1. Introduction and Who Guideline applies to

To give clear guidance and reflect the relevant processes involved in the working of the Image Exchange Portal (IEP).

Thise guideline applies to all hospital Clinicians, Radiologists, Radiographers and Managed Business Partner (MBP) Service Delivery Managers, Service Desk Analysts and Applications Management Radiology team members.

Staff involved in the process should have received appropriate training on the operation of the IEP and should comply with UHL Information Governance Policy (B4/2004).

Due to the technical nature of the terminology included within this Guideline users may wish to refer to the Glossary in Appendix 7 as required.

2. Guideline Standards and Procedures

2.1 Image Exchange Portal – supporting clinicians and improving patient care

a) The Image Exchange Portal (IEP) is a web-based application that allows healthcare professionals to securely transfer patient images from one hospital to another. Image imports via CD have their own process, see Appendix 5, and request form, Appendix 6.

b) Transfer of images by electronic means (IEP) is the preferred method of image transfer rather than CD in order to maximise data protection and to improve patient management by ensuring the images are available on PACS (Picture Archiving and Communication System) with any UHL images.

c) The UHL is a now part of the Trauma Network. The UHL Radiology service has agreed to transfer images to Queens Medical Centre (QMC) in Nottingham out of hours where a trauma patient is being sent from the UHL to QMC. This agreement is for trauma patients in ED only, not for general IEP requests or transfers which remain the responsibility of the MBP as a BAU service. The urgent transfer of Images to Nottingham is described at Appendix 4 where an urgent method of radiologist transferring images onto Nottingham's PACS is described.

d) It is important to note that in April 2014, the Imaging Operational Group carefully considered and agreed a change established IT practice for the timely medical management of patients. Hospital clinicians outside of Radiology were granted access to view unverified images on the UHL PACS. This change reduced the burden on the processes documented below especially in a medical emergency where timely access to imaging is essential. Despite this change it is critical that the routine processes regarding IEP (set out below) are followed and correct information governance is employed at all times.

2.2 Process for Image Transfer

All studies that are to be uploaded to UHL PACS, irrespective of their route of arrival into UHL, must be entered on RIS as part of the process. The UHL requester must ensure the patient has been registered on PatientCentre/HISS prior to sending the request for upload of images to PACS to enable this.

2.3 Requesting Images that are outside UHL:

a) UHL requestor contacts the MBP (service desk by either electronically requesting this using the MBP service desk tool https://servicedesk.xuhl-tr.nhs.uk/ choosing >request service > System > IEP and then choosing the relevant option or by contacting the service desk by telephone on x18000.

- Complete the request form (see attached – Appendix 2) – this must be completed before submitting to the MBP.
- Information required **must** include: patient Name, DOB, Address, S number, (and NHS number if available), exam(s) & event date(s) and
- The Trust from which the images are required
- The priority of the request, Blue Light or Standard. Please note, the Blue Light category are for patients due in theatre in the next few hours , or being transferred into the UHL by ambulance.
- The person requesting the images to be sent on IEP
- Ideally the request also includes the Exam Codes for the requested studies, where known.

b) MBP requests the images electronically from the sending NHS or Private Hospital using the IEP.

c) Providing NHS or Private Hospital uploads the Images to the IEP.

d) UHL IEP has five outbound threads, one is assigned to blue light clinical emergency only and four inbound threads to keep traffic of images flowing.

e) MBP downloads images from the IEP gateway – please be aware of waiting time as this gateway is national and downloads can take some time.

f) MBP uploads the images to UHL PACS and records the event on RIS as an import, using the exam code provided by the referring NHS or Private Hospital (the event date on CRIS is the date the images were acquired not the date transferred or downloaded to PACS). Each imported examination requires a unique entry on CRIS.

g) MBP notifies the UHL requester that the images are available. This notification will be via email using a call ref no. for audit purposes.

2.4 Images on IEP without a request form or missing details

a) MBP will either contact UHL requestor if these details are available within the IEP request message or;

b) Contact remote/sending NHS or Private Hospital via IEP for the above details.

c) Complete steps e, f & g as above.

d) If the MBP are unable to establish the appropriate details via the above process within 2 weeks, the request will be cancelled.

2.5 Image request rejections from third party health care organisations

a) Occasionally NHS or Private Hospitals will reject an IEP image request, usually for one of the following reasons:

- The requested study does not exist at that organisation.
- The request is deemed clinically inappropriate, for example 'all studies' for a patient have been requested for a condition where these are not deemed to be clinically required.

b) The MBP will manage these rejections as per the process wher the request form or the requesting details are insufficient, and attempt to re-process the request for the UHL user.

c) The NHS or Private Hospital ultimately retain the clinical decision to send the requested images or not.

2.6 Sending images from UHL to outside recipients:

a) UHL sender contacts the MBP (service desk by either electronically requesting this using the MBP service desk tool https://servicedesk.xuhl-tr.nhs.uk/ choosing >request service > System > IEP and then choosing the relevant option or by contacting the service desk by telephone on x18000.

- Complete the request form (see attached – Appendix 3) – this must be completed before submitting to the MBP.
- Information required **must** include: patient Name, DOB, Address, S number, (and NHS number if available), exam(s) & event date(s), the name of the NHS or Private Hospital to send the images to, the name of the person recieving the images and the priority of the export request: Blue Light or Standard.

b) The AM Radiology team will then upload the images electronically to the IEP Gateway and notify the receiving NHS or Private Hospital and the UHL requester by email. The internal UHL email will be the email generated by the UHL IM&T Service Desk tool Ivanti LANdesk.

c) Once UHL receive images from other institutions into UHL PACS, Application Management can send onto other institutions via IEP/PACS only if required for patient care, even if the image did not originate at the UHL.

2.7 Authorisation and Registration of the image details onto RIS and PACS system by UHL staff

a) Irrespective of the method of transfer all incoming images require a formal (written) request to authorise the transfer. This will ensure good information governance practice is followed and electronic information is only available for the purpose required. The formal written request for the MBP to provide this service is the combination of the correctly completed request form with the logged service request to carry out this transfer on the IM&T Ivanti LANdesk service too.

b) Image transfers (electronic or CD) can be initiated by a clinician external to the trust or by approved UHL staff usually by a service request to the MBP as per above processes.

c) Receipt of images by electronic transfer (or CD) does not ensure that the images will be uploaded into the UHL image data storage system (PACS). Images will only be uploaded into PACS if the formal request has been received and only if the minimum data required is provided to enable the upload – see below.

d) Patients must already be registered on PatientCentre/HISS and the request must include the following details:

- S number (Hospital No) (and NHS number if available)
- Patients Name
- Patients Address
- Patients DOB
- The name of the hospital from which images are to be received
- The dates and modalities of the examinations required to be uploaded (Please note: In the absence of specific details, all DICOM images available on the disk or IEP will be uploaded)
- The authorising UHL staff's contact details.

e) The full PatientCentre/HISS registration remains the responsibility of UHL staff trained to complete this activity. The presence of a recognised S number on the RIS or PACS systems indicates that there is an existing patient registration.

2.8 Transfer of Images to QMC Nottingham – Trauma Patients only

Urgent requests for the Trauma Network outside normal working hours below will be dealt with by the imaging department. The imaging department will only deal with requests for urgent image transfer for trauma patients, standard requests for MDT review etc must be processed as part of the normal working hours process above. Appendix 4 outlines the process to be followed for sending images to the trauma network.

2.9 Hours of Operation for above processes:

- **Normal working hours are 08:00 to 17:30 (Monday to Friday)**
- **Saturday and Sunday 08:00 – 20:00**

3. Education and Training

All staff involved in the IEP process should have received either training directly from the MBP Applications team responsible for the PACS or cascade training delegated to another senior member of staff. Records will be held locally.

4. Monitoring Compliance

What will be measured to monitor compliance	How will compliance be monitored	Monitoring Lead	Frequency	Reporting arrangements
Meeting the standards as set out in this document	landesk	MBP application lead	biannually	IM&T news letter
Meeting standards as set out in this document	Datix	AM lead	annually	Imaging Ops

5. Supporting References

UHL Information Governance Policy B4/2004

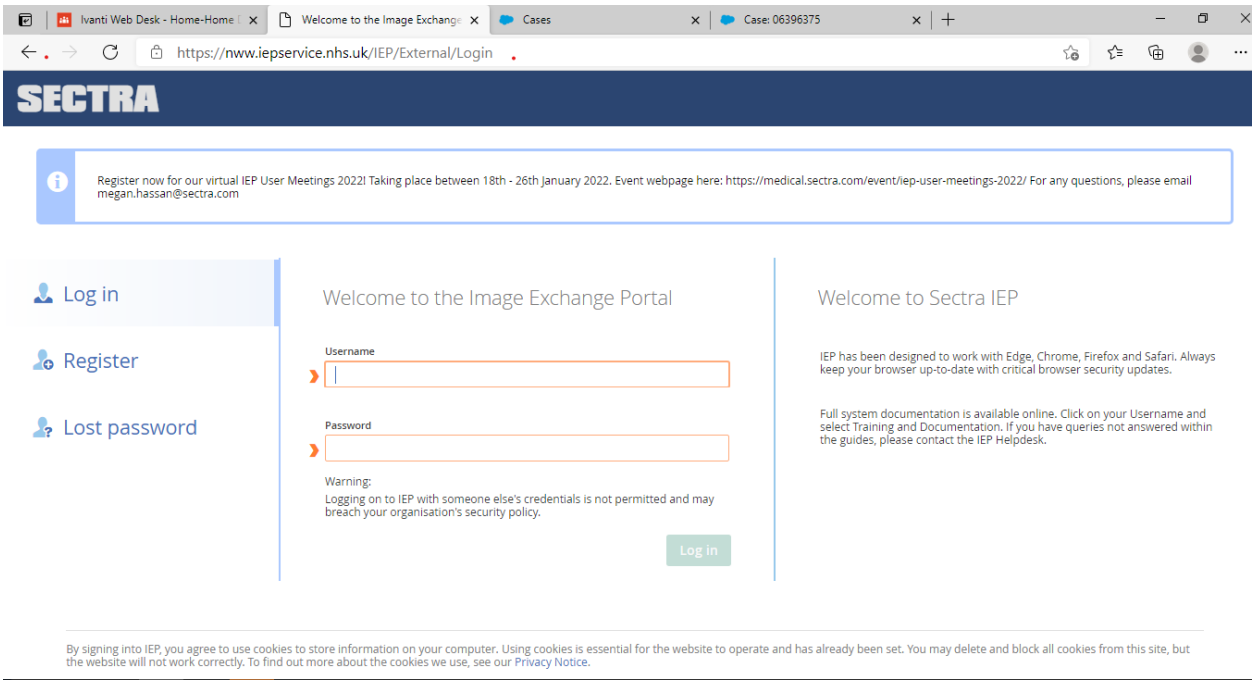
6. Key Words

Image Exchange Portal, Image transfer, PACS, CD Images.

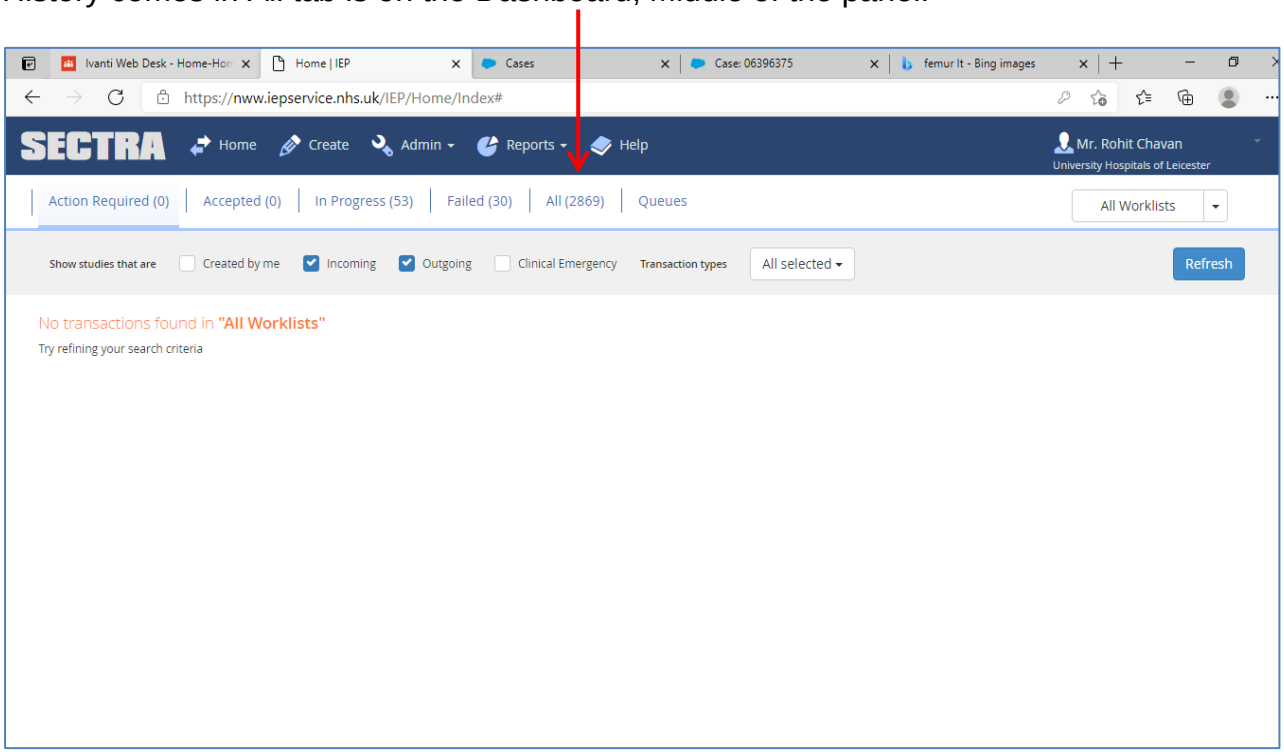
CONTACT AND REVIEW DETAILS	
Guideline Lead (Name and Title) Heath Hopewell – Imaging IT Lead and Project Manager	**Executive Lead** Medical Director
Details of Changes made during review: January 2019: reformatted to a guideline following feedback from the December 2018 PGC December 2021: Replaced all IBM wording with NTT Section 2.3 – added new item d): UHL IEP has five outbound threads, one is assigned to blue light clinical emergency only and four inbound threads to keep traffic off images flowing. Section 2.6 – added new item c): Once UHL receive images from other institutions into UHL PACS, Application Management can send onto other institutions via IEP/PACS only if required for patient care, even if the image did not originate at the UHL. Appendix 1 screenshots updated Appendix 2 IEP Import Form replaced	

Image Exchange Portal – Quick Summary. Requesting Images

- Navigate to website: Welcome to the Image Exchange Portal (iepservice.nhs.uk)
- Enter your NHS Email address and IEP Password, click Login.
- Confirm secure session.



Once logged in, you will be presented with the Home screen (below). The Home screen is where you will find the main commands. The most commonly used commands will be Inprogress and All. **Note:** Transfer comes in Create tab as shown in Blue colour whilst History comes in All tab is on the Dashboard, Middle of the panel.

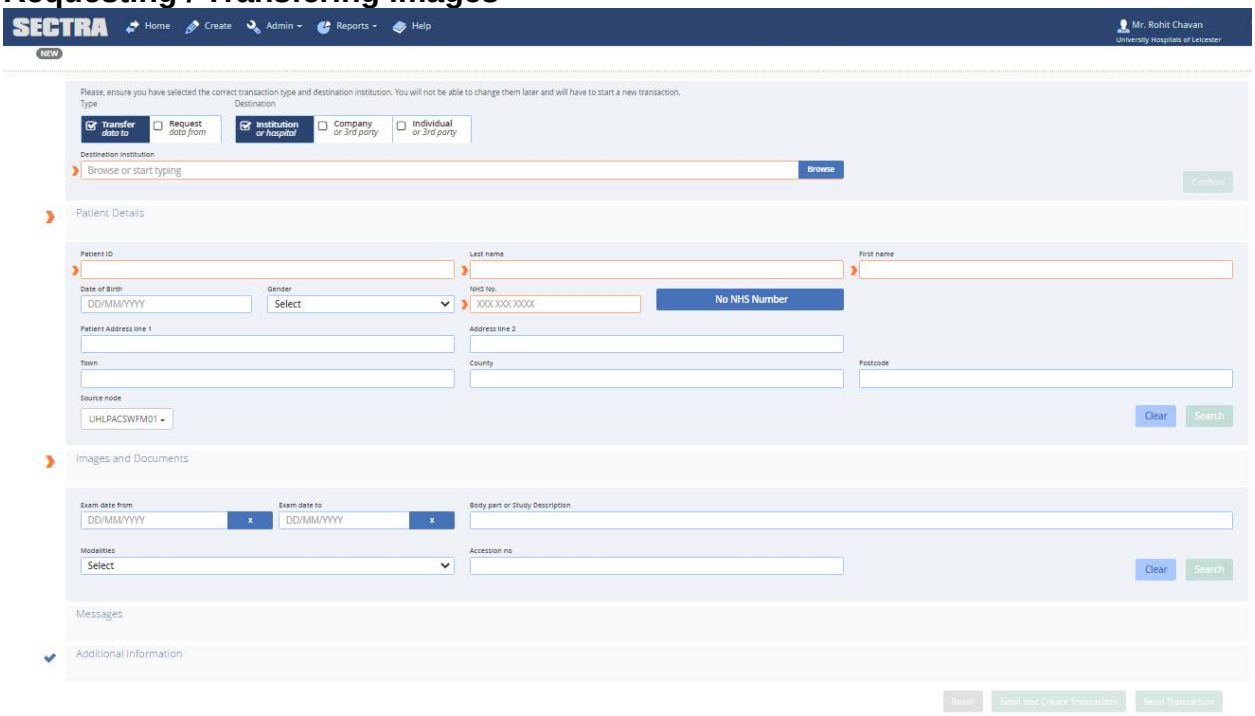


Transfer tab.

The transfer will give you two options, to place: 1) New Request 2) New Transfer

- New Request – to request new images to UHL (Import images from other institution)
- New Transfer – to transfer images outside of UHL (Export images to other institution)

Requesting / Transfering images

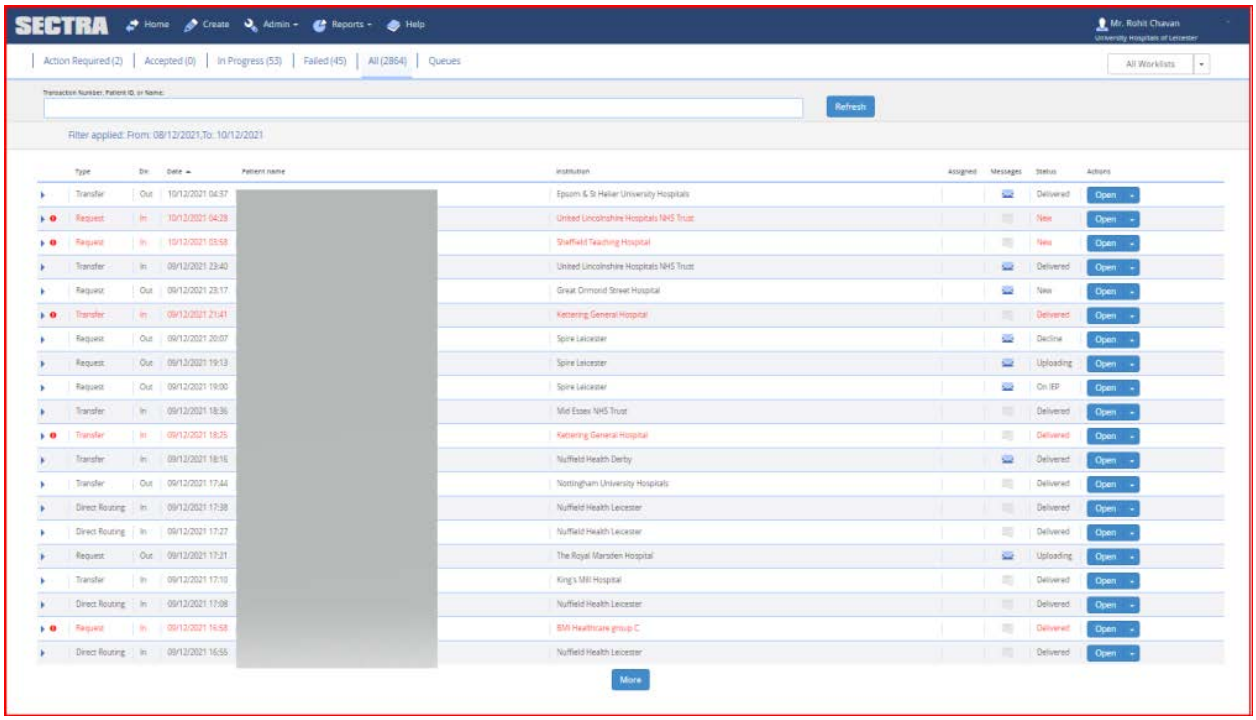


1) **New Request:**Enter the institution name or pick from the A-Z list using the Pick button.
2) **Patient Data:**Fill in the mandatory fields (in Red) and specify the NHS number. It is not mandatory to fill in the patient address field, only when the NHS no is not available then these fields must be completed.
3) **Requested Exam Information:** In the Additional Comments field enter the details of the images you require, the type of scan/sand dates. Please ensure you specify who the requesting Clinician, Consultant and Department is, else your request maybe declined.
4) **DICOM Header Details:** Please insert the UHL Patient ID number, S number here.
5) **Image Delivery Details:** Leave the delivery node as UHLPACSWFM01. Images will arrive straight into our Failed Verification list. Select Priority. Normal is the default. Batch is overnight transfers and Blue Light is only to be used in emergencies.
6) **Delivery Requirements:** Date of when you need your images by, otherwise can be left blank.
7) Press **<u>Send and Create Transaction</u>** button.

All tab

- The All tab is a useful search tool that allows you to check the progress of your request. It also lets you search whether the images have been previously been sent.

- Use the All tab and the available search criteria to track the current status and progress of your request.



Action Required Tab

The action required tab is very useful. By selecting Details you can find more detailed information about the transaction. You can find or add useful messages here.

Statuses

- New – Not looked at yet.
- Started – Transaction acknowledged & is uploading.
- Downloading – Currently downloading into our PACS.
- Download Request – Download is in a que and will start once the other transactions finish.
- Delivered – Delivered to our PACS Failed Verification.
- On IEP – Not on our PACS yet but available to download from IEP after selecting download.
- Failed – Transaction has failed, check details for further details why.
- Decline – Declined by sending Institution, check details for further details why.
- Purged- Images will not be available on IEP portal after 15 days

Request for Import of Images to UHL PACS (Impax)

Please ensure all fields are completed, forms will not be accepted without completion. NOTE: It is essential to state each examination and date of scan required. Stating 'All imaging' will not be accepted.

Please email completed form to sdrequests@uhl-tr.nhs.uk you will then receive a call reference number.

Note: Fields with * are mandatory fields

Click link below to access form:
>>Request for Import of Images to UHL PACS

******** For use by MBP ********

NTT (Offshore team) Call ref	
Imaging up loaded by	
Images 'fixed up' by	

Request for Export of images from UHL PACS Via Image Exchange Portal (IEP)

Please ensure all fields are completed.
Failure to supply full details may lead to delays in processing your request.

UHL staff contact details

Name		Contact No	
Email			
Comments *Additional instructions*			

Request Details

Which Site/Trust needs these studies?	Give organisation name in full
Site Contact Name/Position	
Site Contact telephone number	
Site contact email address	
Priority of Request	• Blue Light (emergency only)* • Standard
Reason for Priority	• Blue Light – emergency admission or surgery in next 12 hours only* • Inpatient admission • MDT Referral • Outpatient appointment • Research • Other
Date Required By:	

* Delete/Cross out answers that are not required

Patient Details

Name		Date of Birth	
UHL Hospital No		NHS No	
Date of Study	Type of study and body part		Exam Codes

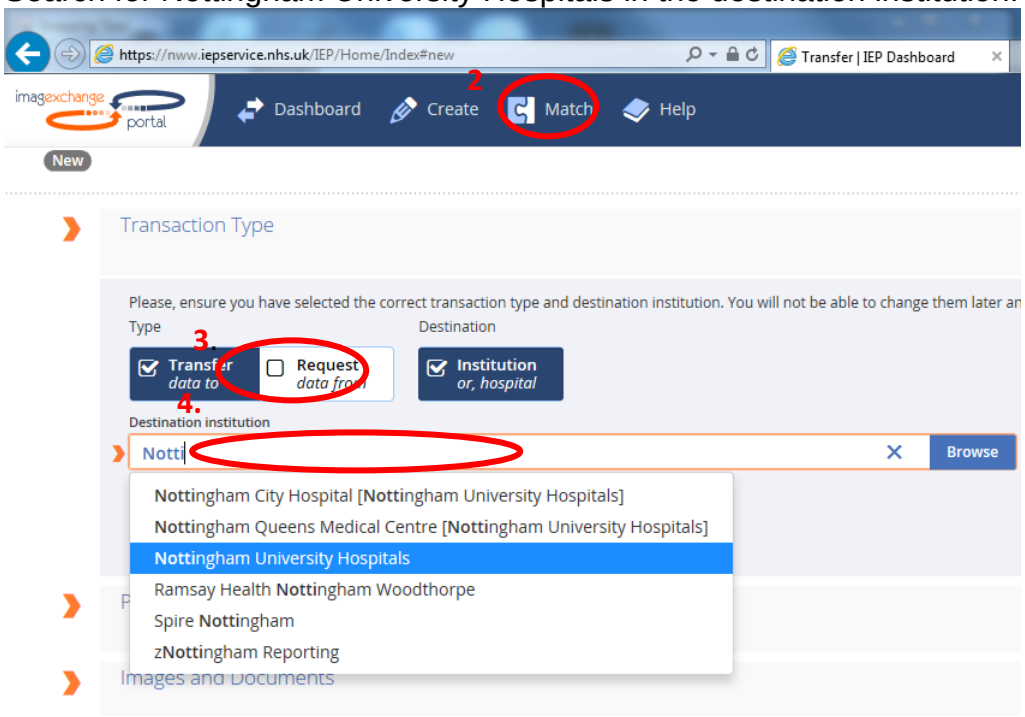
******** For use MBP ********

NTT (Offshore team)Call ref	
Imaging up loaded by	
Date Imaging sent	

Instructions for transmitting trauma scan via IEP to Nottingham University Hospitals

This agreement is for trauma patients in ED only, not for general IEP requests or transfers which remain the responsibility of the MBP

1. Log onto IEP https://nww.iepservice.nhs.uk/IEP/External/Login
2. Enter user name and password.
3. Select create.
4. In transfer type section select 'transfer data to'
5. Search for Nottingham University Hospitals in the destination institution.



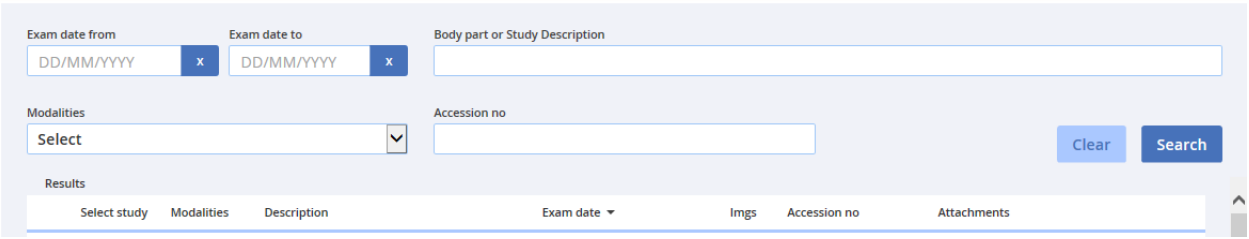
6. UHLPACSWFM01 is the default source node and doesn't need changing as there is only 1.

8) If PACS is down you may not be able to search for images and a hardcopy disk from modality will be required.

7. Select confirm.
8. Enter RWES number in Patient ID field and enter the NHS number in the NHS No. field.

9) If there is no NHS number enter a reason and fill in the rest of the fields.

9. Select search.
10. Check that you have the correct patient.
11. In the images and documents section you can organise the list by clicking on the column header. You can refine the results by entering information in to the filer fields and searching.



12. Select the tick box for the studies you need to send. Only send relevant imaging.
13. Select add attachment for the studies if you need to send the report. You can attach the report as a document or paste the text direct from CRIS or eRadCockpit. When prompted ensure the content of the report is correct before selecting the tick box and proceeding.
14. In the additional information section ensure the destination node is set to NUH Radiology PACS.
15. Set the priority to clinical emergency.
16. If you are happy you have completed all of the steps select send and create transaction.
17. You can track the progress of the request in the dashboard. Once the study is ‘On IEP’ it is the receiving trust’s responsibility to download the images.
18. Please be aware some images may fail, these will then need to be resolved by an administrator from IM&T so a disk should be burnt if images are needed out of hours.

CD Collection Chart

TO ALL DROPPING OFF CD'S TO BE UPLOADED TO PACS

Please ensure that the first 4 columns are filled out completely when dropping off the CD requests into this box. Any CD's that are left in the box without this form being filled out will not be taken and left in this box until completed.

Procedure that needs to be followed to ensure that there are no delays:

1) Ring the IM&T Service Desk to request the CD Image import form. The Service Desk will email you a "CD Upload form".

2) Return the form to the IM&T Service Desk by email to sdrequests@uhl-tr.nhs.uk, the Service Desk will log a request to upload the CD Image and an IM&T Service Desk reference number will be emailed to you.

3) The form needs to be printed, the IM&T Service Desk reference number needs to be on the form, CD/s and the envelope. The form needs to be put in to the envelope along with the CD/s.

- **Standard service CD collections are every Wednesday from Radiology Reception at the LRI, GH and LGH.**

- **If you require the CD to be uploaded urgently, we advise that you or a colleague arrange a time via the service desk to bring the CD/s to County Hall.**

Request for CD Import to UHL PACS

Please email completed form to sdrequests@uhl-tr.nhs.uk. Please ensure **all** fields are filled in and that you save the file and then send it as an attachment to the above address.
Once the form has been sent you will receive a call reference number. Please label the CD(s) or envelope with this reference number and drop the CD(s) to your radiology reception where you will find a box labelled for CD collection.

INCOMPLETE FORMS OR UNLABELLED CD'S WILL NOT BE PROCESSED.

Service desk call reference number	
Internal post address	
Number of CD's	
Study Date	
Full Study Description or CRIS Examination Code	

UHL staff contact details

Name	
Email	
Contact No	

Patient Details

Name	
UHL Hospital No	
NHS No	
Date of Birth	
Address	

APPENDIX 7 – GLOSSARY

Accession Number – a unique identifying code for images and studies held within a PACS system that allows multiple systems to positively identify the studies or images.

AM - Applications Management Tower – a support team within the MBP that provides defined services and support for agreed clinical applications, including IEP.

BAU – Business As Usual, a term to describe day to day office hours support and services, in this case Monday-Friday 08:00-17:30, excluding UK Bank Holidays.

Blue Light – system to a fast track image transfer, expected time frame within 4 hours however this is dependent on how many Blue Light items are being transferred and can vary.

CD – compact disc

DICOM Images – Digital Imaging and Communication in Medicine the standard for handling, storing, printing and transmitting information in Imaging.

Exams and Exam Codes – An exam is a term for the medical examination where the images have been taken or acquired. The exam code refers to the specific modality and body part for the images or study, and ensure the correct identification of the information required.

HISS – Hospital Information Support System, the local name for one of the two front end applications of the Patient Administration System (PAS). HISS is primarily used to document outpatient processes.

IEP – Image Exchange Portal, a third party external system to transfer or request images from other organisations that are a member via the NHS N3 network. The supplier is Burnbank, a subsidiary of Sectra AB. **IM&T** – Information Management and Technology, the UHL Corporate Directorate that commissions and oversees information technology infrastructure and support services.

Imaging Operational Group – Senior managers and heads of Service and Clinical lead for Imaging

Ivanti LANdesk, commonly called LANdesk, the IM&T Service Desk tool that tracks and documents MBP support service activity

MBP – Managed Business Partner (IM&T and its contracted 3rd party partners NTT and NTTdata who collectively manage and provide information management support services, including business as usual)

NHS Number – the unique patient identifier for the NHS in England and Wales that NHS Digital generates and holds centrally in a ten digit format XXX-XXX-XXXX were X represents the digits from 0-9.

PACS – Picture Archiving and Communications System (The system that allows staff to access a patient's images and reports).

PAS – Patient Administration System. A generic term for the clinical software that tracks known patients for a medical organisation. All patients receiving UHL clinical care must be registered on the PAS known locally as PatientCentre/HISS or NerveCentre.

PatientCentre/NerveCentre – the local names for the front end applications of the Patient Administration Systems (PAS).

QMC – Queens Medical Centre, Nottingham

RIS – Radiology Information System (The system that allows imaging to manage patient bookings and workflow in imaging) The HSS EMRAD CRIS product is currently in use within the UHL, this will soon be localised and just called 'CRIS'.

Report – the documented clinical opinion resulting from the medical examination and review of the studies generated.

S Number – System Number, a unique identifier used within the UHL to identify a patient. This reference number takes the format 'SXXXXXXX', where X represents the digits 1-9.

Service Desk Analysts – members of the team who answer the phones and log incidents and service requests as part of the IM&T support processes.

Service Delivery Management – the management team who oversee the delivery of IM&T defined support services.

Study – a group of images that together comprise the imaging documentation for a medical examination. Some examinations, such as CT or MRI Scans, involve multiple images. All images are required to complete the study for these types of examinations.

UHL – University Hospitals of Leicester NHS Trust.