

Optimising the integration of innovations from personalised medicine into healthcare: we need different stakeholders working together in **COLLABORATION**

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Équipe de Recherche en Santé
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Group-Oncology

OUTLINE

01 – SETTING THE SCENE

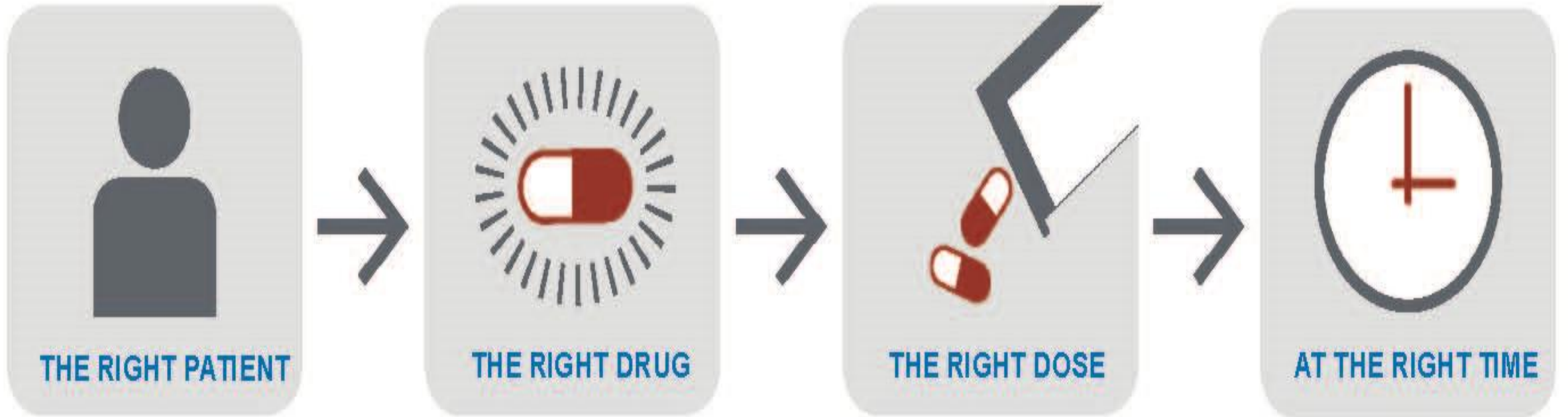
- **General context about personalised medicine**
- **Importance of collaboration**

02- EXAMPLES

- **Local**
- **International**
- **European**

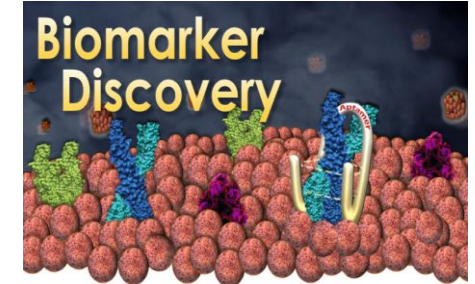
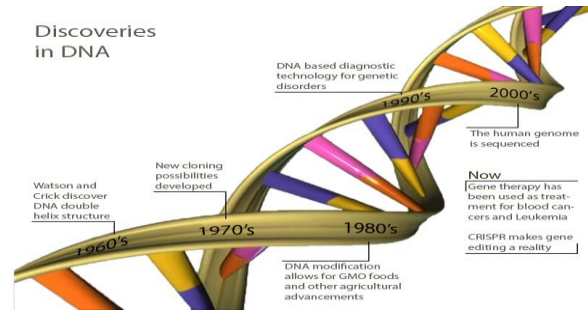
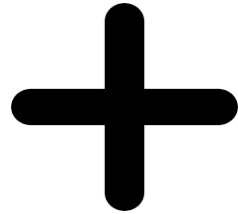
03- CONCLUDING REMARK

Personalized (precision) medicine: the promise



What have been achieved so far?

PM = Generation tremendous insights into:



mechanisms and models of diseases

Genes and biomarkers discoveries



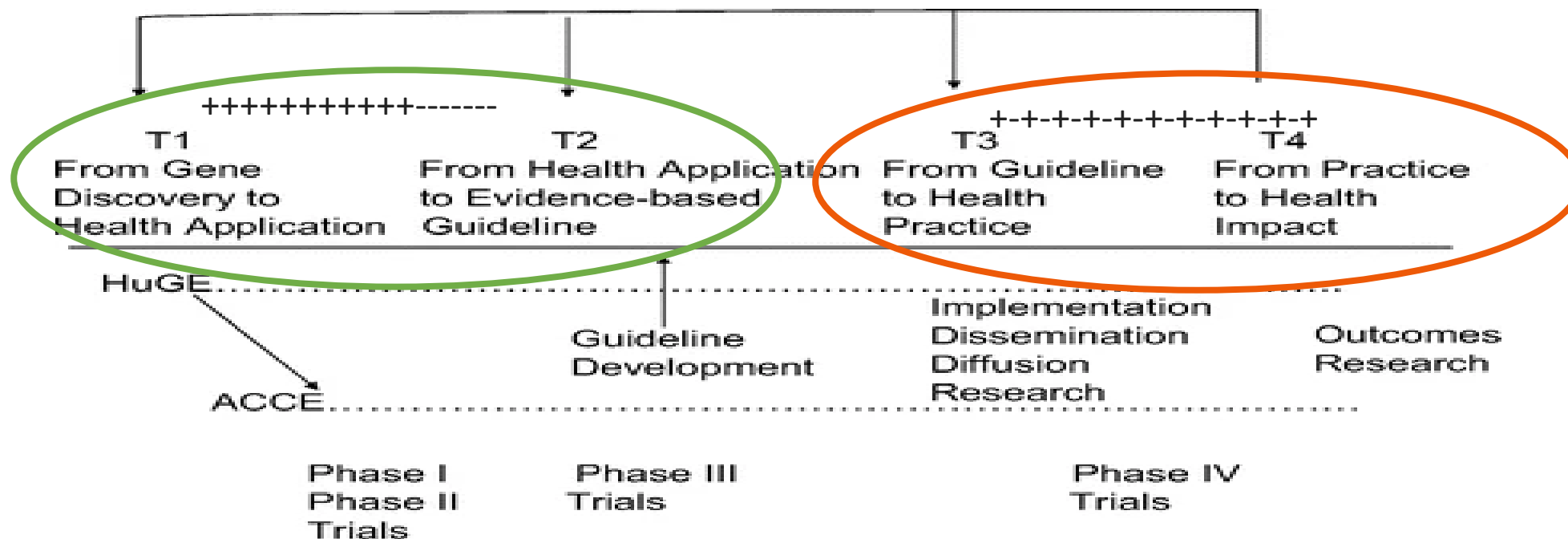
VERY FEWS

BEDSIDE

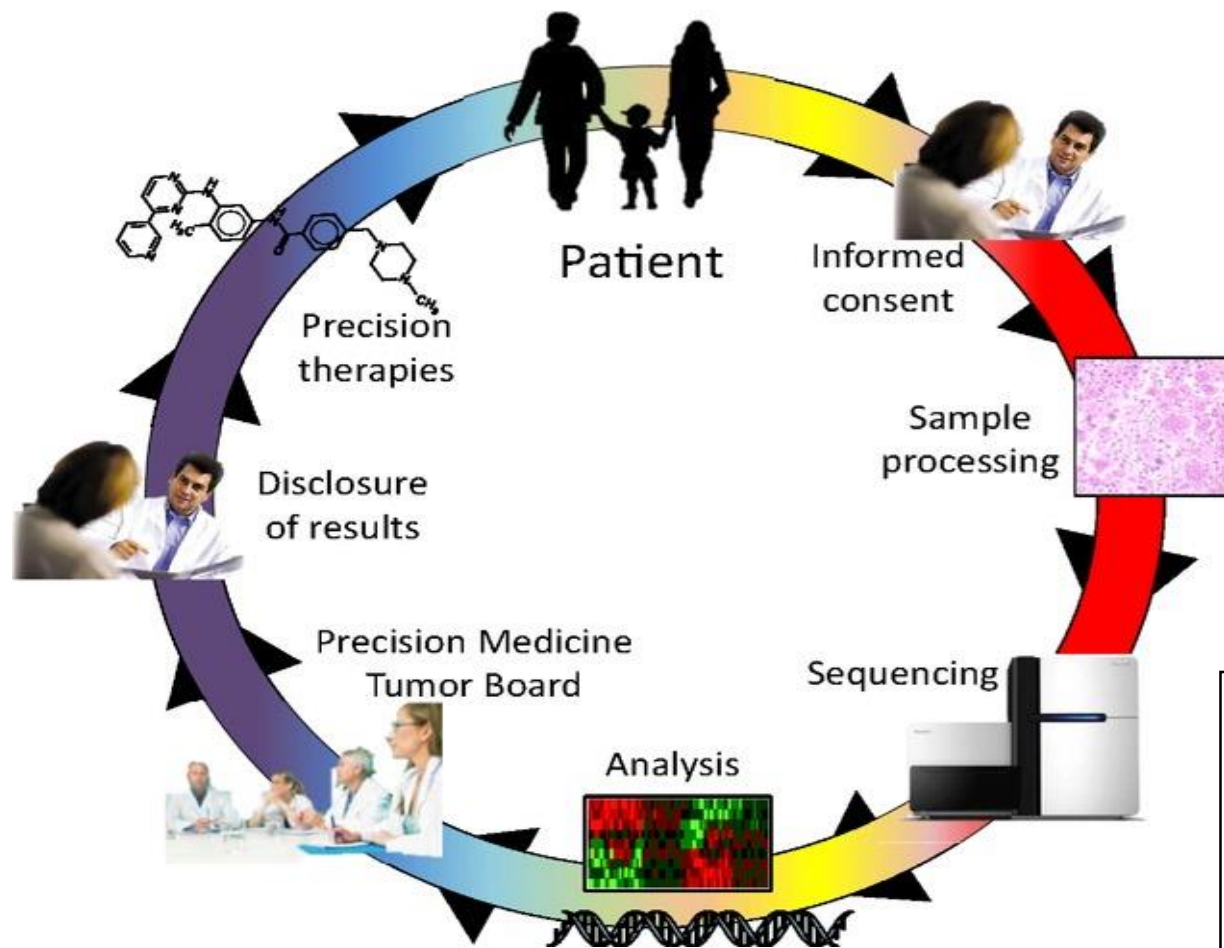
POPULATION HEALTH

Lost in translation problem in PM

The continuum of translation research in genomic (personalized) medicine



Complexity of Delivering Precision Medicine



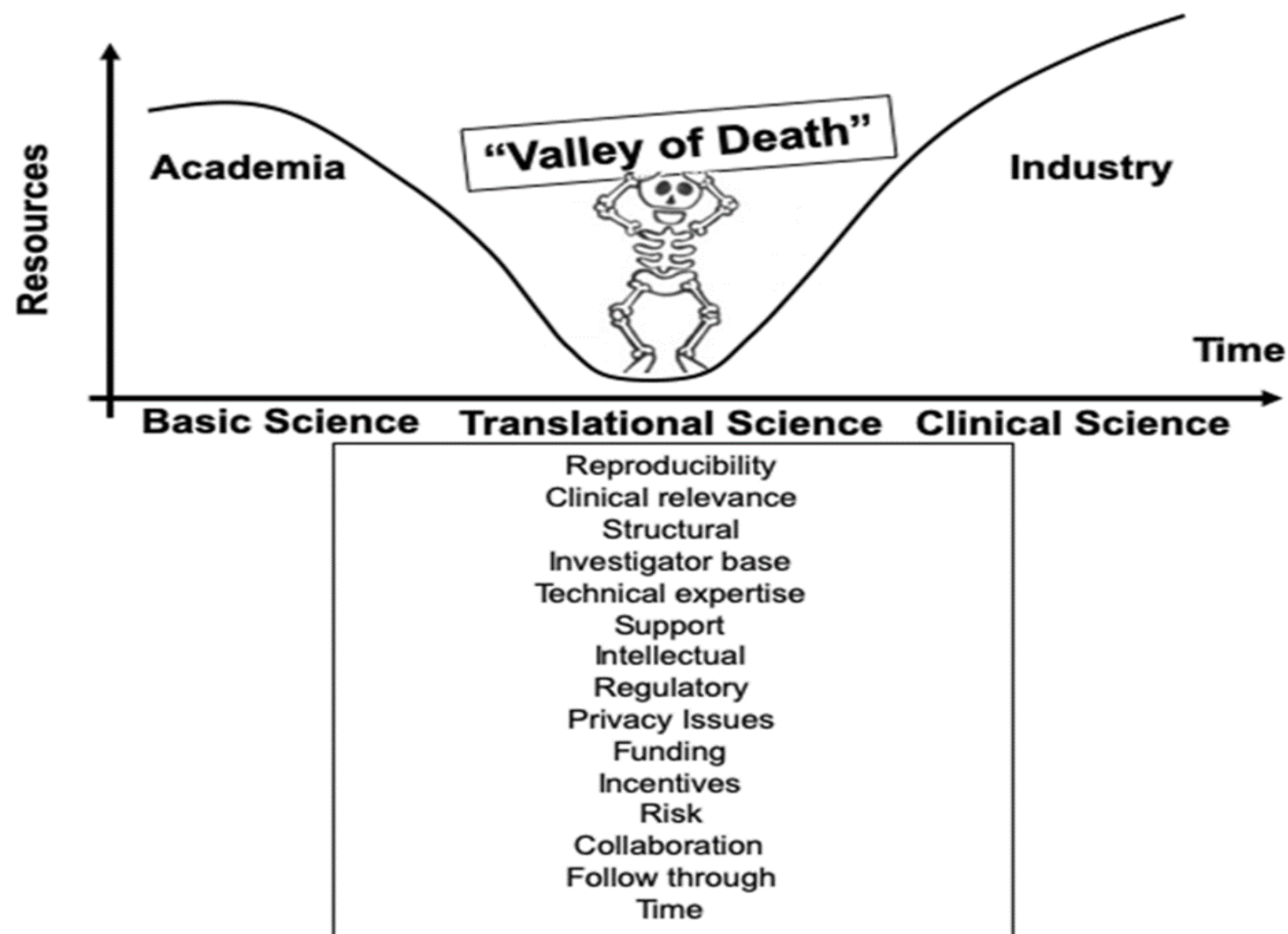
Multiple steps = COMPLEXITY

WORSE IN BUSY HEALTHCARE SYSTEMS

Additional challenges include workforce training, public health literacy, information systems, and public participation

Collaborations and partnerships are key

... to cross the “Valley of Death” in personalize medicine



Personalised medicine requires a more collaborative approach ...

... between researchers, industry, patients, prescribers, regulators, payers and health care systems



Source: European Pharmaceutical Entreprises

https://www.efpia.eu/media/413495/29-ebe-biopharma_whitepaperonpm_rgb.pdf

A local example....



Technological and organizational innovations go hand in hand :
A collaborative model to render oncogenetics more flexible, accessible and efficient

Rationale

- Value of BRCA1/2 genetic testing for risk reduction in breast and ovarian cancer = **well established**
- Access to genetic BRCA genetic counselling and testing = **challenging**



- Demand exceeds systems capacity
- Shortage of geneticists and genetic counsellors

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Long waiting lists and delays

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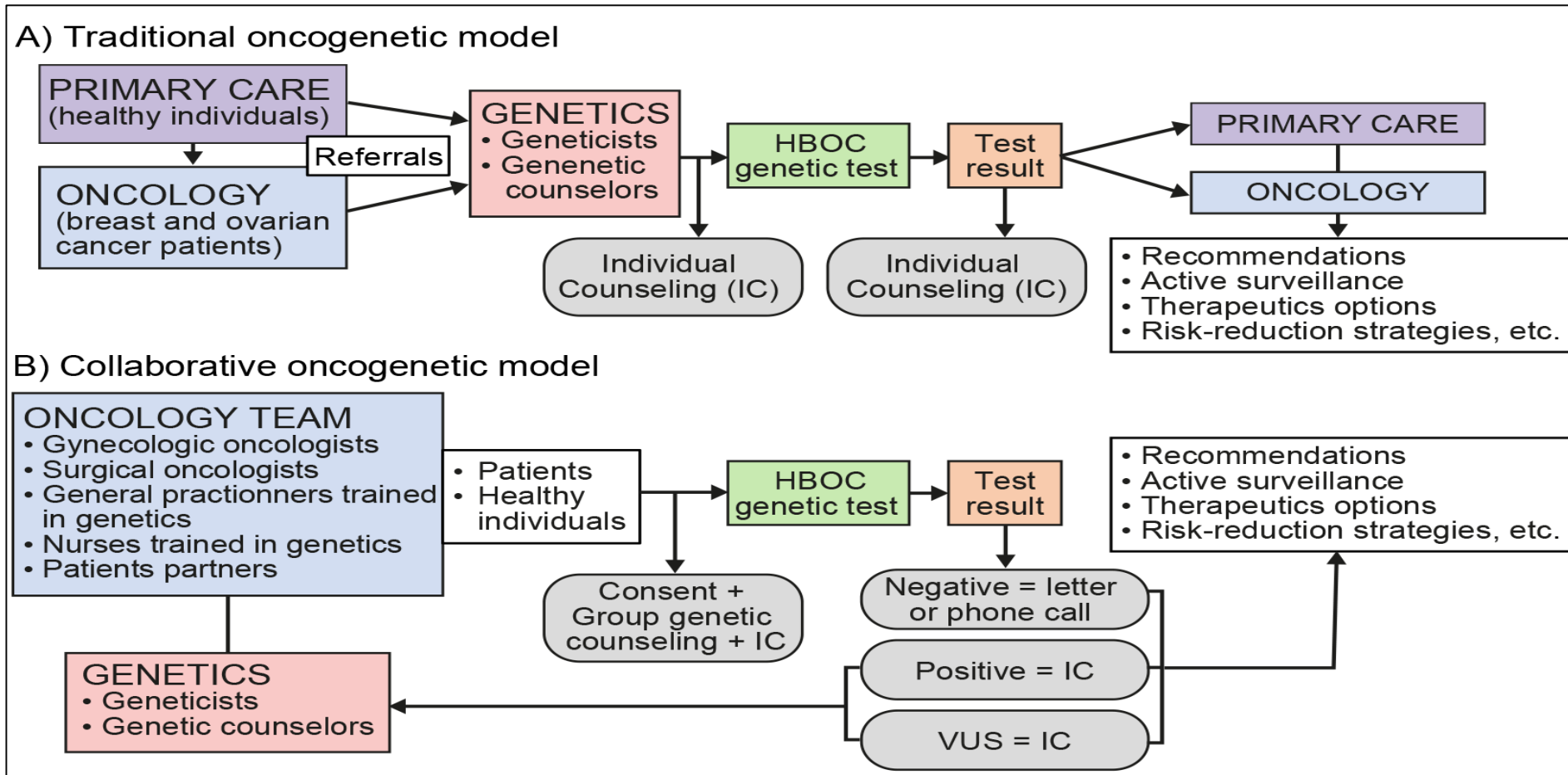


Long waiting lists and delays

NEED

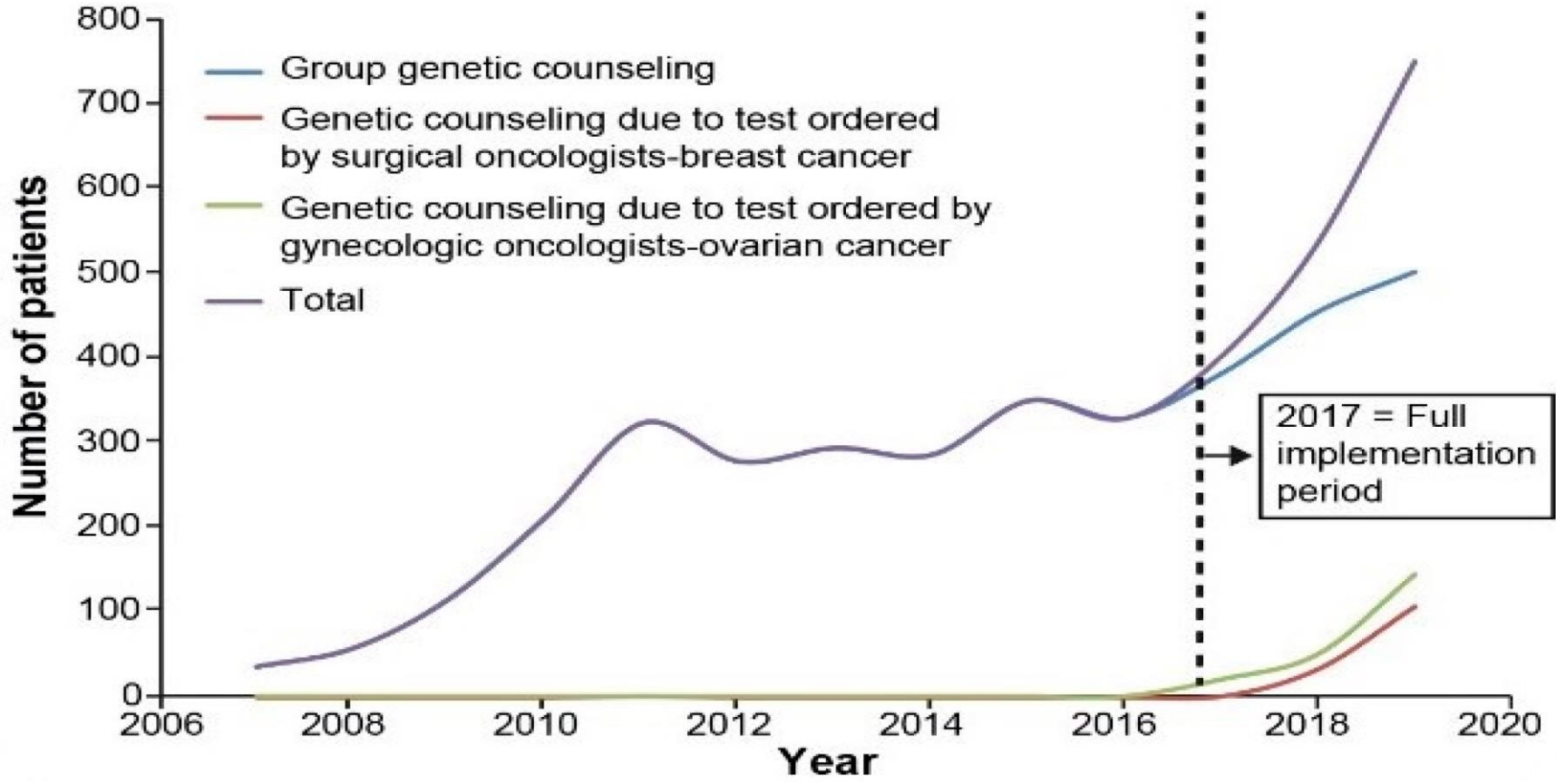
**Alternative genetic
service delivery
models**

Traditionnal vs. collaborative model



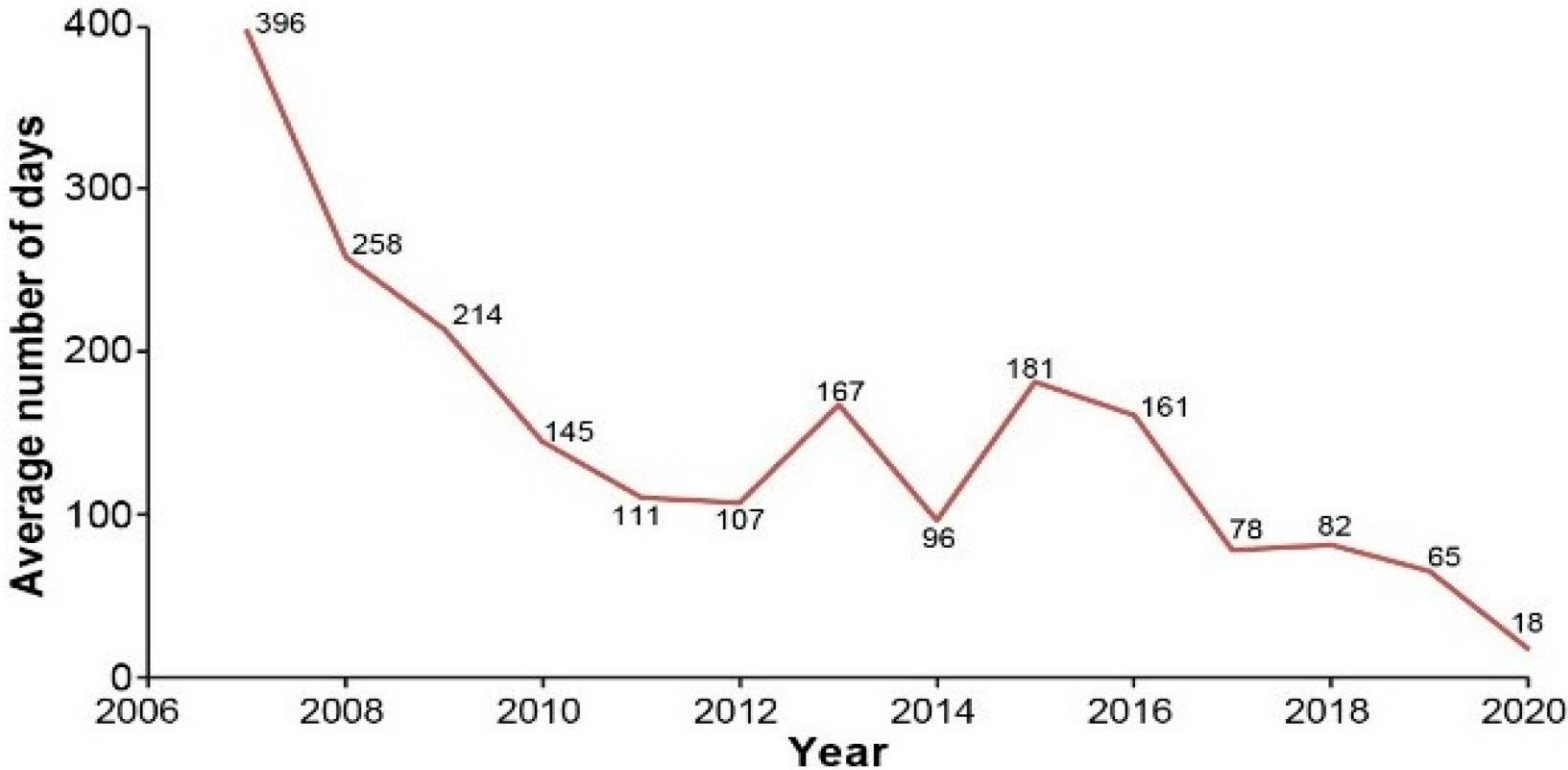
A Simplified Representation of Traditional and Collaborative Oncogenetic Models for Hereditary Breast and Ovarian Cancer (HBOC)

Few results



Number of Patients who Accessed Genetic Counseling for Hereditary Breast-Ovarian Cancer (HBOC) Over Time.

Few results



Average Number of Days between Counseling and Disclosure of Genetic Test Result Over Time.

Lapointe et al. Cancers, 2021.

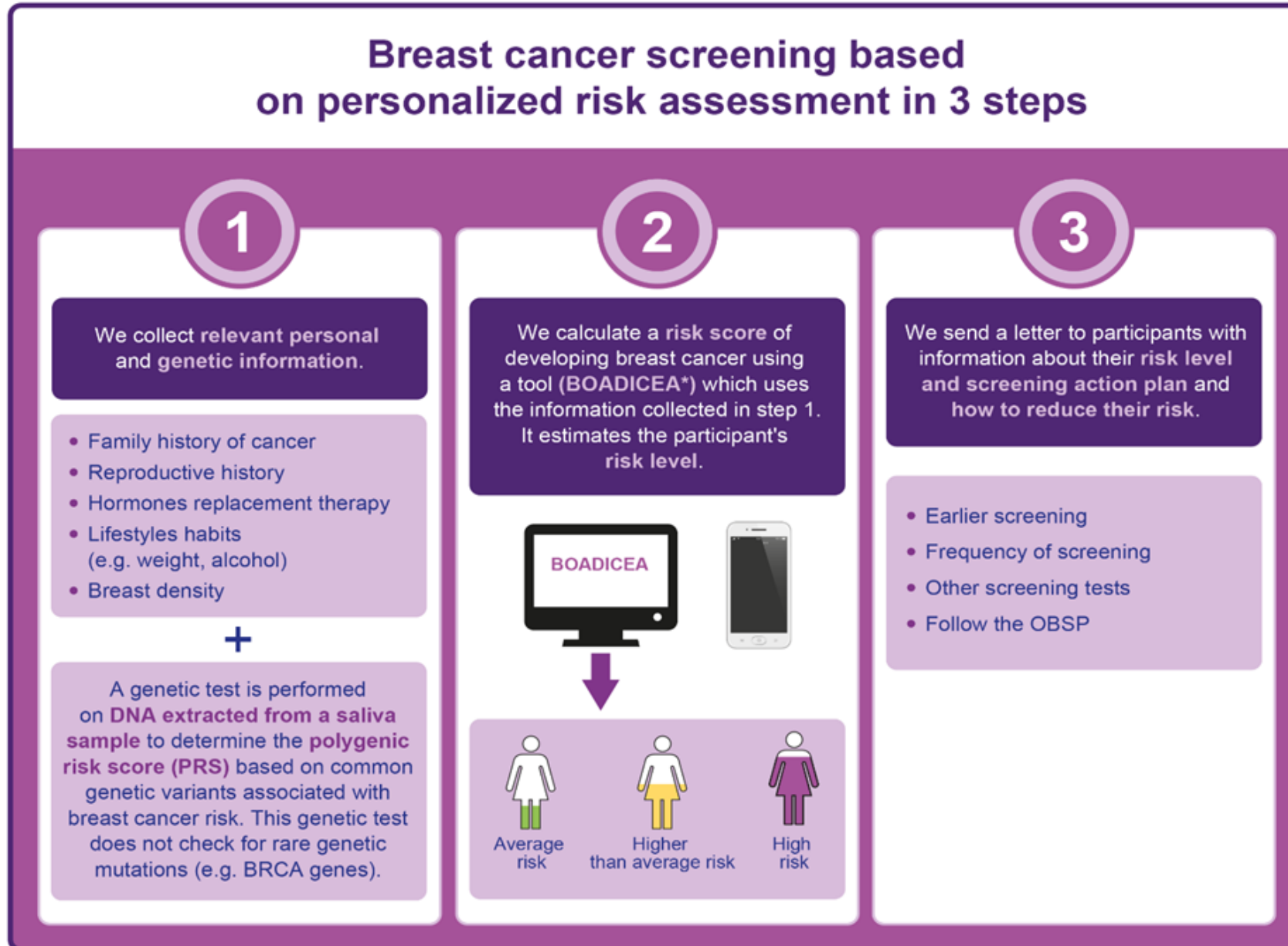
A more international initiative....



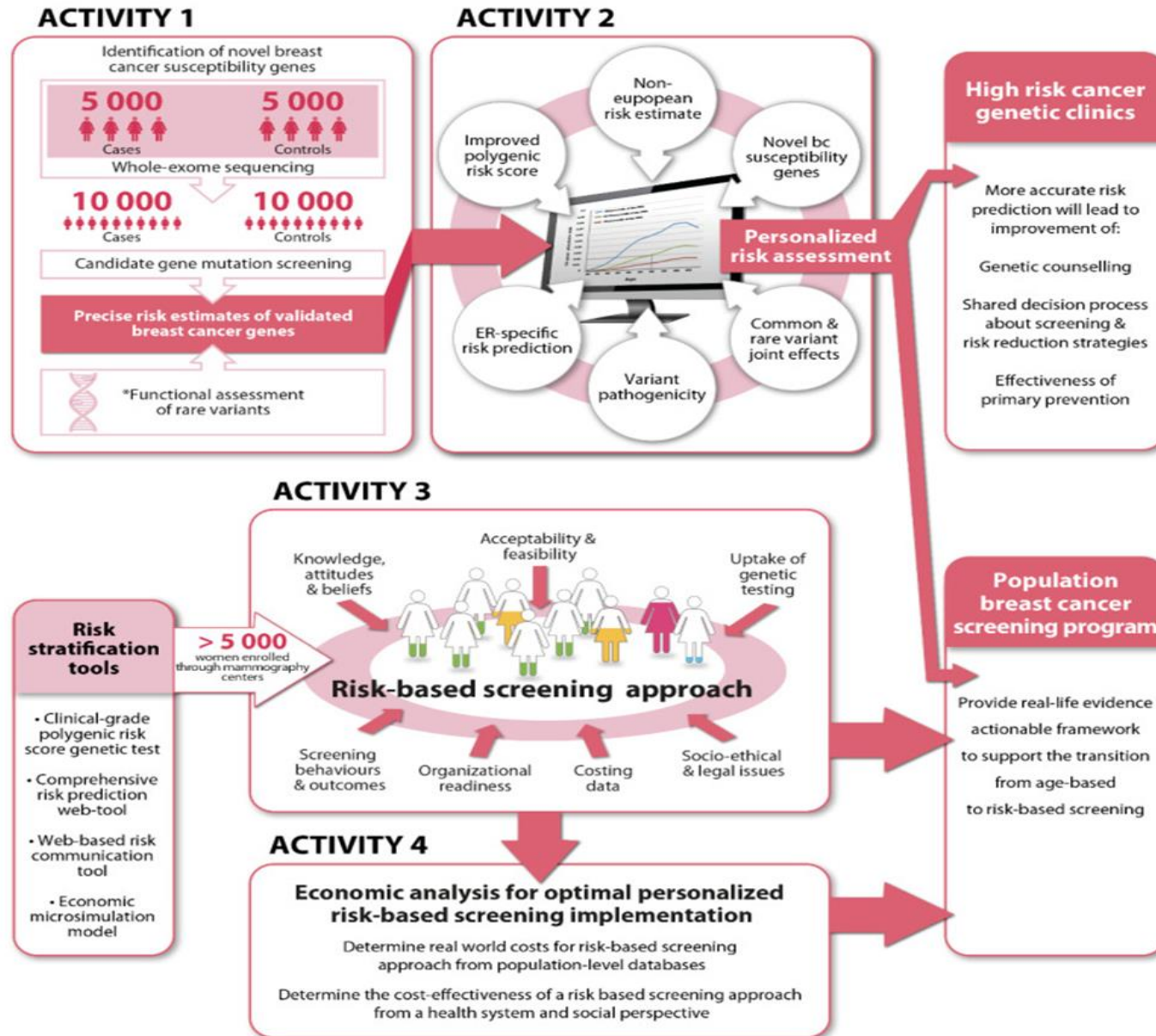
PERSPECTIVE

INTÉGRATION & IMPLANTATION

Topic = Risk-stratified breast cancer screening



Four inter-connected activities...



PERSPECTIVE I&I – A COLLABORATIVE TEAM



Jacques Simard
Chercheur principal

PERSONALIZED RISK ASSESSMENT FOR PREVENTION AND EARLY DETECTION OF BREAST CANCER: INTEGRATION & IMPLEMENTATION



Anna Maria Chiarelli
Co-Chercheuse principale

ÉPIDÉMIOLOGIE GÉNÉTIQUE, BIOSTATISTIQUE ET BIOINFORMATIQUE



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Antonis Antoniou



David Goldgar



Peter Kraft



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Amanda Spurdle

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Jennifer Brooks



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Andrea Eisen



Rita Schmutzler



Gareth Evans



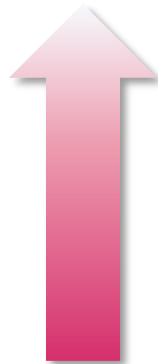
Aisha Lofters



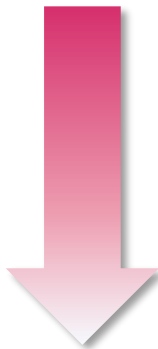
Jean-Sébastien Paquette



A risk-stratified breast cancer screening would:



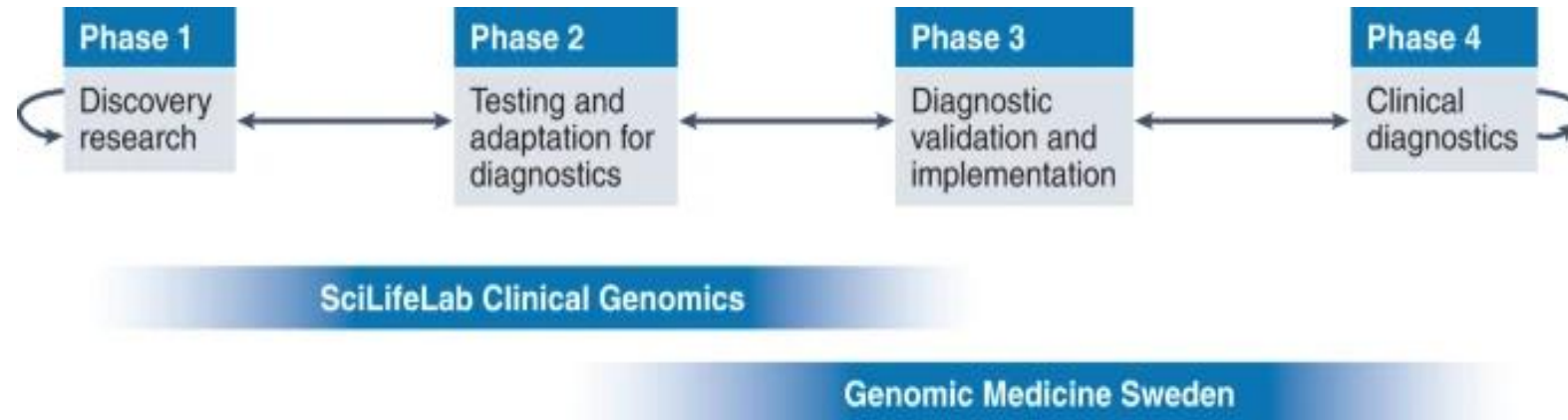
- Better identification of women at high risk
- Early detection
- Survival
- Quality of life
- Prevention



- Over screening
- Overdiagnosis
- Invasive treatments
- Psychosocial impacts
- Clinical and economic burden

Maximize the advantages and minimize the disadvantages

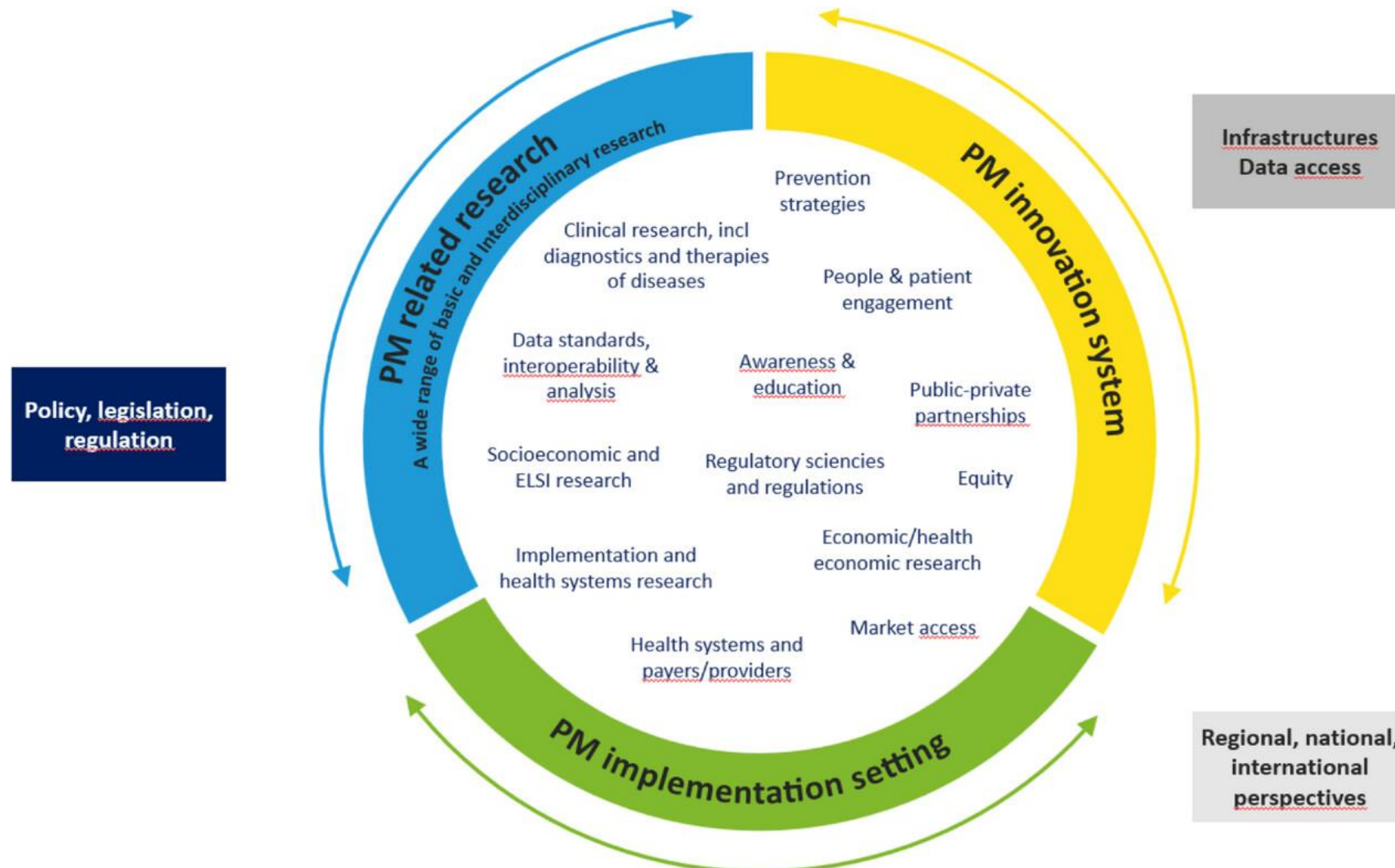
A European perspective: SciLifeLab Clinical Genomics in Sweden...



The technology-driven **SciLifeLab Clinical Genomics platform** **develops, adapts and optimizes new technologies for diagnostics** and has nodes at **all seven universities with a medical faculty**, while **Genomic Medicine Sweden** **validates and implements precision diagnostics/medicine** in Swedish healthcare and has established Genomic Medicine Centers at **all seven university hospitals**. For a continuous development of new methods and treatment strategies, data generated in healthcare will be fed back to research through the National Genomics Platform.

Concluding remark: Implementation of personalized medicine in healthcare

A complex enterprise which requires collaborations between stakeholders



Merci!



Questions?