

National on-call pathology service to support Tx

The story so far and vision for the future

Why do we need an out of hours service

- Donor lesions
- Organ quality
 - Renal
 - Liver

Proposal to develop a national out-of-hours diagnostic histopathology network to support the national transplant programme

2003

A collaboration between the Royal College of Pathologists & UK Transplant

Current Situation

Stakeholders

Diagnostics Branch, DoH
UK Transplant
RCPath
Renal transplant service
NSCAG
IBMS

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21/7/03

The histopathology workforce is in crisis, with more than 200 consultant posts currently unfilled and at least another 200 required to keep up with current service expansion. The RCPath has evidence that many pathology departments are struggling to resource and deliver an adequate out-of-hours service and increasingly, histopathologists are unhappy about having to work out of their area of expertise.

It is important that the difficulties in histopathology do not become a rate-limiting step in the effectiveness of the national transplant programme. Discussions to date and the experience of pathologists suggest that lesional diagnosis for all transplant categories requires specialist expertise.

Approximately 95% of all solid organ donations involve removal of the liver by one of 7 national centres that perform liver transplants: London- Kings and the Royal Free; Birmingham; Cambridge; Leeds; Newcastle; Edinburgh. In addition to retrieving donor livers, the liver transplant teams retrieve 95% of all kidneys for transplantation.

PROBLEM IDENTIFIED BUT TOO EARLY FOR SOLUTION

- Problem identified
 - Pathologist shortage
 - Increasing subspecialisation
- Suggested digital solution – too early
- Technology not good enough and expensive

 **Ali Ben-Mussa** shared a link.
Yesterday at 15:26

<https://www.rcpath.org/.../college-report-finds-severe-staff-...>



RCPATH.ORG
College report finds UK wide histopathology staff shortages
Workforce census shows only 3% of NHS histopathology departments...

NEXT

- 2009 James Neuberger, Ian Roberts, Chris Bellamy, Desley Neil)
- RCPATH, NHSBT + industry (Omnyx) – SAC approved Nov 2009
- JN looked at a lot of funding options
- “great idea” but not our remit try X, Y and Z

- BASICALLY NOBODY WOULD FUND
- STILL A MAJOR ISSUE
- why histopath study done:
 - TO GATHER EVIDENCE



- Until PITHIA trial – lack of appreciation by clinical colleagues of lack of capacity in histopath

PITHIA

- Roberta Cacciola brought in Gavin Pettigrew
 - Renal Tx surgeon Cambridge
 - NIHR Grant got written
 - Became a renal specific project

NHSBT – still wanted whole solution

Seen as way of getting scanner

Pilot data to help get funding from NHSE + Scottish funding

Scanner Centres

PITHIA preimplantation renal
Bx study

3DHistech scanner



Pannoramic DESK



NHSBT clinical governance becomes involved 2017

From: Foley Jeanette <Jeanette.Foley@nhsbt.nhs.uk>
To: Desley Neil
Cc:
Subject: NHSBT Clinical Governance INC 2216

Sent: Thu 05/01/2017 12:01

Dear Dr Neil

We have recently received a report relating to a donor on the 27th October at the Lister Hospital, Stevenage, ODT number 122940. The donors initials were AB and DOB 04/07/1952. The lungs were accepted by your centre (but declined on arrival following inspection).

It has been reported that on arrival of the histopathology report it had no points of donor ID. I understand that the SNOD has already discussed this with you and that this was resolved, with the full report being sent with three points of donor ID.

The absence of donor ID on histopathology results is an ongoing issue as often Transplant Centres identify donor histopathology samples with the potential recipients details, or non at all if it is classed as 'tissue'. This is obviously not a problem internally within a centre, however when the results are shared with other Transplant Centres they require the donor ID to ensure they are able to safely cross reference. Is there a forum that you are aware of that this concern could be highlighted?

Thanks in advance

Jeanette

Jeanette Foley

Head of Clinical Governance

Organ Donation and Transplantation

NHS Blood and Transplant

NHSBT histopathology WG 2017

Hi Jeanette

No forum I
(sometim

I think the
donor nu
done sub
that neve
implantat

There is
your best

I wonder if a "specimen request form" could be made which includes spaces/blanks for all of the relevant information that you require as well as the clinical information which we require and that these forms go with all retrieval teams. I would be very happy and keen to help with that.

Desley

**We don't get given any ID
Donor number
Or
Potential recipients
details**

**Develop request form
To include info:
NHSBT requires
Pathologist requires**

National Histopathology Request Form

To (Address sample to be sent):	From (Donor Hospital details):
Name of National Organ Retrieval (NORS) Surgeon:	Specialist Nurse – Organ Donation (SNOD) name:
NORS Surgeon contact number:	SN-OD On Call pager number:
NORS Surgeon signature:	SNOD signature:

Patient Information	ODT Number	Date of Birth			
	Forename	NHS/CHI Number			
	Surname	Sex	M	F	

Sample Information	Date sample taken:		Time sample taken:		Size of lesion:	
	Site/organ of donor lesion: <small>(if more than one sample please specify which is which and size/size of each)</small>					
	Other information: <small>(Where required including transport medium if not saline soaked gauze)</small>					

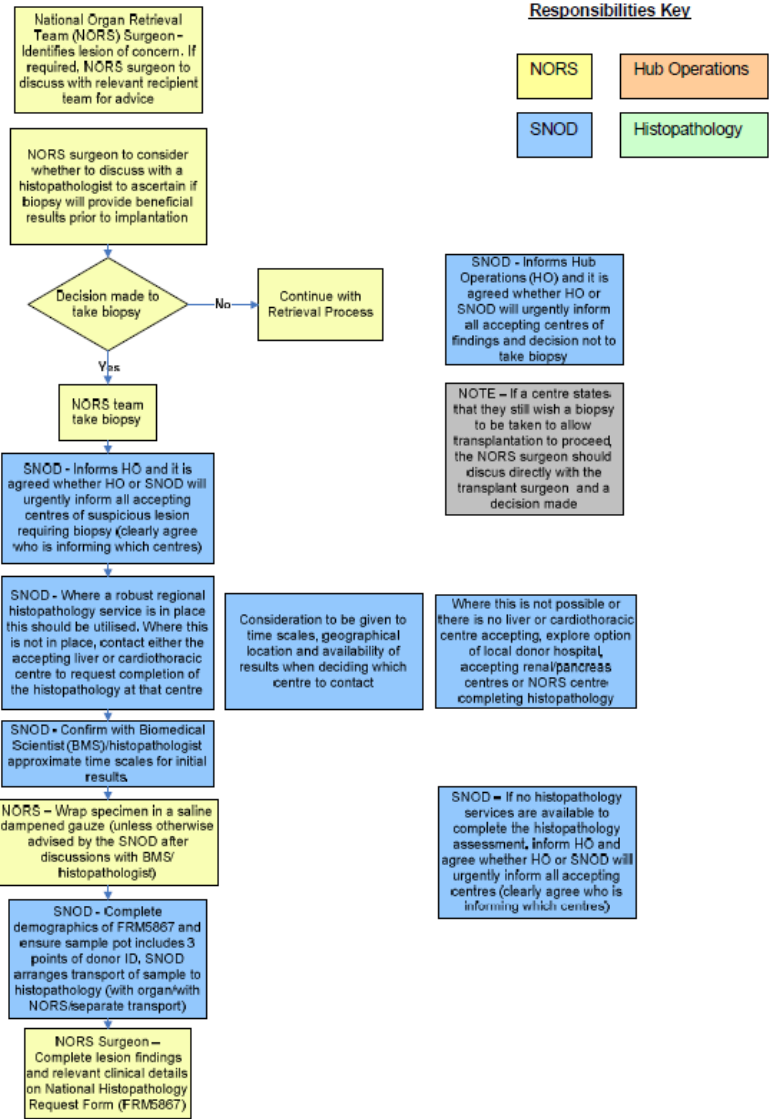
Clinical Information	Relevant past medical history	
	Intraoperative findings	

Organs Accepted and Centre	Heart		Left kidney		Pancreas	
	Lungs		Right kidney		Small bowel	
	Liver		Other (provide detail)			

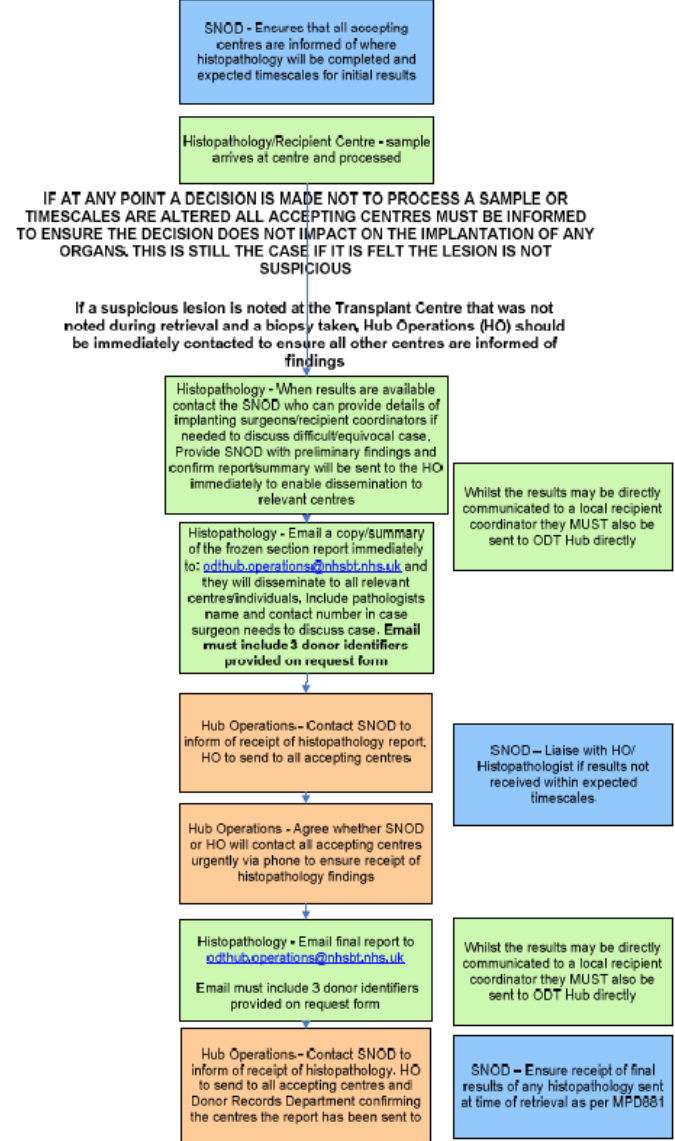
Results – Who to inform:

1. Contact the SNOD (details above), who can provide details of implanting surgeons if needed to discuss difficult/equivocal cases. Inform SNOD of findings verbally
2. Preliminary Report: Send a copy/summary of the report **immediately** via secure email to: odthub.operations@nhsbt.nhs.uk for onward dissemination to all relevant centres/individuals. Please include pathologists name and contact number in case surgeon needs to discuss case. **Email must include 3 identifiers from above**
3. Final Report: Send via secure email to odthub.operations@nhsbt.nhs.uk **Email must include 3 identifiers from above** (Hub Operations phone number: 0117 9757580 if any difficulties)

Findings During Retrieval Requiring Histopathology Assessment



Findings During Retrieval Requiring Histopathology Assessment



Ongoing problems

- Difficulties being able to get a pathologist
 - Donor hospital
 - Implanting centres
- Problems with Communication
 - esp if NHSBT request form not filled in

AIM: safely increase utilisation of donor organs

DONOR LESIONS

- Any pathologist better than no pathologist?
- Yes and no
- Obviously malignant – we should ALL be able to pick
- Most are benign (but if inexperienced – sit on the fence)
- Borderline lesions, up to date criteria – adenoma v carcinoma

- Pathologists would prefer to be in their comfort zone
- College says should not report out of hours what do not report in hours

Increasing histopathology subspecialisation

- Need someone on-call for all areas
 - BREAST
 - GIT
 - HPB
 - UROLOGY
 - LUNG
 - NEUROPATHOLOGY
 - GYNAE
 - SOFT TISSUE
 - HAEMPATH
 - SKIN...
- Impossible and too expensive for all hospitals/retrieval centres.
- SOLUTION = NATIONAL ON-CALL BY SPECIALITY USING WSI
 - 1 PATHOLOGIST IN EACH SPECIALIATY ON CALL FOR THE WHOLE COUNTRY AT ANY 1 TIME
 - Retrieval/scanner centre BMS on-call (6 BMSs for the UK)

Developing a National on-call rota

- By speciality
- Voluntary/pathologist opt in
- Funded
- IBMS + RCPATH support to help NHSBT develop

IBMS

- BMS will be without a pathologist
- Role of macro images - discuss with remote pathologist
- Suitable specimens
 - Surgeon must select representative area(s)
 - No whole organs to be examined out-of hours

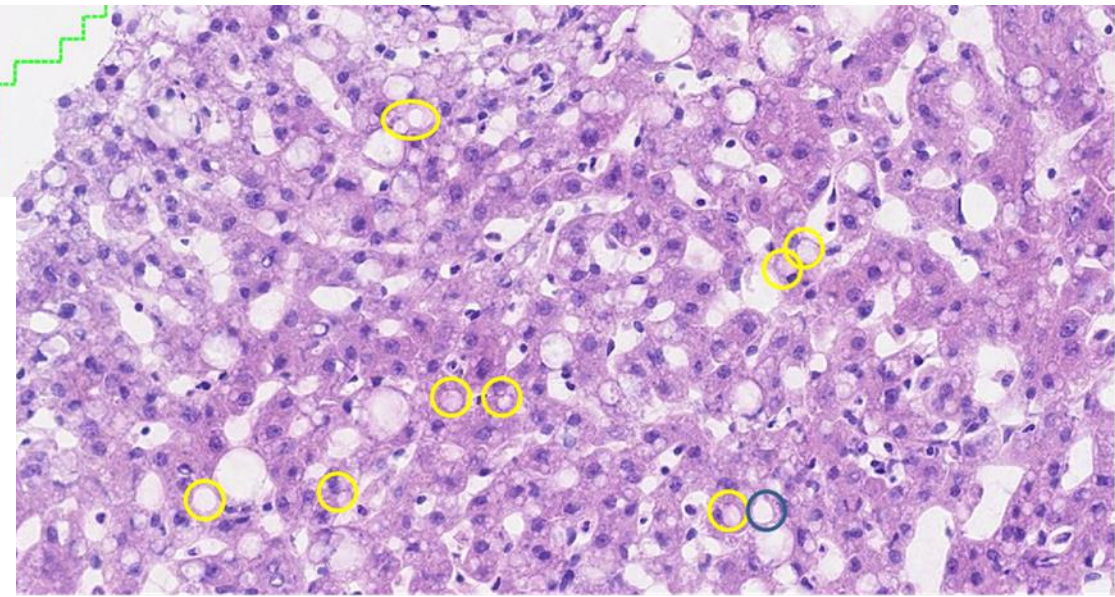
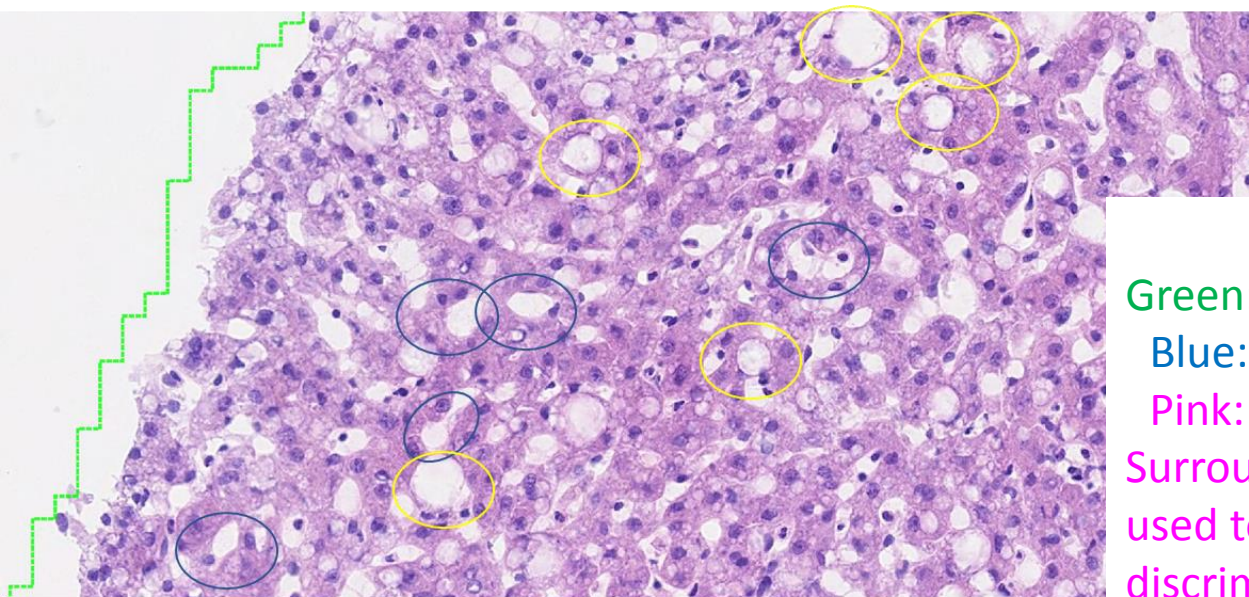
RCPATH

- Histopath Specialist Advisory Committee
- A lead for each subspeciality
 - Work with Tx surgeons/NHSBT
 - Produce guidelines
 - What lesions suitable for a frozen section/limitations
 - When to discuss with pathologist prior to sending
 - Regular review of literature
 - What malignant/borderline malignant lesions “safe”/low risk of transmission
 - Based on clinical urgency

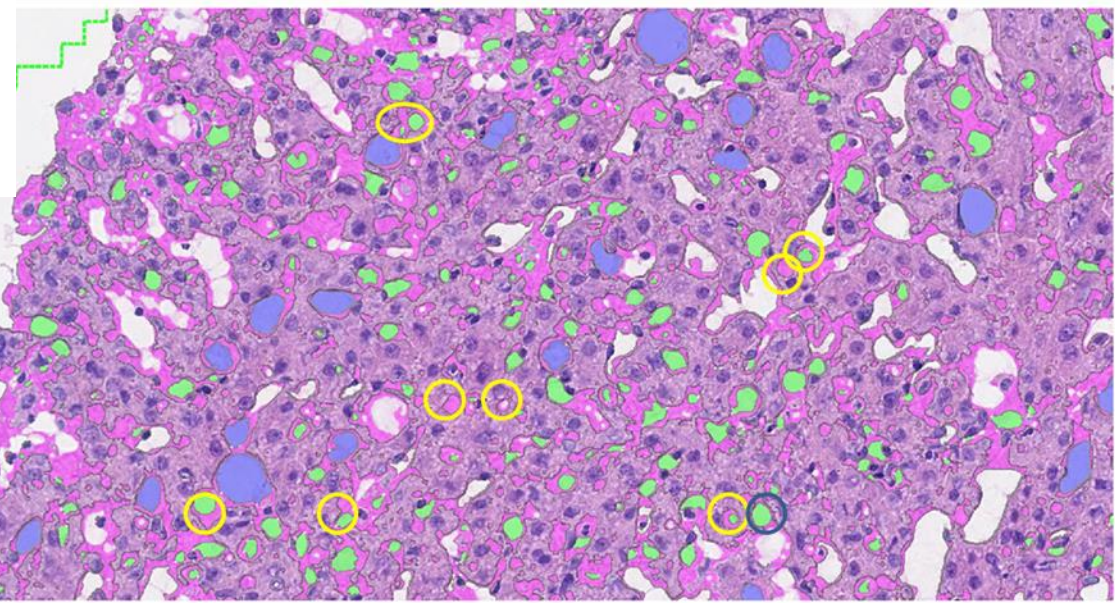
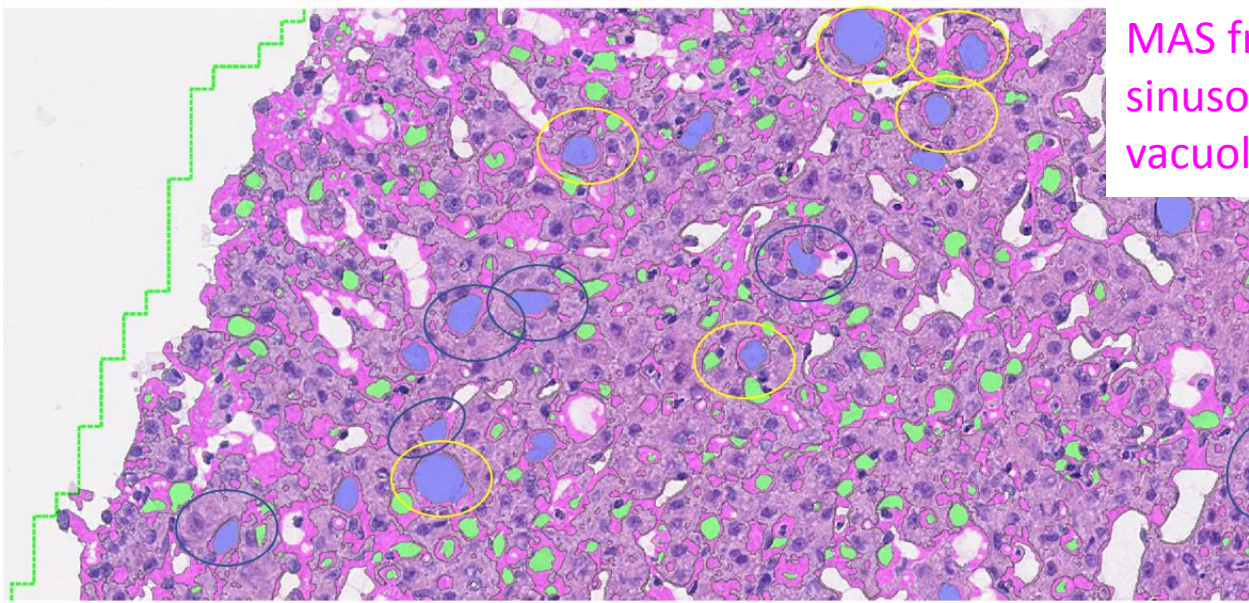
RCPPath

- Each subspeciality
 - Work out “training” for digital
- “certificate” Digital assessment of frozen sections (by organ?)
- Need to remember
 - Not comparing frozen of glass v frozen WSI
 - BUT
 - Frozen on glass by non-specialist or no pathological assessment
 - v
 - Frozen WSI by specialist
- Current time delays v smooth running service (impact of longer ischaemia times on donor organ – short and long term)

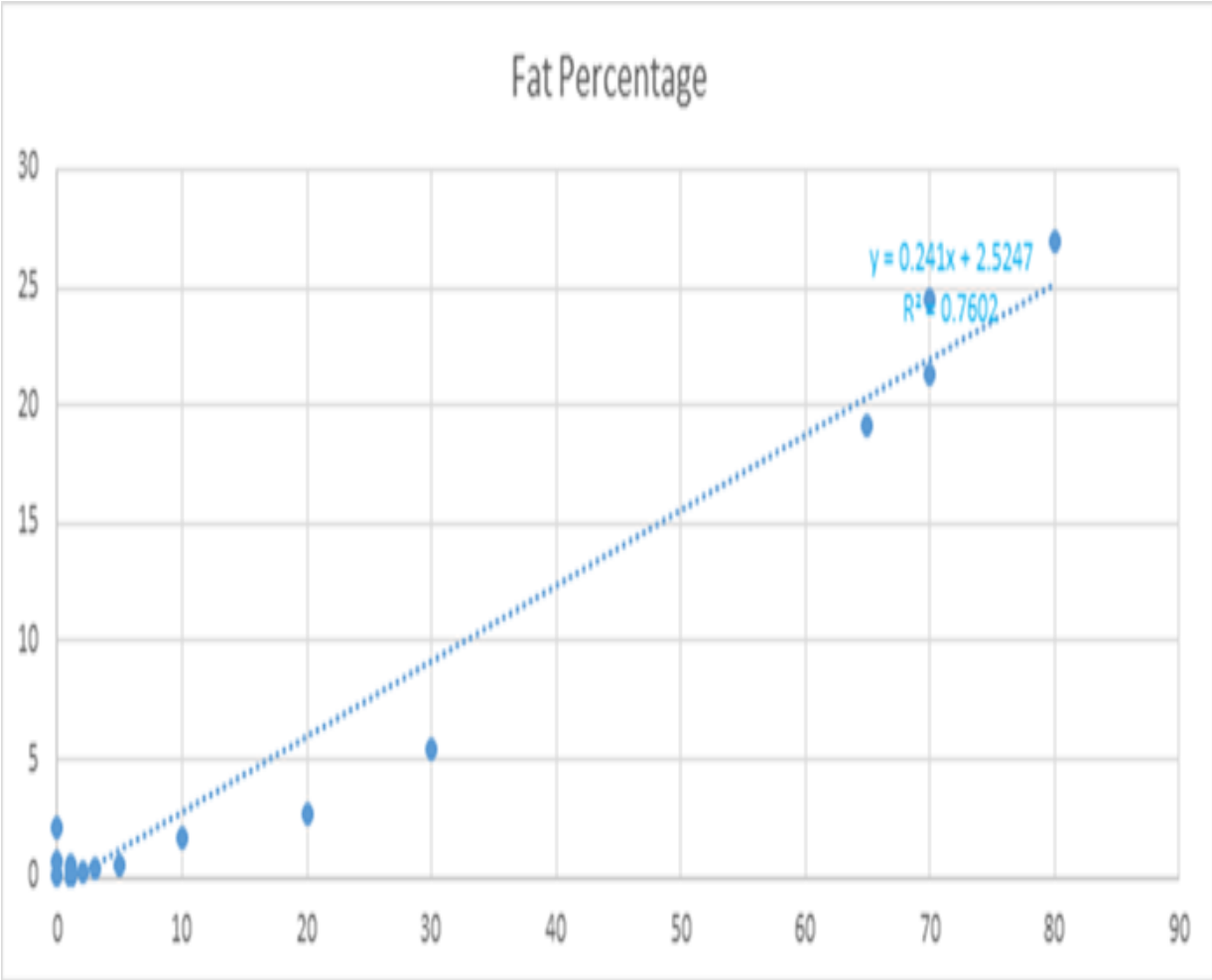
THE FUTURE: DIGITAL ALGORITHMS



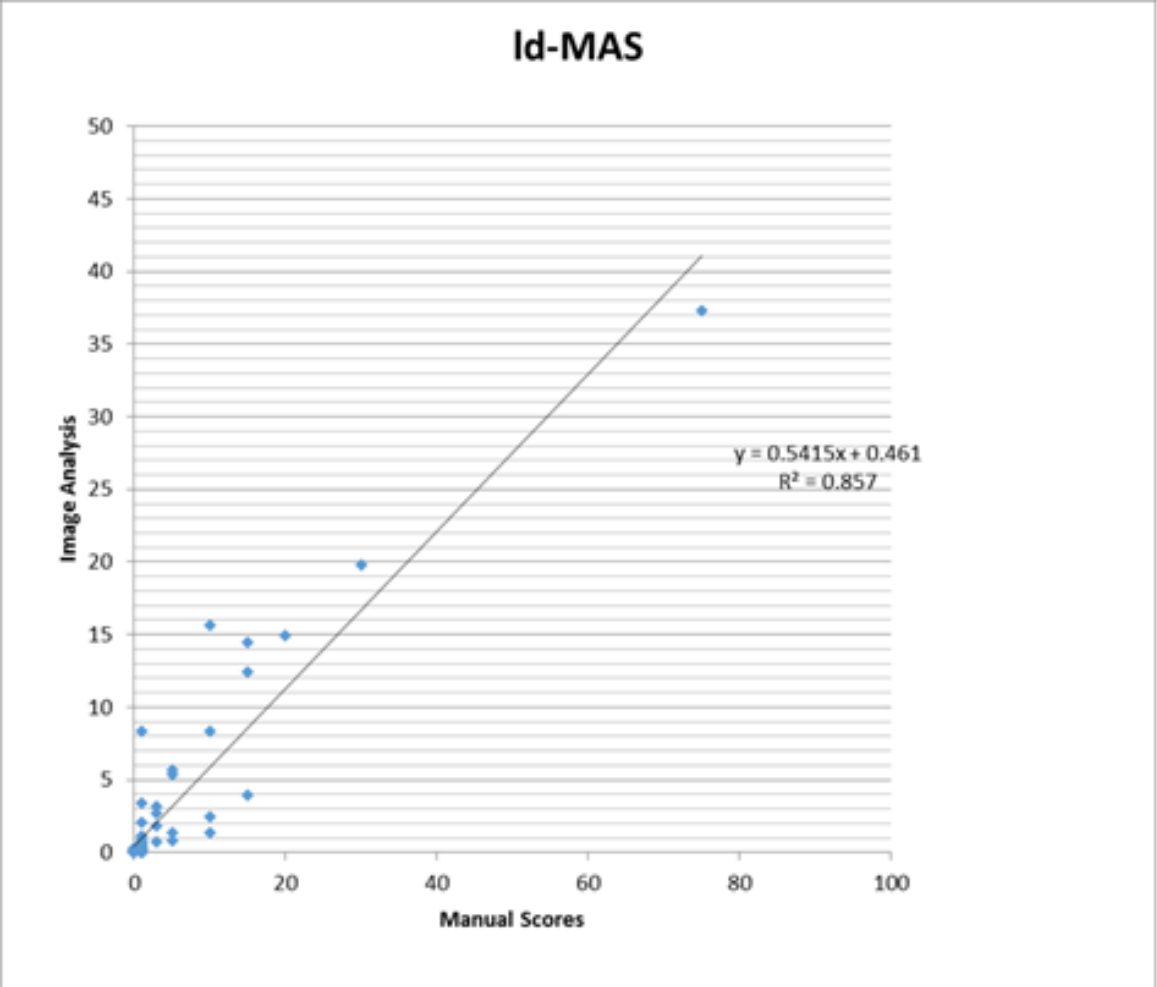
Green: sd-MAS
Blue: ld-MAS
Pink:
Surroundings
used to
discriminate
MAS from
sinusoids and
vacuoles



2015



2017



Other digital algorithms – organ quality

- Fibrosis liver
- Chronic damage kidney

Timing now right?

Scanners
ready

NHS pushing
digital

Links with RCPATH themes/work

- Linkage of specialist services into Networks – recognised by NHSI
 - Work stream of the Pathology Networks Implementation programme
- Coordination of commissioning
- Upgrade of IT and digitisation
 - Encouraging investment in pathology IT infrastructure
- Still to meet with Jo Martin (president RCPATH)

Funding competition

Creating a network of digital pathology, imaging and AI centres

Up to £50 million is available to establish centres of excellence in digital pathology and/or medical imaging with artificial intelligence (AI).

Competition opens: Wednesday 6 June 2018

Competition closes: Thursday 2 August 2018 12:00pm



**National Institute for
Health Research**

Efficacy and Mechanism Evaluation Programme

Transplantation

Closing date: 1:00 pm, 20th November 2018 (two stage – Stage 1 to Stage 2)

A call for research into the efficacy of new or repurposed interventions used in transplantation, whether of cells, tissues or organs.

Areas of particular interest include:

- Tests for the assessment of donor organs, matching of recipients and for post-transplant monitoring.