**Supplementary Table 1.** Search strategies for target databases

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| **Pubmed search strategy** |
| No. | Query |
| 8 | #3 AND #6 AND #7 |
| 7 | ((((((("Randomized Controlled Trial" [Publication Type]) OR "Randomized Controlled Trials as Topic"[Mesh]) OR "Random Allocation"[Mesh]) OR "Double-Blind Method"[Mesh]) OR "Single-Blind Method"[Mesh]) OR "Placebos"[Mesh]) OR ((random\*[Text Word]) OR (placebo[Title/Abstract]))) OR (((((singl\*[Text Word]) OR (doubl\*[Text Word])) OR (trebl\*[Text Word])) OR (tripl\*[Text Word])) AND (((mask\*[Text Word]) OR (blind\*[Text Word])) OR (dumm\*[Text Word]))) |
| 6 | #4 OR #5 |
| 5 | (((((Colonoscop\*[Title/Abstract]) OR (Colonoscopic Surgical Procedure\*[Title/Abstract])) OR (Colonoscopic Surger\*[Title/Abstract])) OR (Surgical Endoscop\*[Title/Abstract])) OR (Endoscopic Surgical Procedure\*[Title/Abstract])) OR (endoscop\*[Title/Abstract]) |
| 4 | ("Colonoscopy"[Mesh]) OR "Endoscopy"[Mesh] |
| 3 | #1 OR #2 |
| 2 | (((((((((((((Artificial Intelligence\*[Title/Abstract]) OR (Computational Intelligence\*[Title/Abstract])) OR (Machine Intelligence\*[Title/Abstract])) OR (Computer Reasoning[Title/Abstract])) OR (Computer Vision System\*[Title/Abstract])) OR (AI[Title/Abstract])) OR (convolutional neural network\*[Title/Abstract])) OR (Computer Neural Network\*[Title/Abstract])) OR (Neural Network Model\*[Title/Abstract])) OR (Neural Network\*[Title/Abstract])) OR (Deep Learning[Title/Abstract])) OR (Hierarchical Learning[Title/Abstract])) OR (Machine Learning[Title/Abstract])) OR (Transfer Learning[Title/Abstract]) |
| 1 | ((("Artificial Intelligence"[Mesh]) OR "Neural Networks, Computer"[Mesh]) OR "Deep Learning"[Mesh]) OR "Machine Learning"[Mesh] |

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| **Embase search strategy** |
| No. | Query |
| #11. | #10 AND [embase]/lim NOT ([embase]/lim AND [medline]/lim) |
| #10. | #3 AND #6 AND #9 |
| #9. | #7 OR #8 |
| #8. | randomized controlled trial (topic)'/exp OR 'equivalence trial'/exp OR 'randomization'/exp OR 'double blind procedure'/exp OR 'single blind procedure'/exp OR 'placebo'/exp OR 'phase 3 clinical trial'/exp OR 'pragmatic trial'/exp OR 'controlled clinical trial'/exp OR 'controlled clinical trial (topic)'/exp |
| #7. | randomized controlled trial':ab,ti AND topic:ab,ti OR 'randomized controlled trial topic':ab,ti OR ('controlled clinical trial':ab,ti AND topic:ab,ti) OR 'controlled clinical trial topic'/exp OR 'controlled clinical trial topic' OR 'randomization'/exp OR randomization OR 'random allocation'/exp OR 'random allocation' OR (random AND allocation) OR 'double-blind method'/exp OR 'double-blind method' OR ('double blind' AND ('method'/exp OR method)) OR 'double blind procedure'/exp OR 'double blind procedure' OR (double AND ('blind'/exp OR blind) AND ('procedure'/exp OR procedure)) OR 'double-blind studies'/exp OR 'double-blind studies' OR ('double blind' AND ('studies'/exp OR studies)) OR 'single-blind method'/exp OR 'single-blind method' OR ('single blind' AND ('method'/exp OR method)) OR 'single blind procedure'/exp OR 'single blind procedure' OR (single AND ('blind'/exp OR blind) AND ('procedure'/exp OR procedure)) OR 'single-blind studies'/exp OR 'single-blind studies' OR ('single blind' AND ('studies'/exp OR studies)) OR (('control'/exp OR control) AND group\*) OR random\* OR sham OR placebo\* OR ((singl\* OR doubl\*) AND adj AND (blind\* OR dumm\* OR mask\*)) OR ((tripl\* OR trebl\*) AND adj AND (blind\* OR dumm\* OR mask\*)) OR (control\* AND adj3 AND ('study'/exp OR study OR 'studies'/exp OR studies OR trial\* OR group\*)) OR ((nonrandom\* OR non) AND random\*) OR 'non random\*' OR 'quasi random\*' OR quasirandom\* OR allocated OR ((open AND label OR 'open label') AND adj5 AND ('study'/exp OR study OR 'studies'/exp OR studies OR trial\*)) OR ((equivalence OR superiority OR 'non inferiority' OR noninferiority) AND adj3 AND ('study'/exp OR study OR 'studies'/exp OR studies OR trial\*)) OR 'pragmatic study' OR (pragmatic AND ('study'/exp OR study)) OR 'pragmatic studies' OR (pragmatic AND ('studies'/exp OR studies)) OR ((pragmatic OR practical) AND adj3 AND trial\*) OR ((quasiexperimental OR 'quasi experimental') AND adj3 AND ('study'/exp OR study OR 'studies'/exp OR studies OR trial\*)) OR 'phase adj3 adj3' OR (phase AND (iii OR '3') AND adj3 AND ('study'/exp OR study OR 'studies'/exp OR studies OR trial\*)) |
| #6. | #4 OR #5 |
| #5. | colonoscopy'/exp OR 'endoscopy'/exp |
| #4. | colonoscop\*:ti,ab,kw OR 'colonoscopic surgical procedure\*':ti,ab,kw OR 'colonoscopic surger\*':ti,ab,kw OR 'surgical endoscop\*':ti,ab,kw OR 'endoscopic surgical procedure\*':ti,ab,kw OR endoscop\*:ti,ab,kw |
| #3. | #1 OR #2 |
| #2. | artificial intelligence'/exp OR 'artificial neural network'/exp OR 'machine learning'/exp |
| #1. | artificial intelligence\*':ti,ab,kw OR 'computational intelligence\*':ti,ab,kw OR 'machine intelligence\*':ti,ab,kw OR 'computer reasoning':ti,ab,kw OR 'computer vision system\*':ti,ab,kw OR ai:ti,ab,kw OR 'convolutional neural network':ti,ab,kw OR 'computer neural network\*':ti,ab,kw OR 'neural network model\*':ti,ab,kw OR 'neural network\*':ti,ab,kw OR 'deep learning':ti,ab,kw OR 'hierarchical learning':ti,ab,kw OR 'machine learning':ti,ab,kw OR 'transfer learning':ti,ab,kw |

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| **Cochrane library search strategy** |
| No. | Query |
| #1 | (Artificial Intelligence\*):ti,ab,kw OR (Computational Intelligence\*):ti,ab,kw OR (Machine Intelligence\*):ti,ab,kw OR (Computer Reasoning):ti,ab,kw OR (Computer Vision System\*):ti,ab,kw (Word variations have been searched) |
| #2 | (AI):ti,ab,kw OR (convolutional neural network\*):ti,ab,kw OR (Computer Neural Network\*):ti,ab,kw OR (Neural Network Model\*):ti,ab,kw OR (Neural Network\*):ti,ab,kw |
| #3 | (Deep Learning):ti,ab,kw OR (Hierarchical Learning):ti,ab,kw OR (Machine Learning):ti,ab,kw OR (Transfer Learning):ti,ab,kw |
| #4 | #1 OR #2 OR #3 |
| #5 | MeSH descriptor: [Artificial Intelligence] explode all trees |
| #6 | MeSH descriptor: [Neural Networks, Computer] explode all trees |
| #7 | MeSH descriptor: [Deep Learning] explode all trees |
| #8 | MeSH descriptor: [Machine Learning] explode all trees |
| #9 | #4 OR #5 OR #6 OR #7 OR #8 |
| #10 | (Colonoscop\*):ti,ab,kw OR (Colonoscopic Surgical Procedure\*):ti,ab,kw OR (Colonoscopic Surger\*):ti,ab,kw OR (Surgical Endoscop\*):ti,ab,kw OR (Endoscopic Surgical Procedure\*):ti,ab,kw |
| #11 | (endoscop\*):ti,ab,kw |
| #12 | #10 OR #11 |
| #13 | MeSH descriptor: [Colonoscopy] explode all trees |
| #14 | MeSH descriptor: [Endoscopy] explode all trees |
| #15 | #12 OR #13 OR #14 |
| #16 | (random\*):ti,ab,kw OR (placebo\*):ti,ab,kw |
| #17 | (singl\*):ti,ab,kw OR (doubl\*):ti,ab,kw OR (trebl\*):ti,ab,kw OR (trip\*):ti,ab,kw |
| #18 | (mask\*):ti,ab,kw OR (blind\*):ti,ab,kw OR (dumm\*):ti,ab,kw |
| #19 | #17 AND #18 |
| #20 | #16 OR #19 |
| #21 | MeSH descriptor: [Randomized Controlled Trial] explode all trees |
| #22 | MeSH descriptor: [Randomized Controlled Trials as Topic] explode all trees |
| #23 | MeSH descriptor: [Random Allocation] explode all trees |
| #24 | MeSH descriptor: [Double-Blind Method] explode all trees |
| #25 | MeSH descriptor: [Single-Blind Method] explode all trees |
| #26 | MeSH descriptor: [Placebos] explode all trees |
| #27 | #20 OR #21 OR #22 OR #23 OR #24 OR #25 OR #26  |
| #28 | #9 AND #15 AND #27  |