

OstoPump: Ostomy system for enteral refeeding



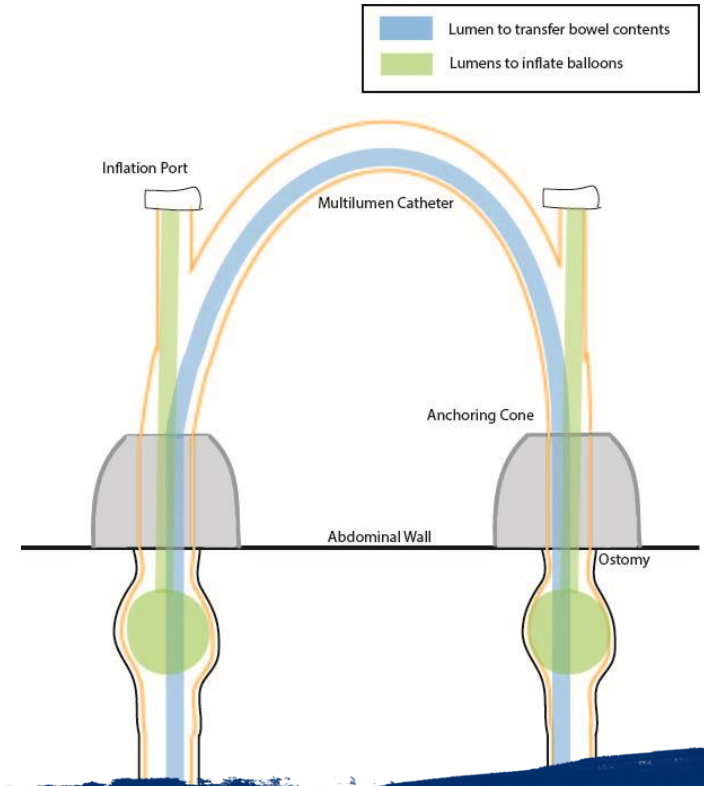
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Necrotizing Enterocolitis

- Necrotizing enterocolitis (NEC) disrupts the ability to absorb nutrients naturally due to necrotic bowel
- Approximately 3,500 infants undergo surgery for necrotizing enterocolitis in the US annually
- **Clinical Challenge:**
 - Intravenous (IV) feeding is standard of care while the bowels are healing from NEC surgery.
 - Prolonged IV feeding can result in:¹
 - More central catheter days and a longer hospital stay
 - Higher risk for acquired bloodstream infections
 - Delayed gut development

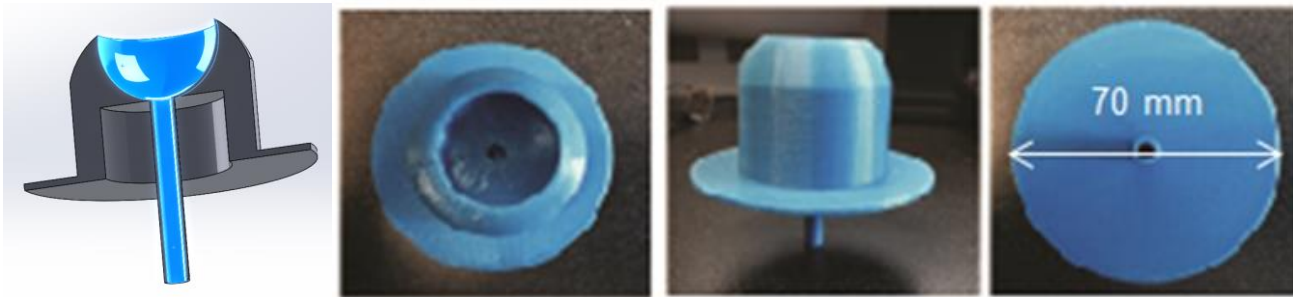
OstoPump

- **Solution:** UVA researchers have developed an ostomy refeeding system, which allows infants to resume enteral (tube) feeding while recovering from necrotizing enterocolitis (NEC) surgery.
- A distal anchoring system maintains proper positioning in the abdomen and a temporary external artificial intestine that connects the two ostomies to recycle nutrients.
- Enteral feeding with OstoPump
 - Reduces treatment costs associated with IV feeding
 - Improves healing rate
 - Leads to better patient outcomes



Ostopump: Anchoring cone prototype

- The novel anchoring cone design was tested in an *in vitro* intestine model and was found to
 - restrict backflow into the intestine
 - allow the bowel contents to collect within the funnel and slowly drain into the distal ostomy



Intellectual Property

UVA LVG Tech ID: **KANE2-OSTOPUMP** (2014-159)

- Title: Ostomy Pump System and Related Methods of Use and Manufacture
- US patent application no. US 14/743,484 filed June 18, 2015 (*Allowed*)

