New Directions in Organ Transplantation:

*Ex Vivo Lung Preservation*

Chris Jaynes
XVIVO Perfusion AB
Current Organ Preservation Strategy:

Hypothermic Preservation Advantages:
- Decrease organ metabolism ~5% normal
- Less metabolic requirements (glucose)
- Less metabolic waste products (lactic acid, etc.)
- Least expensive method to transport organs

Disadvantages:
- Short preservation/transportation window (6-10 hrs for lungs)
- Can’t clear metabolic waste products
- Can’t rehabilitate organ function at cold temperatures
Equipment
Cannulation
Begin EVLP (20 minutes)  EVLP at 120 minutes
The Future of Transplantation:

- Other organs (hearts, kidneys, etc.)
- Other therapies (antibiotics, antifungals)
- Gene/ stem cell therapy

Human Lungs Now...

Human Livers Next...
What will we see in the next few years?
What about the next 10 years?