

Extended perfusion time of livers can streamline planning and logistics - enabling more liver transplants to be performed during daytime

In a recently published [1] clinical trial conducted by the UMCG in Groningen, the Netherlands, XVIVO's Liver Assist has demonstrated its potential to reshape liver transplant logistics. The trial showed that donor livers could be transplanted with consistently good outcomes after up to 20 hours of preservation using DHOPE. This finding provides transplant clinics with the opportunity, for the first time, to plan the timing of a transplant and avoid night time surgery. By extending perfusion times, UMCG in 2023 was able to perform the majority of all liver transplants during daytime rather than nighttime

Liver transplant logistics have long been constrained by the limited time organs can be kept viable outside the donor's body and transplant procedures most often occur during nighttime and under time pressure. This clinical trial marks a turning point by demonstrating the feasibility of prolonging the preservation of donor livers with DHOPE (Dual Hypothermic Oxygenated Perfusion) for up to 20 hours providing flexibility in transplant logistics. This could facilitate successful daytime transplantation, which, for example, can lead to more liver transplants being scheduled during daytime.

The investigator-initiated, prospective, dual-arm clinical trial at UMCG aimed to assess the safety and feasibility of prolonged DHOPE compared to the standard DHOPE method, which typically lasts 1–2 hours. The study results indicate no significant differences in serious adverse events, liver graft-related complications, or patient and graft survival between the two groups.

"Operations no longer have to be carried out immediately after a donor organ becomes available, eliminating the need for nighttime procedures. This not only reduces the demand for night shift teams but also contributes to the sustainable employability of all those directly involved. I am proud to say that in 2023, at UMCG, we performed a majority of transplants during daytime. Furthermore, the trial has lowered the threshold for combined heart-liver or lung-liver transplantation. The ability to safely store the liver for an extended period allows heart or lung transplants to be prioritized, followed by a liver transplant with less time pressure. Additionally, after the trial, we discovered that liver transplants were, on average, almost two hours shorter than those performed at night. This suggests that fitter teams during the day contribute to streamlined procedures", says Professor Vincent de Meijer, Head of liver transplantation and chair UMCG transplantation center, UMCG in Groningen, the Netherlands.

"When developing technologies for organ transplantation, our primary and most important goal is to achieve safe and successful transplantations for the patients. Nonetheless, the ability to support transplant clinics in streamlining their planning and logistics challenges is crucial. It is very pleasing that our Liver Assist's flexibility has been demonstrated to support improved processes without compromising patient safety", says Christoffer Rosenblad, CEO XVIVO.

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Christoffer Rosenblad, CEO
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[1] [https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370\(23\)00588-6/fulltext](https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370(23)00588-6/fulltext)

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About Us

Founded in 1998, XVIVO is the only medical technology company dedicated to extending the life of all major organs - so transplant teams around the world can save more lives. Our solutions allow leading clinicians and researchers to push the boundaries of transplantation medicine. XVIVO is headquartered in Gothenburg, Sweden, and has offices and research sites on two continents. The company is listed on Nasdaq and has the ticker symbol XVIVO. More information can be found on the website www.xvivogroup.com.

Attachments

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