**Supplementary Content 1**

Search strategy used for PubMed

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| --- | --- | --- |
| **#** | **Search Query** | **Search Results** |
| 1 | (("Surgical Procedures, Operative"[Mesh] or "Surgery, Computer-Assisted"[Mesh] or "surgery" [Subheading] or "open surgery" or "surgical procedure" or "open approach" or "invasive surgery" or "investigational procedure" or "microsurgery") not (endoscop\* or laparoscop\*)) | 3,950,797 |
| 2 | "Educational Measurement"[Mesh] or "Teaching"[Mesh] or "Education"[Mesh] or "education" [Subheading] or "surgical skills" or "surgical training" or "proficiency" or "evaluation" or "skills assessment" or "skills classification" | 2,907,908 |
| 3 | "Pattern Recognition, Automated"[Mesh] or "Artificial Intelligence"[Mesh] or "Machine Learning"[Mesh] or "Unsupervised Machine Learning"[Mesh] or "Supervised Machine Learning"[Mesh] or "Deep Learning"[Mesh] or "Automation"[Mesh] or "Neural Networks, Computer"[Mesh] or “automated” or “convolutional neural networks” | 352,769 |
| 4 | (("Surgical Procedures, Operative"[Mesh] or "Surgery, Computer-Assisted"[Mesh] or "surgery" [Subheading] or "open surgery" or "surgical procedure" or "open approach" or "invasive surgery" or "investigational procedure" or "microsurgery") not (endoscop\* or laparoscop\*)) and ("Educational Measurement"[Mesh] or "Teaching"[Mesh] or "Education"[Mesh] or "education" [Subheading] or "surgical skills" or "surgical training" or "proficiency" or "evaluation" or "skills assessment" or "skills classification") and ("Pattern Recognition, Automated"[Mesh] or "Artificial Intelligence"[Mesh] or "Machine Learning"[Mesh] or "Unsupervised Machine Learning"[Mesh] or "Supervised Machine Learning"[Mesh] or "Deep Learning"[Mesh] or "Automation"[Mesh] or "Neural Networks, Computer"[Mesh] or "automated" or "convolutional neural networks") | 5,415 |
| 5 | (("Surgical Procedures, Operative"[Mesh] or "surgery" [Subheading] or "open surgery" or "surgical procedure" or "open approach" or "microsurgery") and (("Teaching"[Mesh] or "Education"[Mesh] or "education" [Subheading]) or ("surgical skills" or "surgical training" or "skills assessment" or "skills classification" or "proficiency" or "surgical technique")) and ("Pattern Recognition, Automated"[Mesh] or "Artificial Intelligence"[Mesh] or "Machine Learning"[Mesh] or "Unsupervised Machine Learning"[Mesh] or "Supervised Machine Learning"[Mesh] or "Deep Learning"[Mesh] or "Automation"[Mesh] or "Neural Networks, Computer"[Mesh] or "convolutional neural networks" or "automated" or "computer vision")) NOT ((endoscop\*[Title/Abstract] OR laparoscop\*[Title/Abstract] OR robot\*[Title/Abstract])) | 658 |