

**Name of Journal:** *World Journal of Gastrointestinal Surgery*

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**Manuscript Type:** ORIGINAL ARTICLE

### *Retrospective Study*

**Functional transition: inconsistently parallel to the increase in future liver remnant volume after preoperative portal vein embolization**

Functional transition after preoperative portal vein embolization

### **Abstract**

#### BACKGROUND

Preoperative portal vein embolization (PVE) is a widely used strategy to enable major hepatectomy in patients with insufficient liver remnant. PVE induces hypertrophy of the future liver remnant (FLR) and a shift of the functional reserve to the FLR. However, whether the increase of the FLR volume (FLRV) corresponds to the functional transition after PVE remains unclear.

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## Functional shift with maintained regenerative potential ...

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## Stepwise approach to curative surgery using percutaneous ...

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On the other hand, 2 weeks after PVE, the **liver function** rate was higher than the **liver volume** rate in the left **liver** (**function** vs. **volume**, 54.5 vs. 49.6 %). The **increase** of **liver function** was significantly higher than that of the **volume** (**function** vs. **volume**, 28.3 vs. 15.8 %).

Author: Naruhiko Honmyo, Shintaro Kuroda, Ts...

Publish Year: 2016

## Percentage of Future Liver Remnant Volume Before Portal ...

<https://www.researchgate.net/publication/236957846...>

Methods: **Future liver remnant volume** (as a percentage of **functional liver volume**, %FLRV) and **remnant liver volume** were measured preoperatively and at 1, 5, 9 and 13 weeks postoperatively.

## Factors influencing hypertrophy of the left lateral liver ...

<https://www.researchgate.net/publication/270655963...>

**Portal vein embolization** (PVE) before extended right hepatectomy leads to an **increase** of the **future liver remnant** (FLR) **volume**, but predictive factors for sufficient hypertrophy are still unclear.

## Assessment of future remnant liver regeneration after ...

<https://www.researchgate.net/publication/6689321...>

**Portal vein embolization** (PVE) with intra-arterial therapy (IAT) may increase **future liver remnant** (FLR)



Functional transition: inconsistently parallel to the increase in future



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**Portal vein embolization** (PVE) with intra-arterial therapy (IAT) may **increase future liver remnant** (FLR) hypertrophy. As such, the feasibility, safety and efficacy of IAT+PVE were investigated.

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**Preoperative** estimation of **future remnant liver function** is critical for major hepatic surgery to avoid postoperative morbidity and mortality. ... The median absolute **volume increase** in (146 cm<sup>3</sup> ...