

1 **Supplementary Table 1.** Total and subscores of the QoR-15 questionnaire

| | Group S (n = 36) | Group R (n = 36) | Mean difference (95% CI) | P-value |
|------------|---------------------|---------------------|-----------------------------|---------|
| Total | | | | |
| Preop | 127.3 (15.1) | 127.0 (14.8) | -1.3 (-8.4, 5.7) | 0.706 |
| POD1 | 114.3 (18.9) | 120.2 (18.8) | 5.9 (-3.0, 14.8) | 0.189 |
| POD2 | 130.6 (13.5) | 130.4 (17.4) | -0.3 (-7.6, 7.1) | 0.946 |
| Question 1 | | | | |
| Preop | 10.0 (0.0) | 10.0 (0.0) | 0 (-0.7, 0.7) | > 0.999 |
| POD1 | 8.4 (2.6) | 9.2 (1.9) | 0.8 (0.1, 1.4) | 0.035 |
| POD2 | 9.2 (1.4) | 9.7 (1.0) | 0.4 (-0.3, 1.1) | 0.208 |
| Question 2 | | | | |
| Preop | 9.9 (0.5) | 10.0 (0.0) | 0.1 (-0.1, 0.3) | 0.321 |
| POD1 | 6.3 (3.2) | 7.4 (2.7) | 1.2 (-0.2, 2.6) | 0.104 |
| POD2 | 8.0 (2.1) | 8.2 (2.2) | 0.2 (-0.8, 1.2) | 0.662 |
| Question 3 | | | | |
| Preop | 8.8 (2.2) | 8.9 (2.1) | 0.1 (-1.0, 1.1) | 0.915 |
| POD1 | 7.4 (2.7) | 6.9 (2.7) | 0.5 (-1.8, 0.7) | 0.410 |
| POD2 | 8.5 (1.9) | 8.5 (1.7) | -0.0 (-0.9, 0.8) | 0.949 |
| Question 4 | | | | |
| Preop | 7.4 (3.0) | 7.0 (3.2) | -0.3 (-1.8, 1.1) | 0.651 |
| POD1 | 5.7 (3.6) | 5.4 (3.1) | -0.3 (-1.9, 1.3) | 0.699 |
| POD2 | 7.9 (2.2) | 7.6 (2.9) | -0.3 (-1.6, 0.9) | 0.588 |
| Question 5 | | | | |
| Preop | 9.8 (0.7) | 9.6 (1.8) | -0.3 (-0.9, 0.4) | 0.452 |
| POD1 | 8.1 (2.7) | 9.1 (2.2) | 1.0 (-0.1, 2.2) | 0.080 |
| POD2 | 9.5 (1.1) | 9.3 (2.0) | -0.2 (-0.9, 0.6) | 0.605 |
| Question 6 | | | | |
| Preop | 10.0 (0.0) | 10.0 (0.0) | 0.0 (-0.7, 0.7) | > 0.999 |
| POD1 | 8.1 (2.9) | 9.4 (1.3) | 1.3 (0.6, 1.9) | < 0.001 |
| POD2 | 9.3 (1.2) | 9.4 (1.4) | 0.2 (-0.5, 0.9) | 0.634 |
| Question 7 | | | | |
| Preop | 10.0 (0.0) | 10.0 (0.0) | 0.0 (-0.3, 0.35) | > 0.999 |
| POD1 | 9.8 (0.9) | 9.9 (0.4) | 0.1 (-0.2, 0.4) | 0.409 |

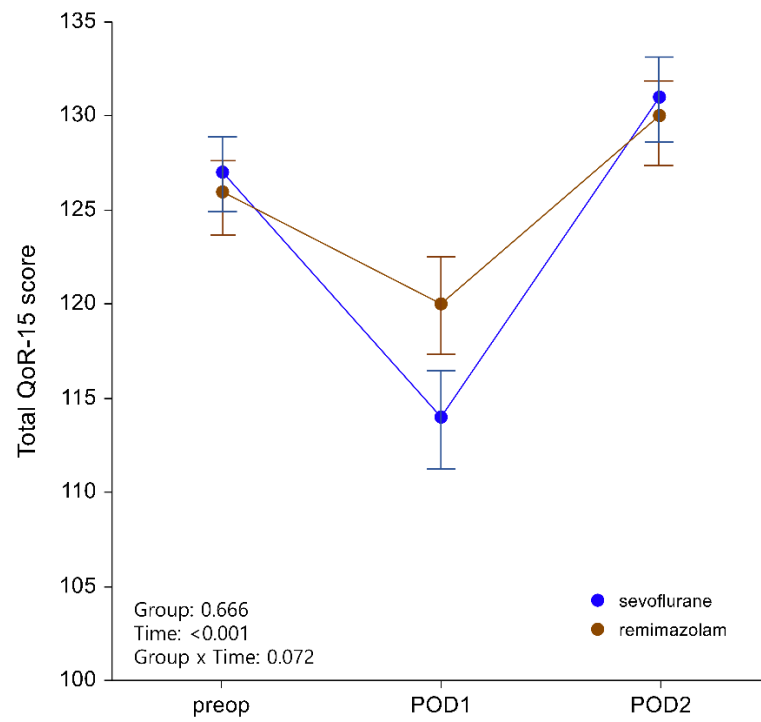
| | | | | | |
|-------------|-------|-----------|-----------|------------------|---------|
| | POD2 | 9.9 (0.4) | 9.8 (0.9) | -0.1 (-0.4, 0.1) | 0.302 |
| Question 8 | | | | | |
| | Preop | 6.5 (2.9) | 6.5 (2.7) | -0.0 (-1.3, 1.3) | 0.966 |
| | POD1 | 6.1 (3.6) | 6.7 (3.5) | 0.6 (-1.1, 2.3) | 0.467 |
| | POD2 | 7.4 (2.9) | 7.4 (3.0) | 0.0 (-1.4, 1.4) | 0.968 |
| Question 9 | | | | | |
| | Preop | 8.8 (2.5) | 8.2 (2.4) | -0.6 (-1.7, 0.7) | 0.318 |
| | POD1 | 8.6 (2.3) | 8.4 (2.3) | -0.2 (-1.2, 0.9) | 0.759 |
| | POD2 | 9.1 (1.6) | 9.1 (2.0) | -0.0 (-0.9, 0.8) | 0.949 |
| Question 10 | | | | | |
| | Preop | 8.8 (1.5) | 8.4 (2.1) | -0.4 (-1.2, 0.5) | 0.419 |
| | POD1 | 7.5 (2.3) | 8.0 (2.1) | 0.4 (-0.6, 1.5) | 0.402 |
| | POD2 | 8.3 (1.9) | 8.3 (2.3) | -0.1 (-1.0, 0.9) | 0.911 |
| Question 11 | | | | | |
| | Preop | 4.6 (2.5) | 4.7 (2.2) | 0.1 (-1.0, 1.2) | 0.882 |
| | POD1 | 5.5 (2.4) | 5.6 (3.0) | 0.2 (-1.1, 1.4) | 0.793 |
| | POD2 | 7.3 (2.2) | 7.1 (2.6) | -0.3 (-1.4, 0.9) | 0.655 |
| Question 12 | | | | | |
| | Preop | 6.8 (3.7) | 7.1 (3.3) | 0.3 (-1.4, 1.9) | 0.764 |
| | POD1 | 7.7 (2.6) | 7.9 (3.2) | 0.2 (-1.2, 1.5) | 0.810 |
| | POD2 | 8.6 (2.4) | 8.0 (2.7) | 0 (-1.2, 1.2) | > 0.999 |
| Question 13 | | | | | |
| | Preop | 9.9 (0.5) | 9.9 (0.2) | 0.1 (-0.1, 0.2) | 0.523 |
| | POD1 | 7.0 (3.2) | 8.8 (2.3) | 1.8 (0.5, 3.1) | 0.009 |
| | POD2 | 9.0 (1.7) | 9.6 (1.3) | 0.5 (-0.2, 1.2) | 0.133 |
| Question 14 | | | | | |
| | Preop | 7.0 (3.0) | 6.9 (2.9) | -0.1 (-1.5, 1.3) | 0.906 |
| | POD1 | 8.7 (2.0) | 8.4 (2.7) | -0.3 (-1.5, 0.8) | 0.556 |
| | POD2 | 9.3 (1.3) | 9.0 (2.2) | -0.3 (-1.1, 0.6) | 0.513 |
| Question 15 | | | | | |
| | Preop | 9.1 (1.7) | 8.0 (2.6) | -1.0 (-2.0, 0.1) | 0.068 |
| | POD1 | 9.2 (1.6) | 8.9 (2.4) | -0.3 (-1.2, 0.7) | 0.561 |
| | POD2 | 9.3 (1.4) | 9.3 (2.0) | -0.1 (-0.9, 0.8) | 0.892 |

2 **Notes:** Values are presented as the estimated mean and standard deviation. Post-hoc tests were conducted according to time, group, and
3 group*time.

4 **Abbreviations:** S, sevoflurane; R, remimazolam; QoR, quality of recovery; preop, preoperative day; POD1, postoperative day 1; POD2,
5 postoperative day 2

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7 **Supplementary Figure 1** Total QoR-15 score.



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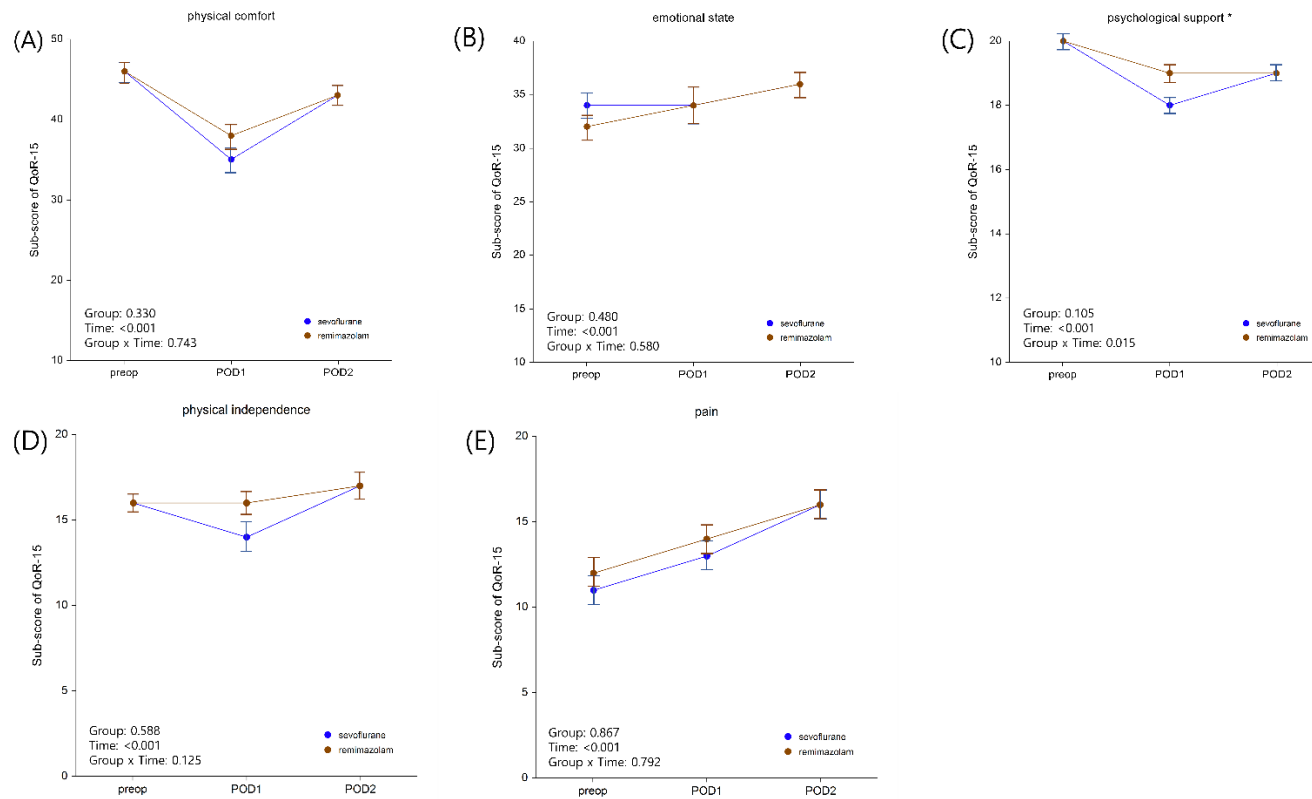
9 Values are presented as the estimated mean and standard error.

10 POD, postoperative day; preop, preoperative; QoR, quality of recovery

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12 **Supplementary Figure 2** Sub-scores of the five dimensions of the QoR-15.

13 (A) Physical comfort, (B) emotional state, (C) psychological support, (D) physical independence, and (E) pain.

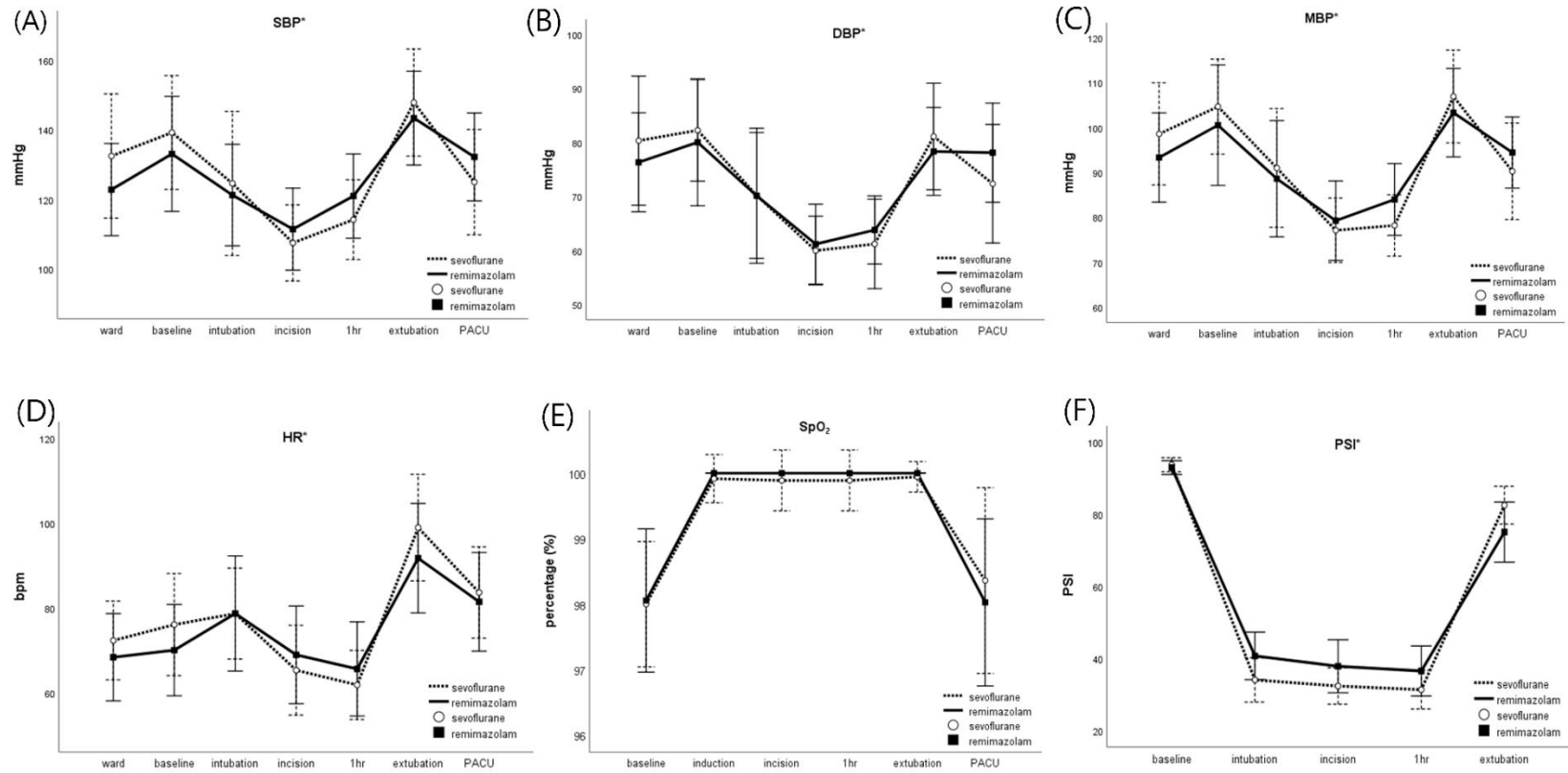


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15 Values are presented as the estimated mean and standard error. Asterisk represents significant interaction between the group and time in the
 16 psychological aspect.

17 POD, postoperative day; preop, preoperative; QoR, quality of recovery

18 **Supplementary Figure 3** Perioperative data, (A) SBP, (B) DBP, (C) MBP, (D) HR, (E) SpO₂ and (F) PSI.



19

20 Values are presented as the estimated mean and standard deviation.

21 Asterisk represents variables with significant interaction between the group and time. (A; p=0.002, B; p<0.001, C; p<0.001, D; p<0.001, E;

22 p=0.391, F; p<0.001, in terms of between the group and time, respectively)