

# Treating a brain aneurysm with glue

**A New Jersey woman is the first in the region to undergo a revolutionary procedure that allowed her to avoid surgery.**

By **KRISTEN COPPOCK**  
STAFF WRITER

As her physician put it, the procedure is not for everyone. But for Melanie Lucas, the glue injected into her cranium to treat a brain aneurysm was no doubt a life-saver.

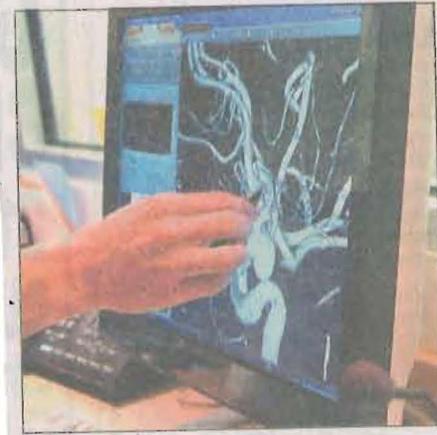
Lucas is New Jersey's first patient to undergo a procedure using the artificial material. The Burlington City resident was treated in September with Onyx Liquid Embolic System, which fills an aneurysm, blocks blood flow to it and prevents the malformation from getting bigger or rupturing.



Melanie Lucas



**DENNIS MCDONALD** / STAFF PHOTOGRAPHER  
According to Capital Health, Dr. Erol Veznedaroglu (above) is the only physician in New Jersey and Philadelphia to have used Onyx on aneurysms.



Today, Lucas, said she "feels fine."  
The procedure was performed at Capital Health in Trenton by Dr. Erol Veznedaroglu, director of neurosciences and endovascular/cerebrovascular neurosurgery. Dr. Vez, as patients and staff call him, is one of only three doctors nationwide initially chosen to use the Onyx system when it was first introduced.  
The product was approved by the federal Food and Drug Administration in 2005 to treat arteriovenous malformations, a brain vascular disorder. The malformations are blood vessel networks that abnormally connect arteries to veins.  
Lucas, who operates her own cleaning business, said the aneurysm and a

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smaller, second malformation were discovered through a series of tests that started with Lyme disease. Brain scans were ordered after she reported memory losses. The tissue was fine, and Lucas, 47, has since tested negative for Lyme disease.

The news about her brain aneurysms didn't surprise Lucas, who said her mother had two strokes and her grandmother had an aneurysm.

According to Capital Health, Veznedaroglu is the only physician in New Jersey and Philadelphia to have used Onyx on aneurysms, which he likens to blisters. They're weakened spots that bulge or balloon out from the side of an artery.

"I'm very careful about who I use it on," he said. "It's not for everybody."

Lucas was an ideal candidate for the glue, Veznedaroglu said, because she's young and her aneurysm was considered to be "wide-necked." A more commonly used procedure that relies on a coil and a permanent stent to close off an aneurysm would have been more difficult in her case and the rate of recurrence might have been higher, the physician said.

Although the rates of aneurysm recurrence with Onyx haven't been determined because its use for that is so new, Veznedaroglu said he's optimistic that Lucas' chances of recurrence are slimmer than they would have been with the coil approach.

Both procedures require access to the aneurysm through the groin. A catheter is threaded

through the vascular system to the aneurysm. After delivering the Onyx, the foamy glue hardens in the aneurysm to prevent a rupture that would send blood into the brain tissue.

Traditionally, treatment for brain aneurysms requires brain surgery.

"That's highly invasive and a pretty big surgery," said Veznedaroglu, who previously used Onyx as director of neurovascular surgery and endovascular neurosurgery at Thomas Jefferson University Hospitals in Philadelphia.

Lucas said she had no reservations about being New Jersey's first patient to be treated with Onyx. Her concerns were more about anesthesia and the alternatives to not being treated.

"As a parent, you don't want to be a burden," she said, adding that she would like her three children to get tested in the future for similar problems.

After the procedure, Lucas remained in the intensive care unit for more than two days before being discharged into the care of her daughter, Kathy Camarda, 25. Lucas was prohibited from driving for about a week after that and said she has slowly returned to many other activities.

On a recent afternoon, mother and daughter returned to Capital Health to talk about Lucas' experience. Lucas marveled at images taken of the aneurysm before and after the procedure. She also got the opportunity to thank many of her caregivers in person again after previously delivering homemade breads to the staff.

"I thank God I was sent [here]," Lucas said. "Once I met with Dr. Vez, I felt completely confident in him and his recommendation to use the glue. He just put my mind at ease."

Throughout this entire process, I felt safe."

Capital Health opened its Stroke and Cerebrovascular Center of New Jersey earlier this year. According to Veznedaroglu, many patients in need of the center's services used to have to travel to Philadelphia or New York City.

"This care did not exist in this state. That's no longer the case," he said. "We can deliver a level of care that goes beyond what was previously available in the area."

Veznedaroglu and Dr. Kenneth Liebman, two of fewer than 60 dual-trained neurosurgeons nationwide, are new to the Capital Health staff. Joining the physicians are medical team members experienced in caring for patients with cerebrovascular disease. Veznedaroglu said many of the people he works with at Capital Health came with him from Jefferson, where the group had formed a cohesive working relationship.

In addition to working with glue, Veznedaroglu advises other doctors on its use and has co-authored a research article published in the medical journal *Neurosurgery*.

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