

TechTitans  
**Forums**  
Health Technology

# Welcome to the TechTitans



**slalom**

July 29, 2016



# The Bleeding Edge of Health Technology

## Hot Trends & Cool Devices

TechTitans  
**Forums**  
Health Technology

slalom





# Bleeding Edge



*Improved Technology*

*Cutting Edge*

**Game Changing**  
INNOVATION

**Disruptive**

*So cool...*





## Artificial Heart - then

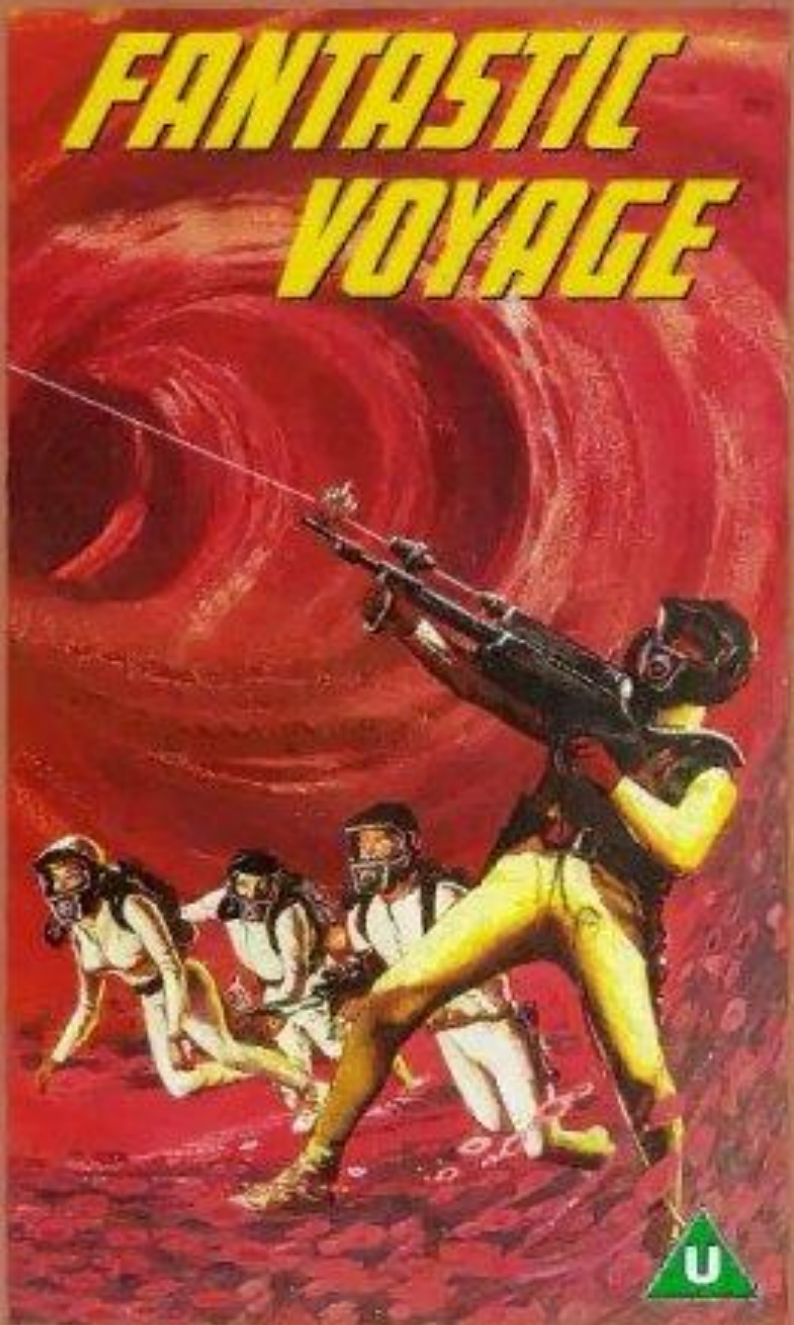
- 1982
- 1<sup>st</sup> Patient: Barney Clark
- Jarvik 7 Heart
- Temporary
- Still awaiting a donor

## Artificial Heart - now

- 2016
- Similar to original heart
- Pump in a backpack
- Permanent solution



WIDESCREEN SERIES



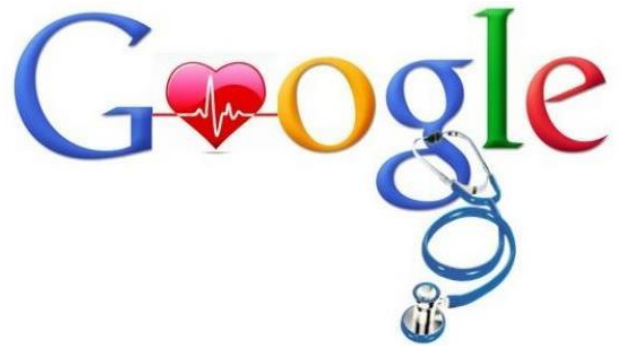
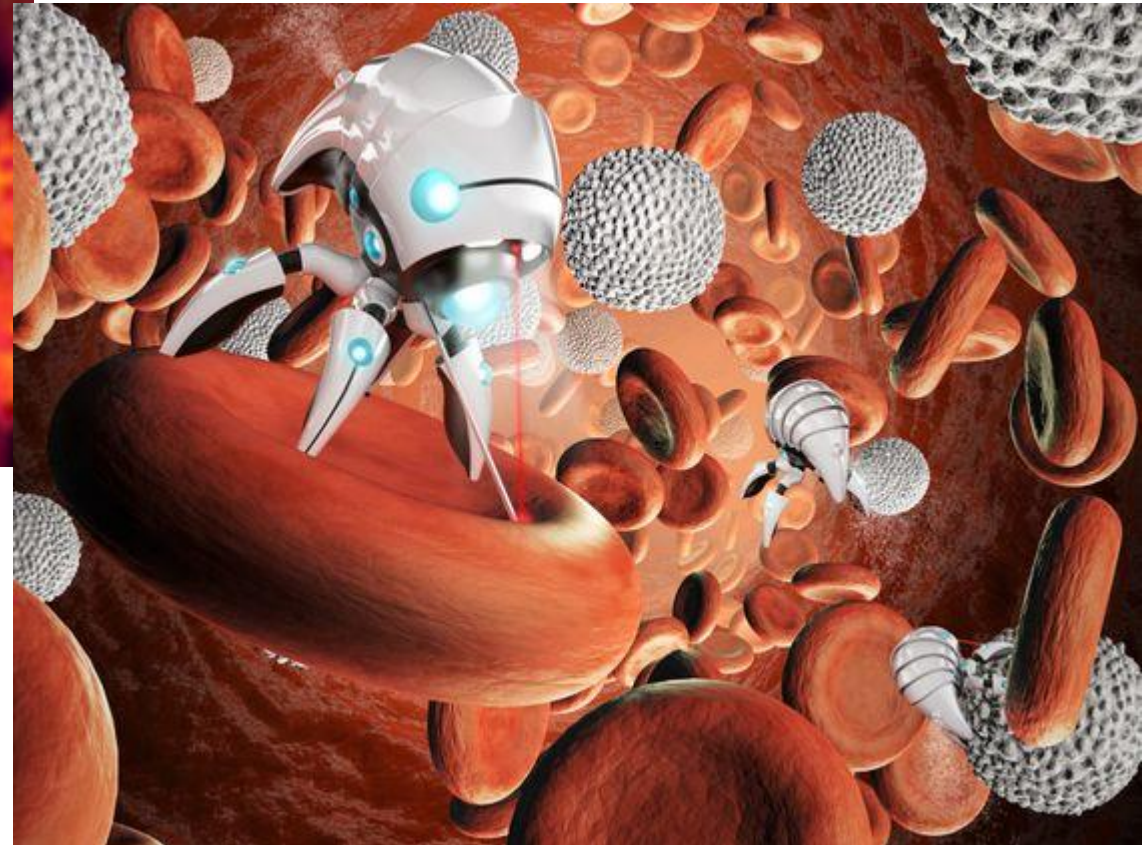
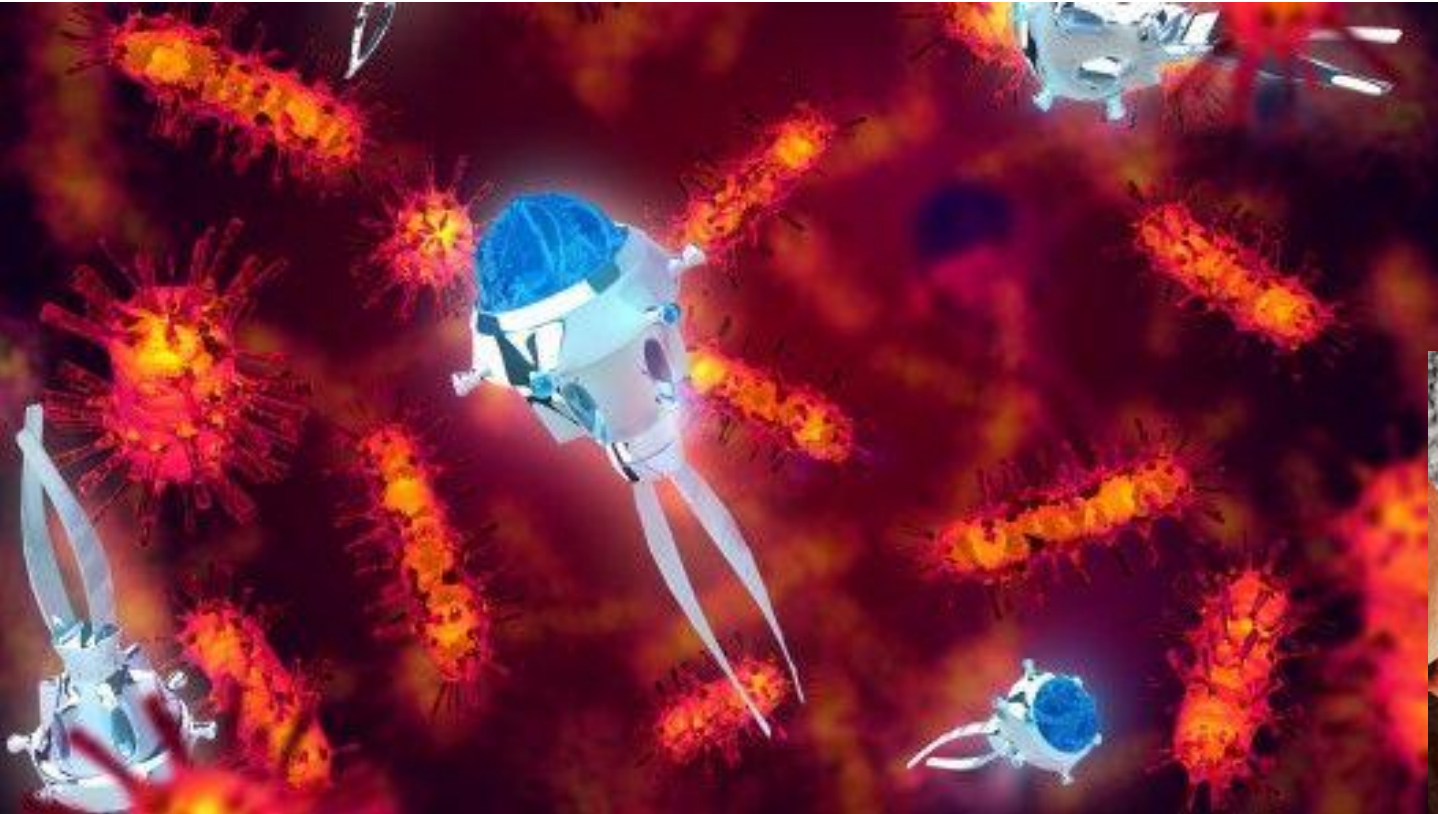
1966



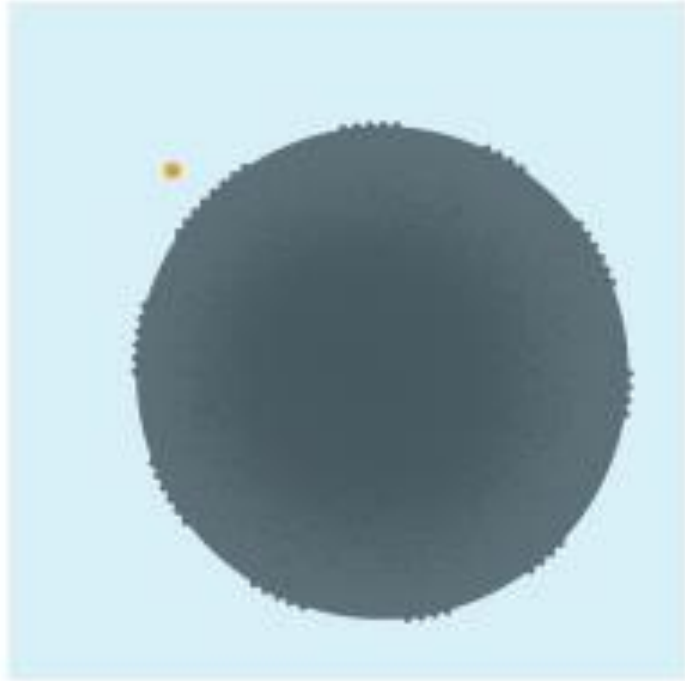


# WAY OUT THERE ON THE “BLEEDING EDGE” of TECHNOLOGY

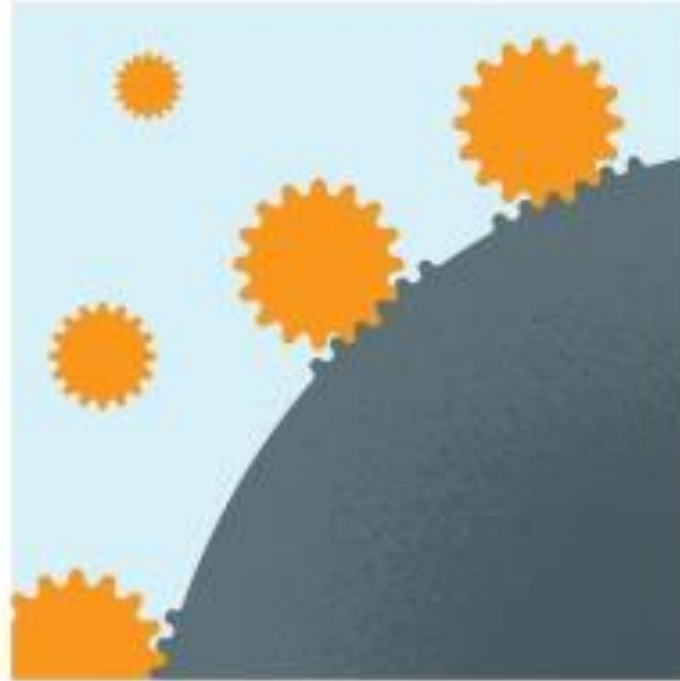
## Nanotechnology - Nanobots - Nanoparticles



**Verily (GLS)** is designing tiny magnetic particles to patrol the human body for signs of cancer & other diseases.



Nanoparticles are really small—more than 2,000 nanoparticles could fit inside one red blood cell.



Nanoparticles circulate in the blood and can be designed to attach to particular types of cells, such as circulating cancer cells.



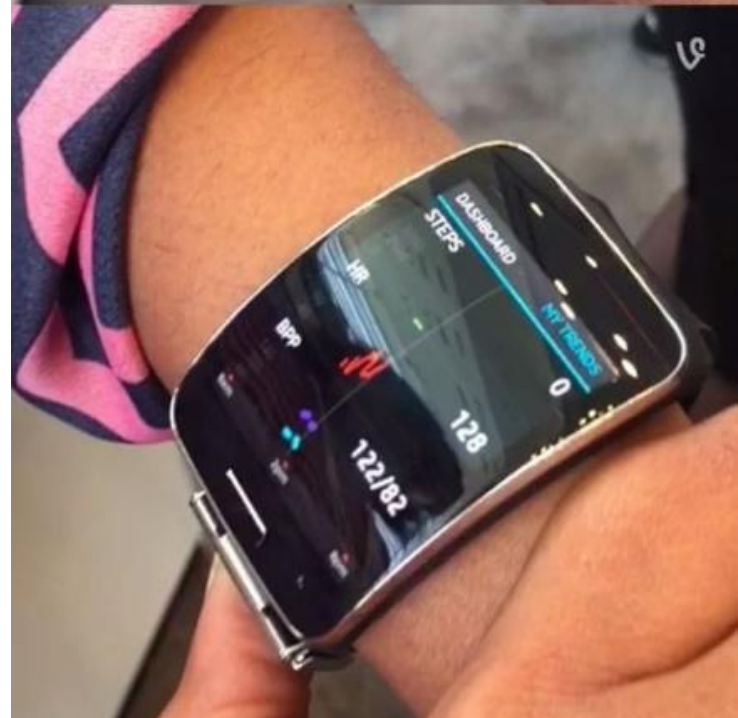
A device worn on the outside of the body can detect the nanoparticles and provide useful information to physicians.





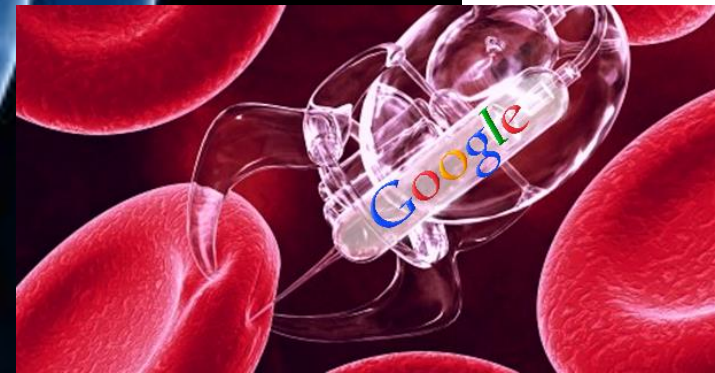
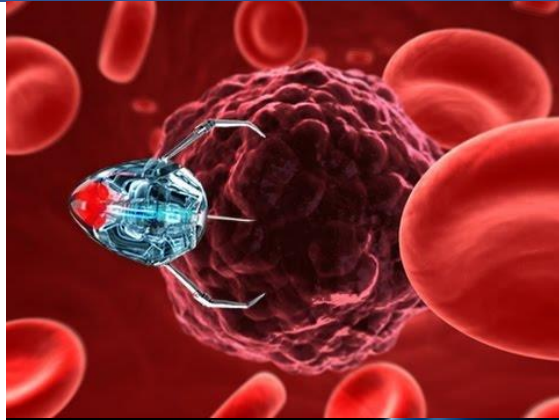
Wearable watches that can measure multiple metrics:

- HR, BP, Temp
- Report disease alerts
- Functional changes





Nanoparticles capable of targeting cancer tissue in the lungs. They release their payloads only once they reach the site of the tumor → reduce dosages and limit the side effects of conventional treatments.





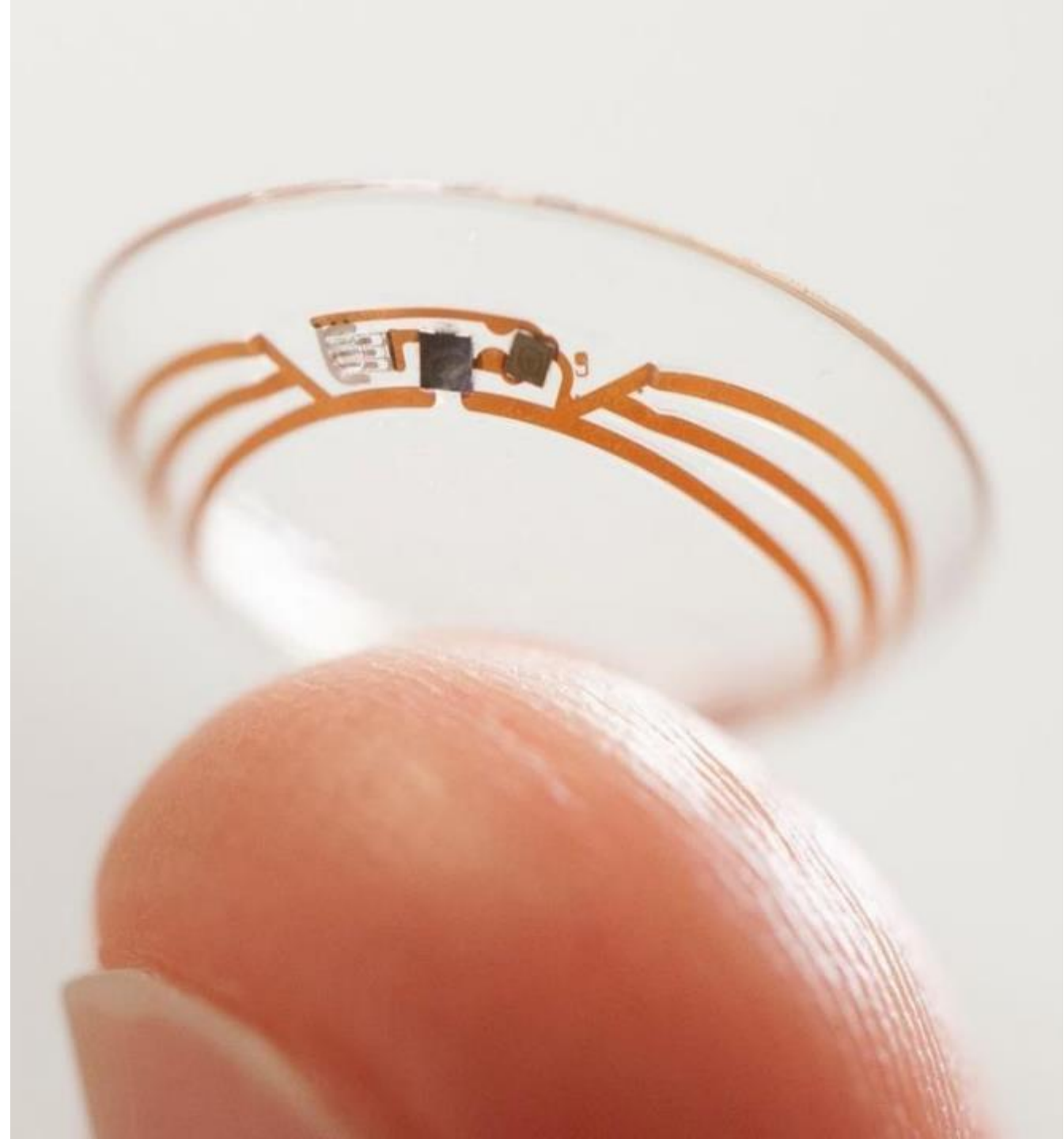


[Novartis](#)'s **Alcon** eye care division has agreed to license "smart lens" technology from [Verily](#).

The technology is a way to embed contact lenses with noninvasive sensors, microchips, and other electronics.

#### Applications:

- helping diabetic patients manage their disease by measuring glucose levels in eye fluid using a smart lens connected wirelessly to a mobile phone.
- measuring other parameters to track health





# Measuring SWEAT



## **Electrolytes**

- Sodium
- Chloride
- Potassium
- Calcium

## **Metabolites**

- Lactate
- Creatinine
- Glucose
- Uric acid

## **Small Molecules**

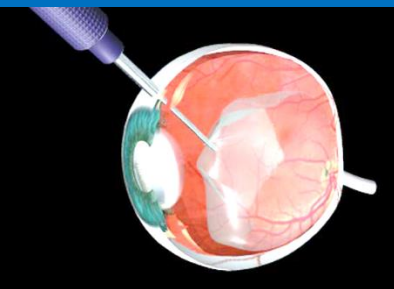
- Amino acids
- DHEA
- Cortisol

## **Proteins**

- Interleukins
- Tumor necrosis factor
- Neuropeptides



# Tracking Patient Progress between Physician Office Visits

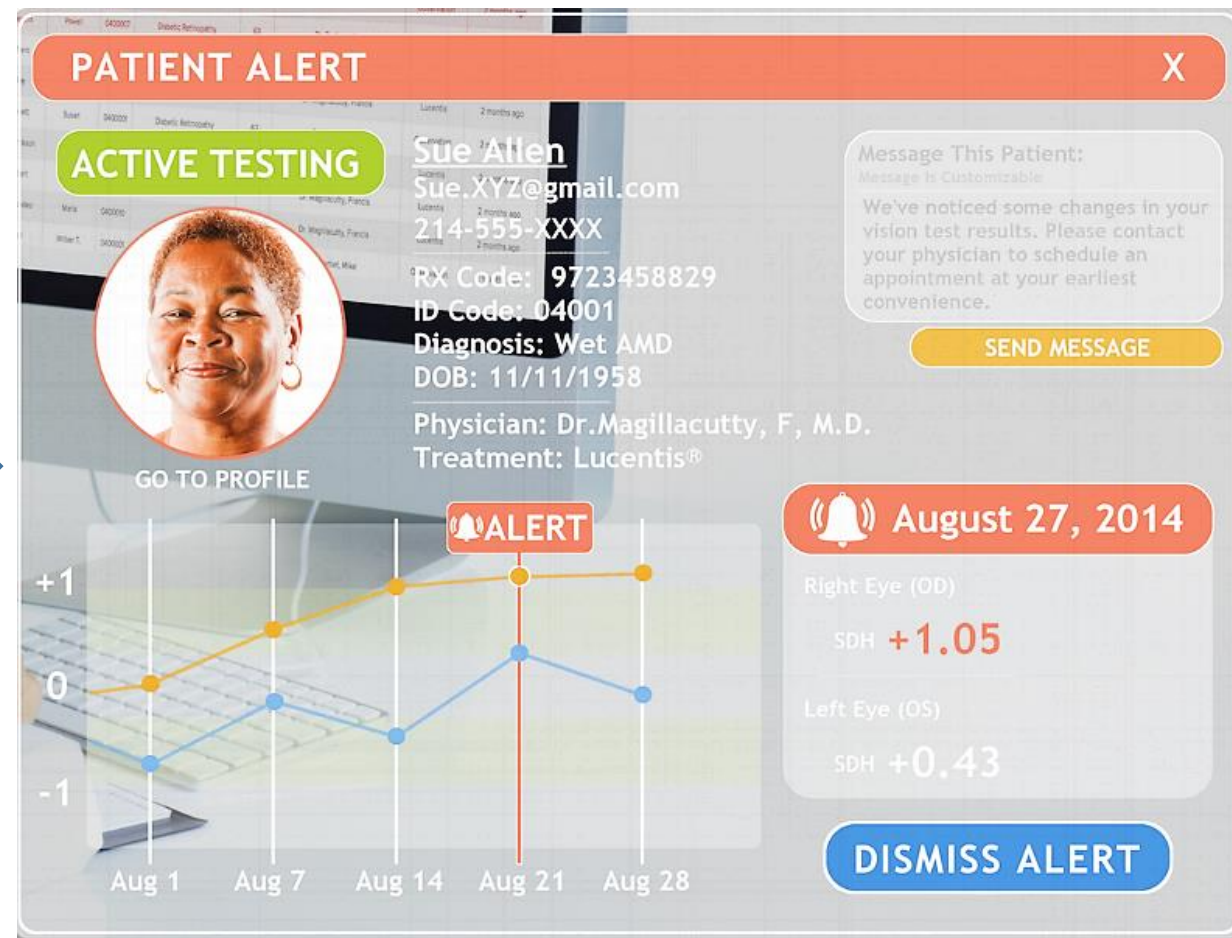
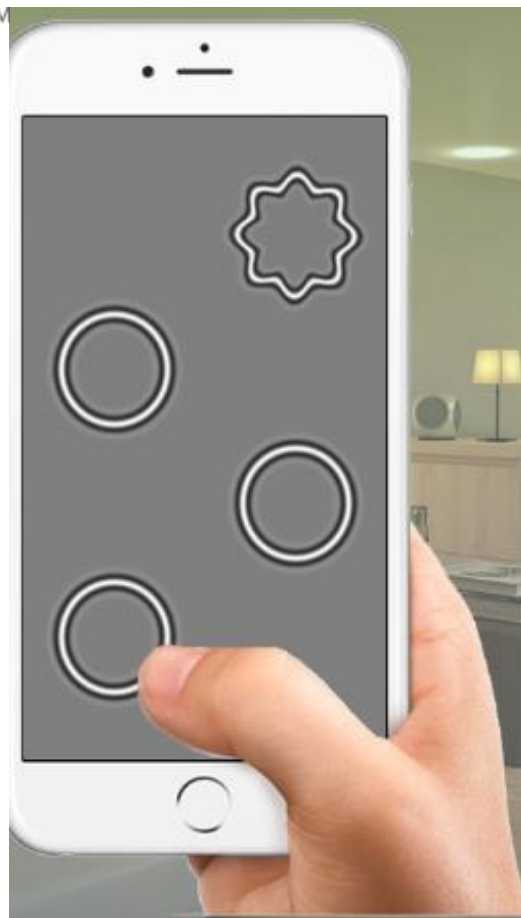


**mVT**  
myVisionTrack<sup>®</sup>

Irving, TX



**DIGISIGHT**  
TECHNOLOGIES





# New Imaging Technology Would Let Cellphones See Through Walls & Bodies

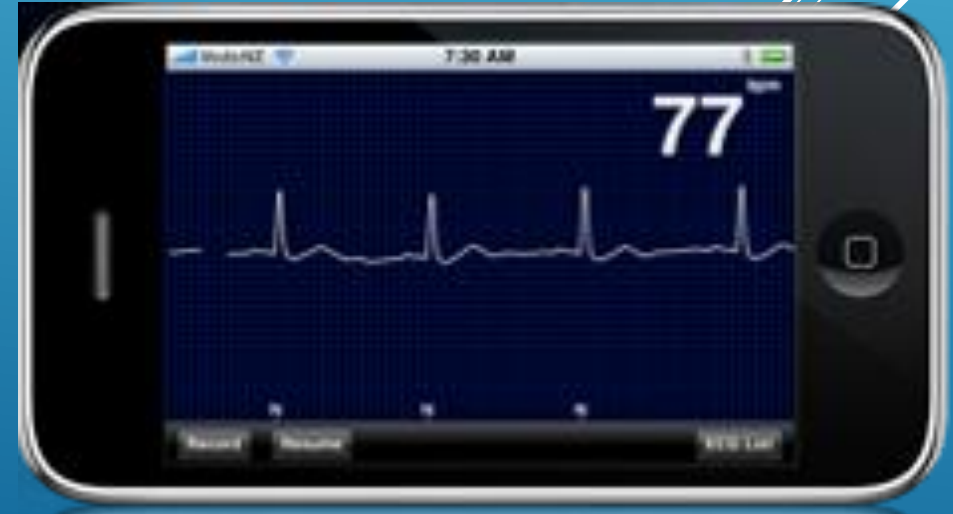
## Implication for Telemedicine

- Locally
- Regionally
- Globally
- In Outer Space





"The Doctor will see ~~you~~ IT now"







### Cupris Otoscope Story



Smartphone-connected Otoscope and software platform for remote diagnosis



Sonogram



Tele-Dermatology



Retinal Exam



Spirometry



Cortisol Test

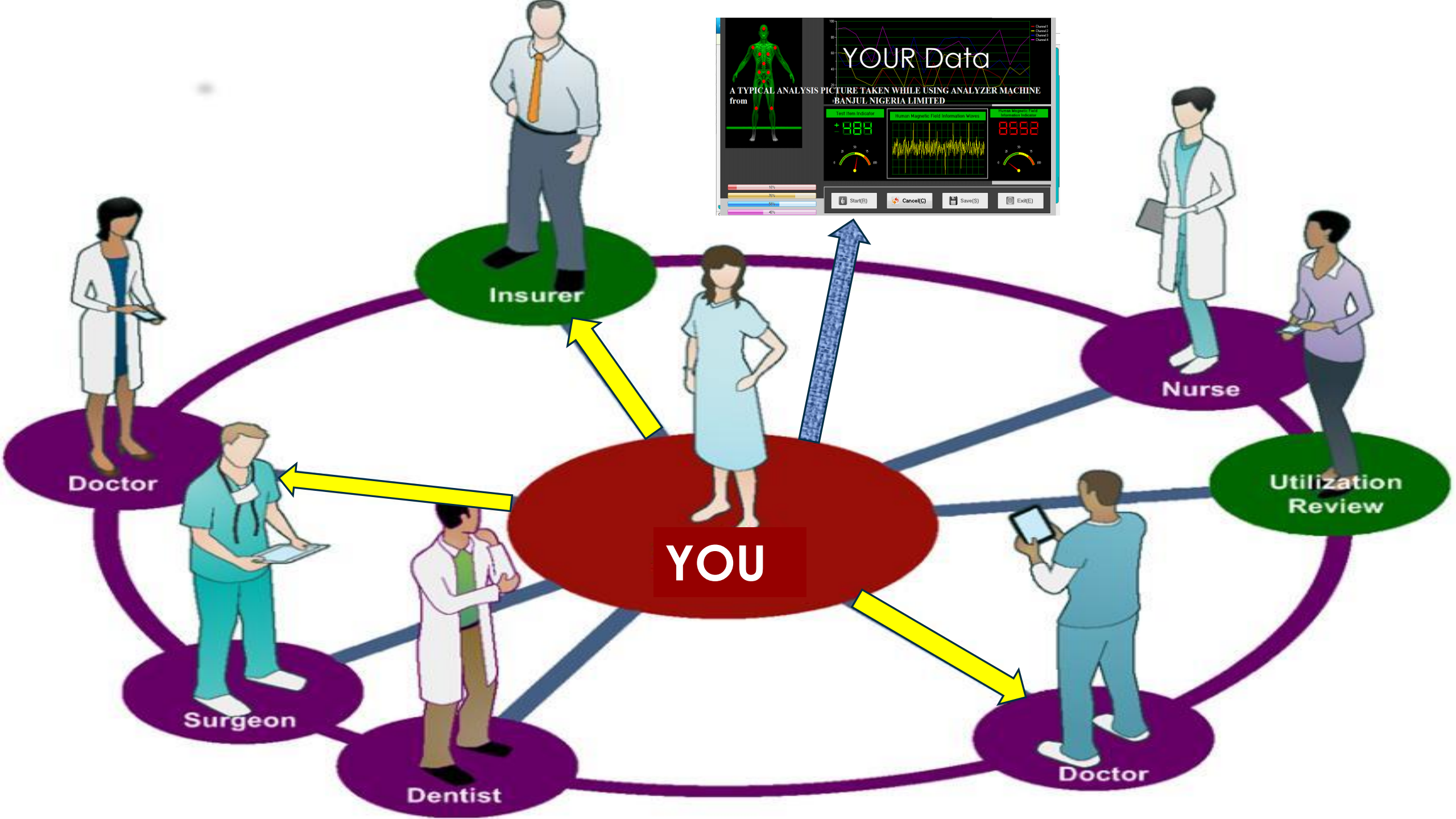


Diabetes





## Early Training For Health Self-Management And Telemedicine







# slalom

mHealth

Ophthalmology, Oncology  
User Experience, Digital App

## Making it possible to see an ER doctor from anywhere in minutes

### BACKGROUND

StatDoctors was formed by seasoned ER physicians that wanted to improve access to affordable urgent care for common medical conditions. Their answer: telemedicine. The company relies on eVisits to provide patients with personalized, timely, and efficient consultation, diagnosis, and treatment from the convenience of a phone, computer, or mobile device.

StatDoctors' virtual visit model connects patients with quality care—in six minutes or less, on average—whether on the road or at home, 24 hours a day, seven days a week. Its eVisits extend care to those without access to same-day care and field non-medical emergencies that might otherwise be treated in an ER or urgent care center. StatDoctors is working to reduce the cost of healthcare while increasing patient satisfaction, convenience, and quality of care.

### PROJECT

After learning that 60 % of users were accessing physicians via smartphones, StatDoctors wanted to improve access to emergency medical care, through a mobile app. The app was designed with a user focus in mind. Once a patient has registered, the app is a one-touch eVisit system. First, verify location and connectivity. Next, identify symptoms. Then, hit the virtual waiting room and wait - 6 minutes on average - to "see" the physician. In addition to briefing the provider on symptoms, the app brings them up to speed on patient profile and history. The app then replicates a face-to-face doctor-patient visit, thanks to **two-way video chat**. Discuss your symptoms, get a diagnosis and a prescription, and you're on your way.

### RESULTS

The client experienced the following benefits as a result of the project:

- Position as an industry leader while providing quality, convenient patient care, with high quality care completely on-the-go
- **New value proposition around costs savings / ER visits reductions**
- Speedier development velocity, as we helped establish a process for mobile developments

# Making it possible to see an ER doctor from anywhere ...in minutes



## Online Medical Consultation

Stat Doctors mobile app provides members with 24/7 access to quality care for minor illnesses and common medical conditions.

In just minutes, you can have a secure eVisit with a Stat Doctors board-certified emergency physician anytime, anywhere and from the convenience of your mobile phone.

Slalom was able to deliver this experience to both iOS and Android devices by leveraging the Xamarin cross-platform development framework.

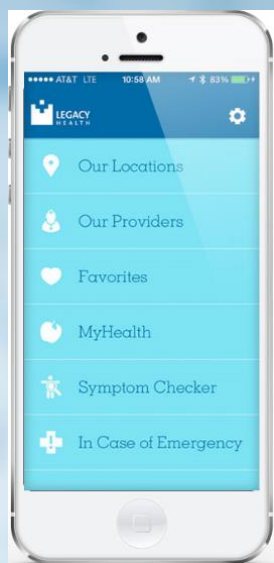




## Mobile Health

MyGroupHealth enables members of Group Health Medical Centers to **make appointments, e-mail medical the team, see lab and test results, get routine care reminders, check immunization history, see allergies and health conditions, check symptoms, map medical facilities, call access 24/7 for professional medical advice, and see lab and pharmacy wait times at clinics.**





## Patient - Powered Healthcare: Putting Information in the Hands of Patients

### BACKGROUND

Legacy Health, an Oregon based health System, wanted to help its patients take control of their care. They reached out to Slalom to build upon the launch of their new responsive website, with the idea of creating a mobile app that gave **patients access to their personal care information anytime, anywhere.**

### PROJECT

The Slalom digital team helped Legacy design and develop a **patient mobile app for iOS and Android**. The App incorporated the needs of patients, physicians, and clinics. The features included:

- Emergency lock-screen wallpaper
- MyCards: Track health insurance information
- MyHealth to communicate with doctors & clinics, get lab results, appointment information, current medications, immunization hx.
- Provider directory, Locations
- Text or email information to friends and family
- Push messaging

### RESULTS

Legacy Health is now the first health system in Portland to offer its patients a robust mobile app. More importantly, **it's empowering the people and communities it serves to take control of their healthcare.** With expanded mobile access to their personal health details, Legacy's tech-savvy patients have better control of their health care and outcomes.



# Developing a patient focused mobile app platform

## BACKGROUND

**Biogen** is aiming to **develop tools to help patients with long term chronic conditions fit therapies into their lives more easily. As with other chronic, long-term conditions, getting MS patients to take their medication consistently over time can be a challenge. Unrealistic treatment expectations, poor patient education, side effects, memory issues and lack of positive reinforcement are just some of the barriers MS patients face every day.**

## PROJECT

**Slalom is helping Biogen outline an overall global mobile app strategy** to be able to effectively deliver apps that will help both patients and HCPs worldwide. As part of this, **Slalom is building a new global mobile app platform which provides functionality for patients to learn more about MS, set up personalized medication reminders, and track daily wellness to help motivate patients and maintain treatments.**

## RESULTS

Biogen will now have a now have a **global mobile app platform** which provides a standard set of mobile capabilities, infrastructure and operating model to allow them to deploy apps quickly. The platform will give Biogen a consistent mobile presence globally and is being built in a manner in which Biogen's affiliates in dozens of countries across the world will be able to easily localize the capabilities to deploy apps in their regions more easily and at a lower cost.

# Giving patients the freedom to manage their healthcare

## BACKGROUND

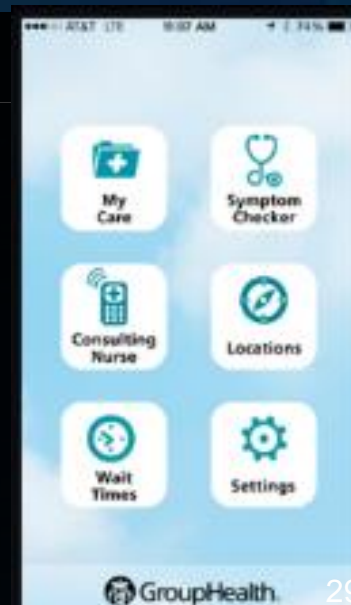
When Group Health wanted to **connect its members with their health information**, Slalom helped build an app that gave them the freedom to manage their care on their terms. Medical care can be confusing, but managing and accessing your personal health information shouldn't have to be. Group Health wanted to bridge the gap between exam room and real world by connecting its 600,000+ members with their care information.

## PROJECT

Group Health asked our mobile team to help build **a robust mobile app that would give members the freedom to engage in their care on their own terms**. From prototype to final delivery, the members' needs came first. We worked with Group Health to gather input from members to make sure that the app included the services and features that matter most, including: **My Care, Consulting Nurse, Symptoms Checker, Locations, Wait Times**.

## RESULTS

Group Health's award-winning Tech Award app put it on the charts as **the first mobile app to provide consumers with their personal health information**. Members get secure, anytime-anywhere access.







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