

## Appendix 1

Using search strategies in Appendix 1, two authors (Wang H, Xing X) identified relevant studies in PubMed, Wanfang, from inception through April 2021 without language restrictions. We also manually screened the reference lists of all relevant articles to supplement the systematic search.

### Search strategy

For question 1, high risk surgery AND goal directed therapy, were used.

surgical apgar score AND high risk, were used.

For question 2, neoadjuvant therapy AND critically ill AND cancer were used.

For question 3, extracorporeal membrane oxygenation AND acute respiratory distress syndrome AND immunocomprised were used.

extracorporeal membrane oxygenation AND surgery AND perioperative were used.

For question 4, acute kidney injury AND cancer AND prognosis were used.

For question 5, post-hepatectomy AND liver failure were used.

For question 6, perioperative stress cardiomyopathy were used.

For question 7, cancer AND (anesthesia OR sedation) AND (dexmedetomidine OR propofol) AND surgery were used.

For question 8, hemodialysis AND postoperative intra-abdominal infection were used.

For question 9, next-generation sequencing tests AND pulmonary infection were used.

For question 10, cerebral oximetry AND critically ill were used.