



PRODUCT

A disposable modular valve for needle flow control, and a hands-free syringe plunger.

INDICATIONS

Ultrasound-guided injection and aspiration procedures (e.g., perineural injections, vascular access, tissue hydrodissections, micro-contrast injections, angiographic procedures, biologic injections, etc.)

VALUE PROPOSITION

- Improves efficiency in delivery of ultrasound-guided fluids, ultimately saving time.
- Ease of dexterity for users, potentially improving safety, and needle agility for novice users.
- Enables clinicians to control both needle location and flow, and easily toggle between injection and aspiration.

INTELLECTUAL PROPERTY

Patent pending.

DEVELOPMENTAL STAGE

Functioning prototype.

CONTACT INFORMATION

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Modular Needle Valve for Injection Flow Control

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PROBLEM

Ultrasound guidance of needle interventions is becoming the standard of care, while at the same time a variety of specialized injectable materials have been developed (e.g., prolotherapy, platelet rich plasma, stem cells, and placental matrix injectates). It is important these injectates are delivered accurately, yet this is challenging to achieve because the clinician cannot simultaneously hold the needle hub, actuate a syringe AND hold an ultrasound probe.

SOLUTION

Cleveland Clinic inventors have developed a needle hub with an easy-to-use flow control, and hands-free syringe plunger mechanism. This device allows users to easily control the rate of injection or aspiration directly at the needle hub. It improves needle control and injectate flow control simultaneously.



Injectate

Aspirate (or another injectate)