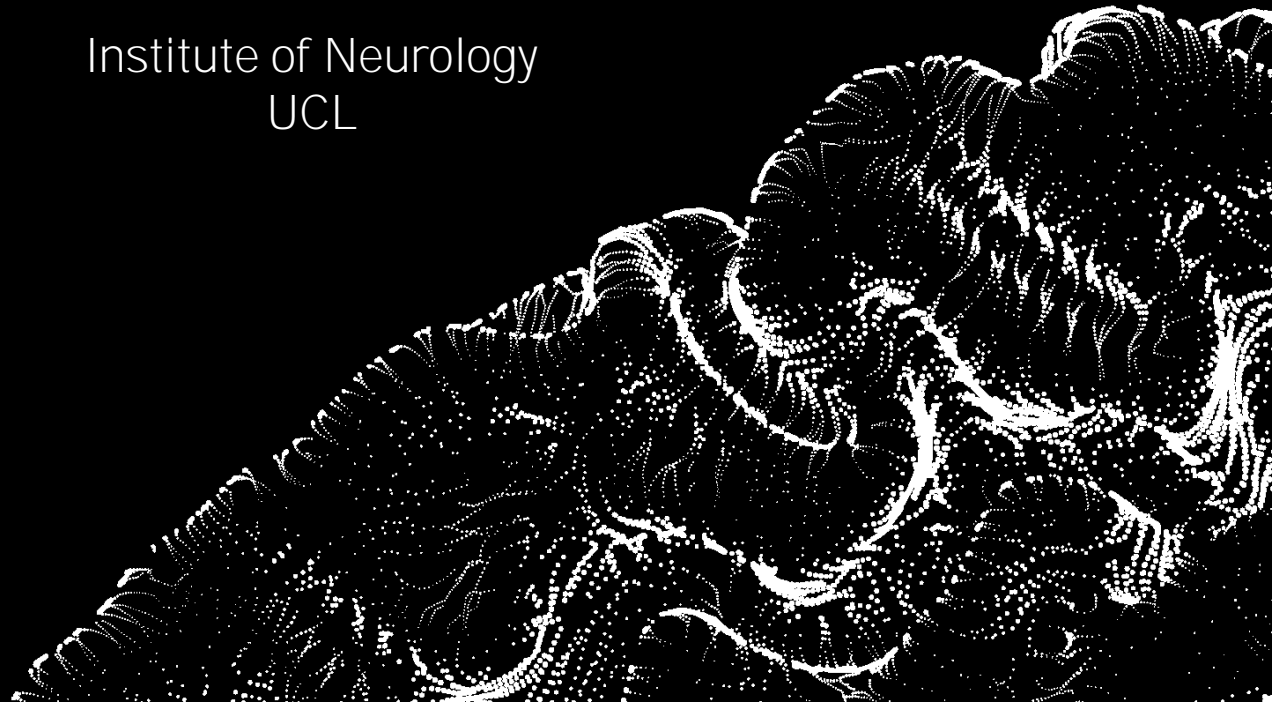


Medical Imaging

PARASHKEV NACHEV

Institute of Neurology
UCL

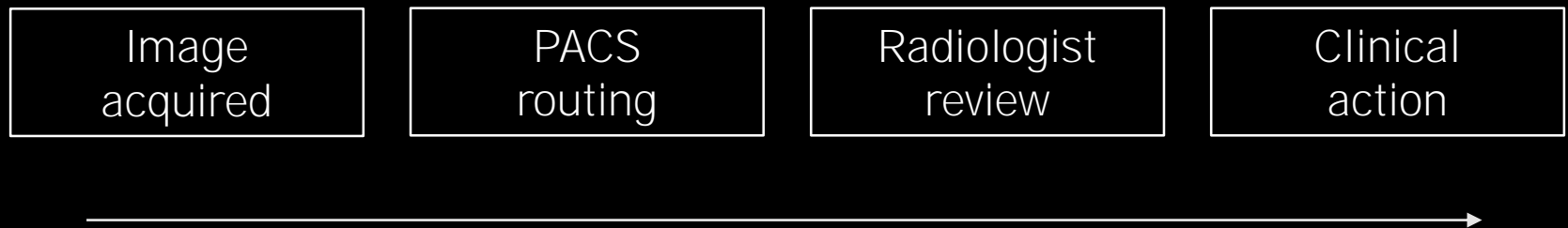


No eye can ever be enough...

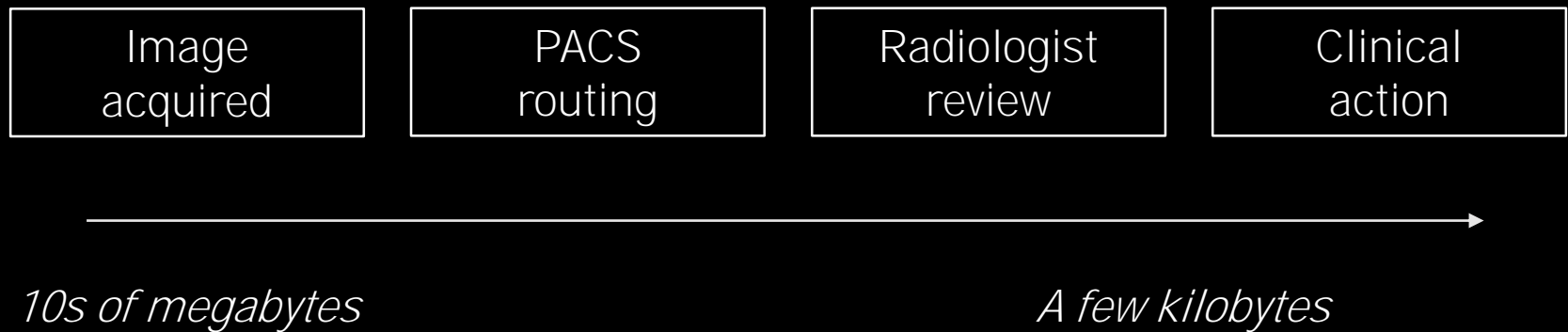


Photo © Ian Cox 2012

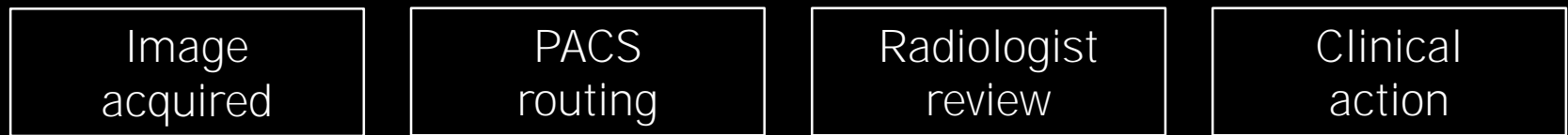
The information gap in medical imaging



The information gap in medical imaging



The information gap in medical imaging



10s of megabytes

A few kilobytes

*Is the difference really just
noise?*

Large scale imaging

Storage

Low latency
Cloud systems

Management

Automated sort
Automated audit

Access

Multimodal
Multisite/agent

Review

CA Diagnosis
CA Triage

Clinically-embedded image analysis

Framework

*Open platforms
for integrating
analysis with
clinical flow*

Application

*Synergizing
research tools
with the clinical
flow*

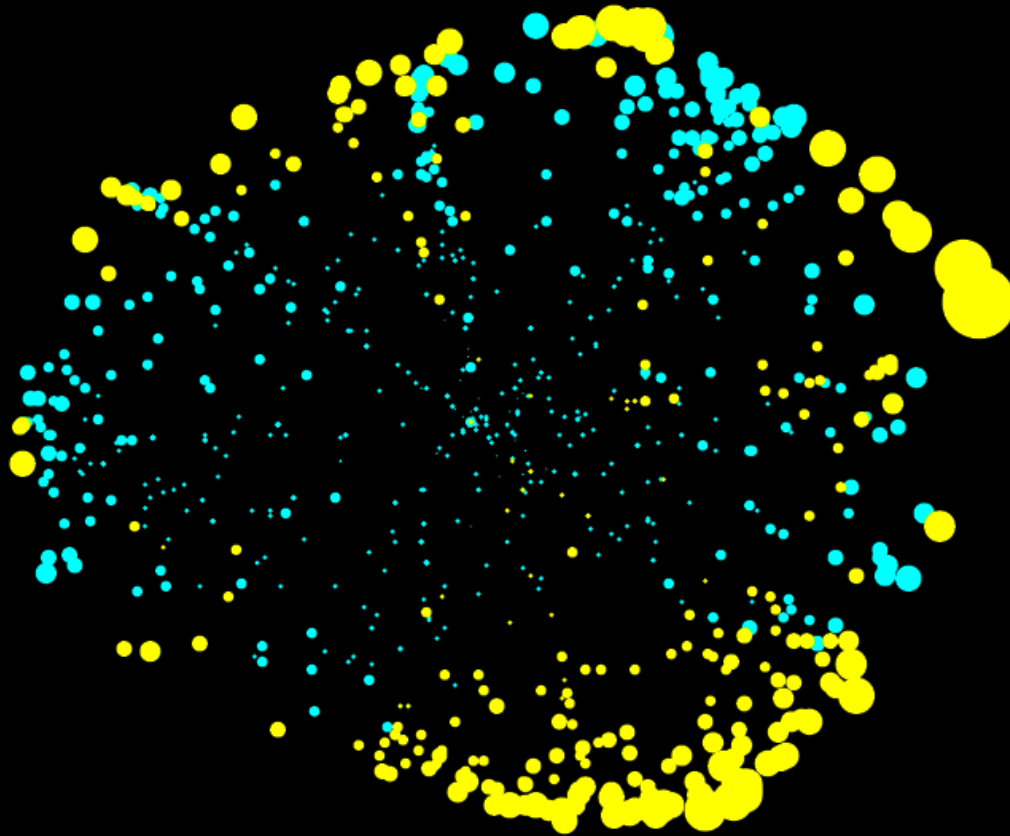
Novel data

*Extracting
novel clinically-
relevant signals*

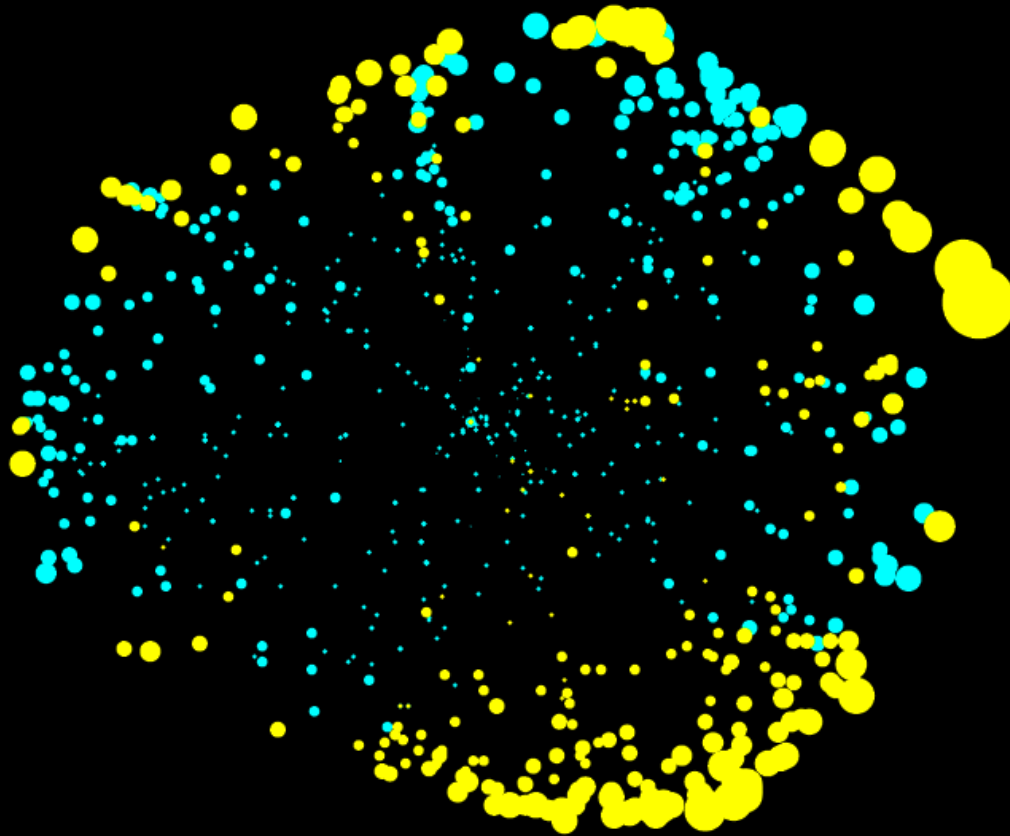
Novel analysis

*Novel
approaches to
analysing existing
data*

Combining imaging & clinical data



Combining imaging & clinical data



Imaging alone counts for little...

Combining imaging & clinical data

Digitization

Point-of-care
Retrospective

Analysis

Semantic
Parameterised

Reporting

Structured
Automated

Integration

Cross-modal
Cross-site

Intra-interventional imaging

Intervention

*New visualisation
tools*

Environment

*Accessing tools
within sterile
constraints*

The ground truth



Devices and techniques to anchor
MRI into reality

