Treatment with Next-Generation, Liquid Embolic NeoCast™ is Pain-Free and Leads to Rapid Resorption of Chronic Subdural Hematoma

Late-Breaking Results from EMBO-02 Clinical Trial Presented at the Society of Neurointerventional Surgery Annual Meeting

WALTHAM, Mass. – (July 16, 2025) – Arsenal Medical, a clinical-stage company developing innovative biomaterials-based devices, today announced late-breaking data from the EMBO-02 clinical study for NeoCast™, a next-generation, shear-responsive liquid embolic treatment. In EMBO-02, NeoCast was evaluated in patients with chronic subdural hematoma (cSDH), a collection of blood on the surface of the brain, using middle meningeal artery embolization (MMAe). Research presented in podium sessions at the Society of Neurointerventional Surgery (SNIS) annual meeting in Nashville, Tenn., showed that all patients met primary safety and feasibility endpoints. Separate late-breaking results demonstrated that NeoCast can be administered painlessly and resulted in rapid hematoma resorption.

A total of 15 patients with cSDH have been enrolled in EMBO-02 across three sites in Australia. The initial cohort (n=10) allowed either general anesthesia or conscious sedation, while the second cohort (n=5) specified the use of conscious sedation. Highlights include:

- 87% of patients underwent embolization without adjunctive surgery.
- 100% target vessel occlusion, and no non-target embolization.
- There were no NeoCast-related adverse events.
- Cohort 1 (n=10): 60% and 90% of patients had complete hematoma resolution at 3 and 6 months, respectively. 80%+ of patients had clinical outcome measures (mRS, VAS, and Markwalder) that were improved or unchanged from baseline.
- Cohort 2 (n=5): MMAe with NeoCast was completed under conscious sedation. No patients reported pain during the injection or increased headache 24 hours post-embolization.

“NeoCast's unique material characteristics have translated from pre-clinical studies to the EMBO-01 first-in-human study in hypervascular brain tumors, and now to the treatment of chronic subdural hematoma in EMBO-02. Results from these studies demonstrate the potential of NeoCast to provide deep distal penetration in multiple clinical scenarios and suggest benefits in speed of hematoma resolution for patients suffering from chronic subdural hematoma,” said Lee-Anne Slater, MBBS MMed FRANZCR, Interventional Neuroradiologist at Monash Health and EMBO-02 principal investigator.

“NeoCast is truly a next-generation liquid embolic agent. The ease of use, controllability, and the lack of pain during or after the injection are such differentiating factors for NeoCast over currently available liquid agents,” said Dr. Tim Phillips, MBBS GDSA FRANZCR, Interventional Neuroradiologist at the Neuro-Intervention and Imaging Service of Western Australia (NIISwa), Sir Charles Gairdner Hospital in Perth, Western Australia.

“We designed NeoCast to be a pain-free, non-adhesive biomaterial to overcome the limitations of existing liquid embolic technologies. These clinical results provide early reinforcement of what we set out to achieve, demonstrating excellent performance with an easy-to-use agent. As

NeoCast continues through its robust clinical research program, we're excited about the potential impact for patients and physicians across a range of neurovascular and peripheral indications," said Upma Sharma, CEO of Arsenal Medical.

About the EMBO-02 Study
The EMBO-02 study (ACTRN12624000659505) is an open-label, multicenter, prospective, externally monitored, core lab adjudicated, feasibility clinical trial. The primary safety endpoint is device-related disabling stroke or neurological death within 30 days of embolization. The primary feasibility endpoint is the successful injection of NeoCast, resulting in complete occlusion at, or distal to, the point of injection.

About NeoCast™
NeoCast™ is a next-generation, solvent-free, non-adhesive liquid embolic biomaterial designed to preferentially reach distal microvasculature without inducing pain. Developed, in part, with funding from the National Cancer Institute, NeoCast leverages shear-thinning science to reach the smallest vessels and halt blood flow to tumors and injured or diseased tissues. NeoCast was designed without the use of harsh solvents and adhesives that are found in prior generation liquid embolic materials, the incorporation of which can lead to patient pain. Its unique material characteristics have been formulated to deliver enhanced control during injection. NeoCast previously demonstrated safety and feasibility in the preoperative embolization of hypervascular brain tumors in EMBO-01.

About Arsenal Medical
Arsenal Medical is a clinical-stage company that creates innovative biomaterials to solve challenging and underserved medical problems. Its lead products target neurovascular and trauma conditions. The company was founded by academic luminaries Robert Langer and George Whitesides, along with serial entrepreneur-investor Carmichael Roberts, who shared a vision for how materials can transform medical devices. www.arsenalmedical.com

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