

## ONLINE SUPPLEMENT FOR:

### **An Official American Thoracic Society Clinical Practice Guideline: Microbiological Laboratory Testing in the Diagnosis of Fungal Infections in Pulmonary and Critical Care Practice**

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#### **Search strategy**

##### First strategy

##### Ovid

Database(s): Embase 1988 to 2016 Week 15, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present, EBM Reviews - Cochrane Central Register of Controlled Trials February 2016, EBM Reviews - Cochrane Database of Systematic Reviews 2005 to April 13, 2016  
Search Strategy:

#	Searches	Results
1	exp Aspergillosis/	31431
2	(aspergilloma* or aspergilloses or aspergillosis or aspergillus).mp.	107443
3	1 or 2	107452
4	exp galactomannan/	2298
5	("d galacto d mannan" or galactomannan).mp.	4388
6	4 or 5	4388
7	3 and 6	2824
8	exp Candidiasis/	62972
9	(Candida or candidamycosis or candidiases or candidiasis or candidosis or Monilia or moniliases or moniliasis).mp.	158677
10	8 or 9	162169

11	exp beta-Glucans/	12015
12	("beta dextroglucan*" or "beta glucan*" or "beta-D-glucan*" or macrogard).mp.	16107
13	10 and (11 or 12)	2125
14	exp Pneumonia/	277082
15	("acute chest syndrome" or Bronchopneumonia* or "inflammatory lung disease*" or lobitis or "lung inflammation*" or pleuropneumonia* or pleuropneumonitis or "pneumonia pleuritica" or "pneumonia superficialis" or pneumonia* or "pneumonic lung*" or "pneumonic pleurisy" or "pneumonic pleuritis" or pneumonitides or pneumonitis or "pulmonal inflammation*" or "pulmonary inflammation*" or "pulmonic inflammation*").mp.	471937
16	14 or 15	486251
17	Mycoses/	34889
18	exp histoplasmosis/	10764
19	exp Blastomycosis/	4049
20	exp Coccidioidomycosis/	5345
21	((fungus or fungi or fungal or mycotic) adj3 (infect* or disease*)) or Blastomyces or blastomycos* or coccidiomycos* or "coccidioid granuloma" or "coccidioid meningitis" or coccidioides or coccidioidosis or coccidioimycosis or coccidiomycosis or "Darling disease" or "Darlings disease" or "gilchrist disease" or "gilchrists disease" or Histoplasma or histoplasmos* or mycoses or mycosis or "valley fever*").mp.	142914
22	17 or 18 or 19 or 20 or 21	144306
23	exp Serology/	135734
24	exp Serologic Tests/	309429
25	exp serodiagnosis/	262369
26	("immune diagnosis" or immunodiagnosis or "immunologic diagnosis" or "neutralization test*" or "precipitin reaction*" or "precipitin test*" or serodiagnos* or serolog* or seronegativ* or "sero-negativ*" or "serum bactericidal antibod*" or Wassermann).mp.	343546
27	23 or 24 or 25 or 26	484614
28	exp Antigens, Fungal/	9119
29	(antigen* or Coccidioidin or "Fungal Polysaccharide*" or	1934894

	Histoplasmin or spherulin or Trichophytin).mp.	
30	28 or 29	1934894
31	16 and 22 and (27 or 30)	1600
32	Mycoses/	34889
33	exp histoplasmosis/	10764
34	exp Blastomycosis/	4049
35	exp Coccidioidomycosis/ (((fungus or fungi or fungal or mycotic) adj3 (infect* or disease*)) or Blastomyces or blastomycos* or coccidiomycos* or "coccidioidal granuloma" or "coccidioidal meningitis" or	5345
36	coccidioides or coccidioidosis or coccidioimycosis or coccidiomycosis or "Darling disease" or "Darlings disease" or "gilchrist disease" or "gilchrists disease" or Histoplasma or histoplasmos* or mycoses or mycosis or "valley fever*").mp.	142914
37	32 or 33 or 34 or 35 or 36	144306
38	exp Pneumonia, Pneumocystis/ (((pneumocystis or "plasma cell*" or pneumocystic) adj3 ("acute chest syndrome" or Bronchopneumonia* or "inflammatory lung disease*" or lobitis or "lung inflammation*" or pleuropneumonia* or pleuropneumonitis or "pneumonia pleuritica" or "pneumonia superficialis" or pneumonia* or "pneumonic lung*" or "pneumonic pleurisy" or "pneumonic pleuritis" or pneumonitides or pneumonitis or "pulmonal inflammation*" or "pulmonary inflammation*" or "pulmonic inflammation*")) or pneumocystos*).mp.	19518
39	or pleuropneumonitis or "pneumonia pleuritica" or "pneumonia superficialis" or pneumonia* or "pneumonic lung*" or "pneumonic pleurisy" or "pneumonic pleuritis" or pneumonitides or pneumonitis or "pulmonal inflammation*" or "pulmonary inflammation*" or "pulmonic inflammation*")) or pneumocystos*).mp.	26059
40	38 or 39	26059
41	exp Immunocompromised Host/	32267
42	exp HIV Infections/	564015
43	exp Immunologic Deficiency Syndromes/ (((antibod* or immun*) adj3 (compromis* or deficien* or suppress* or defect or defects or deficit* or depress* or incompetenc*)) or AIDS or "Di George syndrome" or "DiGeorge syndrome" or HIV or immunocompromised or Immunodeficienc* or immunodepression or immunosuppressed or "leukocyte adhesion" or neutropenia or "thymus aplasia*").mp.	520894
44	AIDS or "Di George syndrome" or "DiGeorge syndrome" or HIV or immunocompromised or Immunodeficienc* or immunodepression or immunosuppressed or "leukocyte adhesion" or neutropenia or "thymus aplasia*").mp.	1263871
45	41 or 42 or 43 or 44	1311034
46	exp Tumor Necrosis Factor-alpha/ai [Antagonists & Inhibitors]	12512

47	exp infliximab/	42892
48	exp adalimumab/	23253
49	exp certolizumab pegol/	4038
50	exp golimumab/	3308
51	exp natalizumab/	7766
52	exp vedolizumab/	655
53	exp ustekinumab/	3027
54	exp etanercept/	27134
55	exp Rituximab/	61117
56	exp abatacept/	7910
57	exp tocilizumab/	5255
58	exp tofacitinib/	1262
59	Certulizumab.mp.	7

60	(abatacept or actemra or "actemra 200" or adalimumab or antegen or antiTNF or "anti-TNF" or "antitumor necrosis factor" or "anti-tumor necrosis factor" or "antitumour necrosis factor" or "anti-tumour necrosis factor" or atlizumab or avakine or Belatacept or "BMS 188667" or "BMS 224818" or BMS188667 or "BMS-188667" or BMS224818 or "BMS-224818" or certolizumab or Certulizumab or cimzia or "cnto 1275" or cnto1275 or "cp 690 550" or "cp 690550" or "cp 690550 10" or "cp690 550" or cp690550 or "cp690550 10" or "CTLA4 Ig" or "CTLA4 immunoglobulin" or "CTLA4-Fc" or CTLA4Ig or "CTLA4-Ig" or "CTLA-4-Ig" or "Cytotoxic T Lymphocyte associated Antigen 4 immunoglobulin" or embrel or Enbrel or etanercept or golimumab or GP2013 or humira or "IDEC C2B8" or IDECC2B8 or inflectra or infliximab or "ldp 02" or ldp02 or LEA29Y or Mabthera or "mln 0002" or "mln 02" or mln0002 or mln02 or "monoclonal antibody D2E7" or "monoclonal antibody idec c2b8" or natalizumab or Nulojix or Orencia or "pegylated TNF" or "pegylated tumor necrosis factor" or "r 1569" or r1569 or "Recombinant Human Dimeric TNF Receptor Type II IgG Fusion Protein*" or reditux or remicade or remsima or revellex or Rituxan or Rituximab or rituxin or roactemra or simponi or stelara or tasocitinib or "TNF alpha antagonist*" or "TNF alpha inhibitor*" or "TNF antagonist*" or "TNF inhibitor*" or "TNF Receptor Type II IgG Fusion Protein*" or "TNFR Fc Fusion Protein*" or "TNR 001" or TNR001 or "TNT Receptor Fusion	172418
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Protein\*" or "TNTR-Fc" or tocilizumab or tofacitinib or trudexa or "tumor necrosis factor alpha antagonist\*" or "tumor necrosis factor alpha inhibitor\*" or "tumor necrosis factor antagonist\*" or "tumor necrosis factor inhibitor\*" or "tumor necrosis factor receptor Fc fusion protein\*" or "tumour necrosis factor alpha antagonist\*" or "tumour necrosis factor alpha inhibitor\*" or "tumour necrosis factor antagonist\*" or "tumour necrosis factor inhibitor\*" or "tumour necrosis factor receptor Fc fusion protein\*" or tysabri or ustekinumab or vedolizumab or xeljanz).mp.

61	or/46-60	177080
62	exp Antigens, Fungal/	9119
63	(antigen* or Coccidioidin or "Fungal Polysaccharide*" or Histoplasmin or spherulin or Trichophytin).mp.	1934894
64	62 or 63	1934894
65	exp Bronchoalveolar Lavage/	67346
66	exp Polymerase Chain Reaction/	701074
67	exp Cytological Techniques/	1859043
68	exp cytology/	517019
69	exp histopathology/	396344
70	((bronchial or bronchioalveolar or bronchoalveolar or bronchopulmonary or lung or lungs or pulmonary) adj3 (lavage* or washing*)) or BAL or "Cell Count*" or "Cell Culture*" or "Cell Migration" or "Cell Separation" or "Cell Tracking" or "Colony-Forming Units" or Cytodiagnos* or cytodifferentiation* or Cytogenetic* or cytolog* or cytomet* or Cytophotometr* or cytotechnolog* or cytotest* or "Enzyme-Linked Immunospot Assay*" or Histocytochemistr* or Histocytological* or histopath* or "Metabolic Flux Analys*" or PCR or "Polymerase Chain Reaction*").mp.	3863919
71	or/65-70	4717559
72	(37 or 40) and (45 or 61) and (64 or 71)	14880
73	72 and (serious* or severe* or disseminat*).mp.	4217
74	7 or 13 or 31 or 73	10105
75	exp evidence based medicine/	869218
76	exp meta analysis/	170814
77	exp Meta-Analysis as Topic/	40739

78	exp "systematic review"/	104337
79	exp Guideline/ or exp Practice Guideline/	388605
80	exp controlled study/	5046346
81	exp Randomized Controlled Trial/	796513
82	exp triple blind procedure/	125
83	exp Double-Blind Method/	368980
84	exp Single-Blind Method/	58187
85	exp latin square design/	326
86	exp Placebos/	295942
87	exp Placebo Effect/	8697
88	exp comparative study/	2584493
89	exp intervention studies/	27368
90	exp Cross-Sectional Studies/	385708
91	exp Cross-Over Studies/	113469
92	exp Cohort Studies/	1876731
93	exp longitudinal study/	295556
94	exp retrospective study/	1025653
95	exp prospective study/	808184
96	exp clinical trial/	1764057
97	clinical study/	71543
98	exp case-control studies/	893791
99	exp confidence interval/	139465
100	exp multivariate analysis/	412608
101	((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 "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	16211769

"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 referrent 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.

102 or/75-101	16672860
103 74 and 102	4516
104 from 74 keep 6437-9955	3519
limit 104 to (clinical study or clinical trial, all or clinical trial, phase i or clinical trial, phase ii or clinical trial, phase iii or clinical trial, phase iv or clinical trial or controlled clinical trial or multicenter study or observational study or randomized controlled trial or	
105 pragmatic clinical trial or comparative study or controlled clinical trial or guideline or practice guideline or meta analysis or multicenter study or randomized controlled trial or pragmatic clinical trial or systematic reviews) [Limit not valid in Embase,CCTR,CDSR; records were retained]	479
106 103 or 105	4524
107 (exp animals/ or exp nonhuman/) not exp humans/	8373701
((alpaca or alpacas or amphibian or amphibians or animal or animals or antelope or armadillo or armadillos or avian or baboon or baboons or beagle or beagles or bee or bees or bird or birds or bison or bovine or buffalo or buffaloes or buffalos or "c elegans" or	
108 "Caenorhabditis elegans" or camel or camels or canine or canines or carp or cats or cattle or chick or chicken or chickens or chicks or chimp or chimpanze or chimpanzees or chimps or cow or cows or "D melanogaster" or "dairy calf" or "dairy calves" or deer or dog or dogs or donkey or donkeys or drosophila or "Drosophila	7344571

melanogaster" or duck or duckling or ducklings or ducks or equid or equids or equine or equines or feline or felines or ferret or ferrets or finch or finches or fish or flatworm or flatworms or fox or foxes or frog or frogs or "fruit flies" or "fruit fly" or "G mellonella" or "Galleria mellonella" or geese or gerbil or gerbils or goat or goats or goose or gorilla or gorillas or hamster or hamsters or hare or hares or heifer or heifers or horse or horses or insect or insects or jellyfish or kangaroo or kangaroos or kitten or kittens or lagomorph or lagomorphs or lamb or lambs or llama or llamas or macaque or macaques or macaw or macaws or marmoset or marmosets or mice or minipig or minipigs or mink or minks or monkey or monkeys or mouse or mule or mules or nematode or nematodes or octopus or octopuses or orangutan or "orang-utan" or orangutans or "orang-utans" or oxen or parrot or parrots or pig or pigeon or pigeons or piglet or piglets or pigs or porcine or primate or primates or quail or rabbit or rabbits or rat or rats or reptile or reptiles or rodent or rodents or ruminant or ruminants or salmon or sheep or shrimp or slug or slugs or swine or tamarin or tamarins or toad or toads or trout or urchin or urchins or vole or voles or waxworm or waxworms or worm or worms or xenopus or "zebra fish" or zebrafish) not (human or humans)).mp.

109	106 not (107 or 108)	3898
110	109 not "conference abstract".pt.	3339
111	limit 110 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) In-Process,CCTR,CDSR; records were retained]	128
112	from 111 keep 1-68	68
113	110 not 112	3271
114	limit 113 to english language [Limit not valid in CDSR; records were retained]	2989
115	limit 114 to yr="1980 -Current"	2982
116	remove duplicates from 115	2230



## Scopus

TITLE-ABS-KEY(aspergilloma\* OR aspergilloses OR aspergillosis OR aspergillus)

TITLE-ABS-KEY("d galacto d mannan" OR galactomannan)

1 and 2

TITLE-ABS-KEY(Candida OR candidamycosis OR candidases OR candidiasis OR candidosis OR Monilia OR moniliases OR moniliasis)

TITLE-ABS-KEY("beta dextroglucan\*" OR "beta glucan\*" OR "beta-D-glucan\*" OR macrogard)

4 and 5

TITLE-ABS-KEY("acute chest syndrome" or Bronchopneumonia\* or "inflammatory lung disease\*" or lobitis or "lung inflammation\*" or pleuropneumonia\* or pleuropneumonitis or "pneumonia pleuritica" or "pneumonia superficialis" or pneumonia\* or "pneumonic lung\*" or "pneumonic pleurisy" or "pneumonic pleuritis" or pneumonitides or pneumonitis or "pulmonal inflammation\*" or "pulmonary inflammation\*" or "pulmonic inflammation\*")

TITLE-ABS-KEY(((fungus or fungi or fungal or mycotic) W/3 (infect\* or disease\*)) OR Blastomyces OR blastomyces\* OR coccidiomycos\* OR "coccidioidal granuloma" OR "coccidioidal meningitis" OR coccidioides OR coccidioidosis OR coccidioimycosis OR coccidiomycosis OR "Darling disease" OR "Darlings disease" OR "gilchrist disease" OR "gilchrists disease" OR Histoplasma OR histoplasmos\* OR mycoses OR mycosis OR "valley fever\*")

TITLE-ABS-KEY("immune diagnosis" OR immunodiagnosis OR "immunologic diagnosis" OR "neutralization test\*" OR "precipitin reaction\*" OR "precipitin test\*" OR serodiagnos\* OR serolog\* OR seronegativ\* OR "sero-negativ\*" OR "serum bactericidal antibod\*" OR Wassermann)

TITLE-ABS-KEY(antigen\* OR Coccidioidin OR "Fungal Polysaccharide\*" OR Histoplasmin OR spherulin OR Trichophytin)

7 and 8 and (9 or 10)

TITLE-ABS-KEY(((antibod\* or immun\*) W/3 (compromis\* or deficien\* or suppress\* or defect or defects or deficit\* or depress\* or incompetenc\*)) OR AIDS OR "Di George syndrome" OR "DiGeorge syndrome" OR HIV OR immunocompromised OR Immunodeficienc\* OR immunodepression OR immunosuppressed OR "leukocyte adhesion" OR neutropenia OR "thymus aplasia\*")

TITLE-ABS-KEY(abatacept or actemra or "actemra 200" or adalimumab or antegren or antiTNF or "anti-TNF" or "antitumor necrosis factor" or "anti-tumor necrosis factor" or "antitumour necrosis factor" or "anti-tumour necrosis factor" or atlizumab or avakine or Belatacept or "BMS 188667" or "BMS 224818" or BMS188667 or "BMS-188667" or BMS224818 or "BMS-224818" or certolizumab or Certulizumab or cimzia or "cnto 1275" or cnto1275 or "cp 690 550" or "cp 690550" or "cp 690550 10" or "cp690 550" or cp690550 or "cp690550 10" or "CTLA4 Ig" or "CTLA4 immunoglobulin" or "CTLA4-Fc" or CTLA4Ig or "CTLA4-Ig" or "CTLA-4-Ig" or "Cytotoxic T Lymphocyte associated Antigen 4 immunoglobulin" or embrel or Enbrel or etanercept or golimumab or GP2013 or humira or "IDEC C2B8" or IDECC2B8 or inflectra or infliximab or "ldp 02" or ldp02 or LEA29Y or Mabthera or "mln 0002" or "mln 02" or mln0002 or mln02 or "monoclonal antibody D2E7" or "monoclonal antibody idec c2b8" or natalizumab or Nulojix or Orencia or "pegylated TNF" or "pegylated tumor necrosis factor" or "r 1569" or r1569 or "Recombinant Human Dimeric TNF Receptor Type II IgG Fusion Protein\*" or reditux or remicade or remsima or revellex or Rituxan or Rituximab or rituxin or roactemra or simponi or stelara or tasocitinib or "TNF alpha antagonist\*" or "TNF alpha inhibitor\*" or "TNF antagonist\*" or "TNF inhibitor\*" or "TNF Receptor Type II IgG Fusion Protein\*" or "TNFR Fc Fusion Protein\*" or "TNR 001" or TNR001 or "TNT Receptor Fusion Protein\*" or "TNTR-Fc" or tocilizumab or tofacitinib or trudexa or "tumor necrosis factor alpha antagonist\*" or "tumor necrosis factor alpha inhibitor\*" or "tumor necrosis factor antagonist\*" or "tumor necrosis factor inhibitor\*" or "tumor necrosis factor receptor Fc fusion protein\*" or "tumour necrosis factor alpha antagonist\*" or "tumour necrosis factor alpha inhibitor\*" or "tumour necrosis

factor antagonist\*" or "tumour necrosis factor inhibitor\*" or "tumour necrosis factor receptor Fc fusion protein\*" or tysabri or ustekinumab or vedolizumab or xeljanz)

TITLE-ABS-KEY(((pneumocystis or "plasma cell\*" or pneumocystic) W/3 ("acute chest syndrome" OR Bronchopneumonia\* OR "inflammatory lung disease\*" OR lobitis OR "lung inflammation\*" OR pleuropneumonia\* OR pleuropneumonitis OR "pneumonia pleuritica" OR "pneumonia superficialis" OR pneumonia\* OR "pneumonic lung\*" OR "pneumonic pleurisy" OR "pneumonic pleuritis" OR pneumonitides OR pneumonitis OR "pulmonal inflammation\*" OR "pulmonary inflammation\*" OR "pulmonic inflammation\*")) OR pneumocystos\* or ((fungus or fungi or fungal or mycotic) W/3 (infect\* or disease\*)) OR Blastomyces OR blastomycos\* OR coccidiomycos\* OR "coccidioid granuloma" OR "coccidioid meningitis" OR coccidioides OR coccidioidosis OR coccidioimycosis OR coccidiomycosis OR "Darling disease" OR "Darlings disease" OR "gilchrist disease" OR "gilchrists disease" OR Histoplasma OR histoplasmos\* OR mycoses OR mycosis OR "valley fever\*")

TITLE-ABS-KEY(antigen\* OR Coccidioidin OR "Fungal Polysaccharide\*" OR Histoplasmin OR spherulin OR Trichophytin)

TITLE-ABS-KEY(((bronchial or bronchioalveolar or bronchoalveolar or bronchopulmonary or lung or lungs or pulmonary) W/3 (lavage\* or washing\*)) OR BAL OR "Cell Count\*" OR "Cell Culture\*" OR "Cell Migration" OR "Cell Separation" OR "Cell Tracking" OR "Colony-Forming Units" OR Cytodiagnos\* OR cytodifferentiation\* OR Cytogenetic\* OR cytolog\* OR cytomet\* OR Cytophotometr\* OR cytotechnolog\* OR cytotest\* OR "Enzyme-Linked Immunospot Assay\*" OR Histocytochemistr\* OR Histocytological\* OR histopath\* OR "Metabolic Flux Analys\*" OR PCR OR "Polymerase Chain Reaction\*")

(12 or 13) and 14 and (15 or 16)

TITLE-ABS-KEY (serious\* or severe\* or disseminat\*)

17 and 18

3 or 6 or 11 or 19

TITLE-ABS-KEY((evidence W/1 based) or (meta W/1 analys\*) or (systematic\* W/3 review\*) or guideline\* or (control\* W/3 study) or (control\* W/3 trial) or (randomized W/3 study) or (randomized W/3 trial) or (randomised W/3 study) or (randomised W/3 trial) or "pragmatic clinical trial" or (doubl\* W/1 blind\*) or (doubl\* W/1 mask\*) or (singl\* W/1 blind\*) or (singl\* W/1 mask\*) or (tripl\* W/1 blind\*) or (tripl\* W/1 mask\*) or (trebl\* W/1 blind\*) or (trebl\* W/1 mask\*) or "latin square" or placebo\* or nocebo\* or multivariate or "comparative study" or "comparative survey" or "comparative analysis" or (intervention\* W/2 study) or (intervention\* W/2 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") W/3 (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 referrent 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\*))

20 and 21

TITLE-ABS-KEY((alpaca OR alpacas OR amphibian OR amphibians OR animal OR animals OR antelope OR armadillo OR armadillos OR avian OR baboon OR baboons OR beagle OR beagles OR bee OR bees OR bird OR birds OR bison OR bovine OR buffalo OR buffaloes OR buffalos OR "c elegans" OR "Caenorhabditis elegans" OR camel OR camels OR canine OR canines OR carp OR cats OR cattle OR chick OR chicken OR chickens OR chicks OR chimp OR chimpanze OR chimpanzees OR chimps OR cow OR cows OR "D melanogaster" OR "dairy calf" OR "dairy calves" OR deer OR dog OR dogs

OR donkey OR donkeys OR drosophila OR "Drosophila melanogaster" OR duck OR duckling OR ducklings OR ducks OR equid OR equids OR equine OR equines OR feline OR felines OR ferret OR ferrets OR finch OR finches OR fish OR flatworm OR flatworms OR fox OR foxes OR frog OR frogs OR "fruit flies" OR "fruit fly" OR "G mellonella" OR "Galleria mellonella" OR geese OR gerbil OR gerbils OR goat OR goats OR goose OR gorilla OR gorillas OR hamster OR hamsters OR hare OR hares OR heifer OR heifers OR horse OR horses OR insect OR insects OR jellyfish OR kangaroo OR kangaroos OR kitten OR kittens OR lagomorph OR lagomorphs OR lamb OR lambs OR llama OR llamas OR macaque OR macaques OR macaw OR macaws OR marmoset OR marmosets OR mice OR minipig OR minipigs OR mink OR minks OR monkey OR monkeys OR mouse OR mule OR mules OR nematode OR nematodes OR octopus OR octopuses OR orangutan OR "orang-utan" OR orangutans OR "orang-utans" OR oxen OR parrot OR parrots OR pig OR pigeon OR pigeons OR piglet OR piglets OR pigs OR porcine OR primate OR primates OR quail OR rabbit OR rabbits OR rat OR rats OR reptile OR reptiles OR rodent OR rodents OR ruminant OR ruminants OR salmon OR sheep OR shrimp OR slug OR slugs OR swine OR tamarin OR tamarins OR toad OR toads OR trout OR urchin OR urchins OR vole OR voles OR waxworm OR waxworms OR worm OR worms OR xenopus OR "zebra fish" OR zebrafish) AND NOT (human OR humans))

22 and not 23

PUBYEAR AFT 1979 AND LANGUAGE(english)

24 and 25

DOCTYPE(le) OR DOCTYPE(ed) OR DOCTYPE(bk) OR DOCTYPE(er) OR DOCTYPE(no) OR DOCTYPE(sh) OR DOCTYPE(ab)

26 and not 27

PMID(0\*) OR PMID(1\*) OR PMID(2\*) OR PMID(3\*) OR PMID(4\*) OR PMID(5\*) OR PMID(6\*) OR PMID(7\*) OR PMID(8\*) OR PMID(9\*)

28 and not 29

## Second strategy

### Ovid

Database(s): Embase 1988 to 2016 Week 39, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present, EBM Reviews - Cochrane Central Register of Controlled Trials August 2016, EBM Reviews - Cochrane Database of Systematic Reviews 2005 to September 28, 2016  
Search Strategy:

#	Searches	Results
1	exp Candidiasis/bl, di [Blood, Diagnosis]	5727
2	exp Candidemia/bl, di [Blood, Diagnosis]	197
3	exp Candidiasis/di	11051
4	exp Candidemia/di	475
5	1 or 2 or 3 or 4	11536
6	"beta-D-glucan".tw,hw,kw.	3721
7	5 and 6	225
8	limit 7 to english language [Limit not valid in CDSR; records were retained]	198
9	exp case report/	3484898
10	(case adj3 report*).mp,pt.	3659310
11	8 not (9 or 10)	178
12	(exp animals/ or exp nonhuman/) not exp humans/ ((alpaca or alpacas or amphibian or amphibians or animal or animals or antelope or armadillo or armadillos or avian or baboon or baboons or beagle or beagles or bee or bees or bird or birds or bison or bovine or buffalo or buffaloes or buffalos or "c elegans" or "Caenorhabditis elegans" or camel or camels or canine or canines or carp or cats or cattle or chick or chicken or chickens or chicks or chimp or chimpanze or chimpanzees or chimps or cow or cows or "D melanogaster" or	8451454
13	"dairy calf" or "dairy calves" or deer or dog or dogs or donkey or donkeys or drosophila or "Drosophila melanogaster" or duck or duckling or ducklings or ducks or equid or equids or equine or equines or feline or felines or ferret or ferrets or finch or finches or fish or flatworm or flatworms or fox or foxes or frog or frogs or "fruit flies" or "fruit fly" or "G mellonella" or "Galleria mellonella" or geese or gerbil or gerbils or goat or goats or goose or gorilla or gorillas or hamster or hamsters or hare or hares or heifer or heifers or horse or	7479515

horses or insect or insects or jellyfish or kangaroo or kangaroos or kitten or kittens or lagomorph or lagomorphs or lamb or lambs or llama or llamas or macaque or macaques or macaw or macaws or marmoset or marmosets or mice or minipig or minipigs or mink or minks or monkey or monkeys or mouse or mule or mules or nematode or nematodes or octopus or octopuses or orangutan or "orang-utan" or orangutans or "orang-utans" or oxen or parrot or parrots or pig or pigeon or pigeons or piglet or piglets or pigs or porcine or primate or primates or quail or rabbit or rabbits or rat or rats or reptile or reptiles or rodent or rodents or ruminant or ruminants or salmon or sheep or shrimp or slug or slugs or swine or tamarin or tamarins or toad or toads or trout or urchin or urchins or vole or voles or waxworm or waxworms or worm or worms or xenopus or "zebra fish" or zebrafish) not (human or humans)).mp.

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|-------------------------------------|-----|
| 14 11 not (12 or 13)                | 166 |
| 15 14 not "conference abstract".pt. | 166 |
| 16 remove duplicates from 15        | 122 |