Silicon Valley's quest to live forever now includes \$2,500 full-body MRIs

Proponents of Prenuvo scans argue that they should become as routine as a mammogram or colonoscopy. Celebrit and venture capitalists are flocking to a growing number of clinics — and flooding social media with chic scan pics.



By Elizabeth Dwoskin

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Jessica Jensen always thought of herself as a healthy enough person. The Silicon Valley executive ate well and worked out once a week — all while juggling a job managing 500 people and her daughter, a soon-to-be middle-schooler.

But in spring 2021, she heard about Prenuvo, a boutique clinic offering a "full-body MRI." While MRIs are typically used to diagnose a particular problem, Prenuvo touts the service as a routine preventive measure, like a colonoscopy or a mammogram. Jensen was intrigued, and her husband persuaded her to try the scan on the eve of her 50th birthday.

The day after the scan, which cost \$2,499 out of pocket, a Prenuvo nurse called to tell Jensen the MRI had detected a hard-looking two centimeter cyst on her pancreas. Doctors confirmed her fears: She had stage 1 pancreatic cancer.

Jensen, who had surgery to remove the mass — along with a third of her pancreas and her entire spleen — credits Prenuvo with <u>saving her life</u>.

Cancers among younger Americans is on the rise

"Doctors think that this is frivolous and extravagant and looking for problems that don't exist," said Jensen, the chief marketing officer for the job site Indeed. "... I think that's a pretty big hole in our medical consciousness."



Jessica Jensen credits Prenuvo with saving her life.

She's one of a growing number of evangelists of the full-body scan, a trend that has taken hold among wealthy denizens in places like Silicon Valley and Los Angeles. Though no official medical body has sanctioned the practice, celebrities and venture capitalists are flocking to a growing number of clinics — and flooding social media with chic scan pics.

Though scanning companies say they aim to lower the cost of screening, right now full-body MRIs exist in a parallel medical system that serves the one percent. Kim Kardashian recently <u>posted</u> about her own scan, which she described as a "life saving machine" and hash-tagged #NotAnAd. It also signals the next phase of the quantified self movement, which started among Silicon Valley engineers and entrepreneurs who argued they could "biohack" their way to extended longevity by making health decisions based on reams of personalized data.

By measuring the world, humans changed it

"For a lot of people with money here — especially post 2021 — the next frontier is your health," said Kat Manalac, a partner at the start-up incubator Y Combinator.

Flush with cash from a recent series of public offerings in tech, a younger moneyed generation has taken that ethos even further. They are funding a new wave of quantified health start-ups that promise elevated, individualized care powered by data and artificial intelligence.

These include primary care clinics like <u>Forward</u> Health, which offers "real-time" bloodwork, biometric monitoring, and preventive genetic counseling. There is Everlywell, which advertises home test kits, which detect problematic gut bacteria and food allergies, on Instagram. There's Signos, which uses continuous glucose monitoring patches to offer real-time dietary and exercise recommendations via an app. A number of start-ups, including Ezra and Neko Health, also offer full-body scans.

One Ezra investor, Bryan Johnson, who sold his company Braintree to PayPal for \$800 million a decade ago, says he spends \$2 million on his own health annually. Earlier this year he received a <u>blood plasma transfer</u> from his 17-year-old son as a wellness experiment.

A recent <u>survey</u> of 3,000 Americans by A/B Consulting with the venture capital firm Maveron found that wealthier Americans — who made over \$250,000 a year — were willing to go to extreme lengths to live longer. This includes paying out of pocket for risky new therapies, like gene editing. Manalac noted that social media advertising had propelled the popularity of scans — a pandemicera trend in which medical experiences are being sold directly to consumers online.

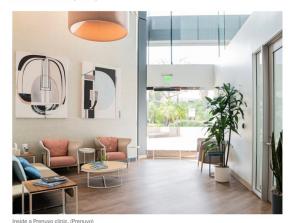
Silicon Valley elites' latest status symbol: chickens

The financial backers of Prenuvo, Ezra, and other full-body-MRI companies are themselves some of the early biohackers. Anne Wojcicki, the CEO of genetics company 23andMe and the ex-wife of Google co-founder Sergey Brin, funds both Ezra and Prenuvo and has spent years tracking her own health. Another Ezra funder, Esther Dyson, attended early meetups where people would exchange health-log spreadsheets, she said in an interview.

Prenuvo funders include former Google chairman Eric Schmidt, supermodel Cindy Crawford, prominent venture capital firms, and the creator of Nest thermostats. Swedish company Neko Health was founded by Spotify CEO Daniel Ek. The company claims its technology can collect 50 million data points about the body in minutes.



A Prenuvo MRI machine. (Prenuvo)



"The future of health is all about taking a 360-degree view of your body across all the different dimensions," said 37-year-old Emi Gal, a software engineer who founded Ezra in 2018.

Gal himself wears two different health trackers — one on each wrist — and takes custom-made dietary supplements, which are personalized based on his bloodwork. Every night, for the past eight years, he has filled out his "LifeLog" — a color-coded Google spreadsheet where he tracks his sleep habits, his oxygen levels, his bone density and the strain on his heart, along with 154 other data points about his body.

The former ad-tech entrepreneur's obsession with health-tracking stems from his childhood, when he developed more than 200 moles, predisposing him to skin cancer. "I've been getting biopsies and having moles removed all my life," he said.

While many of Ezra members are bio-hackers, Gal estimates two-thirds are "cancer-conscious," people who have lost loved ones to cancer and want to manage their anxiety. Another subset is Gen Z. "They don't drink, they wear trackers, they spend most of their disposable income on supplements and Instagram workouts," he said.

Public health experts agree that many cancers are caught too late, and urge new methods of early detection. For the eight most common cancers, the 10-year survival rate is more than 90 percent when cancer is diagnosed at Stage 1, compared with 5 percent when the disease is found at Stage 4, according to Cancer Research UK.

No major medical establishment has said the full-body MRI is an appropriate solution. Imaging tests sometimes lead to harmless findings known as "incidentalomas." The process can take patients on an anxiety-ridden merry-go-round of follow-up testing and potentially complicated procedures, which carry their own risks.

Is it time to stop using your fitness tracker?

"Incidental findings are overwhelmingly benign," said Saurabh Jha, associate professor of radiology at the Hospital at the University of Pennsylvania, and an outspoken <u>critic</u> of the scans. But the only way to know if something is benign, he argued, is to keep getting scanned — which is costly to the individual and to the health system.

"We've learned that there is this silent reservoir of disease that lives in most people, and that subtle disease has a lot of overlap with being completely normal," he said. "At some point you can't tell the difference between the two."

In April, the American College of Radiology released a statement saying that there was "no documented evidence that total body screening is cost-efficient or effective in prolonging life." The American College of Preventive Medicine has recommended <u>against</u> it, though the recommendations mostly address the risks of CT scans, which, unlike MRIs, subject patients to potentially harmful radiation.



Proponents of the scans say that the solution for false positives is, ironically, more scanning, which allows radiologists to get an individualized baseline for each patient.

"The fallacy of the anti-screening arguments is that they assume that the more you scan, the more scary things you'll see, and the more unnecessary procedures you'll cause," said Daniel Sodickson, a professor of radiology at New York University and an adviser to Ezra. "But the more you scan, the less you'll have to freak out about because the doctor will be more familiar with that particular person."

There is limited large-scale data on people who have undergone full-body MRIs because the practice is new. The companies say their rates of false positives are very low, but that it's too early to release any statistics.

Prenuvo CEO Andrew Lacy pointed out that the <u>mammogram</u> was invented in 1913, but it wasn't until the 1980s that insurers began to subsidize the screening. Society must catch up to the practices being pioneered by elites at the frontiers of the health system, the founders say.

<u>Health panel recommends women get screening mammograms at age 40</u>
The companies are also hard at work building <u>artificial intelligence</u> to bring down the costs of scans. Because of advancements in image recognition AI, Ezra says it's aiming to offer a \$500 15-minute full-body scan in the coming years — much less than the \$2,350 the company currently charges for its most thorough scan.

But they acknowledge that their clients are essentially test subjects in a vast experiment to prove that the practice is beneficial on a large scale — the only potential path to getting the scans covered by insurance.

Few of these subjects seem to mind. "My wife and I have four young daughters and can afford this extra precaution — of course we're going to do it," said Joe Lonsdale, an investor and co-founder of the data company Palantir.

Gal argues that decisions that seem reasonable on a population level don't always translate to an individual. "If you go to an epidemiologist and ask should we be screening 30-year-olds for cancer, they will say no way," he says. "But what if you're the 30-year-old who happened to have a headache that turned out to be brain cancer?"

Raj Attariwala, who co-founded Prenuvo in 2018, spent a decade building custom software to allow an MRI to scan an entire body with accuracy. An engineering PhD before going to medical school, he tinkered with MRI machines in his Vancouver, B.C., radiology practice, taking out a \$3 million line of credit to buy his own.



Prenuvo co-founder Raj Attariwala. (Prenuvo)

Getting an MRI at his Silicon Valley clinic — which borders Atherton, America's priciest Zip code — is a more luxurious experience than a standard hospital MRI.

AI can detect breast cancer as well as radiologists, study finds

Patients at the clinic, one of eight Prenuvo has nationwide, are greeted by a cheerful MRI technician. During the procedure, clients are propped up with weighted sandbags for comfort, covered with blankets, and offered Netflix, to filter out the loud drumming noise. Because people have to fast for several hours before getting a full-body scan, Prenuvo offers gobs of free snacks. A sign on a changing room door asks people to tell their MRI tech if they want their photo taken for Instagram.

Attariwala was proud to show off his custom software, which scans 33 body parts and is layered on top of a recently-purchased Siemens and Philips MRI machines. "You can't hide anything from this," he said. He showed how his software could detect subtle details, such as if a person is breastfeeding or the hardness of a mass — a key indicator of a potential cancer.

When The Washington Post asked him what it was like to be on Kardashian's reality show, Attariwala said that he found "Kimberly" relatable — a mom with four kids who comes to Prenuvo for the same reasons as anyone else. "She just wants to stay on top of her health," he said. "She just wants to stay alive for them."



By Elizabeth Dwoskin

Lizza joined The Washington Post as Silicon Valley correspondent in 2016, becoming the paper's eyes and ears in the region. She focuses on social media and the power of the tech industry in a democratic society. Before that, she was the Wall Street Journal's first full-time beat reporter covering AI and the impact of algorithms on people's lives.

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