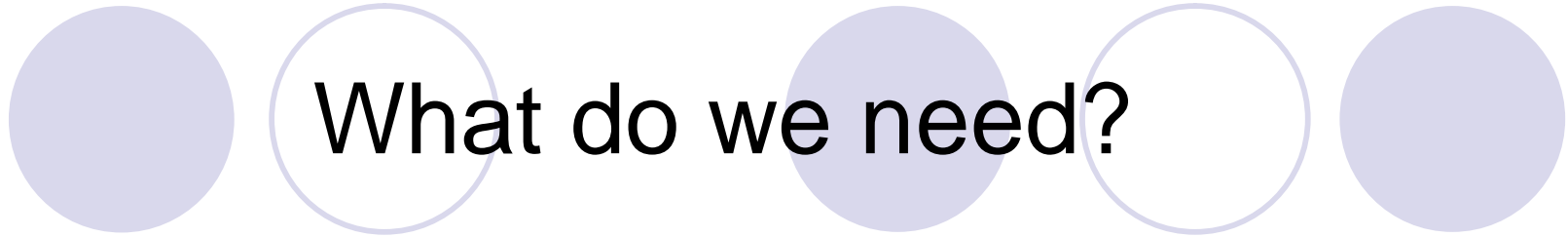


# Radiology and EPR: Clinical requirements of radiology department

9.40 – 10.00

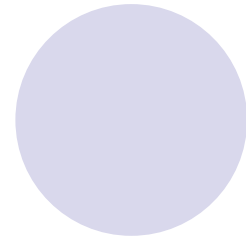
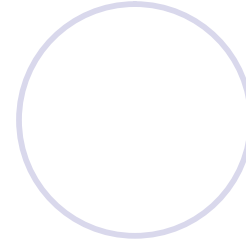
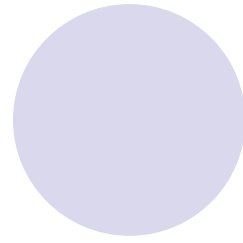
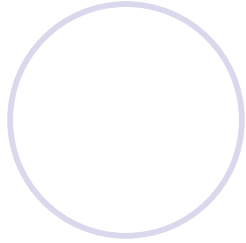
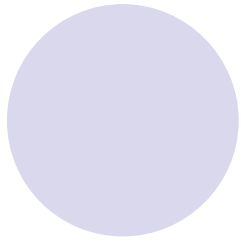
Dr Richard Harries  
Consultant Radiologist

Northern Lincolnshire & Goole



What do we need?

**| Everything**



**The End**



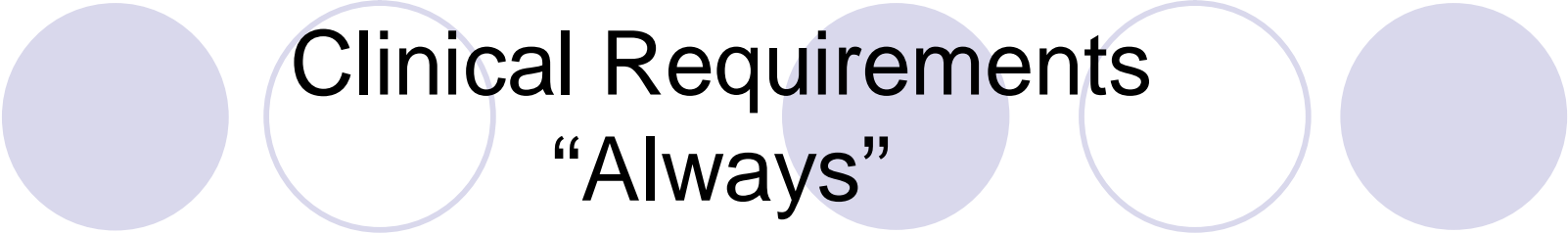
# Clinical Requirements - Why?

- | Understanding request justification
- | Planning examinations in context
- | Performing examinations in context
- | Reporting examinations in context
- | Discussing examinations in context
  - | MDT meetings
  - | Adhoc meetings
  - | Teaching, audit, research



# Clinical Requirements – What?

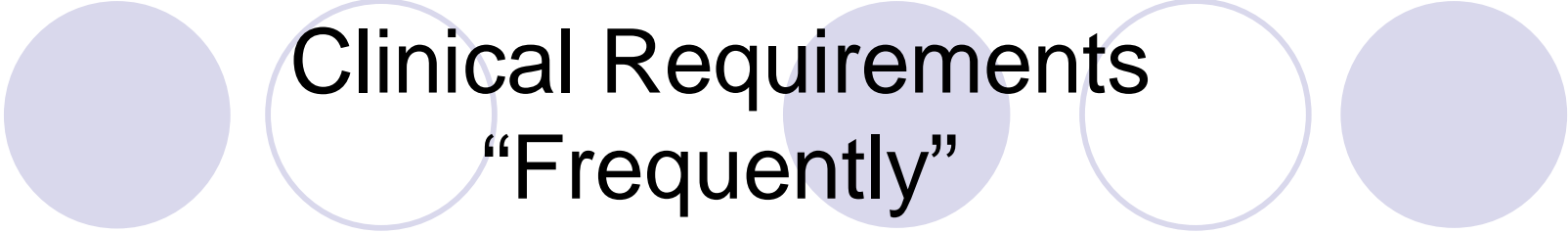
- | Always
- | Frequently
- | Rarely



# Clinical Requirements “Always”

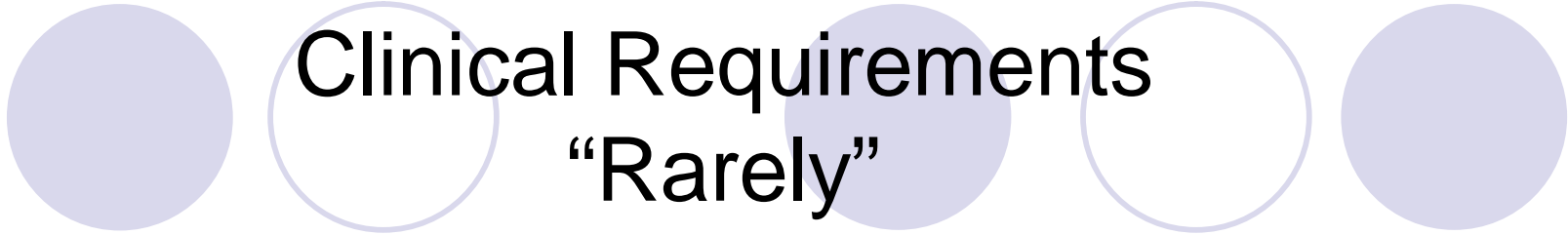
## I Current Presentation

- i Symptoms
- i Signs
- i Recent Pathology
- i Relevant History



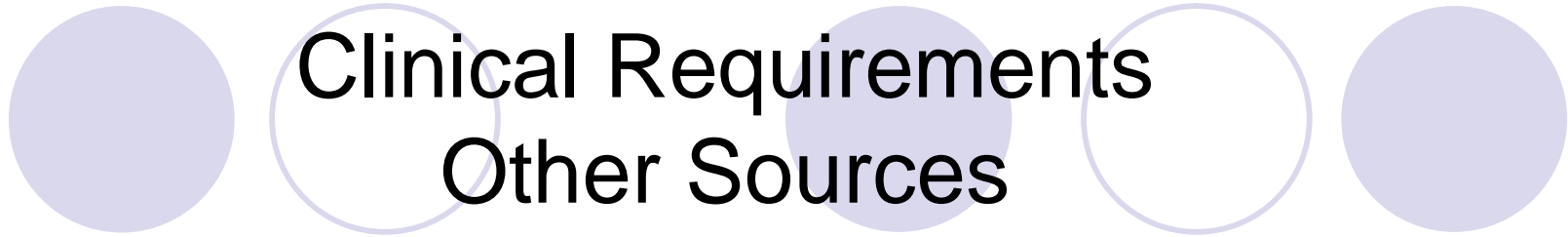
# Clinical Requirements “Frequently”

- | Relevant Pathology
  - | Biochemical (e.g. renal function, bilirubin, CA125 etc)
  - | Surgical (e.g. tumour pathology, stage etc)
- | More Detailed History
- | Discharge summaries
- | MDT Summaries
- | Operation Notes



# Clinical Requirements “Rarely”

- | Nursing reports
- | Observation Charts
- | Drug History
- | Anaesthetic record
- | Accident & Emergency record
- | In-patient/Out-patient visit notes
- | Physiotherapy reports, social reports



- | Tertiary centres
- | PCT/GP
- | Police/Social Services
- | Care home



# Clinical Documents?

- | Any recordable information which is relevant to a patient in a clinical context
  - | Text-based
  - | Numerical
  - | Image
  - | Graphical
  - | Tabular
  - | Mixed



# Clinical Documents?

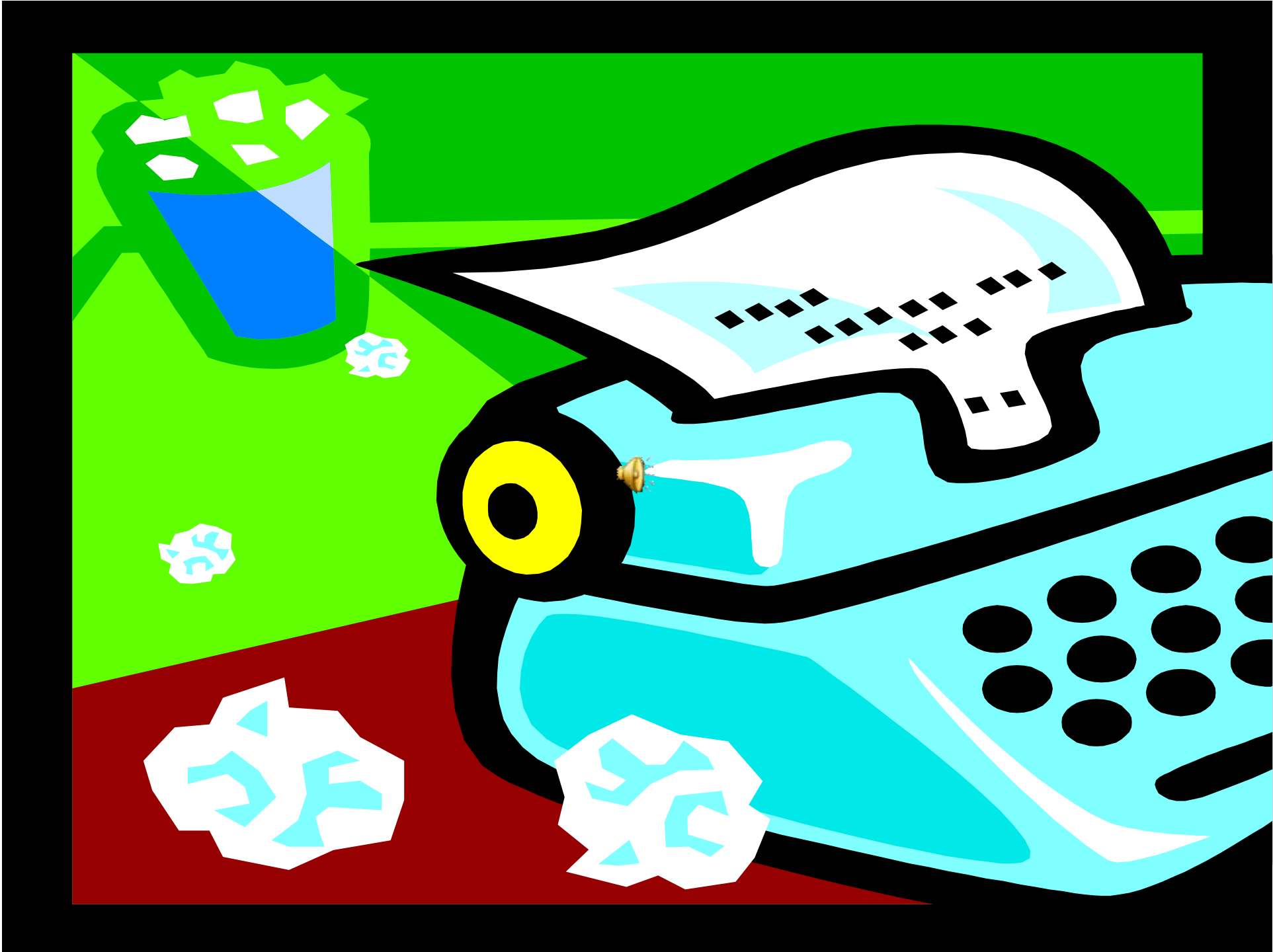
Referral letters	Progress reports
Clinical Consultation	Accident & Emergency cards
Nursing reports	Other correspondence
Observation charts	Consent forms
Drug and fluid balance charts	Operation notes
Pathology Report	Anaesthetic records
Radiology Report	Paramedical reports
Conference & MDT reports	Discharge Summary

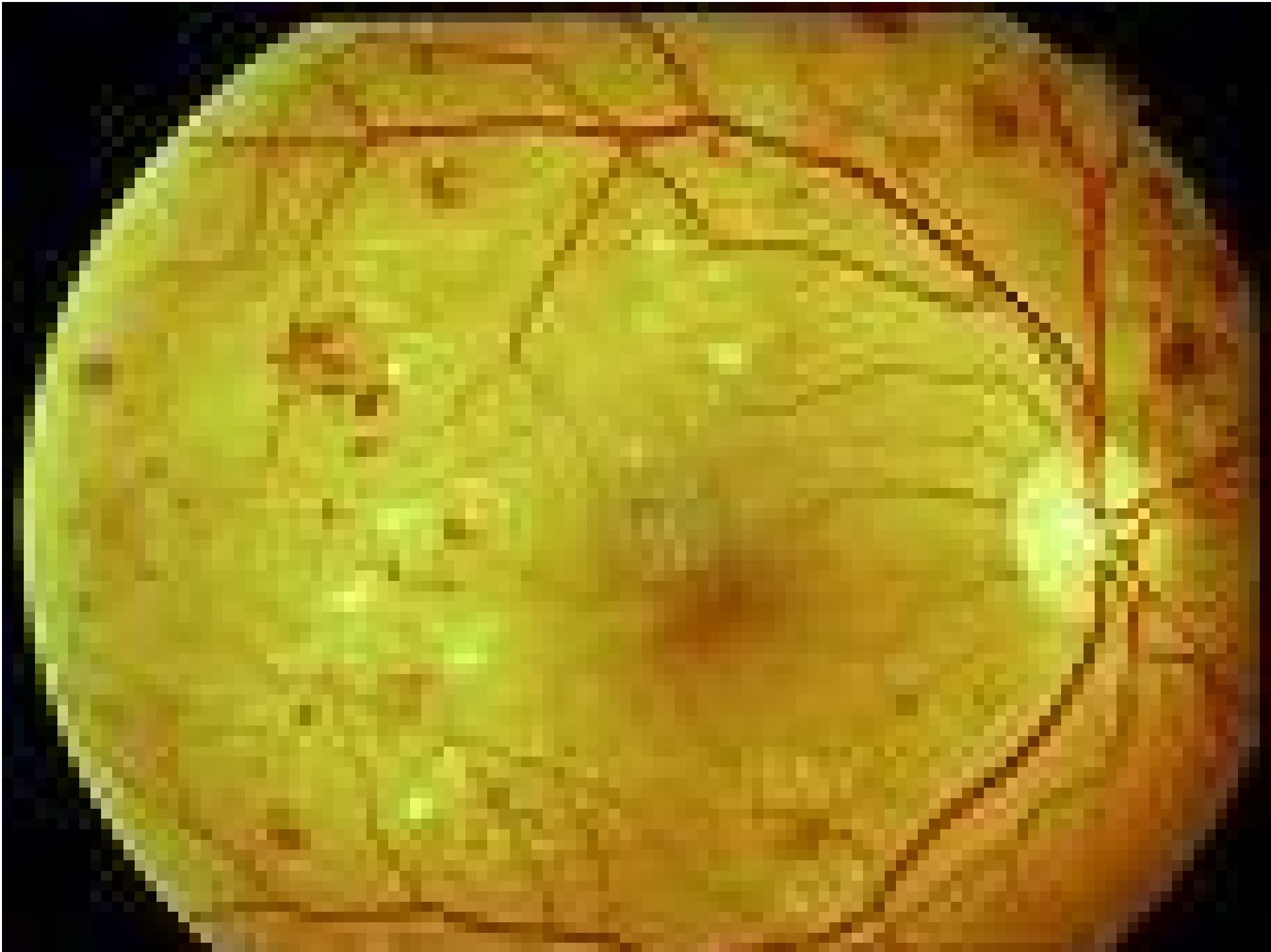
# Clinical Documents – How are they stored now?

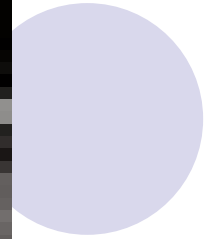
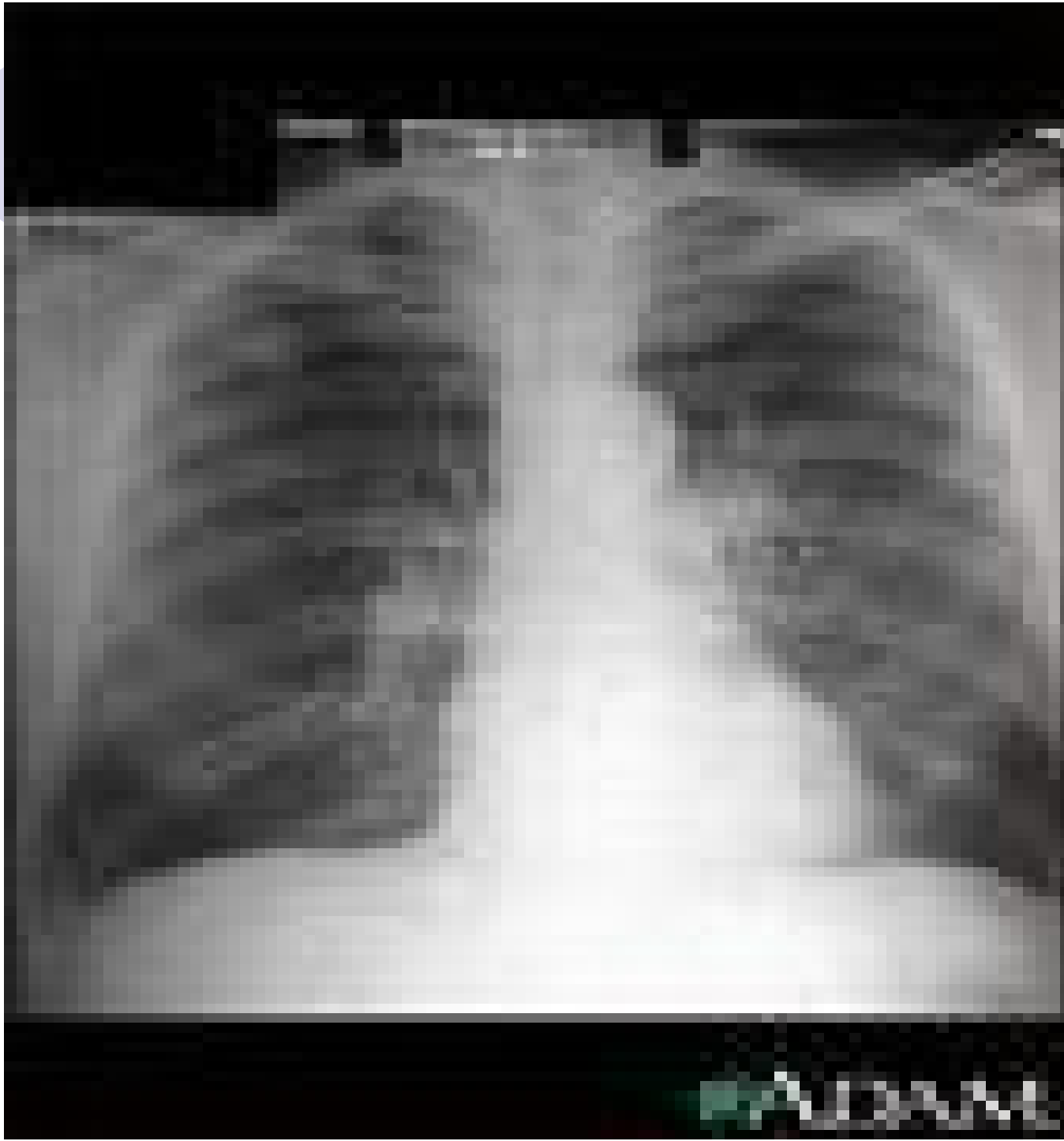
- | Hand-written notes
- | Manual charts and record cards
  - | BP/Pulse/temp
  - | Fluid balance
  - | Nursing notes
- | Typed letters etc –
  - | Hard-copy
  - | Stored on PC
  - | Network storage















# Pathology & Radiology

- | Radiology Images
- | Radiology & pathology Reports
- | Pathology Slides

# Clinical Documents – Where are they stored now?

- | Paper
- | PCs
- | Network Servers
- | Radiology Images – PACS (national spine?)
- | Radiology & pathology Reports (network)
- | Pathology Slides ??

# Clinical Requirements – The “Ideal”

- | Fast access
- | All relevant clinical documents
- | Security
- | Multiple document types
  - | PDF, Office, CDA, Image (DICOM, JPEG etc)
- | Multiple sources
  - | Within Trust
  - | Cross boundary


# Our Solution - Humber XDS Project Overview

## I Why XDS?

- i Relatively simple technology
- i Easily extendible
- i Any document type
- i Cross boundary

## I MDT meetings - WHY?

- i Politics
- i Finance
- i Clinical champion



# Humber XDS Project Overview

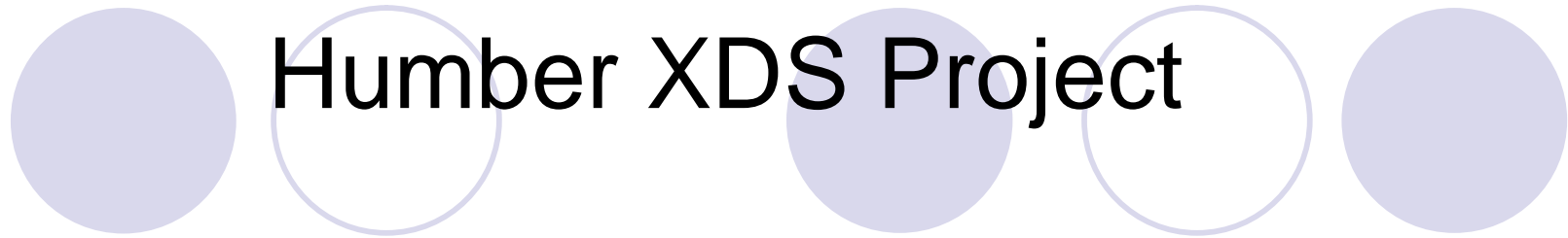
- | Proof of Concept for XDS Implementation
- | Improved functioning of MDT meetings
- | Benefits to Patients, Trust, Clinicians
- | Two MDT meetings initially:
  - | Gynaecology Cancer
  - | Vascular Surgery/Radiology

# The Humber XDS Project “Chained”

## DOCUMENTATION REQUIRED

### | Clinical documents

- | Clinic letters
- | Discharge summaries
- | Operation notes
- ! Radiology Images & Reports
- ! Pathology reports
- ! MDT notes/outcomes



Humber XDS Project

| How do we do it now?





# Humber XDS Project

## PROPOSED “XDS” PROCESS

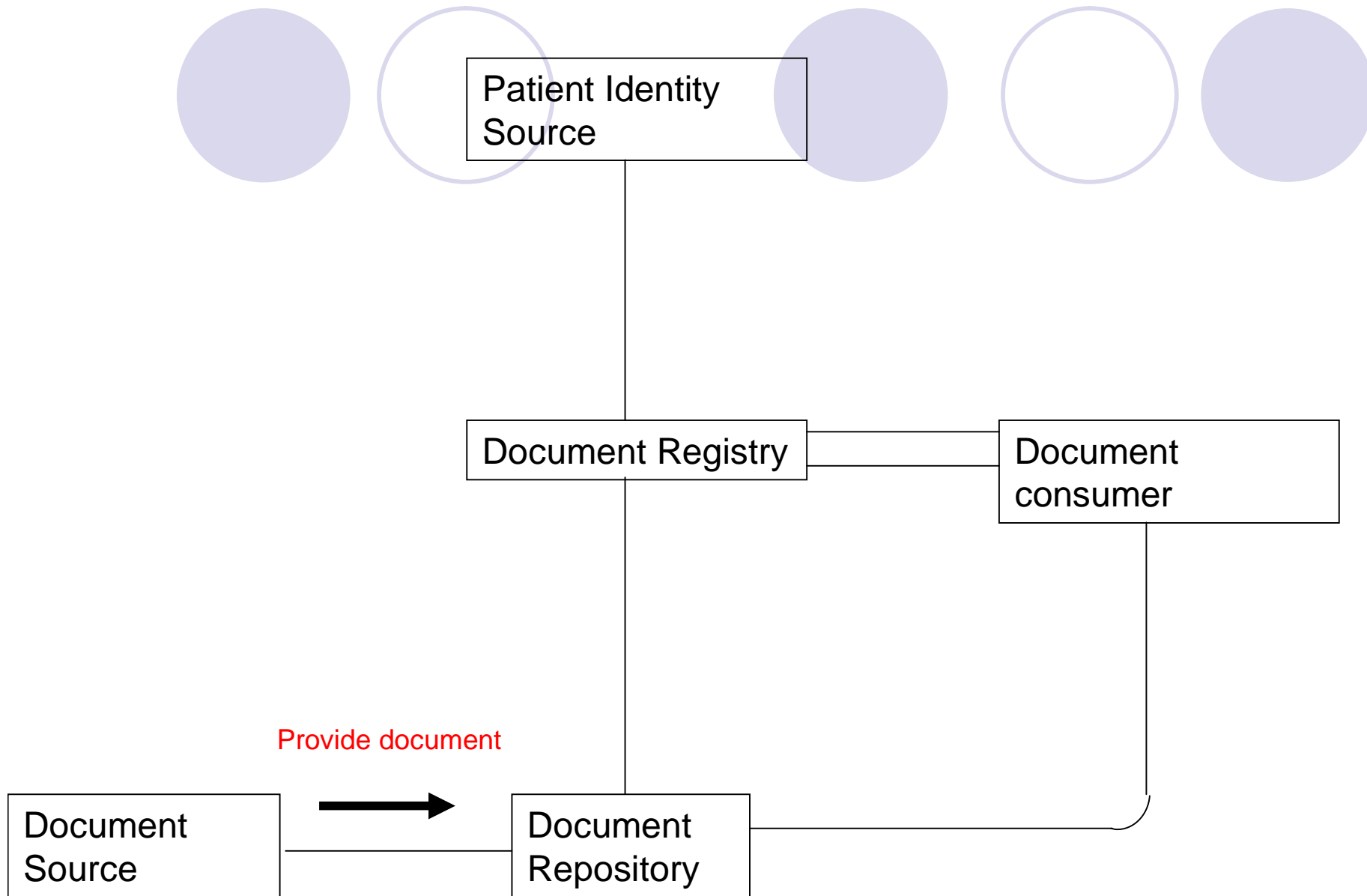
- | Clinical documents → XDS repository/registry
- | View XDS documents on-screen
- | Review pathology/radiology as before
- | MDT summary → XDS repository/registry





# Humber XDS Project – how will we do it?

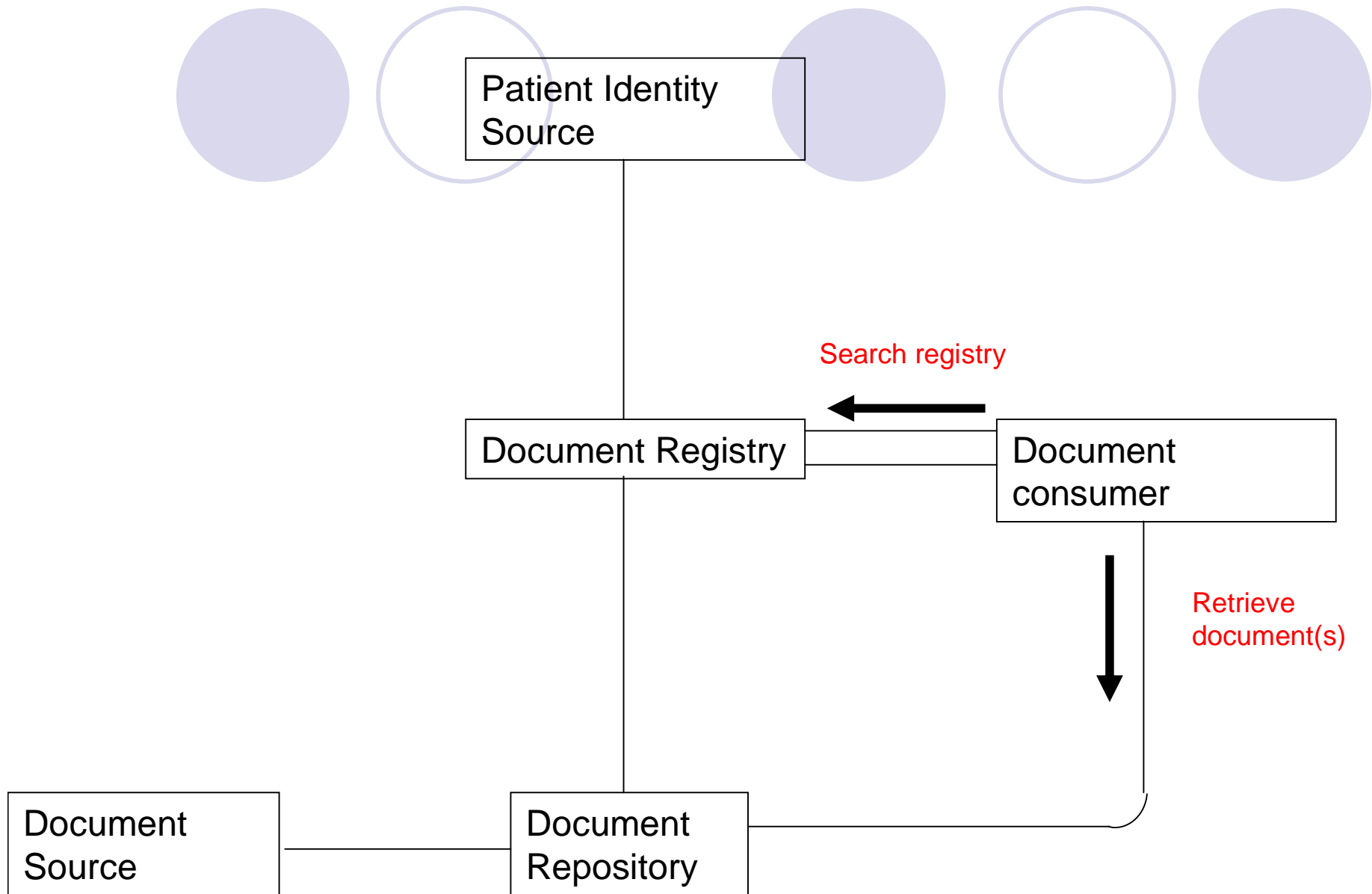
- | Install module for document registration on computers for relevant secretaries (~8)
- | Training





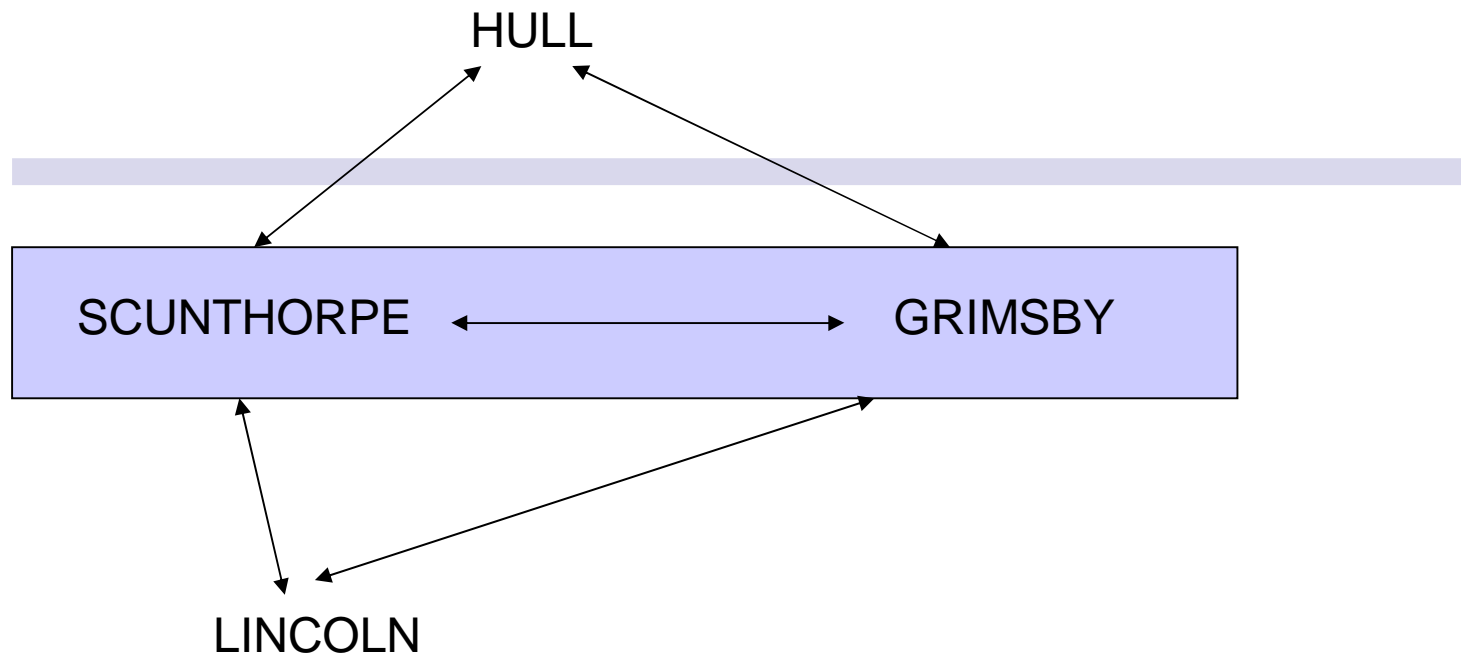
# Humber XDS Project – how will we do it?

- | Install retrieval and viewing modules onto relevant computers in MDT meeting rooms
- | Training



# Humber XDS Project

## GEOGRAPHICAL COVERAGE





# Humber XDS Project

...AND THEN...

## I AND THEN...

- i Include other document groups
- i Other MDTs
- i Clinics/wards etc



# XDS Project – are there any hidden benefits?

- | Scalability
- | Clinical Audit – information availability
- | Patient Follow-up
- | Education



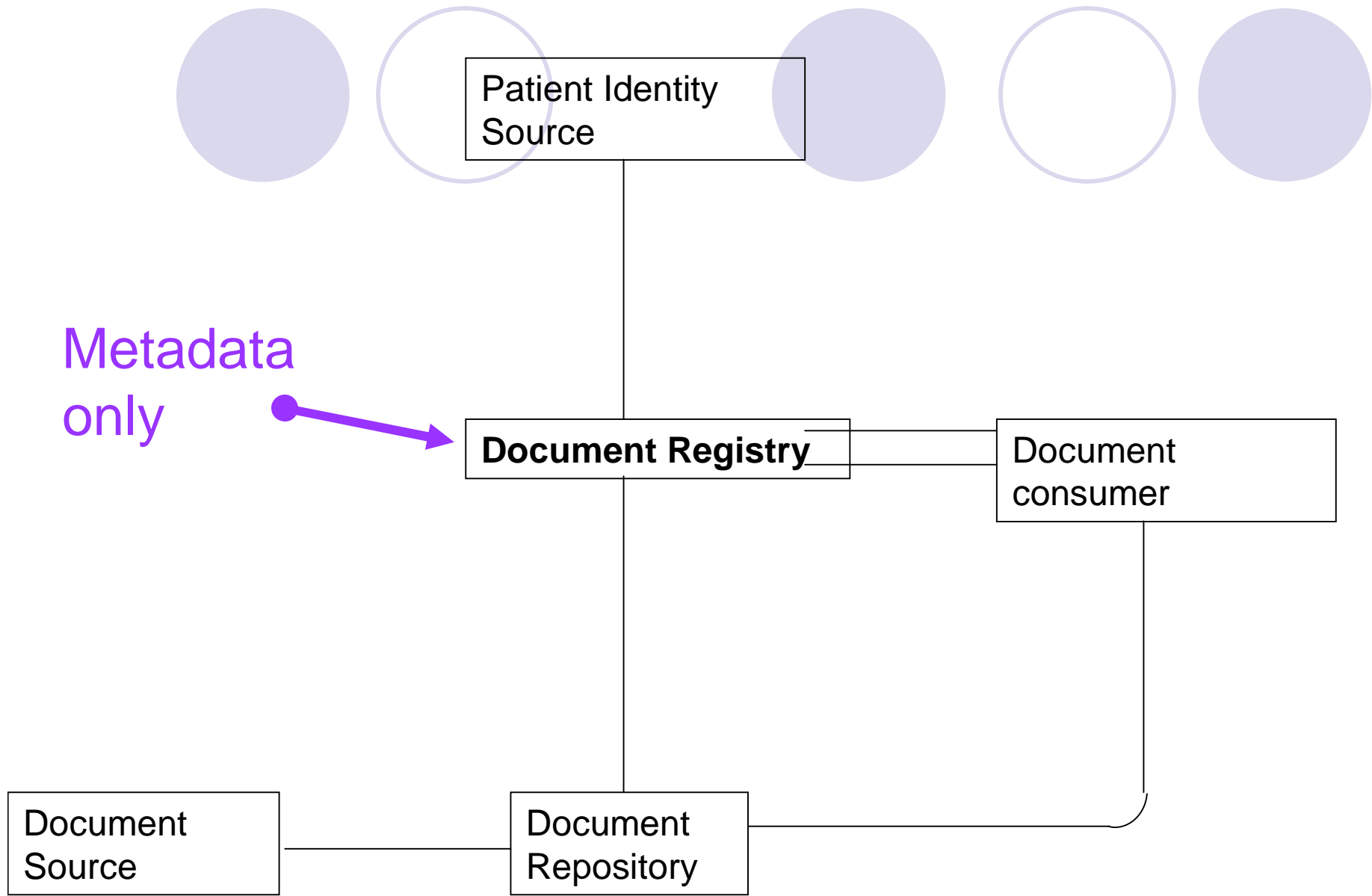
# What are the key challenges?

- | Metadata and document tagging
- | How do I locate the documents I need quickly and easily?
- | Clinical engagement
  - | Take-up
  - | Involvement in development
- | Moving towards a more structured clinical information environment



# What are the key challenges?

- | Metadata and document tagging
- | How do I locate the documents I need quickly and easily?
- | Clinical engagement
  - Take-up
  - Involvement in development
- | Moving towards a more structured clinical information environment



Patient ID	Format Code
Author – Institution, Role, Specialty	Hash
<b>Document Class</b>	Legal Authenticator
Creation Time	Mime Type
Confidentiality	Parent Document
Healthcare Facility Type	Service Start/Stop Times
Intended Recipient	Size
Language	Source Patient Info
Comments	Title
Availability Status	Type
Practice Setting	Entry UUID
Event Code List	

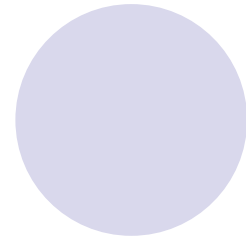
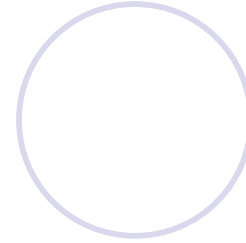
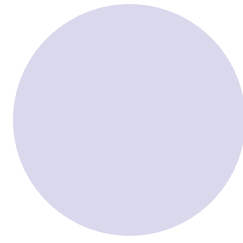
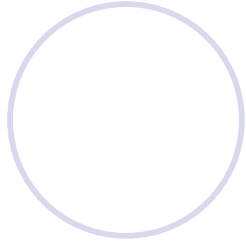
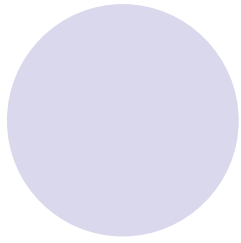
# Clinical Documents – metadata Document Class?

<b>Referral letters</b>	Progress reports
<b>Discharge Summary</b>	Accident & Emergency cards
<b>Operation notes</b>	Other correspondence
<b>Pathology Report</b>	Consent forms
<b>Radiology Report</b>	Nursing reports
<b>Conference &amp; MDT reports</b>	Anaesthetic records
<b>Clinical Consultation</b>	Paramedical reports
Drug and fluid balance charts	Observation charts



# Humber XDS Project Summary

- | IHE-XDS is a powerful method for making available a wide range of clinically useful documents
- | XDS is not technically difficult
- | XDS is a practical short-term solution to the EPR challenge



**The End**

