



# Introduction and welcome

Professor Andrew R Pettitt

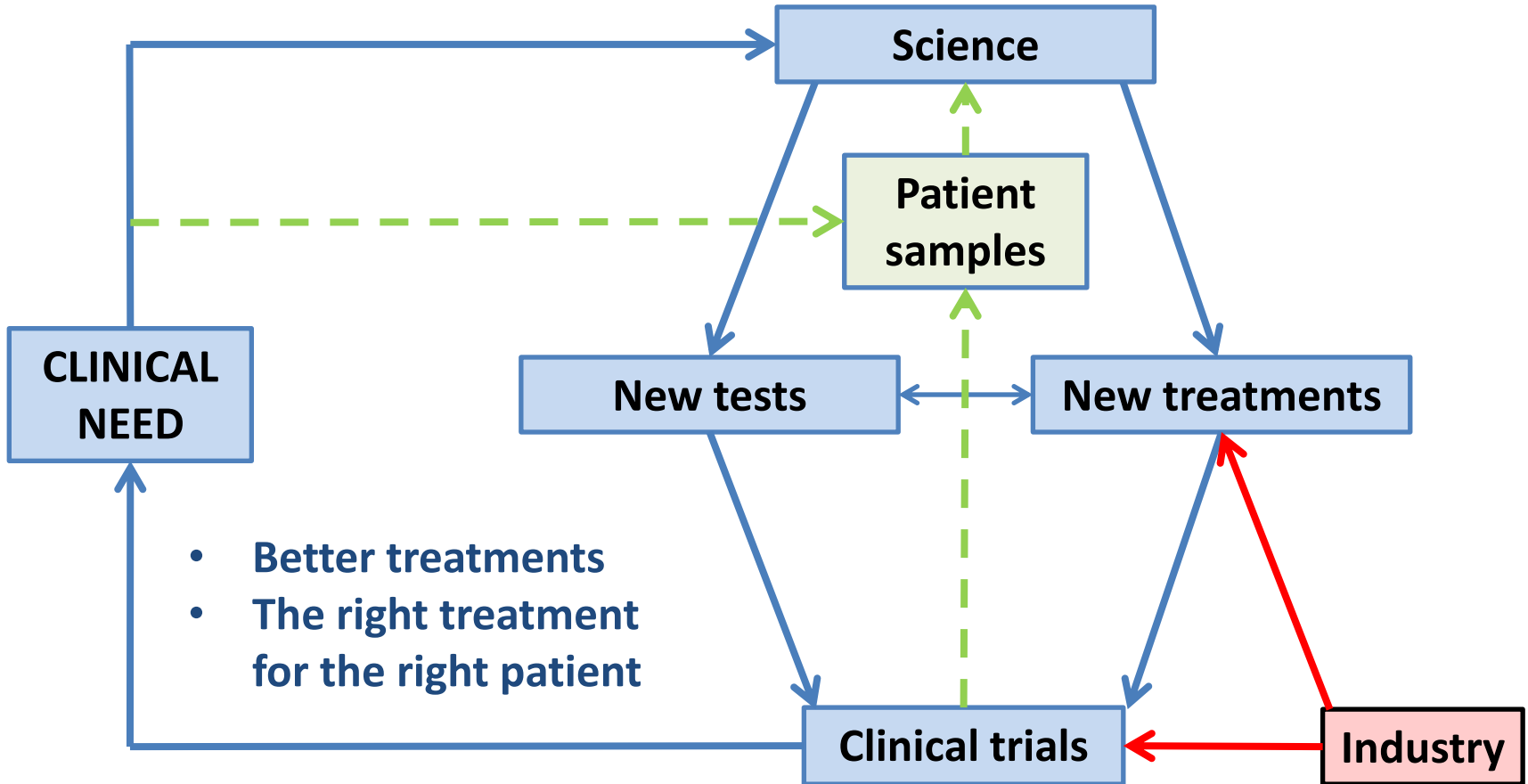
Ronald Finn Chair of Experimental Medicine

Head of Department of Molecular and Clinical Cancer Medicine



UNIVERSITY OF  
LIVERPOOL

# The process of cancer research



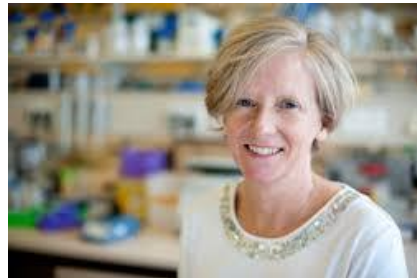
- Better treatments
- The right treatment for the right patient

# The need for a local cancer biobank

- **Cancer biology & preclinical evaluation of novel therapy**
  - Cell lines and animal models
    - Are only an approximation of the real thing
    - Do not capture heterogeneity of most cancers
- **Biomarker discovery & development**
  - Need to demonstrate
    - Variation of assay results in the study population of interest
    - Correlation of assay results with clinical endpoint of interest

# Organisation and governance of LTB

- Sits within the **Department of Molecular and Clinical Cancer Medicine**
- All LTB operations are overseen by a **Governance Board**
  - Professor S Coupland (Director)
  - Mrs R Clarke (Administrator)
  - Professor M Boyd
  - Professor S Frostick
  - Dr W Greenhalf
  - Dr T Helliwell
  - Mr C Holcombe
  - Mr T Jones
  - Professor JP Neoptolemos
  - Professor C Palmieri
  - Professor A Pettitt
  - Professor P Rudland
  - Mr R. Shaw
  - Professor R Sibson
  - Professor R Sutton



# Regulatory framework

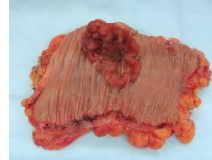
- Strict adherence to national and local **policies and procedures**
- **Human Tissue Authority (HTA) license**
- North West 5 Research **Ethics Committee approval**
- **NHS Trust approval**
- University of Liverpool is **custodian of samples and data**
- **Accountability** to University Research and Ethics Governance Framework



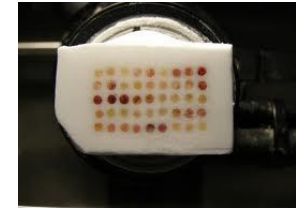
Designated Individual  
Dr Tim Helliwell

# Material stored

- **Surgical specimens**
  - Tumour and normal tissue
- **Participating NHS Trusts:**

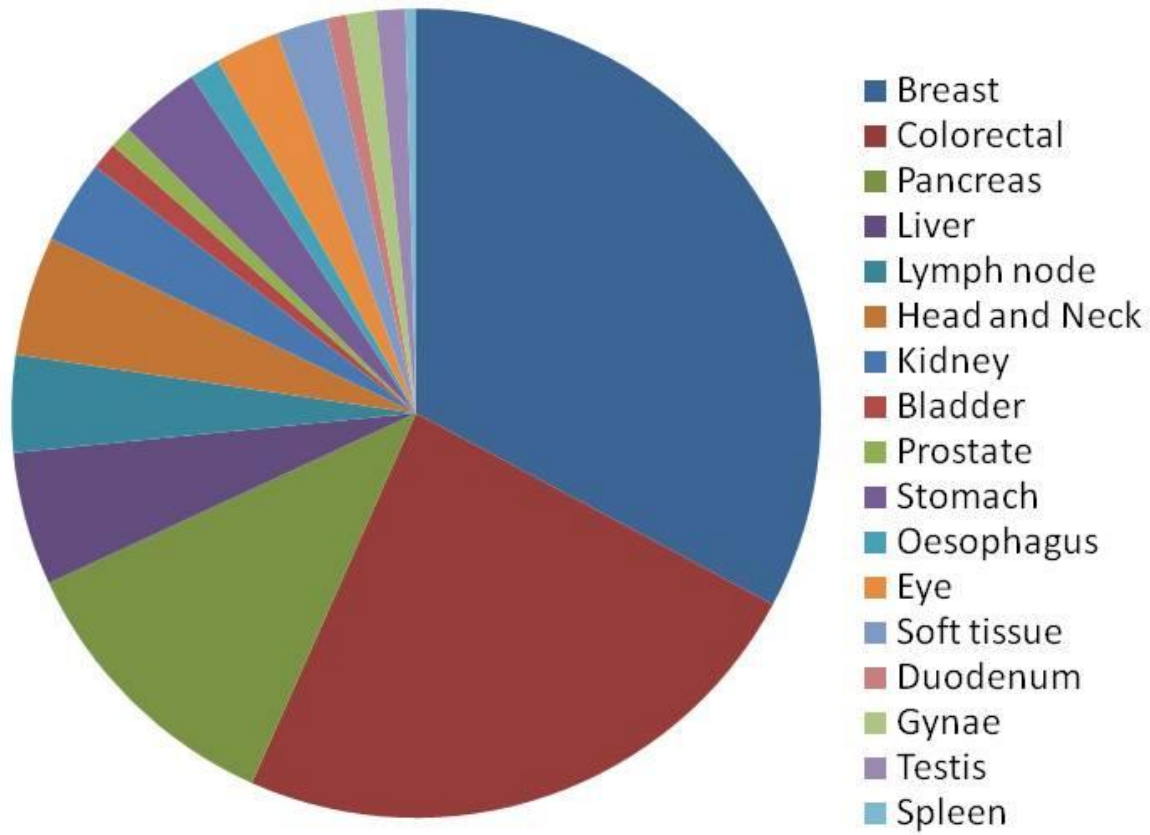


- **Derived material**
  - FFPE blocks and slides
  - Frozen sections
  - Tissue microarrays
  - DNA, RNA and protein



- **Number of samples**
  - Biosamples obtained from 250-300 donors per year
  - >40,000 FFPE and frozen samples stored from >5,300 donors

# Samples stored from each tumour site



# Sample annotation

- **Data protection**
  - Samples are pseudo-anonymised
- **Information available**
  - Gender
  - Age at diagnosis
  - Type and grade of tumour
  - Pathological data such as hormone receptor status
  - Clinical outcome data
- **Data sharing**
  - Cumulative sample annotation
  - Collaboration between research groups
  - Maximal research impact

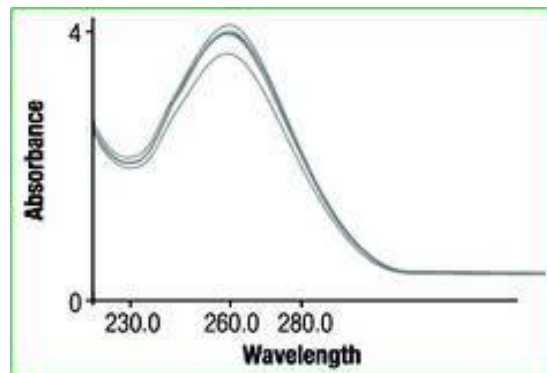
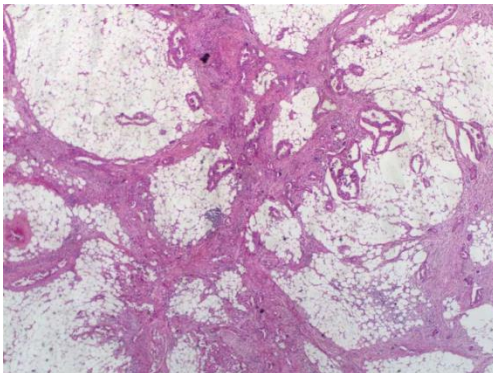


# Sample access

- Researchers complete a **request form**
- Request is considered by the **LTB Management Board**
- **Criteria for sample release**
  - Scientific quality
  - Deliverable
  - Requested samples available
  - Project approved by host organisation
  - Project covered by donor information sheet and consent form
  - Sufficient funding and resources in place

# Quality Control

- All biosamples undergo **routine quality control checks** before being issued
- **Tumour or normal epithelium content**
  - Verified by a pathologist from an H&E slide
- **RNA quality**
  - Routinely assessed from A260/280 and A260/230 ratios
- **DNA quality**
  - Routinely assessed by spectrophotometry



# The process of cancer research

