

Providing an out of hours donor frozen section service for the 21st Century.

BLTG Meeting, York 2018
Pathology Breakout session.

Background: donor frozen sections at Leeds

- Since before 1987 – St James's, around 8 pathologists on rota for the day – included out of hours, covering anything.
- 1998 Trusts merge, rota for on call, about 12, opt in, mainly for donor F/S
- 2003 Consultant contract – on call in contract.
 - First mention of digital in letter to manager June 2003
“Long term based on electronic image capture and transmission. “
- 2008 first meeting of liver transplant pathologists, compared arrangements
- 2010 Transplant centre contract obligation to provide 24 hour F/S cover
- 2013-14 national audit of donor lesion F/S
- 2018 NHSBT letter, national request form,

To: All Pathologists at Organ Retrieval Centres

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11 January 2018

Dear Colleagues,

There have been a number of problems around communication, following the discovery of an abnormality in an organ donor, where the issue is one of potential disease transmission rather than organ quality. To deal with these problems (and not yet those of provision of a suitable histopathology service), we are about to make a number of changes.

NHSBT has developed a standard request form to accompany biopsies of donor lesions to ensure the pathologist has all the relevant clinical information required to assess the lesion and provide contact details of the retrieving surgeon if there are any further details required.

In addition, this form will ensure that all appropriate patient identifiers are supplied to the laboratories to allow accurate booking in of the case and safe dissemination of the report.

Details of who to contact and who to email with the frozen section report will be included on the request form. NHSBT will disseminate the report to all relevant centres. Contact details of the implanting surgeon(s) can be obtained if required to discuss a difficult case.

It should be emphasised that the implanting surgeon will take full and final responsibility for the decision on whether to use the organ or not. The surgeon needs the best possible advice from a pathologist, but will fully appreciate that under often challenging conditions a definitive diagnosis may be impossible to give.

This is the start of a process to establish a more robust national out of hours histopathology service to support organ transplantation. We hope to ultimately minimise individual on-call commitments and develop a specialist on-call service rather than more "general" local on-calls which are becoming increasingly non-viable with the increasing subspecialisation. NHSBT will be working with the Royal College of Pathologists, Institute of Biomedical Scientists and NHS England to develop the national service.

Yours sincerely,

Yours sincerely,


Professor John Dark
National Clinical Governance Lead
Organ Donation & Transplantation


Dr Desley Nell
Histopathology Consultant
University Hospitals Birmingham

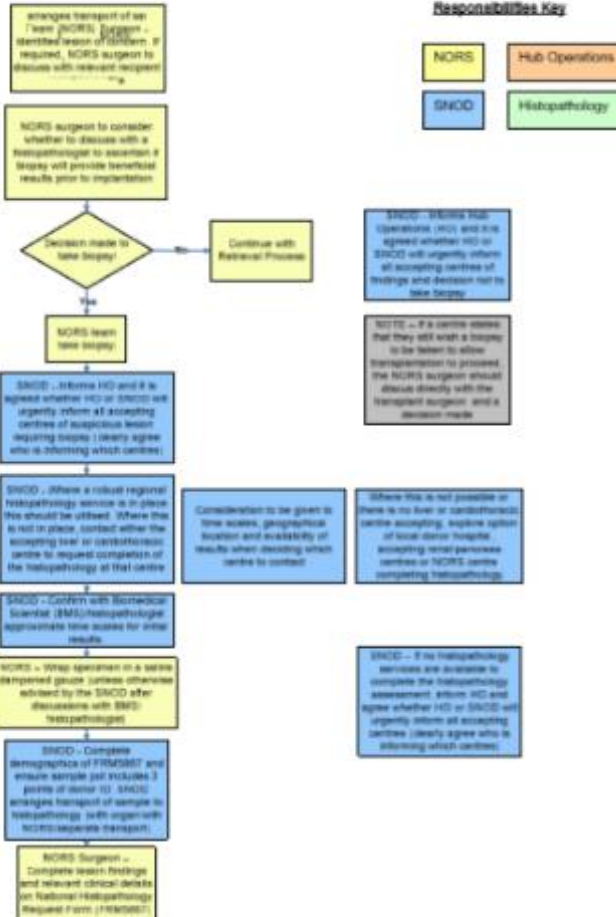
To:
All Pathologists at
Organ Retrieval Centres

Jan 2018

“This is the start of a process to establish a more robust national out of hours histopathology service to support organ transplantation.”

STANDARD OPERATING PROCEDURE SOPS352/H

Findings During Retrieval Requiring Histopathology Assessment



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Author(s):

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STANDARD OPERATING PROCEDURE SOPS352/H

Findings During Retrieval Requiring Histopathology Assessment



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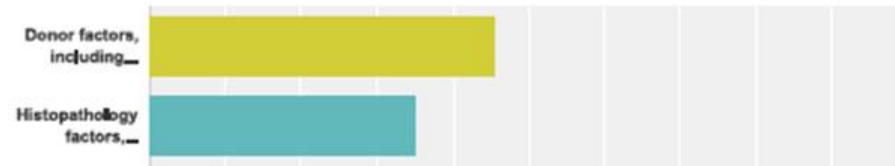
Survey of consultant transplant surgeons on organ utilisation issues

Chris Callaghan
National Clinical Lead for Abdominal Organ Utilisation

March 2016. 80 responses (52%)
of which 22 from liver

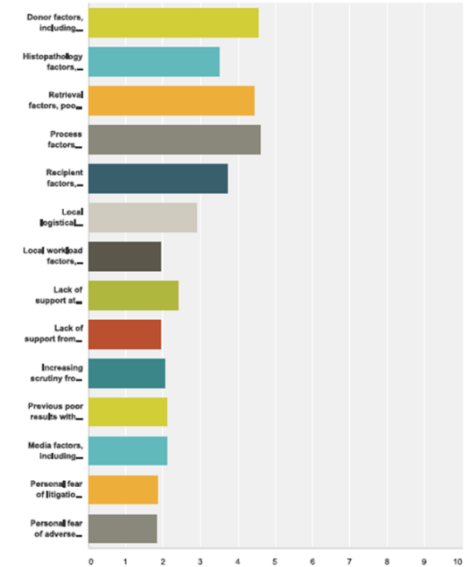
Q7 To what extent do the following factors currently impact on your willingness to accept a deceased donor liver for transplantation?

Answered: 22 Skipped: 58



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Answered: 22 Skipped: 58



	No impact at all	(no label)	(no label)	(no label)	(no label)	Very significant impact	Total	Weighted Average
Donor factors, including increasing age, co-morbidities and BMI	13,64% 3	4,55% 1	4,55% 1	18,18% 4	9,09% 2	50,00% 11	22	4,55
Histopathology factors, including steatosis on pre-implantation liver biopsies	27,27% 6	13,64% 3	0,00% 0	13,64% 3	31,82% 7	13,64% 3	22	3,50

Results – NHSBT actions

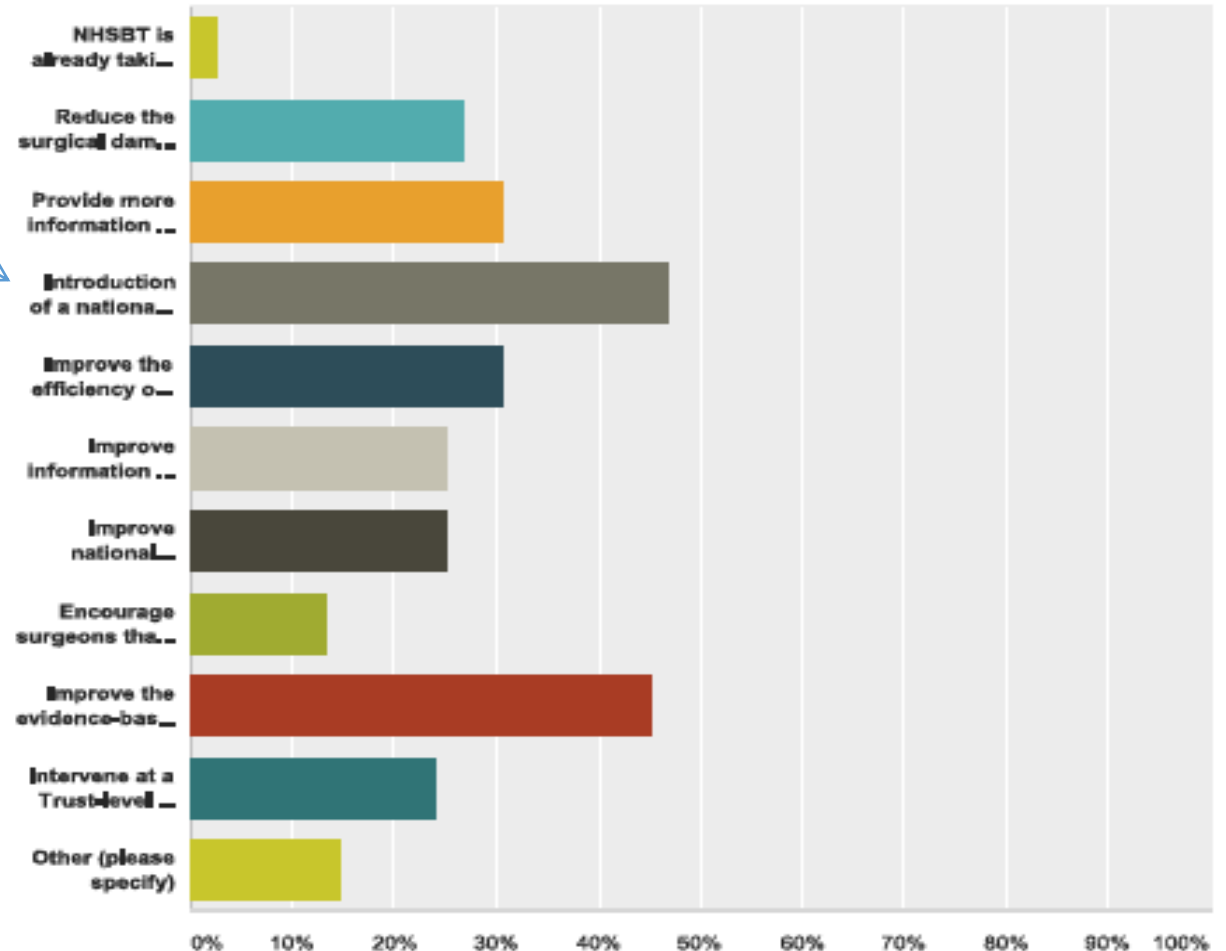
Introduction of a national 24/7 histopathology service for pre-implantation biopsies.

Support for:

- National 24/7 histopathology service
- Improved evidence-base for the use of higher risk organs
- Improved offering, allocation, and transport
- More information on organ appearance

Q12 In your opinion, what are the 3 most important actions that NHS Blood and Transplant can take to support implanting surgeons and increase the successful transplantation of higher risk organs?

Answered: 75 Skipped: 5



Current provision for donor F/S – results of survey summer 2018

Responses from all 7 UK centres – 6 include F/S service, Edinburgh - now just for urgent acute and post-transplant biopsies.

liver pathologists per centre	3 or 4
donor lesion F/S	6 / 7
assess liver graft quality	4 / 7
For donor F/S - 6 centres.....	
rota system : good will	5 : 1
Rota - optional : requirement?	3 : 2
rota frequency - 1 in ?	4, 6, 8, 10, 20
in job plans?	Yes 5/5
has anyone stopped recently?	3 / 7
BMS rota	6 / 7
BMS optional : requirement?	3 : 2

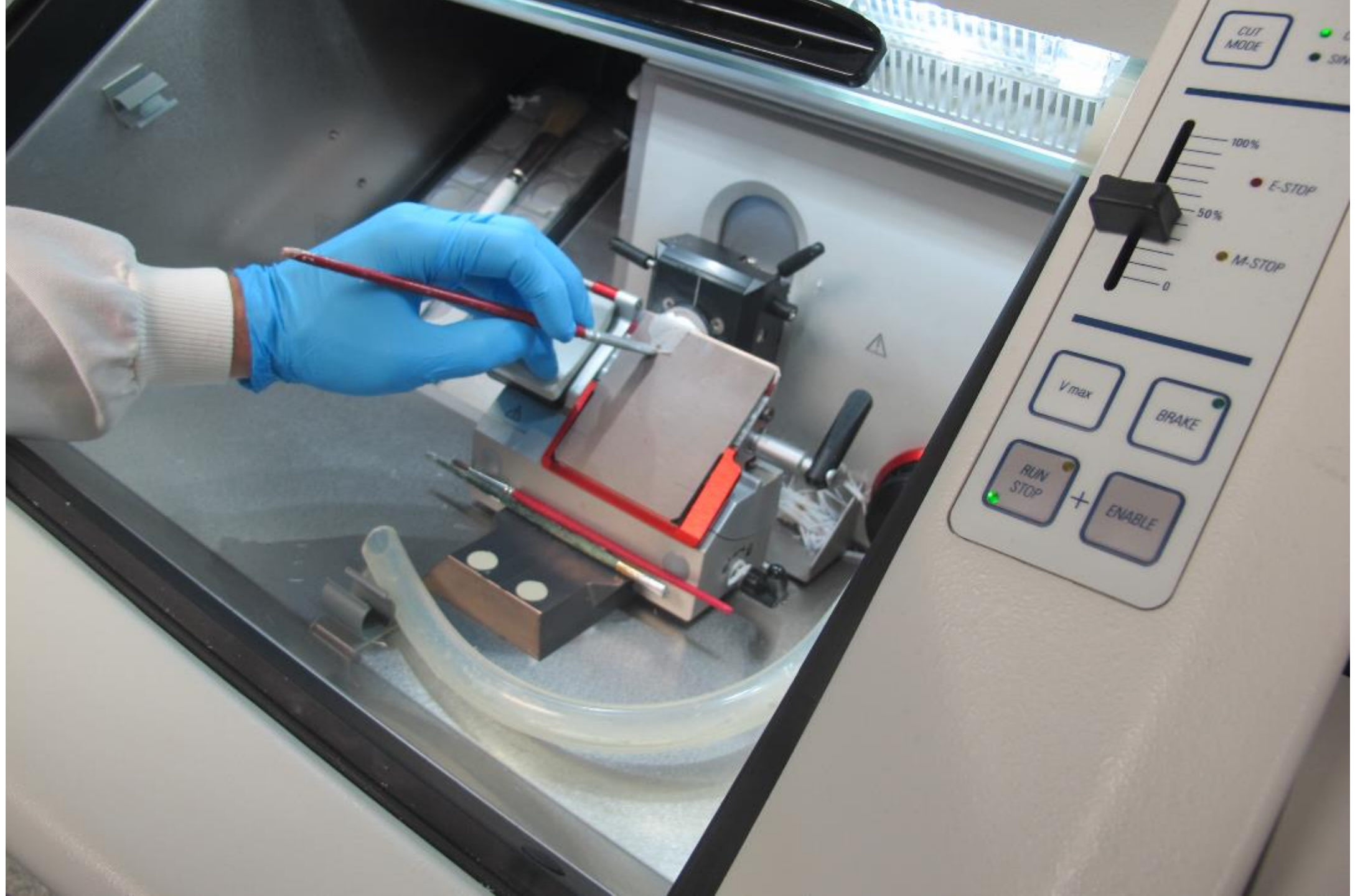
sustainable for next 5 years?	1 'yes'
aware of national audit?	3/7
local audit?	
Annual/occasional / no	1 / 3 / 3
audit of process (3), diagnosis (1), outcome (1)	
any team meetings?	2/6
aware of a proposal for national on call service?	6/7

What is involved.....











FORM FRM5867/1

N 128 101

National Histopathology Request form

To (Address sample to be sent):

Name of National Organ Retrieval (NORS) Surgeon: *Leeds General Infirmary*

NORS Surgeon contact number:

NORS Surgeon signature:

From (Donor Hospital details):

Specialist Nurse - Organ Donation (SNOD) name:

SN-OD On Call pager number:

SNOD signature:

Patient Information:

ODT Number: *132236*

Forename:

Surname:

Date sample taken:

Date of Birth: *14/11/1965*

NHS/CHI Number: *7131344192*

Sex: *M*

M CORB 10mm

LH18-11879

JW

H&E



NHSBT National Audit of donor frozen sections

– 6 months from October 2013 – March 2014

100% data, type 1 biopsies for ? **Malignant lesion** 45/654 retrievals (7%).
(Also type 2 biopsies for **organ quality** – 22 liver, 79 kidney)

Conclusions:

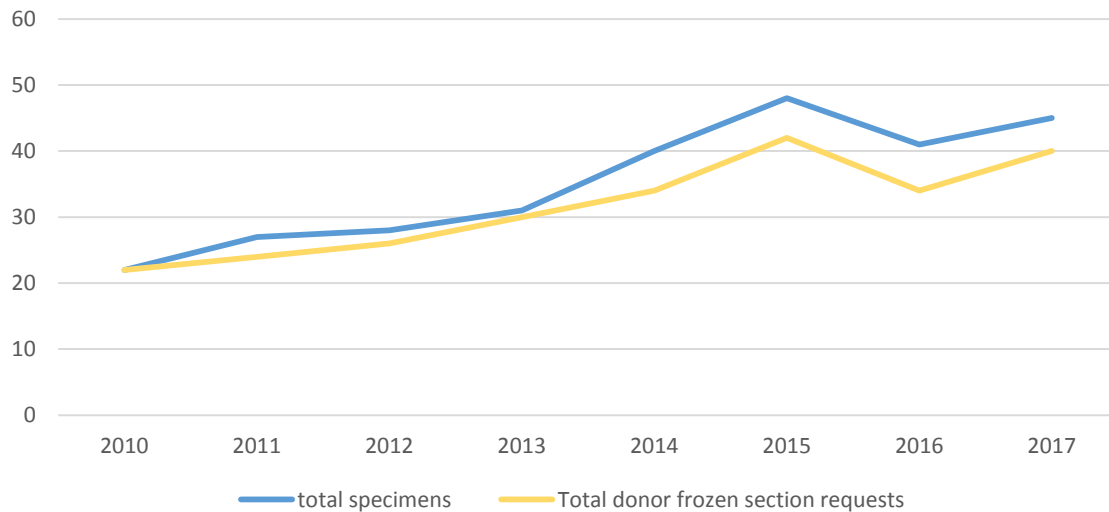
- First national Data on Biopsy and utilisation
- The incidence of urgent Biopsies is higher than expected
- There is evidence that **utilisation increases after Type 1 Bx.**
- It is possible that the audit **may under-represent the actual need** of a National Histopathology Service. The Audit did not capture donors that did not proceed or not considered because no pathology service was available.

67% of Frozen sections for potential liver donors were for focal lesions

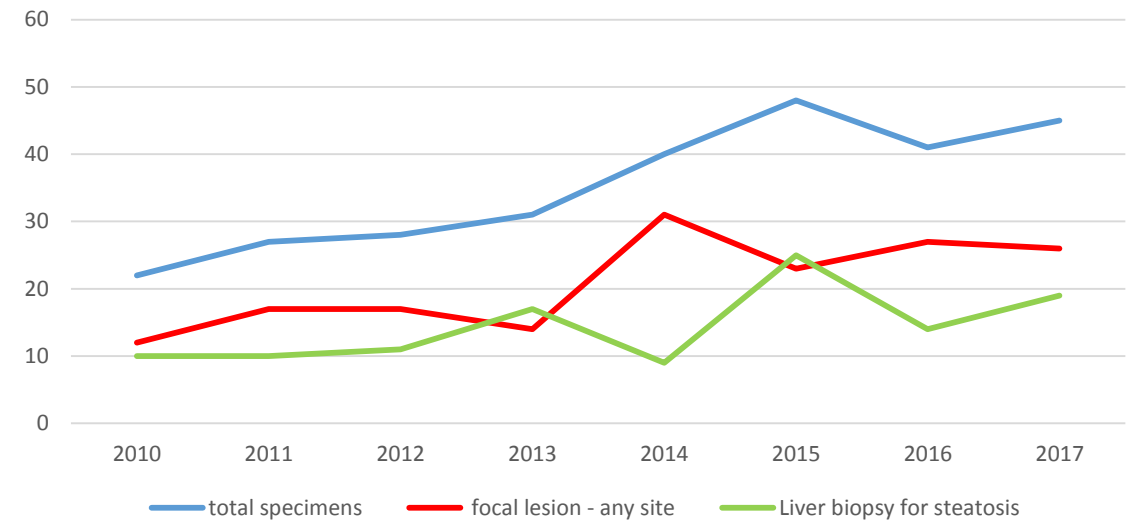
Frozen section biopsies from focal lesions,
for suspected malignancy

Scope of service for donor lesions – data from Leeds.

Leeds - requests for donor frozen sections, 2010-2017



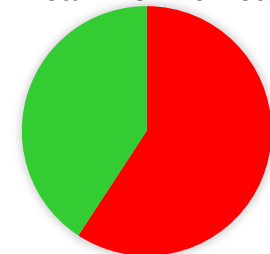
Leeds - specimens for frozen section, 2010-2017



22 in 2010; 40 in 2017

Overall, 282 specimens from 252 donors. 60% for focal lesion ? malignant

Total = 282: 167 focal lesions



Sites of origin of donor focal lesion biopsies

Organ system	2017 data from NHSBT *	Cambridge, 2015-18*	Leeds 2011-17	Total	%
Lung	11	3	13	27	10.5
Kidney	8	21	39	68	26.5
HPB	7	15	48	70	27.2
Lymphoreticular	8	10	17	35	13.6
Gynae	6	1	10	17	6.6
Neuro	3		1	4	1.6
Intestinal	2	2	16	20	7.8
Endocrine	1	5	4	10	3.9
cardiovascular	1			1	0.4
skin			4	1	1.6
Breast			1	1	0.4
total	47	57	153	257	100.0

10/153 (6.5%)
malignant;
7/10 RCC

**Thanks to Rhiannon Taylor from NHSBT for 2017 data, and to Sue Davies for Cambridge 2015-18 data.*

Frozen section biopsies for graft quality,
steatosis?

Biopsies for graft quality – steatosis results.

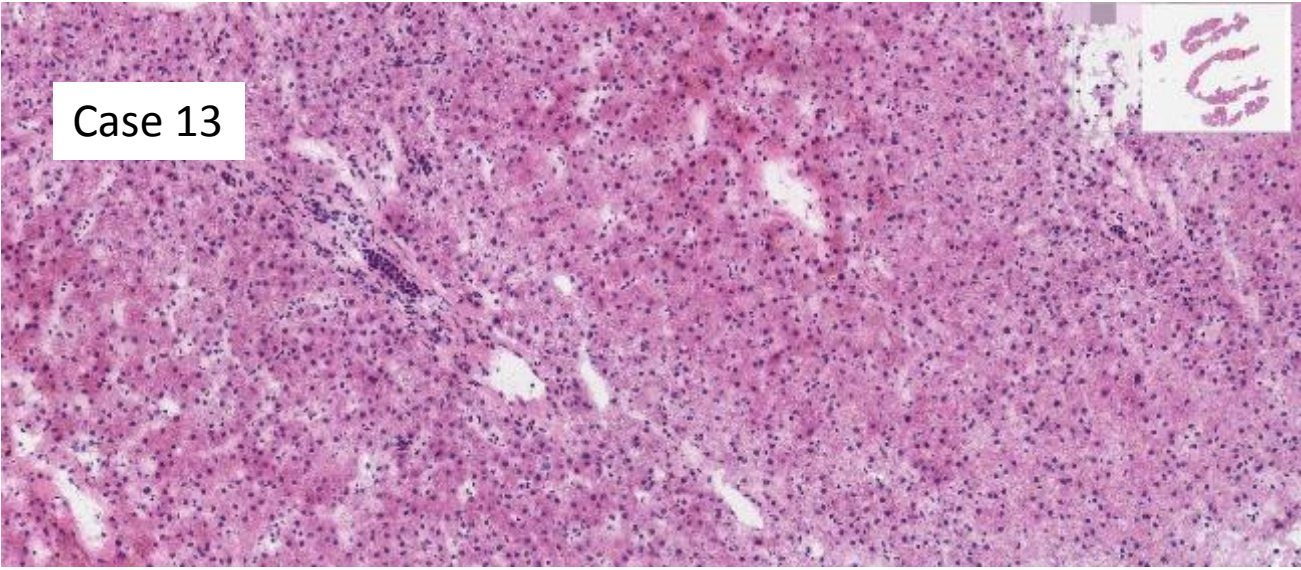
10 people scored % large droplet steatosis
For 18 donor liver F/S for steatosis, Leeds 2017

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Donor liver frozen sections for inter-observer variation study

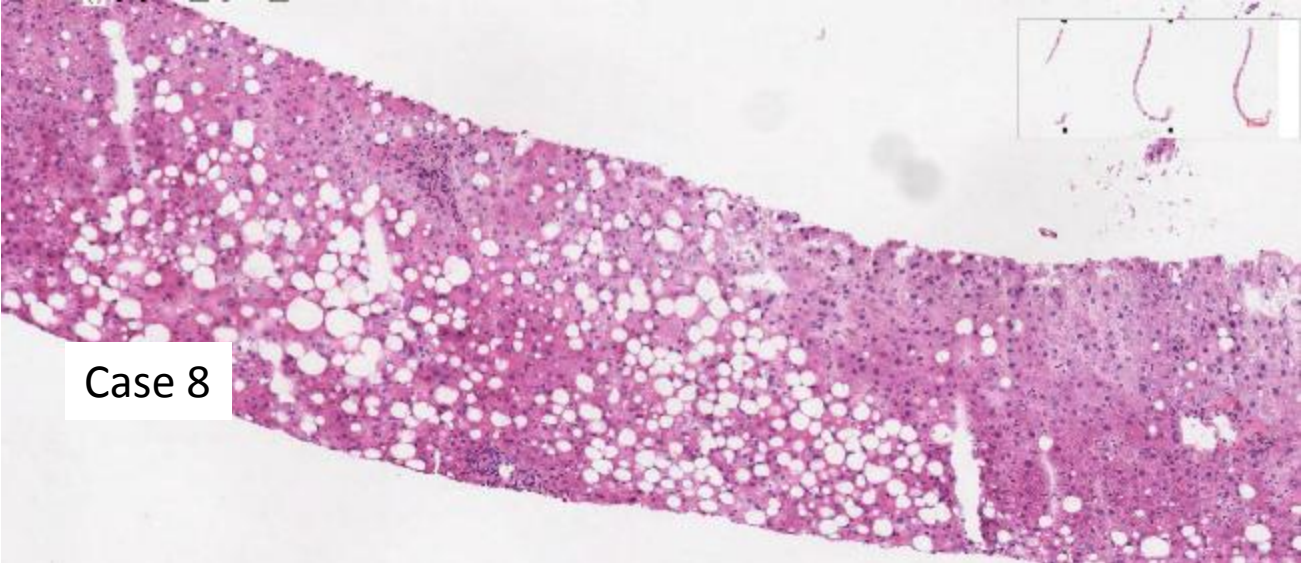
Back to Liver Biopsy page

Case 1	Control
Case 2	Control
Case 3	Control
Case 4	Control
Case 5	Control



Case 13

0-2% steatosis, median 0%,



Case 8

35-70% steatosis, median 52%, 5 score >50

% steatosis: 10 observers, 18 cases (Leeds 2017)

Ranked by ascending median steatosis

Data not displayed pending further participants.....

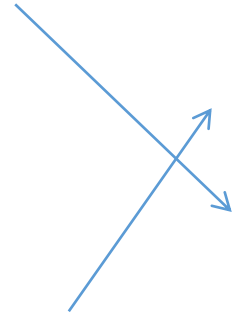
Direction of trends, and why the current system is time-limited

Increasing donor lesion frozen sections:

- More donors,
- increasing donor age, use of 'marginal donors'

Decreasing pathologists for current system:

- Sub-specialisation – reluctant / unsafe to report on other cases
- Difficulties with attending out of hours
- National service – email result to people you don't know – different to phone discussion with local surgeon
- Not all F/S are appropriate, but little opportunity to discuss

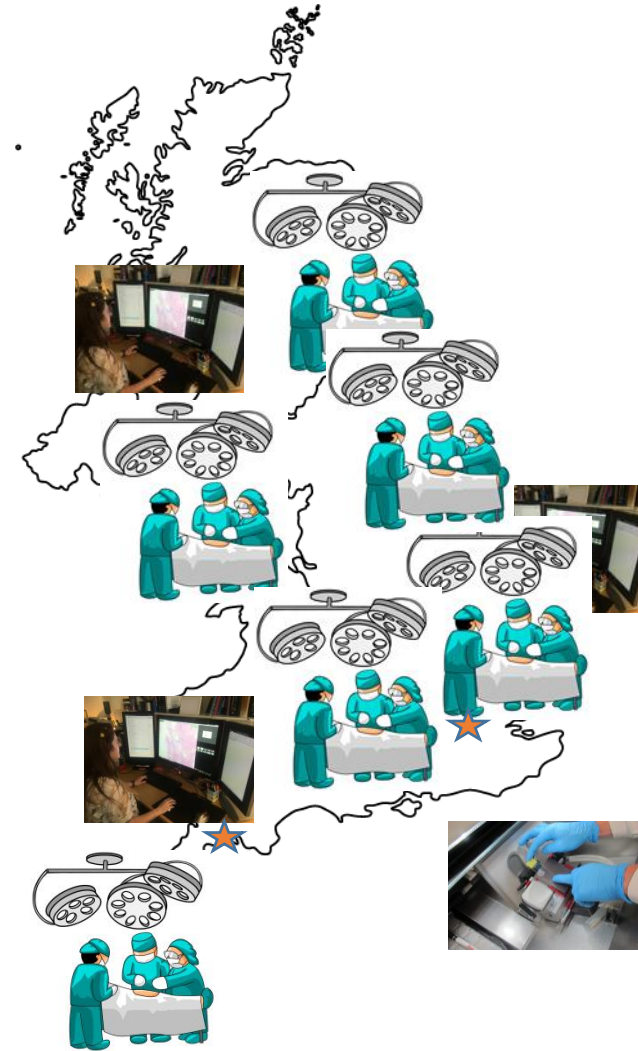


Next steps – meeting today:

- Opportunity to meet, raise awareness,
- Share perspectives of different groups involved

‘Begin with the end in sight’

- what would be an optimal solution?
- input into next steps



Time	Title	Presenter
10.30-10.45	Introduction and transplant centre survey results - current situation	Dr J Wyatt
10.45-10.55	The surgeon's perspective - focal lesions ? cancer	Mr D Vijayanand
10.55-11.05	The surgeon's perspective - graft quality, steatosis	Mr T Perera
11.05-11.20	What does the patient need? How to optimise availability of donor organs - the NHSBT perspective	Professor J Dark
11.20-11.35	How digital pathology could enable a specialist reporting service - the story so far and vision for the future	Dr D Neil
11.35-11.45	Putting a system in place - quality and governance issues.	Dr B Williams
11.45-12.00	Discussion / Next steps / Conclusion	Dr J Wyatt, Dr D Neil