

NEWS

AI fetal tracing technology funded by Hoag Innovators contracts C-section rate



Hoag Innovators co-founder Robert Brunswick, left, asks questions for doctors January Lopez, Shweta Pearlstein and Alison Wu about their pitches at the group's spring meeting on April 16. (Kevin Warn)

By Matt Szabo
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Dr. Lisa Karamardian made the pitch for funding to the Hoag Innovators in October 2023. In a “Shark Tank” style of meeting, Karamardian sought to convince donors to provide money for PeriGen artificial intelligence technology, an automated early warning system for obstetrics.

Karamardian, Hoag’s Jeffrey M. Carlton Endowed Chair in Women’s Health in honor of Dr. Anne M. Kent, [received nearly \\$300,000 in funding](#) that night. Eight months later, in July, the PeriWatch

Vigilance software was out of the box and ready to be used for patients at Hoag in both Newport Beach and Irvine.

There were a record 8,387 babies born at Hoag last year, the second-highest volume in the state.

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PeriWatch helped Hoag improve outcomes for hundreds of mothers and babies, although Karamardian admitted there was skepticism from nurses about the software at first.

[PeriWatch Vigilance](#) helps guide care and decision-making more collaboratively, rather than subjectively, said Tiffany Stewart, Hoag’s executive director of maternal child health.

Stewart explained how the software’s real-time analysis during labor guides physicians.

“If you and I and Dr. Karamardian were all standing together, we could look at a color [the software] shoots [across a computer screen],” Stewart said. “We would know how we’re doing, related to if we can continue the labor or if we need to make the decision that this baby needs to be delivered sooner.”



Dr. Lisa Karamardian received her requested funding of \$299,000 for Artificial Intelligence in Fetal Telemetry during a Hoag Innovators meeting in 2023. (Susan Hoffman)

That real-word application is key to [Hoag Innovators](#), which meets biannually and held its spring meeting on April 16 at The Cove at UC Irvine.

Robert Brunswick, a Newport Beach resident who founded Hoag Innovators with his wife Kitty in 2017, said that it has raised more than \$28 million since its inception and is aiming for \$50 million by 2028.

The group now has 151 members, each of whom contribute at least \$250,000. At last week's meeting, two pitches received their full amount of requested funding, \$500,000 each.

[Dr. Alison Wu](#), medical director of Hoag's OB/GYN hospitalist program, was funded for an obstetric and perinatal simulation lab. [Dr. January Lopez](#), the medical director of breast imaging at the Sue J.

Gross Comprehensive Breast Center, was funded for the Koning Vera Breast CT, a high-resolution 3D breast imaging system.

“Dr. Wu’s simulation center is going to train all of the doctors in my department, and my nursing staff,” Karamardian said. “It’s just helping us to keep getting to the next level.”

Brunswick told the Hoag Innovators that he was proud of what they had built together, but most impressive to him was the new faces that were showing interest.

“It’s not write a check, go home and not think about it again,” he said. “It’s engage, educate, connect.”

The PeriGen technology has helped Hoag cut its cesarean section rate from almost 29% to between 24 and 25%, Stewart said. That might not sound like a lot, but considering the volume of babies that Hoag delivers, it is considered significant.



Dr. January Lopez makes a pitch during the Hoag Innovators spring meeting on April 16 at The Cove at UC Irvine. (Courtesy of Hoag/Kevin Warn)

“We want to promote vaginal birth and prevent the first C-section from happening,” Stewart said. “Some patients have to have a C-section depending on their diagnosis, but we work as a team to prevent that first C-section. PeriGen has helped ensure that we’re giving our patients the best chance to labor longer and safer, by utilizing this technology.”

Michelle Wood of Newport Beach is one patient who has benefited from the technology.

Wood had a scheduled labor induction at Hoag Newport Beach last September, for the delivery of her baby boy with her OB/GYN, Dr. Vinita Speir.

“The nurse was trying to get me comfortable to where I could rest a little bit,” she said. “Then, excuse my language, but all hell broke loose.”

The doctor came running back into the room, and nurses surrounded her bed. Wood later found out that PeriWatch Vigilance had detected that her blood pressure was tanking into the 80s, making her son’s heart rate go very low.

“I had what they later identified was an amniotic fluid embolism,” Wood said. “Technology picked up that I needed to be delivered immediately.”



Hoag Innovators members listen to co-founder Robert Brunswick give remarks at the spring meeting on April 16. (Courtesy of Hoag/Kevin Warn)

She was taken to the operating room, where an emergency C-section was performed. Wood's blood still wasn't clotting, and it took nine hours for her to be stabilized and meet her newborn son.

Ethan is now 7 ½ months old and a healthy baby.

Karamardian knows that the PeriGen technology has helped the Wood family and many others, and she has the Hoag Innovators to thank.

"When you start to trust the technology and figure out how to use it to its best capabilities to augment what we were already doing and already know, I think that's when you really start to see a lot of changes," said Karamardian, who lives in Newport Beach.

She said the Innovators remind her of the way medicine used to be 30 years ago, when there wasn't as much managed care and control.

"Now I'm looking for the next new shiny toy that we can make use of," she added with a laugh.

Hoag Innovators will hold its next meeting on Oct. 16 at Newport Beach Country Club.



Matt Szabo

Matt Szabo covers the city of Huntington Beach and sports for the Daily Pilot. A Southern California native and Cal Poly San Luis Obispo graduate, he has been working for L.A. Times Community News since 2006 and still loves talking to people about their hopes and dreams.