Background and Aims Chronic pain is prevalent and poses challenges in perioperative management. Opioid-dependent patients often require higher opioid doses and experience uncontrolled postoperative pain. Ketamine, a non-competitive NMDA-receptor-antagonist, has shown promise in reducing postoperative opioid-consumption and pain intensity. This study aims to evaluate ketamine-infusion safety and side-effects in postoperative wards and its impact on monitoring protocols, as well as its potential to reduce opioid-use in chronic opioid-dependent patients.

Methods In this retrospective chart-review we compared: patients who received intraoperative and postoperative ketamine-infusion (Ketamine-Group) and patients who did not (Control-Group). Outcomes included severity of ketamine-related adverse-effects, opioid-related side-effects measured via validated 11 item scale, and length of hospital stay.

Results This study included 202 patients, ketamine-group (94 patients) and control-group (108 patients). No ketamine-related severe side-effects were observed in any group. Mild to moderate ketamine-related side-effects were reported in both groups, with mild-hallucinations being more frequent in the ketamine-group (p = 0.006). Mild Nausea (p = 0.052) and urinary-retention (p < 0.001) was observed more frequently in ketamine-group. Constipation was observed more frequently in control-group (p = 0.033). Ketamine-group had significantly higher median intraoperative opioid-use (p < 0.001), and second 24-hour postoperative opioid-use (p = 0.033). Median length of hospital stay in the ketamine-group was 174.55-hours compared to 116.66-hours in control-group (p < 0.001) (table-1, figure-1).

Conclusions This study demonstrated the feasibility of ketamine-infusion for postoperative opioid consumption in patients with chronic pain without 1:1 monitoring in the ICU or step-down units. The use of ketamine was not associated with any major adverse effects requiring intense resource utilization. There was no direct association between ketamine-related side-effect and increased length of hospital stay. However, the long-term effects of ketamine-infusion on postoperative pain remain to be evaluated.