

OHSU releases Mole Mapper ResearchKit app to track potential skin cancers

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Oregon Health & Science University today released an iPhone app designed to advance melanoma research by giving users the ability to accurately measure and monitor moles, and contribute photos of how their potential trouble spots evolve over time. Called Mole Mapper, the app is free to download from the App Store and was developed using ResearchKit, an open source framework developed by Apple.

Equipping individuals en masse to use their iPhone cameras to chronicle subtle changes in spots on their skin, and share that photographic data with scientists, will accelerate an interactive, grassroots-style public health initiative underway at the OHSU Knight Cancer Institute to better understand the precursors for lethal melanomas and make headway in reducing deaths from the disease.

Mole Mapper allows individuals to photograph and measure mole sizes relative to a common reference object, like a coin, over time. In addition to providing a more accurate method for tracking, the [app](#) gives individuals the opportunity to contribute to a melanoma research initiative.

Dan Webster, a cancer biologist, created this app to help monitor his wife's moles between visits to the dermatologist. He then teamed with OHSU's Sancy Leachman, M.D., Ph.D., chair of the Department of Dermatology in the OHSU School of Medicine and director of the OHSU Knight Cancer Institute's Melanoma Research Program. Sage Bionetworks, a nonprofit research institute whose efforts are aimed at

leveraging the power of science to solve complex scientific problems, is a key partner and world leader in managing and analyzing big data.

"It's amazing to think this app—something I created in my spare time—now has the capacity to involve so many people in the fight against melanoma," said Webster. "Tracking your moles on your phone now gives you the opportunity to contribute to cancer research. It's incredible."

App users can maintain their images exclusively on their phones for later sharing with a dermatologist; or, after signing an electronic consent form, they can enroll in the OHSU Knight Cancer Institute Melanoma Community Registry to learn more about current research and educational opportunities focused on early detection, prevention and survivorship. Since Leachman launched the registry in 2014, more than 3,600 melanoma survivors, family members and friends have joined. Her hope is that the Mole Mapper app will expand that number into the tens of thousands.

"Our hypothesis is that digital images taken by members of the public on cell phones could one day be used to develop diagnostic algorithms for melanoma," said Leachman. "To test this theory, we need a large number of images, and that's where our partnership with Apple and Sage Bionetworks is key."

"This is just the beginning of the War on Melanoma," added Leachman. "We now have the unprecedented opportunity to bring in more data than ever to fuel research. This can be another tool to empower patients to take charge of their health monitoring. It also gives health care providers additional data to inform patient recommendations and diagnoses."

The earlier melanoma is detected, the more likely it can be cured. The data collected with the Mole Mapper app will help inform research into

the types of changes in skin that are the most meaningful in detecting lethal forms of the disease. This data will complement other efforts underway at the OHSU Knight Cancer Institute's Melanoma Research Program and Department of Dermatology to better understand the biological drivers of [melanoma](#) so the disease can be more effectively detected and treated.

The OHSU Knight Cancer Institute recently raised \$1 billion to fund, among other things, the launch of a large-scale program to advance the early detection of lethal cancers. The campaign was fueled by a \$500 million pledge from Nike co-founder Phil Knight and his wife Penny.

More information: itunes.apple.com/us/app/id1048337814

www.molemapper.org/

Provided by Oregon Health & Science University

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