

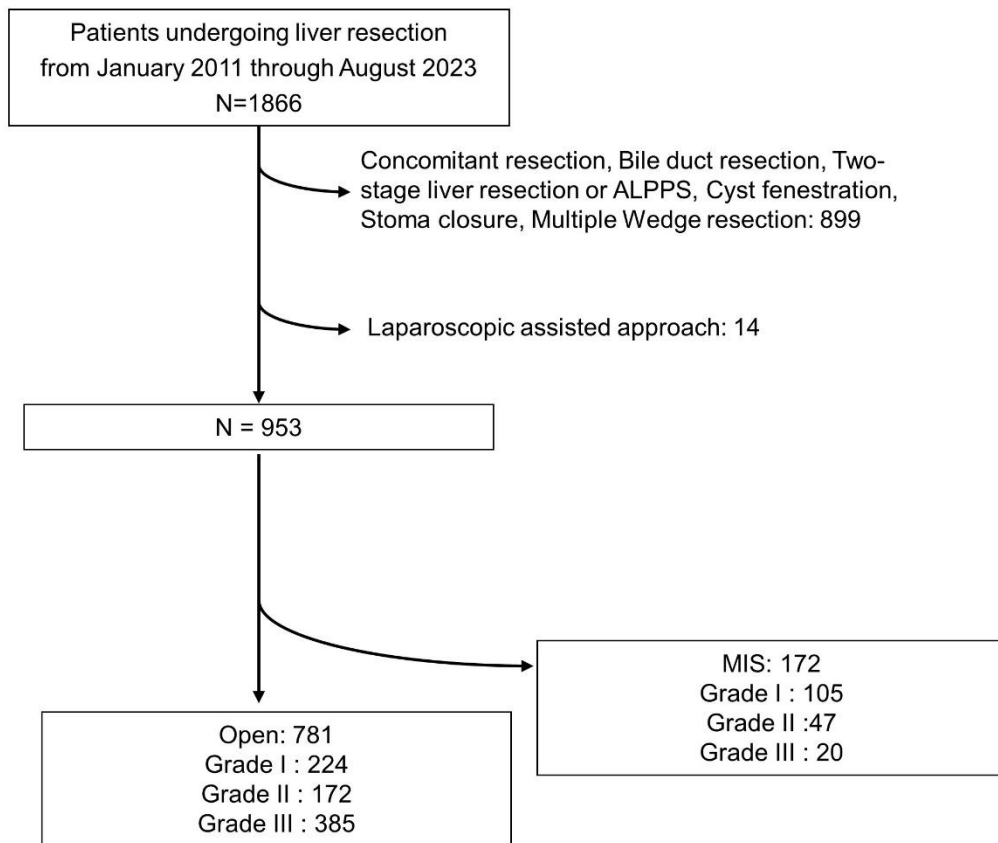
Supplementary Materials

Gradual expansion of the indications for minimally invasive liver resection to include highly complex procedures may improve postoperative outcomes

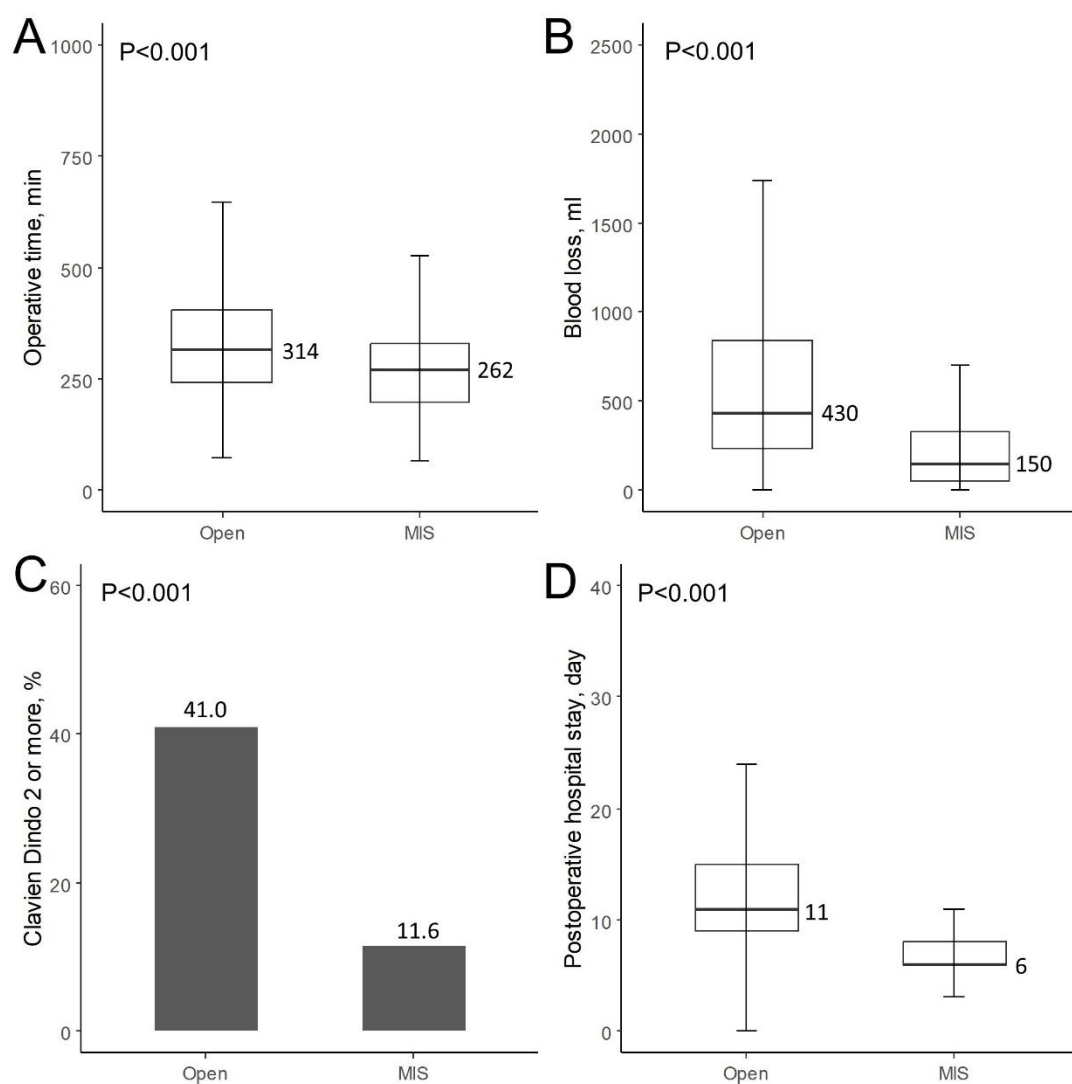
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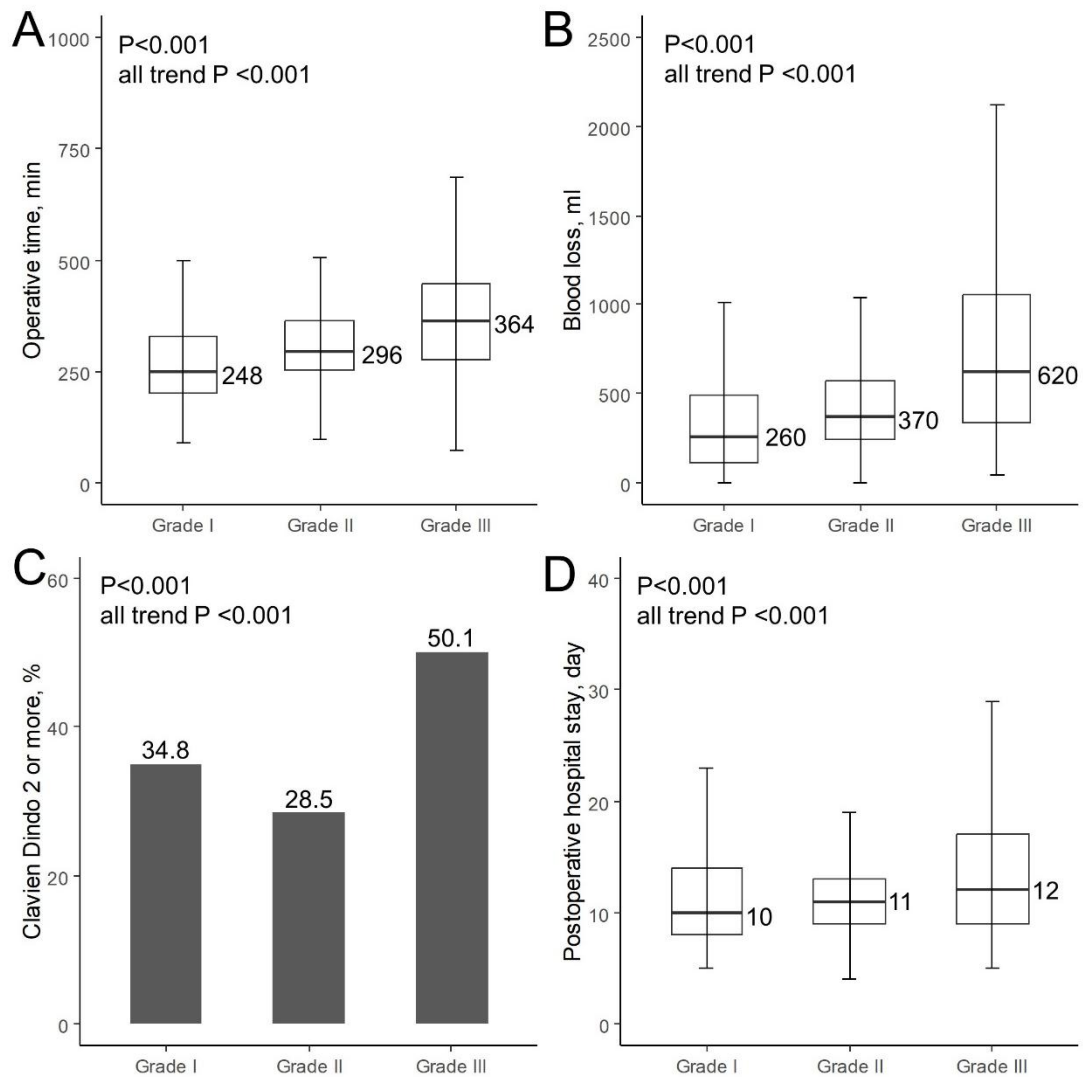
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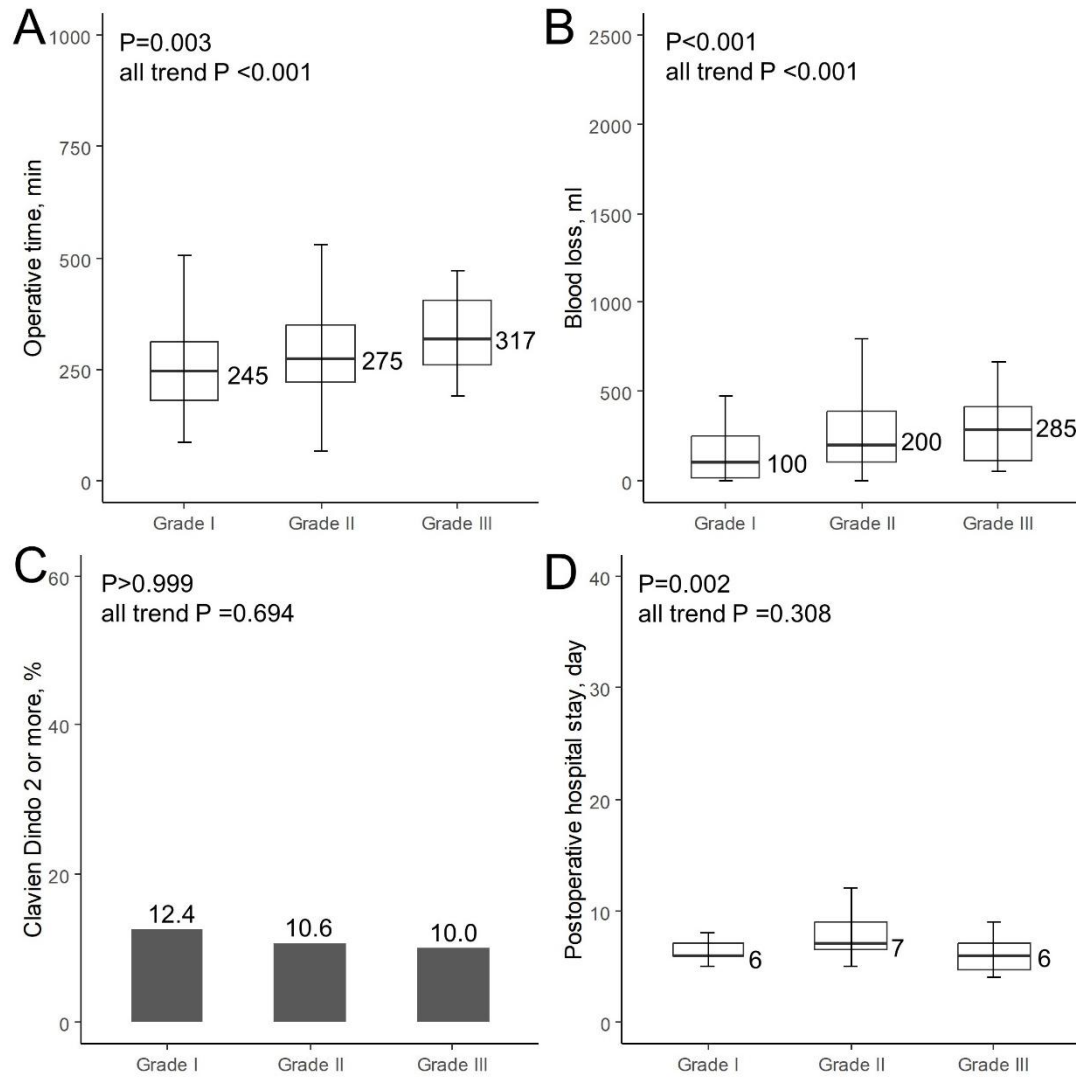
Supplementary Figure 1. Patients underwent liver resection with open laparotomy or minimally invasive surgery. MIS: Minimally invasive surgery.



Supplementary Figure 2. Surgical and postoperative outcomes compared between OLR and MIS group. Operation time (A), blood loss (B), complication of Clavien Dindo 2 or more (C), and postoperative hospital stay (D) are better in MIS group. The numbers of cases of complication of Clavien Dindo 2 or more were 320 cases (41.0%) in OLR, 20 cases (11.6%) in MIS group (C). OLR: Open liver resection; MIS: minimally invasive surgery.



Supplementary Figure 3. Surgical and postoperative outcomes compared between grades in OLR group. Operation time (A) and blood loss (B) have a significant increase from grade I to grade III. Complication of Clavien Dindo 2 or more (C) is significantly frequent in grade III. Postoperative hospital stay (D) has an increase with grades. The numbers of cases of complication of Clavien Dindo 2 or more were 78 cases (34.8%) in Grade I, 49 cases (28.5%) in Grade II and 193 cases (50.1%) in Grade III (C). OLR: Open liver resection.



Supplementary Figure 4. Surgical and postoperative outcomes compared between grades in MIS group. Operation time (A) and blood loss (B) have an increase with grades. Complication of Clavien Dindo 2 or more (C) and postoperative hospital stay (D) are not significantly different. The numbers of cases of complication of Clavien Dindo 2 or more were 13 cases (12.4%) in Grade I, 5 cases (10.6%) in Grade II and 2 cases (10.0%) in Grade III (C). MIS: Minimally invasive surgery.