

PEOPLE CENTRIC, THE NEW FRONTIER ?

Room Louis Armand

PARIS
DEC, 13th 2017

Karin Sipido

H2020 Scientific Panel for
Health

The Scientific Panel for Health



- 27 experts across disciplines and activities
- advisors and liaisons to the community

Our mandate

- to provide foresight, overall vision, strategy
- to identify bottlenecks to innovation and propose solutions
 - to consult and connect
 - recommendations



‘.. the Scientific Panel for Health is calling for the development of a comprehensive policy for health.. A long-term mechanism to ensure these policies and quality of research requires a science-led multi-stakeholders’ platform for European transdisciplinary health and biomedical research which could take shape as a **European Council for Health Research...**’

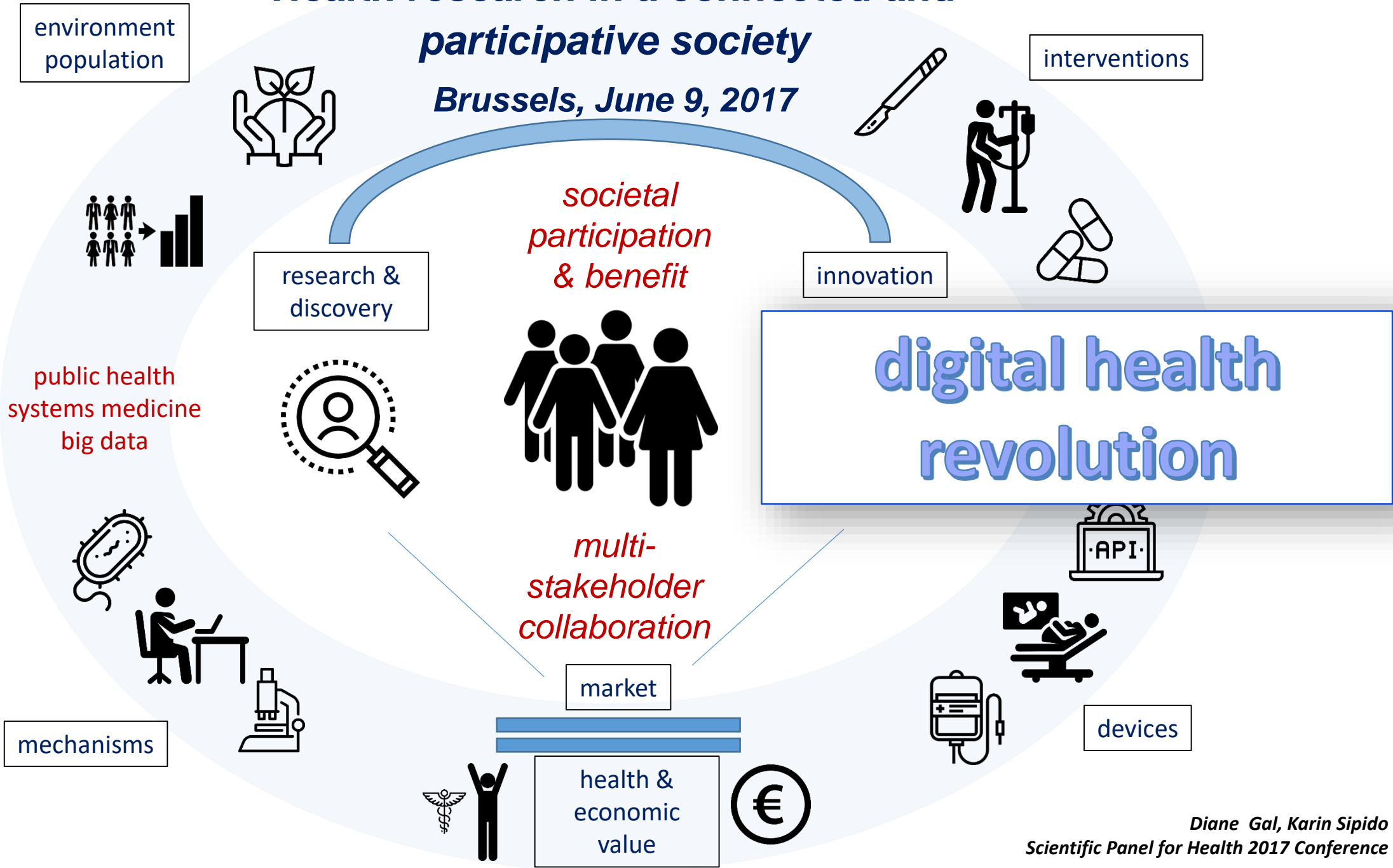
The Lancet, 2016

- to create **synergies** collating separate goals for research, health care and prevention into an inclusive **health research agenda for Europe**
- providing an adapted, innovative and **people-centered research** framework

Scientific Panel for Health conference – June 9, 2017

Health research in a connected and participative society

Brussels, June 9, 2017



The panel



- **Petra Wilson - Managing Director Health Connect Partners, Senior Advisor for Healthcare, FTI Consulting (BEL) / [@PetraWilson11](#)**
- **Hans Hofstraat - Vice President, Philips (NL) / [@PhilipsResearch](#)**
- **Fabrice Denis - MD, PhD, Oncologist, Jean Bernard Center (FR).**
- **Laetitia Flender-Micaelli - Deputy Managing Director, CHU Nantes (FR).**
- **Gilles Litman - Vice-President Global Integrity Care Diabetes & Cardiovascular, Sanofi (FR) / [@GillesLitman](#)**



Putting the digital patient at the centre

Petra Wilson

What does the digital patient need?

*To co-create,
nurture and
maintain
trust in data*



*To co-create a
dynamic flow of
data*

What is Co-Creation ?

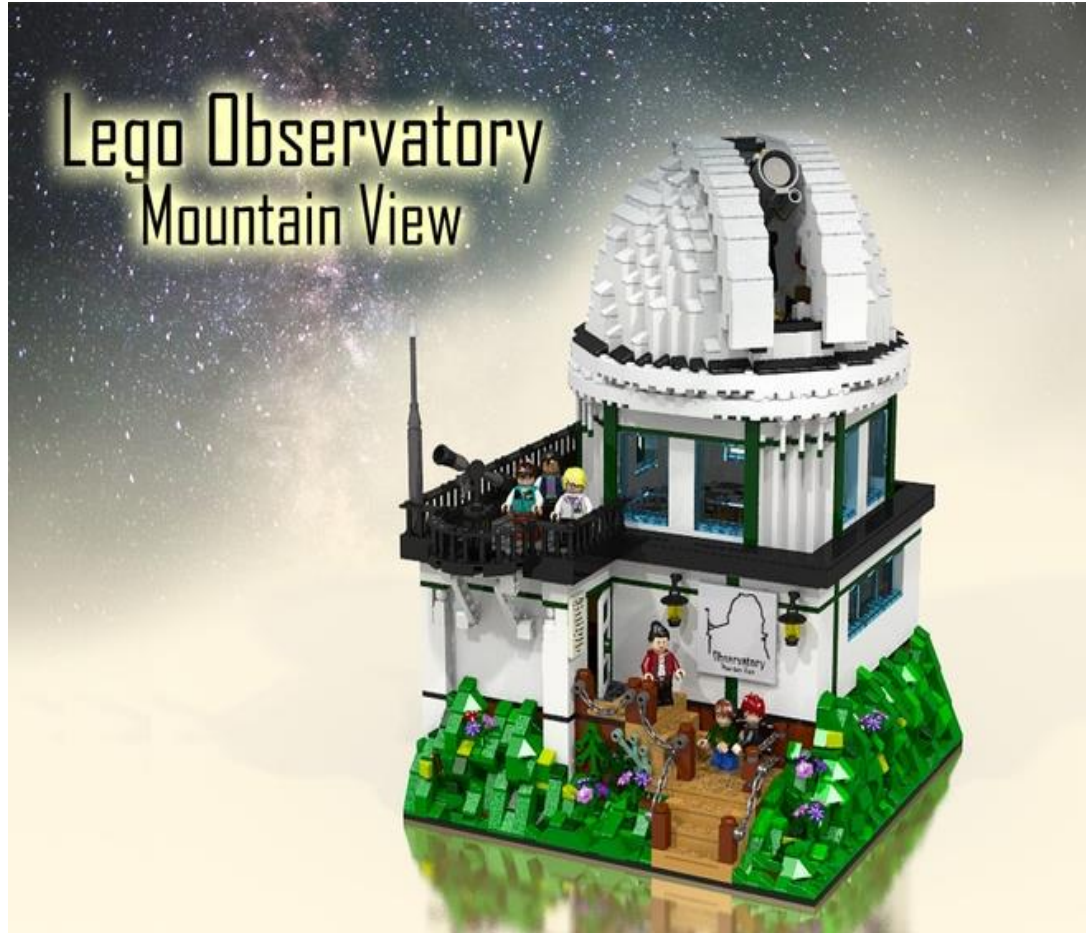
Perhaps a new label, but not a new concept!

“The physician must not only be prepared to do what is right, but also make the patient cooperate”. Hippocrates.

Co-creation has many elements:

- **Co-design of services** – co-planning of health and social policy, co-prioritisation of services and co-financing of services, co-commissioning;
- **Co-delivery of services** – co-managing and co-performing services
- **Co-assessment** – co-monitoring and co-evaluation of services.

Inviting the Community to Present its ideas



LEGO has long seen the value in co-creating products with customers (both young and old). For example, LEGO Ideas is an online community where members can discover cool creations by other fans and submit their own designs for new sets. Fans can vote on submissions and give feedback. If a project gets 10,000 votes, LEGO reviews the idea and picks a winner for an official LEGO Ideas set to be created and sold worldwide. The creator gives final product approval, earns a percentage of the sales and is recognized as the creator on all packaging and marketing. This concept celebrates loyal customers and rewards them for innovation, creativity and entrepreneurialism.

Adopting Hybrid Value Systems



The Specialists

Specialisterne Foundation is a not-for-profit foundation with the goal to create one million jobs globally for people with autism. People with autism often have skills that are very valuable on the labour market, for example an outstanding memory or a remarkable eye for details. Also, they often have a structured way of working, can think outside the box, have passion for detail and are capable of doing repetitive tasks with an unceasing enthusiasm. We define them as “specialist people” – specialists with a business potential that can be realised through special understanding and management.

Learning from the experience of others



Great Ormond Street's surgical and intensive care clinical leaders worked Ferrari's F1 racing team at their home base in Modena, Italy, in the pits of the British Grand Prix and in the Great Ormond Street theatre and intensive care ward.

The major restructuring of the patient handover procedure, resulting directly from the input of the F1 pit technicians.

Ferrari pit stop saves Alexander's life

What can co-creation add ?

- **Engagement** - *of the patient in the healthcare journey.*
- **Empowerment** - *of the patient to play a key role in her health and wellness.*
- **Evaluation** - *of the learnings for each patient, providers, the system and the community.*
- **Evolution** - *of the system to better meet the needs of patients and healthcare systems*

My Story

- Despite good intentions we are still far from achieving good levels of **patient engagement and empowerment**, and we have barely started on **evaluating** data that comes from beyond a very narrow interpretation of data beyond EHRs, images and some medical device data.



- What a waste of a co-creation opportunity!
- The data are there, the patient is willing and able to assess them, but the system is closed.
- The patient is dis-engaged, dis-empowered and not included in any evaluation.
- And only a fraction of the investment made is being harnessed.

Thank you

Petra.wilson@fticonsulting.com
petra@hcp.partners



Digital Healthcare – Personal, Precise and Affordable

Hans Hofstraat

Philips Research
December 13, 2017

innovation  you



PHILIPS

Trends in health technology, driven by challenges in care delivery: exploding cost, shortage of hands



Consumers increasingly engaged in their health



Transition to value-based healthcare



Care shifting to lower-cost settings



Provider and payer landscape consolidating



Precision diagnostics & personalized therapies



Integrated technology; Data-driven care

Transformation of healthcare by digitization

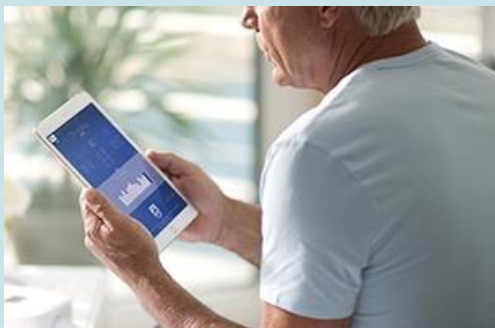
Healthy living

Prevention

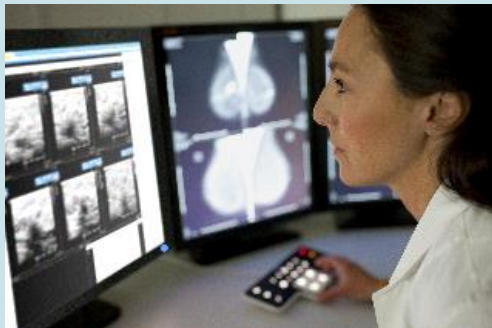
Diagnosis

Treatment

Home care



Connected products and services for health and well-being



Integrated modalities and clinical informatics to deliver definitive diagnosis



Real-time guidance and smart devices for minimally invasive interventions



Connected products and services for chronic care patients

Connecting patients and providers for more effective, personalized care
leveraging (real-time) patient data and clinical analytics

Digitization enables integrated, continuous care

Delivering clinically rich healthcare solutions across the enterprise

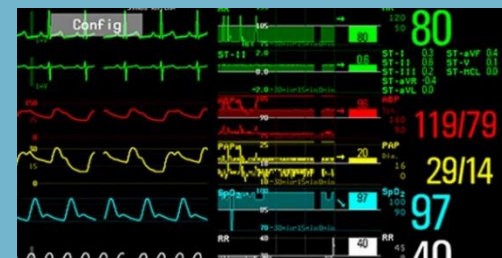
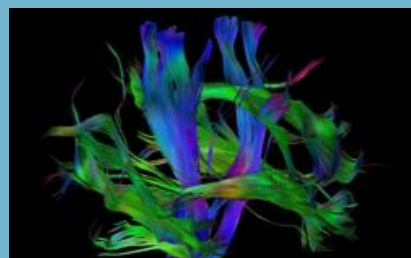
Cloud Internet of Things Artificial Intelligence Sensors
 Conversational interfaces Micro-systems Robotics Autonomous systems



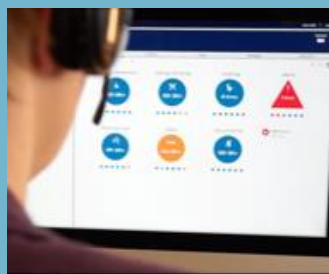
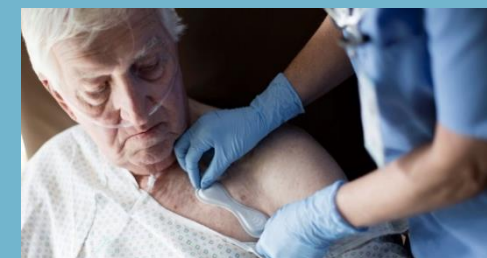
Continuous health tracking



Advanced visualization



Context-aware patient monitoring



Home monitoring



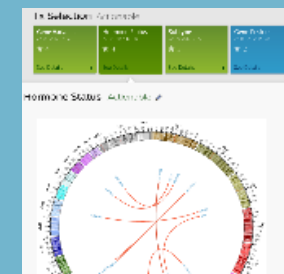
Image-guided therapy



Computational pathology



Quantification



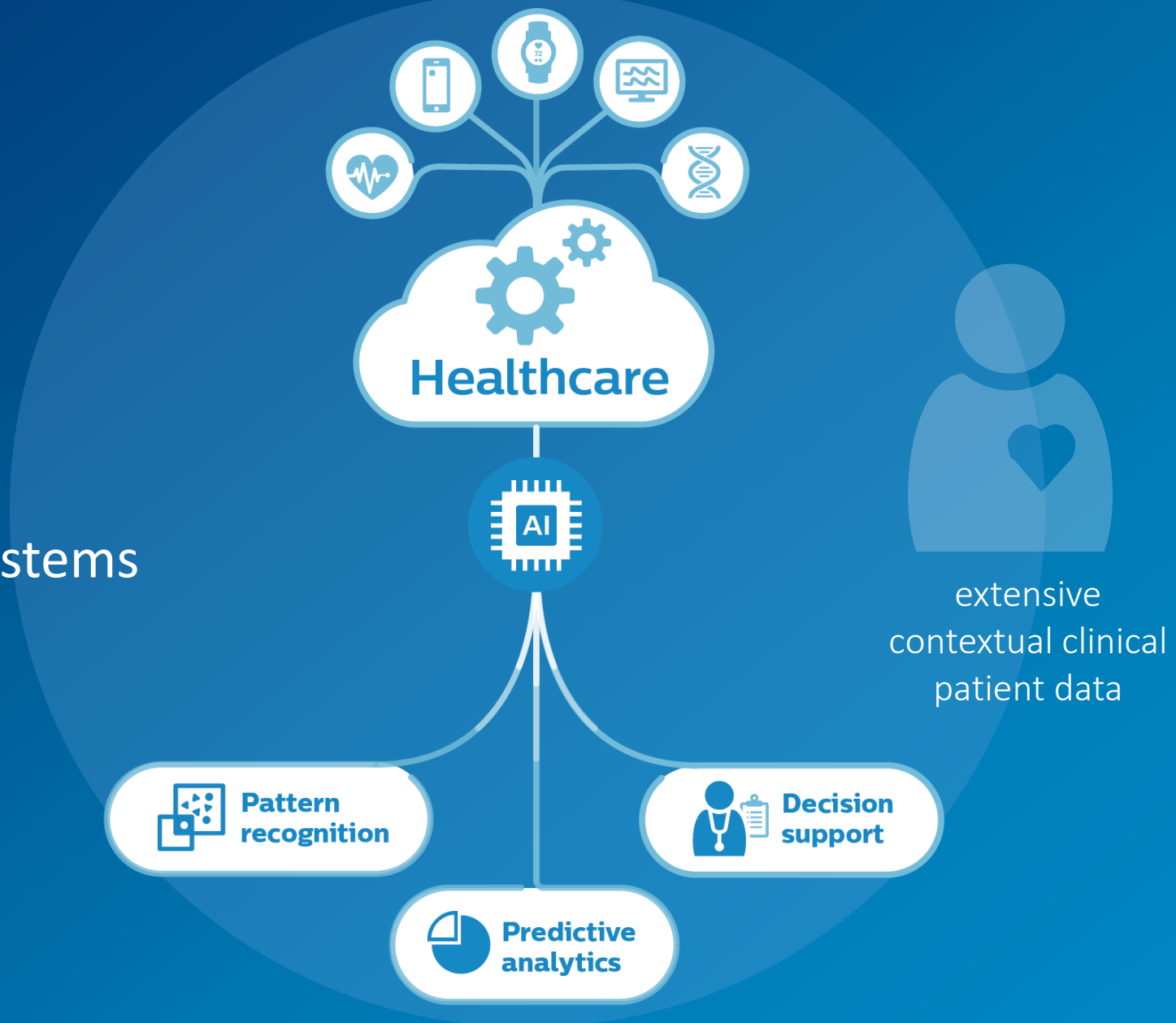
Genomics



Adaptive interfaces

Adding context to patient information for enhanced clinical decision making

- Longitudinal data
- Smart devices and systems
- Ambient Intelligence
- Smart workflows
- Digital ecosystems



Targeted interventions in acute care • Precision medicine • Care pathway optimization
Population health management • Operational optimization

Digital innovations with proven outcomes

Long-term, strategic partnerships, and co-creation with customers and stakeholders



- St Antonius Hospital, Nieuwegein, The Netherlands

- **Image-Guided Interventions**

- Ysbyty Gwynedd Hospital, Bangor, United Kingdom

- **Continuous Monitoring Solutions**

- Massachusetts General Hospital, MIT, Boston

- **Digital Pathology Solutions**



Image-guided therapies revolutionize healthcare

Treating patients better and faster, less invasively

Azurion, a digital, connected solution for image-guided vascular interventions improved workflow and reduced procedure time, while improving patient and clinical staff satisfaction

12%

Reduction in
Patient Preparation Time

28%

Reduction in
Post Procedure Time

29%

Reduction in
Staff Movement

25%

Reduction in Planned
Cases Finished Late

17%

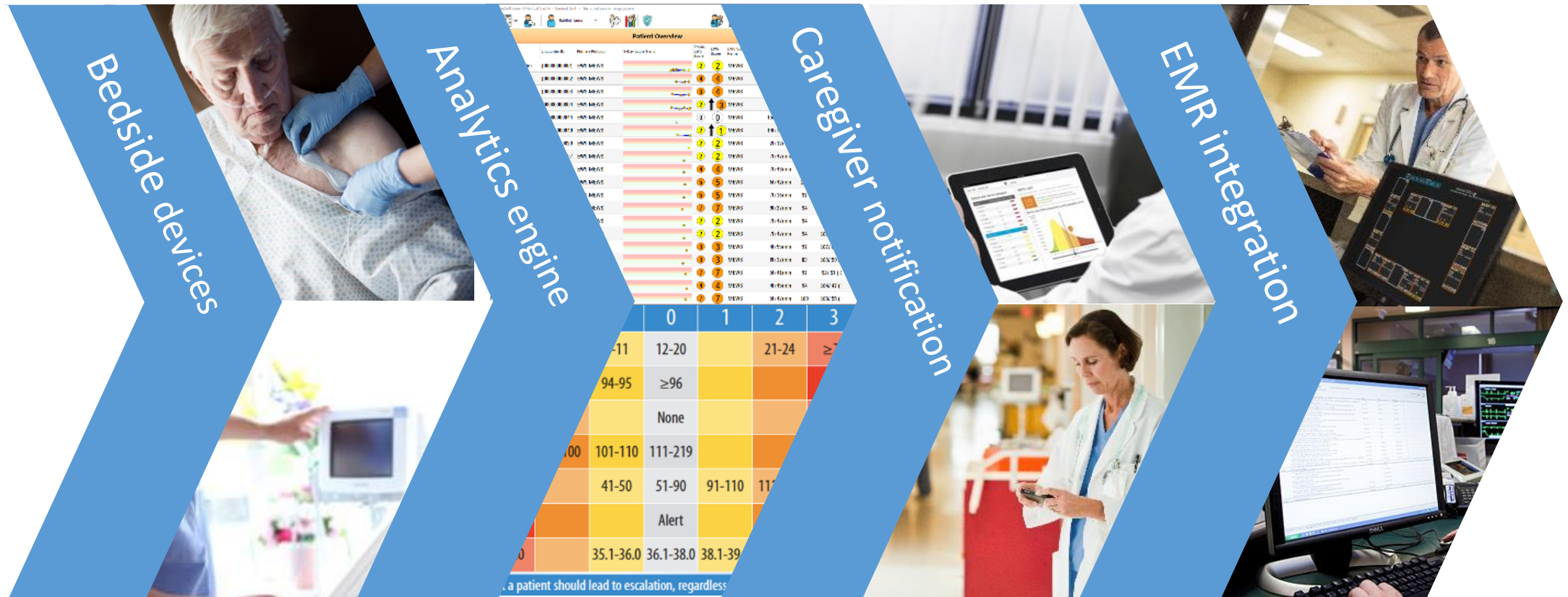
Reduction in
Procedure Time

*Independent 3rd Party Verification

**Results are specific to the institution where they were obtained and may not reflect the results achievable at other institutions

General Ward: Automated Early Warning System

Transforming clinical workflow in the General Ward (Ysbyty Gwynedd Hospital)



34% reduction in
SAE and better
patient safety*

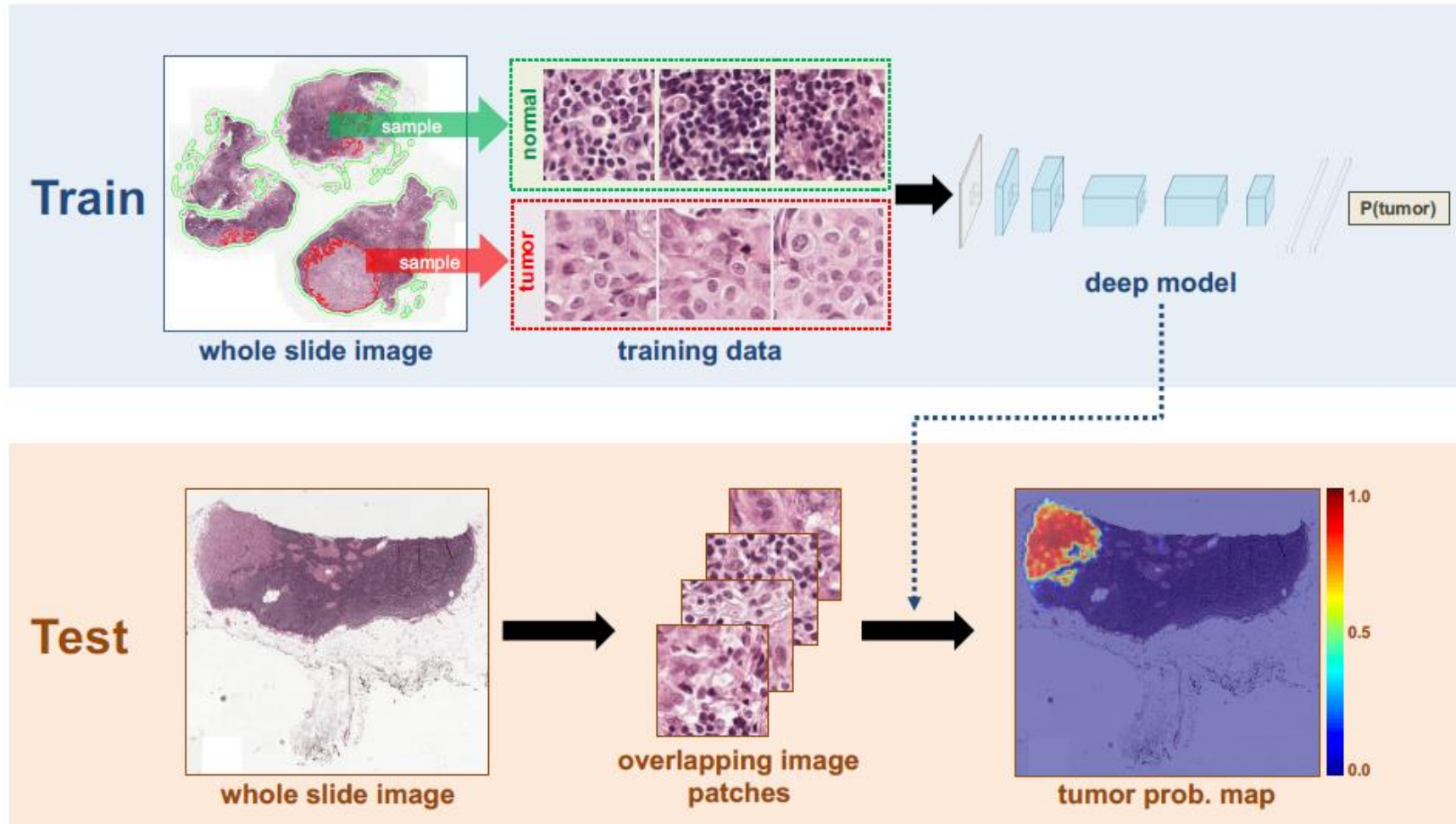
88% reduction
in Cardiac
Arrest*

20% reduction
in Mortality*

*Subbe et al. Critical Care (2017)
doi.org/10.1186/s13054-017-1635-z

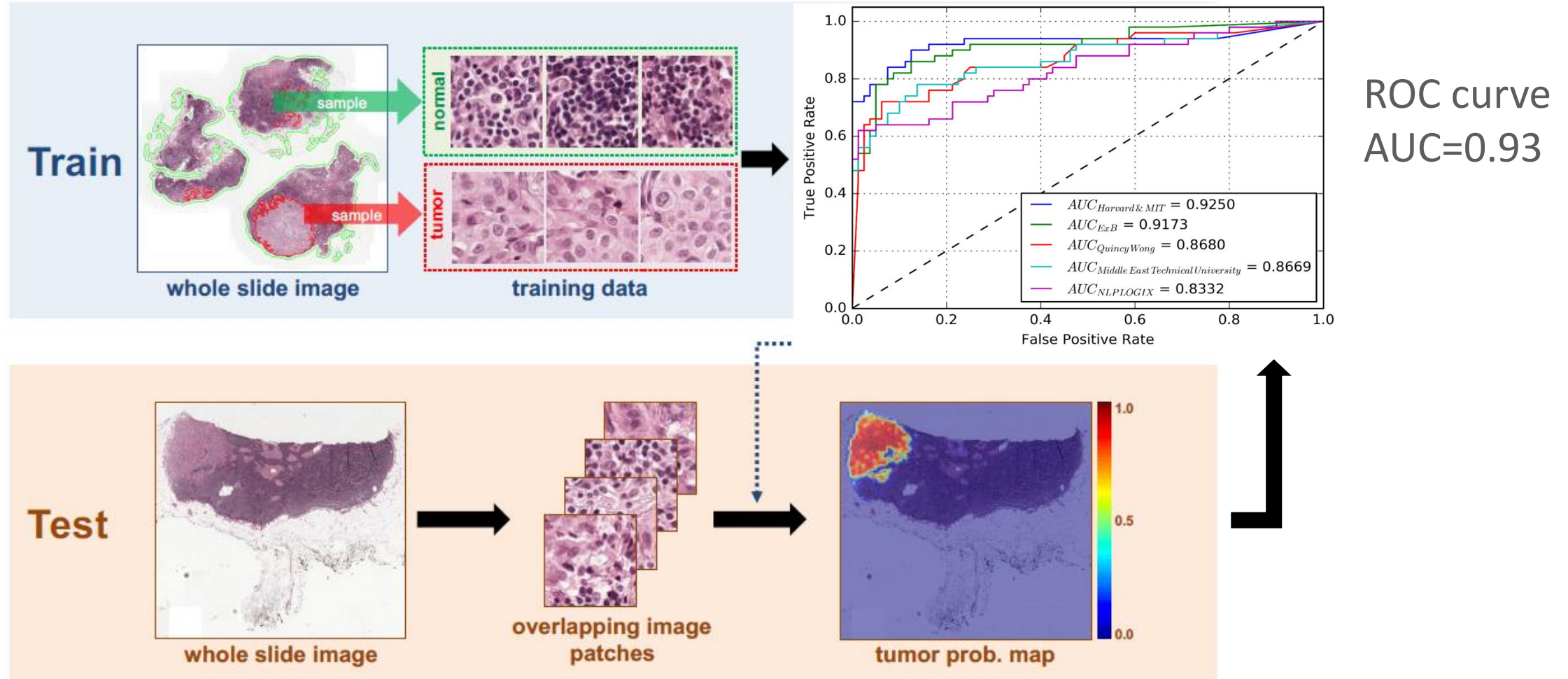
PHILIPS

Deep Learning for metastasis detection in Sentinel Lymph Node Biopsies



Deep Learning for metastasis detection in Sentinel Lymph Node Biopsies

- Comparable or better performance than a human pathologist*
- Significant time savings (tens of slides/node)
- When combined with a Pathologist, up to 85% reduction in error rate**



* <https://camelyon16.grand-challenge.org/results/>

** From Wang et al. Deep Learning for Identifying Metastatic Breast Cancer

Key takeaways



Transition to **value based care** and **population health**

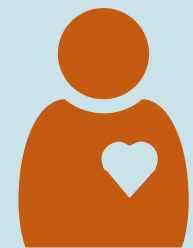


Applying design thinking and **digital models** to healthcare

A healthcare system fully connected, aware and **adaptive to patient needs**



Prevention, **precision** diagnosis, **personalized** treatment



Hans Hofstraat
hans.hofstraat@philips.com

PARIS
DEC, 13th 2017



E-health and cancer

PARIS
DEC, 13th 2017

Dr Fabrice DENIS, MD, PhD
Radiation Oncologist
Inter-Regional Institut of Oncology
Le Mans
France



E-health app'



- **100.000 à 200.000 available e-health app'**
- **Less than 5 were assessed in randomized clinical trial**
- **3 showed survival benefit**
- **2 have been published...**



Patient-Reported Outcome applications

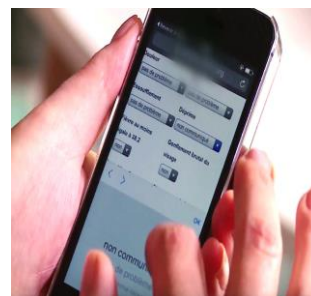
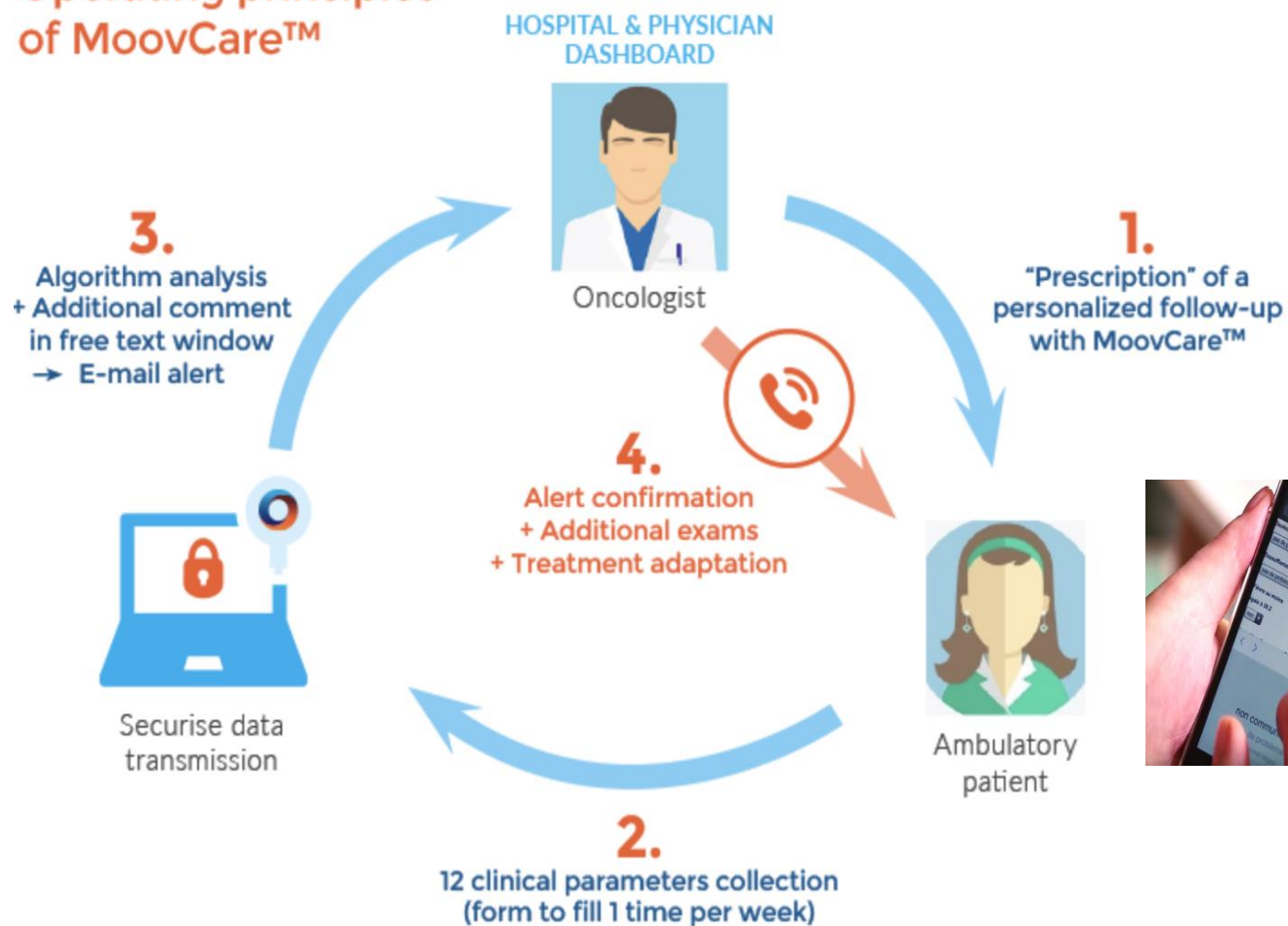


- **Allows symptoms follow-up personnalization**
- **Patient is the main actor by transmitting symptoms**
- **Optimisation of communication between patient and medical team**
- **Earlier diagnosis and treatment**



Moovcare™ and lung cancer

Operating principles of MoovCare™



Poids (Si poids en décimales, saisir : 80.4 et non 80,4)

Appétit

non communiqué

Douleur

non communiqué

Essoufflement

non communiqué

Fièvre au moins
égale à 38.2

non

Apparition d'une
boule sous la peau

non

Apparition ou
augmentation
du sang dans les
crachats

non

Commentaire libre (champ facultatif)

Sensation de faiblesse

non communiqué

Toux

non communiqué

Déprime

non communiqué

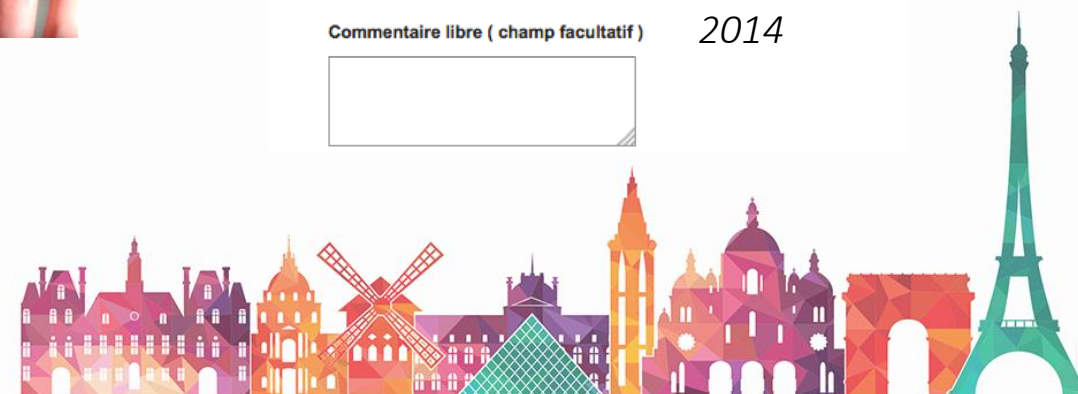
Gonflement brutal du
visage

non

Changement de la
voix

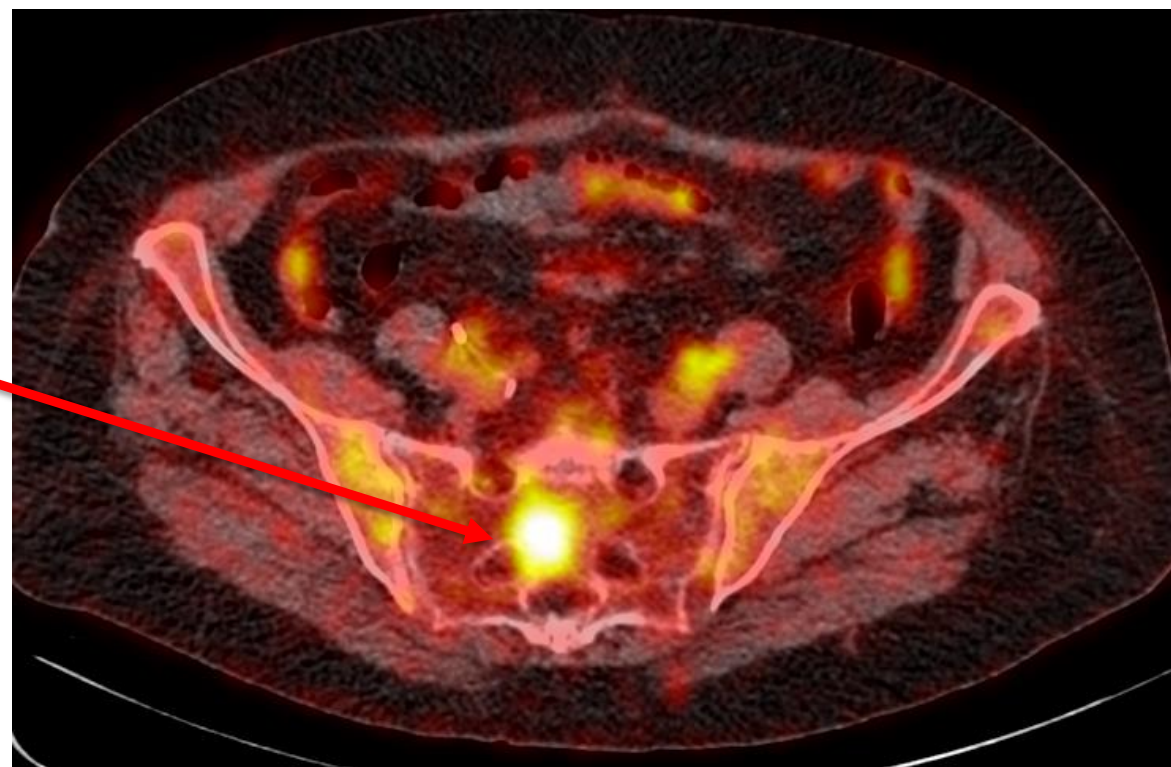
non

*F Denis et al
Support Care Cancer
2014*



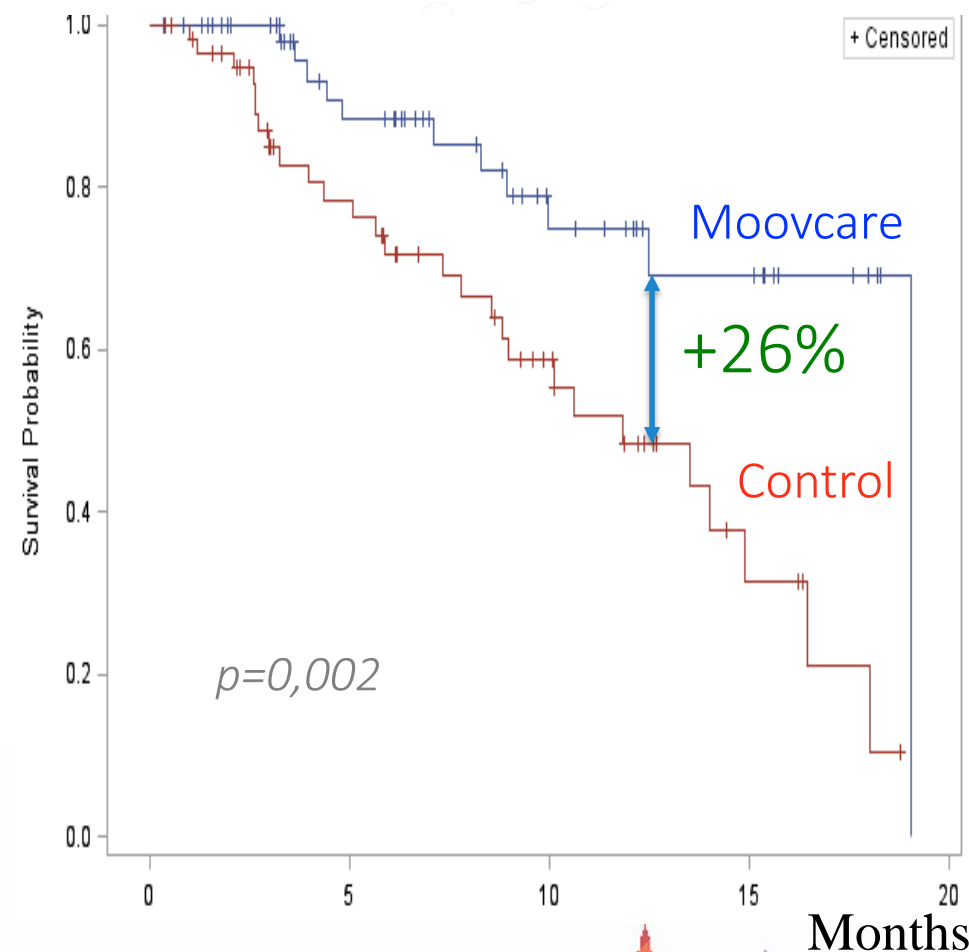
Relapse detection at first symptoms

jj mm	17 07	28 07	06 08	15 08	22 08	30 08	05 09
aa	16	16	16	16	16	16	16
POIDS	72.9	72.9	72.9	73.5	72.6	71.5	71.3
DELTA POIDS	1.5	0.9	-4.6	-5	-4.1	-3	-2.3
APPETIT	0	0	0	0	1	0	0
FAIBLESSE	0	0	0	0	1	1	0
DOULEUR	0	0	0	0	2	1	1
TOUX	0	0	0	0	0	0	0
ESSOUFFLEMENT	0	0	0	0	0	1	1
DEPRIME	0	0	0	0	1	1	0
FIEVRE	0	0	0	0	0	0	0
VISAGE	0	0	0	0	0	0	0
PEAU	0	0	0	0	1	0	0
VOIX	0	0	0	0	0	0	0
CRACHATS	0	0	0	0	0	0	0



2016, Overall survival benefit report

- 300 patients assessed in 4 trials
- Phase 3 randomized study
- App' after treatment during 2-Yrs
- 1-Yr survival: 75% vs 49%
- Median survival benefit 7 months

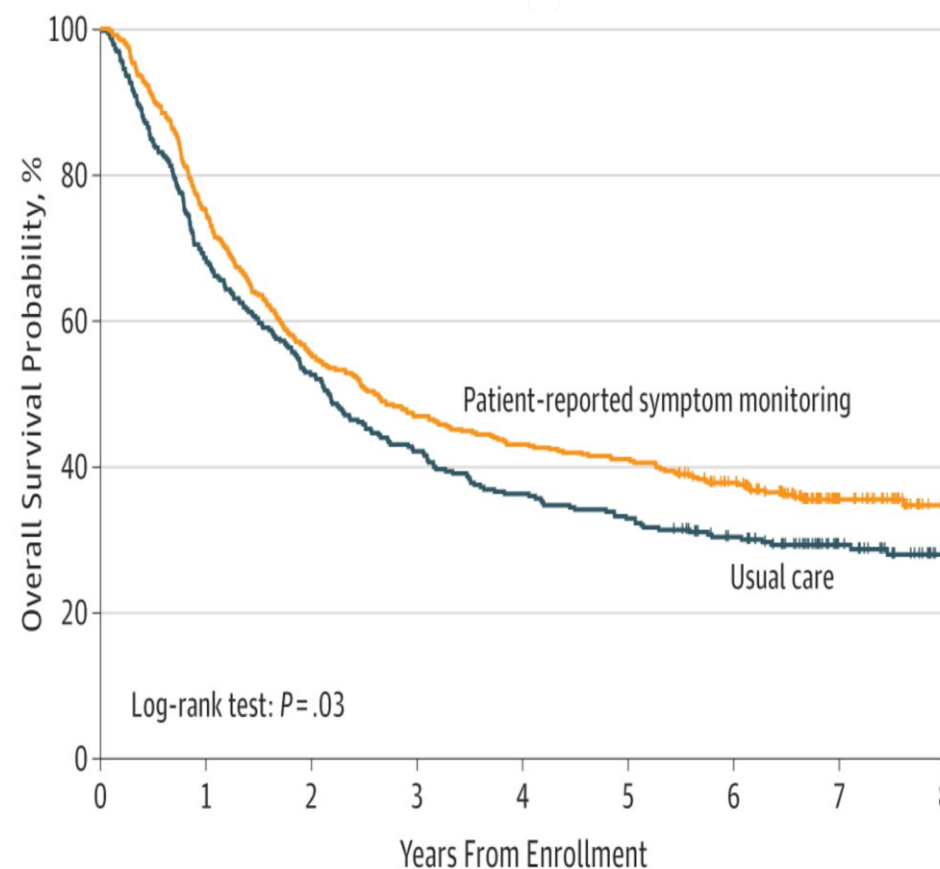


F. Denis et al, J Natl Cancer Inst 2017



2017, US study confirmation

- 766 patients randomized
- App' during chemo only
- Survival benefit 5 months



E Basch et al, JAMA 2017



Why does it work?

- Between visit relapse detection
74% vs 33% ($p < 0.001$)
- Treatment of relapse
"Intensive" 72% (with Moovcare™)
vs 33% (with Imaging follow-up)
- 50% reduction of Imaging with Moovcare™



Cost-effectiveness

<i>Follow-up</i>	<i>Survival benefit</i>	<i>ICER QALY</i>
<i>Lung cancer followed by CT-scan</i>	<i>4 weeks</i>	<i>>265.000 \$</i>
<i>Lymphoma and CT-scan</i>	<i>2 weeks</i>	<i>800.000 \$</i>
<i>Immunotherapy in lung cancer</i>	<i>12 weeks</i>	<i>300.000 \$</i>
<i>Moovcare™ and lung cancer</i>	<i>30 weeks</i>	<i>[-5000 ; 5000 \$]</i>



Conclusion



- **E-health can improve survival and QoL**
- **True personalization of care and follow-up**
- **More outpatient care**
- **More information => Relevant visit and imaging**
- **App' must be clinically assessed (6-Yr... too long...)**
- **New standard of care incoming => new organization**



Fabrice DENIS
f.denis@cjb72.org

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DEC, 13th 2017



From patient-centric to people-centric

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DEC, 13th 2017

Gilles LITMAN
Head of Global Integrated Care
Sanofi



PEOPLE are
living longer
and some severe
diseases became

**CHRONIC
CONDITIONS**



More than

400 million
people

are living with diabetes

It's a 24/7 job

1 out of 2 is not on target!

A woman with short blonde hair, wearing a black zip-up tank top, is smiling and holding a large, light-colored surfboard with both hands above her head. The surfboard features a prominent blue star design. She is standing on a sandy beach with waves in the background. The scene is brightly lit, suggesting a sunny day.

We want to
empower

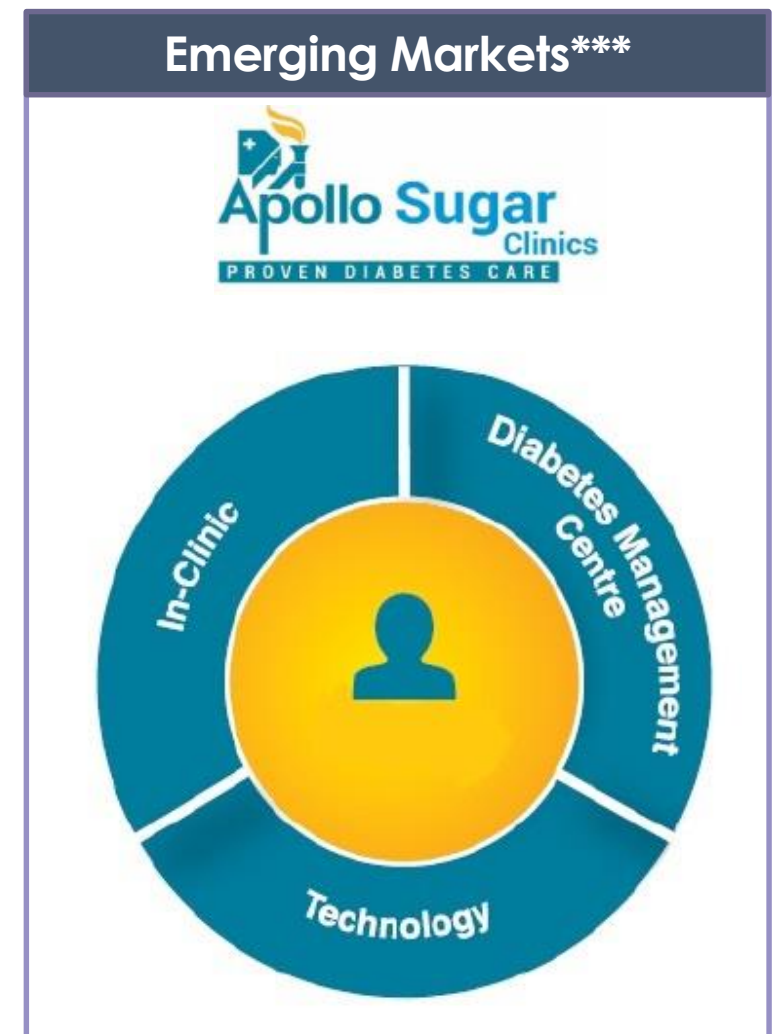
PEOPLE

living with
diabetes to live
the life they want.

We offer
More Than
Medicines



Examples of our solutions across the globe



* Onduos Virtual Diabetes Clinic will be accessible for US-patients early 2018

** diabeo is available in France

*** The Apollo SugarClinics are located in India



Real insights



Mobilization &
Resources

Buy / Build /
Partner

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DEC, 13th 2017

Gilles Litman, Sanofi
gilles.litman@sanofi.com