

Infuse-a-Cuff Central Venous Catheter

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The Innovation: A novel cuffed central venous catheter enabling infusion of medication directly into the retention cuff to ease removal.

Background: Cuffed central venous catheters are routinely used in the field of medicine for long term venous therapy. Current techniques for removal require invasive procedures to dissect tissue away from the cuff resulting in patient pain and anxiety as well as incurring the cost and risk of interventions to reduce these symptoms during removal. There is a need in the art for a catheter which can be secured with a cuff that will allow safer, easier, less painful, and less costly removal.

To address this issue, researchers and clinicians at Children's Mercy Hospital have developed Infuse-a-Cuff, a novel catheter that features an infusion cuff, allowing for the direct delivery of medication into surrounding tissue. This innovation is based on cuffed central venous catheters that use a Dacron cuff to promote tissue ingrowth which helps secure the catheter in place. Proof of concept testing has shown that injecting active agents directly into the cuff effectively reduces the force required for catheter removal. This will provide safer, easier, less painful, and less costly catheter removal.

Applications:

- Delivering medication directly to tissue surrounding the infusion cuff.
- Use in healthcare, clinic, and home health settings.
- Application in clinical trials/research where local delivery of medication is critical for effectiveness.

Advantages:

- Standard Securement with Easier Removal: Dacron cuff for securement with novel infusion process for easier removal.
- Improved Patient Safety and Comfort: Less invasive, safer, and less painful removal.
- Cost Effective: Eliminates the need for anesthesia and costly procedure room use resulting in reduced healthcare costs.
- Versatile Application: Flexibility to be used in hospitals, clinics, or home healthcare.

IP Status: Patent Pending