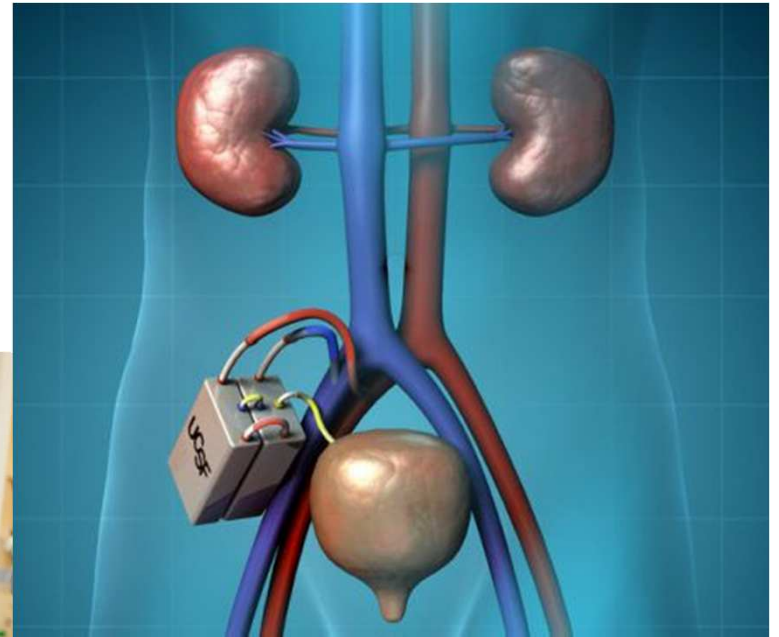
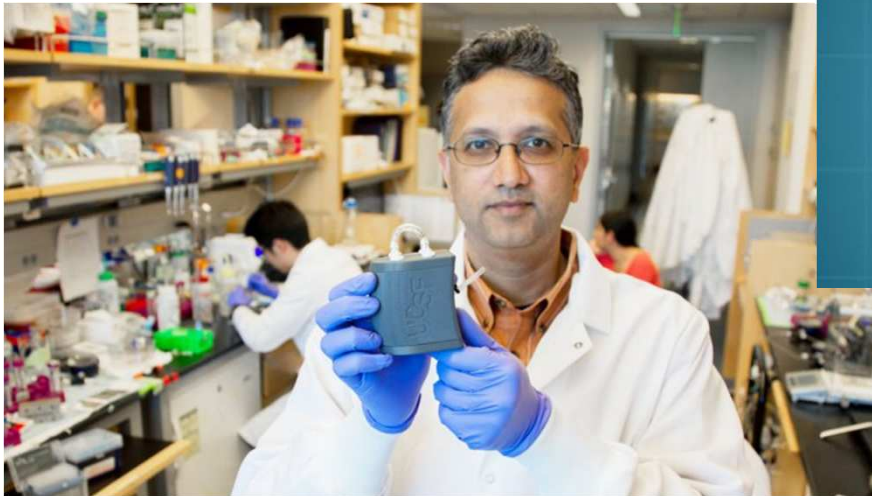


Nephrology: What innovations do we need most?

Monnie Wasse, MD, MPH
Director, Interventional Nephrology
Rush University Medical Center
Chicago, IL
January 28, 2017

We need a kidney

Surgically implantable,
bioartificial kidney



Shuvo Roy, PhD.
The Kidney Project
<http://pharm.ucsf.edu/kidney>

Implantable artificial kidney

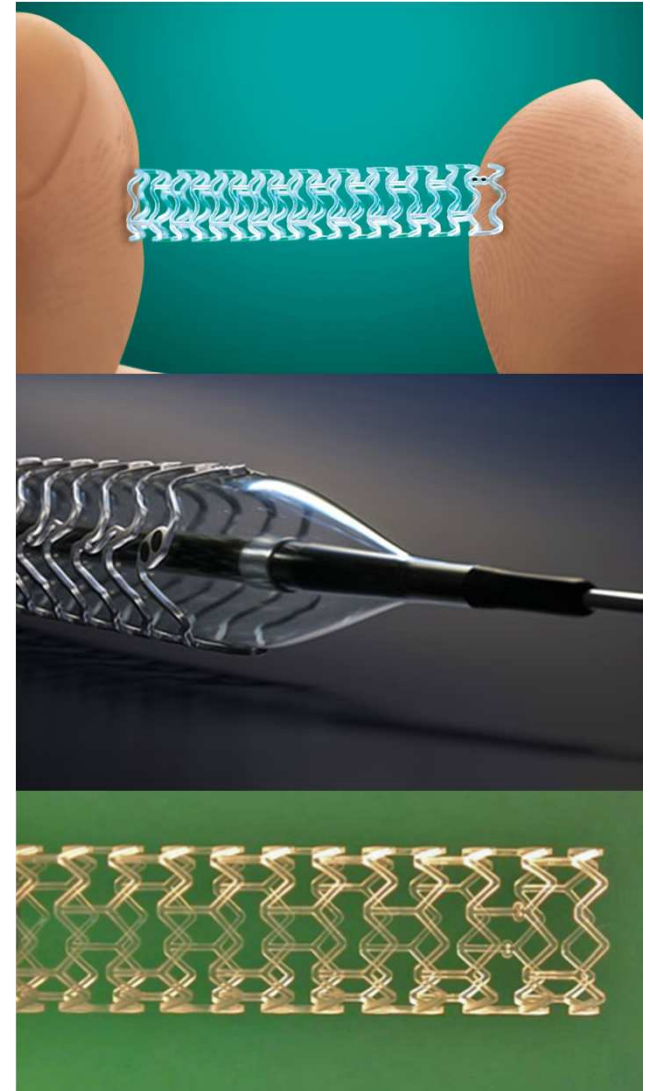
- Implantable artificial kidney is a microchip
 - Uses nanotechnology
- Chips affordable, precise, ideal filters & provide scaffold for living kidney cells
- First-in-human clinical trials to start late 2017

Need better treatment of outflow and cannulation segment stenosis

- Dissolvable stent advantages:
 - Avoid chronic occupation of venous real estate & allow for surgical revision
 - Allows cannulation following dissolution
 - DES could inhibit stenosis
- Eliminates inflammation and reduces thrombogenicity from foreign body

Several Devices on Market or Being tested for CAD and PAD

- Polylactic acid dissolving heart stents- unfavorable clinical trials
- Magnesium-based scaffolds, 95% dissolve in 1 year, approved in Europe
- Everolimus-eluting stents for PAD



Effective prevention for central stenosis

- In ESRD, majority of CVS is secondary to protracted CVC use
- Prevention of hyperplastic development
 - Drug-eluting catheter, balloon or stent

Simple cannulation assistance

- Inexpensive, easy to operate device for nurses/techs
 - Sonic Window
 - ultrasound
 - IV-EYE
 - Near-infrared imaging



Quality Vascular Access Research

- Innovative basic & translational access research
- Clinical research by interventional nephrologists
 - Beathard + Urbanes = 106 publications



Finally... expert access surgeons

- Formalized program requirements for surgeons performing access surgery

Thank you

