

## Hypothermic machine perfusion (HMP) of kidneys slows down metabolism and reduces detrimental effects of ischemia

Results from clinical trials suggest that non-oxygenated hypothermic machine perfusion (HMP) compared to static cold storage leads to:

- Reduced risk of delayed graft function<sup>1,2</sup>
- Improved graft survival at 1 and 3 years<sup>1,3</sup>

Further it is suggested that HMP of kidneys donated after circulatory death (DCD) leads to:

- Reduced risk of delayed graft function<sup>4,5,6,7,8</sup>
- Improved graft survival at 1<sup>6,8</sup> and 3 years<sup>6,7</sup>

The COMPARE-trial shows that supplemental oxygen during hypothermic machine perfusion of DCD kidneys leads to<sup>9</sup>:

- Improved renal function
- Reduction in graft failure
- Lower incidence of acute rejection



# Kidney Assist

Unlock the power of flexibility



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## Unlock the power of flexibility

XVIVO's Kidney Assist is a dedicated device for pressure controlled, oxygenated, ex vivo perfusion of donor kidneys.

An integrated heater/cooler provides perfusion ranging from hypothermic to normothermic temperatures. XVIVO's Kidney Assist allows clinicians to choose the protocol, including HMP, COR and NMP.



Hollow fiber oxygenated perfusion with integrated heat exchanger



Perfusion at a flexible temperature range (12-37°C)



True pulsatile perfusion pattern (60bpm) through renal artery generated by a dedicated pressure controlled pump unit



Assess function and viability of the kidney graft by perfusion and perfusate characteristics as well as urine production

### Table

Table top with sterile drape to allow back-table work with an ergonomic working height.

### Dedicated disposable organ chamber

Kidneys are submerged in a perfusion medium. The organ chamber has an integrated urine drainage.

### Thermo unit

Control of perfusion temperature within a flexible range of 12-37°C.



### Sampling port

Direct sampling is available for perfusate and urine analysis. Integrated sensors monitor real-time flows, pressures and temperatures.

### Renal artery pump unit

Pressure controlled centrifugal pump generating pulsatile perfusion.

### Trolley

Allows for easy in-hospital transportation with 360° rotating wheels with brakes.

## Normothermic Machine Perfusion (NMP) of kidneys restores the cellular metabolism and allows for assessment of organ function

Results from clinical trials suggest that adding a short period of NMP after standard SCS of kidneys lead to:

- Reduced risk of delayed graft function in Extended Criteria Donor (ECD) kidneys<sup>10</sup>
- Similar graft and patient survival at 1 year post-transplant with ECD kidneys after normothermic machine perfusion<sup>10</sup>
- Increased utilization of DCD kidneys<sup>11</sup>



# Nobody should die waiting for a new organ

Founded in 1998, XVIVO is the only MedTech 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 organ transplantation.

Scan this QR-code to get in touch with us!



Not all XVIVO products are approved in all markets.

### References:

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XVIVO BV, Bornholmstraat 84, 9723 AZ Groningen, Netherlands  
Tel +31 50 313 1905 | xvivogroup.com

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