**Additional file 1. Search strategy for PubMed.**

**Search strategy for PubMed-** **from inception through to February 1, 2021**

1 hyperoxia [Text Word]

2 hyperoxic [Text Word]

3 lower [Title/Abstract]

4 hyperoxemi\* [Text Word]

5 high\* [Title/Abstract]))

6 liberal\* [Title/Abstract]

7 conservative\* [Title/Abstract]

8 conventional\* [Title/Abstract]

9 hyperoxia [Mesh]

10 1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9

11 concentrat\* [Title/Abstract]

12 tension\* [Title/Abstract]

13 pressur\* [Title/Abstract]

14 level\* [Title/Abstract]

15 supply\* [Title/Abstract]

16 supplement\* [Title/Abstract]

17 inspir\* [Title/Abstract]

18 inhal\* [Title/Abstract]

19 therap\* [Title/Abstract]

20 admininstr\* [Title/Abstract]

21 target [Title/Abstract]

22 11 OR 12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18 OR 19 OR 20 OR 21

23 mortality [Title/Abstract]

24 outcome [Title/Abstract]

25 death [Title/Abstract]

26 survival [Title/Abstract]

27 died [Title/Abstract]

28 23 OR 24 OR 25 OR 26 OR 27

29 intensive care

30 critical care

31 ICU

32 intensive care unit

33 29 OR 30 31 32

34 oxygen [Title/Abstract]

35 oxygenation [Title/Abstract]

36 34 OR 35

37 randomized controlled trial [Publication Type]

38 controlled clinical trial [Publication Type]

39 randomized [Title/Abstract]

40 placebo [Title/Abstract]

41 randomly [Title/Abstract]

42 trial [Title/Abstract]

43 groups [Title/Abstract]

44 37 OR 38 OR 39 OR 40 OR 41 OR 42 OR 43

45 animals [MeSH Terms]

46 humans [MeSH Terms]

47 44 NOT 46

48 44 NOT 47

49 10 AND 22 AND 28 AND 33 AND 36 AND 48