ or prepubescen\$).ti,ab,jx. (917224)
10	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (4534431)
11	exp antithrombin/ or Antithrombins.mp. (9693)
12	thrombin inhibitor/ or thrombin inhibitor.mp. (8158)
13	Factor Xa Inhibitors.mp. or exp blood clotting factor 10a inhibitor/ (22164)

14 rivaroxaban/ or dabigatran etexilate/ or apixaban/ or edoxaban/ or betrixaban/ or ximelagatran/ or Darexaban/ or Otamixaban/ or Razaxaban/ or Bivalirudin/ or Desirudin/ or Lepirudin/ or Melagatran/ (20729)  
15 (rivaroxaban or Xarelto or apixaban or Eliquis or dabigatran etexilate or Edoxaban or Savaysa or Betrixaban or ximelagatran or pradaxa or lixiana or exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or Lepirudin or Melagatran or YM 150 or Iprivask or argatrovan or pradax or BIBR-953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b).mp. (23112)  
16 (TSOAC\$ or NOAC\$ or DOAC\$).ti,ab,kw. (5117)  
17 ((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or (direct\$ adj anticoagulant\$)).mp. (19502)  
18 ((new or novel or direct or direct-acting or target-specific or targeted or non-vitamin K) adj3 oral anticoagulant\*).mp. (8439)  
19 (factor Xa adj2 (antag\* or inhibit\*)).mp. (4541)  
20 or/11-19 (54253)  
21 exp 4 hydroxycoumarin/ or exp 4 hydroxycoumarin derivative/ (801)  
22 warfarin/ (83676)  
23 acenocoumarol/ (5807)  
24 coumarin/ or coumarin derivative/ (20408)  
25 phenindione/ (1268)  
26 dicoumarol derivative/ or dicoumarol/ (3458)  
27 phenprocoumon/ (4773)  
28 pephromaron/ (11)  
29 ethyl biscoumacetate/ (565)  
30 fluindione/ or difenacoum/ or coumatetralyl/ (1034)  
31 vitamin K antagonist.mp. or antivitamin K/ (13044)  
32 (4 hydroxycoumarin or warfarin or acenocoumarol or nicoumalone or synthrom or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or pephromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tiocloamarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl).mp. (103886)  
33 or/21-32 (125429)  
34 exp anticoagulant agent/ (614028)  
35 Anticoagula\$.mp. (204282)  
36 34 or 35 (652176)  
37 exp Platelet Aggregation/ (50950)  
38 Aspirin/ (178849)  
39 Aminosalicylic Acids/ (2268)  
40 triflusal/ (595)  
41 Phosphodiesterase inhibitors/ (9326)  
42 Dipyridamole/ (23228)  
43 cilostazol/ (5093)  
44 Thienopyridines/ (2765)  
45 clopidogrel/ (52917)  
46 prasugrel/ (7027)  
47 Ticlopidine/ (13954)  
48 Abciximab/ (9981)  
49 Eptifibatide/ (5222)  
50 Tirofiban/ (5832)  
51 (Platelet Aggregation or Aspirin or Aminosalicylic Acids or Triflusal or Cilostazol or dipyridamole or Clopidogrel or Prasugrel or Ticlopidine or Tirofiban or Abciximab or Eptifibatide).mp. (204468)

52 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or  
49 or 50 or 51 (295260)  
53 (fondaparinux or Arixtra).mp. (6966)  
54 exp Heparin/ (138849)  
55 (un?fract\* adj heparin).mp. (8523)  
56 UFH.mp. (3431)  
57 ((sodium or alpha) adj1 heparin).mp. (1176)  
58 (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. (1879)  
59 or/54-58 (140448)  
60 exp heparin derivative/ or heparin\*.mp. (206120)  
61 nadroparin/ (4450)  
62 enoxaparin/ (21962)  
63 dalteparin/ (7276)  
64 ardeparin/ (351)  
65 tinzaparin/ (3000)  
66 certoparin/ (714)  
67 reviparin/ (924)  
68 danaparoid/ (2517)  
69 (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 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).mp. (58701)  
70 (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. (340)  
71 or/60-70 (208601)  
72 20 or 33 or 36 or 52 or 53 or 59 or 71 (748338)  
73 10 and 72 (63953)  
74 exp vein thrombosis/ (117897)  
75 exp Venous Thromboembolism/ (134879)  
76 exp 'lung embolism'/ (84001)  
77 Thrombophlebitis/ (15964)  
78 (PE or DVT or VTE).mp. (149094)  
79 ((Pulmon\$ or vein or venous or lung) adj (Emboli\$ or thromb\$)).mp.  
(199304)  
80 (thrombus\* or thrombotic\* or thrombolic\* or thromboemboli\* or thrombos\*  
or embol\*).mp. (618099)  
81 (((deep or thromb\* or stasis) adj2 (vein\* or venous)) or (blood flow  
stasis or blood clot)).mp. (189548)  
82 or/74-81 (767793)  
Annotation: DVT, PE, VTE  
83 exp Asymptomatic Diseases/ (10643)  
84 (asymptomatic or (asymptomatic adj2 (Vein adj thromb\*)) or  
(asymptomatic adj (pulmonary or lung) adj (embolism or emboli))).mp. (199156)  
85 83 or 84 (199156)  
86 82 or 85 (952099)  
87 exp anticoagulant agent/ (614028)  
88 Anticoagula\$.mp. (204282)

89	87 or 88 (652176)
90	82 or 85 or 89 (1397113)
91	73 and 90 (58177)
92	clinical study/ (153820)
93	exp case control study/ (144495)
94	family study/ (25372)
95	longitudinal study/ (113437)
96	prospective study/ (453441)
97	cross-sectional study/ (256582)
98	cohort analysis/ (378515)
99	follow-up/ (1298990)
100	cohort*.ti,ab. (767405)
101	cohort*.ti,ab. (767405)
102	(cohort adj (study or studies or analys*)).ti,ab. (231464)
103	case control.ti,ab. (138712)
104	((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic*) adj (study or studies)).ti,ab. (288643)
105	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort*)).ti,ab. (1739000)
106	92 or 93 or 94 or 95 or 96 or 97 or 98 or 99 or 100 or 101 or 102 or 103 or 104 or 105 (3701870)
107	random*.ti,ab. (1309942)
108	trial.ti,ab. (719234)
109	factorial*.ti,ab. (32978)
110	(crossover* or cross over*).ti,ab. (94417)
111	((doubl* or singl*) adj blind*).ti,ab. (209544)
112	(assign* or allocat* or volunteer* or placebo*).ti,ab. (910093)
113	placebo.ab. (265679)
114	crossover procedure/ (55786)
115	single blind procedure/ (31571)
116	randomized controlled trial/ (505723)
117	double blind procedure/ (150639)
118	or/107-117 (2312488)
119	animals/ not humans/ (1349456)
120	nonhuman/ (5472108)
121	exp Animal Experiment/ (2231311)
122	exp Experimental Animal/ (589177)
123	animal model/ (1107471)
124	exp Rodent/ (3499609)
125	(rat or rats or mouse or mice).ti. (1480444)
126	119 or 120 or 121 or 122 or 123 or 124 or 125 (7856264)
127	118 not 126 (1959578)
128	106 or 118 (5414421)
129	91 and 128 (17560)
130	129 not 126 (16756)
131	91 and 127 (4288)
132	130 not 131 (12468)

OVERVIEW	
Interface:	Cochrane Library
Databases:	Cochrane Central Register of Controlled Trials (CENTRAL)
Study	Randomized controlled trials and clinical controlled trials
Types:	
Search Strategy:	search terms [number of results]



#1 MeSH descriptor: [Adolescent] this term only 95884  
#2 MeSH descriptor: [Minors] this term only 9  
#3 (adolescen\* or teen\* or youth\* or young or juvenile? or minors or  
highschool\*) 188335  
#4 MeSH descriptor: [Child] explode all trees 324  
#5 (child\* or schoolchild\* or "school age" or "school aged" or preschool\* or  
toddler\* or kid? or kindergar\* or boy? or girl?) 143233  
#6 MeSH descriptor: [Infant] explode all trees 15955  
#7 (infan\* or neonat\* or newborn\* or baby or babies) 67147  
#8 MeSH descriptor: [Pediatrics] explode all trees 700  
#9 MeSH descriptor: [Puberty] explode all trees 355  
#10 (p?ediatric\* or pubert\* or prepubert\* or pubescen\* or prepubescen\*)  
16262  
#11 #1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 297717  
#12 MeSH descriptor: [Heparin] explode all trees 4910  
#13 (UFH or Unfractionated Heparin or Heparin, Unfractionated or Sodium  
Heparin or Heparin, Sodium or Heparin Sodium or alpha-Heparin or alpha Heparin  
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):ti,ab,kw 2365  
#14 #12 or #13 5973  
#15 MeSH descriptor: [Antithrombins] explode all trees 777  
#16 MeSH descriptor: [Factor Xa Inhibitors] explode all trees 423  
#17 (rivaroxaban or Xarelto or apixaban or Eliquis or dabigatran etexilate or  
Edoxaban or Savaysa or Betrixaban or ximelagatran or pradaxa or lixiana or  
exanta or Darexaban or Otamixaban\$ or Razaxaban or Bivalirudin or Desirudin or  
Lepirudin or Melagatran or YM 150 or Iprivask or argatrovan or pradax or BIBR-  
953 or BIBR-953ZW or BAY 59-7939 or BMS-562247 or DU-176 or DU-176b) 2942  
#18 ((Target adj Specific adj Oral adj Anticoagulant\$) or (oral adj  
anticoagulant\$) or (novel adj anticoagulant\$) or (new adj anticoagulant\$) or  
(direc\$ adj anticoagulant\$)) 171  
#19 ((new or novel or direct or direct-acting or target-specific or targeted  
or non-vitamin K) near/3 oral anticoagulant\*) 864  
#20 (factor Xa adj2 (antag\* or inhibit\*)) 9  
#21 #15 or #16 or #17 or #18 or #19 or #20 3689  
#22 MeSH descriptor: [Anticoagulants] explode all trees 5026  
#23 (Anticoagulant or anticoagulation):ti,ab,kw 7680  
#24 #22 or #23 10641  
#25 MeSH descriptor: [Platelet Aggregation] explode all trees 16  
#26 MeSH descriptor: [Aspirin] 10 tree(s) exploded 5630  
#27 MeSH descriptor: [Aminosalicylic Acids] explode all trees 683  
#28 MeSH descriptor: [Phosphodiesterase Inhibitors] this term only 808  
#29 MeSH descriptor: [Dipyridamole] explode all trees 645  
#30 MeSH descriptor: [Thienopyridines] explode all trees 1912  
#31 MeSH descriptor: [Ticlopidine] 11 tree(s) exploded 1907  
#32 MeSH descriptor: [Prasugrel Hydrochloride] this term only 308  
#33 (Platelet Aggregation or Aspirin or Aminosalicylic Acids or Triflusal or  
Cilostazol or dipyridamole or Clopidogrel or Prasugrel or Ticlopidine or  
Tirofiban or Abciximab or Eptifibatide) 20230  
#34 #25 or #26 or #27 or #28 or #29 or #30 or #31 or #32 or #33 21384  
#35 fondaparinux or Arixtra 445  
#36 MeSH descriptor: [Heparin] explode all trees 4910  
#37 MeSH descriptor: [Heparin, Low-Molecular-Weight] explode all trees  
2096

#38 MeSH descriptor: [Heparinoids] this term only	58
#39 MeSH descriptor: [Dalteparin] this term only	350
#40 MeSH descriptor: [Enoxaparin] this term only	755
#41 MeSH descriptor: [Nadroparin] this term only	122
#42 (LMWH or LMWHs or low molecular weight heparin or 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 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)	12755
#43 (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)	148
#44 #36 or #37 or #38 or #39 or #40 or #41 or #42 or #43	12802
#45 MeSH descriptor: [Warfarin] explode all trees	248
#46 MeSH descriptor: [Acenocoumarol] explode all trees	4
#47 MeSH descriptor: [Phenindione] explode all trees	30
#48 MeSH descriptor: [Coumarins] explode all trees	265
#49 MeSH descriptor: [Dicumarol] explode all trees	0
#50 MeSH descriptor: [Phenprocoumon] explode all trees	2
#51 MeSH descriptor: [Ethyl Biscoumacetate] explode all trees	0
#52 MeSH descriptor: [4-Hydroxycoumarins] explode all trees	254
#53 MeSH descriptor: [Phenprocoumon] explode all trees	2
#54 (4 hydroxycoumarin or warfarin or acenocoumarol or nicoumalone or sinthrome or Sintrom or phenindione or dicoumarol or coumadin or phenprocoumon or pheapromaron or ethyl-biscoumacetate or phenindione or Diphenadione or Tiocloamarol or Racumi or Marcoumar or Marcumar or Falithrom or Coumadin or Jantoven or vitamin K antagonist\$ or VKA or fluindione or difenacoum or coumatetralyl)	5423
#55 #45 or #46 or #47 or #48 or #49 or #50 or #51 or #52 or #53 or #54	5434
#56 #14 or #21 or #24 or #34 or #35 or #44 or #55	38838
#57 #11 and #56	4774
#58 MeSH descriptor: [Venous Thrombosis] explode all trees	2855
#59 MeSH descriptor: [Thromboembolism] explode all trees	2304
#60 MeSH descriptor: [Venous Thromboembolism] explode all trees	753
#61 MeSH descriptor: [Pulmonary Embolism] explode all trees	1140
#62 MeSH descriptor: [Thrombophlebitis] this term only	1100
#63 (DVT or VTE or PE)	11840
#64 ((Pulmon* or vein or venous or lung) near (Emboli* or thromb*))	12398
#65 (Thrombus* or thrombotic* or thrombolic* or thromboemboli* or thrombos* or embol*)	29970
#66 (((deep or thromb* or stasis) near/2 (vein* or venous)) or (blood flow stasis or blood clot))	11637
#67 #58 or #59 or #60 or #61 or #62 or #63 or #64 or #65 or #66	40816
#68 MeSH descriptor: [Asymptomatic Diseases] explode all trees	184
#69 Asymptomatic Disease or Disease, Asymptomatic or Diseases, Asymptomatic or Asymptomatic States or Asymptomatic State or Asymptomatic Conditions or Asymptomatic Condition or Condition, Asymptomatic or Conditions, Asymptomatic	6648
#70 #68 or #69	6653
#71 MeSH descriptor: [Venous Thrombosis] explode all trees	2855

```
#72 MeSH descriptor: [Venous Thromboembolism] explode all trees 753
#73 MeSH descriptor: [Pulmonary Embolism] explode all trees 1140
#74 (deep venous thromb*) or PE or DVT or VTE or (thromboprophyla* or thrombus*
or thrombotic* or throm- bolic* or thromboemboli* or thrombos* or embol*)
38556
#75 #71 or #72 or #73 or #74 39058
#76 #70 and #75 769
#77 #70 or #75 44942
#78 MeSH descriptor: [Anticoagulants] explode all trees 5026
#79 (Anticoagulant or anticoagulation):ti,ab,kw 7680
#80 #78 or #79 10641
#81 #67 or #77 or #80 51635
#82 #57 and #81 2148
```

## Recommendations 3, 4, 5, and 6: Thrombolysis and thrombectomy

OVERVIEW	
Interface:	Ovid
Database:	Medline, and Medline In-Process & Other Non-Indexed Citations (1946-present)
Study Types:	Randomized controlled trials and Observational studies
Search Strategy: search terms [number of results]	
1	Adolescent/ (1870435)
2	Minors/ (2452)
3	(adolescens\$ or teen\$ or youth\$ or young or juvenile? or minors or highschool\$).ti,ab,jw. (755813)
4	exp Child/ (1774964)
5	(child\$ or schoolchild\$ or "school age" or "school aged" or preschool\$ or toddler\$ or kid? or kindergar\$ or boy? or girl?).ti,ab,jw. (1439729)
6	exp Infant/ (1067518)
7	(infan\$ or neonat\$ or newborn\$ or baby or babies).ti,ab,jw. (691736)
8	exp Pediatrics/ (53305)
9	exp Puberty/ (16879)
10	(p?ediatric\$ or pubert\$ or prepubert\$ or pubescen\$ or prepubescen\$).ti,ab,jw. (695024)
11	or/1-10 (4261244)
12	Streptokinase/ or Tissue Plasminogen Activator/ or Mechanical Thrombolysis/ or Fibrinolytic Agents/ or Thrombolytic Therapy/ (57865)
13	Thrombectomy/ (5063)
14	exp Thromboembolism/ or exp Venous Thromboembolism/ (51479)
15	exp Pulmonary Embolism/ (36211)
16	exp Venous Thrombosis/ (51417)
17	Thrombophlebitis/ (21392)
18	(DVT or VTE or PE).mp. (48649)
19	((Pulmon\$ or vein or venous or lung) adj (Emboli\$ or thromb\$)).mp. (104377)
20	(thrombus* or thrombotic* or thrombolic* or thromboemboli* or thrombos* or embol*).mp. (364542)
21	((((deep or thromb* or stasis) adj2 (vein* or venous)) or (blood flow stasis or blood clot)).mp. (77520)
22	12 or 13 (61635)
23	or/14-21 (412279)
24	11 and 22 and 23 (2207)

OVERVIEW	
Interface:	Ovid
Database:	Embase (1974-present)
Study Types:	Randomized controlled trials and observational studies
Search Strategy: search terms [number of results]	
1	Adolescent/ (1493893)
2	Minors/ (496)
3	(adolescens\$ or teen\$ or youth\$ or young or juvenile? or minors or highschool\$).ti,ab,jw. (956095)

```

4   exp Child/ (2548124)
5   (child$ or schoolchild$ or "school age" or "school aged" or preschool$
or toddler$ or kid? or kindergar$ or boy? or girl?).ti,ab,jw. (1811850)
6   exp Infant/ (1000204)
7   (infan$ or neonat$ or newborn$ or baby or babies).ti,ab,jw. (843432)
8   exp Pediatrics/ (99753)
9   exp Puberty/ (39356)
10  (p?ediatric$ or pubert$ or prepubert$ or pubescen$ or
prepubescen$).ti,ab,jw. (917224)
11  or/1-10 (4534579)
12  Streptokinase/ or Tissue Plasminogen Activator/ or Mechanical
Thrombolysis/ or Fibrinolytic Agents/ or Thrombolytic Therapy/ (74080)
13  Thrombectomy/ (10707)
14  exp Thromboembolism/ or exp Venous Thromboembolism/ (447229)
15  exp Pulmonary Embolism/ (84001)
16  exp Venous Thrombosis/ (117897)
17  Thrombophlebitis/ (15964)
18  (DVT or VTE or PE).mp. (149094)
19  ((Pulmon$ or vein or venous or lung) adj (Emboli$ or thromb$)).mp.
(199304)
20  (thrombus* or thrombotic* or thrombolic* or thromboemboli* or thrombos*
or embol*).mp. (618099)
21  (((deep or thromb* or stasis) adj2 (vein* or venous)) or (blood flow
stasis or blood clot)).mp. (189548)
22  12 or 13 (82831)
23  or/14-21 (776394)
24  11 and 22 and 23 (3400)

```

OVERVIEW	
Interface:	Cochrane Library
Databases:	Cochrane Central Register of Controlled Trials (CENTRAL)
Study	Randomized controlled trials and clinical controlled trials
Types:	
Search Strategy: search terms [number of results]	
#1	MeSH descriptor: [Adolescent] this term only 95884
#2	MeSH descriptor: [Minors] this term only 9
#3	(adolescen* or teen* or youth* or young or juvenile? or minors or highschool*) 188335
#4	MeSH descriptor: [Child] explode all trees 324
#5	(child* or schoolchild* or "school age" or "school aged" or preschool* or toddler* or kid? or kindergar* or boy? or girl?) 143233
#6	MeSH descriptor: [Infant] explode all trees 15955
#7	(infan* or neonat* or newborn* or baby or babies) 67147
#8	MeSH descriptor: [Pediatrics] explode all trees 700
#9	MeSH descriptor: [Puberty] explode all trees 355
#10	(p?ediatric* or pubert* or prepubert* or pubescen* or prepubescen*) 16262
#11	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 297717
#12	MeSH descriptor: [Thrombolytic Therapy] explode all trees 1847
#13	MeSH descriptor: [Fibrinolytic Agents] explode all trees 2305
#14	MeSH descriptor: [Fibrinolysis] explode all trees 12
#15	MeSH descriptor: [Plasminogen Activators] explode all trees 2536
#16	MeSH descriptor: [Tissue Plasminogen Activator] explode all trees 1629

```
#17 MeSH descriptor: [Urokinase-Type Plasminogen Activator] explode all trees
    348
#18 plasminogen near/2 activator*    4455
#19 rt-pa or tPA 1843
#20 Urokinase* or alteplase* or reteplase* or tenecteplase* or saruplase* or
    anistreplase* or monteplase* or streptokinase* or staphylokinase or avelizin
    or awelysin or celiase* or distreptase* or Kabikinase* or kabivitrum 22 or
    Streptase* or streptodecase* or apsac or Abbokinase* or renokinase* or
    Actilyse* or Activase* or Eminase* or Retavase* or Rapilysin or desmopletase*
    or u-pa or alfimeprase* or thromboly* or fibrinoly* or antithrombotic or
    antithrombic    12964
#21 MeSH descriptor: [Thrombectomy] explode all trees    269
#22 #12 or #13 or #14 or #15 or #16 or #17 or #18 or #19 or #20 or #21
    14795
#23 MeSH descriptor: [Venous Thrombosis] explode all trees    2855
#24 MeSH descriptor: [Thromboembolism] explode all trees 2304
#25 MeSH descriptor: [Venous Thromboembolism] explode all trees    753
#26 MeSH descriptor: [Pulmonary Embolism] explode all trees    1140
#27 MeSH descriptor: [Thrombophlebitis] this term only    1100
#28 (DVT or VTE or PE) 11840
#29 ((Pulmon* or vein or venous or lung) near (Emboli* or thromb*))    12398
#30 (Thrombus* or thrombotic* or thrombolic* or thromboemboli* or thrombos* or
    embol*)    29970
#31 (((deep or thromb* or stasis) near/2 (vein* or venous)) or (blood flow
    stasis or blood clot))    11637
#32 #23 or #24 or #25 or #26 or #27 or #28 or #29 or #30 or #31    40816
#33 #22 and #32    5507
#34 #11 and #33    713
```

## Recommendation 7: Inferior Vena Cava filters

OVERVIEW	
Interface:	Ovid
Database:	Medline, and Medline In-Process & Other Non-Indexed Citations (1946-present)
Study Types:	Randomized controlled trials and Observational studies
Search Strategy: search terms [number of results]	
1	exp adolescent/ (1870435)
2	(adolescen\$ or teen\$ or youth\$ or young or juvenile? or minors or highschool\$).ti,ab,jx. (736657)
3	exp child/ (1774964)
4	(child\$ or schoolchild\$ or "school age" or "school aged" or preschool\$ or toddler\$ or kid? or kindergar\$ or boy? or girl?).ti,ab,jx. (1373876)
5	exp infant/ (1067518)
6	(infan\$ or neonat\$ or newborn\$ or baby or babies).ti,ab,jx. (675209)
7	exp pediatrics/ (53305)
8	exp puberty/ (16879)
9	(p?ediatric\$ or pubert\$ or prepubert\$ or pubescen\$ or prepubescen\$).ti,ab,jx. (342436)
10	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (4186979)
11	exp vena cava filter/ (2687)
12	ven* cava filter*.mp. (3450)
13	(Celect or Greenfield or Gunther Tulip or Ninitol Bard G2 or OptEase or Trapease or Vena Tech).mp. (955)
14	or/11-13 (3843)
15	10 and 14 (443)

OVERVIEW	
Interface:	Ovid
Database:	Embase (1974-present)
Study Types:	Randomized controlled trials and observational studies
Search Strategy: search terms [number of results]	
1	exp adolescent/ (1494066)
2	(adolescen\$ or teen\$ or youth\$ or young or juvenile? or minors or highschool\$).ti,ab,jx. (956095)
3	exp child/ (2548124)
4	(child\$ or schoolchild\$ or "school age" or "school aged" or preschool\$ or toddler\$ or kid? or kindergar\$ or boy? or girl?).ti,ab,jx. (1811850)
5	exp infant/ (1000204)
6	(infan\$ or neonat\$ or newborn\$ or baby or babies).ti,ab,jx. (843432)
7	exp pediatrics/ (99753)
8	exp puberty/ (39356)
9	(p?ediatric\$ or pubert\$ or prepubert\$ or pubescen\$ or prepubescen\$).ti,ab,jx. (917224)
10	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (4534431)
11	exp vena cava filter/ (4869)
12	ven* cava filter*.mp. (5463)

13	(Celect or Greenfield or Gunther Tulip or Ninitol Bard G2 or OptEase or Trapease or Vena Tech).mp. (1675)
14	or/11-13 (6069)
15	10 and 14 (495)

OVERVIEW	
Interface:	Cochrane Library
Databases:	Cochrane Central Register of Controlled Trials (CENTRAL)
Study Types:	Randomized controlled trials and clinical controlled trials
Search Strategy: search terms [number of results]	
#1	MeSH descriptor: [Adolescent] this term only 95884
#2	MeSH descriptor: [Minors] this term only 9
#3	(adolescen* or teen* or youth* or young or juvenile? or minors or highschool*) 188335
#4	MeSH descriptor: [Child] explode all trees 324
#5	(child* or schoolchild* or "school age" or "school aged" or preschool* or toddler* or kid? or kindergar* or boy? or girl?) 143233
#6	MeSH descriptor: [Infant] explode all trees 15955
#7	(infan* or neonat* or newborn* or baby or babies) 67147
#8	MeSH descriptor: [Pediatrics] explode all trees 700
#9	MeSH descriptor: [Puberty] explode all trees 355
#10	(p?ediatric* or pubert* or prepubert* or pubescen* or prepubescen*) 16262
#11	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 297717
#12	MeSH descriptor: [Vena Cava Filters] explode all trees 43
#13	ven* cava filter* 148
#14	Celect or Greenfield or (Gunther Tulip) or (Ninitol Bard G2) or OptEase or Trapease or (Vena Tech) 404
#15	#12 or #13 148
#16	#11 and #15 40



## Recommendations 9, 10, 11, 12, and 16: CVAD-related thromboses

OVERVIEW	
Interface:	Ovid
Database:	Medline, and Medline In-Process & Other Non-Indexed Citations (1946-present)
Study Types:	Randomized controlled trials and Observational studies
Search Strategy: search terms [number of results]	
1	exp adolescent/ (1870435)
2	(adolescen\$ or teen\$ or youth\$ or young or juvenile? or minors or highschool\$).ti,ab,jx. (736657)
3	exp child/ (1774964)
4	(child\$ or schoolchild\$ or "school age" or "school aged" or preschool\$ or toddler\$ or kid? or kindergar\$ or boy? or girl?).ti,ab,jx. (1373876)
5	exp infant/ (1067518)
6	(infan\$ or neonat\$ or newborn\$ or baby or babies).ti,ab,jx. (675209)
7	exp pediatrics/ (53305)
8	exp puberty/ (16879)
9	(p?ediatic\$ or pubert\$ or prepubert\$ or pubescen\$ or prepubescen\$).ti,ab,jx. (342436)
10	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (4186979)
11	Catheterization, Central Venous/ (13938)
12	Central Venous Catheters/ (1539)
13	(central adj venous).ti,ab. (22749)
14	(catheter* or device or line or access).ti,ab. (1162378)
15	13 and 14 (15524)
16	11 or 12 or 15 (22779)
17	10 and 16 (6530)
18	clinical study/ (2893)
19	exp case control study/ (922999)
20	family study/ (0)
21	longitudinal study/ (116549)
22	prospective study/ (475467)
23	cross-sectional study/ (268692)
24	cohort analysis/ (225391)
25	follow-up/ (0)
26	cohort*.ti,ab. (464612)
27	cohort*.ti,ab. (464612)
28	(cohort adj (study or studies or analys*)).ti,ab. (162386)
29	case control.ti,ab. (108615)
30	((follow up or observational or uncontrolled or non randomi#ed or nonrandomi#ed or epidemiologic*) adj (study or studies)).ti,ab. (208667)
31	((longitudinal or retrospective or prospective or cross sectional) and (study or studies or review or analys* or cohort*)).ti,ab. (1184790)
32	18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 (2478366)
33	random*.ti,ab. (983751)
34	trial.ti,ab. (506989)
35	factorial*.ti,ab. (25764)
36	(crossover* or cross over*).ti,ab. (78180)
37	((doubl* or singl*) adj blind*).ti,ab. (153300)
38	(assign* or allocat* or volunteer* or placebo*).ti,ab. (701012)

39	placebo.ab. (189979)
40	crossover procedure/ (0)
41	single blind procedure/ (0)
42	randomized controlled trial/ (463543)
43	double blind procedure/ (0)
44	or/33-43 (1753365)
45	animals/ not humans/ (4437393)
46	nonhuman/ (0)
47	exp Animal Experiment/ (8717)
48	exp Experimental Animal/ (0)
49	animal model/ (38504)
50	exp Rodent/ (3034487)
51	(rat or rats or mouse or mice).ti. (1262464)
52	45 or 46 or 47 or 48 or 49 or 50 or 51 (5237344)
53	44 not 52 (1551165)
54	32 or 44 (3859012)
55	17 and 54 (2930)
56	55 not 52 (2911)
57	17 and 53 (616)
58	56 not 57 (2295)

OVERVIEW	
Interface:	Ovid
Database:	Embase (1974-present)
Study	Randomized controlled trials and observational studies
Types:	
Search Strategy: search terms [number of results]	
1	exp adolescent/ (1494066)
2	(adolescens\$ or teen\$ or youth\$ or young or juvenile? or minors or highschool\$).ti,ab,jx. (956095)
3	exp child/ (2548124)
4	(child\$ or schoolchild\$ or "school age" or "school aged" or preschool\$ or toddler\$ or kid? or kindergar\$ or boy? or girl?).ti,ab,jx. (1811850)
5	exp infant/ (1000204)
6	(infan\$ or neonat\$ or newborn\$ or baby or babies).ti,ab,jx. (843432)
7	exp pediatrics/ (99753)
8	exp puberty/ (39356)
9	(p?ediatric\$ or pubert\$ or prepubert\$ or pubescen\$ or prepubescen\$).ti,ab,jx. (917224)
10	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (4534431)
11	Catheterization, Central Venous/ (7611)
12	Central Venous Catheters/ (14361)
13	(central adj venous).ti,ab. (32073)
14	(catheter* or device or line or access).ti,ab. (1552073)
15	13 and 14 (22705)
16	11 or 12 or 15 (31088)
17	10 and 16 (8299)
18	clinical study/ (153820)
19	exp case control study/ (144495)
20	family study/ (25372)
21	longitudinal study/ (113437)
22	prospective study/ (453441)
23	cross-sectional study/ (256582)

```

24 cohort analysis/ (378515)
25 follow-up/ (1298990)
26 cohort*.ti,ab. (767405)
27 cohort*.ti,ab. (767405)
28 (cohort adj (study or studies or analys*)).ti,ab. (231464)
29 case control.ti,ab. (138712)
30 ((follow up or observational or uncontrolled or non randomi#ed or
nonrandomi#ed or epidemiologic*) adj (study or studies)).ti,ab. (288643)
31 ((longitudinal or retrospective or prospective or cross sectional) and
(study or studies or review or analys* or cohort*)).ti,ab. (1739000)
32 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or
30 or 31 (3701870)
33 random*.ti,ab. (1309942)
34 trial.ti,ab. (719234)
35 factorial*.ti,ab. (32978)
36 (crossover* or cross over*).ti,ab. (94417)
37 ((doubl* or singl*) adj blind*).ti,ab. (209544)
38 (assign* or allocat* or volunteer* or placebo*).ti,ab. (910093)
39 placebo.ab. (265679)
40 crossover procedure/ (55786)
41 single blind procedure/ (31571)
42 randomized controlled trial/ (505723)
43 double blind procedure/ (150639)
44 or/33-43 (2312488)
45 animals/ not humans/ (1349456)
46 nonhuman/ (5472108)
47 exp Animal Experiment/ (2231311)
48 exp Experimental Animal/ (589177)
49 animal model/ (1107471)
50 exp Rodent/ (3499609)
51 (rat or rats or mouse or mice).ti. (1480444)
52 45 or 46 or 47 or 48 or 49 or 50 or 51 (7856264)
53 44 not 52 (1959578)
54 32 or 44 (5414421)
55 17 and 54 (3310)
56 55 not 52 (3095)
57 17 and 53 (689)
58 56 not 57 (2406)

```

OVERVIEW	
Interface:	Cochrane Library
Databases:	Cochrane Central Register of Controlled Trials (CENTRAL)
Study Types:	Randomized controlled trials and clinical controlled trials
Search Strategy: search terms [number of results]	
#1 MeSH descriptor: [Adolescent] this term only	95884
#2 MeSH descriptor: [Minors] this term only	9
#3 (adolescen* or teen* or youth* or young or juvenile? or minors or highschool*)	188335
#4 MeSH descriptor: [Child] explode all trees	324
#5 (child* or schoolchild* or "school age" or "school aged" or preschool* or toddler* or kid? or kindergar* or boy? or girl?)	143233
#6 MeSH descriptor: [Infant] explode all trees	15955

```
#7 (infan* or neonat* or newborn* or baby or babies) 67147
#8 MeSH descriptor: [Pediatrics] explode all trees 700
#9 MeSH descriptor: [Puberty] explode all trees 355
#10 (p?ediatric* or pubert* or prepubert* or pubescen* or prepubescen*)
16262
#11 #1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 297717
#12 MeSH descriptor: [Central Venous Catheters] explode all trees 106
#13 MeSH descriptor: [Catheterization, Central Venous] explode all trees
913
#14 (central:ti,ab near venous:ti,ab) and (catheter*:ti,ab or device:ti,ab or
line:ti,ab or access*:ti,ab) 1759
#15 #12 or #13 or #14 2130
#16 #11 and #15 628
```

## Recommendations 17 and 18: Right atrial thrombosis

OVERVIEW	
Interface:	Ovid
Database:	Medline, and Medline In-Process & Other Non-Indexed Citations (1946-present)
Study Types:	Randomized controlled trials and Observational studies
Search Strategy: search terms [number of results]	
1	exp adolescent/ (1870435)
2	(adolescens\$ or teen\$ or youth\$ or young or juvenile? or minors or highschool\$).ti,ab,jx. (736657)
3	exp child/ (1774964)
4	(child\$ or schoolchild\$ or "school age" or "school aged" or preschool\$ or toddler\$ or kid? or kindergar\$ or boy? or girl?).ti,ab,jx. (1373876)
5	exp infant/ (1067518)
6	(infan\$ or neonat\$ or newborn\$ or baby or babies).ti,ab,jx. (675209)
7	exp pediatrics/ (53305)
8	exp puberty/ (16879)
9	(p?ediatric\$ or pubert\$ or prepubert\$ or pubescen\$ or prepubescen\$).ti,ab,jx. (342436)
10	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (4186979)
11	(right and (atrial or atrium)).ti,ab. (38952)
12	thrombosis/ or exp venous thrombosis/ (114005)
13	thrombo\$.ti,ab,kw. (334769)
14	(right atrial adj thromb*).ti,ab,kw. (570)
15	12 or 13 (373802)
16	11 and 15 (2897)
17	14 or 16 (2979)
18	10 and 17 (622)

OVERVIEW	
Interface:	Ovid
Database:	Embase (1974-present)
Study Types:	Randomized controlled trials and observational studies
Search Strategy: search terms [number of results]	
1	exp adolescent/ (1494066)
2	(adolescens\$ or teen\$ or youth\$ or young or juvenile? or minors or highschool\$).ti,ab,jx. (956095)
3	exp child/ (2548124)
4	(child\$ or schoolchild\$ or "school age" or "school aged" or preschool\$ or toddler\$ or kid? or kindergar\$ or boy? or girl?).ti,ab,jx. (1811850)
5	exp infant/ (1000204)
6	(infan\$ or neonat\$ or newborn\$ or baby or babies).ti,ab,jx. (843432)
7	exp pediatrics/ (99753)
8	exp puberty/ (39356)
9	(p?ediatric\$ or pubert\$ or prepubert\$ or pubescen\$ or prepubescen\$).ti,ab,jx. (917224)
10	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (4534431)
11	(right and (atrial or atrium)).ti,ab. (58486)

12	thrombosis/ or exp venous thrombosis/ (230831)
13	thrombo\$.ti,ab,kw. (479463)
14	(right atrial adj thromb*).ti,ab,kw. (749)
15	12 or 13 (563651)
16	11 and 15 (4415)
17	14 or 16 (4681)
18	10 and 17 (864)

OVERVIEW	
Interface:	Cochrane Library
Databases:	Cochrane Central Register of Controlled Trials (CENTRAL)
Study	Randomized controlled trials and clinical controlled trials
Types:	
Search Strategy: search terms [number of results]	
#1	MeSH descriptor: [Adolescent] this term only 95884
#2	MeSH descriptor: [Minors] this term only 9
#3	(adolescen* or teen* or youth* or young or juvenile? or minors or highschool*) 188335
#4	MeSH descriptor: [Child] explode all trees 324
#5	(child* or schoolchild* or "school age" or "school aged" or preschool* or toddler* or kid? or kindergar* or boy? or girl?) 143233
#6	MeSH descriptor: [Infant] explode all trees 15955
#7	(infan* or neonat* or newborn* or baby or babies) 67147
#8	MeSH descriptor: [Pediatrics] explode all trees 700
#9	MeSH descriptor: [Puberty] explode all trees 355
#10	(p?ediatric* or pubert* or prepubert* or pubescen* or prepubescen*) 16262
#11	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 297717
#12	right:ti,ab and (atrium:ti,ab or atrial:ti,ab) 1677
#13	thrombo*:ti,ab,kw 39786
#14	MeSH descriptor: [Venous Thrombosis] explode all trees 2855
#15	MeSH descriptor: [Venous Thromboembolism] explode all trees 753
#16	MeSH descriptor: [Pulmonary Embolism] explode all trees 1140
#17	#12 or #13 or #14 or #15 or #16 41992
#18	#11 and #17 5324

## Recommendations 19 and 20a,b: Renal vein thrombosis

OVERVIEW	
Interface:	Ovid
Database:	Medline, and Medline In-Process & Other Non-Indexed Citations (1946-present)
Study Types:	Randomized controlled trials and Observational studies
Search Strategy: search terms [number of results]	
1	Adolescent/ (1870435)
2	Minors/ (2452)
3	(adolescens\$ or teen\$ or youth\$ or young or juvenile? or minors or highschool\$).ti,ab,jw. (755813)
4	exp Child/ (1774964)
5	(child\$ or schoolchild\$ or "school age" or "school aged" or preschool\$ or toddler\$ or kid? or kindergar\$ or boy? or girl?).ti,ab,jw. (1439729)
6	exp Infant/ (1067518)
7	(infan\$ or neonat\$ or newborn\$ or baby or babies).ti,ab,jw. (691736)
8	exp Pediatrics/ (53305)
9	exp Puberty/ (16879)
10	(p?ediatric\$ or pubert\$ or prepubert\$ or pubescen\$ or prepubescen\$).ti,ab,jw. (695024)
11	or/1-10 (4261244)
12	exp Renal Veins/ (7200)
13	(renal or nephro\$ or kidney).ti,ab,kw. (823565)
14	(vein or venous).ti,ab,kw. (330289)
15	13 and 14 (23260)
16	12 or 15 (26786)
17	thrombosis/ or exp venous thrombosis/ (114005)
18	exp thromboembolism/ or venous thromboembolism/ (51479)
19	exp Pulmonary Embolism/ (36211)
20	thrombo\$.ti,ab,kw. (334769)
21	17 or 18 or 19 or 20 (408773)
22	16 and 21 (6894)
23	(renal vein adj thromb*).ti,ab,kw. (1189)
24	22 or 23 (6938)
25	11 and 24 (1761)

OVERVIEW	
Interface:	Ovid
Database:	Embase (1974-present)
Study Types:	Randomized controlled trials and observational studies
Search Strategy: search terms [number of results]	
1	Adolescent/ (1493893)
2	Minors/ (496)
3	(adolescens\$ or teen\$ or youth\$ or young or juvenile? or minors or highschool\$).ti,ab,jw. (956095)
4	exp Child/ (2548124)
5	(child\$ or schoolchild\$ or "school age" or "school aged" or preschool\$ or toddler\$ or kid? or kindergar\$ or boy? or girl?).ti,ab,jw. (1811850)

6	exp Infant/ (1000204)
7	(infan\$ or neonat\$ or newborn\$ or baby or babies).ti,ab,jw. (843432)
8	exp Pediatrics/ (99753)
9	exp Puberty/ (39356)
10	(p?ediatric\$ or pubert\$ or prepubert\$ or pubescen\$ or prepubescen\$).ti,ab,jw. (917224)
11	or/1-10 (4534579)
12	exp Renal Veins/ (7803)
13	(renal or nephro\$ or kidney).ti,ab,kw. (1107118)
14	(vein or venous).ti,ab,kw. (461298)
15	13 and 14 (37168)
16	12 or 15 (39837)
17	thrombosis/ or exp venous thrombosis/ (230831)
18	exp thromboembolism/ or venous thromboembolism/ (447229)
19	exp Pulmonary Embolism/ (84001)
20	thrombo\$.ti,ab,kw. (479463)
21	17 or 18 or 19 or 20 (693171)
22	16 and 21 (12364)
23	(renal vein adj thromb*).ti,ab,kw. (1559)
24	22 or 23 (12386)
25	11 and 24 (2366)

OVERVIEW	
Interface:	Cochrane Library
Databases:	Cochrane Central Register of Controlled Trials (CENTRAL)
Study	Randomized controlled trials and clinical controlled trials
Types:	
Search Strategy: search terms [number of results]	
#1	MeSH descriptor: [Adolescent] this term only 95884
#2	MeSH descriptor: [Minors] this term only 9
#3	(adolescen* or teen* or youth* or young or juvenile? or minors or highschool*) 188335
#4	MeSH descriptor: [Child] explode all trees 324
#5	(child* or schoolchild* or "school age" or "school aged" or preschool* or toddler* or kid? or kindergar* or boy? or girl?) 143233
#6	MeSH descriptor: [Infant] explode all trees 15955
#7	(infan* or neonat* or newborn* or baby or babies) 67147
#8	MeSH descriptor: [Pediatrics] explode all trees 700
#9	MeSH descriptor: [Puberty] explode all trees 355
#10	(p?ediatric* or pubert* or prepubert* or pubescen* or prepubescen*) 16262
#11	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 297717
#12	MeSH descriptor: [Renal Veins] explode all trees 21
#13	renal:ti,ab,kw or nephro*:ti,ab,kw or kidney:ti,ab,kw 59676
#14	(vein or venous):ti,ab,kw 29547
#15	#13 and #14 2058
#16	#12 or #15 2061
#17	thrombo*:ti,ab,kw 39786
#18	MeSH descriptor: [Venous Thrombosis] explode all trees 2855
#19	MeSH descriptor: [Venous Thromboembolism] explode all trees 753
#20	MeSH descriptor: [Pulmonary Embolism] explode all trees 1140
#21	#17 or #18 or #19 or #20 40401
#22	#16 and #21 805



#23 #11 and #22 135

## Recommendations 21a,b: Portal vein thrombosis

OVERVIEW	
Interface:	Ovid
Database:	Medline, and Medline In-Process & Other Non-Indexed Citations (1946-present)
Study Types:	Randomized controlled trials and Observational studies
Search Strategy: search terms [number of results]	
1	exp adolescent/ (1870435)
2	(adolescen\$ or teen\$ or youth\$ or young or juvenile? or minors or highschool\$).ti,ab,jx. (736657)
3	exp child/ (1774964)
4	(child\$ or schoolchild\$ or "school age" or "school aged" or preschool\$ or toddler\$ or kid? or kindergar\$ or boy? or girl?).ti,ab,jx. (1373876)
5	exp infant/ (1067518)
6	(infan\$ or neonat\$ or newborn\$ or baby or babies).ti,ab,jx. (675209)
7	exp pediatrics/ (53305)
8	exp puberty/ (16879)
9	(p?ediatric\$ or pubert\$ or prepubert\$ or pubescen\$ or prepubescen\$).ti,ab,jx. (342436)
10	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (4186979)
11	exp Portal Vein/ (20430)
12	(portal adj vein).ti,ab,kw. (23906)
13	(portal adj venous).ti,ab,kw. (6813)
14	((splanchnic or splenic or mesenteric) adj (venous or vein)).ti,ab,kw. (5694)
15	11 or 12 or 13 or 14 (39990)
16	thrombosis/ or exp venous thrombosis/ (114005)
17	exp thromboembolism/ or venous thromboembolism/ (51479)
18	exp Pulmonary Embolism/ (36211)
19	thrombo\$.ti,ab,kw. (334769)
20	16 or 17 or 18 or 19 (408773)
21	15 and 20 (8312)
22	(portal vein adj thromb*).ti,ab,kw. (3454)
23	21 or 22 (8389)
24	10 and 23 (2108)

OVERVIEW	
Interface:	Ovid
Database:	Embase (1974-present)
Study Types:	Randomized controlled trials and observational studies
Search Strategy: search terms [number of results]	
1	exp adolescent/ (1494066)
2	(adolescen\$ or teen\$ or youth\$ or young or juvenile? or minors or highschool\$).ti,ab,jx. (956095)
3	exp child/ (2548124)
4	(child\$ or schoolchild\$ or "school age" or "school aged" or preschool\$ or toddler\$ or kid? or kindergar\$ or boy? or girl?).ti,ab,jx. (1811850)

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5     exp infant/ (1000204)
6     (infan$ or neonat$ or newborn$ or baby or babies).ti,ab,jx. (843432)
7     exp pediatrics/ (99753)
8     exp puberty/ (39356)
9     (p?ediatric$ or pubert$ or prepubert$ or pubescen$ or
prepubescen$).ti,ab,jx. (917224)
10    1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (4534431)
11    exp Portal Vein/ (1717)
12    (portal adj vein).ti,ab,kw. (35402)
13    (portal adj venous).ti,ab,kw. (9046)
14    ((splanchnic or splenic or mesenteric) adj (venous or vein)).ti,ab,kw.
(8277)
15    11 or 12 or 13 or 14 (47288)
16    thrombosis/ or exp venous thrombosis/ (230831)
17    exp thromboembolism/ or venous thromboembolism/ (447229)
18    exp Pulmonary Embolism/ (84001)
19    thrombo$.ti,ab,kw. (479463)
20    16 or 17 or 18 or 19 (693171)
21    15 and 20 (13650)
22    (portal vein adj thromb*).ti,ab,kw. (6346)
23    21 or 22 (13675)
24    10 and 23 (3431)

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**OVERVIEW**

Interface: Cochrane Library  
Databases: Cochrane Central Register of Controlled Trials (CENTRAL)  
Study: Randomized controlled trials and clinical controlled trials  
Types:

**Search Strategy: search terms [number of results]**

```

#1 MeSH descriptor: [Adolescent] this term only 95884
#2 MeSH descriptor: [Minors] this term only 9
#3 (adolescen* or teen* or youth* or young or juvenile? or minors or
highschool*) 188335
#4 MeSH descriptor: [Child] explode all trees 324
#5 (child* or schoolchild* or "school age" or "school aged" or preschool* or
toddler* or kid? or kindergar* or boy? or girl?) 143233
#6 MeSH descriptor: [Infant] explode all trees 15955
#7 (infan* or neonat* or newborn* or baby or babies) 67147
#8 MeSH descriptor: [Pediatrics] explode all trees 700
#9 MeSH descriptor: [Puberty] explode all trees 355
#10 (p?ediatric* or pubert* or prepubert* or pubescen* or prepubescen*)
16262
#11 #1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 297717
#12 MeSH descriptor: [Portal Vein] explode all trees 305
#13 portal:ti,ab and (vein or venous):ti,ab 1336
#14 #12 or #13 1403
#15 thrombo*:ti,ab,kw 39786
#16 MeSH descriptor: [Venous Thrombosis] explode all trees 2855
#17 MeSH descriptor: [Venous Thromboembolism] explode all trees 753
#18 MeSH descriptor: [Pulmonary Embolism] explode all trees 1140
#19 #15 or #16 or #17 or #18 40401
#20 #14 and #19 302
#21 #11 and #20 109

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## Recommendations 22 and 23:Cerebral sinus venous thrombosis

OVERVIEW	
Interface:	Ovid
Database:	Medline, and Medline In-Process & Other Non-Indexed Citations (1946-present)
Study Types:	Randomized controlled trials and Observational studies
Search Strategy: search terms [number of results]	
1	exp adolescent/ (1870435)
2	(adolescen\$ or teen\$ or youth\$ or young or juvenile? or minors or highschool\$).ti,ab,jx. (736657)
3	exp child/ (1774964)
4	(child\$ or schoolchild\$ or "school age" or "school aged" or preschool\$ or toddler\$ or kid? or kindergar\$ or boy? or girl?).ti,ab,jx. (1373876)
5	exp infant/ (1067518)
6	(infan\$ or neonat\$ or newborn\$ or baby or babies).ti,ab,jx. (675209)
7	exp pediatrics/ (53305)
8	exp puberty/ (16879)
9	(p?ediatric\$ or pubert\$ or prepubert\$ or pubescen\$ or prepubescen\$).ti,ab,jx. (342436)
10	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (4186979)
11	exp cerebral sinus thrombosis/ (0)
12	exp occlusive cerebrovascular disease/ (0)
13	brain embolism/ (4893)
14	((cerebral vein or cerebral venous or sinus or intracranial) adj thrombo*).ti,ab,kw. (5193)
15	((intracranial or cerebral) adj embolism).ti,ab,kw. (1512)
16	11 or 12 or 13 or 14 or 15 (11142)
17	10 and 16 (2408)

OVERVIEW	
Interface:	Ovid
Database:	Embase (1974-present)
Study Types:	Randomized controlled trials and observational studies
Search Strategy: search terms [number of results]	
1	exp adolescent/ (1494066)
2	(adolescen\$ or teen\$ or youth\$ or young or juvenile? or minors or highschool\$).ti,ab,jx. (956095)
3	exp child/ (2548124)
4	(child\$ or schoolchild\$ or "school age" or "school aged" or preschool\$ or toddler\$ or kid? or kindergar\$ or boy? or girl?).ti,ab,jx. (1811850)
5	exp infant/ (1000204)
6	(infan\$ or neonat\$ or newborn\$ or baby or babies).ti,ab,jx. (843432)
7	exp pediatrics/ (99753)
8	exp puberty/ (39356)
9	(p?ediatric\$ or pubert\$ or prepubert\$ or pubescen\$ or prepubescen\$).ti,ab,jx. (917224)
10	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (4534431)
11	exp cerebral sinus thrombosis/ (7613)

12	exp occlusive cerebrovascular disease/ (35956)
13	brain embolism/ (6911)
14	((cerebral vein or cerebral venous or sinus or intracranial) adj thrombo*).ti,ab,kw. (7858)
15	((intracranial or cerebral) adj embolism).ti,ab,kw. (2578)
16	11 or 12 or 13 or 14 or 15 (45149)
17	10 and 16 (6659)

**OVERVIEW**

Interface: Cochrane Library  
 Databases: Cochrane Central Register of Controlled Trials (CENTRAL)  
 Study Types: Randomized controlled trials and clinical controlled trials

**Search Strategy: search terms [number of results]**

#1	MeSH descriptor: [Intracranial Embolism] this term only	159
#2	MeSH descriptor: [Intracranial Thrombosis] this term only	44
#3	MeSH descriptor: [Intracranial Embolism and Thrombosis] explode all trees	316
#4	MeSH descriptor: [Sinus Thrombosis, Intracranial] explode all trees	16
#5	((cerebral vein) or (cerebral venous) or sinus or intracranial) near thrombo*:ti,ab,kw	514
#6	((intracranial or cerebral) near embolism):ti,ab,kw	382
#7	#1 or #2 or #3 or #4 or #5 or #6	809
#8	MeSH descriptor: [Adolescent] this term only	95884
#9	MeSH descriptor: [Minors] this term only	9
#10	(adolescen* or teen* or youth* or young or juvenile? or minors or highschool*)	188335
#11	MeSH descriptor: [Child] explode all trees	324
#12	(child* or schoolchild* or "school age" or "school aged" or preschool* or toddler* or kid? or kindergar* or boy? or girl?)	143233
#13	MeSH descriptor: [Infant] explode all trees	15955
#14	(infan* or neonat* or newborn* or baby or babies)	67147
#15	MeSH descriptor: [Pediatrics] explode all trees	700
#16	MeSH descriptor: [Puberty] explode all trees	355
#17	(p?ediatric* or pubert* or prepubert* or pubescen* or prepubescen*)	16262
#18	#8 or #9 or #10 or #11 or #12 or #13 or #14 or #15 or #16 or #17	297717
#19	#7 and #18	128

## Recommendations : Purpura fulminans

OVERVIEW	
Interface:	Ovid
Database:	Medline, and Medline In-Process & Other Non-Indexed Citations (1946-present)
Study Types:	Randomized controlled trials and Observational studies
Search Strategy: search terms [number of results]	
1	exp adolescent/ (1870435)
2	(adolescen\$ or teen\$ or youth\$ or young or juvenile? or minors or highschool\$).ti,ab,jx. (736657)
3	exp child/ (1774964)
4	(child\$ or schoolchild\$ or "school age" or "school aged" or preschool\$ or toddler\$ or kid? or kindergar\$ or boy? or girl?).ti,ab,jx. (1373876)
5	exp infant/ (1067518)
6	(infan\$ or neonat\$ or newborn\$ or baby or babies).ti,ab,jx. (675209)
7	exp pediatrics/ (53305)
8	exp puberty/ (16879)
9	(p?ediatic\$ or pubert\$ or prepubert\$ or pubescen\$ or prepubescen\$).ti,ab,jx. (342436)
10	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (4186979)
11	exp Purpura Fulminans/ (223)
12	(purpur\$ and fulminan\$).ti,ab. (1028)
13	11 or 12 (1064)
14	10 and 13 (634)

OVERVIEW	
Interface:	Ovid
Database:	Embase (1974-present)
Study Types:	Randomized controlled trials and observational studies
Search Strategy: search terms [number of results]	
1	exp adolescent/ (1494066)
2	(adolescen\$ or teen\$ or youth\$ or young or juvenile? or minors or highschool\$).ti,ab,jx. (956095)
3	exp child/ (2548124)
4	(child\$ or schoolchild\$ or "school age" or "school aged" or preschool\$ or toddler\$ or kid? or kindergar\$ or boy? or girl?).ti,ab,jx. (1811850)
5	exp infant/ (1000204)
6	(infan\$ or neonat\$ or newborn\$ or baby or babies).ti,ab,jx. (843432)
7	exp pediatrics/ (99753)
8	exp puberty/ (39356)
9	(p?ediatic\$ or pubert\$ or prepubert\$ or pubescen\$ or prepubescen\$).ti,ab,jx. (917224)
10	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (4534431)
11	exp Purpura Fulminans/ (1195)
12	(purpur\$ and fulminan\$).ti,ab. (1308)
13	11 or 12 (1664)
14	10 and 13 (951)

OVERVIEW		
Interface:	Cochrane Library	
Databases:	Cochrane Central Register of Controlled Trials (CENTRAL)	
Study Types:	Randomized controlled trials and clinical controlled trials	
Search Strategy: search terms [number of results]		
#1	MeSH descriptor: [Purpura Fulminans] explode all trees	0
#2	purpura:ti,ab,kw and fulminans:ti,ab,kw	12
#3	#1 or #2	12
#4	MeSH descriptor: [Adolescent] this term only	95884
#5	MeSH descriptor: [Minors] this term only	9
#6	(adolescen* or teen* or youth* or young or juvenile? or minors or highschool*)	188335
#7	MeSH descriptor: [Child] explode all trees	324
#8	(child* or schoolchild* or "school age" or "school aged" or preschool* or toddler* or kid? or kindergar* or boy? or girl?)	143233
#9	MeSH descriptor: [Infant] explode all trees	15955
#10	(infan* or neonat* or newborn* or baby or babies)	67147
#11	MeSH descriptor: [Pediatrics] explode all trees	700
#12	MeSH descriptor: [Puberty] explode all trees	355
#13	(p?ediatric* or pubert* or prepubert* or pubescen* or prepubescen*)	16262
#14	#4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12 or #13	297717
#15	#3 and #14	12