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# The correlation between preoperative volumetry and actual graft weight of liver according to the donor age

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**Introduction** : Liver volume assessment is essential to provide adequate graft volume to recipients and ensure safety to donors in living donor liver transplantation. This study aims to compare the graft volume (GV) calculated by preoperative liver volumetry and graft weight(GW) measured during surgery according to the donor age and the influence of GRWR mismatch on patient survival.

**Methods** : Data from 771 living donors between 2005 to 2020 in Severance hospital were reviewed. We defined graft weight mismatch as a discrepancy ≥ 10% between preoperatively estimated and actually measured GRWR. Donor groups were divided into 6 groups based on ten year age interval and data were compared according to their age. Recipient survival outcomes were analyzed in accordance with the GRWR mismatch.

**Results** : The proportion of GRWR mismatch donors was not different across the donor age groups (47% vs. 43% vs. 48% vs. 45% vs. 39% vs. 60%; P=0.778). However, actual GRWR was significantly smaller than estimated GRWR as donor was younger (p-0.002). Total 29 (3.7%) recipients received liver whose GRWR<0.8 and 24% of them (n=7) underwent portal flow modulation (splenic artery ligation, splenectomy, or renal vein ligation) during transplantation surgery. Overall survival did not differ between GRWR<0.8 and ≥0.8 groups.

**Conclusions** : Actual liver graft weight tends to smaller than estimated graft volume as donor is younger. GRWR mismatch was not affect overall survival of recipients.

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