

Team Infection
Protection: Client
Meeting #2

Product Requirements

1.1 What it should do

The catheter shall allow for quick and easy insertion, anchoring, and removal. The anchor shall deploy once inserted in the bladder. At no point prior to removal shall the catheter slip from the bladder due to an anchor failure. Upon removal, the anchor shall be quickly and carefully released, leading to a smooth catheter withdrawal.

The design must employ a mechanism which will allow solution/antibiotics to be pumped through the catheter to flush out the bladder and the urethra in order to prevent bacteria from building up, and consequentially causing an infection. Additionally, there must be a port and channel with the ability to connect/disconnect to a pump or syringe system which will be used to inject the system-flushing fluid.

Functional Requirements

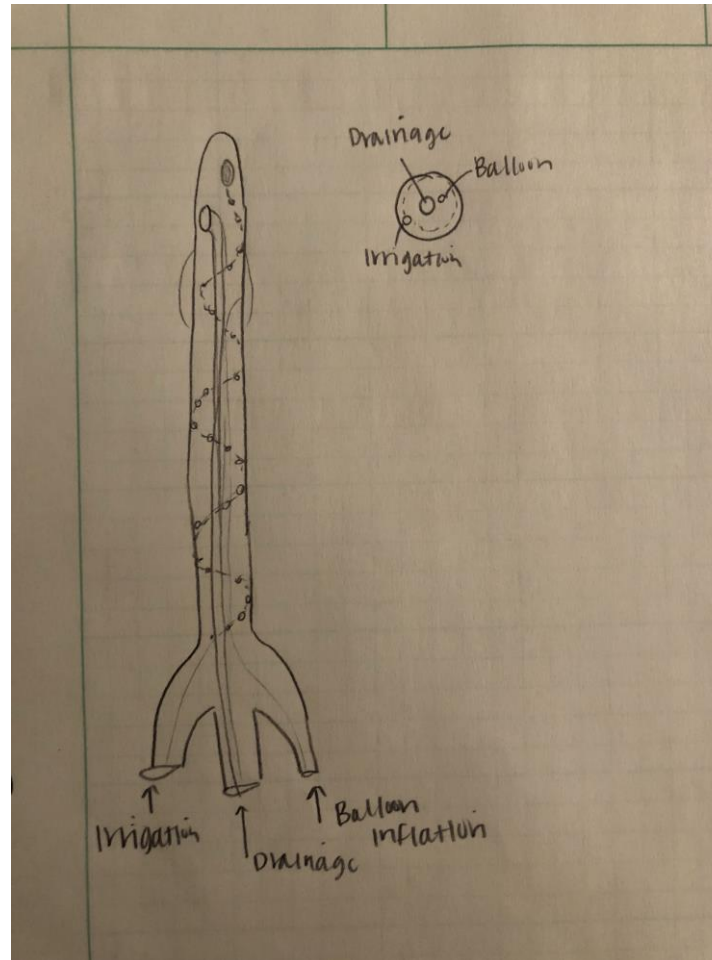
- Including the time to carefully anchor the catheter within the bladder, insertion should take no more than 45 seconds.
- The flow rate must be no less than 4 mL/s.
- The urethra tissue and the outer surface of the catheter should have a coefficient of friction no higher than 0.2. The lower the COF, the less irritation, resistance, and risk of infection.

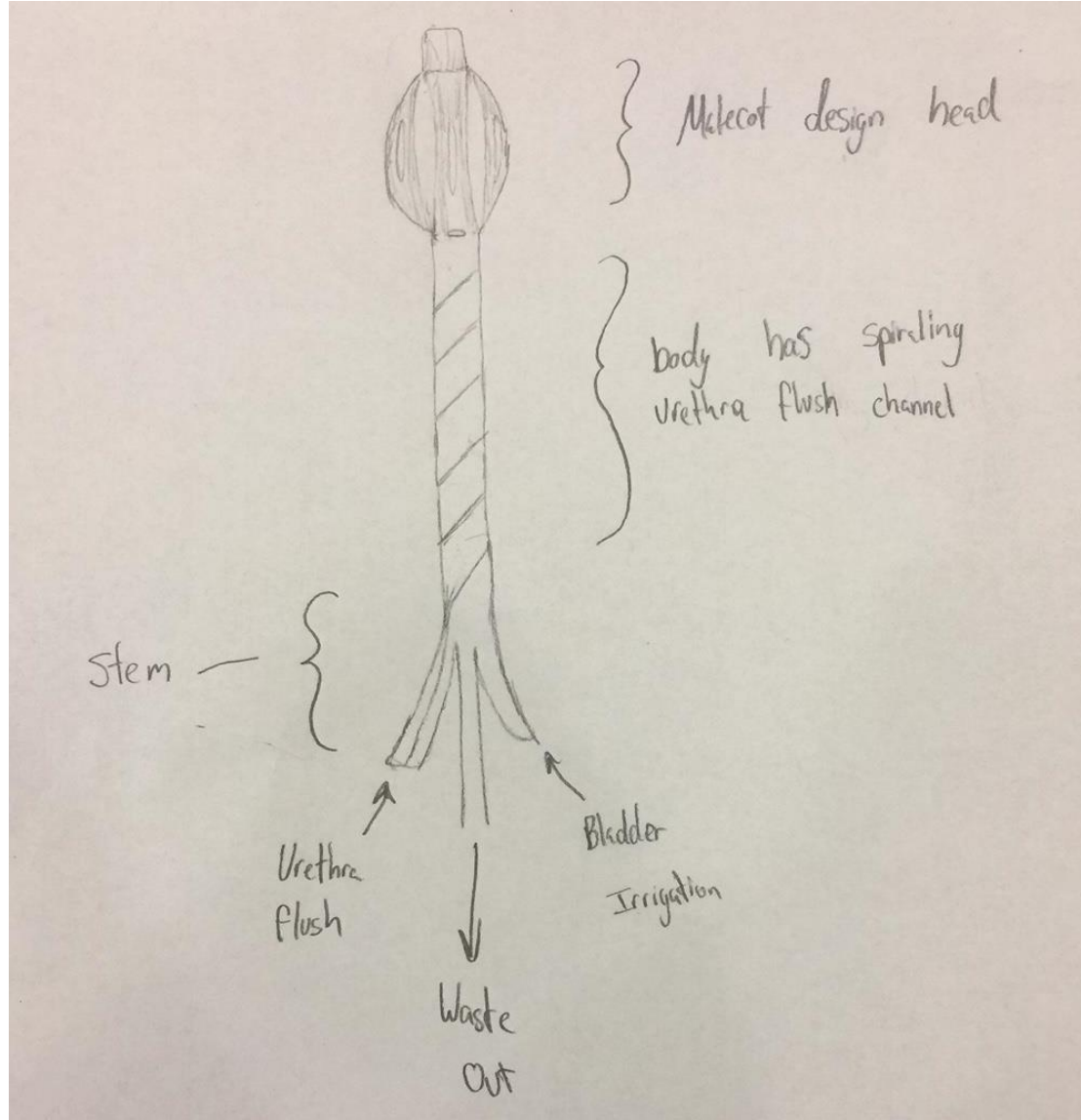
Size Requirements

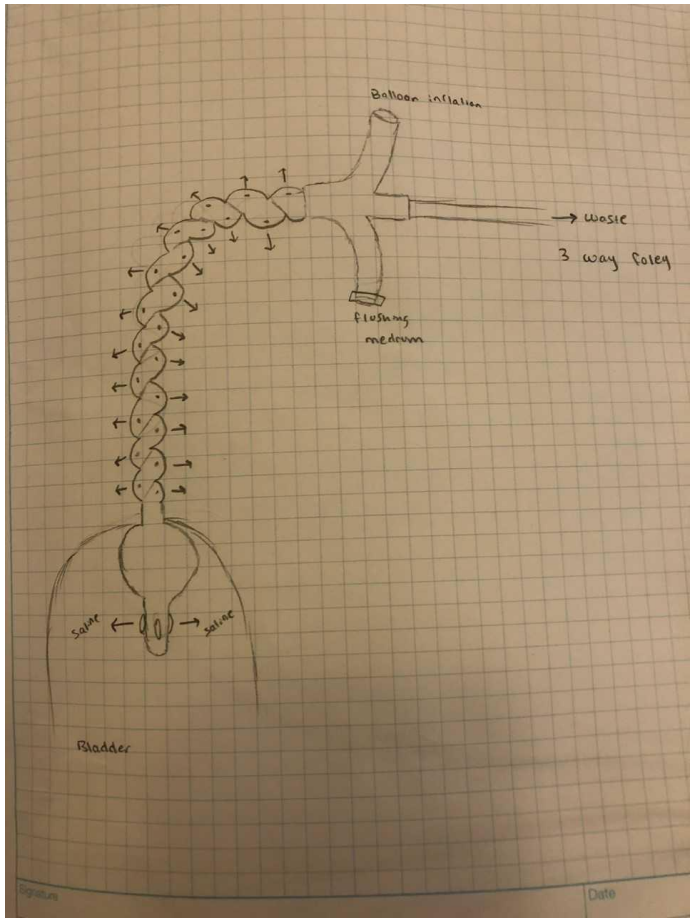
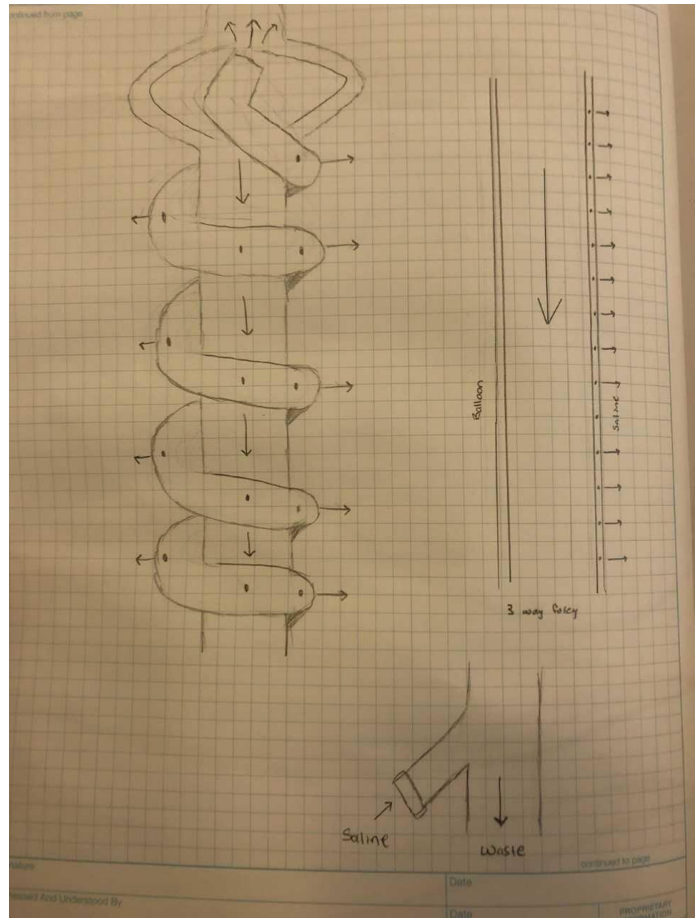
- The design shall be adaptable to a size range of 12-24 Fr.
- The catheter shall be available in lengths ranging from 6-16 inches.

Design Ideas

- Variation of 3-way Foley

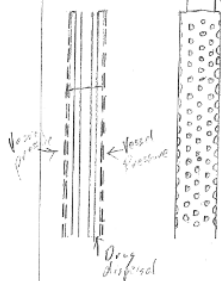






KJ can
Pat. no.
4/16/2018

Double Wall
To bladder $\approx 1\text{cm}$

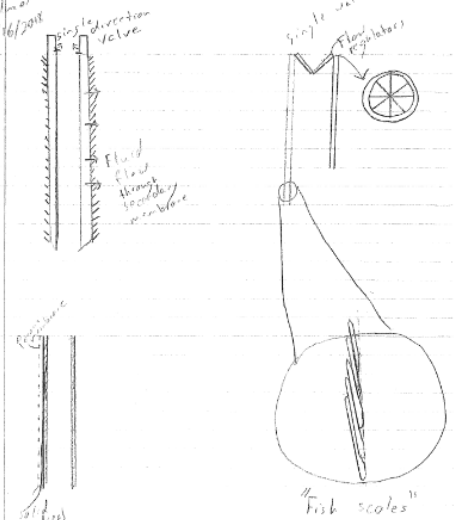


$V = 2.9 \text{ E}^{-10}$
 $C = 10^3 \text{ kg}^{-1}$
 $\rho = 0.97$
 $\rho = 1.1 \text{ g/cc}$



Vessel pressure seals and compresses medication typical area except when active

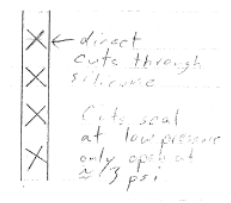
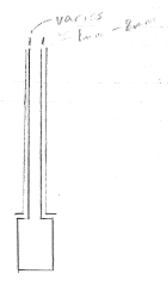
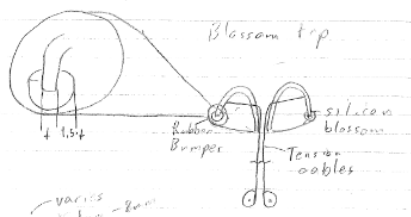
Kuson
Palmer
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Note: Used fluid the hole
as for the bottom - Aquifer
in the long the water to rise

My seal
Patent
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Similar to 3 lumen



Blossom Seal

