

Organ Damage Imaging Protocol

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Background

The Organ Damage Imaging Working group was set up to develop guidance and process to provide more accurate photographic evidence of damage to retrieved organs at the time of retrieval and make it available to the accepting centre. We expect implementing this program into daily practice will increase organ utilisation, shorten the process of organ acceptance, improve transplant outcomes and support the governance process in case of a clinical incident to damaged organs.

Objectives

This protocol is designed to help streamline and speed up the process of distributing images of organ damage to accepting centres. This protocol follows organ photography sharing principles outline in MPD1100/10 – Guidance and Principles - Donor Organ Photographs (attachment 2). All images must be taken in line with the key principles of consent, anonymity and confidentiality. It is worth noting that this document is awaiting total re-write with the impending implementation of TransplantPath, and the function of image storage.

Roles and responsibilities

NORS team responsibilities:

- A NORS lead surgeon performs a careful ex-situ assessment of every retrieved organ. If any damage is identified, this protocol is initiated and followed.

- A NORS lead surgeon informs a SNOD about detected damage and assists with taking the image(s)
- A NORS lead surgeon record damage and photography information on HTA-A forms.

A SNOD Responsibility:

- Takes image(s) of organ damage
- Communicate with Hub via phone call to advise sending images (using 3 points of PID and confirm which organ imaged and how many images to expect)
- Photos should be emailed to: Odthub.operations@nhsbt.nhs.uk as per section 8 MPD1100/10
- Documentation in DonorPath that photographs have been taken and sent to Hub Operations
- Photographs of the organ must be deleted from the IPAD and not uploaded onto DonorPath.

The ODT Hub team Responsibility:

- Informs the accepting centre via phone about available photographic documentation of the damage to the retrieved organ
- Share images with the accepting centre via encrypted or secure email pathway.
- Store images on electronic Hub donor record

The Recipient Transplant Centre Responsibility:

- Comply with GDPR regulations
- Confirm receipt of images
- Safe storage or deletion as per MPD1100/10

Process

1. A NORS surgeon carefully inspects every retrieved organ at the end of retrieval to identify any damage, pathology or abnormality. A surgeon follows the “**Organ Damage Assessment Checklist**” specifically designed for this purpose; (attachment 1).
2. If a NORS surgeon identifies any damage to retrieved organs process of this protocol is commenced, and a surgeon must:
 - a. inform SNOD about the damage
 - b. in details record damage on HTA-A and RTI form
 - c. assist SNOD to take image(s) of damage (max 5 per organ)
3. A SNOD uses the “Genius” scan app (on an NHSBT-registered iPad) to take images of damage to the retrieved organ. A retrieval surgeon will guide a SNOD to take a series of pictures of every damage for the best description.

4. SNOD informs an accepting team and ODT Hub about damage. A SNOD sends images to the ODT Hub. In the case that the accepting team is interested and provides a email for secure image transfer (section 5.2. MPD1100/8 – Guidance and Principles - Donor Organ Photographs guidance), a member of ODT Hub sends images to the accepting centre.
5. A SNOD records information about available images of retrieved organs on DonorPath.
6. A lead NORS surgeon clearly records damage information with detailed descriptions on HTA-A and RTI forms and records information about taken images on these forms.

Attachments:

1. Organ Damage Assessment Checklist
2. MPD1100/10 – Guidance and Principles - Donor Organ Photographs

1. Organ Damage Assessment Checklist – abdominal team

Donor No	
Donor Hospital	
Date of retrieval	
Donor type	
NORS team	

Kidney		
Renal Artery	atheroma/atherosclerosis, damage, thrombus, orifice, aneurysm, accessory	
Aortic patch	atheroma/atherosclerosis	
Renal Vein	damage, thrombus,	
Ureter	damage, length	
Kidney Hilum	damage, haematoma	
Kidney capsule	location, length, depth	
Kidney parenchymal	appearance	
Biopsy side	location, size	

Any other pathology		
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Pancreas		
Arterial/venous conduit	presence, atheroma/atherosclerosis, intimal dissection, damage	
Capsule and parenchyma	location, length, depth, underlying damage, subcapsular haematomas, mass lesions	
SMA	atheroma/atherosclerosis, damage, thrombus	
Splenic artery	course, damage, aneurysm, thrombus	
Portal & Splenic Vein	length, damage	
Duodenum	perfusion, perforation (DCD), diverticula, ulcers, intramural, haematomas	
Staple lines	on duodenum and mesentery	
Any Other Pathology		

Liver		
Edges	smooth, blunt	
Steatosis	mild, moderate, severe	
Weight	(g)	
Capsule injury	location, length	
Parenchymal injury	location, length, depth	
Liver Lesion		
Hepatic veins	intact orifices	
IVC		
Portal vein	injury/length	
Hepatic artery	anatomy, accessory, damage, arteries ligated quality	
Bile duct	flush	
Any Other Pathology		

1. Organ Damage Assessment Checklist – CT team

Donor No	
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Donor Hospital	
Date of retrieval	
Donor type	
NORS team	

Heart		
<i>Pre-procurement assessment</i>		
Imaging	Echocardiogram, X-Ray, CT (coronary calcifications)	
Cardiac output studies	screenshot	
<i>In Situ Assessment</i>		
Inspection pic & video	Appearance, visible coronary plaques, contractility	
<i>Back table Assessment</i>		
Aorta	Length	
Pulmonary arteries	length	
SVC	length	
IVC	Distance from coronary sinus ostia	
Atrial cuff	Distance from coronary sinus on the outside	
Any Other Pathology		

Lung		
<i>Pre-procurement assessment</i>		
Radiology	X-Ray, CT	
Bronchoscopy	anatomical anomalies, growths, infection/inflammation, aspiration, secretions	
<i>In Situ Assessment</i>		
Inspection	Appearance, bulge, scarring, adhesions, signs of fat embolism, consolidation, necrotic areas, barotrauma	
<i>Back table Assessment</i>		
Parenchymal damage	tearing around the infra-pulmonary ligament, tearing along the fissures	
Deflation		
Atrial cuff	Small, injured, transected	
Pulmonary Arteries		
Bronchus		
Any Other Pathology		