

Table S1. Pain in patients who required rescue analgesia.

| Morphine group | | | | | | |
|----------------|--------|---|--------------------|--------------|----------|-----------|
| Age in years | Smoker | | | Satisfaction | AUPS72hR | AUPS 72hM |
| 28 | – | <i>fentanyl 50 mcg intraoperatively</i> | | 5 | -29 | -28 |
| 29 | – | <i>fentanyl 50 mcg intraoperatively</i> | | 5 | 0 | 114 |
| 29 | Yes | <i>50 mg tramadol one dose in day 0</i> | | 5 | 0 | 191 |
| Fentanyl group | | | | | | |
| Age in years | Smoker | | | Satisfaction | AUPS72hR | AUPS72hM |
| 21 | – | <i>50 mg tramadol</i> | <i>two doses</i> | 3 | 146 | 350 |
| 22 | – | <i>50 mg tramadol</i> | <i>two doses</i> | 4 | 193 | 297 |
| 27 | – | <i>50 mg tramadol</i> | <i>two doses</i> | 3 | 205 | 296 |
| 30 | – | <i>50 mg tramadol</i> | <i>three doses</i> | 2 | 296 | 466 |
| 33 | – | <i>50 mg tramadol</i> | <i>two doses</i> | 3 | 86 | 372 |
| 35 | – | <i>50 mg tramadol</i> | <i>one dose</i> | 4 | 86 | 188 |
| 36 | – | <i>50 mg tramadol</i> | <i>one dose</i> | 4 | 21 | 301 |
| 40 | – | <i>50 mg tramadol</i> | <i>one dose</i> | 4 | 16 | 196 |
| 42 | – | <i>50 mg tramadol</i> | <i>two doses</i> | 3 | 211 | 388 |
| 50 | – | <i>50 mg tramadol</i> | <i>one dose</i> | 3 | 86 | 171 |

Table S2. Analgesia-related adverse effects in patients who required rescue medication for pain.

| Morphine group | | | | | | | | | |
|----------------|--------|---|--------------------|--------|----------|--------|----------|------------------|------------------|
| Age in years | Smoker | | | Satisf | Pruritus | Nausea | Vomiting | Const. dizziness | Effective treat. |
| 28 | – | <i>fentanyl 50 mcg intraoperatively</i> | | 5 | Yes | – | – | – | Yes |
| 29 | – | <i>fentanyl 50 mcg intraoperatively</i> | | 5 | 2 | Yes | Yes | Yes | Yes |
| 29 | Yes | <i>50 mg tramadol one dose in day 0</i> | | 5 | Yes | – | – | Yes | Yes |
| Fentanyl group | | | | | | | | | |
| Age in years | Smoker | | | Satisf | Pruritus | Nausea | Vomiting | Const. dizziness | Effective treat. |
| 21 | – | <i>50 mg tramadol</i> | <i>two doses</i> | 3 | Yes | Yes | – | – | – |
| 22 | – | <i>50 mg tramadol</i> | <i>two doses</i> | 4 | – | – | – | – | – |
| 27 | – | <i>50 mg tramadol</i> | <i>two doses</i> | 3 | Yes | – | – | Yes | – |
| 30 | – | <i>50 mg tramadol</i> | <i>three doses</i> | 2 | – | – | – | – | – |
| 33 | – | <i>50 mg tramadol</i> | <i>two doses</i> | 3 | Yes | – | – | Yes | – |
| 35 | – | <i>50 mg tramadol</i> | <i>one dose</i> | 4 | Yes | – | – | – | Yes |
| 36 | – | <i>50 mg tramadol</i> | <i>one dose</i> | 4 | – | – | – | Yes | – |
| 40 | – | <i>50 mg tramadol</i> | <i>one dose</i> | 4 | – | – | – | – | – |
| 42 | – | <i>50 mg tramadol</i> | <i>two doses</i> | 3 | Yes | Yes | – | – | – |
| 50 | – | <i>50 mg tramadol</i> | <i>one dose</i> | 3 | – | – | – | – | – |