MEDICAL NEWS

BS Võ Hiếu Thành

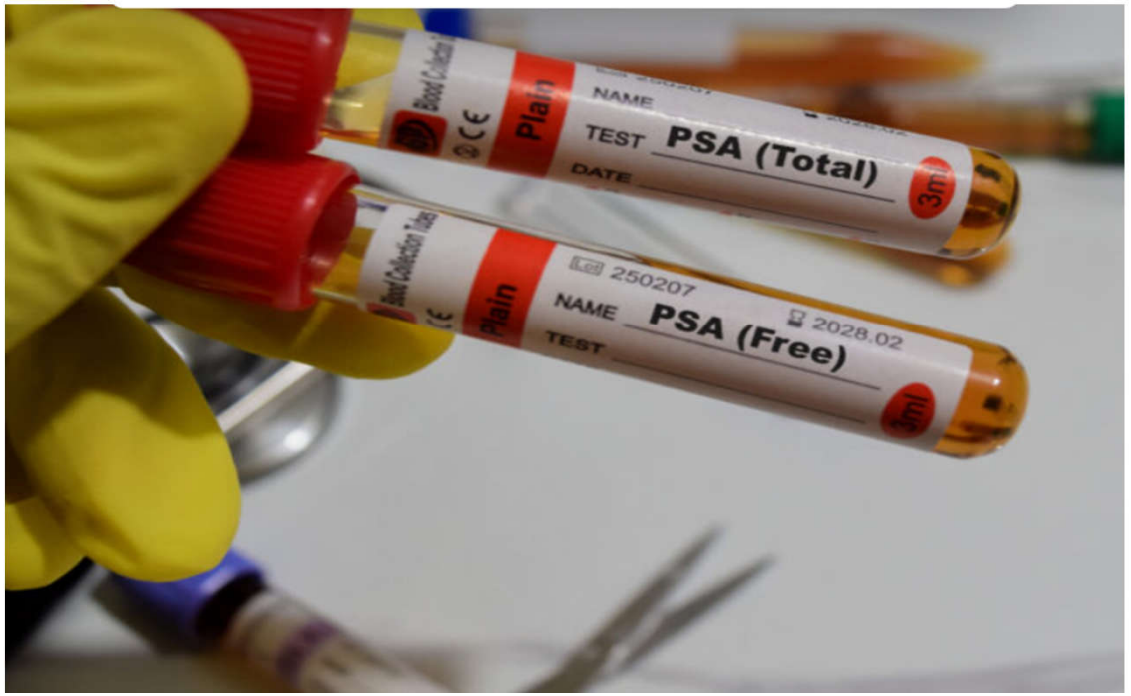
PK Cơ Xương Khớp

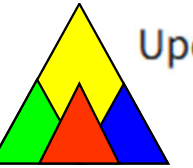
American Cancer Society

American Cancer Society Updates Prostate Cancer Screening Guideline: Major Changes Include Regular PSA Testing for Average and High-Risk Men

Nov 12, 2026

The guideline aims to lower prostate cancer deaths, focusing on clinical management strategies to reduce harms associated with PSA testing





Updated ACS recommendations for prostate cancer screening include:

- PSA-based screening every two years for average-risk men aged 50 to 69 years.
- Men at high risk, including Black men and non-Black men with a strong family history of prostate cancer (either a first-degree relative diagnosed before age 65, or multiple first-degree relatives diagnosed at any age), should undergo annual PSA-based screening from age 45 to 69 years.
- Non-Black men with a single first-degree relative diagnosed at age 65 or older should be screened every two years from ages 45 to 69.
- Individualized decision-making on continuing screening is recommended for men aged 70 to 74 years, as the balance of benefits and harms remains uncertain.
- Men with elevated PSA levels (3.0 ng/mL or higher for men aged 45 to 69 years, and 6.5 ng/mL or higher for men aged 70 to 74 years) should undergo repeat PSA testing between two weeks and three months.
- Men with a confirmed elevated PSA should be offered testing by magnetic resonance imaging (MRI) and/or a validated biomarker to guide biopsy decisions.

- Screening is not recommended for men aged 75 years and older. Some men ages 75 to 79 who are very healthy may want to continue screening, especially if their PSA has been rising on previous tests. But this should be discussed with a healthcare provider.
- Screening is not recommended for men aged 80 and older, and for men who are not expected to live another ten years.
- Men diagnosed with prostate cancer that has a low risk of growing or spreading should be offered active surveillance as the initial management option.

ACS đề xuất một số bước nhằm giảm sinh thiết không cần thiết

PSA tăng

↓

Kiểm tra PSA lần thứ hai

↓

MRI tuyến tiền liệt

↓

Đánh giá nguy cơ và quyết định sinh thiết

Newsweek U.S. Global Lifestyle Opinion Rankings Watch Extra

Life Cancer Lung Cancer Health And Medicine Health And Science



News Article

New Blood Test Can Find One of the Deadliest Cancers Returning—Before Scans

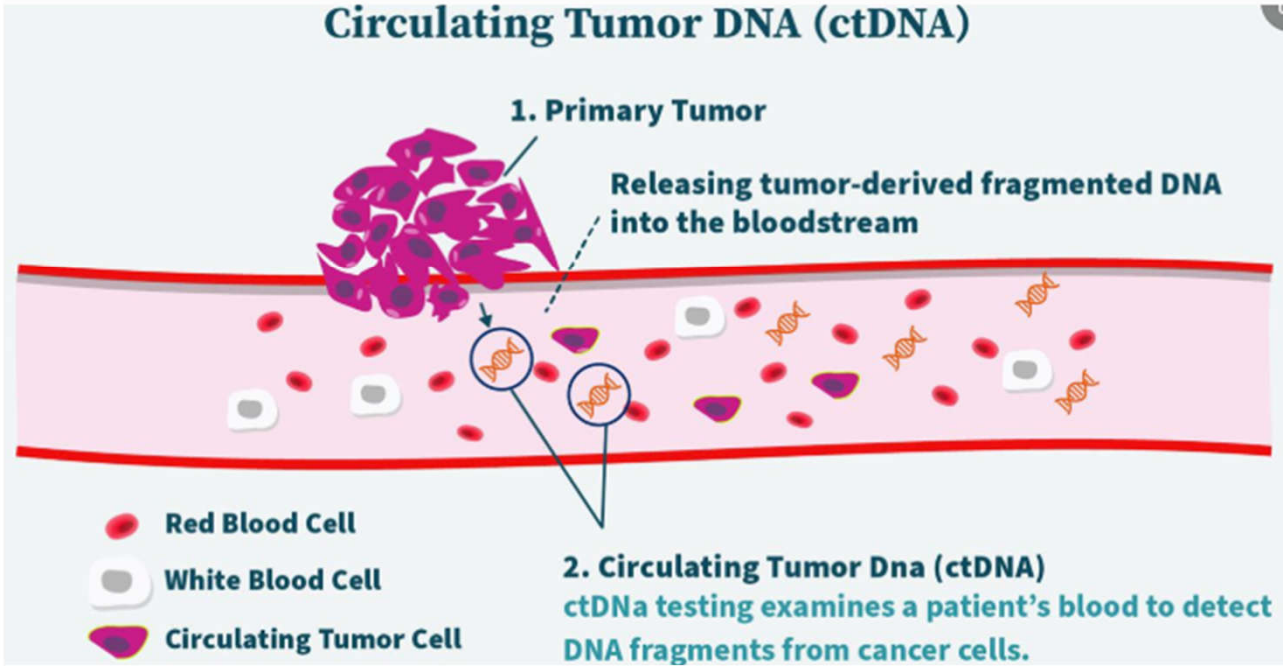
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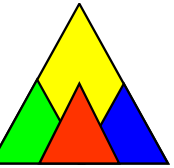
Predicting Recurrence of Stage IA Lung Adenocarcinoma Using Circulating Tumor Cell–Free DNA Whole-Genome Mutational Signatures

Matija Snuderl [1], James Smadbeck [2], Reid Wilkins [3], Kenneth Tokoro [4], Ryan Ptashkin [2], Isabella Pizzillo [3], Alejandro Vargas [3], Andre Moreira [3], Danielle Afterman [5], Tomer Lauterman [5], Maja Kuzman [2], Santiago Gonzalez [2], Dunja Glavas [2], Dillon Maloney [2], Jurica Levatic [2], Samuel Phillips [2], Sunil Deochand [2], Michael Yahalom [5], Iman Tavassoly [5], Zohar Donenhirsh [5], Eric White [2], Ravi Kandasamy [2], Ury Alon [5], Paz Polak [2], Boris Oklander [5], Asaf Zviran [2], Harvey I Pass [6]

Abstract

Lung adenocarcinoma (LUAD) remains a leading cause of cancer-related mortality. Although for stage IA, LUAD surgery is often curative, recurrence rates remain significant. Liquid biopsy enables monitoring residual disease and predicts recurrence; however, utility in stage IA LUAD is not well established. Tumor-informed whole-genome sequencing (WGS) represents a highly sensitive liquid biopsy method for the analysis of circulating tumor cell-free DNA (ctDNA) without designing and maintaining patient-specific probes. This study aimed to determine the prognostic value of genome-wide tumor-informed minimal residual disease monitoring in stage IA non-small-cell lung cancer (NSCLC) using WGS of ctDNA. WGS was performed on 42 patients with stage IA NSCLC. Tumor was sequenced at 40× and germline DNA and plasma derived ctDNA at 20×, and patient-specific mutational signatures were developed from the tumor-normal comparison and applied to ctDNA WGS at each time point using an artificial intelligence-supported pattern recognition algorithm. ctDNA results were compared with clinical recurrence. WGS ctDNA was able to predict recurrence with 0.75 sensitivity and 0.83 specificity, with median 16.7 months lead time compared with clinical or imaging recurrence. ctDNA WGS was able to distinguish between a second primary and recurrence in histologically or clinically challenging cases. Whole-genome sequencing of ctDNA can predict recurrence in the earliest clinical stage of NSCLC, identifying patients who will recur, and providing information to help guide radiological follow-up and adjuvant therapy.





Phẫu thuật ung thư phổi

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Theo dõi ctDNA định kỳ

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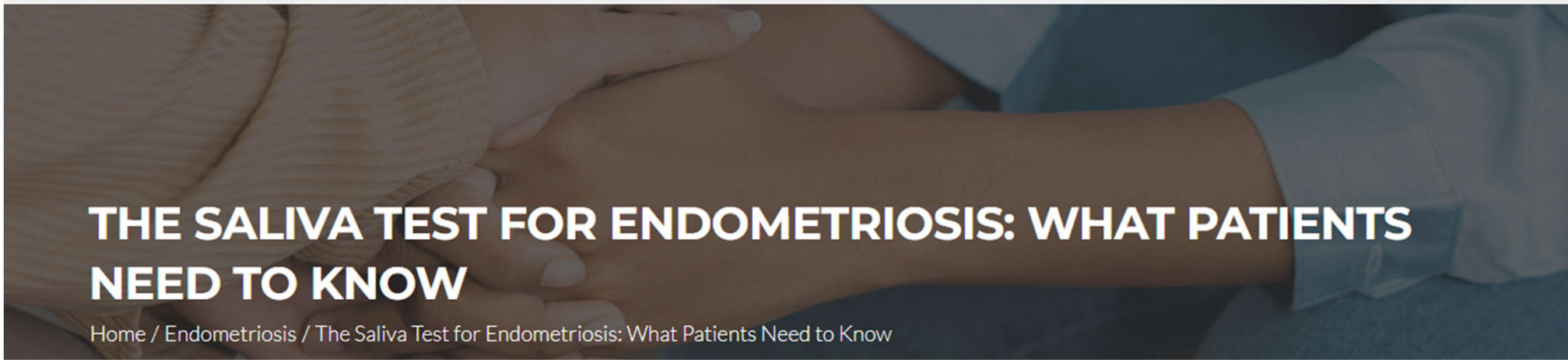
ctDNA dương tính

↓

Đánh giá lâm sàng và hình ảnh học phù hợp

↓

Cân nhắc điều chỉnh theo dõi và điều trị



THE SALIVA TEST FOR ENDOMETRIOSIS: WHAT PATIENTS NEED TO KNOW



A saliva test for endometriosis has generated worldwide attention, offering hope for a faster and less invasive way to identify the disease. For millions of women living with pelvic pain, painful periods, or infertility, the possibility of diagnosing endometriosis with a simple saliva sample is understandably exciting.

But how accurate is this new test? Can it replace laparoscopic surgery as the gold standard for diagnosing endometriosis? And what does it mean for patients today?

Here is what the current evidence tells us.

What Does the Research Show?

The early findings are encouraging, but they should be interpreted within the context of ongoing research. In the largest published validation study to date, involving **971 women with symptoms suggestive of endometriosis**, researchers reported:

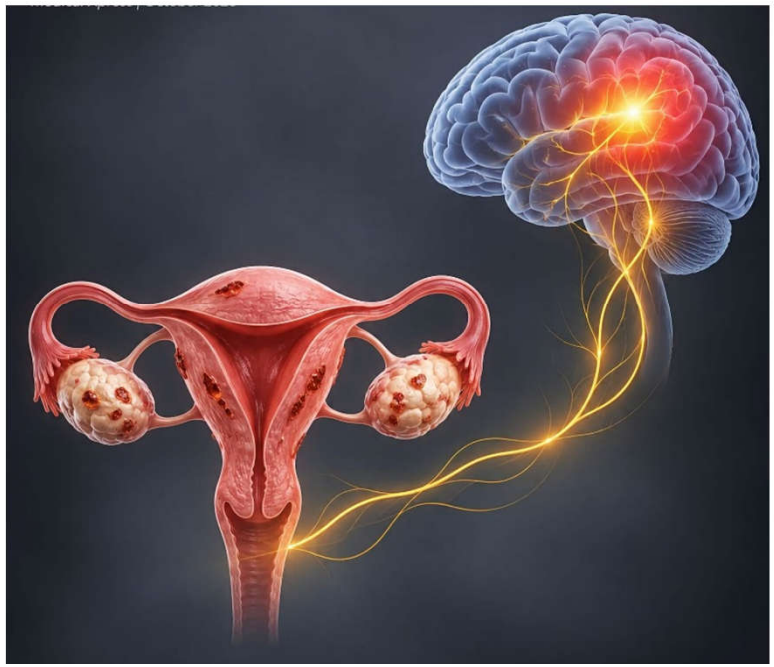
- Sensitivity: 97.3%
- Specificity: 94.1%
- Overall accuracy: 96.6%

These findings suggest that the test may correctly identify many women with endometriosis while also correctly excluding many women who do not have the disease.

However, promising early data do not automatically change clinical practice.

Before any diagnostic test becomes part of routine medical care, its performance must be confirmed through independent studies conducted across different healthcare systems and diverse patient populations. Additional research is still needed before the saliva test can be considered a standard diagnostic tool.

OCTOBER 20, 2026



Migraine, endometriosis overlap far more than recognized, analysis of 13 million finds

by American Neurological Association

edited by Gaby Clark, reviewed by Andrew Zinin

Editors' notes

The GIST

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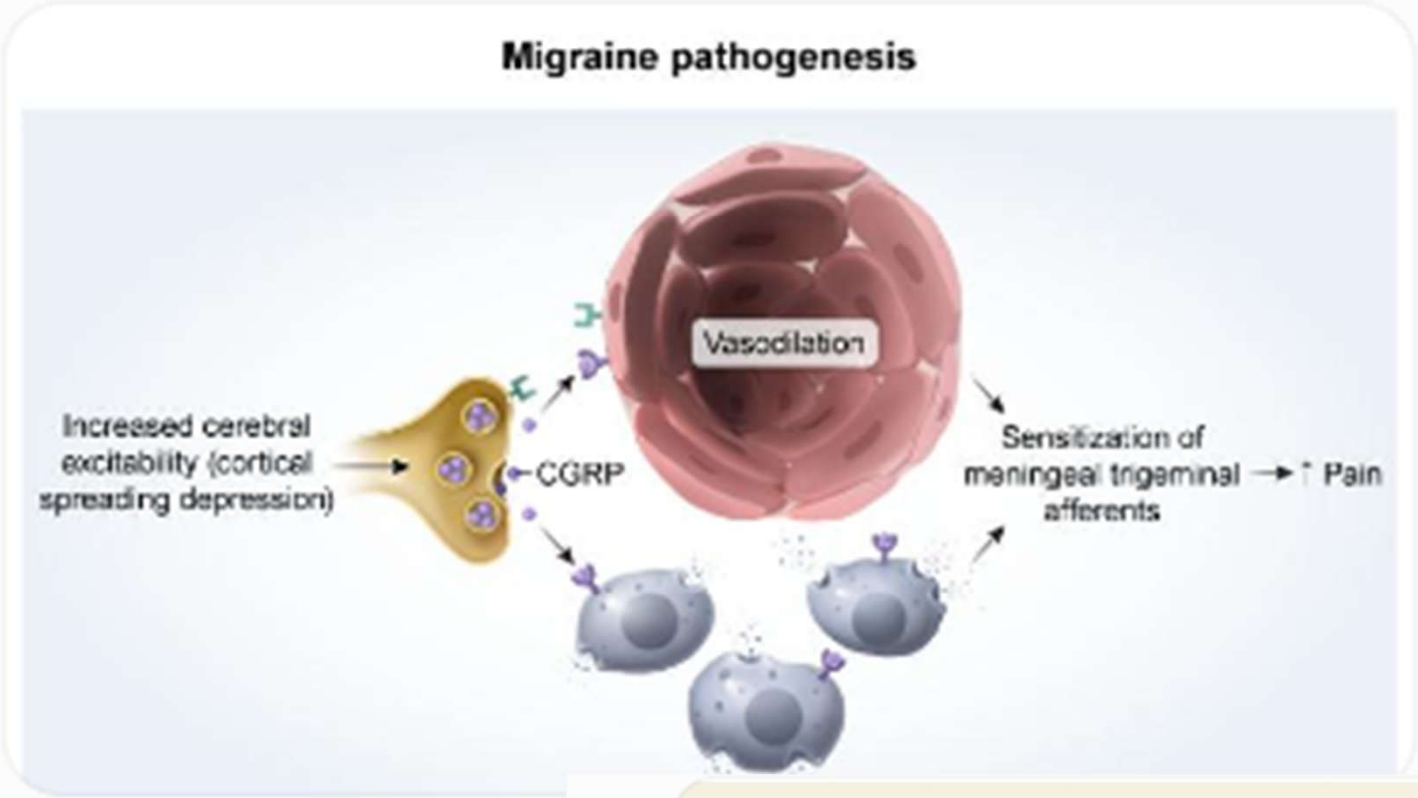
Half to three-quarters of women with endometriosis may also suffer from migraines, but short-term records miss up to 90% of that overlap, according to a first-of-its-kind analysis of more than 13 million women presented at the 151st Annual Meeting of the American Neurological Association (ANA).

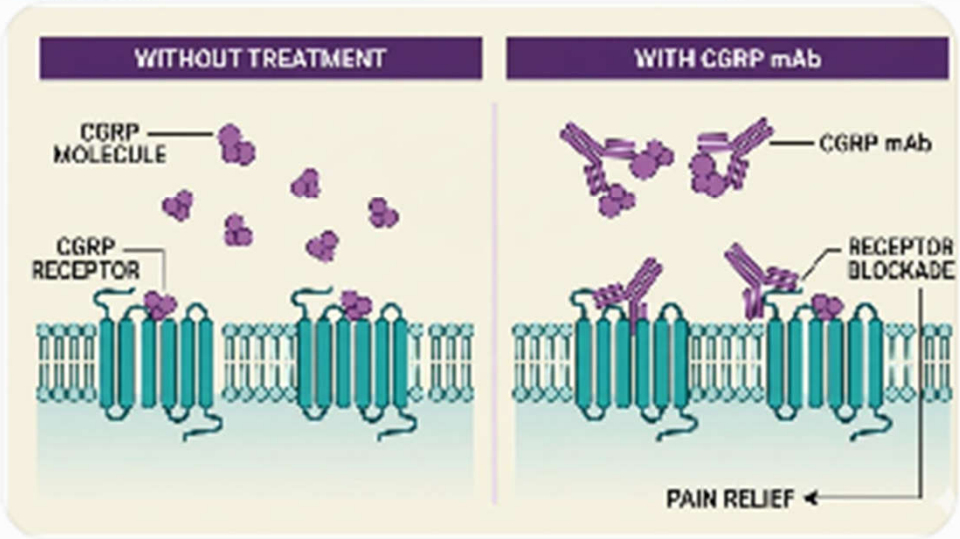
The analysis also showed women with endometriosis had 2.3 times the odds of having migraine compared with women who didn't have the pelvic condition. The research adds to evidence that migraine and endometriosis may share a pain pathway involving calcitonin gene-related peptide (CGRP)—a chemical messenger that helps transmit pain signals—and inflammation around nerves and blood vessels, the researchers say. They note the findings support further research into whether CGRP-targeting migraine medications could also help relieve endometriosis-related pain.

"There's a visibility gap because migraine and endometriosis are treated by different specialists and recorded separately, making the overlap easy to miss," said Yohannes Woubishet Woldeamanuel, M.D., lead author of the study and assistant professor of neurology at Mayo Clinic Arizona, Phoenix. "As a result, women's headaches and pelvic pain may be viewed as unrelated, even when they may be part of a broader pain pattern."

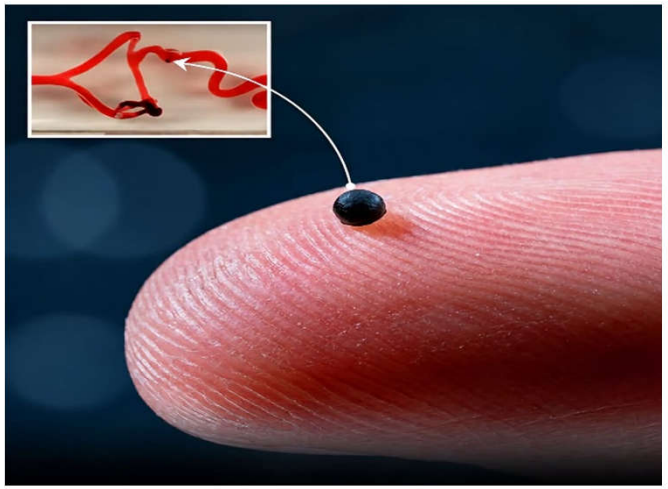
How the studies identified migraine in women with endometriosis made a difference. Clinic-based studies using patient interviews identified migraine in 54% to 78% of cases; insurance claims over longer periods reported rates of 18% to 43%; and one year of billing records identified fewer than 5%. The findings suggest that short-term health records miss up to 90% of women who have both conditions.

CGRP – Calcitonin Gene-Related Peptide





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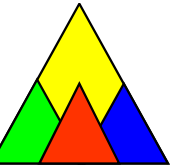


Scientists develop tiny robots that can swim through your blood to fight strokes

Researchers at the federal technology institute ETH Zurich have created a microrobot to fight diseases inside the body. Scientists can control the device, which is less than two millimetres in width, through blood vessels to deliver essential drugs.

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The tiny robot has not yet been tested on humans. However, it worked in tests on pigs and a sheep, the researchers reported on Thursday in the journal *Science*.

Medical research has been trying for some time to develop methods to deliver drugs exactly where they are needed, ETH Zurich said in a press release. Today, many diseases, such as strokes or tumours, require high doses of drugs to be administered and distributed throughout the body, and this increases the risk of side effects.

According to ETH Zurich, the researchers combined three different magnetic navigation strategies with which they can navigate the robot in all regions of head arteries.

“It’s incredible how much blood is pumped through our vessels and at what speed. Our navigation system has to be able to withstand all of this,” Fabian Landers, ETH Zurich researcher and main author of the study, said in the press release.

At the destination, the capsule is then heated by a high-frequency magnetic field, causing the gel structure to dissolve and release the medication.

To enable doctors to follow how the capsule moves, the researchers have also equipped it with a contrast agent. They used tantalum nanoparticles, which are frequently used in medicine, but are more difficult to control because they are heavier.

Wireless electrocatalytic closed-loop system for drug-free management of diabesity

Debasis Maity [1], Preetam Guha Ray [1], Peter Buchmann [1], Ghislaine Charpin-El Hamri [2], Martin Fussenegger [1 3]

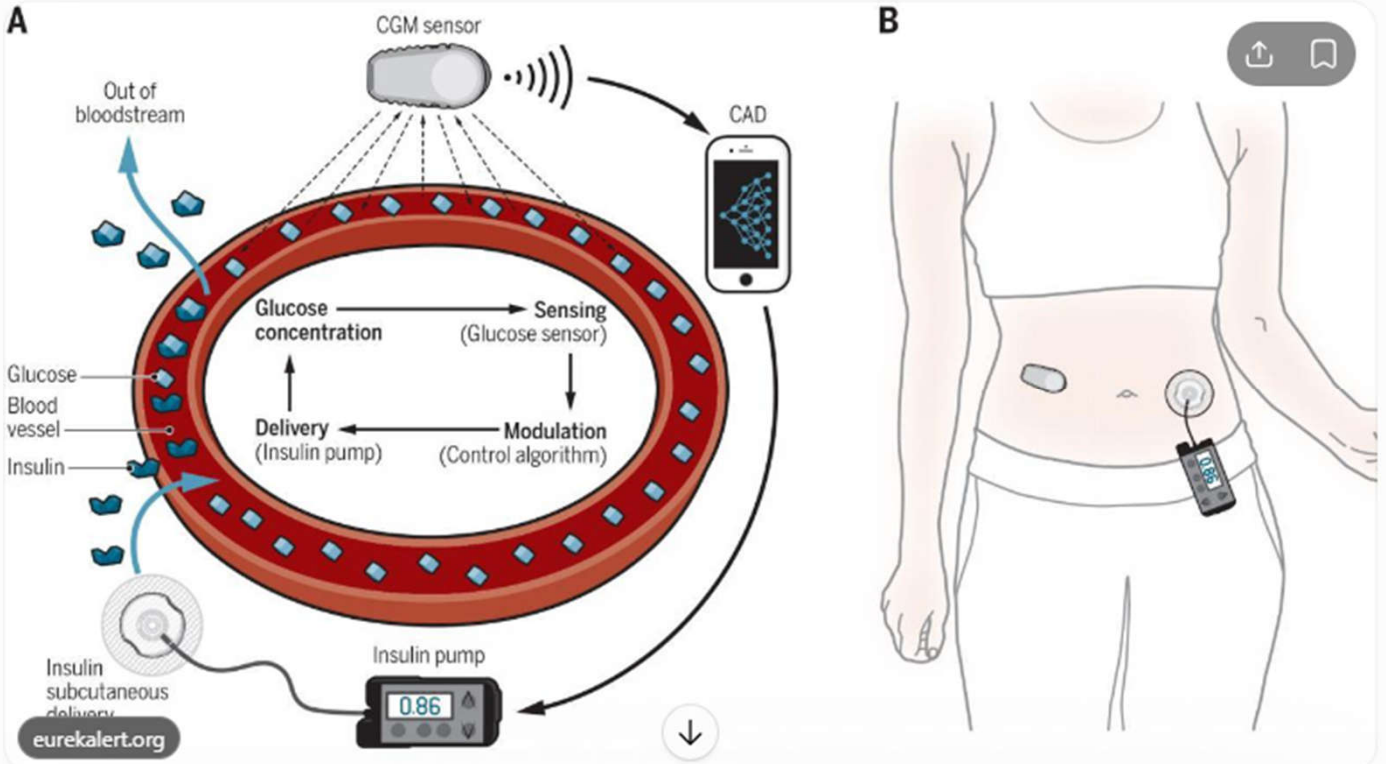
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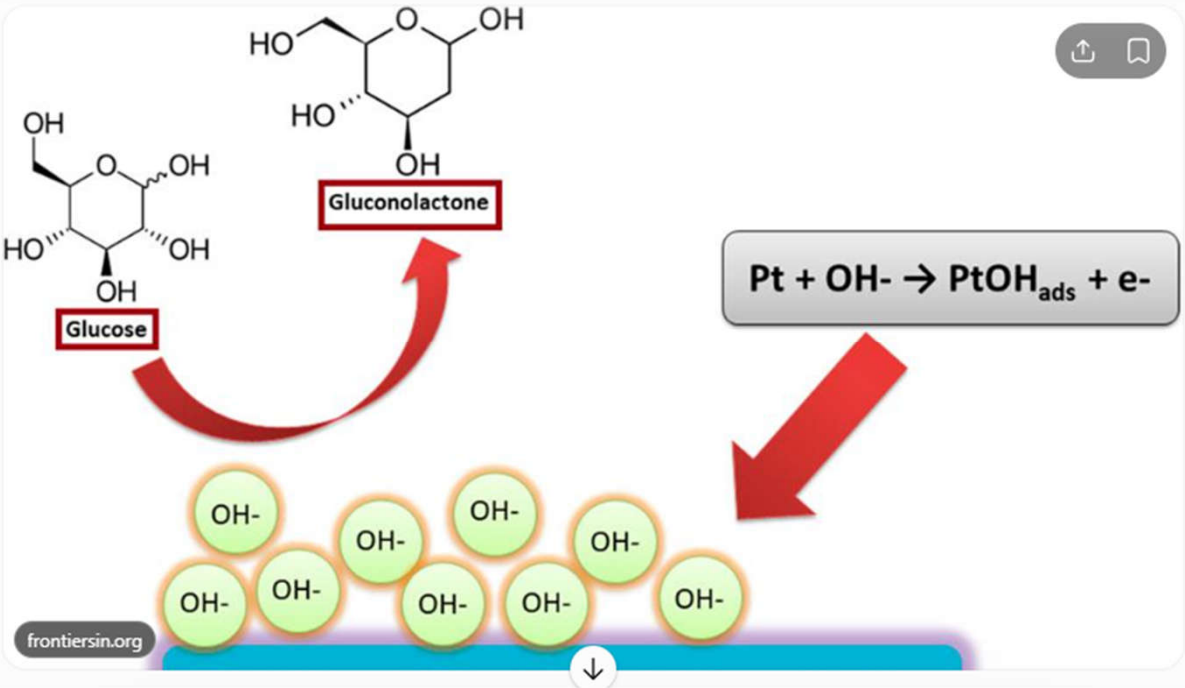
PMID: 42912137 DOI: 10.1126/science.ady8560



Abstract

Lifestyle-related type 2 diabetes and associated obesity (diabesity) affect >2.5 billion people worldwide and impose nearly $3 trillion in annual health care costs. We developed an implantable, wirelessly powered electrocatalytic closed-loop health optimization (ECHO) device containing platinum-decorated gold nanoclusters embedded in graphite felt that enabled selective, electrically tunable oxidation of blood glucose to renally cleared gluconate. In type 2 diabetic mice, wireless, low-power activation (0.75 volts, 10 milliamperes) restored glucose homeostasis within 1 hour, shifted metabolism from glucose to lipid utilization, reduced body weight and triglycerides, and increased circulating free fatty acids and ketone bodies without detectable hypoglycemia or adverse physiological, inflammatory, or behavioral effects during 6 weeks of treatment. Coupling this ECHO device to a commercial continuous glucose monitoring system enabled autonomous, smartphone-controlled, drug-free closed-loop management of experimental diabesity.


A
CGM sensor
Out of bloodstream
CAD
Glucose concentration
Sensing (Glucose sensor)
Delivery (Insulin pump)
Modulation (Control algorithm)
Glucose
Blood vessel
Insulin
Insulin subcutaneous delivery
Insulin pump
0.86
eurekalert.org
B


Gluconolactone
Glucose
Pt + OH- → PtOH$_{ads}$ + e-
OH-
frontiersin.org

NOVEMBER 17, 2026

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Vest that maps heart's electrical activity could flag health risks

by British Heart Foundation

edited by Lisa Lock, reviewed by Andrew Zinin

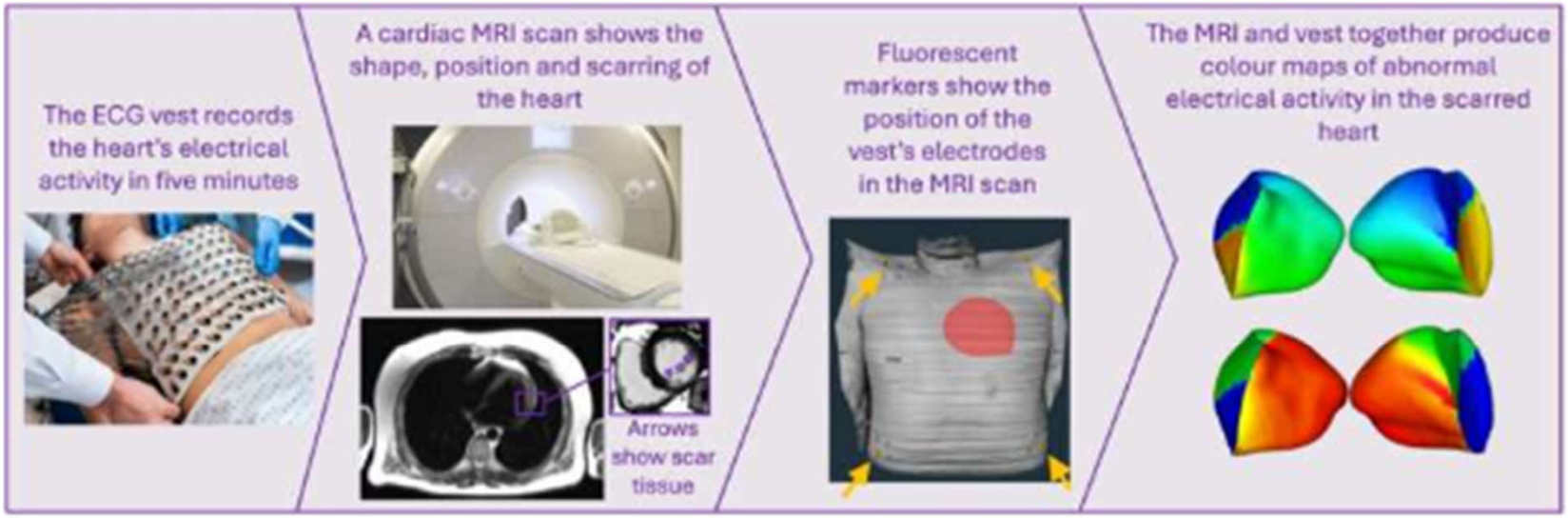
Editors' notes



The ECG imaging (ECGI) vest, developed by a team at University College London (UCL), has 256 electrodes sewn inside it, can be washed or disinfected and reused indefinitely, and provides a detailed map of the heart's electrical activity in just five minutes. Researchers found it can reveal damage to our hearts from scarring—which happens naturally to many people as we get older, from blockages in blood vessels or simple "wear and tear."

The team studied the hearts of 402 older people who wore the vest and were given an MRI scan. The MRI revealed the parts of their hearts that contained scarring, while the ECGI vest showed the electrical activity in their hearts.

Around 70% were found to have scarring in their hearts, and even minor scarring, seen in people who'd never had a heart attack, affected the heart's electrical system—the electrical impulses that power every heartbeat. This electrical disruption, revealed by the ECGI vest, could be a red flag for heart issues, as it was also linked to people's likelihood of being admitted to the hospital with cardiovascular disease.



Credit: University College London

Gaby Captur, professor of cardiology at UCL and a consultant cardiologist, who led the research, said, "When we judge the risk to our hearts as we get older, we often think about blood pressure and stiffening arteries. But this study suggests the scar tissue found in our hearts is important to look at too.

Alzheimer's Disease

Last Updated: 14 October 2026

DEVELOPMENT STAGE

EARLY STAGE | CLINICAL TRIALS | INTERNATIONAL APPROVAL | FDA APPROVED

Focused ultrasound is approved to treat this condition outside the US. Patients can seek commercial treatment at participating international sites. There are also clinical trials that may be of interest to patients.



Overview

Focused ultrasound is a rapidly evolving, noninvasive therapeutic technology that is improving the quality and longevity of life and decreasing the cost of care for millions of patients with a variety of serious medical disorders. It offers a disruptive, game changing alternative or complement to surgery, radiation therapy, drug delivery, and cancer immunotherapy. This novel technology precisely focuses beams of ultrasound energy on targets deep in the body without affecting surrounding normal tissue. Where the beams converge, the ultrasound can produce a variety of therapeutic effects without incisions or radiation.

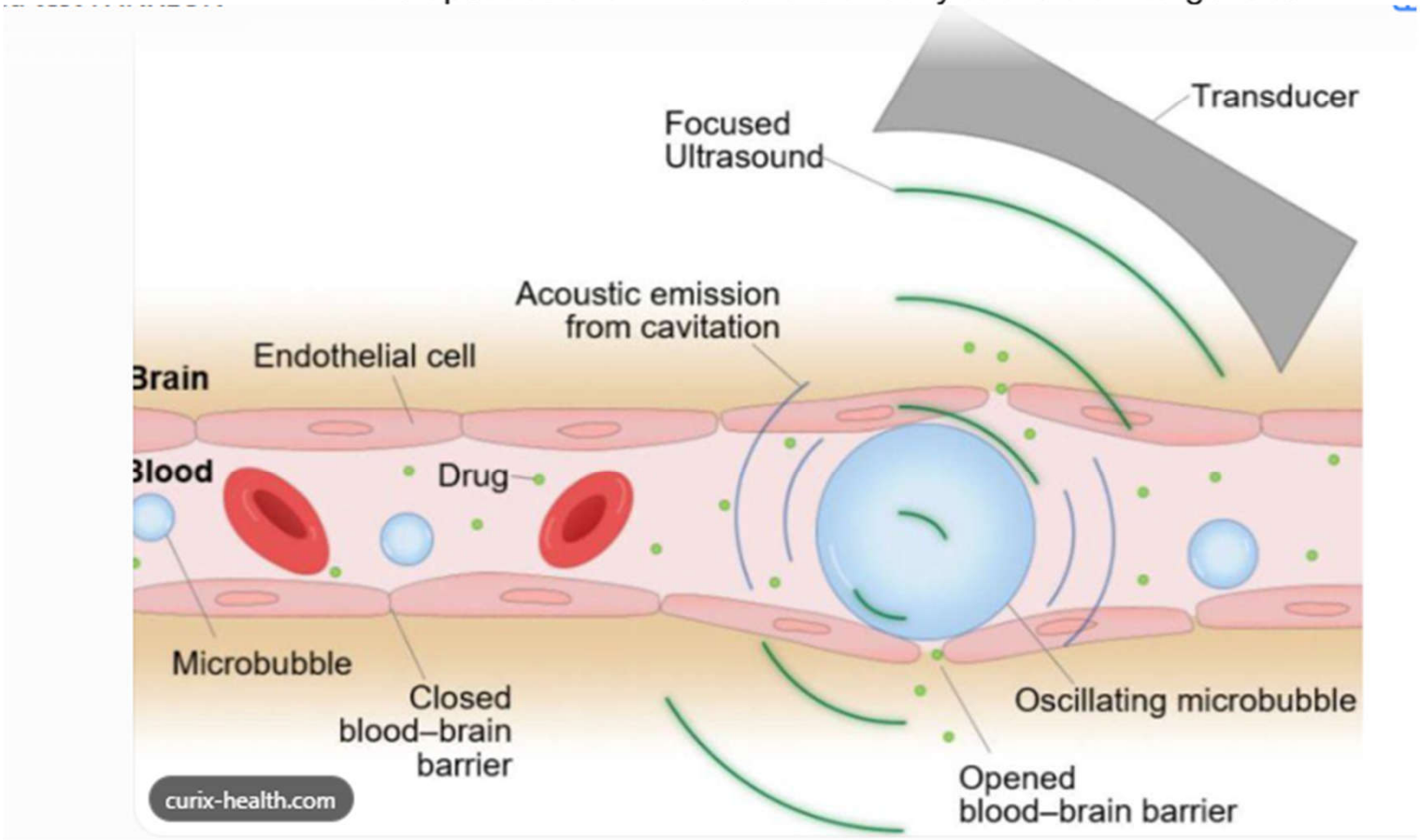
For Alzheimer's disease, focused ultrasound temporarily opens the blood-brain barrier (BBB), a naturally occurring barrier of tightly aligned cells along blood vessels that normally inhibits the diffusion of medications and immune cells into the brain.

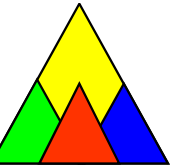
Benefits

Currently, there is no cure or effective treatment for Alzheimer's disease. Potentially promising drug and antibody therapies have proven ineffective due to their inability to cross the BBB and enter the brain

Advantages:

- Noninvasive – no incisions, no risk of infection or bleeding, less pain, and rapid recovery
- Image-guided – minimal damage to surrounding tissue
- Safe, temporary, and repetitive opening of the BBB – enhancing the delivery of therapeutics and immune cells directly to the brain target site





Cám ơn sự chú ý của quý vị!