

INTERNET NEWS

BS. Nguyễn Văn Công

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ients say keto helps with their mental
ess. Science is racing to understand why



stone (NPR)

24 3:52 a.m.



ll, a researcher in Scotland, has lived with Bipolar disorder for much of his life. After trying the ketogenic diet, he experienced life-changing improvements in his symptoms — and now wants to learn if it can do the same for others. He shares his story at the Metabolic Health Summit in Clearwater, Fla., on Jan. 25, 2024.

for NPR / Tina Russell for NPR

obell was gazing out the bus window on his way to work when he first sensed something was reshaping how he experienced the world.

ing emerged from an altogether ordinary observation: He felt peaceful, maybe even touched the trees along the road pass by.

experienced that in a really long time, probably since I was a kid," says Campbell, rgh, Scotland.

now what was going on at the time, but I thought this might be what it feels like to

l had lived with bipolar disorder for much of his life. Mental illness runs in his family. loved ones to suicide. Over the years, he tried different treatments, but it had become ngly difficult to live with."

l changed? A few weeks earlier, he'd started a new diet.

l dealt with unwanted weight gain and metabolic troubles, a common side effect of c medications.

rt to lose weight, he drastically cut back on carbs and instead focused on protein. he'd unknowingly entered ketosis: A metabolic state where the body switches from primary energy source to ketones, which come from fat.

d learning about the [ketogenic diet](#), which is high fat and very low carb, on podcasts and videos. Soon, he was tracking his ketone levels, courtesy of an at-home blood test.

d it was actually the ketone level that was making this shift in my symptoms in a way I've ever had," he says. "It struck me as really significant, like life-changing."

career-launching moment

...exactly was a diet performing this alchemy? Campbell decided to pursue a PhD in mental health at the University of Edinburgh, hoping to do his own research and learn if it could help others.

...online forums, people with bipolar disorder were [sharing similar notes](#) — they were finding improvements in their mood, increased clarity and fewer episodes of depression.

...as Campbell searched for ways to launch a proper clinical trial to test the diet's effectiveness, he became discouraged.

...as really like you were considered wacky," he says, "At one point, I thought nobody's going to pay for this research."

...put together a 45-minute [video](#) summing up the biological rationale for using the ketogenic diet in bipolar disorder and posted it on social media, not expecting much after that.

...e doctors had already started researching it after seeing the potential in the
... among them [Chris Palmer](#), a psychiatrist at Harvard Medical School and

... had his own revelation about the diet a few years earlier, which he detailed in [this report](#). Two patients with schizo-affective disorder had "truly dramatic, long-term improvement in their psychotic symptoms," he says.

... 2021, he started working with the eldest son of Jan and David Baszucki, a tech entrepreneur. Their son Matt had bipolar disorder and had been on many medications over the years.

... Baszucki enlisted Palmer's help as her son gave the ketogenic diet a try.

... "After a couple of months, we saw a dramatic change," she says.

... So, she started contacting clinicians and researchers, looking to bring more funding — to the treatment. Since rigorous data on the diet is still lacking, scientists and researchers conduct large clinical trials to back up anecdotes like her son's.

... A big-time philanthropist was in touch with Campbell, ready to pay for his bipolar treatment and others.

... Around a [dozen clinical trials](#) are in the works, testing the diet's effect on mental health conditions, most notably for bipolar disorder, schizophrenia and depression, but also for conditions like anorexia, alcoholism and PTSD.

... "Research and the clinical interest is suddenly exploding," says Dr. [Georgia Eberhardt](#), a psychiatrist in Massachusetts, who began using the ketogenic diet in her own practice a decade ago.

epilepsy care to the mainstream

Basic [ketogenic diet](#) contains an eye-popping amount of fat, roughly 90% of calories from that alone. Other [versions](#) have come along that dial down the fat and up for protein and slightly more carbohydrates.

Followers may buy a device to measure ketone levels in their blood, to track. It's entered a range that means they're experiencing what's called nutritional ketosis.

Its entrance into the mainstream has fed plenty of debate about its merits, with some groups [raising concerns](#). Yet, there's also growing attention — and [clinical trials](#) underway — on its potential, not only for obesity but a variety of other conditions.

"It's not a fad diet," says Dr. [Shebani Sethi](#), who's leading [research](#) into the diet's potential for mental health at Stanford University. "It's a medical intervention."

The ketogenic diet was developed over a hundred years ago for pediatric epilepsy. There's a resurgence in that field over the last three decades.

"It's not the general standard of care for epilepsy," says [Dr. Eric Kossoff](#), a pediatric neurologist at Johns Hopkins University.

"The [link record](#) in epilepsy, the thinking goes, paves the way for its adoption in psychiatry. [The links](#) between the conditions. Medications developed for seizures are [reused](#) for a range of psychiatric conditions such as bipolar disorder.

"We use them off label, even when we don't have studies to suggest or prove that they work for people with mental illness," says Palmer, "So, in many ways, this is not

Metabolic link

There is also a [well-documented](#) association between a variety of psychiatric conditions and metabolic problems like high blood sugar and [insulin resistance](#), [Type 2 diabetes](#), obesity and [hypertension](#).

People with psychiatric disorders are at an increased risk. And it's not just psychiatric meds that can cause weight gain and other issues. Research shows that metabolic problems [can arise](#) even before someone with serious mental illness starts on medication or is diagnosed.

It's been known for a long time that there's something going on in the metabolism of the brain that's not quite right in people with severe mental illness," says [Dr. Dost Ongür](#), chief of the division of Psychotic Disorders at Massachusetts General Hospital and a professor at Harvard Medical School.

The growing evidence of energy problems in the brain and elsewhere in the body has been discussed over the decades in psychiatry — unrelated to the ketogenic diet. "I can't say that there's a causal relationship, but there are a lot of questions that should be explored further," says Ongür whose [work](#) has focused on [this theme](#) in bipolar and schizophrenia.

"This data is strong enough to suspect that 'metabolic problems may be more than just innocent bystanders,' that they may, in fact, play a direct role in the development, severity or course of psychiatric conditions," says E

And keto's power

Why could a diet that stops seizures also exert powerful effects on tough-to-treat psychiatric illness?

Indeed, scientists who study epilepsy aren't exactly sure why it works for that illness.

"With so many different mechanisms," says [Dominic D'Agostino](#), a professor of molecular pharmacology and physiology who studies the ketogenic diet.

He likes to characterize the diet as being more like a "shotgun" than a "bullet."

When the body essentially changes metabolic gears. It increasingly draws on ketones — made from the breakdown of glucose.

"What happens on a ketogenic diet," says Kossoff, "Ketones can be used for energy, but how that helps seizures is unclear."

When the diet eliminates carbohydrates, blood sugar comes down and insulin sensitivity [improves](#).

"It's like turning the pressure off of your really delicate insulin signaling system," says Ede, while offering cells another fuel that could help get the system back online that may have been stuttering."

Other scientists believe problems with mitochondria — the powerhouses of the cells that produce energy — are also involved.

"Due to mitochondria's essential role in maintaining key brain function," says [Ana Andreazza](#), a professor of psychiatry at the University of Toronto.

Andreazza studies what biological pathways make people with psychiatric illness more vulnerable to mitochondrial dysfunction.

Damage to these vital power houses ultimately leads to a "metabolic shift" that wreaks havoc in myriad ways — including increased production of lactate.

"These findings are compelling for many psychiatric disorders," she says.

"The ketones help the mitochondria by relieving oxidative stress — a harmful build up of free radicals, she says, and providing an alternative energy source that circumvents the dysfunctional machinery in the mitochondria.

"Moving the body towards more normal mitochondrial function and metabolic health, that's restoring neurotransmitter systems and increasing blood flow to the brain," says D'Agostino.

Search for more clues

Effect of ketosis on the mitochondria is one hypothesis for why keto diets could work, but it's not the whole story.

The data on how the diet [affects the brain](#) come from research into epilepsy and other neurological diseases like Alzheimer's and Parkinson's.

Researchers find serious mental illnesses like schizophrenia, major depression and bipolar disorder share notable similarities with these conditions: Inflammation in the brain, oxidative stress, mitochondrial dysfunction, and issues with glucose and insulin.

Research suggests ketosis can be [beneficial](#) on these fronts, although human studies are limited. The larger clinical trials now underway for keto diets will seek to pin down what's going on.

For example, Dr. [Deanna Kelly](#) is trying to determine if the diet's potential benefits emerge from changes in [microbiome](#) in the gut.

"It's potentially changing the way bacteria are functioning and that could affect your behavior," says Kelly, a professor of psychiatry at the University of Maryland, who's leading a clinical trial on the ketogenic diet for schizophrenia.

Scientists are studying the diet's effect on neurotransmitters like GABA — which acts as an inhibitory neurotransmitter in the brain.

Phillips, who has studied how dopamine affects the reward circuit in bipolar disorder, hopes this research will help explain its therapeutic effects.

She's leading her [clinical trial of bipolar](#) and the keto diet, which launched recently, also gets asked a common question:

"How do you know which people the ketogenic diet is going to work for?" says [Phillips](#), a professor at the University of Pittsburgh. "It's not the easiest diet in the world to get started on."

shows promise

[Recent evidence](#) on its potential for mental health comes from case reports, observational data and open trials that have laid the foundation for clinical studies.

What exists shows improvements in both mental and metabolic health.

[Small pilot study](#), designed to test the feasibility of a randomized controlled trial, found patients lost an average of about 10 pounds and "improvements" in blood pressure.

As the level went up, we saw their mood improved, their energy improved, their anxiety decreased and their impulsivity decreased," says Dr. Öngür, a research fellow in metabolic psychiatry at the University of Edinburgh.

At baseline, a sign of mitochondrial dysfunction, dropped as did [glutamate in the brain](#), an effect also seen with anti-seizure medication. The study, from Toulouse, France, is [the largest](#) to look at hospitalized patients with severe mental illness.

Of the 100 patients, 72 couldn't stick with it, the 28 who did had substantial improvements in their symptoms of depression and psychosis by the end of the study.

Of those who achieved clinical remission.

Of the control group, but she points out these patients had been hospitalized before under the care of the same psychiatrist — with the same treatment this time being the ketogenic diet.

"I think the diet probably had something to do with the outcome," says Ede.

Dr. Öngür's pilot [study](#) found the majority of patients with schizophrenia or bipolar disorder had "clinically meaningful improvement" or "achieved recovery."

Of those who entered the study had metabolic syndrome — a cluster of risk factors like insulin resistance and high blood pressure — the condition

[Abi-Dargham](#), who isn't involved in the research, calls the initial data "intriguing," when considered alongside the existing evidence on mitochondrial dysfunction in psychiatric illness.

"It really convinces me there is a signal that is worth pursuing in a rigorous way," says Abi-Dargham, chair of the department of psychiatry at Stony Brook University.

The attention ahead of solid clinical data has raised eyebrows among some psychiatrists.

[Dr. Öngür](#) worries the hype has created an unrealistic perception about the ketogenic diet in mental health. For now, he remains skeptical.

"It works for some people, which is awesome, but most things work for some people in mental health," says Ramsey, a nutritionist.

He readily acknowledges the field is still in the early stages.

"I'm modest about this," says Öngür, "The ketogenic diet is really a test case, but it's not the silver bullet."

The diet is a powerful intervention, but "it's not going to cure everybody with mental illness, or even necessarily help everybody."

Psychiatry takes off

A swell of excitement around a high-fat, minimal carb diet reflects a broader movement to recognize the link between metabolic health and mental illness.

Diet research is just one branch of a growing area of research now being called [metabolic psychiatry](#).

Dr. Sethi coined the term when she launched Stanford's program in 2015, says the idea is to link metabolic health – tackling conditions like high blood sugar, insulin resistance and obesity – to psychiatric problems.

Insulin resistance is the most prominent example she says medications are also [under study](#), including metformin, which makes the body more sensitive to insulin — the hormone that helps usher glucose into cells. The connection is intuitive for Sethi, who trained in obesity medicine and psychiatry. It was in 2012 when she first witnessed keto's potential for her psychiatric patients.

A patient with treatment-resistant schizophrenia had tried the diet to lose weight and manage side effects. To her surprise at the time, Sethi recalls it also helped the patient with hallucinations.

A [clinical trial](#) underscores the promise of targeting metabolic problems, beyond just treating obesity.

The study included patients with treatment-resistant bipolar depression and insulin resistance, but not Type 2 diabetes. Some also took the diabetes drug metformin.

At the end of the study, half of those who took the medication had reversed their insulin resistance. They also found dramatic improvements in their psychiatric symptoms, even though most had no weight loss without any remission.

"The results were so far of blown away," says [Dr. Cynthia Calkin](#), a psychiatrist at Dalhousie University in Nova Scotia who was not in the study. "It's not that metformin is an antidepressant, it's that it can reverse insulin resistance and that improves outcomes."

o wellness

patients nor clinicians are waiting for the results of larger trials to try keto.

patients [share their experiences](#) with – and challenges – trying the diet. And doctors who trains other clinicians, regularly treat patients with it.

years ago, Lori Katz ended up at Sethi's Stanford clinic after trying many treatments in order — a diagnosis she received when she was 18 years old.

struggled with chronic pain, binge eating and emotional eating, and unwanted weight gain. Episodes of depression had led her to consider electroconvulsive therapy (ECT).

ketogenic diet was quite the adjustment, but Katz gave it a go, under Sethi's supervision.

"I was losing weight really fast and was extremely satisfied with what I was eating," she says. Her personal trainer who lives in Santa Cruz, Calif.

those around her quickly noticed a change in her mood.

"I lost the depressive symptoms, but it was the feeling of lack of control," she says. "It was like a tailwind — just blowing me into a better future."

So, she started going to the gym and taking longer walks. And after years without a boyfriend entered her life.

But she can't always follow the diet perfectly and notices the change in mood when she doesn't. It hasn't erased the reality of living with a mental illness.

Living with this but it's a question of am I more resilient? Yes. Am I more optimistic? Yes. Do I have this tool? Yes, when I get in there and I get the support. I need to stay in ketosis.

nd of diet can be [hard to stick to](#) – and one that involves largely giving up common comfort foods like bread is more challenging.

er of those in Campbell's study withdrew, which he notes is [similar to other pilot trials](#) with the ketogenic diet. [Lakh](#), a psychiatrist at the University of Louisville, became interested in the diet more than two decades ago and

ad early [success with a few patients](#), but hasn't had much luck over the years: "I haven't been able to get people at all as excited as maybe others."

ctors who already use it in their practice say with enough education and support patients can be successful. Bernstein has found striking results in some of his patients.

the most restrictive form of the diet, especially if they have severe symptoms, but he emphasizes it can be tailored. "Precision" has made an "incredible difference" for some patients.

m into it, lowering their carbohydrate intake gradually.

e like to do it cold turkey, but for a lot of people, that's not the best thing," says [Bernstein](#), chief medical officer of a recovery program in Boston.

hat this is going to be sustainable and not just something you do for a few months and then stop."

chiatrists are trained to offer the diet, although the numbers are growing.

l other doctors say those with a history of serious mental illness should have medical supervision. There can be side effects and conditions that need to be adjusted.

optimism, there are still many unanswered questions.

search, Iain Campbell's already hearing some real results of his dream to help others find this treatment. "I can describe it to me like, 'This changed my life completely, I'm reconnecting with my family. I can work again for

NEWS | CT

AI shows potential for assisting in bone tumor diagnosis

Yee

PT shows potential in helping radiologists to identify malignant lesions based on CT imaging findings in radiology reports, according to a study published January 22 in the *Journal of Bone Oncology*.

led by Fan Yang, MD, of Capital Medical University in Beijing, reported that a few-shot trained ChatGPT model (that is, a model trained to make accurate predictions with only a small number of examples) showed 95% accuracy and 99% sensitivity for flagging malignant bone tumors. The findings highlight the potential of ChatGPT in the diagnosis of benign and malignant bone tumors, offering advantages like enhanced efficiency and "reduction in missed diagnoses," the group wrote.

Benign bone lesions are commonly identified on CT, and while some are in fact malignant, most present as benign abnormalities, Yang and colleagues noted. Ambiguous diagnostic cases are challenging for ChatGPT, and overlapping benign and malignant imaging features can complicate matters. This is why "collaboration between physicians and ChatGPT is crucial in real-world settings," they noted.

In the use of ChatGPT to identify malignant bone lesions, the tea

learning improved ChatGPT's results, the researchers found.

ChatGPT performance for diagnosing bone tumors

Measure	Before few-shot learning	After few-shot learning
Accuracy	73%	87%
Sensitivity	95%	99%
Specificity	58%	73%

o conducted an experiment analyzing the influence of the radiologists' reporting style on ChatGPT. ChatGPT had a higher sensitivity when interpreting reports written by experienced radiologists. The results are as follows:

ChatGPT misdiagnosed 56 benign cases as malignant. Of these, 35 benign lesions were misidentified as osteosarcomas or osteomyelitis.

ChatGPT misdiagnosed 23 osteosarcoma cases as osteomyelitis.

ChatGPT misdiagnosed 8 cases of chondrosarcoma as fibrous dysplasia or aneurysmal bone cyst.

ChatGPT misdiagnosed four cases of spinal chordoma and spinal tuberculosis.

The study suggests that ChatGPT shows promise in the diagnosis of benign and malignant bone tumors.

Collaboration with radiologist readers is necessary, according to the authors.

The authors underscore the necessity of collaborative interactions between physicians and ChatGPT.

The study lays the groundwork for future AI advancements in medicine," they concluded.

The study [it shows] the benefits of few-shot learning in fine-tuning ChatGPT applications in specialized

ING INFORMATICS | ARTIFICIAL INTELLIGENCE

may help plan new treatment in scoliosis patients

on

24

model for x-ray imaging could help clinicians plan treatment other
usions in patients with adolescent idiopathic scoliosis, according
n published January 14 in *PLOS One*.

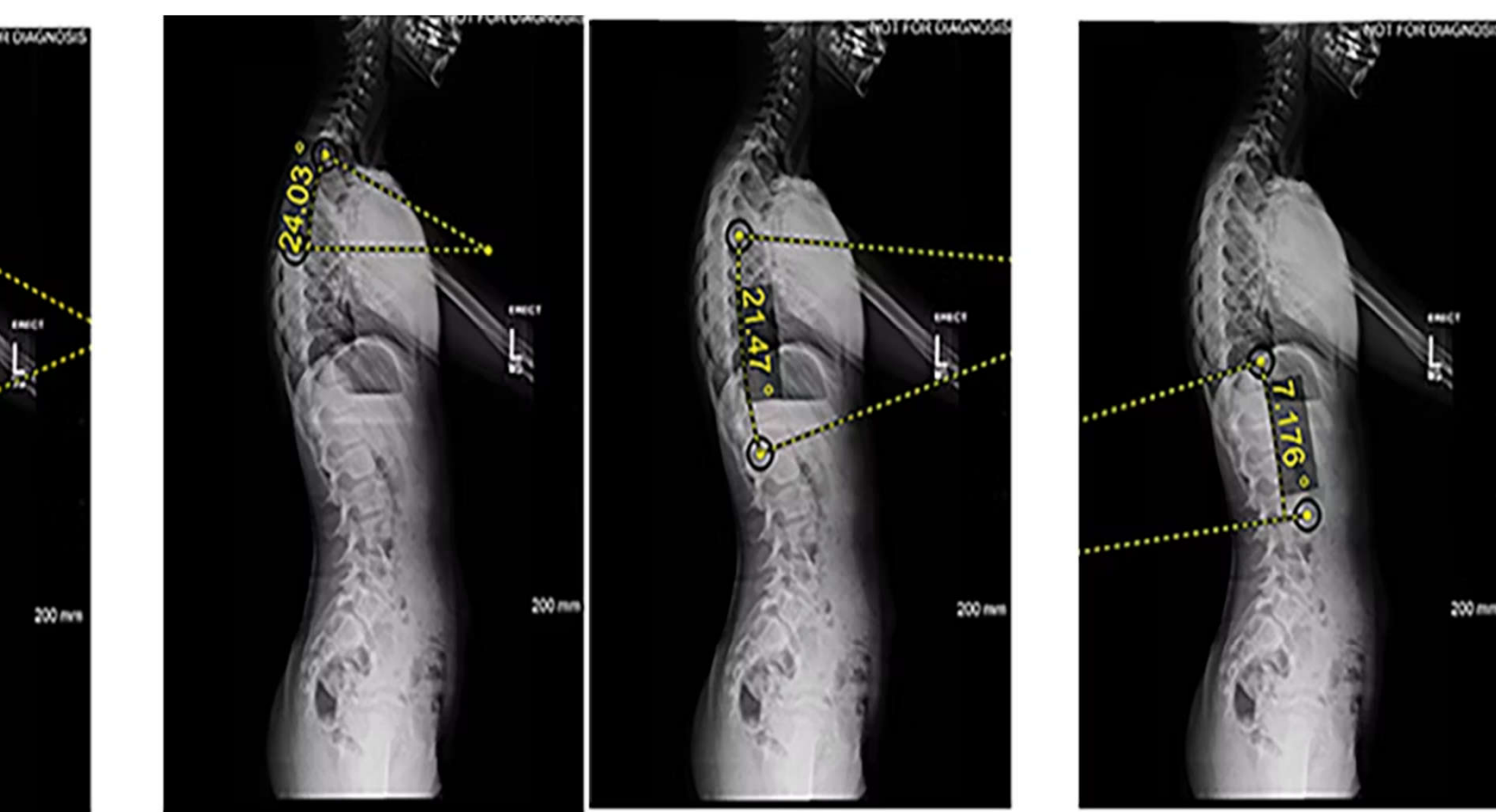
dy proposes a machine learning-based tool for planning anterior
al body tethering (AVBT), an emerging minimally invasive surgi
nt, noted first author Ausilah Alfraihah, a PhD student at Drexel
ity in Philadelphia, PA, and colleagues.

urrent model has potential to serve as a valuable clinical tool, pr
nto the optimal timing of intervention and surgical planning
ters," the group wrote.

as approved in the U.S. in 2019 and involves implanting a flex
ng the spine to guide spinal growth to correct deformities in
ent patients who continue to progress despite bracing. Despite
g promise in several studies, the predictability of the procedure
s uncertain and hinges on a complex interplay of factors that ar
to analyze clinically, the authors wrote.

the group developed a machine-learning-based algorithm that
lly fill this gap.

earchers included data from 91 patients with adolescent idiopa
s who underwent AVBT surgery at the Shriners Hospitals for C
delphia. For all patients, spinal x-rays were taken at six visits, f
' first standing x-ray to their most recent follow-up exam



(b)

(c)

(d)

Features extracted from lateral radiographs. (a) the thoracic kyphosis and lumbar lordosis Cobb angle (b) proximal thoracic Cobb angle (c) mid-lower thoracic Cobb angle (d) thoracolumbar Cobb angle measured by the angle between the superior endplate of the uppermost vertebral level (T2) and the inferior endplate of the lowermost vertebral level: T2-T5, T5-T12, and T12-L5. Image courtesy of [unclear]

the findings, the AI model predicted the final Cobb angle with an average error of 6.3 ± 5.6 degrees. The model also provided a prediction interval, where 84% of the actual values were within the prediction interval, they added.

The model, trained on these features, predicted the final curve magnitude with a clinically acceptable accuracy, they wrote.

The authors noted that this is the first study to apply AI methods to longitudinal data from patients undergoing BT surgery. Significantly, the model is based on a rank-ordered list of the most predictive features for postsurgical curve correction, they wrote.

NEWS | CT

Predicts cardiovascular disease mortality risk with CT

Learning algorithm could predict a patient's risk of atherosclerotic cardiovascular disease (ASCVD) from analysis of noncontrast-enhanced chest CT exams, according to research presented at the recent RSNA meeting.

Researchers, led by presenter Vineet Kalathur Raghu, PhD, from Harvard Medical School and Massachusetts General Hospital, trained an AI model to predict a patient's probability of cardiovascular mortality within 12 years. In testing, the algorithm yielded a statistically significant improvement in prediction performance over a baseline regression model. The model, called CT-CV-Risk, also predicted cardiovascular mortality beyond CAC score and traditional risk factors, according to the researchers.

"We believe that this can help improve cardiovascular risk stratification to guide primary prevention," Raghu told session attendees.

Coronary artery calcium (CAC) scoring on CT exams can be utilized to estimate the risk of ASCVD. In 2018, the American Heart Association and American College of Cardiology updated cholesterol guidelines that recommend CAC scoring be used to guide decisions for intermediate and higher adults with at an intermediate (7.5% to 20%) 10-year risk should take a statin.

Previous research groups, as well as other researchers, have previously demonstrated that convolutional neural networks (CNNs) can accurately measure CAC on noncontrast-enhanced chest CT scans, including low-dose lung cancer screening CT exams.

"An automated CAC score is highly correlated to manual CAC measurements and has proven to be a valuable tool to predict future cardiovascular risk," he said.

In this study, they sought to determine if AI could also extract information from CT exams to predict cardiovascular risk beyond the CAC score and beyond prevalent cardiovascular risk factors. Researchers trained two separate CNNs using 2D projections of CT volumes - one for coronal images and one for axial images. Each model outputs an estimate of cardiovascular risk, which is then combined using a logistic regression model to produce a final 12-year risk estimate.

ning CT-CV-Risk using 10,151 CT exams from the National Lung Screening
 they then tested it on a holdout set of 6,745 individuals from the NLST. All
 ory of type 2 diabetes, myocardial infarction, or stroke were excluded from
 he primary outcome was fatal cardiovascular events over 12 years of follow
 earchers then compared the performance of the combined model with a ba
 on model that incorporated age, sex, body mass index (BMI), race, curren
 istory of cancer, and CT findings into its analysis.

t results were achieved when using results from both the regression mode
 model.

ance for predicting 12-year ASCVD mortality

	Best AI model	Regression model	Combination of baseline regression model and best AI model
Regression model			
Cardiovascular mortality C-statistic	0.69	0.69	0.72
Myocardial infarction C-statistic	0.69	0.70	0.73
Stroke C-statistic	0.68	0.69	0.73

ifferences between the baseline regression model and the
ation of the baseline regression model and the best AI model
statistically significant.

urther subanalysis of 3,878 patients who had automatic CAC
s, a high CT-CV-Risk score and CAC scoring had a
ementary, graded association with cardiovascular mortality
reported.

am also noted that association analyses found that CT-CV
s from axial and coronal projections were most strongly
ated with age, sex, BMI, history of myocardial infarction, a
y of hypertension.

p learning-based model can predict incident cardiovascular
ity beyond prevalent cardiovascular risk factors and CAC s
said.

acknowledged the limitations of their research, including its
pective nature and the need for external validation. The gro



NEWS | ULTRASOUND

Sound waves ease pain by influencing brain area

gretto

Low-intensity focused ultrasound could help ease pain by manipulating the area of the brain that registers pain, a proof-of-principle study published February 10, 2015, in *NeuroImage*.

Researchers led by Wynn Legon, PhD, from the Fralin Biomedical Research Institute at VTC (Virginia Tech Carilion) found that low-intensity focused ultrasound can nonsurgically modulate the anterior insula and posterior insula, with participants reporting lower pain levels after undergoing the procedure.

“Taken together, low-intensity focused ultrasound is an effective noninvasive method to individually target subregions of the insula in humans for site-specific modulation of brain biomarkers of pain processing and autonomic reactivity. This study shows that modulation of the insula leads to reduced perceived pain to a transient heat stimulus,” Legon and colleagues wrote.

“This research has explored the potential of noninvasive techniques for pain management. Low-intensity focused ultrasound is one such method, which nondestructively and reversibly changes brain activity with high spatial resolution and adjustable depth of focus.

The research team investigated whether low-intensity focused ultrasound applied to the anterior or posterior insulae would affect the amplitude of the cardiac cycle. They looked at potential pain ratings or heart rate variability. The insula

Participants rated their pain perception for each heat application on a scale. The researchers also observed heart rate and heart rate variability in each participant to find out how ultrasound waves delivered to the brain affect the body's reaction to painful stimuli.

The study found that the participants reported an average pain reduction of one-fourths of a point. It added that the pain decrease was more pronounced when ultrasound waves were delivered to the posterior insula.

The researchers said this difference, while seemingly small, could make a significant difference in quality of life or managing chronic pain with non-opioid medicines instead of prescription opioids.

The researchers also reported that the use of ultrasound reduced physiological responses to the stress of pain. They explained that ultrasound waves delivered to the posterior insula affected earlier electroencephalogram (EEG) waves while waves to the anterior insula affected later such as beta waves.

The study also found that ultrasound waves delivered to the anterior insula affected heart rate variability as indicated by an increase in standard deviation of normal-to-normal intervals.

Hospimedia Expo
World's Medical Device Marketplace



Samsung's X-Ray Devices to Be Powered by Lunit AI Solution for Advanced Chest Screening

edImaging International staff writers

ed on 17 Jan 2024



hcare (Suwon, South Korea) and Lunit (Seoul, South Korea) have collaboration to integrate Lunit's AI technology into Samsung's devices, enhancing the accuracy and speed of chest screening. ns of the three-year supply contract, Lunit will provide two AI-screening solutions: Lunit INSIGHT CXR and Lunit INSIGHT CXR Samsung. INSIGHT CXR is an AI-powered chest X-ray analysis e capability to detect 10 of the most common lung abnormalities, cancer, pneumonia, and pneumothorax. INSIGHT CXR Triage is d AI solution that can identify pre-specified critical findings, such ion or pneumothorax, on frontal chest X-ray images. The software images in the Picture Archiving and Communication System ation, enabling a prioritized review process for timely intervention. ncy of cases generally experienced in Intensive Care Units (ICUs) y Rooms (ERs), Samsung's X-ray devices with the Lunit INSIGHT be mainly deployed in these high-stakes medical settings. During e of this collaboration, Samsung's X-ray devices integrated with ions will target markets in the US, Canada, and Europe. In the ilability of these devices will be expanded to the Middle East, and Southeast Asia, thus broadening their global reach. between Lunit and Samsung Electronics will enable faster, more screenings, leading to timely interventions and improved patient d Brandon Suh, CEO of Lunit. "We're excited about the potential o holds for advancing chest X-ray practices, particularly in ICUs



Image: The Lunit INSIGHT CXR AI-powered analysis solution (Photo courtesy)

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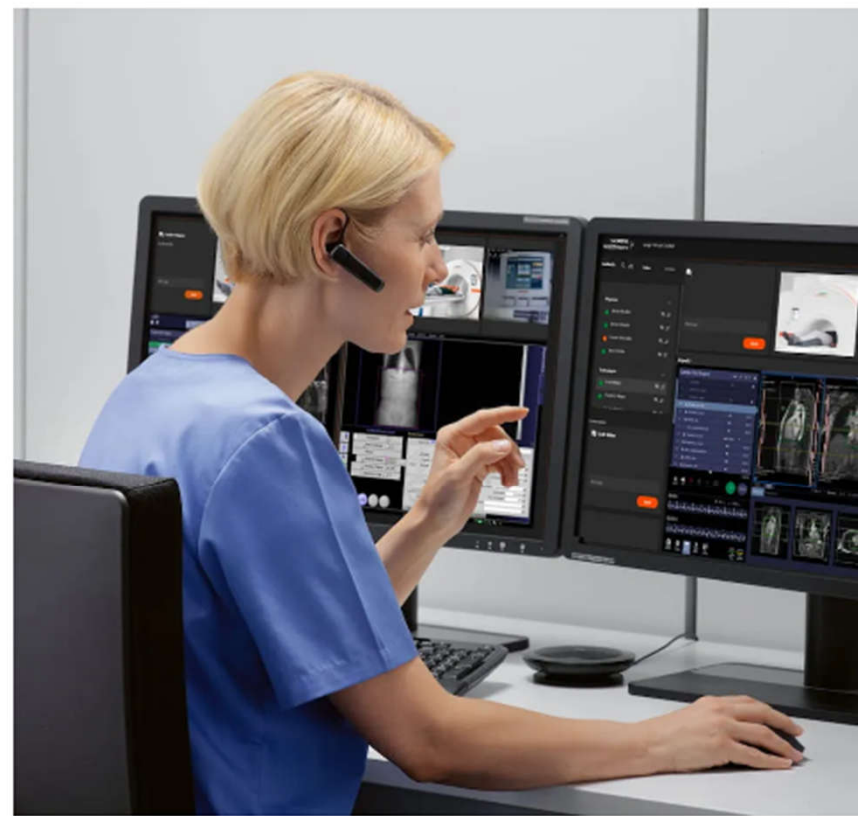
ears Remote Scanning Software with MRI, CT and PET Capabilities

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nd Drug Administration (FDA) has granted
ance for the *syngo* Virtual Cockpit, a multi-
ote scanning platform that may help facilitate
ccess to advanced imaging for patients in
tions.

Virtual Cockpit enables remote access for
omography (CT), magnetic resonance imaging
ron emission tomography (PET) and single-
sion CT (SPECT) imaging, according to
ealthineers, the manufacturer of the software.
y said the remote platform also features live
hat functionalities to foster collaboration
nicians across multiple sites.

possibly facilitating improved standardization for imaging of remote patients, Siem
suggested the *syngo* Virtual Cockpit could be utilized in training staff at remote fa
earance means that our customers can use *syngo* Virtual Cockpit for their remote
with even more confidence that they are using a proven solution — one that prioritiz
onvenience while also addressing operational and staffing challenges,” noted Pete
al and automation at Siemens Healthineers North America.



The Food and Drug Administration (FDA) has granted 510(k) clearance for
Virtual Cockpit, a multi-vendor remote scanning platform that may enable access to
positron emission tomography (PET) imaging for patients in remote

oc > Khoa học trong nước

, 11/2/2024, 11:53 (GMT+7)

Kỹ sư GenZ làm ứng dụng trí tuệ tạo miễn phí cho người Việt

ề nước, Nguyễn Hoàng Quân cùng các cộng
LM, phát triển hệ thống trí tuệ nhân tạo (AI)
cho người Việt sử dụng trong các lĩnh vực
khách hàng với hơn trăm nghìn lượt tải mỗi

/2023, Nguyễn Hoàng Quân, 25 tuổi, cùng các
Phạm Nhật Huy, 23 tuổi, kỹ sư trí tuệ nhân
aloAI và Đào Minh Dũng, 24 tuổi, nghiên cứu
University of Cork, Ireland, đồng sáng lập tổ
lợi nhuận VILM, với mong muốn giúp người
trải nghiệm công nghệ AI tiên tiến nhất một
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6 tháng nghiên cứu và ứng dụng, nhóm

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hoặc hỏi đáp miễn phí.

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Safetensors Model size 7 Tensor type B

Text Generation Model is too large Inference API. To Inference Endpoi

Finetuned fr Xem t



Aa