

RCI Assist

User Guide

Version 1.0 Effective date: 17/02/2025

Caring Expert Quality



By the end of this session, you will:

- Know where to locate RCI Assist
- Know how to use RCI Assist to support decision making
- Know how to manage urgent referrals to RCI
- Know who to contact for any queries



What is RCI Assist?

- RCI Assist is a referral support tool which guides users when processing samples in the hospital transfusion laboratory (HTL) to ensure appropriate investigation of patients requiring red cell transfusion supports
- The referral support tool contains decision points to either refer cases to Red Cell Immunohaematology (RCI) or resolve in-house and is supported with pop up information to improve staff confidence



How to access RCI Assist

- RCI Assist will be accessed via a link held in Sp-ICE and OBOS
- The user will log into Sp-ICE and OBOS using their usual credentials



Disclaimer



Select click here to read disclaimer



Disclaimer



Once you have read the disclaimer, select the **tick box** to confirm you have read it the disclaimer



Disclaimer



You cannot proceed to RCI Assist if you do not select the tick box to confirm you have read the disclaimer

NHS Blood and Transplant



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Blood and Transplant





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RCI Assist	Grouping	Antibody ID	Antenatal	Panreactives	Elutions	Transfusion
Is ABO and D group Image: Comparison of the second sec		lf you w select th availabl follow a	ant to jump ne required e for when particular	o to another l tab. This o you don't n pathway	r section, ption is need to	
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The required page is highlighted in the corresponding colour:





Moving between pages

- As you move between pages, previously selected pathways will still be available if you return to any previous pages using the navigation tabs
- Please note, using the back arrows will cause you to exit RCI Assist
- You must ensure that you only reset the package when your investigation is complete
- You must reset the package when processing a new sample
- Each time you log in from Sp-ICE or OBOS, you will reach the RCI Assist homepage and have to accept the disclaimer



Resetting the package

- To reset the package, select the reset button in the top left
- You will be asked if you are sure you want to reset
- If you select no, you will return to the current page and all previous selections will be available
- If you select yes, you will return to the RCI Assist homepage

RCI Assist	Grouping	Antibody ID	Antenatal	Panreactives	Elutions	Transfusion
Is ABO and D group interpretable?						
NO						
Help Print page Disclaimer	Read Here				Bloo	NHS d and Transplant



Using RCI Assist

Use the RCI Assist referral support tool to navigate your way through serological investigations:



Elutions

To move through the pathways, select the yes or no options next to the question boxes

- To jump straight to a section, select the required tab
- To get supporting information about a topic, click the information icon
- Reach a decision point and either refer to RCI or result in-house

RCI Assist	Grouping	Antibody ID	Antenatal	Panreactives	Elutions	Translusion
Is ABO and D group interpretable?	55					
Check Patient History Has patient been transfused in last 3 months? NO Is the reaction vs anti-D s2+ ?	ES Check Has D va previously	Patient History	YES	Clic Refe inve clini pati bee Refer t	k to learn more er to RCI (2) er to RCI for D variant stigation if result has cal impact and this ent has not previously n investigated before.	
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Decision/referral points







Grouping referral point numbers

RCI Assist	Grouping	Antibody ID	Antenatal	Panreactives	Elutions	Transfusion

Referral Point	Supporting Information
1	Anomalous ABO/D referral
2	Variant D referral

ABID referral point numbers



RCI Assist	Grouping	Antibody ID	Antenatal	Panreactives	Elutions	Transfusion	
Referral Point	Supporting Inform	ation					
5	Optional point t antibody ID par	Optional point to refer to RCI when positive antibody screen obtained if laboratory does not possess antibody ID panel					
7	 If primary panel significant alloat Note: for patient it is not expected plasma 	 If primary panel (and secondary if available/required) panel have been performed and all clinically significant alloantibodies cannot be confirmed and/or excluded referral should be made to NHSBT Note: for patients with known multiple antibodies which are unlikely to be resolved by a secondary panel it is not expected that a second panel will be performed prior to RCI referral in order to save time and plasma 					
8	 Optional retros this referral poi investigations 	pective referral for nt for antenatal cas	cases which have ses; any additiona	e not previously bee I work can be perfo	en seen by RCI. P Drmed by RCI as p	Please do not use part of antenatal	
9	 Referral to RCI point for antena antenatal investigation 	for RhK or other p atal cases. Addition tigations as require	henotyping if no a al work such as p ad	vailable reagents. henotyping can be	Please do not use performed in RC	e this referral I as part of	
18i	 Patient ethnicit these may be a Samples shoul 	y/haemoglobinopat Illoantibodies due t d be referred to IB0	thy status should b o variant Rh antig GRL for RHD/RHC	be considered when ens CE sequencing	n assigning auto l	Rh antibodies as	

Antenatal referral point numbers



RCI Assist	Grouping	Antibody ID	Antenatal	Panreactives	Elutions	Transfusion
Referral Point	Supporting Informati	ion				
3	 Antenatal sample for quantification of anti-D (alloimmune and passive) or anti-c, or titration of anti-K, anti-E or anti-C When fetal antigen status is positive or unknown Cases where the fetus has been typed as antigen negative only require quantification/titration at bookin and 28 weeks gestation The value of quantification is doubtful when alloanti-D >15 IU/mL or alloanti-c > 20 IU/mL and Doppler MCA ultrasonography is in place 					
4	 Titration of maternal antibodies other than anti-D/c/K/C/E to assess the risk of haemolytic disease of foetus and newborn in accordance with BSH guidelines 					
17/17i	 Quantification/titra required Whilst it is possible considered as cline The IBGRL fetal <i>R</i> be performed from IBGRL also offer for and K from 20 wee Please See <u>https:</u> further information 	ation of anti-D/c/K e to obtain fetal p ically valuable du RHD screening se n 11 weeks gesta etal genotyping for eks gestation //ibgrl.blood.co.ul	C/C/E to RCI (17) whenotype inform ue to issues surro rvice to prevent to tion or antenatal patients k/services/molec	AND fetal genotype ation indirectly by prounding non-paterni unnecessary admin ents with alloantiboo ular-diagnostics/feta	ing/ <i>RHD</i> screenin paternal phenotyp ity istration of anti-D dies for D C c E f <u>al-genotyping-dia</u>	ng at IBGRL (17i) Ding this is not D prophylaxis can From 16 weeks

Panreactive referral point numbers

🕤 RCI Assist	Grouping Antibody ID Antenatal Panreactives Elutions Transfusion					
Referral Point	Supporting Information					
6	 Anti-CD38 therapy patients requiring transfusion who have not had a DTT panel performed by RCI in the last month 					
10	 Anti-CD38 patients who have been transfused in last 3 months require genotyping by RCI laboratory using PCR-SSP. RCI can crossmatch from this sample if blood is required. 					
11	 Anti-CD38 patients requiring a full phenotype (if no typing reagents available in referring laboratory) RCI can crossmatch from this sample if is blood required 					
14	 Pan-reactive autoantibodies often require testing by other methodologies to exclude or confirm the presence of alloantibodies. Patients with pan-reactive autoantibodies which have previously been referred to RCI will require testing again by RCI to exclude/confirm the presence of clinically significant alloantibodies only prior to transfusion. It is not essential to refer for serological investigation if transfusion is not anticipated within the validity of the sample. 					
15	 Apparent pan-reactivity due to alloantibodies require additional investigations by NHSBT to determine if there is a mixture of alloantibodies (which precludes obtaining any negative results), an HTLA alloantibody or an alloantibody to a high frequency antigen Samples should be referred for known patients if transfusion is required or anticipated. Antigen negative blood for patients with high incidence antibodies is not readily available and additional notice will usually be required 					



Elution referral point numbers

RCI Assist	Grouping	Antibody ID	Antenatal	Panreactives	Elutions	Transfusion

Referral Point	Supporting Information
12	Patients requiring elution (if not performed by referring HTL).
13	 Reactivity in an eluate may be indicative of a recently formed alloantibody which is not detectable in the patient's plasma. Referral to NHSBT should be made to enable exclusion of newly formed alloantibodies In most instances involving pan-reactive eluates RCI referral is not required. However, if there has been a decrease in transfusion interval, a suspected transfusion reaction, or any other indicator of increased red cell destruction, referral should be made to RCI A new sample may be required for repeat eluates



Transfusion referral point numbers

RCI Assist	Grouping	Antibody ID	Antenatal	Panreactives	Elutions	Transfusion

Referral Point	Supporting Information
16	Incompatible crossmatch for unknown reasons which requires RCI investigation

Please note, where a sample is deemed to require NHSBT investigation but does not fit any referral point number, these must be referred to RCI

• Examples include: FMH, HDFN investigation, HTR and ABOi titrations



Urgent Referrals to RCI

- Please notify the RCI laboratory by telephone of any urgent requests
- All crossmatch requests required during routine hours must be telephoned to the local RCI laboratory
- Out of hours, only crossmatch requests that are required to be tested within the out of hours must be telephoned
- For further information, please refer to the <u>RCI User Guide</u>



Queries on RCI Assist

- For any queries relating to RCI Assist, contact your local RCI centre in the first instance
- For all other queries, please contact Hospital Customer Services on <u>NHSBTCustomerService@nhsbt.nhs.uk</u> and your query will be directed to the appropriate team



Case Example

- 35-year-old female
- Antenatal Group & Screen (booking at 11 weeks)
- First time seen by your lab
- No history on Sp-ICE
- Never been transfused











Is ABO and D group interpretable?



(i)

NO

Is ABO and D group interpretable?

Forward and reverse ABO groups match in accordance with Landsteiner's Law.

Note: Neonate groups are considered 'interpretable' from forward group only.

ABO forward group and D group show strong positive (3+/4+) reactions. Reverse group reactions may be weaker.







Do the ABO forward group and D group show strong positive (3+/4+) reactions? **No** – the D group does not show strong positive reactions

Therefore, the ABO and D group is **not** interpretable

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Or, if you want to jump to another section, select the required tab.













9	RCI Assist	Grouping	Antibody ID	Antenatal	Panreactives	Elutions	Transfusion
	Is ABO and D group interpretable? NO Check Patient History Has patient been transfused in last 3 months?	 YES Click to learn more Check Patient History Has patient been transformer A previous transfusion is anomaly with the ABO or of transfusion (red cells, Dual populations arise in transfusion (ABO and/or unexpected reactions mat following transfusion with 	fused in the last 3 the most likely sou D group. Conside platelets, FFP, Ivig the case of red ce D group not identi ay occur in the reve n products containi	3 months? urce of an er any type j). ell cal), whilst erse group ng plasma.			
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Elutions



Check patient history









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D grouping: Interpretation of Weak Reactions

 Please refer to <u>BSH guidelines</u>, local policies and manufacturer's instructions when interpreting weak reactions in D grouping



https://onlinelibrary.wiley.com/doi/full/10.1111/j.1365-3148.2012.01199.x



Yes – the D group reactions is $\leq 2+$ or less

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Is ABO and D group interpretable?

NO

Check Patient History

Has patient been transfused

in last 3 months?

NO





Click to learn more

Check Patient History Has D variant investigation been previously performed? - in your hospital or by RCI.

Samples should be referred to RCI for D variant investigation where the result has a clinical impact. For example: women of childbearing potential, chronically transfused patients or the administration of anti-D prophylaxis in pregnancy. The clinical impact of D variant investigations on males or the elderly who do not fit into the category above is negligible. Follow BSH guidelines and your local trust policy.

Is the reaction vs.anti-D ≤2+ ? YES → Check Patient History I YES Has D variant investigation previously been performed? NO



























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The pathway is now complete and referral to RCI would be made for this patient as there is clinical impact





Processing referrals using RCI Assist

- Log into RCI Assist via Sp-ICE or OBOS
- Click to read the disclaimer
- Tick to accept you have read the disclaimer
- Answer the questions using the patient results and history
- Select the Yes or No options to move to the next prompt
- Following the pathways, you will reach a final decision point and either enter result into your LIMS or refer to RCI
- If you are unsure, please call your local RCI centre to discuss