

The future of healthcare is personal!

PRISME 2019
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November 21, 2019





Patient Power

Power of information
Power of permission
Power of access

“Future of healthcare is personal!”

Who am I ?

Roche



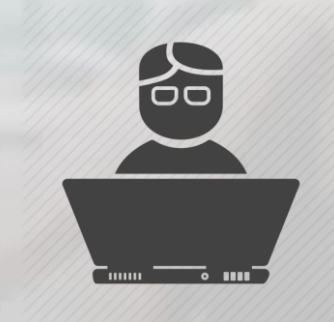
I am not a
scientist



I am not a
doctor



I am not a
chemist



I am an
engineer

Why now? Data & Technology

Roche

Data
+
Insights
=
Learning

Insights

Artificial Intelligence

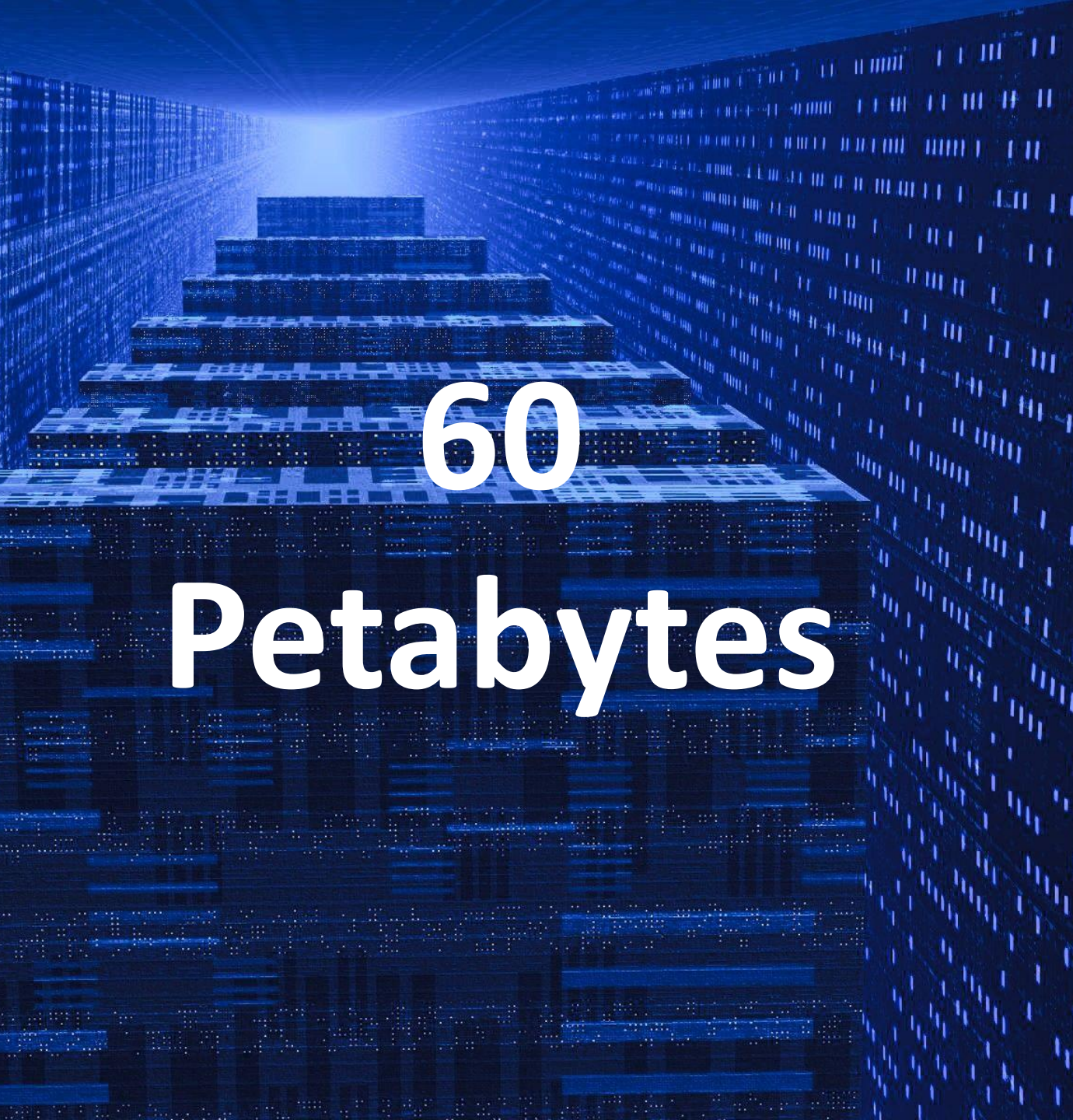
Machine Learning

Deep Learning

Big DATA



Learning



60
Petabytes



500K
Patients

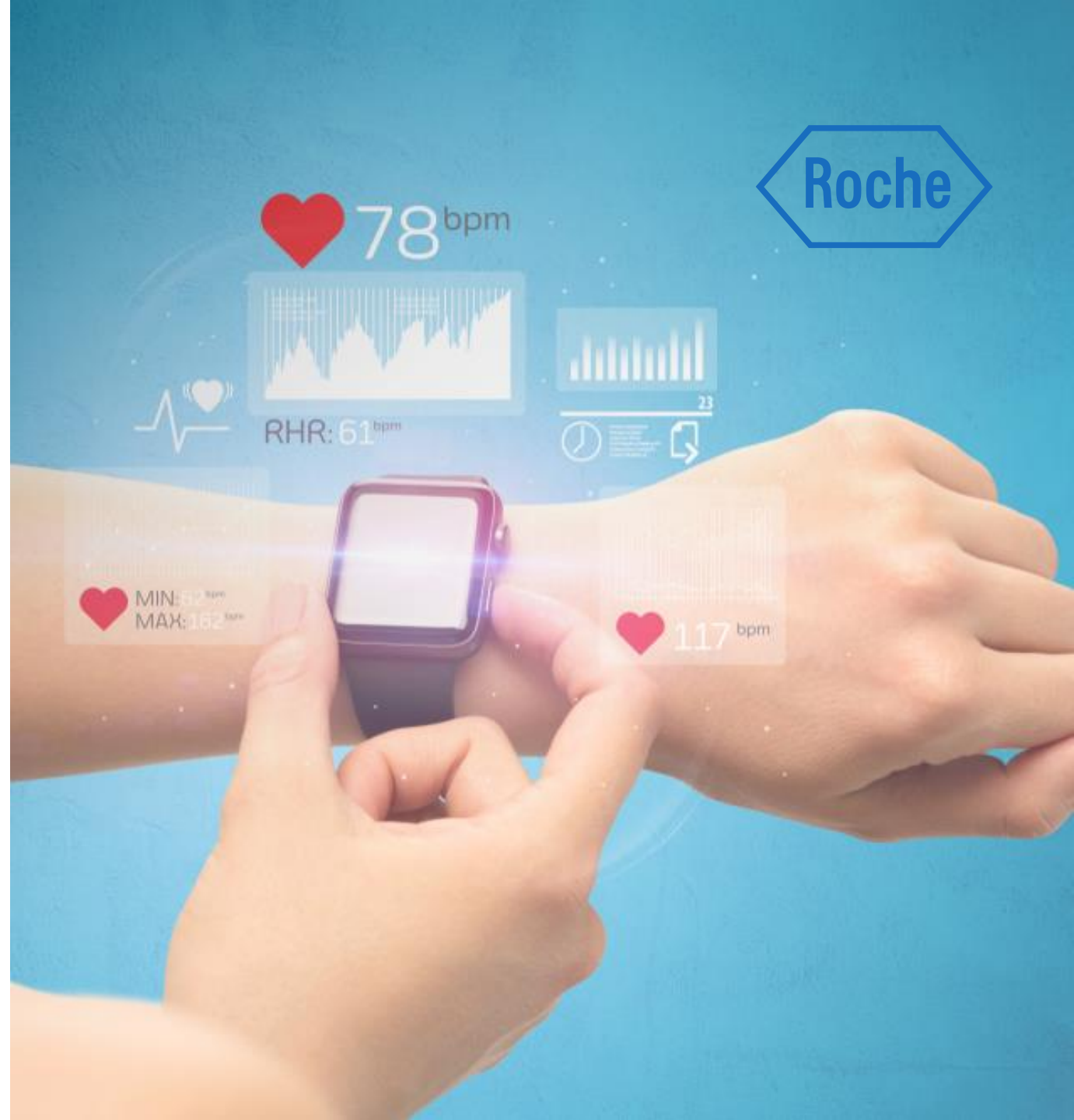
Digital to drive better outcomes

Two types of measures:
Objective and Subjective

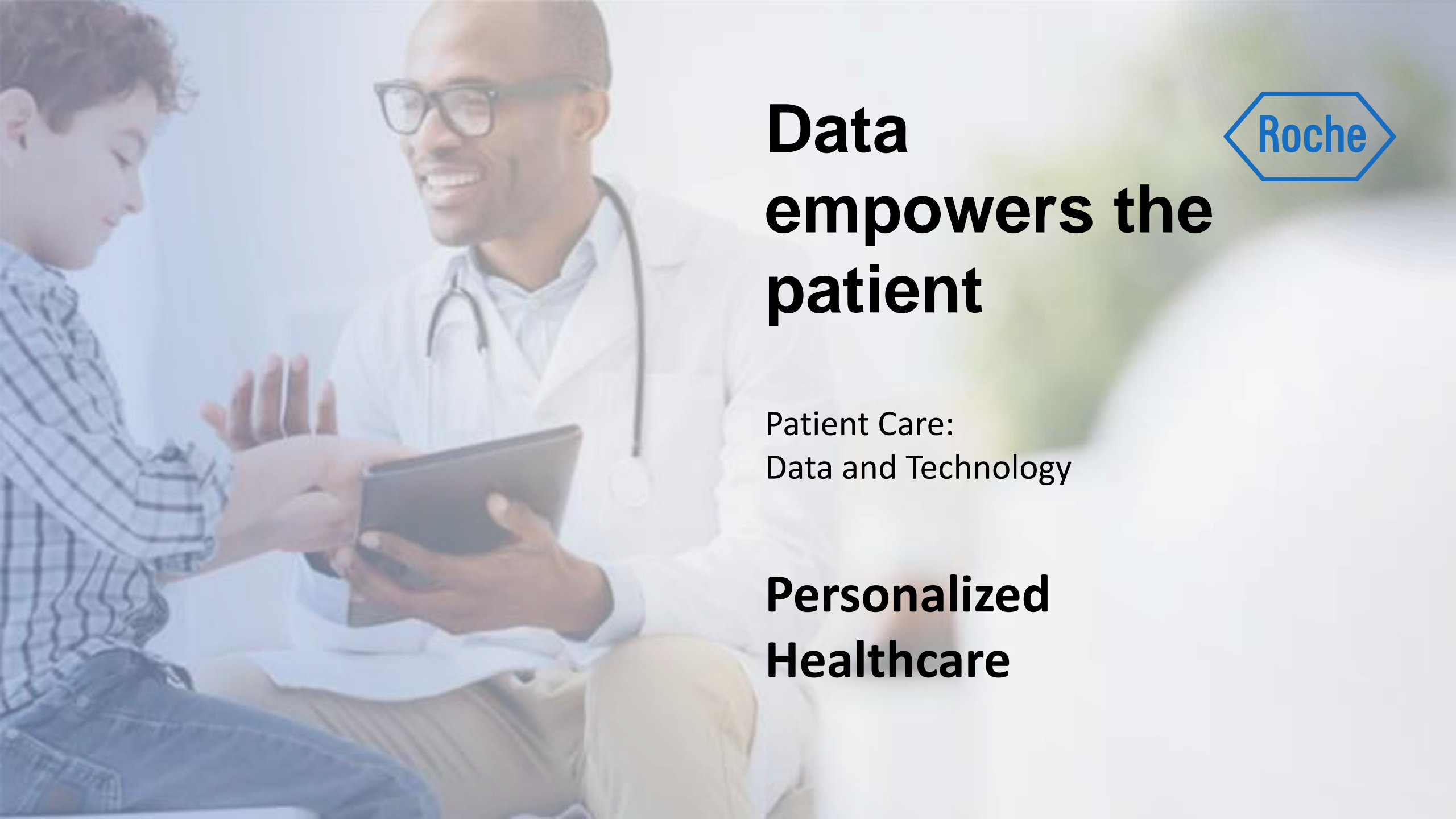
Biomarkers

Endpoints

Outcomes



Roche



Data empowers the patient

Patient Care:
Data and Technology

**Personalized
Healthcare**

Secret sauce is trust



SCALABLE



Software as a Medical Device (SaMD)



Clinical Evaluation		
① Valid Clinical Association	② Analytical Validation	③ Clinical Validation
Is there a valid clinical association between your SaMD output and your SaMD's targeted clinical condition?	Does your SaMD correctly process input data to generate accurate, reliable, and precise output data?	Does use of your SaMD's accurate, reliable, and precise output data achieve your intended purpose in your target population in the context of clinical care?

State of Healthcare situation or condition	Significance of information provided by SaMD to healthcare decision		
	Treat or Diagnose	Drive Clinical Management	Inform Clinical Management
Critical	IV	III	II
Serious	III	II	I
Non-serious	II	I	I

Risk categorization for SaMD – Adapted from IMDRF framework, Sep 2014



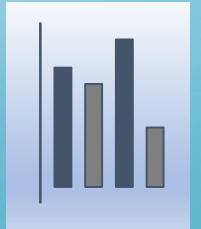
Roche

Personalized Healthcare Platform with Meaningful Data At Scale

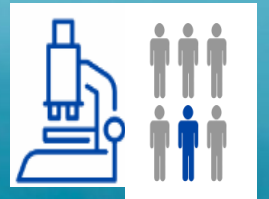
**Clinical Trial
Real World**



**Insights
Advanced Analytics**



**R&D
Quality Care**

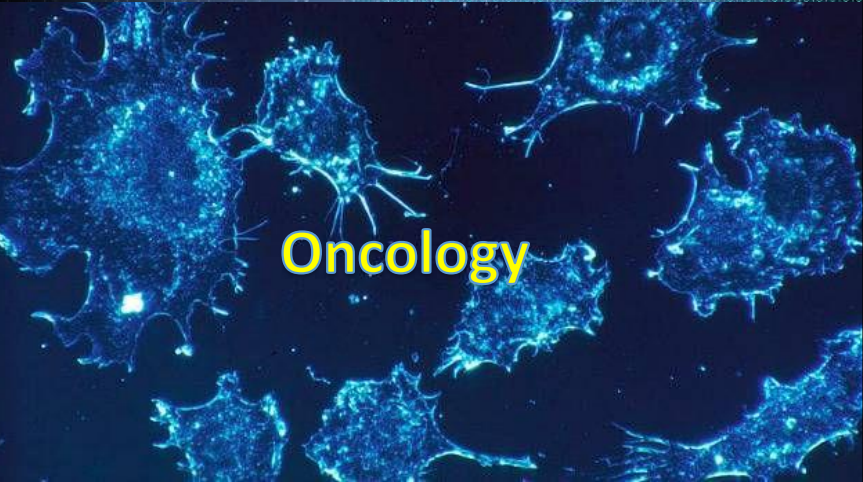




Neuroscience



Ophthalmology



Oncology



Software as a Medical Device: FLOODLIGHT MS



"Ocrevus was 'the most successful launch in the history of Roche'."

- Severin Schwan, Roche CEO

"Ocrevus is the first medicine to be approved for primary progressive MS..."

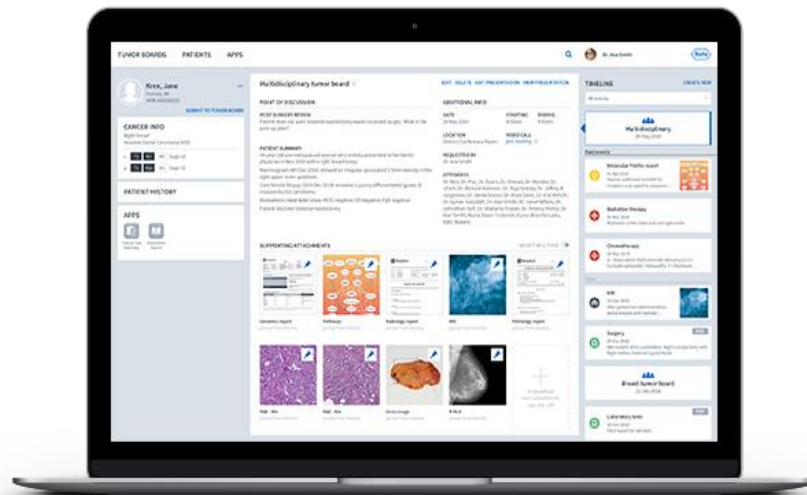
- Sandra Horning, Former Roche CMO



Clinical Decision Support:



NAVIFY Tumor Board



A cloud-based workflow product that securely integrates and displays relevant aggregated data into a single, holistic patient dashboard for oncology care teams to review, align, and decide on the optimal treatment for the patient.

Clinical Decision Support Apps



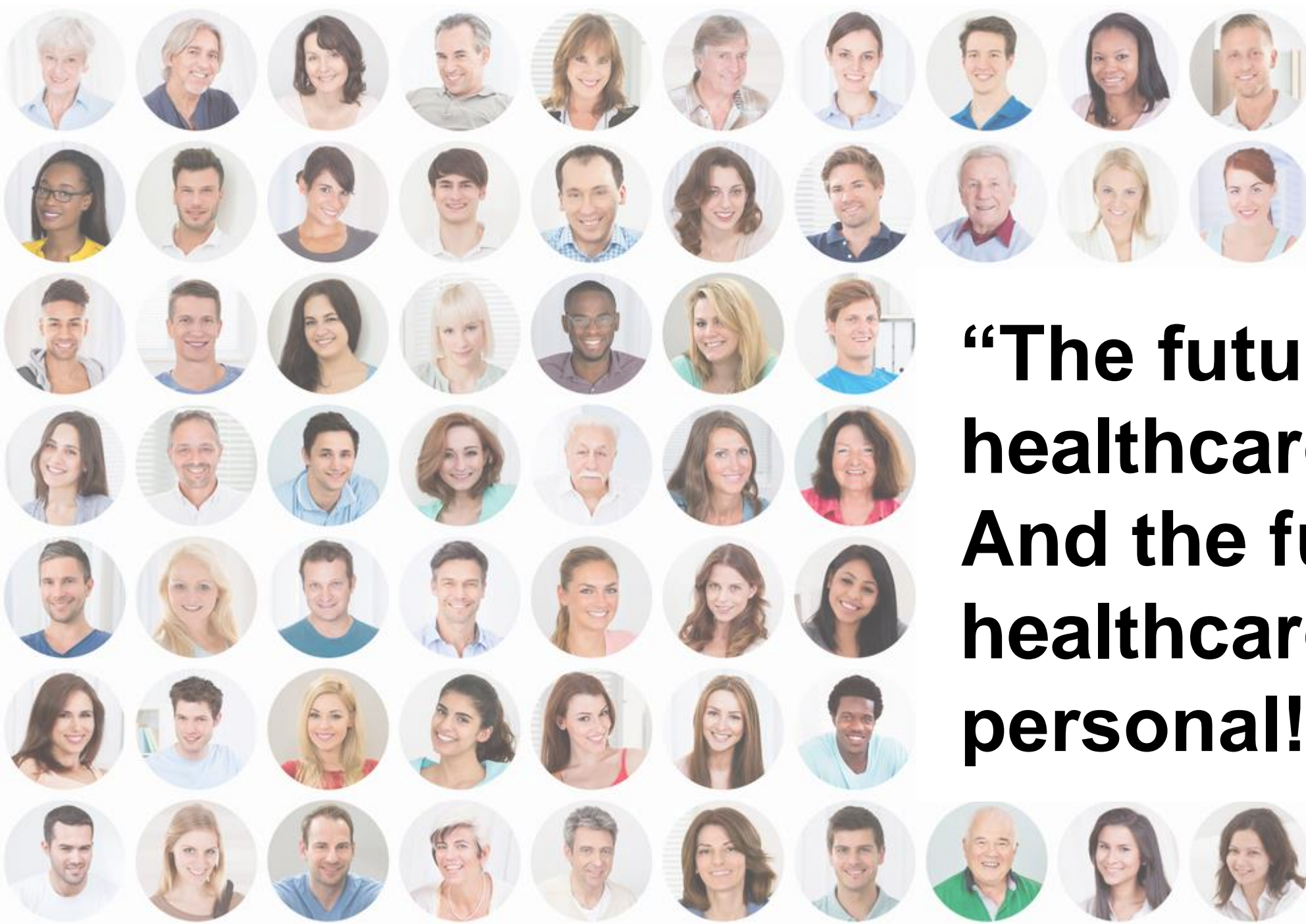
NAVIFY Clinical Trial Match app

Searches largest international trial registries, including ClinicalTrials.gov, European Medicines Agency, Japan Medical Association Center and private institutions



NAVIFY Publication Search app

Searches more than 858,000 publications across PubMed, American Society of Clinical Oncology and American Association of Cancer Research.



**“The future of
healthcare is now!
And the future of
healthcare is
personal!”**