



WJG 20<sup>th</sup> Anniversary Special Issues (15): Laparoscopic resection of gastrointestinal

## Laparoscopic liver resection for living donation: Where do we stand?

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**Author contributions:** Cauchy F, Schwarz L and Soubrane O designed the research; Cauchy F and Schwarz L performed the research; Cauchy F, Schwarz L and Scatton O analyzed the data; Cauchy F and Schwarz L wrote the paper; Scatton O and Soubrane O gave an important intellectual contribution; Scatton O and Soubrane O supervised.

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Received: May 28, 2014 Revised: July 21, 2014

Accepted: September 5, 2014

Published online: November 14, 2014

with left lateral sectionectomy, which is performed for adult to child living donation. In this setting, the laparoscopic technique is now well standardized, is associated with decreased donor blood loss and hospital stays and provides graft of similar quality compared to the open approach. On the other hand laparoscopic major right or left hepatectomies for adult-adult LDLT currently lack standardization and various techniques such as the full laparoscopic approach, the hand assisted approach and the hybrid approach have been reported. Hence, even-though several reports highlight the feasibility of these procedures, the true benefits of laparoscopy over laparotomy remain to be fully assessed. This could be achieved through standardization of the procedures and creation of international registries especially in Eastern countries where LDLT keeps on flourishing.

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**Key words:** Liver transplantation; Laparoscopy; Living donation; Postoperative course

### Abstract

In Western countries, living donor liver transplantation (LDLT) may represent a valuable alternative to deceased donor liver transplantation. Yet, after an initial peak of enthusiasm, reports of high rates of complications and of fatalities have led to a certain degree of reluctance towards this procedure especially in Western countries. As for living donor kidney transplantation, the laparoscopic approach could improve patient's tolerance in order to rehabilitate this strategy and reverse the current trend. In this setting however, initial concerns regarding patient's safety and graft integrity, need for acquiring surgical expertise in both laparoscopic liver surgery and living donor transplantation and lack of evidence supporting the benefits of laparoscopy have delayed the development of this approach. Similarly to what is performed in classical resectional liver surgery, initial experiences of laparoscopy have therefore begun

**Core tip:** Initial concerns regarding patient's safety and graft integrity, need for acquiring surgical expertise in both laparoscopic liver surgery and living donor transplantation (LDLT) and lack of evidence supporting the benefits of laparoscopy have delayed the development of this approach in LDLT. Preliminary experiences of laparoscopic liver resection for LDLT have begun with laparoscopic left lateral sectionectomy for adult-child LDLT, where the procedure is now well standardized and provides satisfactory results. On the other hand, lack of standardization and multiplicity of the techniques currently limit the evaluation of this approach in the setting of major liver resection for adult-adult LDLT.

Cauchy F, Schwarz L, Scatton O, Soubrane O. Laparoscopic liver resection for living donation: Where do we stand? *World J Gastroenterol* 2014; 20(42): 15590-15598 Available from: URL: