

Supplement 4: Search Strategies

Recommendations 1-10: Cerebrovascular Disease

1. Database(s): Embase 1988 to 2017 Week 30, Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to July 24th, 2017.

#	Searches	Results
1	exp Anemia, Sickle Cell/	46344
2	exp Hemoglobin, Sickle/	6407
3	((((drepanocytic or "haemoglobin s" or "hemoglobin s" or "Hb SS" or hbs or sickle or "sickle cell" or sickling or ss) adj2 (anaemia* or anemia* or disease* or disorder*)) or ((Hb S or HbS or sickle) adj3 (disease* or thalassemi* or thalassaemi*)) or (sickle and SCD) or drepanocyt* or drepanocytemia* or drepanocytoses or drepanocytosis or "haemoglobin C disease" or "haemoglobin D disease" or "haemoglobin E disease" or "haemoglobin S" or "haemoglobin SC" or "haemoglobin SE" or "haemoglobin SS" or "Hb C disease" or "Hb D disease" or "Hb E disease" or "Hb SC" or "Hb SS" or "HbACor Hb SE" or HbAS or HbSC or HbSS or "hemoglobin C disease" or "hemoglobin D disease" or "hemoglobin E disease" or "hemoglobin S" or "hemoglobin SC" or "hemoglobin SE" or "hemoglobin SS" or meniscocyt* or meniscocytoses or meniscocytosis or "SC disease" or "SC diseases" or "sickle cell*" or sickled or sicklemlia or sickling).ti,ab,hw,kw.	60611
4	1 or 2 or 3	61233
5	exp Cerebrovascular Disorders/	795153
6	((((brain* or cerebr* or vertebrobasil* or hemispher* or intracran* or intracerebral or infratentorial or supratentorial or MCA* or "anterior circulation" or "basilar artery" or "vertebral artery" or subcortical or cortical or choroidal) adj5 (ischemi* or ischaemi* or infarct* or thrombo* or phlebothrombo* or stenosis or emboli* or occlus* or "vaso-occlus*" or vasocclus* or vasoocclus* or obstruction* or hypoxi* or accident* or abnormalit* or vasculopath* or vasospasm* or disorder* or damage* or disease* or lesion* or insufficien*)) or ((ischemi* or ischaem*) adj5 (apoplex* or attack* or accident* or seizure* or arrest* or injur* or failure* or lesion* or insult*)) or CVA or "incomplete infarct*" or "silent infarct*" or stroke*).ti,ab,hw,kw.	1424380
7	exp Cerebrovascular Circulation/	65969
8	Ultrasonography, Doppler, Transcranial/	7419
9	((((brain* or cerebr* or vertebrobasil* or hemispher* or intracran* or intracerebral or infratentorial or supratentorial or MCA* or anterior circulation or "basilar artery" or "vertebral artery" or subcortical or cortical or choroidal) adj3 (hemodynamics or haemodynamics or "blood flow" or "blood velocit*" or volume)) or (transcranial adj3 (doppler or ultrasound or sonograph* or ultrasonograph*))).ti,ab,hw,kw.	142868
10	exp Cerebral Arteries/di	8
11	Blood Volume Determination/	3365
12	Blood Flow Velocity/	85785
13	(TCD adj3 (flow* or velocit*)).ti,ab,hw,kw.	1009

14	exp Cerebral Infarction/	88572
15	Brain Infarction/	45233
16	Stroke/	201470
17	Stroke, Lacunar/	1099
18	("cerebral vasculopath*" or "cerebrovascular accident*" or "cerebral vascular accident*" or ((asymptomatic* or silent* or nonsymptomatic* or unsymptomatic* or "non-symptomatic*" or quiet* or symptomfree or symptomfree or symptomless or "symptom-less" or occult or "free of symptom" or "free of symptoms" or subclinical* or covert* or incomplete*) adj5 (infarct* or ischemi* or ischaemi* or stroke*)) or ((cerebral or cerebellar or cerebrovascular or choroidal or hemispher* or cortical or subcortical or brain*) adj3 (infarct* or ischemi* or ischaemi* or stroke*)) or ((ischemic or ischaemic or cerebrovascular) adj2 (event* or injur* or complication*)) or ((MRI or "magnetic resonance imaging" or neuroimaging or "white matter") adj3 abnormal*).ti,ab,hw,kw.	491537
19	or/5-18	1811262
20	4 and 19	6483
21	exp controlled study/	5811944
22	exp Randomized Controlled Trial/	915994
23	exp triple blind procedure/	166
24	exp Double-Blind Method/	280263
25	exp Single-Blind Method/	53493
26	exp latin square design/	338
27	exp Placebos/	300518
28	exp Placebo Effect/	8693
29	exp clinical trials as topic/	562292
30	((control* adj3 study) or (control* adj3 trial) or (randomized adj3 study) or (randomized adj3 trial) or (randomised adj3 study) or (randomised adj3 trial) or "pragmatic clinical trial" or (random* adj1 allocat*) or (doubl* adj blind*) or (doubl* adj mask*) or (singl* adj blind*) or (singl* adj mask*) or (tripl* adj blind*) or (tripl* adj mask*) or (trebl* adj blind*) or (trebl* adj mask*) or "latin square" or placebo* or nocebo* or random* or trial or groups).mp,pt.	11406054
31	or/21-30	11499518
32	20 and 31	2065
33	(exp animals/ or exp nonhuman/) not exp humans/	8938125
35	32 not (33 or 34)	1998
36	limit 35 to (editorial or erratum or letter or note or addresses or autobiography or bibliography or biography or blogs or comment or dictionary or directory or interactive tutorial or interview or lectures or legal cases or legislation or news or newspaper article or overall or patient education handout or periodical index or portraits or published erratum or video-audio media or webcasts) [Limit not valid in Embase,Ovid MEDLINE(R),Ovid MEDLINE(R) Daily Update,Ovid MEDLINE(R) In-Process,Ovid MEDLINE(R) Publisher; records were retained]	52
38	limit 37 to ("all infant (birth to 23 months)" or "all child (0 to 18 years)" or "newborn infant (birth to 1 month)" or "infant (1 to 23 months)" or "preschool child (2 to 5 years)" or "child (6 to 12 years)" or "adolescent (13 to 18 years)") [Limit not valid in Embase; records were retained]	1817

39	limit 38 to (embryo or infant or child or preschool child <1 to 6 years> or school child <7 to 12 years> or adolescent <13 to 17 years>) [Limit not valid in Ovid MEDLINE(R),Ovid MEDLINE(R) Daily Update,Ovid MEDLINE(R) In-Process,Ovid MEDLINE(R) Publisher; records were retained]	1138
41	limit 40 to (adult <18 to 64 years> or aged <65+ years>) [Limit not valid in Ovid MEDLINE(R),Ovid MEDLINE(R) Daily Update,Ovid MEDLINE(R) In-Process,Ovid MEDLINE(R) Publisher; records were retained]	652
43	37 not 42	1681
45	limit 44 to yr="2016 -Current"	263
46	remove duplicates from 45	214

2. Database(s): Embase 1988 to 2017 Week 30, Ovid MEDLINE(R) 1946 to Present and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) Daily

#	Searches	Results
1	exp Anemia, Sickle Cell/	46346
2	((haemoglobin adj2 s) or (haemoglobin adj2 ss) or (hemoglobin adj2 SS) or (hemoglobin adj2 s) or (Hb adj2 SS) or (Hb adj2 S) or HbS or HbSS or sickle or "sickle cell" or sickling or SS or sickled or Drepanocyt* or meniscocyt*).mp.	151452
3	1 or 2	151576
4	exp alpha-Thalassemia/	7157
5	((alpha adj2 (thalassemia* or thalassaemia*)) or alphathalassemia or alphathalassaemia or (hemoglobin adj2 H) or (haemoglobin adj2 H) or HbH or (A adj2 (thalassemia* or thalassaemia*)) or (alpha adj2 thal)).mp.	12552
6	4 or 5	14546
7	exp beta-Thalassemia/	18198
8	((b adj2 (thalassemia* or thalassaemia*)) or betathalassemia or betathalassaemia or bethathalassemia or bethathalassaemia or (Betha* adj2 (thalassemia* or thalassaemia*)) or (Beta* adj2 (thalassemia* or thalassaemia*)) or (betha adj thal) or (beta adj tal) or HbF or "Hb F" or (haemoglobin adj2 F) or (hemoglobin adj2 F) or ((thalassemia* or thalassaemia*) adj2 intermedia*) or ((thalassemia* or thalassaemia*) adj2 major*) or ((thalassemia* or thalassaemia*) adj2 minor*)).mp.	38636
9	7 or 8	38636
10	exp delta-Thalassemia/	99
11	(delta or (D adj2 (thalassemia* or thalassaemia*))).mp.	248275
12	10 or 11	248275
13	9 and 12	1209

14	(deltabeta or deltabetha or "delta betha" or "delta beta").mp.	1599
15	13 or 14	2315
16	((((Hemoglobin or haemoglobin or Hb) adj2 lepore) or Hblepore or ((Hemoglobin or haemoglobin or Hb) adj2 Hollandia) or HbHollandia).mp.	466
17	((((Hemoglobin or haemoglobin or Hb) adj2 O) or HbO or ((Hemoglobin or haemoglobin or Hb) adj2 arab*) or HbArab).mp.	6230
18	((((Hemoglobin or haemoglobin or Hb) adj2 D) or HbD or ((Hemoglobin or haemoglobin or Hb) adj2 Punjab) or HbPunjab or ((Hemoglobin or haemoglobin or Hb) adj2 "los angeles") or HbLosAngeles).mp.	5948
19	("haemoglobin E" or "hemoglobin E" or "Hb E" or HbE).mp.	11018
20	6 or 15 or 16 or 17 or 18 or 19	37676
21	3 and 20	5703
22	((((Haemoglobin or hemoglobin or Hb) adj2 (SO or SSO or SD or SSD or Slepore or SSlepore)) or haemoglobinSO or hemoglobin SO or HbSO or HaemoglobinSSO or hemoglobinSSO or HbSSO or HaemoglobinSD or hemoglobinSD or HbSD or HaemoglobinSSD or hemoglobinSSD or HbSSD or HaemoglobinSlepore or hemoglobinSlepore or HbSlepore or HaemoglobinSSlepore or hemoglobinSSlepore or HbSSlepore or "haemoglobin SE" or "hemoglobin SE" or "Hb SE" or "HbSE" or "haemoglobin SC" or "hemoglobin SC" or "Hb SC" or HbSC).mp.	4270
23	21 or 22	9673
24	exp Ultrasonography, Doppler, Transcranial/	7424
25	exp transcranial doppler/	2604
26	((((transcranial or brain or cranial or head) and (sonograph* or ultrasonograph* or ecograph* or doppler or echogram* or echosound* or sonogram* or sonograph* or ultrasonic or ultrasound)) or neurosonolog*).mp.	99679
27	24 or 25 or 26	99679
28	23 and 27	156

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#	Searches	Results
1	exp Anemia, Sickle Cell/	46344
2	((haemoglobin adj2 s) or (haemoglobin adj2 ss) or (hemoglobin adj2 SS) or (hemoglobin adj2 s) or (Hb adj2 SS) or (Hb adj2 S) or HbS or HbSS or sickle or "sickle cell" or sickling or SS or sickled or Drepanocyt* or meniscocyt*).mp.	151414
3	1 or 2	151538
4	exp alpha-Thalassemia/	7157
5	((alpha adj2 (thalassemia* or thalassaemia*)) or alphathalassemia or alphathalassaemia or (hemoglobin adj2 H) or (haemoglobin adj2 H) or HbH or (A adj2 (thalassemia* or thalassaemia*)) or (alpha adj2 thal)).mp.	12540
6	4 or 5	14534
7	exp beta-Thalassemia/	18198
8	((b adj2 (thalassemia* or thalassaemia*)) or betathalassaemia or betathalassemia or bethathalassaemia or bethathalassemia or (Betha* adj2 (thalassemia* or thalassaemia*)) or (Beta* adj2 (thalassemia* or thalassaemia*)) or (betha adj thal) or (beta adj tal) or HbF or "Hb F" or (haemoglobin adj2 F) or (hemoglobin adj2 F) or ((thalassemia* or thalassaemia*) adj2 intermedia*) or ((thalassemia* or thalassaemia*) adj2 major*) or ((thalassemia* or thalassaemia*) adj2 minor*)).mp.	38628
9	7 or 8	38628
10	(deltabeta or deltabetha or "delta betha" or "delta beta").mp.	1599
11	((Hemoglobin or haemoglobin or Hb) adj2 lepore) or Hblepore or ((Hemoglobin or haemoglobin or Hb) adj2 Hollandia) or HbHollandia).mp.	466
12	((Hemoglobin or haemoglobin or Hb) adj2 O) or HbO or ((Hemoglobin or haemoglobin or Hb) adj2 arab*) or HbArab).mp.	6229
13	((Hemoglobin or haemoglobin or Hb) adj2 D) or HbD or ((Hemoglobin or haemoglobin or Hb) adj2 Punjab) or HbPunjab or ((Hemoglobin or haemoglobin or Hb) adj2 "los angeles") or HbLosAngeles).mp.	5946
14	("haemoglobin C" or "hemoglobin C" or "Hb C" or HbC or "haemoglobin E" or "hemoglobin E" or "Hb E" or HbE).mp.	23879
15	6 or 9 or 10 or 11 or 12 or 13 or 14	78909
16	3 and 15	17721

17	((((Haemoglobin or hemoglobin or Hb) adj2 (SO or SSO or SD or SSD or Slepore or SSlepore)) or haemoglobinSO or hemoglobin SO or HbSO or HaemoglobinSSO or hemoglobinSSO or HbSSO or HaemoglobinSD or hemoglobinSD or HbSD or HaemoglobinSSD or hemoglobinSSD or HbSSD or HaemoglobinSlepore or hemoglobinSlepore or HbSlepore or HaemoglobinSSlepore or hemoglobinSSlepore or HbSSlepore or "haemoglobin SE" or "hemoglobin SE" or "Hb SE" or "HbSE" or "haemoglobin SC" or "hemoglobin SC" or "Hb SC" or HbSC).mp.	4270
18	((("haemoglobin s" or "hemoglobin s" or "Hb S" or hbs or sickle or "sickle cell" or sickling or SS) adj2 (anaemia* or anemia* or disease* or disorder*)) or drepanocytomia* or meniscocyt* or "haemoglobin SS" or "hemoglobin SS" or "Hb SS" or HbSS).mp.	52812
19	16 or 17 or 18	63394
20	exp Ultrasonography, Doppler, Transcranial/	7424
21	exp transcranial doppler/	2604
22	exp Brain/	2130110
23	exp Head/	480633
24	((((transcranial or brain or cranial or head) and (sonograph* or ultrasonograph* or ecograph* or doppler or echogram* or echosound* or sonogram* or sonograph* or ultrasonic or ultrasound)) or neurosonolog*).mp.	99666
25	20 or 21 or 22 or 23 or 24	2639879
26	19 and 25	2249
27	exp Afghanistan/	7388
28	exp Benin/	3137
29	exp Burkina Faso/	5915
30	exp Burundi/	1200
31	exp Central African Republic/	1340
32	exp Chad/	1212
33	exp Comoros/	529
34	exp Congo/	4219
35	exp Eritrea/	637
36	exp Ethiopia/	19949
37	exp Gambia/	4511
38	exp Guinea/	2284

39	exp Guinea-Bissau/	1645
40	exp Haiti/	5852
41	exp North Korea/	570
42	exp "Democratic People's Republic of Korea"/	570
43	exp Liberia/	2109
44	exp Madagascar/	6187
45	exp Malawi/	9540
46	exp Mali/	4635
47	exp Mozambique/	4513
48	exp Nepal/	14839
49	exp Niger/	2607
50	exp Rwanda/	4388
51	exp Senegal/	9913
52	exp Sierra Leone/	2833
53	exp Somalia/	2832
54	exp South Sudan/	144
55	exp Tanzania/	20657
56	exp Togo/	1999
57	exp Uganda/	22017
58	exp Zimbabwe/	10106
59	(Afghanistan or Kabul or Benin or dahomey or "porto novo" or hogbonu or ajashe or "Burkina faso" or "Burkina fasso" or "upper volta" or uagadugu or Burundi or urundi or Bujumbura or "Central African republic " or "Ubangi shari " or "centrafrican republic " or centrafricque or Bangui or Chad or tchad or Ndjamena or "n djamena" or "ndjamena" or Comoros or "Comoro island*" or "iles comores " or Mayotte or moronic or Congo* or Brazzaville or Eritrea or asmara or Ethiopia* or "addis ababa" or Gambia* or Banjul or Guinea* or Conakry or guinee or "Guinea bissau " or guinea or Bissau or guine or Haiti* or "port au prince" or "North korea*" or (democratic and people* and republic and korea) or Pyongyang or Liberia or Monrovia or Madagascar* or malasgasy or Antananarivo or Malaw* or Nyasaland or Lilongwe or Mali or Bamako or Mozambique* or (Portuguese and east and Africa) or mocambique or Maputo or Nepal* or Kathmandu or Niger* or Niamey or Rwand* or Ruand* or Kigali or Senegal* or Dakar or Sierra Leone or Freetown or Somalia or Mogadishu or "South sudan*" or	581612

	jubatan or juba or Tanzan* or Tanganyika or Zanzibar or Dodoma or Togo* or togelese or lome or Ugand* or Kampala or Zimbabwe* or Rhodesia or Harare).mp.	
60	exp Angola/	1824
61	exp Armenia/	2456
62	exp Bangladesh/	20705
63	exp Bhutan/	803
64	exp Bolivia/	4900
65	exp Cambodia/	6604
66	exp Cote d'Ivoire/	5195
67	exp Djibouti/	469
68	exp Egypt/	28269
69	exp El Salvador/	2052
70	exp "Georgia (Republic)"/	2704
71	exp Ghana/	14335
72	exp Guatemala/	5528
73	exp Honduras/	2304
74	exp India/	198521
75	exp Indonesia/	19997
76	exp Kenya/	28573
77	exp Kiribati/	1919
78	exp Micronesia/	2505
79	exp Kosovo/	388
80	exp Kyrgyzstan/	1895
81	exp Laos/	3227
82	exp Lesotho/	831
83	exp Mauritania/	849
84	exp "Federated States of Micronesia"/	655
85	exp Moldova/	1357
86	exp Mongolia/	3854
87	exp Morocco/	10436
88	exp Myanmar/	4152
89	exp Nicaragua/	2978

90	exp Nigeria/	53469
91	exp Pakistan/	34782
92	exp Papua New Guinea/	7089
93	exp Solomon Islands/	6188
94	exp Melanesia/	6376
95	exp Sri Lanka/	11022
96	exp Sudan/	8912
97	exp Swaziland/	1121
98	exp Syrian Arab Republic/	1726
99	exp Syria/	3060
100	exp Tajikistan/	1246
101	exp Timor-Leste/	525
102	exp Tunisia/	14711
103	exp Ukraine/	23944
104	exp Uzbekistan/	2998
105	exp Vanuatu/	650
106	exp Viet Nam/	21480
107	exp Palestine/	1200
108	exp Middle East/	252831
109	exp Yemen/	2673
110	exp Zambia/	8183
111	(Angol* or Luanda or Armenia* or Yerevan or Bangladesh* or "east Pakistan" or Dhaka or Bhutan* or thimphu or Bolivia* or sucre or "la paz" or "cabo verd*" or praia or Cambodia* or "phnom penh" or Kampuchea or (khmer adj2 republic*) or kampudja or "cote d'Ivoire" or "ivory coast" or Yamoussoukro or Ivorian or Djibouti or ("afar and issa" adj2 land) or "French sudan" or "French adj somaliland" or Egypt* or "united arab republic" or cairo or "El Salvador" or Salvador* or "san salvador" or Georgia* or Tiflis or Ghana* or "gold coast" or Accra or Guatemala* or Hondura* or Tegucigalpa or India* or "New delhi" or Indonesia* or Jakarta or Celebes or "East indies" or "Irian jaya" or java or madoera or Madura or "malay archipelago" or "Netherlands east indies" or ("new guinea" adj west) or Sulawesi or Sumatra or timor or "west irian" or Kenya* or Nairobi or Kiribati or Tarawa or Micronesia* or Palikir or "caroline island*" or "ellice island*" or "gilbert island*" or "Johnston island*" or "mariana island*" or Nauru or	911285

	"pacific island*" or Tuvalu or Kosov* or Pristina or Kirghiz* or Kyrgyz* or Bishkek or Lao or Laos or Laotian or Vientiane or Lesotho or Basutoland or Basotho or Maseru or (Lesotho adj kingdom) or Mauritania* or Nouakchott or Mauretania or Moldova* or Moldova* or Chisinau or Moldavia* or Mongolia* or Ulaanbaatar or Morocco or Ifni or Rabat or Moroccan or Myanma* or Burma or Naypyidaw or Burmese or Nicaragua* or Managua or Abuja or Pakistan* or Islamabad or Papua or "New guinea*" or ("New guinea" adj east) or "Port moresby" or "Sao tome and Principe" or "Sao Tome*" or "Solomon Island*" or Melanesia* or "Norfolk island*" or "Sri Lanka*" or Ceylon or "Sri Jayawardenepura Kotte" or Sudan* or Khartoum or Swaziland or Mbabane or Swazi or Syria* or Damascus or Tajikistan or Tadjikistan or TadzhiK or TadzhiKistan or Tajik or Dushanbe or Timor* or Dili or Tunisia* or Tunis or tunesia or Ukraine or Ukraina* or Kiev or Uzbekistan* or Uzbek or Tashkent or Vanuatu or "New Hebrides" or "Port Vila" or "Viet Nam" or Vietnam* or Hanoi or Palestin* or "West Bank" or "Middle East" or Yemen*n or Aden or Sanaa or Zambia* or Lusaka).mp.	
112	exp "South and Central America"/	168878
113	exp Latin America/	178792
114	((latin or south or central) adj America*).mp.	101128
115	exp low income country/	1223
116	exp Developing Countries/	142230
117	(("Low income" or "Lower middle income") adj (economy or country or countries)).mp.	12147
118	exp developing country/	142230
119	exp South Asia/ or exp Asia/ or exp Southeast Asia/	1468844
120	exp South Africa/ or exp Africa/ or exp North Africa/ or exp Central Africa/	475241
121	exp Asia, Northern/ or exp Asia, Central/ or exp Asia, Western/ or exp Asia, Southeastern/	1137800
122	exp Africa, Western/ or exp Africa, Northern/ or exp Africa, Eastern/ or exp "Africa South of the Sahara"/ or exp Africa, Southern/	453676
123	exp Europe, Eastern/ or exp Europe/	2488395
124	(europe or asia or africa).mp.	732169
125	27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 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 or 52 or 53 or 54 or 55 or 56 or 57 or 58 or 59 or 60 or 61 or 62 or 63 or 64 or 65 or 66 or 67 or 68 or 69 or 70 or 71 or 72 or 73 or 74 or 75 or 76 or 77 or 78 or 79 or 80 or 81 or 82 or 83 or 84 or 85 or 86 or 87 or 88 or 89 or 90 or 91 or 92 or 93 or 94 or 95 or 96 or 97 or 98 or 99 or 100 or 101	5342423

	or 102 or 103 or 104 or 105 or 106 or 107 or 108 or 109 or 110 or 111 or 112 or 113 or 114 or 115 or 116 or 117 or 118 or 119 or 120 or 121 or 122 or 123 or 124	
126	26 and 125	286
127	remove duplicates from 126	242

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#	Searches	Results
1	exp Anemia, Sickle Cell/	46344
2	((haemoglobin adj2 s) or (haemoglobin adj2 ss) or (hemoglobin adj2 SS) or (hemoglobin adj2 s) or (Hb adj2 SS) or (Hb adj2 S) or HbS or HbSS or sickle or "sickle cell" or sickling or SS or sickled or Drepanocyt* or meniscocyt*).mp.	151414
3	1 or 2	151538
4	exp alpha-Thalassemia/	7157
5	((alpha adj2 (thalassemia* or thalassaemia*)) or alphathalassemia or alphathalassaemia or (hemoglobin adj2 H) or (haemoglobin adj2 H) or HbH or (A adj2 (thalassemia* or thalassaemia*)) or (alpha adj2 thal)).mp.	12540
6	4 or 5	14534
7	exp beta-Thalassemia/	18198
8	((b adj2 (thalassemia* or thalassaemia*)) or betathalassaemia or betathalassemia or bethathalassaemia or bethathalassemia or (Betha* adj2 (thalassemia* or thalassaemia*)) or (Beta* adj2 (thalassemia* or thalassaemia*)) or (betha adj2 thal) or (beta adj2 tal) or HbF or "Hb F" or (haemoglobin adj2 F) or (hemoglobin adj2 F) or ((thalassemia* or thalassaemia*) adj2 intermedia*) or ((thalassemia* or thalassaemia*) adj2 major*) or ((thalassemia* or thalassaemia*) adj2 minor*)).mp.	38628
9	7 or 8	38628
10	(deltabeta or deltabetha or "delta betha" or "delta beta").mp.	1599
11	((Hemoglobin or haemoglobin or Hb) adj2 lepore) or Hblepore or ((Hemoglobin or haemoglobin or Hb) adj2 Hollandia) or HbHollandia).mp.	466
12	((Hemoglobin or haemoglobin or Hb) adj2 O) or HbO or ((Hemoglobin or haemoglobin or Hb) adj2 arab*) or HbArab).mp.	6229

13	((((Hemoglobin or haemoglobin or Hb) adj2 D) or HbD or ((Hemoglobin or haemoglobin or Hb) adj2 Punjab) or HbPunjab or ((Hemoglobin or haemoglobin or Hb) adj2 "los angeles") or HbLosAngeles).mp.	5946
14	("haemoglobin C" or "hemoglobin C" or "Hb C" or HbC or "haemoglobin E" or "hemoglobin E" or "Hb E" or HbE).mp.	23879
15	6 or 9 or 10 or 11 or 12 or 13 or 14	78909
16	3 and 15	17721
17	((((Haemoglobin or hemoglobin or Hb) adj2 (SO or SSO or SD or SSD or Slepore or SSlepore)) or haemoglobinSO or hemoglobin SO or HbSO or HaemoglobinSSO or hemoglobinSSO or HbSSO or HaemoglobinSD or hemoglobinSD or HbSD or HaemoglobinSSD or hemoglobinSSD or HbSSD or HaemoglobinSlepore or hemoglobinSlepore or HbSlepore or HaemoglobinSSlepore or hemoglobinSSlepore or HbSSlepore or "haemoglobin SE" or "hemoglobin SE" or "Hb SE" or "HbSE" or "haemoglobin SC" or "hemoglobin SC" or "Hb SC" or HbSC).mp.	4270
18	((("haemoglobin s" or "hemoglobin s" or "Hb S" or hbs or sickle or "sickle cell" or sickling or SS) adj2 (anaemia* or anemia* or disease* or disorder*)) or drepanocytomia* or meniscocyt* or "haemoglobin SS" or "hemoglobin SS" or "Hb SS" or HbSS).mp.	52812
19	16 or 17 or 18	63394
20	exp Stroke/	259706
21	exp cerebrovascular accident/	259706
22	(stroke* or "cerebrovascular accident*" or ((cerebrovascular or cerebral or cerebrum) adj2 (apoplexy or apoplexia or apoplectic)) or CVA or CVAS or ((brain or cerebrum or head or cranial or cerebral or cerebrovascular) adj2 (insult* or injur* or insufficienc* or failure* or ischaemic or ischemic or "vascular event*" or "vascular accident*" or "blood flow disturbance*" or "blood flow disorder*")) or ((ischemic or ischaemic) adj2 (attack* or seizure*))).mp.	910401
23	20 or 21 or 22	926623
24	exp Blood Transfusion/ or exp Blood Component Transfusion/ or exp Transfusion Medicine/ or exp Blood Transfusion, Autologous/	224415
25	exp transfusion/ or exp exchange blood transfusion/ or exp erythrocyte transfusion/	249016
26	((((blood or erythrocyte* or normocyte*) adj3 (transfusion* or exchange or infusion or replacement or retransfusion)) or hemotherapy or haemotherapy or multitransfusion	252201

	or retransfusion or (transfusion adj2 (therapy or therapeutic* or exchange or replacement)) or exsanguinatio transfusion).mp.	
27	24 or 25 or 26	386349
28	exp evidence based medicine/	1053589
29	exp Meta-Analysis as Topic/	52304
30	exp meta analysis/	214090
31	exp "systematic review"/	144175
32	exp Guideline/ or exp Practice Guideline/	448026
33	exp controlled study/	5811944
34	exp Randomized Controlled Trial/	915994
35	exp triple blind procedure/	166
36	exp Double-Blind Method/	280263
37	exp Single-Blind Method/	53493
38	exp latin square design/	338
39	exp Placebos/	300518
40	exp Placebo Effect/	8693
41	exp comparative study/	2776471
42	exp intervention studies/	33498
43	exp Cross-Sectional Studies/	476748
44	exp Cross-Over Studies/	95187
45	exp Cohort Studies/	2022204
46	exp longitudinal study/	213380
47	exp retrospective study/	1211528
48	exp prospective study/	852329
49	exp clinical trial/	1991860
50	clinical study/	105905
51	exp case-control studies/	1024912
52	exp confidence interval/	161103
53	exp multivariate analysis/	447822
54	((evidence adj based) or (meta adj analys*) or (systematic* adj3 review*) or guideline* or (control* adj3 study) or (control* adj3 trial) or (randomized adj3 study) or (randomized adj3 trial) or (randomised adj3 study) or (randomised adj3 trial) or	17659596

	"pragmatic clinical trial" or (doubl* adj blind*) or (doubl* adj mask*) or (singl* adj blind*) or (singl* adj mask*) or (tripl* adj blind*) or (tripl* adj mask*) or (trebl* adj blind*) or (trebl* adj mask*) or "latin square" or placebo* or nocebo* or multivariate or "comparative study" or "comparative survey" or "comparative analysis" or (intervention* adj2 study) or (intervention* adj2 trial) or "cross-sectional study" or "cross-sectional analysis" or "cross-sectional survey" or "cross-sectional design" or "prevalence study" or "prevalence analysis" or "prevalence survey" or "disease frequency study" or "disease frequency analysis" or "disease frequency survey" or crossover or "cross-over" or cohort* or "longitudinal study" or "longitudinal survey" or "longitudinal analysis" or "longitudinal evaluation" or longitudinal* or ((retrospective or "ex post facto") adj3 (study or survey or analysis or design)) or retrospectiv* or "prospective study" or "prospective survey" or "prospective analysis" or prospectiv* or "concurrent study" or "concurrent survey" or "concurrent analysis" or "clinical study" or "clinical trial" or "case control study" or "case base study" or "case referent study" or "case referent study" or "case referent study" or "case compeer study" or "case comparison study" or "matched case control" or "multicenter study" or "multi-center study" or "odds ratio" or "confidence interval" or "change analysis" or ((study or trial or random* or control*) and compar*).mp,pt.	
55	28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 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 or 52 or 53 or 54	18150067
56	19 and 23 and 27 and 55	1063
57	limit 56 to yr="2010 -Current"	707
58	remove duplicates from 57	577
59	limit 58 to (editorial or erratum or letter or note or addresses or autobiography or bibliography or biography or blogs or comment or dictionary or directory or interactive tutorial or interview or lectures or legal cases or legislation or news or newspaper article or overall or patient education handout or periodical index or portraits or published erratum or video-audio media or webcasts) [Limit not valid in Embase,Ovid MEDLINE(R),Ovid MEDLINE(R) Daily Update,Ovid MEDLINE(R) In-Process,Ovid MEDLINE(R) Publisher; records were retained]	16
60	58 not 59	561

5. Database(s): **Embase** 1988 to 2017 Week 30, Ovid MEDLINE(R) 1946 to Present and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) Daily

#	Searches	Results
1	sickle cell disease.mp. or exp Anemia, Sickle Cell/	51510
2	sickle cell anemia.mp. or exp Anemia, Sickle Cell/	49034
3	1 or 2	53110
4	erythrocyte transfusion.mp. or exp Erythrocyte Transfusion/	29205
5	exp Erythrocyte Transfusion/ or exp Blood Transfusion/ or rbc transfusion.mp.	228206
6	transfusion.mp. or exp Blood Transfusion/	320429
7	4 or 5 or 6	320429
8	stroke.mp. or exp Stroke/	651609
9	3 and 7 and 8	1604
10	remove duplicates from 9	1252
11	limit 10 to "all child (0 to 18 years)" [Limit not valid in Embase; records were retained]	1209
12	limit 11 to yr="2010 -Current"	782

6. Database(s): **Embase** 1988 to 2017 Week 30, Ovid MEDLINE(R) 1946 to Present and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) Daily

#	Searches	Results
1	exp moyamoya disease/ or moyamoya.mp.	3243
2	sickle cell disease.mp. or exp sickle cell anemia/	22496
3	1 and 2	97
4	remove duplicates from 3	94
5	"moya moya".mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, mesh heading word, identifier, synonyms]	213
6	"sickle cell anemia".mp. [mp=title, abstract, original title, name of substance word, subject heading word, keyword heading word, mesh heading word, identifier, synonyms]	5256
7	2 or 6	23255
8	5 and 7	14
9	4 or 8	102
10	remove duplicates from 9	101

7. Database(s): **Embase** 1988 to 2017 Week 30, Ovid MEDLINE(R) 1946 to Present and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) Daily

#	Searches	Results
1	sickle cell disease.mp. or exp sickle cell anemia/	22496
2	exp tissue plasminogen activator/ or tpa.mp.	33314
3	tissue type plasminogen activator.mp. or exp tissue plasminogen activator/	19450
4	t plasminogen activator.mp. or exp tissue plasminogen activator/	17855
5	angiokinase.mp. or exp tissue plasminogen activator/	17922
6	ak 124.mp. or exp tissue plasminogen activator/	17852
7	tisokinase.mp. or exp tissue plasminogen activator/	17857
8	2 or 3 or 4 or 5 or 6 or 7	34707
9	1 and 8	15
10	remove duplicates from 9	15

8. Database(s): **Embase** 1988 to 2017 Week 30, Ovid MEDLINE(R) 1946 to Present and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) Daily

#	Searches	Results
1	cognition disorders/ or exp cognitive dysfunction/	198187
2	exp Cognition Disorders/ or cognitive disorder.mp.	209031
3	exp Developmental Disabilities/ or exp Intellectual Disability/ or exp Child Behavior Disorders/ or developmental delay.mp.	845290
4	developmental disabilities.mp. or exp Developmental Disabilities/	54991
5	mental deficiencies.mp. or exp Intellectual Disability/	475427
6	intellectual disabilities.mp. or exp Intellectual Disability/	477347
7	1 or 2 or 3 or 4 or 5 or 6	1001926
8	sickle cell disease.mp. or exp Anemia, Sickle Cell/	50589
9	((((drepanocytic or "haemoglobin s" or "hemoglobin s" or "Hb SS" or hbs or sickle or "sickle cell" or sickling or ss) adj2 (anaemia* or anemia* or disease* or disorder*)) or drepanocytemia* or	51089

	drepanocytoses or drepanocytosis or "haemoglobin SS" or "hemoglobin SS" or meniscocytoses or meniscocytosis).ti,ab,hw,kw.	
10	8 or 9	53551
11	cognitive disorder.mp. or exp cognitive defect/	130226
12	exp intellectual impairment/	384959
13	((cognitive or cognition or developmental or intellectual) adj3 (disorder* or defect* or disabilit* or dysfunction* or impairment* or declin*)) or "developmental delay" or "developmentally delayed" or "developmentally disabled" or "executive dysfunction*" or "intellectually disabled" or overinclusion or "response interference*").mp.	477505
14	7 or 11 or 12 or 13	1114853
15	10 and 14	1356
16	remove duplicates from 15	1173

9. Database(s): **Embase** 1988 to 2017 Week 30, Ovid MEDLINE(R) 1946 to Present and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) Daily

#	Searches	Results
1	cognition disorders/ or exp cognitive dysfunction/	198187
2	exp Cognition Disorders/ or cognitive disorder.mp.	209031
3	exp Developmental Disabilities/ or exp Intellectual Disability/ or exp Child Behavior Disorders/ or developmental delay.mp.	845290
4	developmental disabilities.mp. or exp Developmental Disabilities/	54991
5	mental deficiencies.mp. or exp Intellectual Disability/	475427
6	intellectual disabilities.mp. or exp Intellectual Disability/	477347
7	1 or 2 or 3 or 4 or 5 or 6	1001926
8	sickle cell disease.mp. or exp Anemia, Sickle Cell/	50589
9	((drepanocytic or "haemoglobin s" or "hemoglobin s" or "Hb SS" or hbs or sickle or "sickle cell" or sickling or ss) adj2 (anaemia* or anemia* or disease* or disorder*)) or	51089

	drepanocytomia* or drepanocytoses or drepanocytosis or "haemoglobin SS" or "hemoglobin SS" or meniscocytoses or meniscocytosis).ti,ab,hw,kw.	
10	8 or 9	53551
11	cognitive disorder.mp. or exp cognitive defect/	130226
12	exp intellectual impairment/	384959
13	((cognitive or cognition or developmental or intellectual) adj3 (disorder* or defect* or disabilit* or dysfunction* or impairment* or declin*)) or "developmental delay" or "developmentally delayed" or "developmentally disabled" or "executive dysfunction*" or "intellectually disabled" or overinclusion or "response interference*").mp.	477505
14	7 or 11 or 12 or 13	1114853
15	10 and 14	1356
16	remove duplicates from 15	1173

10. Searched on July 20, 2017
Database(s): **Embase** 1988 to 2017 Week 30, Ovid MEDLINE(R) 1946 to Present and Epub Ahead of Print, In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) Daily

#	Searches	Results
1	sickle cell disease.mp. or exp Anemia, Sickle Cell/	50601
2	((drepanocytic or "haemoglobin s" or "hemoglobin s" or "Hb SS" or hbs or sickle or "sickle cell" or sickling or ss) adj2 (anaemia* or anemia* or disease* or disorder*)) or drepanocytomia* or drepanocytoses or drepanocytosis or "haemoglobin SS" or "hemoglobin SS" or meniscocytoses or meniscocytosis).ti,ab,hw,kw.	51099
3	1 or 2	53563
4	magnetic resonance imaging.mp. or exp Magnetic Resonance Imaging/	1226802
5	silent stroke.mp.	253
6	exp Brain Ischemia/ or Ischemic stroke.mp. or exp Ischemic Attack, Transient/	267127

7	Hemorrhagic stroke.mp.	9766
8	Lacunar infarcts.mp. or exp Stroke, Lacunar/	4755
9	5 or 6 or 7 or 8	274886
10	3 and 4	2493
11	9 and 10	390
12	exp transient ischemic attack/	47886
13	exp brain hemorrhage/	167433
14	12 or 13	209071
15	9 or 14	403461
16	10 and 15	451
17	remove duplicates from 16	381
18	limit 17 to yr="2010 -Current"	227