

Non-Invasive Continuous Blood Glucose Monitor (NICBGM) for Diabetics

John Hubert

VP of Engineering

SMART MedTech

Improving Diabetic Health through Innovation



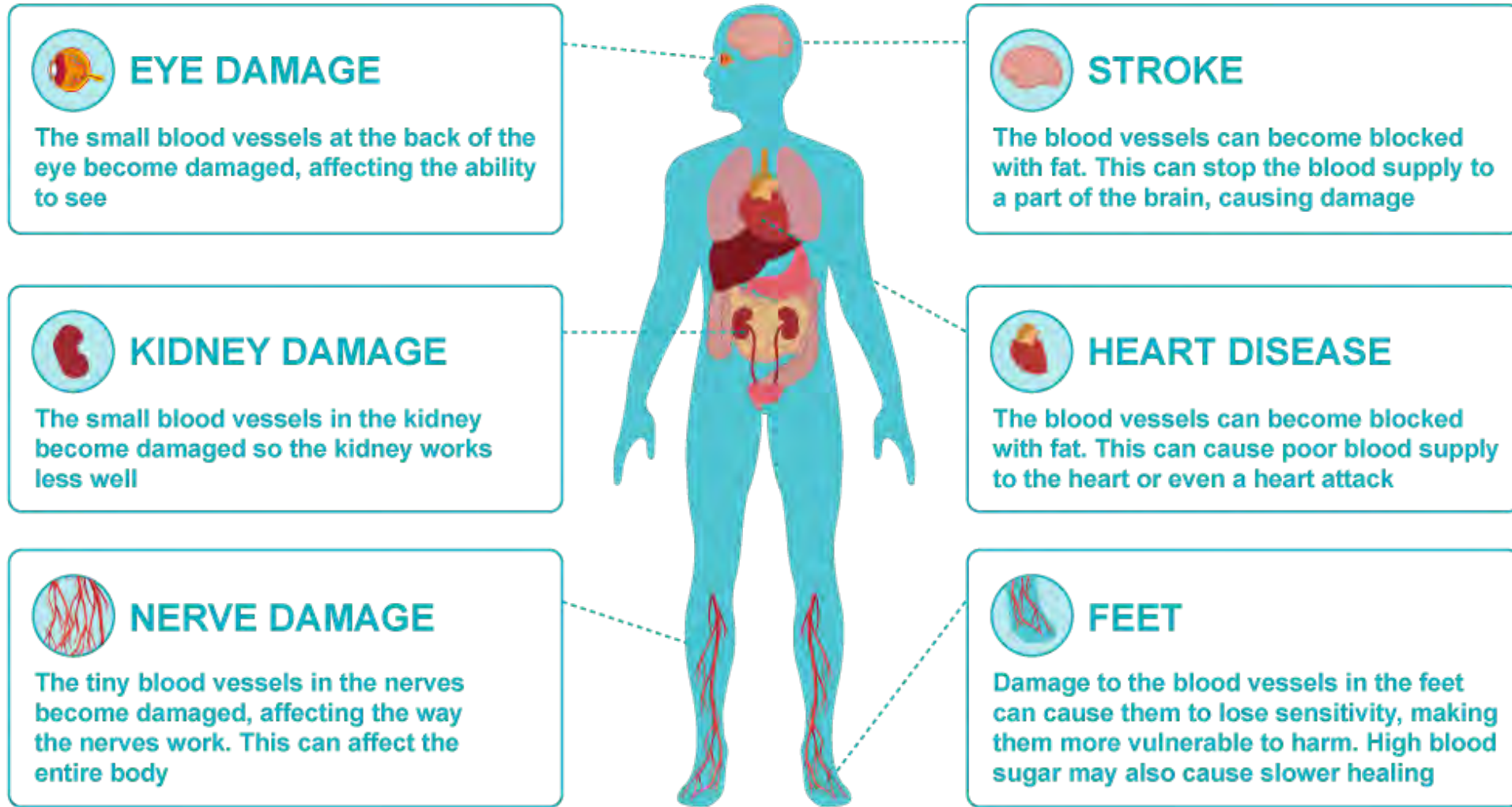
Susan Rippen: Alertgy Test Subject



Marc Rippen, founded Alertgy after he saved his wife, Susan, a Diabetic, from slipping into a low blood sugar induced coma, one Sunday morning in 2016.

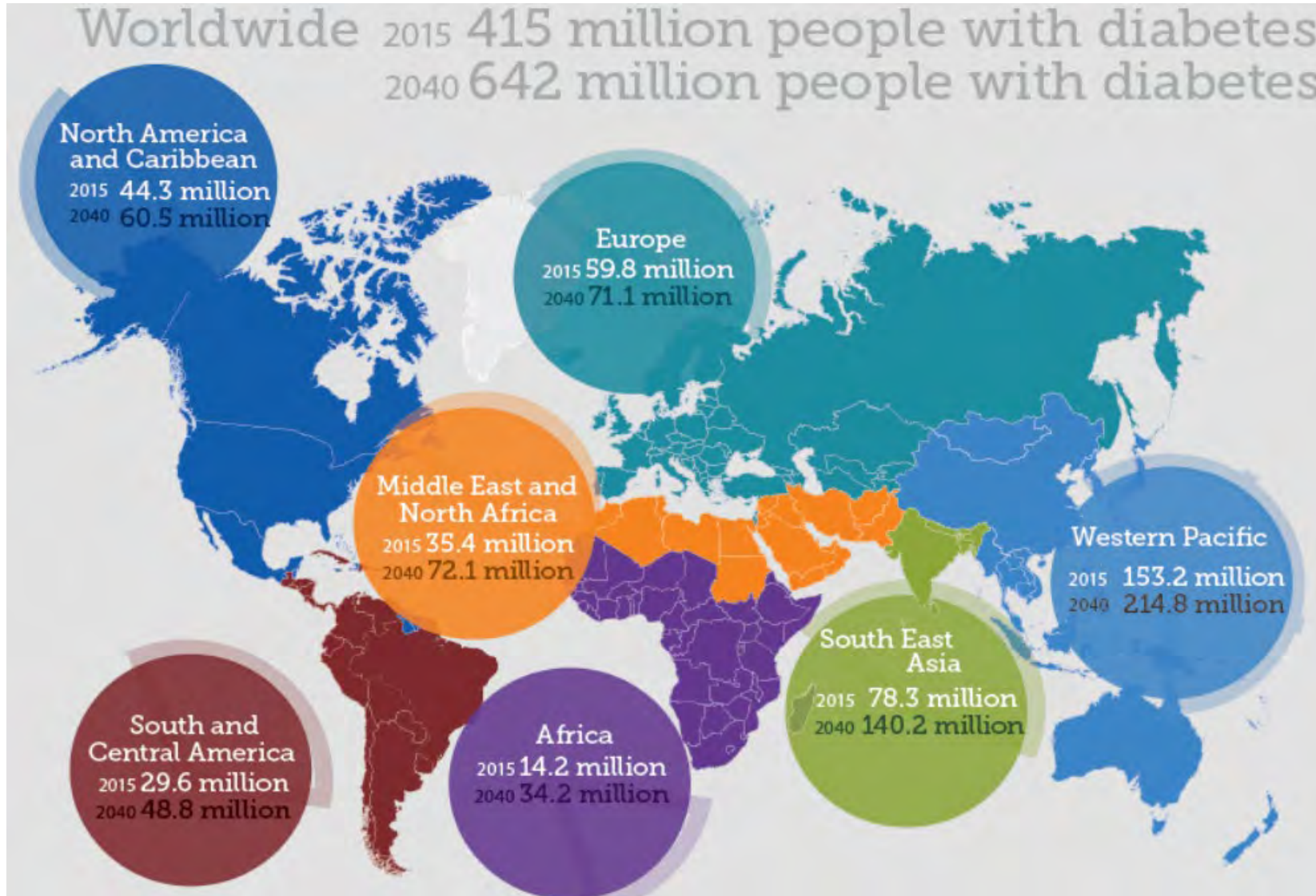
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Why Treat Diabetes?



Hospitals could delay surgery

422 Million Diabetics & Growing



studioadelasia.wordpress.com

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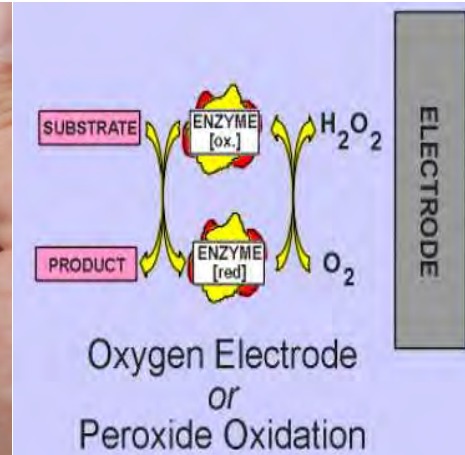
Current Technology for Diabetics

20-30 year old chemical reaction based old technology , **>90% diabetics** use Self Monitoring Blood Glucometers (SMBGs) that require blood to be drawn to test.

Others use Continuous Glucose Monitoring (CGMs) devices that require sensors to be implanted under the skin that must be replaced every few days.

SMBG

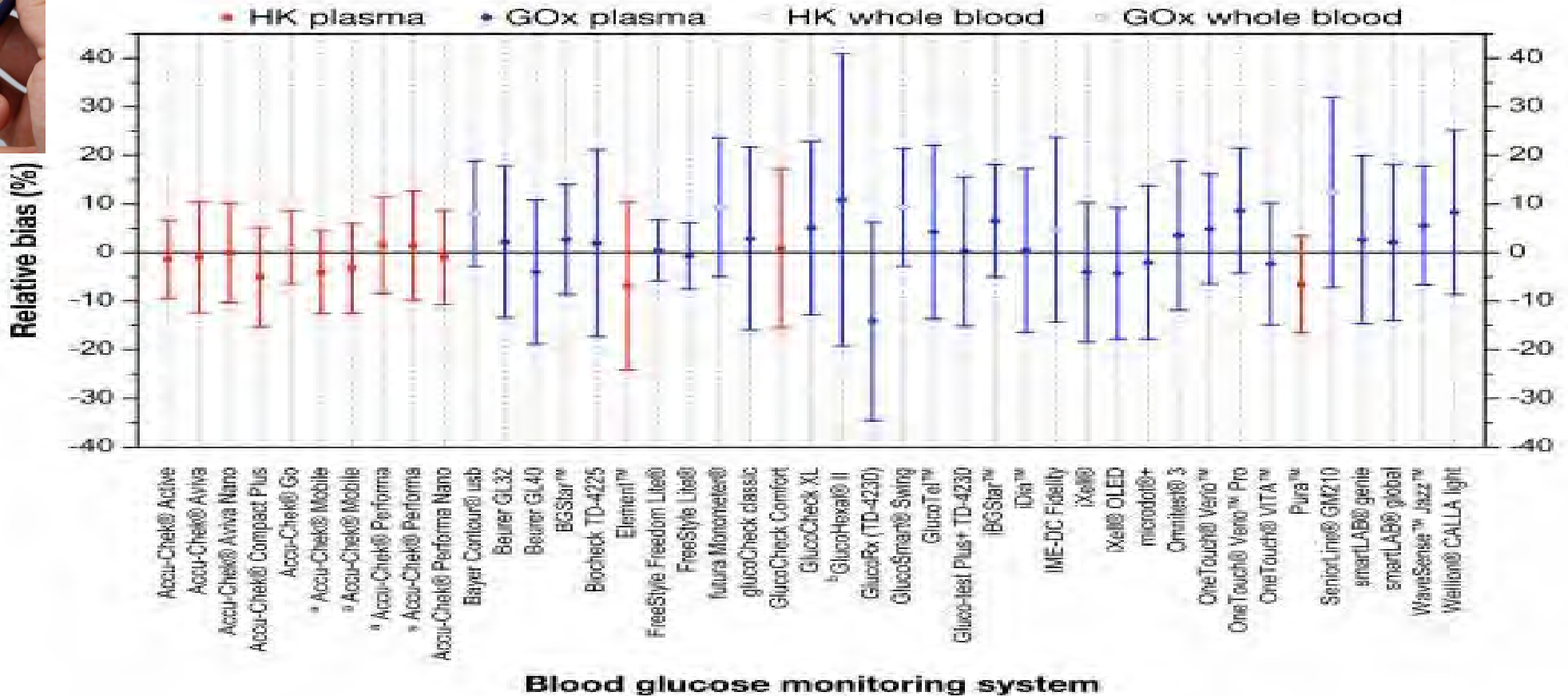
- Invasive
- Painful
- Manual
- No alerts
- No trending
- Messy



CGM

- Highly Invasive
- Painful
- Glucose Time Lag vs SMBG
- Expensive
- Painful
- Must be Replaced Every 5-14 days

Self Monitoring Blood Glucose Systems

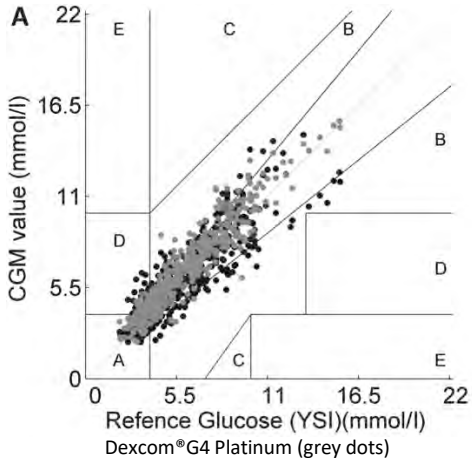


Blood glucose monitoring system

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3570840/figure/fig01B/>

A Alertgy

Improving Diabetic Health Through Innovation



DEXCOM
CONTINUOUS GLUCOSE MONITORING

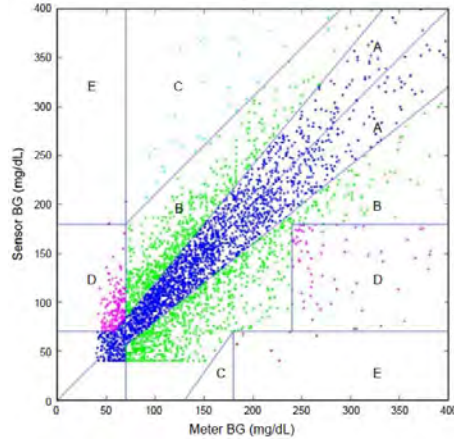


DexcomG6

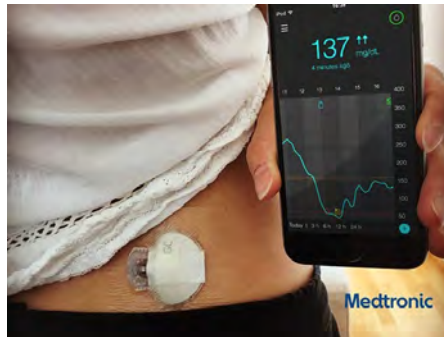
Performance of a Factory-Calibrated, Real-Time Continuous Glucose Monitoring System in Pediatric Participants With Type 1 Diabetes



Continuous Glucose Monitors

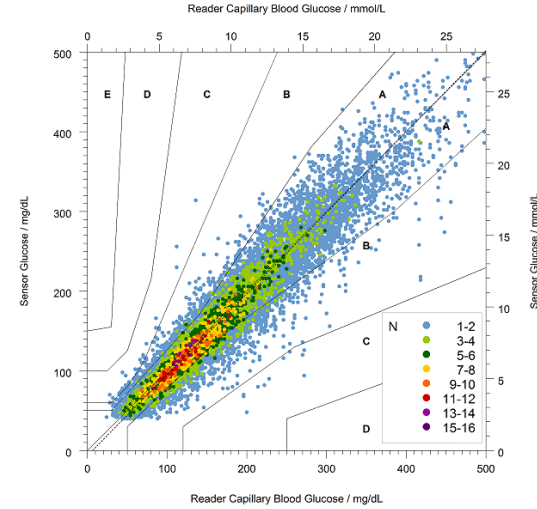


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Guardian Connect

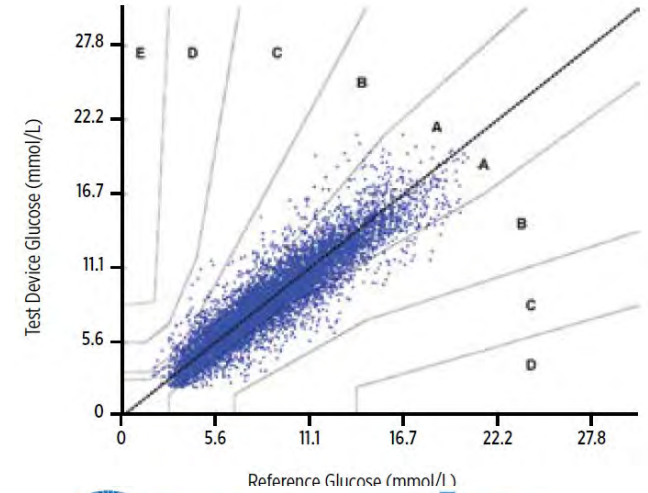
iPro2_User_Guide-en-US



Abbott



FreeStyle Libre



Senseonics



eversense.

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SEMICONDUCTORS DRIVE SMART

12-15 NOV 2019

Alertgy NICGM



Prototype Demo



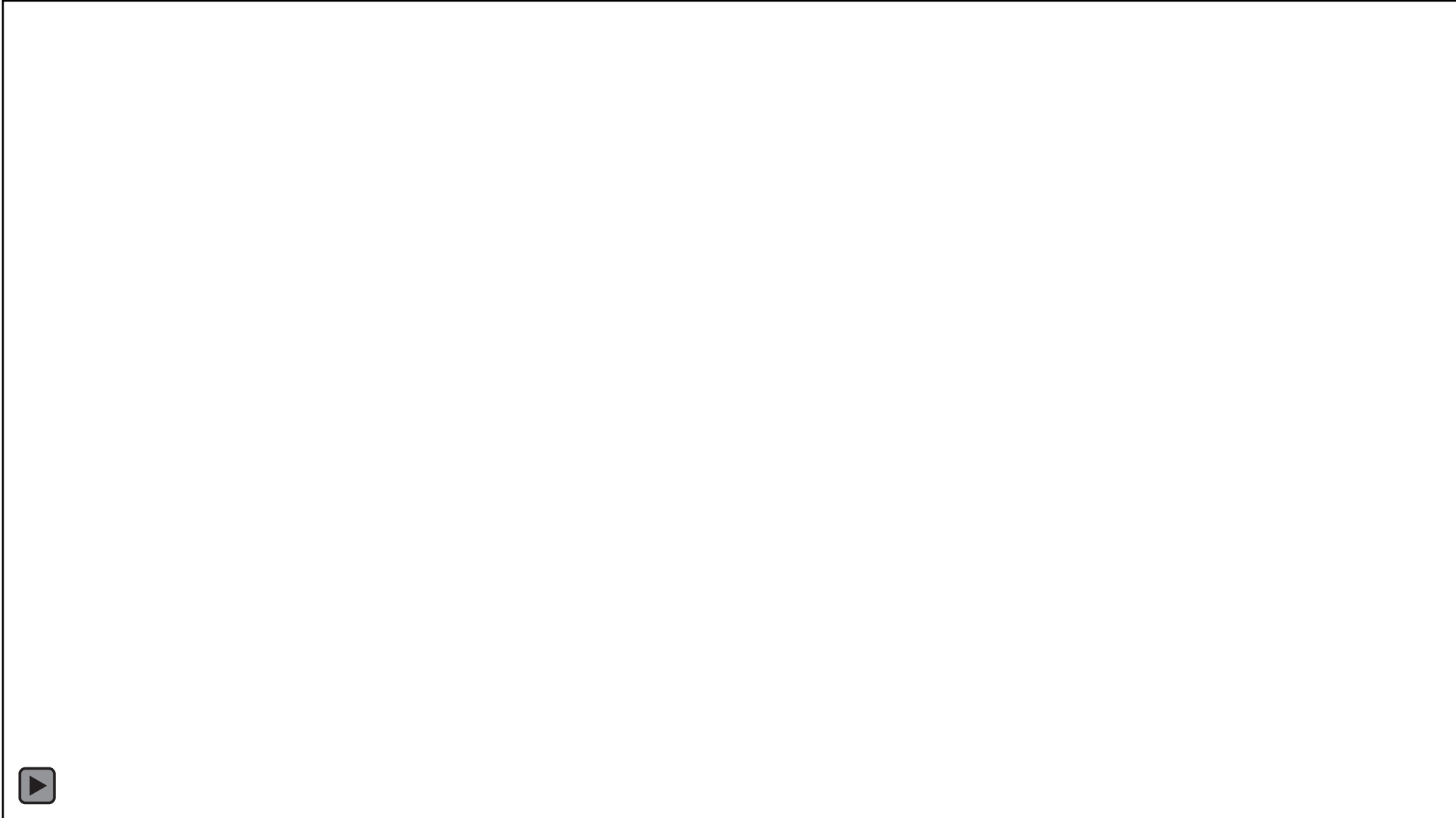
Clinical Alertgy NICGM

Dielectric / Impedance Spectroscopy is a technique that generates a spectrum by measuring the interaction of electromagnetic signals. A very low power RF field interacts with glucose in the body accurately and truly non-invasively. This measurement is a composite measure of blood glucose, venular, arterial, capillary & interstitial.

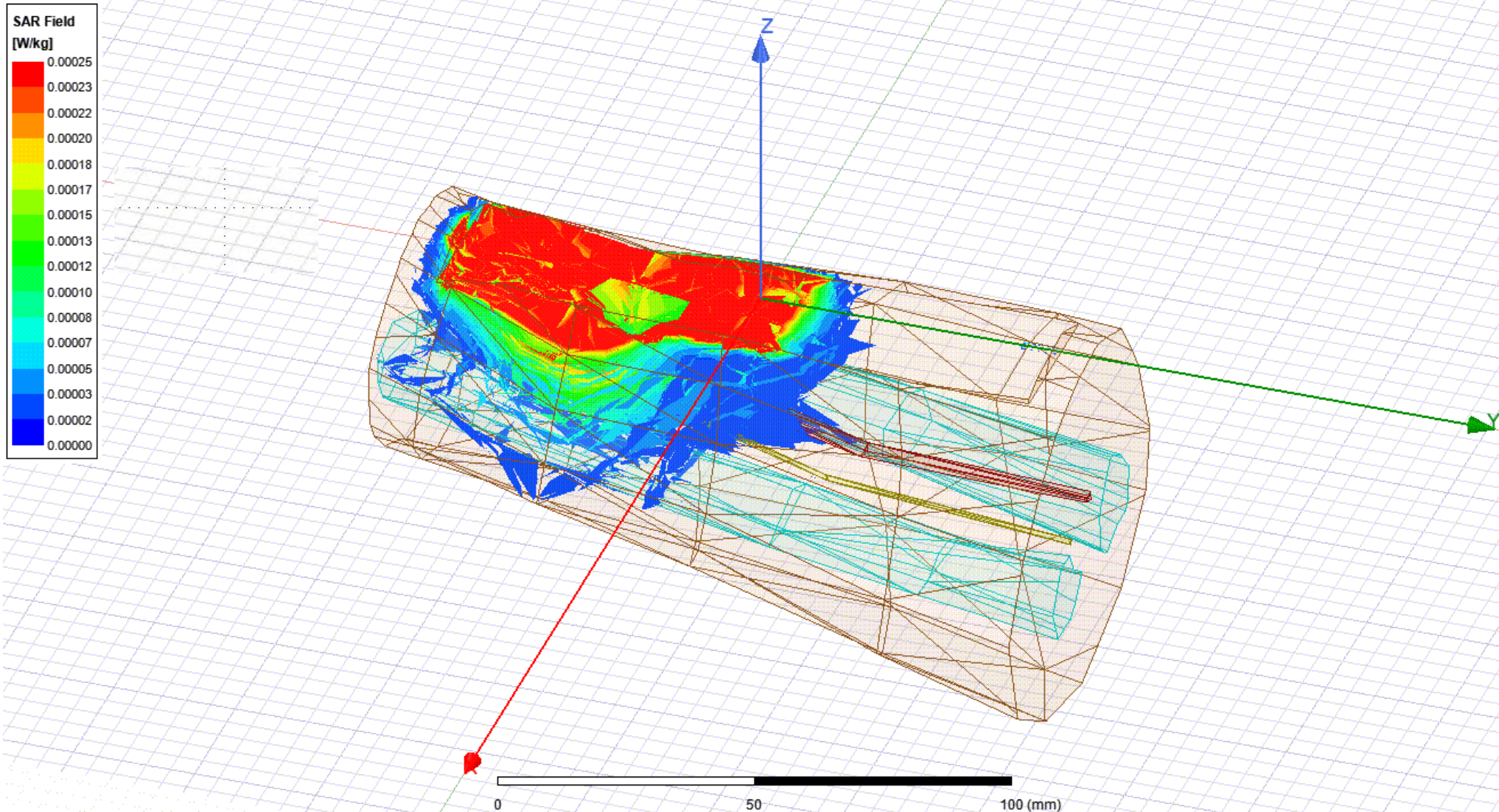
Over the last 20 years this technology has been proven to work in several University Studies. Alertgy just made its application in a wearable device practical through the use advanced signal processing / extraction techniques, novel dielectric materials, and leading-edge AI/Machine Learning/Neural Network Analytics developed for DARPA DOD applications.



Spectrum Image Analysis Rules Engine



Dielectric Spectroscopy of Foreman



CGM Industry

Lag Interstitial Glucose

Invasive
(Skin disturbed)

Non-invasive
(Skin intact)



Real time Blood

Thank you for your interest

Any questions?

Please contact:

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Alertgy will be attending the Medics Conference in Dusseldorf

Nov 18th - 21st See <http://www.medica-2019.com/>

Will have table at the Department of Commerce booth (USA CEO Center) in Hall 16 Booth A02



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