

# Why are biobanks important for medicines development?

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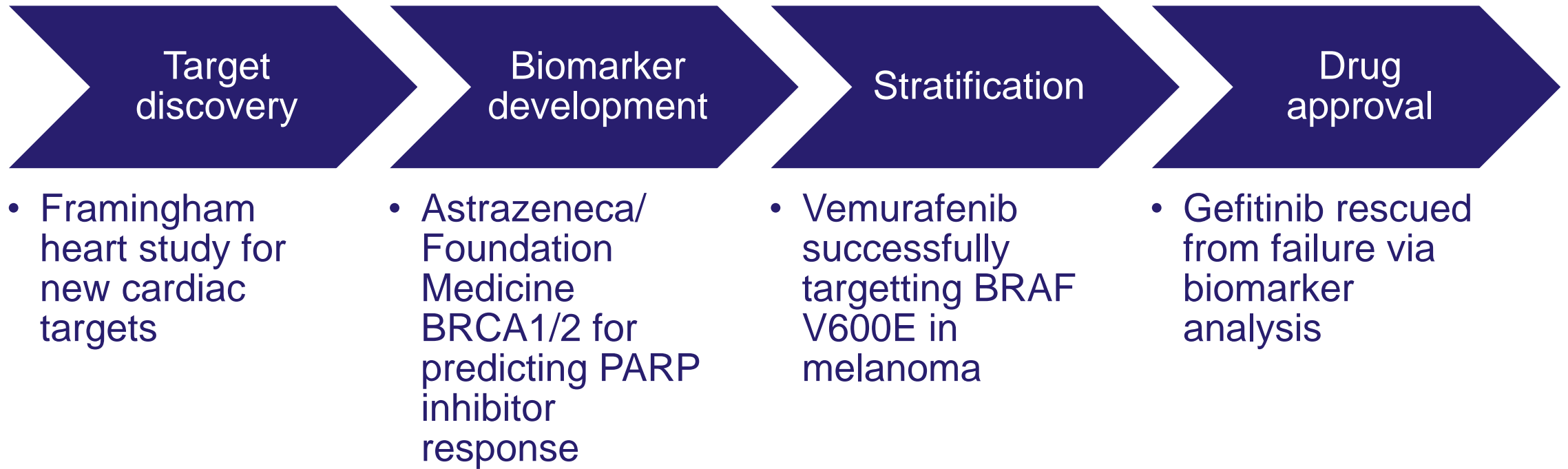
# Summary

- Biobanks are vital for medicines development
- Importance has increased due to precision medicine
- But medicines development requires
  - Samples of interest
  - Discoverable sample data
  - Clinical data
  - Customer service
- Banks, like libraries, need to change



Photo: Biblioteca Joanina, Coimbra

# Biobanks are valuable at the beginning, middle and end of medicines development



# “Precision medicine” makes biobanks more important and has attracted funding

- More variables than patients
  - 3 billion base pairs
  - And methylation, scRNAseq, etc
- Need for cheaper development
  - \$136bn yearly cost of failure
  - Patient information earlier
- Move to human centred drug design
  - Bring patient data in earlier
  - Understand real world disease



*And >£2bn global investments including*

*All of Us  
China Kadoorie  
FinnGen  
Nashville Bio  
Shanghai Zhiangjiang  
M2Gen  
Etc*

# So what has changed?

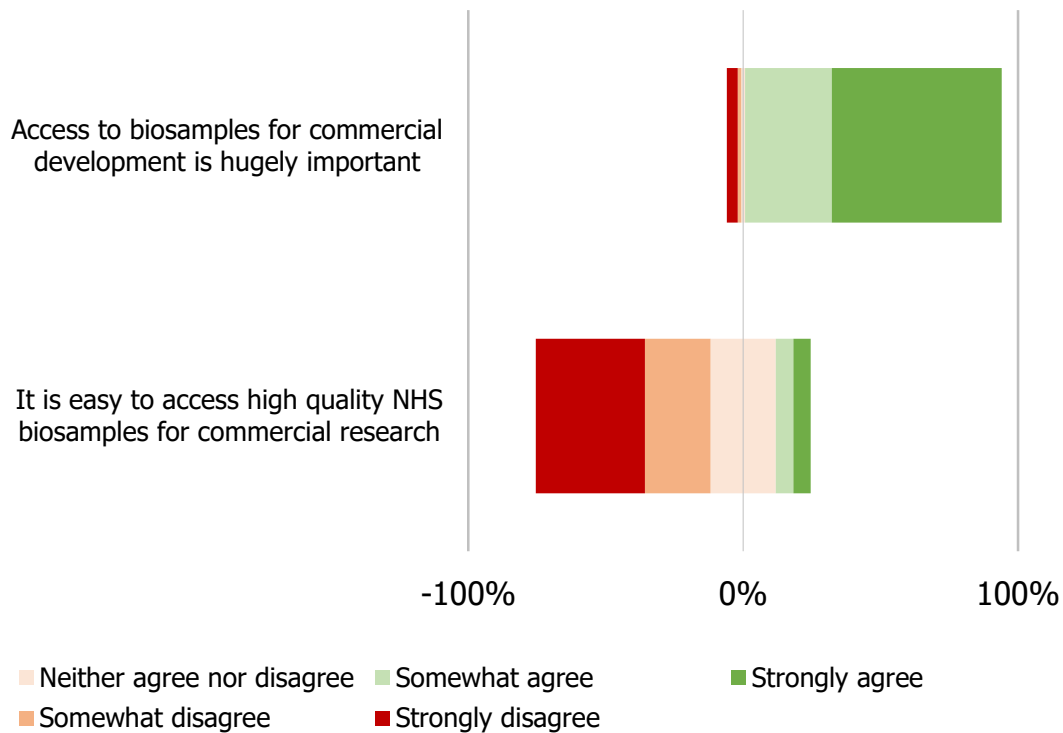
- Technological factors
  - Increased range of biomarkers detectable (cell free DNA, immune markers) and affordable
  - Increasing ability to (and value from) link to phenotype or real world evidence
- Commercial factors
  - Biobank investments not delivering
  - Sample markets forming
  - Pharma R&D productivity falling
- Environmental factors
  - More samples being banked globally



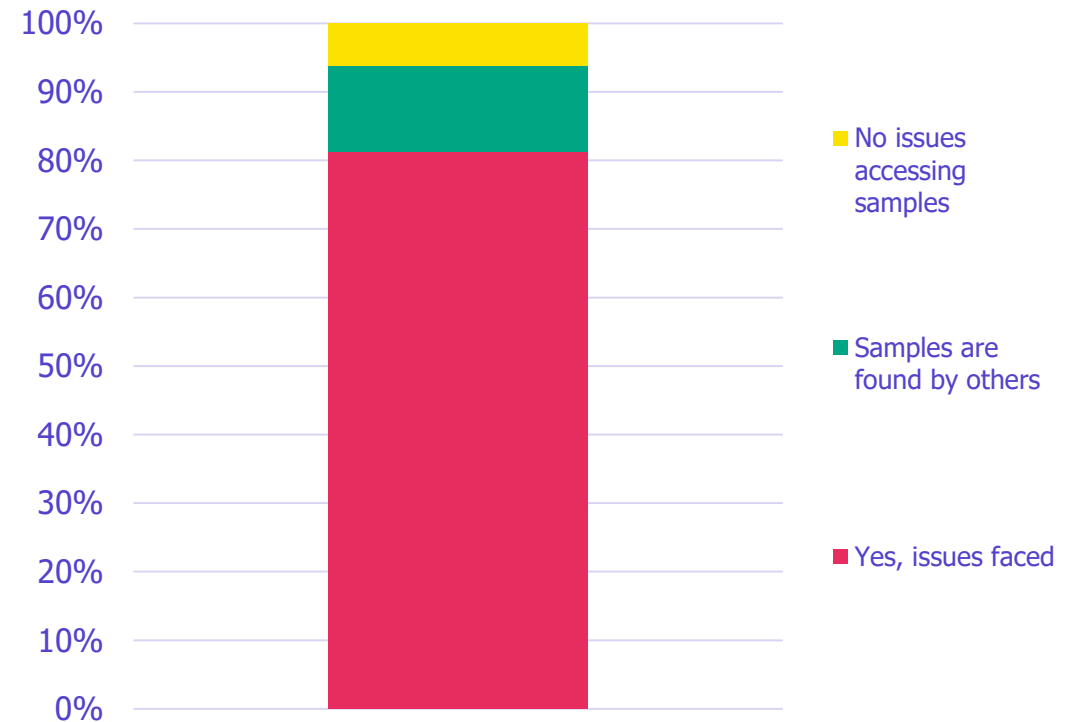
- Demand for samples up
- Demand for samples and data way up
- Cautious customers
- Supply for samples up
- Markets forming

# UK SMEs see value in NHS samples but find them hard to access

## Samples are important for biotech R&D but hard to access



## Most companies have issues accessing samples



# Requirements of a biobank in 2019

## Samples of interest

- Very many samples
- Very rare samples

## Discoverable sample data

- Web accessible & searchable
- Sample numbers, types, standards

## Clinical data

- Consistent and reliable
- As detailed & longitudinal as possible

## Customer service

- Transparent, predictable access process & decisions
- Simple contracting process

# So what makes an “important” biobank



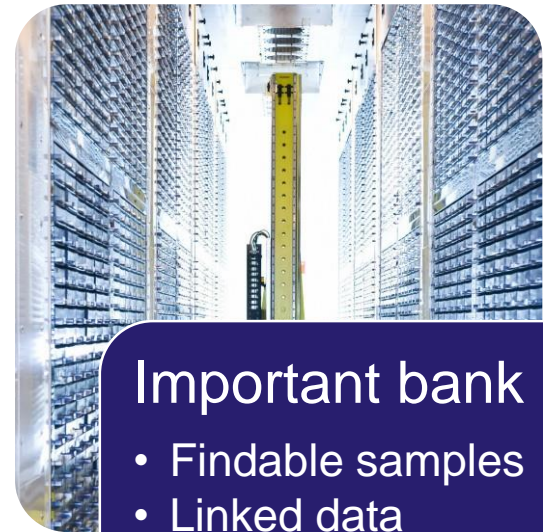
## Kings library

- Historic, beautiful,
- Service, samples & data not suited to modern taste
- “Ask the PI” mentality



## Good local

- Known to and serves local community
- Professionally set up & maintained
- Low utilisation and sustainability



## Important bank

- Findable samples
- Linked data
- Clear value proposition
- Easy to contract with
- Service culture

Discoverable, accessible, valuable