

Personalized medicine: some facts and a perspective



Thierry Zylberberg – EVP Orange
Healthcare
December 2011



Agenda

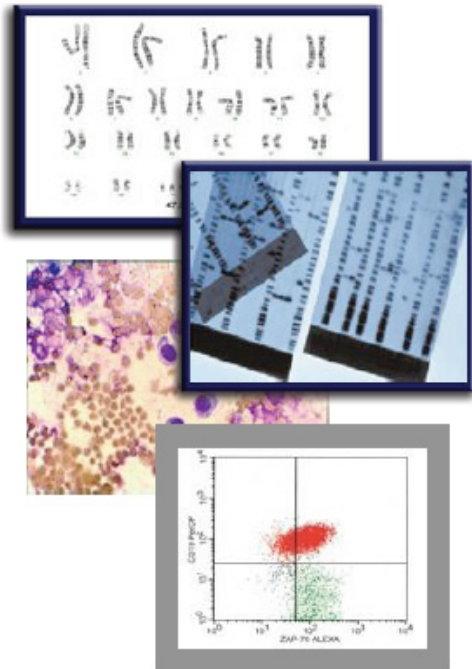
part 1 the evolution of personalized medicine

part 2 down the road

part 3 a prediction

1- The evolution of personalized medicine

Today, personalized medicine is mainly about oncology



Stakeholder concerns:

Patients: more effective with fewer side effects

Pharmas: reduce drug failures in late clinical trials

Regulatory: value for money

Today : **over 50% of cancer drugs** in development are **targeted**

1- The evolution of personalized medicine

The emergence of new technologies allows for a larger view of personalized medicine



1

“Big Data”

Prevention

2

Enabling access to information

Patient empowerment

3

Monitoring patients anytime, anywhere

New ways of delivering care

2- Down the road

Personalized medicine in prevention: What are the advantages? The downside ?



Risk for payers:
“health dictatorships”
Competition between **countries.**

Risk for patients:
What if I do not want to know ?
57% of individuals at risk for Huntington’s Disease indicated an interest in testing before it was available. **16%** took the test*

*Maat-Kievit et al. *J Neurol Neurosurg Psychiatry* 2000;**69**:579-583

2- Down the road

Personalized medicine and patient empowerment The possibilities exist. What are the advantages?

Medical imaging in general practice 2010

US: 68m X-rays, 42m MRI

Fr: 50m (X-rays + MRI)

Patient record

Veteran Health Administration: 5.5m

France: dossier pharma > 15m

**Patients generate data
with professionals, or alone**

**The medical cloud
is up and running**

**It is not just about raw
data, but also
corporate decision
making tools**



2- Down the road

Personalized medicine and patient empowerment: Asymmetrical information?



Personalized medicine as new ways of delivering care

Asthma

300M people worldwide (5% population),
what triggers asthma attack remains unclear

1985: asthma epidemic hits Barcelona.

All attacks occurred near the harbour, when ships were unloading soya beans.



2011: chips inside asthma inhalers

A better follow-up for the patient

You've been using your inhaler twice as much as you did last month - is everything ok?

A better understanding of the external causes

You might want to avoid getting too close to that crop!



Personalized medicine: consequences of “Big Data”



•Massive amounts of data

•New kind of follow up, with new medical challenges

•New kind of jobs



3- a prediction

Personalized medicine will require the end of two myths:
the omniscient physician,
and the patient-led revolution in healthcare

Data will be available

But does it fit an existing healthcare process ?
Is there someone to monitor & interpret this data?
Are physicians ready to use data collected by their patient?

We will be facing two challenges

- **Over-expectation: omniscient physician**
- Be sure that **healthcare pros are leading the way,**

thank you

