









Dostępność nowoczesnych terapii, – dokąd zmierzamy i co nas czeka w przyszłości? Availability of modern therapies – where we are heading and what's the future?

Nick Sykes
Senior Director, Pfizer
(on behalf of EFPIA)

About EFPIA and CTR 536/2014

The European Federation of Pharmaceutical Industries and Associations (EFPIA) represents the pharmaceutical industry operating in Europe. Through its direct membership of 33 national associations and 40 leading pharmaceutical companies, EFPIA is the voice on the EU scene of 1,900 companies committed to researching, developing and bringing to patients new medicines that will improve health and the quality of life around the world

Trials Regulation as an opportunity to demonstrate Europe's commitment to clinical innovation, scientific collaboration and transparency of clinical trials information. Successful implementation of EU CTR is one of EFPIA's priorities.

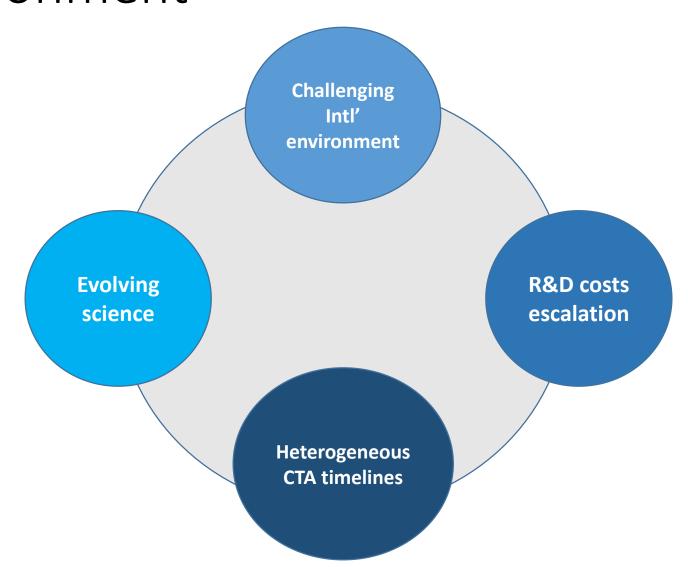




Aim of today's presentation

- Outlining challenges in clinical development of new drugs
- Providing an overview of some of the ways we are changing how we manage and run clinical trials
- Addressing some of the challenges and highlighting the opportunities

Challenging global medicine development environment



Rising to the Challenge

- Making crisp, objective decisions
- Allocating resources appropriately
- Looking for 'early signs of clinical activity' & "Killer" experiments
- Increasing Phase 2 success Rates
- Improving cycle time
- Seeking expedited pathways

Results being seen: Recent big 'game-changers':

- Cures for Hepatitis C
- Immuno-oncology

Current Challenges in Clinical Development: Solutions being Adopted

- Greater efficiencies in running trials using <u>innovative trial design</u> approaches and <u>technology</u>
- Move towards a patient-centered approach to drug development
 - Personalized treatments
 - Drug-diagnostic <u>co-development</u>
- Research and care need to be better integrated, anticipating <u>real life</u> implementations

Adaptive Clinical Trial Design

Many designs possible

Sample Size Reestimation Bayesian Borrowing

Seamless Phase

Dose Allocation

Dose Selection

Model-Based Dose Escalation

Group Sequential

Population Enrichment

Paving the Way for Innovation

Will the EU Clinical Trial regulation meet its stated objective of quicker access to new and innovative medicines?

Regulatory Guidance

Changes brought by Risk/Opportunity Mitigation/Action **Activity** CTR for Adaptive design Centralised Issues with one MS Assessment might impact the others · Choice of the RMS will Assessment Countries opting out Loose criteria for a be key country to opt-out Easier operationally Implementation: No If substantial amendment substantial amendment Potential for alignment Interim requested, it might cause should be required to on submission of Analysis delays submit interim analysis interim analysis Consistency ⇒ Sharing experiences between Member States ⇒ EU guidance could be updated to get alignment between

MSs and between EMA and MSs ⇒ In addition, possible ICH guidance

Strategic Planning

Changes brought by Risk/Opportunity Mitigation/Action **Activity** for Adaptive design CTR Sponsors must Failure by the sponsor to therefore set up Substantial Comments to be provide comments in time will efficient systems to result in automatic withdrawal amendment provided on time engage with the from the process. new approach Protocol needs to explain: Protocol needs to be Sponsor's decision strategically written to Protocol RMS to assess protocol in making process allow for operational writing the round · Set boundaries flexibility to match adaptability of design · When sponsor will go back to regulators

Timing for Changes

Activity

Changes brought by CTR

Risk/Opportunity for Adaptive design

Mitigation/Action

Adding a country &

Substantial Amendments: new sites etc.

- Adding a country cannot be in parallel of initial approval & no substantial amendment possible in parallel
- Potentially longer assessment timelines

Risk of delay



As those are key enablers of the adaptability of the design, Sponsors could:

- Strategically plan within protocol
- Take advantage of the sequential submission of part I and part II

Transparency

Changes brought by Risk/Opportunity Activity Mitigation/Action for Adaptive design **CTR** Commercially Summary of Confidential · Importance of the Interim 'Intermediate' analysis to Information? implementation analysis be published within a guidelines Integrity of the trial? year of analysis date Bias issues?

Adaptive Trials: To Sum Up

Many designs possible

Sample Size Reestimation Bayesian Borrowing

Seamless Phase

Dose Allocation

Dose Selection

Model-Based Dose Escalation

Group Sequential

Population Enrichment All requiring <u>flexibility</u>

Centralized assessment

Strategic protocol writing

Adding countries/sites

Substantial amendments

Interim analysis

Transparency

Implementation of the CT
Regulation must allow
enough <u>flexibility</u> to enable
the <u>adaptability</u> required for
a timely access by patients
to innovative treatments

The Changing Clinical Research Pathway: Towards a Life-Cycle Approach to Evidence Generation

From trials "designed to learn" to real life situation

Early clinical trials (R&D)

- · Biology / imaging driven
- Integrated TR
- Screening platforms
- Collection of high quality data from various sources

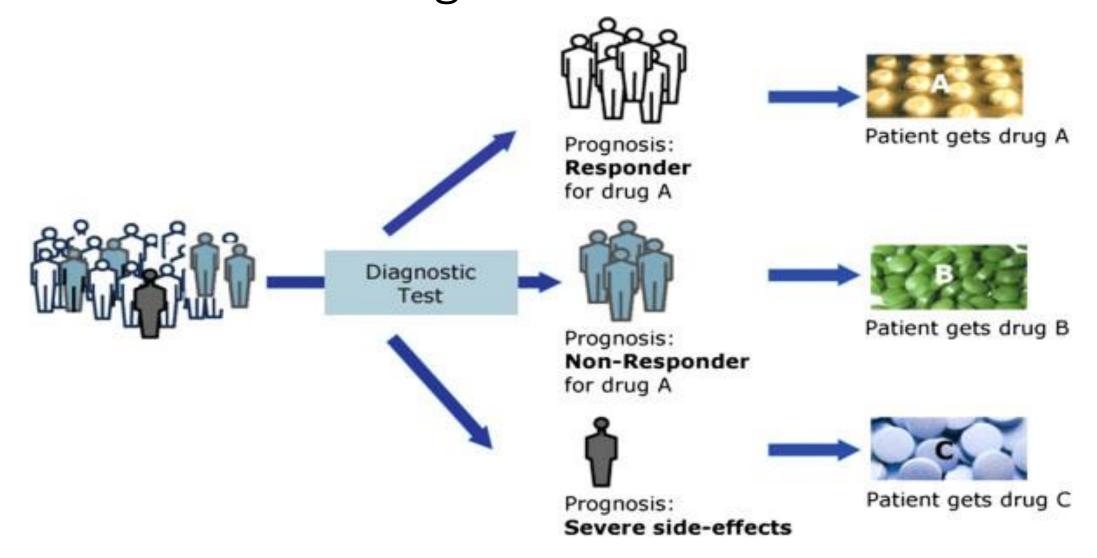
Pivotal trials

- · Highly targeted
- Large differences

Population-based studies

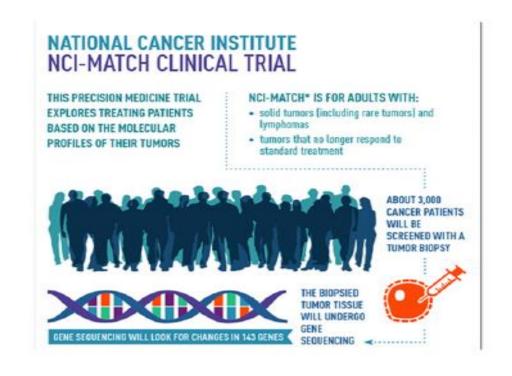
- Real world data
- Quality of life
- · Health economics
- HTA
- Pragmatic trials

Sustainable Model of Drug Development – Efficiencies through Patient Selection



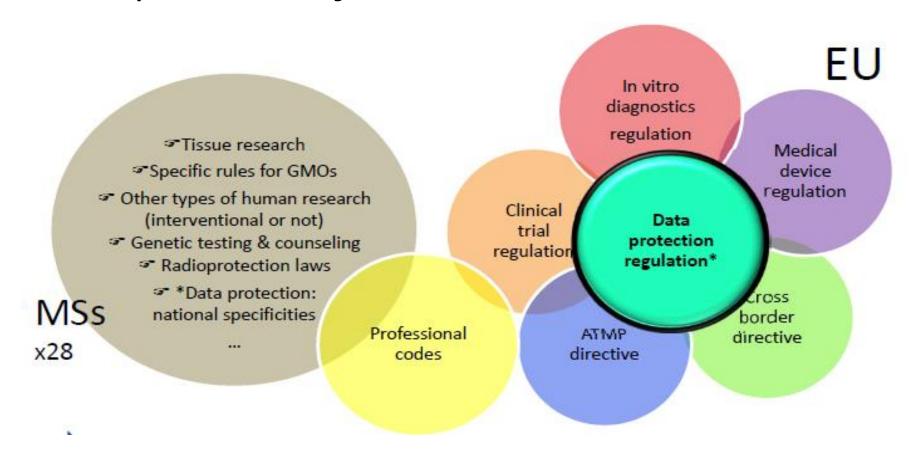
Example of 21st century personalized medicine trial





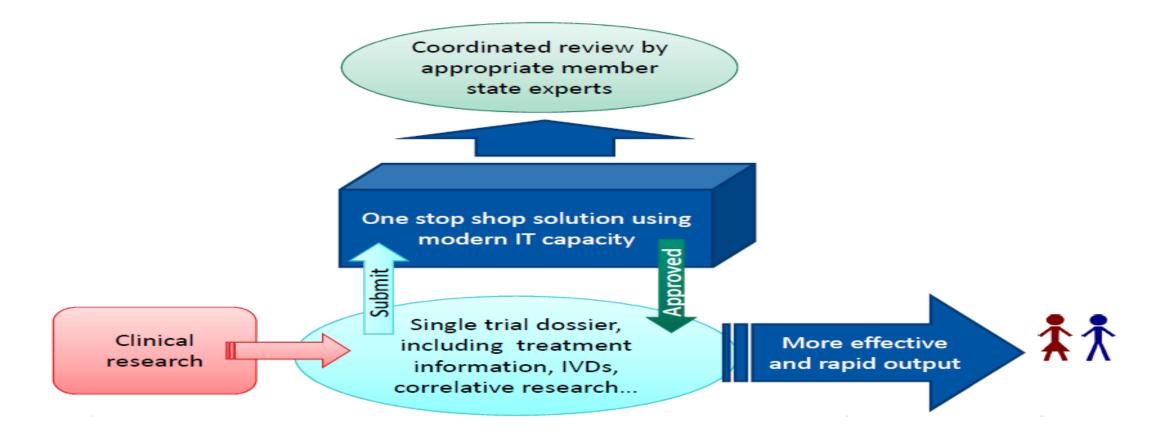
Such projects are at the edge of several regulations:
Clinical trials, data protection and IVD

Fragmentation of the regulatory framework in Europe: a major bottleneck

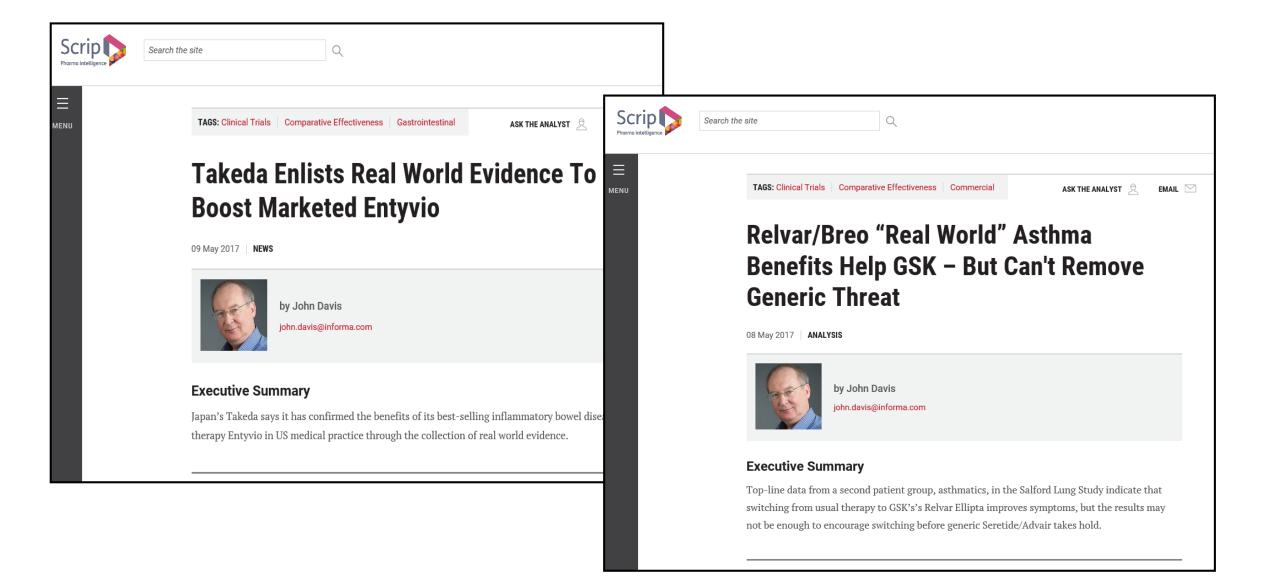


Streamline - Simplify - Harmonize

Europe must build an integrated and harmonized legal and ethical framework to foster relevant international clinical research



The Potential for Real World Data



Real-World Data/Evidence is relevant throughout the drug development lifecycle

Discovery

Early Development Full Development Registration /Market Access

Life Cycle Management

Epidemiology of the Condition

Biomarkers

Treatment algorithm.

Compliance to clinical Guidelines.

Set scope for Regulatory and HTA early scientific advice Study designs optimised for registration, but anticipate HTA

Feasibility of potential studies to address regulatory and HTA commitments

Optimised (adaptive) evidence generation plan

Post launch studies to address regulatory and HTA commitments

Support initial regulatory B/R decision-making

Deliver postapproval safety and efficacy data to confirm initial B/R determination

Drive B/R
decisionmaking for
product
enhancements

Orphan, Paediatrics, Feasibility Support MAA,
HTA, B/R
profile
through lifecycle

Technology can help....

Advances such as electronic data capture, and prevalence of wi-fi connectivity are driving changes in how clinical trials are conducted and analysed





Trends in Technology Helping in Clinical Trials

- Using patients own health data from other systems
 - Electronic health records
 - Data captured on their own smartphone
- Making research participation more accessible
 - Self-reporting and tracking using technology in their pocket
 - Wearable sensors capturing data and transmitting the data to a remote location

Challenges remain...

Reaching the potential:



In Summary – Many opportunities to maximise efficiency

- Novel approaches to running/managing clinical trials are being adopted
 - Innovative trials designs
 - Patient-focussed approaches
 - Use of real-world data
 - Advances in technology
- Hurdles still to overcome
 - Legislative
 - Ensuring quality
 - Subjective

Questions

