

## SUPPLEMENTARY APPENDIX 7: Search Strategies

### 2021 American College of Rheumatology Guideline for the Treatment of Rheumatoid Arthritis

#### RHEUMATOID ARTHRITIS – SEARCH STRATEGIES

<b>Syntax Guide for OVID Medline</b>	
/ = At the end of a word or phrase means that it is searched as a subject heading	Exp = A command to retrieve all narrower subject headings (MeSH)
Adj = Adjacency; terms are adjacent to each other, in either direction ; adj3 = terms are within 3 words of each other, in either direction	\$ = unlimited truncation symbol ? = substitutes for one or no characters
Limit = Command to limit results to age groups, years, language, etc.	In process = Records that do not contain all indexing
ti,ab. = Word or phrase is searched for in the title and abstract	tw. = textword; in Medline, indexed words from title, abstract .kw. – keywords assigned by the author
.fs. = free-floating Medical Subject Heading [MeSH] subheading, i.e. attached to any MeSH in the record, e.g.tu.fs. = free-floating subheading “therapeutic use”; dt = “drug therapy”, ai = “antagonists and inhibitors”	.pt. = publication type, e.g. randomized controlled trial
<b>Additional Syntax Guide for OVID Embase</b>	
.tw. = Words from title, abstract, and drug trade names	
<b>Syntax Guide for Cochrane (Wiley)</b>	
MeSH descriptor = Medical Subject Heading	ti,ab,kw = Word appears in title, abstract or keyword field of record
near/2 = Terms must be within two words of each other, e.g. psoria* near/2 axial SpA	Next = terms must be adjacent, e.g. nonsteroidal next anti-inflammatory* means that the term nonsteroidal must be adjacent to the term anti-inflammatory*
* = truncation symbol	Word variations are searched in title, abstract, keyword search
<b>Boolean Operators</b>	
OR = retrieves results that include at least one of the search terms	AND = retrieves results that include all the search terms
NOT = excludes the retrieval of terms from the search	

Database: **Ovid MEDLINE**(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations,  
Daily and Versions(R) <1946 to November 21, 2019>

Search Strategy:

- 
- 1 Arthritis, Rheumatoid/
  - 2 ((rheumatoid adj2 arthrit\$) or (rheumatoid adj2 arthros\$)).tw,kw.
  - 3 Rheumatoid nodule/ or (rheumatoid adj2 nodule\$).tw,kw.
  - 4 or/1-3
  - 5 Hydroxychloroquine/ or (hydroxychloroquine or Plaquenil).tw,kw.
  - 6 (leflunomide or Arava).tw,kw.
  - 7 Methotrexate/ or (methotrexate or Rheumatrex or Trexall or Otrexup or Rasuvo).tw,kw.
  - 8 Sulfasalazine/ or (sulfasalazine\$ or sulphasalazine\$ or Azulfidine).tw,kw.
  - 9 or/5-8 [conventional synthetic DMARDs]
  - 10 Adalimumab/ or (adalimumab or Humira).tw,kw.
  - 11 Certolizumab Pegol/ or (certolizumab or Cimzia).tw,kw.
  - 12 Etanercept/ or (etanercept or Enbrel).tw,kw.
  - 13 (Golimumab or Simponi).tw,kw.
  - 14 Infliximab/ or (infliximab or Remicade).tw,kw.
  - 15 Tumor Necrosis Factor-alpha/tu [Therapeutic Use]
  - 16 Receptors, Tumor Necrosis Factor/tu
  - 17 ((tumor or tumour) adj necrosis factor adj (block\$ or inhibitor\$)).tw. or (TNF inhibitor\$ or TNFi).tw,kw. or (anti-TNF or anti TNF).tw,kw.
  - 18 Abatacept/ or (abatacept or Orencia).tw,kw.
  - 19 Rituximab/ or (rituximab or Rituxan or MabThera or Remsima).tw,kw.
  - 20 Antibodies, Monoclonal/tu
  - 21 (Sarilumab or Kevzara).tw,kw.
  - 22 tocilizumab.tw,kw.
  - 23 Interleukin-6/tu or Interleukin-1/tu or Receptors, Interleukin-6/tu or Receptors, Interleukin-1/tu
  - 24 (interleukin 6 inhibit\$ or IL 6 inhibit\$).tw,kw.
  - 25 biologic\$ DMARD\$.tw,kw.
  - 26 biological products/ and exp antirheumatic agents/
  - 27 or/10-26 [biological DMARDs]
  - 28 (Amjevita or "adalimumab-atto").tw,kw.
  - 29 (Erelzi or "etanercept szzs").tw,kw.
  - 30 (infliximab-QBTZ or Ixifi).tw,kw.
  - 31 ("Infliximab-DYBB" or Inflectra).tw,kw.

32 biosimilar pharmaceuticals/ and antirheumatic agents/  
 33 (biosimilar adj2 disease adj2 modifying adj2 anti-rheumatic\$).tw,kw.  
 34 (biosimilar adj3 DMARD\$).tw,kw.  
 35 (bs adj DMARD\$).tw,kw.  
 36 or/28-35 [biosimiar dmards]  
 37 (baricitinib or Olumiant).tw,kw.  
 38 (fostamatanib or Tavalisse).tw,kw.  
 39 (Filgotinib or GS-6034 or GLPG0634).tw,kw.  
 40 (tofacitinib or tasocitinib or Xeljanz or cp690550 or "cp 690550" or "cp 690 550" or **Upadacitinib**  
 or "ABT-494").tw,kw.  
 41 (((JAK 1 or JAK 2) adj inhibit\$) or (Janus kinase 1 inhibit\$ or Janus kinase 3 inhibit\$)).tw,kw.  
 42 Janus Kinase inhibitors/ or Janus Kinase 1/ai or Janus Kinase 3/ai  
 43 or/37-42 [targeted dmards]  
 44 4 and (9 or 27 or 36 or 43) [PICO 1-11,16-20,24-27,52-54,56-60-63]  
 45 (T2T or TTT or "treat to target" or "treat-to-target" or "at target" or remission or bridge therapy  
 or  
 treatment persistence or tight\$ control\$ or therapeutic target\$ or low disease activity).tw,kw.  
 46 Remission Induction/  
 47 or/45-46  
 48 4 and 47 [PICO 12-14]  
 49 exp Folic Acid/ or folic acid\$.tw,kw.  
 50 4 and 7 and 49 [PICO15]  
 51 exp Adrenal Cortex Hormones/ [Includes corticosteroids, hydroxycorticosteroids]  
 52 (corticosteroid\$ or glucocorticoid\$ or dexamethasone\$ or methylprednisolone\$ or  
 prednisolone\$ or  
 prednisone\$ or cortisone\$ or triamcinolone or pregnenolone).tw,kw.  
 53 exp Dexamethasone/ or Methylprednisolone/ or Prednisolone/ or Prednisone/ or Cortisone/ or  
 exp  
 Hydrocortisone/ or Triamcinolone/ or Triamcinolone Acetonide/ or Pregnenolone/  
 54 or/51-53  
 55 4 and (9 or 27 or 36 or 43)  
 56 4 and (9 or 27 or 36 or 43) and 54  
 57 55 or 56 [PICO 21-23,55]  
 58 Synovitis/ or (exp Synovial Membrane/ and exp Inflammation/) or synovitis.tw,kw. or  
 (inflammation  
 and synovial membrane\$).tw,kw.  
 59 exp Injections/ or (inject\$ or intra-articular or intraarticular).tw,kw.  
 60 4 and 58 and (9 or 27 or 36 or 43) and 54 and 59

- 61 4 and 58 and (9 or 27 or 36 or 43)
- 62 or/60-61 [PICO 28]
- 63 44 or 48 or 50 or 57 or 62

64 limit 63 to in process

65 (MEDLINE or systematic review).tw. or meta analysis.pt. [McMaster University Health Research Information Unit. Filter for identifying reviews - best balance of specificity and sensitivity. [https://hiru.mcmaster.ca/hiru/HIRU\\_Hedges\\_MEDLINE\\_Strategies.aspx](https://hiru.mcmaster.ca/hiru/HIRU_Hedges_MEDLINE_Strategies.aspx)]

66 63 and 65

67 limit 66 to english language [drug pico and systematic reviews and English]

68 (randomized controlled trial or controlled clinical trial).pt. or (randomized or placebo).ab. or drug therapy.fs. or (randomly or trial or groups).ab. [Cochrane Highly Sensitive Search Strategy for identifying randomized trials in Ovid Medline]

69 epidemiologic studies/ or exp case control studies/ or exp cohort studies/ or Cross-sectional studies/

70 case control.tw.

71 (cohort adj (study or studies)).tw.

72 cohort analy\$.tw.

73 (Follow up adj (study or studies)).tw.

74 (Observational adj (study or studies)).tw.

75 (longitudinal or retrospective or cross sectional).tw.

76 or/69-75 [Scottish Intercollegiate Guidelines SIGN <https://www.sign.ac.uk/search-filters.html>]

77 68 or 76

78 63 and 77 [drug picos and rct, observ]

79 exp adult/ or aged.sh. or age:.tw. or adult.mp. or middle aged.sh. or young adult.sh. or geriatric.tw.

80 78 and 79

81 limit 80 to english language [drug picos and rct, observ and age groups and english]

82 exp Diet/ or exp Food/ or exp Micronutrients/ or Spices/ or exp Nutritional Requirements/ or Nutritional status/ or exp Nutritive Value/ [Food includes dietary supplements, spices]

83 (diet or dietary or food or calorie\$ or caloric or nutrient\$ or spice\$ or nutraceutical\$ or prebiotic\$ or probiotic\$ or nutrition\$).tw,kw. or dh.fs.

84 Plants, Medicinal/ or exp Plant Extracts/ or exp Plant Oils/ or exp Phytochemicals/

85 phytonutrient\$.tw,kw.

86 or/82-85

87 4 and 86

88 4 and 86 and (9 or 27 or 36 or 43) [PICO 29-32, 35-36]

89 87 or 88 [PICO 29-32,35-36]

90 aerobic\$ exercise\$.tw,kw.

91 exp Exercise/ or exp Exercise Therapy/ or Physical Exertion/ or exp Exercise Movement Techniques/



92 (running or walking or climbing or swimming or jogging or Aquarobics or bicycling or Rowing or Boxing or Aerobic class\$ or cardio class\$ or "Team sports" or Dancing).tw,kw.

93 (Jumping rope or jogging or Stationary bike or elliptical machine or Zumba or spinning or hiking or skiing or kickboxing).tw,kw.

94 (aquatic exercise\$ or aquafit\$ or water sport\$ or water therapy exercise\$ or exercise\$).tw,kw.

95 Resistance Training/

96 (resistance training or weight lift\$ or muscle strengthen\$ of isokinetic exercise\$ or free weights or dumbbells or barbells or weight machines or pushup\$ or push-up\$ or sit-up\$ or chin-ups or squat thrusts or lunges or step-ups).tw,kw.

97 or/90-96

98 4 and 97

99 4 and 97 and (9 or 27 or 36 or 43)

100 or/98-99 [PICO 33-34,38-40]

101 Self-Management/ or exp Self Care/ or Self Efficacy/ or Patient Participation/ or exp "Patient Acceptance of Health Care"/ or Patient Compliance/

102 Health Behavior/ or Illness Behavior/ or Adaptation, Psychological/

103 (self adj (management or managing or care or efficacy)).tw,kw.

104 (patient adj (compliance or acceptance or education)).tw,kw.

105 exp Attitude to Health/

106 Health Education/

107 exp behavior/

108 (problem solving or coaching or care planning or communication or emotional management or role management or group program\$).tw,kw.

109 (personal care plan\$ or monitor\$ symptom\$ or patient engagement or patient learning or patient education).tw,kw.

110 exp Motivation/

111 (motivation or goal setting or group programs or supportive intervention\$).tw,kw.

112 exp social support/

113 exp social environment/

114 (peer support\$ or self confidence or skills).tw,kw.

115 personal autonomy/

116 guided self determination.tw,kw.

117 (coping adj (skill\$ or strateg\$ or behavior\$ or behaviour\$)).tw,kw.

- 118 or/101-117
- 119 4 and 118 and (9 or 27 or 36 or 43) [PICO 37]
- 120 Splints/ or Bandages/ or Athletic Tape/ or exp Orthotic Devices/



121 (splint\$ or bandage\$ or tape or brace\$ or orthoses or orthotic\$ or orthosis or insole\$).tw,kw.  
122 or/120-121  
123 4 and (9 or 27 or 36 or 43) and 122 [PICO 41-42]  
124 Hand Strength/ or (exp Hand/ and Exercise/) or hand exercise\$.tw,kw.  
125 4 and (9 or 27 or 36 or 43) and 124 [PICO 43]  
126 (joint\$ adj2 protect\$).tw,kw.  
127 exp Joints/ and (protect\$ or orthotics or orthoses or splint\$).tw,kw.  
128 or/126-127  
129 4 and (9 or 27 or 36 or 43) and 128 [PICO 44]  
130 exp Mind-Body Therapies/ or exp Behavior Therapy/  
131 (biofeedback or neurofeedback or breathing exercise\$ or Qigong or hypnosis or autogenic  
training  
or autosuggestion or imagery or meditation or mental healing or role playing or  
psychophysiology  
or relaxation or Tai Ji or Tai Chi or therapeutic touch or yoga).tw,kw.  
132 (mindfulness or spirituality).tw,kw.  
133 or/130-132  
134 4 and (9 or 27 or 36 or 43) and 133 [PICO 45]  
135 exp Employment/ or exp Disability Evaluation/ or Work Schedule Tolerance/ or exp Work/ or  
Workplace/  
136 (disability evaluation or work disability or employ\$ or unemploy\$ or work productivity).tw,kw.  
137 (work\$ intervention\$ or work\$ capacity\$).tw,kw.  
138 (work\$ adj2 adjust\$).tw,kw.  
139 Occupational Health Services/  
140 or/135-139  
141 4 and (9 or 27 or 36 or 43) and 140 [PICO 46]  
142 Occupational Therapy/ or "Activities of Daily Living"/  
143 occupational therap\$.tw,kw.  
144 self-help devices/ or patient education/ or counseling/ or (assistive device\$ or assistive  
technolog\$  
or dexterity or joint protection or counsel?ing).tw,kw.  
145 Pain Management/  
146 exp Patient Education as Topic/  
147 Rehabilitation/  
148 or/142-147  
149 4 and (9 or 27 or 36 or 43) and 148 [PICO 47]  
150 exp Physical Therapy Modalities/  
151 (physiotherapy or physical therapy).tw,kw.

152 or/150-151

153 4 and (9 or 27 or 36 or 43) and 152 [PICO 48]  
154 exp Weight Loss/ or Obesity Management/ or exp Body Weight Changes/  
155 (weight adj3 (loss\$ or losing or reduction)).tw,kw.  
156 or/154-155  
157 4 and (9 or 27 or 36 or 43) and 156 [PICO 49]  
158 Smoking Cessation/ or Smoking Reduction/ or "Tobacco Use Cessation"/ or exp "Tobacco  
Use"/ or  
Smoking/  
159 ((stop\$ or cease or ceasing or quit\$) adj3 (tobacco or smoking or cigarette\$)).tw,kw. (13372)  
160 or/158-159  
161 4 and (9 or 27 or 36 or 43) and 160 [PICO 50]  
162 Acupuncture/ or exp Acupuncture Therapy/ or (acupunctur\$ or electroacupuncture\$ or  
needling or  
accupressure).tw,kw.  
163 4 and (9 or 27 or 36 or 43) and 162 [PICO 51]  
164 (subcutaneous adj3 nodule\$).tw,kw.  
165 4 and 7 and 164  
166 4 and (9 or 27 or 36 or 43) and 164  
167 165 or 166 [PICO 64-65]  
168 88 or 99 or 119 or 123 or 125 or 129 or 134 or 141 or 149 or 153 or 157 or 161 or 163 or 167  
169 limit 168 to in process  
170 168 and 65  
171 limit 170 to english language [non-pharm and systematic reviews and english]  
172 168 and 77  
173 172 and 79  
174 limit 173 to english language [non-pharm and rct, observ and age groups and english]  
175 64 or 67 or 81 or 169 or 171 or 174 [PHARM, NON-PHARM OUTPUT]  
176 Agammaglobulinemia/ or (Agammaglobulinemia or hypogammaglobulinemia).tw,kw.  
177 4 and 19 and 176  
178 4 and (9 or 27 or 36 or 43) and 176  
179 177 or 178 [PICO 66]  
180 exp Lung Diseases, Interstitial/  
181 ((interstitial adj2 lung\$) or (parenchyma\$ adj3 lung\$)).tw,kw.  
182 or/180-181  
183 4 and (9 or 27 or 36 or 43) and 182 [PICO 67-69]  
184 exp Heart Failure/  
185 ((heart or cardiac or myocardial) adj2 failure).tw,kw.

186 ((CHF NYHA adj2 Class III) or (CHF NYHA adj2 Class IV) or (CHF New York Heart Association  
adj2 Class III) or CHF New York Heart Association Class IV).tw,kw.

187 or/184-186

188 4 and (9 or 27 or 36 or 43) and 187 [PICO 70-71]

189 exp Skin Neoplasms/  
190 exp Neoplasms, Squamous Cell/  
191 exp Neoplasms, Basal Cell/  
192 (non-melanoma adj2 skin adj2 cancer\$).tw,kw.

193 ((squamous or basal) adj3 (carcinoma or cancer\$ or neoplasm\$)).tw,kw.

194 (Skin adj2 (neoplasm\$ or cancer\$ or carcinoma\$)).tw,kw.

195 exp Carcinoma, Basal Cell/  
196 exp Carcinoma, Squamous Cell/  
197 exp Melanoma/ or melanoma.tw,kw.

198 or/189-197

199 4 and (9 or 27 or 36 or 43) and 198 [PICO 72-73]

200 exp Lymphoproliferative Disorders/ or (lymphoproliferative disorder\$ or Chronic lymphocytic  
leukemia or Hairy cell leukemia or Large granular lymphocyte disorder\$ or Lymphocytosis or  
Natural killer cell leukemia or Prolymphocytic leukemia).tw,kw.

201 immunoblastic lymphadenopathy/ or infectious mononucleosis/ or leukemia, hairy cell/ or  
leukemia,  
lymphoid/ or leukemia, b-cell/ or leukemia, lymphocytic, chronic, b-cell/ or leukemia,  
prolymphocytic, b-cell/ or leukemia, biphenotypic, acute/

202 leukemia, prolymphocytic/ or leukemia, t-cell/ or precursor cell lymphoblastic leukemia-  
lymphoma/  
or lymphoma/ or hodgkin disease/ or lymphoma, non-hodgkin/ or marek disease/ or  
sarcoidosis/ or  
sezary syndrome/ or tumor lysis syndrome/ or waldenstrom macroglobulinemia/

203 or/200-202

204 4 and (9 or 19 or 27 or 36 or 43) and 203 [PICO 74-76]

205 exp neoplasms by site/  
206 (solid organ adj2 (cancer\$ or malignanc\$)).tw,kw.

207 ((abdominal or anal gland or bone or skull or jaw or nose or orbital or spinal or breast or  
digestive  
system or biliary tract or bile duct or gallbladder or gastrointestinal or esophageal or intestinal  
or  
cecal or appendiceal or colorectal or colonic or rectal or duodenal or ileal or jejunal or  
stomach)  
adj2 (cancer\$ or neoplasm\$ or carcinoma\$)).tw,kw.

208 ((liver or pancreatic or peritoneal or endocrine gland or adrenal gland or ovarian or parathyroid  
or  
pituitary or testicular or thyroid or eye or orbital or retinal or "head and neck" or esophageal or  
eyelid or mouth) adj2 (cancer\$ or neoplasm\$ or carcinoma\$)).tw,kw.

209 ((ear or laryngeal or nose or pharyngeal or parathyroid or thyroid or tracheal or mammary or pelvic or splenic or thoracic or heart or lung or thymus or genital or uterine or vaginal or vulvar or penile or prostatic or testicular or urologic or kidney or urethral or bladder) adj2 (cancer\$ or neoplasm\$ or carcinoma\$)).tw,kw.

210 or/205-209

211 4 and (9 or 27 or 36 or 43) and 210 [PICO 78-79]

212 exp neoplasms/ or (cancer\$ or neoplasm\$ or carcinoma\$ or malignan\$).tw,kw.

213 (((check-point or checkpoint) adj3 inhibit\$) or ICI).tw,kw.

214 Ipilimumab/ or Programmed Cell Death 1 Receptor/tu or CTLA-4 Antigen/tu or (Ipilimumab or Yervoy or Pembrolizumab or Keytruda or Nivolumab or Opdivo or Atezolizumab or Tecentriq or Avelumab or Bavencio or Durvalumab or Imfinz or anti-PD1 or anti-CTLA-4 antibody or programmed cell death-1 inhibit\$).tw,kw.

215 or/213-214

216 4 and 212 and 215 [PICO 80-81]

217 exp Hepatitis B/ or Hepatitis B virus/ or (hepatitis B or HBV).tw,kw.

218 exp Blood Cell Count/ or Liver Function Tests/ or Prothrombin Time/ or Hepatitis B Surface Antigens/ or Hepatitis B Antibodies/ or Hepatitis B e Antigens/ or DNA, Viral/ or Alanine Transaminase/

219 (monitor or monitoring or blood cell count or liver function or prothrombin or hepatitis b surface antigen\$ or hepatitis b antibod\$ or hepatitis b e antigen\$ or viral dna or alanine transaminase\$).tw,kw.

220 (serum aminotransferase or HBVDNA or hepatitis B e antigen or HBeAg or anti-HBe or HBsAg or anti-HBs or liver histology).tw,kw.

221 (HBV adj DNA).tw,kw.

222 or/218-221

223 exp Antiviral Agents/ or Post-Exposure Prophylaxis/ or Antiviral prophyla\$.tw,kw. (333010)

224 (Lamivudine or Telbivudine or Entecavir or Adefovir or Tenofovir or Pegylated interferon or PEG-INF or anti-HBV prophylaxis).tw,kw.

225 exp Tenofovir/ or Lamivudine/

226 or/223-225

227 4 and 19 and 217 and (222 or 226) [PICO 82]

228 4 and (27 or 36 or 43) and (222 or 226) [PICO 83-84]

229 exp Hepatitis C/  
230 ("hepatitis C".tw,kw. and chronic disease/) or ("hepatitis c" and chronic).tw,kw.  
231 229 and 230  
232 4 and 231 and (9 or 27 or 36 or 43) [PICO 85-86]

233 Non-alcoholic Fatty Liver Disease/ or (non-alcoholic fatty liver disease\$ or nonalcoholic fatty liver disease or NAFLD-NASH or Non-alcoholic steatohepatitis or nonalcoholic steatohepatitis).tw,kw.

234 4 and 7 and 233 [PICO 87]

235 exp Bacterial Infections/ or exp Infection/ or exp Opportunistic Infections/

236 ((serious adj3 (bacteri\$ or opportunistic)) or serious infection\$).tw,kw.

237 or/235-236

238 4 and 237 and (9 or 27 or 36 or 43 or 54) [PICO 88-91]

239 Mycobacterium avium-intracellulare Infection/ or exp Mycobacterium avium/ or Mycobacterium avium Complex/

240 (mycobacterium avium or mycobacterium avium intracellulare infection\$ or Micobacterium intracellulare or MAC).tw,kw.

241 239 or 240

242 4 and (9 or 27 or 36 or 43 or 54) and 241 [PICO 92-95]

243 179 or 183 or 188 or 199 or 204 or 211 or 216 or 227 or 228 or 232 or 234 or 238 or 242

244 limit 243 to in process

245 243 and 65

246 limit 245 to english language [comorbid and systematic review and english]

247 243 and 79

248 limit 247 to english language [comorbid and rct, observ and age groups and english]

249 244 or 246 or 248 [COMORBID OUTPUT]

250 Influenza Vaccines/

251 (influenza vaccine\$ or flu vaccine\$ or influenza vaccination\$ or flu vaccination\$).tw,kw.

252 ((A H1N1 virus or A H3N2 virus or B virus) adj2 influenza adj2 (vaccine\$ or vaccination\$)).tw,kw.

253 or/250-252

254 4 and (9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 36 or 43) and 253 [PICO 96]

255 4 and 19 and 253 [PICO 97]

256 4 and 7 and 253 [PICO 98]

257 Vaccines, Attenuated/ or (attenuated vaccine\$ or live vaccine\$ or live attenuated influenza vaccine\$).tw,kw.

258 4 and 9 and 257 [PICO 99]

259 4 and (27 or 36 or 43) and 257 [PICO 100]

260 Herpes Zoster Vaccine/ or (recombinant adj2 zoster adj2 vaccin\$).tw,kw.



- 261 4 and (9 or 27 or 36 or 43) and 260 [PICO 101]
- 262 4 and 54 and 257 [PICO 102]
- 263 254 or 255 or 256 or 258 or 259 or 261 or 262 [VACCINES PICOS]

264 limit 263 to in process

265 263 and 65

266 limit 265 to english language [vaccines and systematic reviews and english]

267 263 and 77

268 267 and 79

269 limit 268 to english language [vaccine picos and rct, observ and age groups and english]

270 264 or 266 or 269 [VACCINES OUTPUT]

271 Economics/ or exp "Costs and Cost Analysis"/ or Economics, Nursing/ or Economics, Medicl/  
or  
Economics, Pharmaceutical/ or exp Economics, Hospital/  
272 exp "Fees and Charges"/ or exp Budgets/ or budget\*.ti,ab,kf.  
273 (economic\* or cost or costs or costly or costing or price or prices or pricing or  
pharmacoeconomic\*  
or pharmaco-economic\* or expenditure or expenditures or expense or expenses or financial or  
finance or finances or financed).ti,ab.  
274 ((cost\* adj2 (effective\* or util\* or benefit\* or minimi\* or analy\* or outcome or  
outcomes)).ab,kw. or  
(value adj2 money) or monetary)).ti,ab,kw. or economic model\*.ab,kw.  
275 Quality-Adjusted Life Years/ or (quality adjusted life year\$ or qaly\* or qald\* or disability  
adjusted  
life or daly\*).ti,ab,kf.  
276 willingness to pay.ti,ab.  
277 or/271-276 [MODIFIED CADTH filter for economic evaluations in OVID Medline  
[https://www.cadth.ca/resources/finding-evidence/strings-attached-cadths-database-  
search-  
filters#health](https://www.cadth.ca/resources/finding-evidence/strings-attached-cadths-database-search-filters#health)]  
278 63 or 168 or 243  
279 277 and 278  
280 279 and 79  
281 limit 279 to english language [PHARM, NON-PHARM, COMORBID COST]  
282 263 and 277 [vaccines and cost]  
283 282 and 79  
284 limit 283 to english language [VACCINES COST]

Database: **Embase** <1974 to 2019 November 21>

Search Strategy:

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- 1 rheumatoid arthritis/ or rheumatoid nodule/ or (rheumatoid arthritis or rheumatoid nodule\$.ti,ab.
- 2 hydroxychloroquine/
- 3 leflunomide/
- 4 methotrexate/
- 5 salazosulfapyridine/
- 6 or/2-5
- 7 abatacept/
- 8 adalimumab/
- 9 certolizumab pegol/
- 10 etanercept/
- 11 golimumab/
- 12 infliximab/
- 13 tumor necrosis factor/dt
- 14 tumor necrosis factor inhibitor/dt
- 15 rituximab/
- 16 sarilumab/
- 17 tocilizumab/
- 18 interleukin 6/dt
- 19 interleukin 6 receptor/dt
- 20 monoclonal antibody/dt
- 21 biosimilar agent/ and antirheumatic agent/
- 22 or/7-21
- 23 baricitinib/
- 24 fostamatinib/
- 25 filgotinib/
- 26 tofacitinib/ or **Upadacitinib**/
- 27 Janus kinase inhibitor/dt
- 28 or/23-27
- 29 1 and (6 or 22 or 28) [PICO 1-11, 16-20, 24-27, 52-54, 56-60-63]
- 30 (T2T or "treat to target" or "treat-to-target" or "at target" or remission or bridge therapy or treatment persistence or tight control or therapeutic target\$.tw.
- 31 remission/ or low disease activity.tw.
- 32 or/30-31



- 33 1 and 32 [PICO 12-14]
- 34 folic acid/
- 35 1 and 4 and 34 [PICO 15]
- 36 exp corticosteroid/
- 37 (29 and 36) or 29 [PICO 21-23,55]
- 38 synovitis/
- 39 intraarticular drug administration/
- 40 1 and 38 and (6 or 22 or 28) and 36 and 39 [PICO 28]
- 41 29 or 33 or 35 or 37 or 40 [DRUG PICO]
- 42 meta-analy:.mp. or search:.tw. or review.pt. [McMaster University Health Information Research Unit.  
Best balance of sensitivity and specificity.  
[https://hiru.mcmaster.ca/HIRU\\_Hedges\\_EMBASE\\_Strategies.aspx](https://hiru.mcmaster.ca/HIRU_Hedges_EMBASE_Strategies.aspx)]
- 43 (Randomized Controlled Trial or Pragmatic Clinical Trial).pt. or exp Randomized Controlled Trials as  
Topic/ or "Randomized Controlled Trial (topic)"/ or Randomized Controlled Trial/ or Randomization/  
or Random Allocation/ or Double-Blind Method/
- 44 Double Blind Procedure/ or Double-Blind Studies/ or Single-Blind Method/ or Single Blind Procedure/ or Single-Blind Studies/ or Placebos/ or Placebo/
- 45 (random\* or sham or placebo\* or ((singl\* or doubl\*) adj (blind\* or dumm\* or mask\*)) or ((tripl\* or  
trebl\*) adj (blind\* or dumm\* or mask\*))).ti,ab,hw,kf,kw.
- 46 or/43-45 [CADTH rct filter <https://www.cadth.ca/resources/finding-evidence/strings-attached-cadths-database-search-filters>]
- 47 exp cohort analysis/ or exp longitudinal study/ or exp prospective study/ or exp follow up/ or cohort\$.tw. or exp case control study/ or (case\$ and control\$).tw. [BMJ Best Practice. Embase cohort and case-control strategy <https://bestpractice.bmj.com/info/toolkit/learn-ebm/study-design-search-filters/>]
- 48 observational stud\$.tw.
- 49 or/47-48
- 50 41 and 42
- 51 adulthood/ or senescence/ or exp adult/ or aged.sh. or age:.tw. or adult.mp. or middle aged.sh.  
or  
young adult.sh. or elder:.tw.
- 52 50 and 51

- 53 41 and (46 or 49) and 51
- 54 52 or 53 [Pharm and study designs]
- 55 limit 54 to english language
- 56 limit 55 to conference abstract
- 57 limit 55 to conference paper

58 limit 55 to "conference review"  
 59 or/56-58  
 60 55 not 59  
 61 limit 60 to embase [PHARM]  
 62 exp nutrition/  
 63 1 and 62  
 64 1 and 62 and (6 or 22 or 28)  
 65 or/63-64 [PICO ]  
 66 aerobic exercise/ or exp exercise/ or exp kinesiotherapy/ or aquatic exercise/ or resistance  
 training/  
 67 1 and 66  
 68 1 and 66 and (6 or 22 or 28)  
 69 or/67-68 [PICO 33-34,38-40,43]  
 70 self care/  
 71 1 and 70 and (6 or 22 or 28) [PICO 37]  
 72 orthotics/ or exp splint/ or exp brace/  
 73 1 and 72 and (6 or 22 or 28) [PICO 41-42]  
 74 1 and exp joint/ and protection/ and (6 or 22 or 28) [PICO 44]  
 75 mind-body therap\$.tw,kw.  
 76 meditation/ or mindfulness/ or exp psychotherapy/ or biofeedback/ or breathing exercise/  
 (236616)  
 77 or/75-76  
 78 1 and 77 and (6 or 22 or 28) [PICO 45]  
 79 work disability/ or exp employment/ or unemployment/ or occupational health/ or work  
 capacity/  
 80 1 and 79 and (6 or 22 or 28) [PICO 46]  
 81 occupational therapy/ or occupational therapist/  
 82 1 and 81 and (6 or 22 or 28) [PICO 47]  
 83 exp physiotherapy/  
 84 1 and 83 and (6 or 22 or 28) [PICO 48]  
 85 body weight/ or body weight loss/  
 86 1 and 85 and (6 or 22 or 28) [PICO 49 ]  
 87 smoking cessation/ or smoking/ or exp "tobacco use"/  
 88 1 and 87 and (6 or 22 or 28) [PICO 50]  
 89 1 and exp acupuncture/ and (6 or 22 or 28) [PICO 51]  
 90 subcutaneous nodule/  
 91 1 and 3 and 90  
 92 1 and (6 or 22 or 28) and 90

93 91 or 92 [PICO 64-65]



94 65 or 69 or 71 or 73 or 74 or 78 or 80 or 82 or 84 or 86 or 88 or 89 or 93  
 95 94 and 42  
 96 95 and 51  
 97 94 and (46 or 49)  
 98 97 and 51  
 99 96 or 98 [Non-pharm and study designs]  
 100 limit 99 to english language  
 101 limit 100 to conference paper  
 102 limit 100 to conference abstract  
 103 limit 100 to "conference review"  
 104 or/101-103  
 105 100 not 104  
 106 limit 105 to embase [Non-Pharm]  
 107 61 or 106 [PHARM, NON-PHARM OUTPUT]  
 108 agammaglobulinemia/  
 109 1 and 15 and 108  
 110 1 and (6 or 22 or 28) and 108  
 111 109 or 110 [PICO 66]  
 112 lung parenchyma/ or exp interstitial lung disease/  
 113 1 and (6 or 22 or 28) and 112 [PICO 67-69]  
 114 exp heart disease/  
 115 ((CHF NYHA adj2 Class III) or (CHF NYHA adj2 Class IV) or (CHF New York Heart Association  
 adj2 CLASS III) or CHF New York Heart Association Class IV).tw,kw.  
 116 114 or 115  
 117 1 and (6 or 22 or 28) and 116 [PICO 70-71]  
 118 non melanoma skin cancer/ or exp melanoma/  
 119 1 and (6 or 22 or 28) and 118 [PICO 72-73]  
 120 1 and (6 or 22 or 28) and exp lymphoproliferative disease/ [PICO 74-76]  
 121 (solid organ\$ adj (cancer\$ or malignan\$ or neoplasm\$ or carcinoma\$)).tw,kw.  
 122 exp abdominal cancer/ or exp breast cancer/ or exp "cancer of the thorax and thoracic cavity"/  
 123 exp cardiovascular system cancer/ or exp digestive system cancer/ or exp locomotor system  
 cancer/  
 124 exp pelvis cancer/ or exp soft tissue cancer/ or exp urogenital tract cancer/  
 125 or/121-124  
 126 1 and (6 or 22 or 28) and 125 [PICO 78-79]  
 127 exp malignant neoplasms/

128 ipilimumab/ or pembrolizumab/ or nivolumab/ or atezolizumab/ or durvalumab/ or avelumab/  
129 check point inhibitor\$.tw,kw.  
130 or/128-129  
131 1 and 127 and 130 [PICO 80-81]  
132 exp hepatitis B/ or Hepatitis B virus/  
133 monitoring/ or blood cell count/ or liver function test/ or prothrombin time/ or exp hepatitis B  
antibody/ or alanine aminotransferase/ or aspartate aminotransferase/  
134 hepatitis B surface antigen/ or "hepatitis B(e) antigen"/ or virus DNA/  
135 or/133-134  
136 exp antiviral agent/  
137 exp prophylaxis/  
138 telbivudine/  
139 entecavir/  
140 adefovir/  
141 peginterferon/  
142 or/138-141  
143 1 and 132 and 15 and (135 or 142) [PICO 82]  
144 1 and 132 and (6 or 22 or 28)  
145 1 and 132 and (135 or 142)  
146 144 or 145 [PICO 83-84]  
147 chronic hepatitis C/ or hepatitis C virus/  
148 1 and 147 and (6 or 22 or 28) [PICO 85-86]  
149 nonalcoholic fatty liver/  
150 1 and 4 and 149  
151 1 and (6 or 22 or 28) and 149  
152 or/150-151 [PICO 87]  
153 exp bacterial infection/ or opportunistic infection/  
154 1 and 153 and (6 or 22 or 28 or 36) [PICO 88-91]  
155 mycobacterium avium complex/ or exp Mycobacterium avium/ or mycobacterium  
intracellulare/  
156 1 and (6 or 22 or 28) and 155 [PICO 93-95]  
157 111 or 113 or 117 or 119 or 120 or 126 or 131 or 143 or 146 or 148 or 152 or 154 or 156  
158 42 and 157  
159 158 and 51  
160 limit 159 to english language  
161 157 and (46 or 49)  
162 161 and 51

163 limit 162 to english language  
164 160 or 163  
165 limit 164 to conference abstract  
166 limit 164 to conference paper  
167 limit 164 to "conference review"  
168 or/165-167  
169 164 not 168  
170 limit 169 to embase [COMORBIDITIES OUTPUT]  
171 exp influenza vaccine/  
172 1 and 171 and (6 or 22 or 28) [PICO 96-98]  
173 live vaccine/  
174 1 and (6 or 22 or 28) and 173 [PICO 99-100]  
175 varicella zoster vaccine/ or recombinant zoster vaccine.tw.  
176 1 and (6 or 22 or 28 or 36) and 175 [PICO 101-102]  
177 172 or 174 or 176  
178 177 and 42  
179 limit 178 to english language  
180 177 and (46 or 49)  
181 180 and 51  
182 limit 181 to english language  
183 179 or 182  
184 limit 183 to conference paper  
185 limit 183 to conference abstract  
186 limit 183 to "conference review"  
187 or/184-186  
188 183 not 187  
189 limit 188 to embase [VACCINES OUTPUT]  
190 cost effectiveness analysis.sh. or economic.tw.  
191 \*economics/ or exp \*"costs and cost analysis"/ or (economic adj2 model\*).mp.  
192 (cost minimi\* or cost-utilit\* or health utilit\* or economic evaluation\* or economic review\* or  
cost  
outcome or cost analys?s or economic analys?s or budget\* impact analys?s).ti,ab,kf,kw.  
193 (cost-effective\* or pharmaco-economic\* or pharmaco-economic\* or cost-benefit or  
costs).ti,kf,kw. or  
(life year or life years or qaly\* or cost-benefit analys?s or cost-effectiveness  
analys?s).ab,kf,kw.  
194 (cost or economic\*).ti,kf,kw. and (costs or cost-effectiveness or markov).ab.  
195 or/190-194 [CADTH economic filter OVID Embase <https://www.cadth.ca/resources/finding->

evidence/strings-attached-cadths-database-search-filters#health]

196 41 or 94 or 157  
197 195 and 196  
198 197 and 51  
199 limit 198 to english language  
200 limit 199 to conference abstract  
201 limit 199 to conference paper  
202 limit 199 to "conference review"  
203 or/200-202  
204 199 not 203  
205 limit 204 to embase [COST OUTPUT]  
206 177 and 195  
207 limit 206 to english language  
208 limit 207 to conference abstract  
209 limit 207 to conference paper  
210 limit 207 to "conference review"  
211 or/208-210  
212 207 not 211  
213 limit 212 to embase [VACCINES COSTS]

## Cochrane

Search Name: RA Guidelines 2018 2nd ed

Last Saved: 11/21/2019

- #1 MeSH descriptor: [Arthritis, Rheumatoid] this term only
- #2 MeSH descriptor: [Rheumatoid Nodule] this term only
- #3 ("rheumatoid arthrit\*" or "rheumatoid arthros" or "rheumatoid nodule\*"):ti,ab,kw
- #4 {OR #1-#3}
- #5 MeSH descriptor: [Hydroxychloroquine] this term only
- #6 (hydroxychloroquine or Plaquenil):ti,ab,kw
- #7 (leflunomide or Arava):ti,ab,kw
- #8 MeSH descriptor: [Methotrexate] this term only
- #9 (methotrexate or Rheumatrex or Trexall or Otexup or Rasuvo):ti,ab,kw
- #10 MeSH descriptor: [Sulfasalazine] this term only
- #11 (sulfasalazine or sulphasalazine or Azulfidine):ti,ab,kw
- #12 {OR #5-#11}
- #13 MeSH descriptor: [Certolizumab Pegol] this term only
- #14 (certolizumab or Humira):ti,ab,kw
- #15 MeSH descriptor: [Etanercept] this term only
- #16 (etanercept or Enbrel):ti,ab,kw
- #17 (Golimumab or Simponi):ti,ab,kw
- #18 MeSH descriptor: [Infliximab] this term only
- #19 (Infliximab or Remicade):ti,ab,kw
- #20 MeSH descriptor: [Tumor Necrosis Factor-alpha] this term only and with qualifier(s):  
[therapeutic  
use - TU]
- #21 ((tumor or tumour) NEXT (necrosis factor) NEXT (block\* or inhibitor\*)):ti,ab,kw
- #22 (TNFi inhibitor\* or TNFi or anti-TNF or "anti TNF"):ti,ab,kw
- #23 MeSH descriptor: [Abatacept] this term only
- #24 (abatacept or Orencia):ti,ab,kw
- #25 MeSH descriptor: [Rituximab] explode all trees
- #26 (rituximab or Rituxan or ManThera or Remsina):ti,ab,kw
- #27 (sarilumab or Kevzara):ti,ab,kw
- #28 (tocilizumab):ti,ab,kw
- #29 MeSH descriptor: [Antibodies, Monoclonal] explode all trees and with qualifier(s):  
[therapeutic use  
- TU]
- #30 MeSH descriptor: [Interleukin-6] this term only and with qualifier(s): [therapeutic use - TU]



#31 MeSH descriptor: [Interleukin-1] explode all trees and with qualifier(s): [therapeutic use - TU]

#32 MeSH descriptor: [Receptors, Interleukin-6] explode all trees and with qualifier(s): [therapeutic use - TU]

#33 MeSH descriptor: [Receptors, Interleukin-11] explode all trees and with qualifier(s): [therapeutic use - TU]

#34 (biologic NEXT DMARD\*):ti,ab,kw

#35 MeSH descriptor: [Biological Products] this term only

#36 MeSH descriptor: [Antirheumatic Agents] explode all trees

#37 #35 and #36

#38 {OR #13-#34, #37}

#39 (Amjevita OR "adalimumab-atto"):ti,ab,kw

#40 (Erelzi or "etanercept szzs"):ti,ab,kw

#41 ("infliximab-DYBB" or Inflectra):ti,ab,kw

#42 MeSH descriptor: [Biosimilar Pharmaceuticals] this term only

#43 #42 and #36

#44 (biosimilar NEXT disease NEXT modifying NEXT anti-rheumatic\*):ti,ab,kw

#45 (biosimilar NEXT DMARD\*):ti,ab,kw

#46 (bs NEXT DMARD\*):ti,ab,kw

#47 {OR #39-#41, #43, #44-#46}

#48 (baricitinib or Olumiant):ti,ab,kw

#49 (fostamatinib or Tavalisse or **Upadacitinib** or "**ABT-494**):ti,ab,kw

#50 (Figotnib or "GS-6034" or "GLPG0634"):ti,ab,kw

#51 (tofacitinib or tasocitinib or Xeljanz or "cp690550" or "cp 690 550"):ti,ab,kw

#52 ((JAK1 or JAK2) NEXT inhibit\*):ti,ab,kw

#53 ((Janus kinase 1 inhibitor\*) or (Janus kinase 3 inhibitor\*)):ti,ab,kw

#54 MeSH descriptor: [Janus Kinase Inhibitors] this term only and with qualifier(s): [therapeutic use - TU]

#55 {OR #48-#54}

#56 {OR #12, #38, #47, #55}

#57 {AND #4, #56}

#58 ((T2T or TTT or "treat to target" or "treat-to-target" or "at target" or remission or "bridge therapy" or "treatment persistence" or "tight\* control\*" or "therapeutic target\*" or "low disease activity")):ti,ab,kw



#59 MeSH descriptor: [Remission Induction] this term only  
#60 {OR #58-#59}  
#61 {AND #4, #60}

#62 MeSH descriptor: [Folic Acid Antagonists] this term only  
#63 (folic acid\*):ti,ab,kw  
#64 {OR #62-#63}  
#65 {AND #4, #64, #9}  
#66 MeSH descriptor: [Adrenal Cortex Hormones] explode all trees  
#67 (corticosteroid\* or glucocorticoid\* or dexamethasone\* or methylprednisolone\* or prednisolone\* or prednisone\* or cortisone\* or triamcinolone\* or pregnenolone\*):ti,ab,kw  
#68 {OR #66, #67}  
#69 {AND #4, #56}  
#70 {AND #4, #56, #69}  
#71 {OR #69, #70}  
#72 MeSH descriptor: [Synovitis] explode all trees  
#73 MeSH descriptor: [Synovial Membrane] explode all trees  
#74 MeSH descriptor: [Inflammation] explode all trees  
#75 #73 and #74  
#76 #72 or #75  
#77 MeSH descriptor: [Injections] explode all trees  
#78 (inject\* or intra-articular or intraarticular):ti,ab,kw  
#79 {OR #77, #78}  
#80 {AND #4, #76, #56, #68, #79}  
#81 {AND #4, #76, #56}  
#82 {OR #80, #81}  
#83 MeSH descriptor: [Diet] explode all trees  
#84 MeSH descriptor: [Food] explode all trees  
#85 MeSH descriptor: [Micronutrients] explode all trees  
#86 MeSH descriptor: [Spices] this term only  
#87 MeSH descriptor: [Nutritional Requirements] explode all trees  
#88 MeSH descriptor: [Nutritional Status] this term only  
#89 MeSH descriptor: [Nutritive Value] explode all trees  
#90 (diet or dietary or food or nutrient\* or spice\* or nutraceutical\* or prebiotic\* or probiotic\* or nutrition\*):ti,ab,kw  
#91 MeSH descriptor: [Plants, Medicinal] this term only  
#92 MeSH descriptor: [Plant Extracts] explode all trees  
#93 MeSH descriptor: [Plant Oils] explode all trees  
#94 MeSH descriptor: [Phytochemicals] explode all trees  
#95 (phytonutrient\*):ti,ab,kw

#96 {OR #83-#95}  
 #97 {OR #56, #96}  
 #98 {AND #4, #97}  
 #99 ("aerobic exercise\*"):ti,ab,kw  
 #100 MeSH descriptor: [Exercise] explode all trees  
 #101 MeSH descriptor: [Exercise Therapy] explode all trees  
 #102 MeSH descriptor: [Physical Exertion] this term only  
 #103 MeSH descriptor: [Exercise Movement Techniques] explode all trees  
 #104 (running or walking or climbing or swimming or jogging or aquarobics or bicycling or rowing):ti,ab,kw  
 #105 (boxing or "aerobic class\*" or "cardio class\*" or "team sport\*" or dancing):ti,ab,kw  
 #106 ("jumping rope" or "stationary bike" or "elliptical machine" or zumba or spinning or hiking or skiing or kickboxing):ti,ab,kw  
 #107 ("aquatic exercise\*" or aquafit\* or "water sport\*" or "water therapy exercise\*"):ti,ab,kw  
 #108 MeSH descriptor: [Resistance Training] this term only  
 #109 ("resistance training" or "weight lift\*" or "muscle strengthen\*" or "isokinetic exercise\*"):ti,ab,kw  
 #110 {OR #99-#109}  
 #111 #4 AND #110  
 #112 {OR #57, #111}  
 #113 MeSH descriptor: [Self-Management] this term only  
 #114 MeSH descriptor: [Self Care] this term only  
 #115 MeSH descriptor: [Self Efficacy] this term only  
 #116 ("self management" or "self care" or "self efficacy"):ti,ab,kw  
 #117 MeSH descriptor: [Personal Autonomy] this term only  
 #118 {OR #113-#117}  
 #119 {AND #4, #56, #118}  
 #120 MeSH descriptor: [Splints] this term only  
 #121 MeSH descriptor: [Bandages] explode all trees  
 #122 MeSH descriptor: [Orthotic Devices] explode all trees  
 #123 splint\* or orthotic\* or athletic tape  
 #124 {OR #120-#123}  
 #125 {AND #4, #56, #124}  
 #126 ("joint protection"):ti,ab,kw  
 #127 {AND #4, #126}  
 #128 MeSH descriptor: [Joints] explode all trees  
 #129 protect\* or splint\* or orthoses or orthotic



#130 {AND #4, #128, #129}

#131 {OR #127, #130}

#132 MeSH descriptor: [Mind-Body Therapies] explode all trees

#133 MeSH descriptor: [Behavior Therapy] explode all trees

#134 biofeedback or neurofeedback or "breathing exercise" or Qigong or hypnosis or "autogenic training" or "autosuggestion" or imagery or meditation or "mental healing" or "role playing"

#135 (psychophysiology or relaxation or "Tai Ji" or "Tai Chi" or "therapeutic touch" or yoga):ti,ab,kw

#136 (mindfulness or spirituality):ti,ab,kw

#137 {OR #132-#136}

#138 {AND #4, #56, #137}

#139 MeSH descriptor: [Employment] explode all trees

#140 MeSH descriptor: [Disability Evaluation] explode all trees

#141 MeSH descriptor: [Work Schedule Tolerance] explode all trees

#142 MeSH descriptor: [Work] explode all trees

#143 ("disability evaluation" or "work disability" or employment or unemployment or employed or unemployed or "work productivity"):ti,ab,kw

#144 ("work intervention\*" or "Work adjustment"):ti,ab,kw

#145 MeSH descriptor: [Occupational Health Services] this term only

#146 {OR #139-#145}

#147 {AND #4, #56, #146}

#148 MeSH descriptor: [Occupational Therapy Department, Hospital] this term only

#149 MeSH descriptor: [Occupational Therapy] this term only

#150 "occupational therapy" or "occupational therapist"

#151 MeSH descriptor: [Rehabilitation] explode all trees

#152 MeSH descriptor: [Physical Therapy Modalities] explode all trees

#153 physiotherap\*

#154 {OR #148-#153}

#155 {AND #4, #56, #154}

#156 MeSH descriptor: [Body Weight] explode all trees

#157 "weight loss" or "losing weight" or "weight reduction" or obesity or overweight

#158 {OR #156-#157}

#159 {AND #4, #56, #158}

#160 MeSH descriptor: [Tobacco Use Cessation Products] this term only

#161 MeSH descriptor: [Smoking Cessation] this term only

#162 MeSH descriptor: [Tobacco Use Cessation] this term only

#163 MeSH descriptor: [Smoking] explode all trees

#164 "quitting smoking" or "stopping smoking" or "reducing smoking" or "smoking reduction" or "ceasing smoking"

#165 {OR #160-#164}

#166 {AND #4, #56, #165}

#167 MeSH descriptor: [Acupuncture Therapy] explode all trees

#168 MeSH descriptor: [Acupuncture] this term only

#169 (acupuncture or acupressure or electroacupuncture or needling):ti,ab,kw

#170 {OR #167-#169}

#171 {AND #4, #56, #170}

#172 "subcutaneous nodule\*"

#173 {AND #4, #56, #172}

#174 {OR #57, #61, #65, #71, #82, #98, #112, #119, #125, #131, #138, #147, #155, #159, #166, #171, #173}

#175 MeSH descriptor: [Agammaglobulinemia] this term only

#176 (agammaglobulinemia or hypogammaglobulinemia):ti,ab,kw

#177 {OR #175-#176}

#178 {AND #4, #26, #177}

#179 MeSH descriptor: [Lung Diseases, Interstitial] explode all trees

#180 "interstitial lung" or "parenchymal lung\*"

#181 {OR #179, #180}

#182 {AND #4, #56, #181}

#183 MeSH descriptor: [Heart Failure] explode all trees

#184 "heart failure" or "cardiac failure" or "myocardial failure"

#185 "CHF NYHA Class III" or "CHF NYHA Class IV" or "CHF New York Heart Association Class III" or "CHF New York Heart Association Class IV"

#186 {OR #183-#185}

#187 {AND #4, #56, #186}

#188 MeSH descriptor: [Skin Neoplasms] explode all trees

#189 MeSH descriptor: [Neoplasms, Squamous Cell] explode all trees

#190 MeSH descriptor: [Neoplasms, Basal Cell] explode all trees

#191 ("non-melanoma cancer" or "non melanoma cancer" or "non-melanoma skin cancer" or "non melanoma skin cancer"):ti,ab,kw

#192 ("squamous cell carcinoma" or "basal cell carcinoma" or "squamous cell cancer" or "basal cell cancer"):ti,ab,kw

#193 ("skin cancer" or "skin neoplasm" or "skin carcinoma" or melanoma):ti,ab,kw

#194 MeSH descriptor: [Carcinoma, Basal Cell] explode all trees



#195 MeSH descriptor: [Carcinoma, Squamous Cell] explode all trees

#196 MeSH descriptor: [Melanoma] explode all trees

#197 {OR #188-#196}

#198 {AND #4, #56, #197}

#199 MeSH descriptor: [Lymphoproliferative Disorders] explode all trees

#200 (lymphoproliferative disorder\*):ti,ab,kw

#201 {OR #199-#200}

#202 {OR #12, #26, #38, #47, #55}

#203 {AND #4, #201, #202}

#204 MeSH descriptor: [Neoplasms by Site] explode all trees

#205 ("solid organ cancer\*" or "solid organ malignancy" or "solid organ carcinoma" or "solid organ neoplasm\*"):ti,ab,kw

#206 ((intestinal or cecal or appendiceal or colorectal or colonic or rectal or duodenal or ileal or jejunal  
or stomach) NEXT (cancer or neoplasm or carcinoma)):ti,ab,kw

#207 ((abdominal or anal gland or bone or skull or jaw or nose or orbital or spinal or breast or digestive  
system or biliary tract or gallbladder or gastrointestinal or esophageal) NEXT (cancer or neoplasm or carcinoma)):ti,ab,kw

#208 ((liver or pancreatic or peritoneal or endocrine gland or adrenal gland or ovarian or parathyroid or  
pituitary or testicular or thyroid or eye or orbital or retinal or eyelid or mouth or head or neck)  
NEXT (cancer or neoplasm or carcinoma)):ti,ab,kw

#209 ((laryngeal or nose or pharyngeal or tracheal or mammary or pelvic or prostatic or urologic or  
kidney or urethral or bladder) NEXT (cancer or neoplasm or carcinoma)):ti,ab,kw

#210 {OR #204-#209}

#211 {AND #4, #56, #210}

#212 MeSH descriptor: [Neoplasms] explode all trees

#213 (cancer\* or neoplasm\* or carcinoma\* or malignan\*):ti,ab,kw

#214 {OR #212-#213}

#215 ("check point inhibitor\*" or "check-point inhibitor\*"):ti,ab,kw

#216 (Ipilimumab or pembrolizumab or nivolumab or atezolizumab or durvalumab or avelumab):ti,ab,kw

#217 {OR #215-#216}

#218 {AND #4, #214, #217}

#219 MeSH descriptor: [Hepatitis B] explode all trees

#220 MeSH descriptor: [Hepatitis B virus] explode all trees

#221 ("hepatitis b" or HBV):ti,ab,kw



#222 {OR #219-#221}

#223 {OR #38, #47, #55}

#224 MeSH descriptor: [Blood Cell Count] explode all trees

#225 MeSH descriptor: [Liver Function Tests] this term only

#226 MeSH descriptor: [Prothrombin Time] this term only

#227 MeSH descriptor: [Hepatitis B Surface Antigens] explode all trees

#228 MeSH descriptor: [Hepatitis B Antibodies] explode all trees

#229 MeSH descriptor: [DNA, Viral] this term only

#230 MeSH descriptor: [Alanine Transaminase] this term only

#231 (monitor\* or "blood cell count" or "liver function" or prothrombin or "hepatitis b surface antigen\*" or "hepatitis b antibod\*"):ti,ab,kw

#232 ("hepatitis b e antigen\*" or "viral dina" or "alanine transaminase"):ti,ab,kw

#233 ("serum aminotransferase" or "HBV DNA" or "liver histology"):ti,ab,kw

#234 {OR #224-#233}

#235 MeSH descriptor: [Antiviral Agents] explode all trees

#236 MeSH descriptor: [Post-Exposure Prophylaxis] this term only

#237 MeSH descriptor: [Lamivudine] this term only

#238 MeSH descriptor: [Tenofovir] explode all trees

#239 (lamivudine or telbivudine or entecavir or adefovir or tenofovir or "pegylated interferon" or PEG-INF or "anti-HBV prophylaxis"):ti,ab,kw

#240 {OR #235-#239}

#241 #234 or #240

#242 {AND #4, #222, #223, #241}

#243 MeSH descriptor: [Hepatitis C] explode all trees

#244 ("hepatitis C" and chronic):ti,ab,kw

#245 {OR #243, #244}

#246 {AND #4, #245, #56}

#247 MeSH descriptor: [Non-alcoholic Fatty Liver Disease] this term only

#248 ("non-alcoholic fatty liver disease\*" or "NAFLD-NASH" or "non-alcoholic steatohepatitis" or "nonalcoholic steatohepatitis"):ti,ab,kw

#249 {OR #247, #248}

#250 {AND #4, #56, #249}

#251 MeSH descriptor: [Central Nervous System Infections] explode all trees

#252 MeSH descriptor: [Bacterial Infections] explode all trees

#253 MeSH descriptor: [Infection] explode all trees

#254 ("serious bacterial infection\*" or "bacterial infection\*" or "opportunistic infection\*" or "central nervous system infection\*"):ti,ab,kw

#255 {OR #251-#254}



#256 {OR #56, #68}

#257 {AND #4, #255, #256}

#258 MeSH descriptor: [Mycobacterium avium-intracellulare Infection] this term only

#259 MeSH descriptor: [Mycobacterium avium] explode all trees

#260 MeSH descriptor: [Mycobacterium avium Complex] this term only

#261 ("mycobacterium avium" or "mycobacterium avium intracellulaire"):ti,ab,kw

#262 {OR #258-#261}

#263 {AND #4, #262, #56}

#264 {OR #178, #182, #187, #198, #203, #211, #218, #242, #246, #250, #257, #263}

#265 MeSH descriptor: [Influenza Vaccines] this term only

#266 ("influenza vaccine\*" or "flu vaccine\*" or "influenza vaccination\*" or "flu vaccination\*"):ti,ab,kw

#267 (("AH1N1 virus" or "AH3N2 virus" or "B virus") and (influenza) and (vaccine\* or vaccination\*)):ti,ab,kw

#268 {OR #265-#267}

#269 {AND #4, #56, #268}

#270 MeSH descriptor: [Vaccines, Attenuated] explode all trees

#271 "attenuated vaccine\*" or "live vaccine\*"

#272 {OR #270-#271}

#273 {AND #4, #56, #272}

#274 MeSH descriptor: [Herpes Zoster Vaccine] this term only

#275 (recombinant zoster vaccin\*):ti,ab,kw

#276 {OR #274, #275}

#277 {AND #4, #56, #276}

#278 {OR #269, #273, #277}

#279 MeSH descriptor: [Economics] explode all trees

#280 MeSH descriptor: [Costs and Cost Analysis] this term only

#281 MeSH descriptor: [Economics, Nursing] this term only

#282 MeSH descriptor: [Economics, Medical] explode all trees

#283 MeSH descriptor: [Economics, Pharmaceutical] this term only

#284 MeSH descriptor: [Economics, Hospital] explode all trees

#285 MeSH descriptor: [Fees and Charges] explode all trees

#286 MeSH descriptor: [Budgets] explode all trees

#287 (budget\*):ti,ab,kw

#288 (economic\* or cost or costs or costly or price or prices or pricing or pharmacoeconomic\* or expenditure or expenditures or expense or expenses or financial or finance or finances or financed):ti,ab,kw

- #289 ("cost effective\*" or "cost utility\*" or "cost benefit\*" or "cost minimiz\*" or "cost analy\*" or "cost outcome\*" or "cost outcomes"):ti,ab,kw
- #290 ("value NEAR2 money" or monetary):ti,ab,kw
- #291 MeSH descriptor: [Quality-Adjusted Life Years] this term only
- #292 "willingness to pay" or "quality adjusted life years" OR "disability adjusted life years" or QALY  
or  
DALY
- #293 {OR #279-#292}
- #294 {OR #174, #264}
- #295 {AND #293, #294}
- #296 {AND #276, #293}