Supplementary file 1:

1a: Specific database search terms:

"transmission", "host cell entry", "clinical presentation", "symptoms", "risk factors", "genetic risk", "coronavirus", "structure", "genetics", "replication", open reading frame", "structural proteins", "accessory proteins", "spike", "receptor binding domain", "mutation", "variant of concern", "variant of interest", "alpha", "beta", "gamma", "delta", "omicron", "lambda", "mu", "pfizer", "BNT162b2", "oxford-AtraZeneca", "AZD1222", "ChAdOx1", "johnson and johnson", "janssen", "Ad26.COV.2.S", "moderna", "mrna-1273", "sinopharm", "BBIBP-CorV", "sinovac", "CoronaVac", "bharat biotech", "Covaxin", "BBV152", "Novavax", " Coalition for Epidemic Preparedness Innovations", "Covovax", "Nuvaxovid", "NVX-CoV2372", "immunogenicity" "antibody", "neutralisation", "reactogenicity", "safety", "adverse events", "effectiveness", "efficacy", "immunity", "booster", "treatment", "therapy", "guideline", "recommendations".

1b: Selection of studies (inclusion/exclusion criteria):

Virology studies – preference was given to studies directly examining/discussing SARS-CoV-2, however, useful papers that explored the structure, genetics, and virology of coronaviruses in general were considered.

Variant studies – in general, large epidemiological studies that explored the prevalence and risk of certain outcomes (e.g. hospitalisation, death, etc.) with COVID-19 infection for certain variants were included. Authors aimed to include studies from multiple countries.

Vaccine studies – Studies with human derived data (e.g. blood sera, phase 1/2 trials) were of greatest interest when collating information on immunogenicity, reactogenicity, and safety. Large randomised controlled trials, test-negative case-control, and observational studies were of selected when exploring vaccine efficacy. Review articles summarising effectiveness studies were excluded, unless a meta-analysis was performed.