

# Cancer patients need innovation

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- **Rising incidence in Europe and Globally....**
  - ~50% due to the aging population
- **Rising workload – 8% per year in many chemo units**
  - Improving outcomes in advanced disease
  - More treatments in early disease
  - Rising incidence
- **Workforce challenges**
  - Clinical staff are expensive to train
  - Patients demand (rightfully) expert workforce and multi-disciplinary working
- **Economy**

## Then

- **Single handed clinician**
  - Treats many cancers
  - Makes own decisions
  - Follows-up own patients
- **Few treatments**
  - So not hard to be reasonably up-to-date

## and now

- **Multi-disciplinary team**
  - Focus on 1 disease
  - Several people to make 1 decision
  - 1 wte clinician per week in Breast MDTs in 1 hospital
- **Many new treatments**
  - New toxicities
  - Interactions....

## Then

- **Lung cancer**
  - Non-small cell vs small cell
  - Small benefit from chemotherapy
  - Palliative XRT
  - Surgery for a few

## and now

- **Multi-disciplinary team**
  - EGFRmut: TKIs
  - Alk: Crizotinib & post-crizotinib
  - Chemotherapy
  - Anti-PD(L)1 drugs
  - Many new targets
    - New toxicities
    - Interactions....



# System Innovations



innovative  
medicines  
initiative

- **Co-ordinated approaches to care**
  - Information sharing across providers
- **Multi-disciplinary working**
  - Still not “standard” across Europe
- **Quality approaches to diagnosis**
  - QA for pathology reporting
- **Patient involvement**
  - “no decision about me, without me” .....

- **Molecular targeting of therapy**
  - Hormone receptors in breast cancer
  - HER2 testing in breast and gastric cancer
    - Not the same disease in different primary tumours
  - Ras and EGFR-inhibition in colorectal cancer
  - BRCA1/2 mutation carriers – surgery and PARPi
- **Molecular definition of prognosis to aid choice**
  - Oncotype Dx, Mammaprint, PAM50 in breast cancer

# Personalised or Precision Medicine



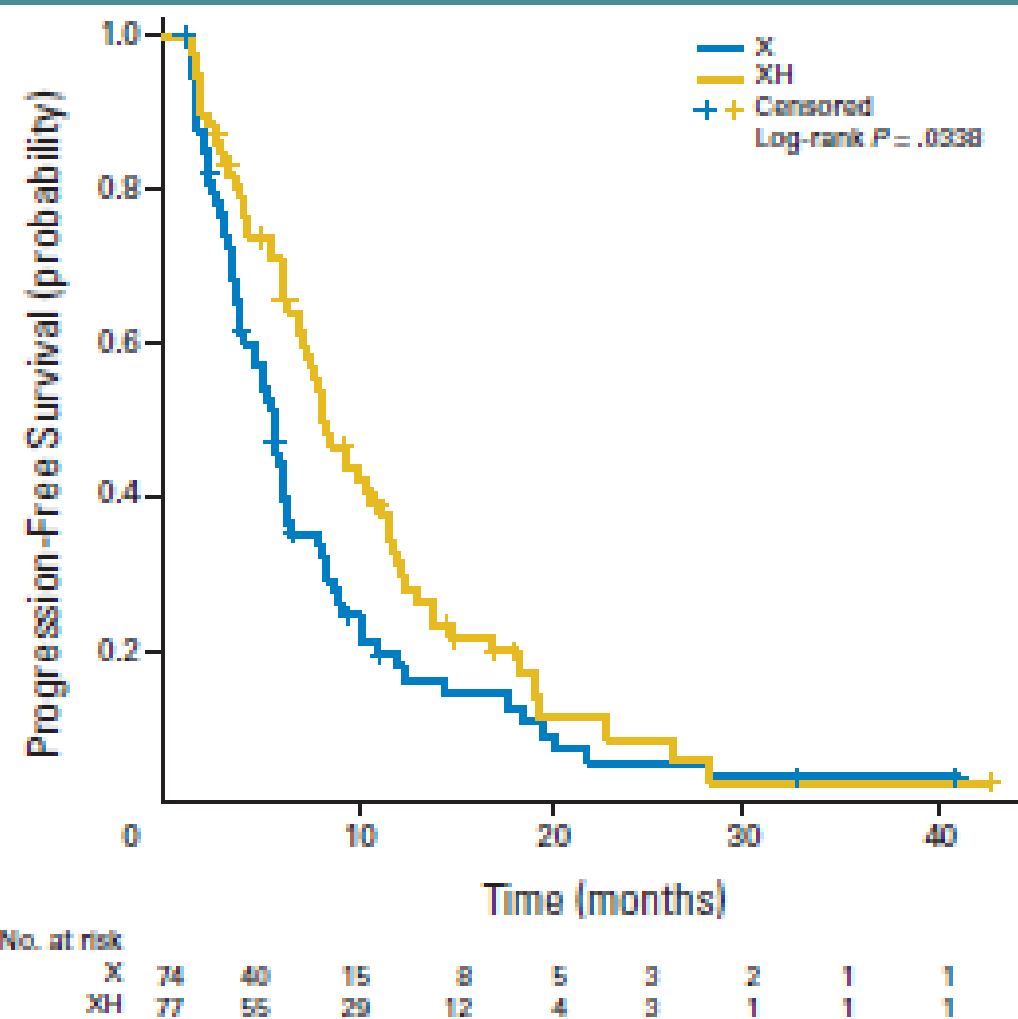
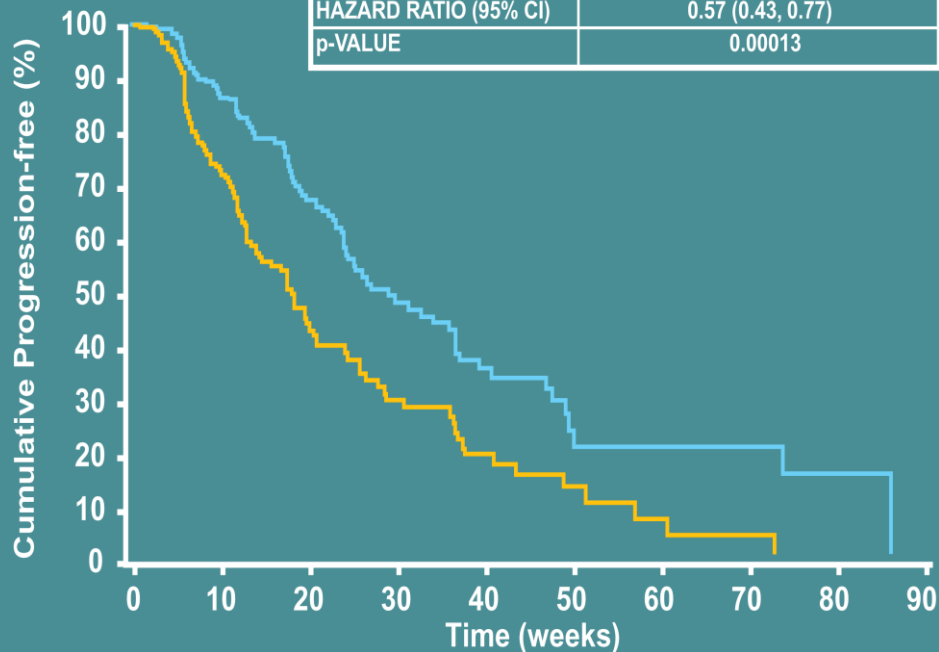
# Needs to be

- Achievable
  - Practical challenges in diagnosis, decision making, treatment delivery
- Affordable
  - Whole genome sequencing – do we have the ability to interpret the data?
  - Drug prices rise faster than inflation – are they worth the cost?
- Acceptable
  - Universally applicable – not just for the young or the rich
  - Efficacy must outway toxicity (↑2 weeks PFS not enough)



# What partner for Capecitabine in HER2+ve BC Regulator vs Real world ?

	LAPATINIB + CAPECITABINE	CAPECITABINE
NO. OF PATIENTS	198	201
PROGRESSED OR DIED	82 (41%)	102 (51%)
MEDIAN TTP, MO	6.2	4.3
HAZARD RATIO (95% CI)	0.57 (0.43, 0.77)	
p-VALUE	0.00013	



# Re-imbbursement

- When is it appropriate to spend € 10 000 a month on a drug?
- What benefits will it bring?
  - Estimated from a clinical trial with very specific entry criteria
  - Control arm is usually what the regulator approves, not what clinicians use
- How sure are we that those benefits will be realised?
  - Uncertainty about the improvement in the endpoint – trial(s) produce an estimate for the particular population

# What other innovation?

- What are we doing now?
- Electronic prescribing – both chemotherapy & radiotherapy
- Electronic community prescribing
- Electronic hospital records
- Electronic capture of patient reported outcomes
  - Smart phones, web, tablets....
  
- **BIG DATA**

# WHY?

- How do we treat patients now?
  - What scope for innovation that uses currently available therapies?
- How well do our treatments work now?
  - Patients can ask.....but doctors cant usually say
- The new innovation.....what actually will it replace>
  - Does the current therapy work as well/badly as the control arm of the trial?
  - Will the intervention actually be used as in the trial or in a different sequence/line of therapy?

# Where next ?

- **Raise standards across Europe**
  - Implement what we already know works
  - Stop doing what doesn't work
    - Excess follow-up of breast cancer by doctors
  - Research improves outcomes for all patients
    - Embed a research culture into European health care
  - Measure what we do.....it might surprise you!

## Access to medicines—the status quo is no longer an option



Last week, the much anticipated report of the UN Secretary-General's High-Level Panel on Access To Medicines, *Promoting innovation & access to health technologies*, was published. The independent panel sought recommendations to solve the disjunction between trade and the patent system with fulfilment of the right to health. This misalignment continues to be a barrier to affordable access to essential medicines.

the report's recommendations and block its release have been widely reported. These tensions are not new. The existing intellectual property (IP) system serves these parties well where public health and human rights considerations are often omitted in pricing decisions and access to medical products and technologies. It is a pity no consensus was reached among panellists on renegotiating TRIPS and a new IP regime.

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# Innovation is needed to implement the innovations.....

# Who are the stakeholders?

**Commercial treatment vendors**

**Clinicians**

Patients and carers/families

**Regulators**

**Health care providers/payers**

# Thank you

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