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Views and Perspectives of Robot-Assisted Liver Surgery

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Message from the Guest Editors

Minimally invasive liver surgery has less morbidity with equal oncological outcomes compared to open procedures. The robot adds some technical innovations to minimally invasive surgery that might help us to overcome some limitations of conventional laparoscopy. The enhanced degrees of freedom at the tip of the instruments enable precise dissection in narrow spaces, improve stitching and ensure tissue control in complex situations during surgery. The three-dimensional visualization is stable with several frames of magnification. One major limitation is the missing haptic, which is a feature that should be added in the future. The current so-called robots are not really robots, they are tele-manipulators because they are handled by a surgeon from a console. Real autonomy of the machines does not exist so far. However, the current systems are platforms that have the potential for future innovation. Here, we summarize the current results indicating the value of the robot in minimally invasive liver surgery from oncological surgery to living donor hepatectomy for transplantation and give some insight into future trends and innovation.



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Special Issue



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Message from the Editor-in-Chief

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