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PHARMA HIGHLIGHTS

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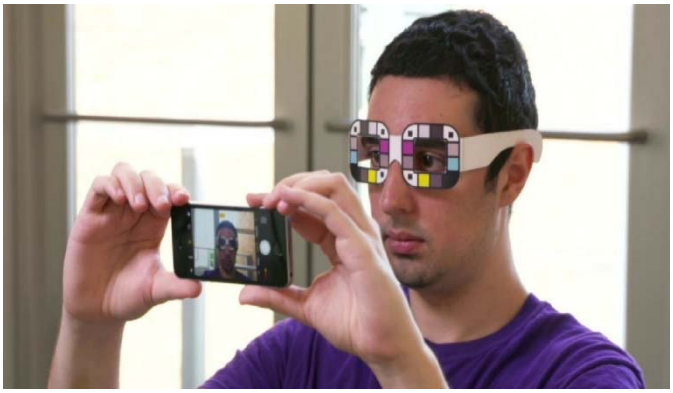
Pancreatic Cancer Detection? There's a Selfie App for That!



BiliScreen, the first of its kind is a diagnostic selfie app. Developed by researchers at the University of Washington, BiliScreen is so named because it uses computer vision algorithms to analyze a person's eyes for increased bilirubin levels.

One of the more common early symptoms of pancreatic cancer is jaundice, the yellowing of the skin and eyes. Jaundice is caused by the buildup of bilirubin, a yellow-brown substance produced by the liver as part of bile. While blood tests can quantify levels of bilirubin, this method is invasive and has to be done by a medical professional. Furthermore, if people aren't coming in for regular checkups, they may not know to ask for a bilirubin blood test.

Based on these clinical observations, the research team engineered an app that can detect whether a person's eyes have higher bilirubin levels than normal. In theory, all a person would need is a smartphone that can take their selfie. The app would do the rest – alerting them to seek medical care if their eyes show more yellow than normal. In an early trial of 70 people, researchers show the app can correctly identify "cases for concern" in almost 90 percent of the time, as compared to traditional bilirubin blood tests. So far, the app requires users to wear special glasses or a 3D-printed light-controlling box that normalizes the eyes' exposure to light. The team wants to optimize further and reduce the need for these extra add-ons.

Source: http://www.washington.edu/news/2017/08/28/new-app-uses-smartphone-selfies-to-screen-for-pancreatic-cancer/

New Study Favors Fat Over Carbs

High carbohydrate intake is associated with a higher risk of mortality, and high fat intake with a lower risk, according to a recent study. An international team of scientists studied diet and mortality in 135,335 people between 35 and 70 years old in 18 countries, following them for an average of more than seven years. Diet information were dependent on self-reports, and the scientists controlled factors including age, sex, smoking, physical activity and body mass index.

Compared with people who ate the lowest 20 percent of carbohydrates, those who ate the highest 20 percent had a 28 percent increased risk of dying earlier. But high carbohydrate intake was not associated with cardiovascular death. People with the highest 20 percent in total fat intake — an average of 35.3 percent of calories from fat — had about a 23 percent reduced risk of death compared with the lowest 20 percent (an average of 10.6 percent of calories from fat). Consuming higher saturated fat, polyunsaturated fat and monounsaturated fat were all associated with lower mortality. Higher fat diets were also associated with a lower risk of stroke. Interesting! Isn't it?!

Source: http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(17)32252-3/fulltext

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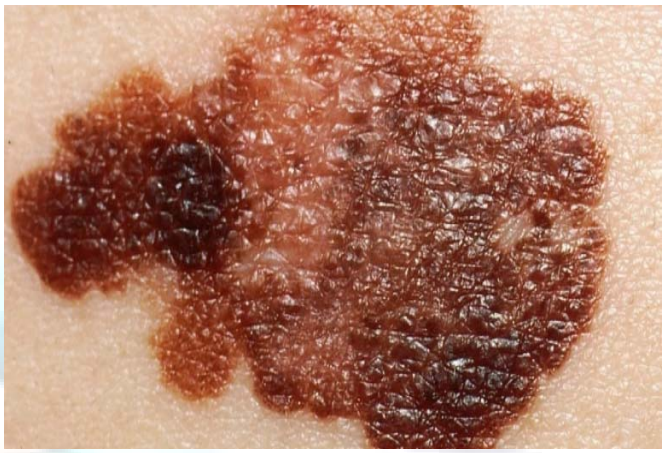
Most Melanomas Begin as New Moles

Some scientists argue that melanomas grew from existing moles in a small percentage of cases, while others found a larger correlation. The disparities between these studies, according to the authors of the current study, may stem from research focusing on different aspects of the cancer.

In the new study, the team took a simplified approach. They compared the rate of melanoma that seemed to be associated with moles (nevus-associated melanomas) versus those melanomas that were new (de novo melanomas). After analyzing over 20,000 melanomas in 38 studies, the team found that nearly 71 percent of melanomas were of the de novo type. That is, an overwhelming majority of melanomas came from new growths. Melanomas that came from a pre-existing mole accounted for about a third of the cases. One other interesting link pertained to melanoma's origin. The team found that melanomas that grew from existing moles were more likely to be thinner spots with better prognosis. This finding reiterates the importance of self-exams to catch the more serious melanomas that grow from out of nowhere.



Source: http://www.sciencedirect.com/science/article/pii/S0190962217320510

Lipoxin: A New Drug for Heart Attack Recovery

Lipoxins are right in the middle of the action when it comes to the immune system and have been used to treat inflammatory disorders, renal fibrosis, and even cancer because of it. They are known to be anti-inflammatory, making them the perfect candidate for reducing chronic inflammation following a heart attack.

The immune response following a heart attack isn't inherently harmful. The first wave is an acute inflammatory response, where white blood cells flow into the heart tissues to remove dead cells and begin building scar tissue to replace them. After this, the immune response begins the healing process. These two reactions are normal and healthy. But when the initial stage of acute inflammation turns into chronic inflammation, that's a problem. Over time, excessive inflammation leads to swelling in the heart's left ventricle, ultimately resulting in congestive heart failure and death.

Researchers found that giving mice a form of lipoxin called 15-epimer lipoxin A4, also known as "aspirin-trigger lipoxin A4," improved heart function after a heart attack by boosting activity during the healing phase but leaving the acute inflammation phase alone. With this effect, lipoxin reveals its therapeutic potential as a post-heart attack treatment.

Source: http://www.uab.edu/news/innovation/item/8659-a-bioactive-molecule-may-protect-against-congestive-heart-failure-after-heart-attacks