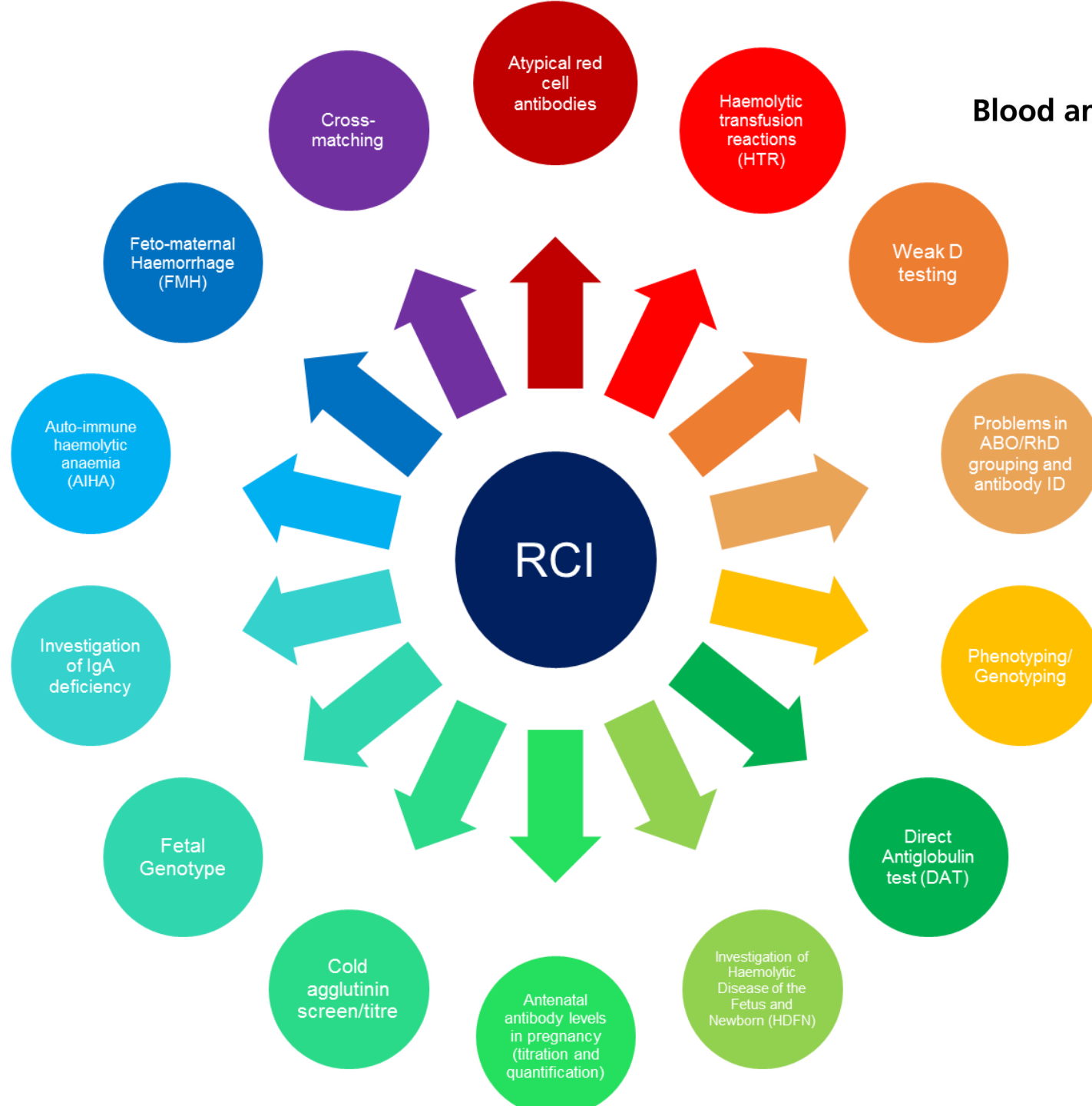


Referrals to RCI

Eve Hayes- Biomedical Scientist
Red Cell Immunohaematology (RCI) – Colindale



Requesting tests

INVESTIGATIONS REQUESTED
ABO / Rh GROUPING
PROBLEMS



Automated group

INVESTIGATIONS REQUESTED
Blood Group Confirma



Weak D testing

INVESTIGATIONS REQUESTED
Group Confirmation

ABO Subgrouping

Requesting tests

EDD
(if pregnant)

30 05 2021

INVESTIGATIONS REQUESTED

?

~~ITD FN~~
ITD FN

Ant. bodies

Requesting Tests

- Be specific!
- If requesting a Weak D investigation or ABO subgrouping then state this!
- If you're not sure, then consider putting your results and state where the problem is!



Sending samples



Blood and Transplant

FAO: RED CELL IMMUNOHAEMATOLOGY

NHS Blood and Transplant - Colindale

Charcot Road, Colindale
London
NW9 5BG

ROUTINE / URGENT

Referring Hospital..... Date.....

Diagnostic Specimen STORE BETWEEN 2°C – 8°C

- Urgent or Routine?
- NHSBT centre with RCI or Interim site?

- Clear labelling
- Specifies which department



1A Request Form

Request for Reference Serology 1A
Red Cell Immunohaematology

NHS
Blood and Transplant

NHS

Blood and Transplant

Please see reverse for samples required

Place correctly labelled samples in bag, remove protective strip, fold onto bag and seal firmly

**At least three points of matching identification must be used
on forms and sample tubes (see over)**

Please do not use this form for routine antenatal requests

Please write clearly inside text boxes, one character per box and mark option boxes as appropriate

TEAR HERE

Please complete all sections fully. Urgent requests MUST be telephoned.

PATIENT DETAILS	
NHSBT No.	NHS No.
Surname	
First name	
DOB	Gender (M/F) Ethnic origin code (see reverse)
First line of address	
Post code	EDD (if pregnant)
Hospital number	Hospital sample ID number

HOSPITAL & REQUESTER DETAILS	
Full Hospital name	
Hospital (NHS code)	Consultant
Contact name	
Phone	Bleep

Paternal or cord samples: Please give details of linked antenatal patient:	NHSBT/ NHS number
Name:	Date of birth:

CROSSMATCH REQUEST	INVESTIGATIONS REQUESTED
No. units required <input type="checkbox"/> Date & time required <input type="checkbox"/>	
Special requirements: (e.g. CMV neg, irradiated)	

REFERRING LABORATORY'S FINDINGS	YOUR RESULTS (state technique(s) & date tested)
Blood group: DAT:	Antibody screen:
Sample date & time	Ab ID:
	Other results:

DIAGNOSIS & CLINICAL HISTORY	
Diagnosis:	Hb & date:
Previous transfusion? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, date of most recent:	
Anti-D Ig (Dose & date given):	

Signature	Date
-----------	------

NHSBT USE	
Type of sample if not EDTA:	NHSBT sample number Date / time sample received

Hospitals and Science website:
<https://hospital.blood.co.uk/diagnostic-services/red-cell-immunohaematology/>

Urgent Requests




RCI Record of Verbal Contacts – Information Received

Blood and Transplant


Location		Phone number	
Hospital contact name (record full name)		Job title / Position	
PATIENT DETAILS			
Full Name			
Date of birth		Hospital Number / NHS number	
CLINICAL CONDITION/TYPE OF PATIENT/SEROLOGICAL FINDINGS:			
Type of patient (please circle): Medical / haematology / obstetric / surgical			
Date of last transfusion:			
Hb (Result, Time, Date):			
Blood group / Antibodies / DAT result:			
Special requirements (please circle): CMV - / Irradiated / Washed / HbS - / Other / None			
Additional information; (anti-D given, Consultant details, hospital findings etc)			
SAMPLE TRANSPORT DETAILS:			
Transport method;		Estimated time / date of arrival of sample:	
TRANSFUSION REQUIREMENTS (please note – 'ASAP' is not an acceptable time/date)			
No. of units requested:		Date and time required at hospital:	
Transport of units (please circle): Routine / Ad hoc / Hospital collect / Blue light / Not stated			
Call Taken by (sign):	Date:	Time:	VMB updated? (circle) Y N/A

- Every time an urgent sample is called to RCI we have to complete one of these forms and an alternative form for FMH samples.
- Why?


RCI Techniques

- LISS
 - NISS
 - IAT
 - DAT
 - Neutralisation (Lewis, P1, Chido/Rogers, Knops)
 - Adsorptions
 - Elution
 - Flow cytometry
 - Quantification using continuous flow analyser (CFA)
 - PCR
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Abbreviations

- BRIAT – Bio-Rad IAT
 - EIAT- Bio-Rad IAT
 - LISS or LIAT – LISS IAT
 - NAAD or NAD- No Alloantibodies Detected
 - SNDT- Specificity Not Determined
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Common Cases- 1

- Patient not seen at this hospital before- no other clinical information!
 - 51 year old patient
 - Grouped as B RhD Positive, previously typed as R1r K-
 - Automated panel on IH1000
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[illegible]

Common Case 1

- Patient record from sample sent to RCI Tooting stated the patient was on Daratumumab.
- From these results we would suspect Daratumumab and check with the hospital if they were on the treatment due to results.
- DTT treatment of red cells destroys Kell system antigens so K negative red cells should be supplied unless they are known to be K positive.
- What testing should we do before starting treatment?



Common Case 2

- New patient
 - 34 year old male
 - Pre-op sample
 - Anti-M stated on request form.
 - Grouped by IH1000 as O RhD negative
 - Rh/K- C-c+E-e+K-
- 
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Common Cases- 2

NHSBT Reagents Panel 1


Antibody Investigation Worksheet

Sample Name		PATIENT 1		Requestor		-		Database Ref No.		-		Tested by		*IH1000				
Date of Birth		-		Hosp no		-		Sample No.		-		Date Tested		-				
Product		Lot No.		Product		Lot No.		Product		Lot No.		Product		Lot No.				
Panel in Alsevers		R144 3466		Panel in CellStab		R143 3466		Panel in CellMedia		R163 3466		Panel in LISP		R146 3466				
Panel Papainised in Alsevers		R154 3466		Panel Papainised in CellStab		R153 3466		Panel Papanised in CellMedia		R173 3466		EXPIRY DATE: 2020.11.19						
	Rh	M	N	S	s	P1	Lu ^a	K	k	Kp ^a	Le ^a	Le ^b	Fy ^a	Fy ^b	Jk ^a	Jk ^b	Other	*BRIATEIAT
1	R ₁ ^w R ₁	0	+	0	+	3	0	0	+	0	0	+	0	+	0	+		0 0
2	R ₁ R ₁	+	0	+	0	0	0	+	+	0	0	0	+	0	+	0		0 0
3	R ₂ R ₂	+	0	0	+	2	0	0	+	0	+	0	+	0	0	+	Cob+, Bgb+	wf 1
4	r'r	0	+	0	+	2	0	0	+	0	+	0	+	+	+	0		0 1
5	r''r	0	+	+	0	1	0	0	+	0	0	+	0	+	+	0		0 0
6	rr	+	+	0	+	1	0	+	0	0	0	+	0	+	+	0		0 0
7	rr	0	+	0	+	1	0	+	+	0	+	0	0	+	0	+		0 0
8	rr	0	+	0	+	2	0	0	+	+	0	+	+	0	+	0		0 0
9	rr	+	0	+	0	0	0	0	+	0	+	0	+	0	0	+	Cob+	? 1
10	rr	+	0	0	+	4	+	0	+	0	0	+	0	+	0	+		1 0
Auto																		0

Antibody Titre										Group		Pheno	
Dilution:										Cell Id			
Anti-													
Archive													
Anti													
Archive													
DAT Batch No													
PS		IgG		IgA		IgM		C3c		C3d		Ctl	
Reagent													
Batch No's													
Reporting BMS:.....										Checking BMS:.....			

Pipette batch No's

Interesting Case 1

- 28 year old pregnant woman
 - Two previous pregnancies
 - First referred to RCI in 2015
 - Grouped as B RhD Positive by IH1000
 - Srilankan put as ethnicity on request form
 - Previously detected a high frequency antibody
 - EDD: May 2021
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Interesting Case 1- Serology

NHSBT Reagents Panel 1

Antibody Investigation Worksheet

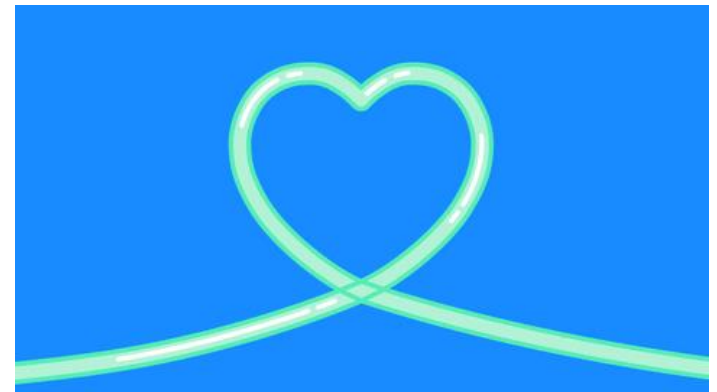
Sample Name		PATIENT 1		Requestor		—		Database Ref No.		—		Tested by		—	
Date of Birth		—		Hosp no		—		Sample No.		—		Date Tested		—	
Product		Lot No.		Product		Lot No.		Product		Lot No.		Product		Lot No.	
Panel in Alsevers		R144 3466		Panel in CellStab		R143 3466		Panel in CellMedia		R163 3466		Panel in LISP		R146 3466	
Panel Papainised in Alsevers		R154 3466		Panel Papainised in CellStab		R153 3466		Panel Papanised in CellMedia		R173 3466		EXPIRY DATE: 2020.11.19			

	Rh	M	N	S	s	P1	Lu ^a	K	k	Kp ^a	Le ^a	Le ^b	Fy ^a	Fy ^b	Jk ^a	Jk ^b	Other	BRIAT	EIAT
1	R ₁ W _R ₁	0	+	0	+	3	0	0	+	0	0	+	0	+	0	+		3	0
2	R ₁ R ₁	+	0	+	0	0	0	+	+	0	0	0	+	0	+	0		3	0
3	R ₂ R ₂	+	0	0	+	2	0	0	+	0	+	0	+	0	0	+	Cob+, Bgb+	3	3
4	r'r	0	+	0	+	2	0	0	+	0	+	0	+	+	+	0		3	2
5	r'r	0	+	+	0	1	0	0	+	0	0	+	0	+	+	0		3	3
6	rr	+	+	0	+	1	0	+	0	0	0	+	0	+	+	0		3	3
7	rr	0	+	0	+	1	0	+	+	0	+	0	0	+	0	+			
8	rr	0	+	0	+	2	0	0	+	+	0	+	+	0	+	0			
9	rr	+	0	+	0	0	0	0	+	0	+	0	+	0	0	+	Cob+		
10	rr	+	0	0	+	4	+	0	+	0	0	+	0	+	0	+			
Auto																		0	


Antibody Titre										Group		Pheno					
Dilution:										Cell Id							
Anti-																	
Archive																	
Anti																	
Archive																	
DAT Batch No										<p>Negative reactions in enzyme and positive in BRIAT? Possible clue- multiple antibodies?</p> <p>Reporting BMS:..... Checking BMS.....</p>							
PS		IgG		IgA		IgM		C3c						C3d		Ctl	
Reagent																	
Batch No's																	

Interesting Case 1- Results

- This lady has Anti-Inb, Anti-c and previously Anti-E
- Samples sent to the International Blood Group Reference Laboratory (IBGRL) for exclusions.
- What other tests would you do or consider?
- Further samples?
- Risk of HDFN?
- Blood supply and advice?



Interesting Case 2

- 40 year old pregnant woman
 - Last seen by RCI in 2012
 - Grouped as O RhD positive by IH1000
 - EDD: May 2021 (as well!)
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Antibody Investigation Worksheet

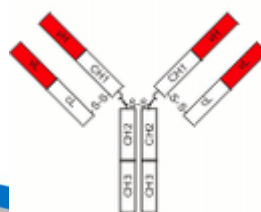
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Pipette batch No's

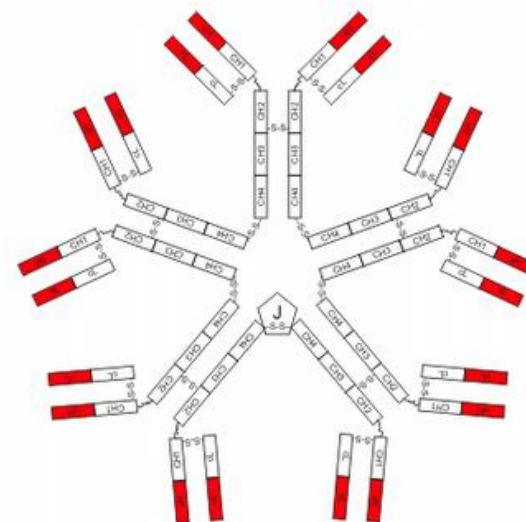
Interesting Case 2- Results

- Patient is Bombay (Oh)
- Antibody titre of 128
- Risk of HDFN?
- Consultant asks us to do an IgG and IgM titre of the antibody due to the high titre- Why?

IgG ~150 kDa




(B) IgM (pentamer)



~950 kDa

To summarise...

- Be specific in test requesting!
 - Call us to let us know when sending urgent samples or FMH's
 - Preparation is key when it comes to patients with known rare antibodies in order for us to be able to meet the supply of blood!
 - We are here to offer advice whether it's transfusion advice or sending of samples!
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Thank you for listening!

