

Faculty Spotlight:

Eleni Linos

*Professor of Dermatology at Stanford Medicine and,
by courtesy, of Health Research and Policy (Epidemiology)*



Next-Generation Public Health

Eleni Linos, MD, DrPH, a professor of dermatology, has multiple professional passions—skin cancer prevention, caring for vulnerable populations, and teaching students. She joined the Stanford faculty in the spring, with a remarkable track record in each and a fierce desire to continue to pursue them all in radically new ways.

The Media is the Message

One of boldest themes in Linos' work is her focus on how to use technology—social media in particular—to improve health behaviors. Linos brings with her a New Innovator award, one of the National Institute of Health's highest honors, for her work in examining the use of online and digital tools for cancer prevention. Her award has funded a pilot study investigating the effectiveness of using digital messaging on Instagram and Facebook to convince young people not to use tanning beds, which increase the risk of melanoma—the second most common cancer in women between 20 and 29 years old.

“Conventional messages are probably not effective,” Linos says. “They use fear as their main strategy, and we know that fear doesn't work.” Her team's systematic review found that, when you put together all the tanning bed prevention messages coming from the top organizations on Facebook over the course of one year, on average they garner about 100 likes or shares per message. By contrast, she and her colleagues created a prevention campaign involving Instagram influencers, celebrities, and parody song videos. “We took this approach because these are the messengers and the messages that young people listen to,” says Linos. In 10 days, they reached more than a million young women in the six states with the highest use of tanning beds and the weakest legislation the week before prom. “We had the right message for the right people at the right time,” says Linos. Her next steps will be to study whether this approach changes actual behaviors.

A Social Media Lab

Linos hopes to make Stanford a next-generation nexus of public health by establishing a Social Media Lab. “I want to create a new way for the medical and research community to collaborate with technology companies to use the power of social media to help people live healthier lives,” says Linos.

Her work in technology goes beyond cancer prevention. She has worked with groups of people with rare skin diseases who have felt shamed and mistreated by physicians and sought help from online communities instead. And, in collaboration with artificial intelligence experts and psychologists, Linos has studied how digital assistants on mobile devices, such as Siri, respond to requests for help concerning

suicidal ideation, domestic abuse, and rape. As a result of her research, published in the Journal of the American Medical Association, Apple reprogrammed Siri with helpful responses. “In public health, it usually takes us decades to effect change. When Apple reprogrammed its iPhone a week after our study came out, I was shocked,” recounts Linos. “I realized then that collaboration with technology companies is essential if we really want to have an impact on people’s lives.”

“Stanford’s proximity to Silicon Valley makes this exactly where I should be to make this work happen,” she says. “I’m thrilled to be here.”

Vulnerable Populations

Linos’ other passion is framed in a Mentorship Award that she received from the National Institute of Arthritis and Musculoskeletal and Skin Diseases. With it, she will mentor the next generation of physician scientists, while pursuing research on vulnerable populations. “I am very interested in geriatric dermatology as well as skin cancer prevention among racial, ethnic, and sexual minorities” says Linos. “This award allows me to explore my passion for caring for vulnerable populations while supporting trainees from diverse backgrounds.”

Linos, who grew up in Greece, has done remarkable work in skin cancer care among older adults there. She recently completed a pilot study on the island of Ikaria, famous for its longevity. “Traditionally, we are taught that every skin cancer should be removed,” says Linos. “But not all cancers are equally dangerous, and this paradigm is being challenged in other cancers like prostate or breast cancer especially, if the risks of treatment outweigh the benefits.” In her pilot study of the natural history of untreated low-risk basal cell tumors, Linos found that, after two years, only about 50 percent of them grew. “I was surprised to see that a small number of cancers actually spontaneously regressed on their own,” says Linos.

Based on her results, she hopes to study the natural history of low-risk basal cell cancers in the United States and develop ways to help frail elderly patients, who may struggle to make it to the doctor, monitor their skin from home using imaging technology. “Getting to the doctor is not always easy for a frail older adult,” says Linos. “Imaging technology can help facilitate urgent visits when necessary, while avoiding unnecessary visits.”

Education

Linos left her native Greece to attend Cambridge University in the United Kingdom. After completing her undergraduate studies there, she attended Oxford University for her medical degree. Linos came to the United States in 2003 to acquire a master’s degree in public health, followed by a PhD in epidemiology at the Harvard T.H. Chan School of Public Health. After her residency at Stanford, Linos worked at UCSF for eight years, becoming an associate professor of epidemiology and biostatistics.

Linos now lives in Menlo Park with her husband and two children. “Having trained at Stanford, it feels like I am back home,” she says. “I am excited to be back and inspired to tackle major public health problems in order to ultimately have a positive impact on people’s lives.”

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