



NHS

Blood and Transplant

RCI Assist and Remote Interpretation

A referral support tool for Hospital Transfusion Laboratories

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Disclaimer



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Disclaimer: the information contained in this presentation and any opinion that may be expressed represent NHSBT's view

This presentation is intended for Health Care Professionals

NHSBT declare no conflict of interest for this presentation



Introduction



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The Transfusion 2024 strategic plan outlined the urgent need to strengthen support for Hospital Transfusion Laboratories (HTL) to ensure safe provision of care for patients in need of transfusion



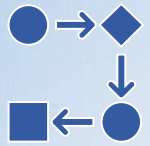
There was an action to undertake pilots of integrated transfusion services between NHSBT Red Cell Immunohaematology (RCI) and HTLs



A pilot of remote interpretation commenced across Path Links Pathology Network, supported by RCI Barnsley, and East and South East London Pathology Partnership, supported by RCI Tooting



The pilot was underpinned by the referral support tool, RCI Assist. This acts as a guide for HTL staff and aims to improve confidence by providing reassurance about investigations and blood provision



Referral support tool



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RCI referral support tool contains nineteen decision points and alongside supporting information, assists the user to resolve samples in-house or know when to refer to RCI



Acts as a guide for less experienced staff



Ensure appropriate cases are referred to RCI – improved patient care



The pilot included four points at which a 'dry' referral could be made to RCI, where analyser results were emailed for remote interpretation without the need to send the traditional 'wet' sample

How does it work?

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

Start

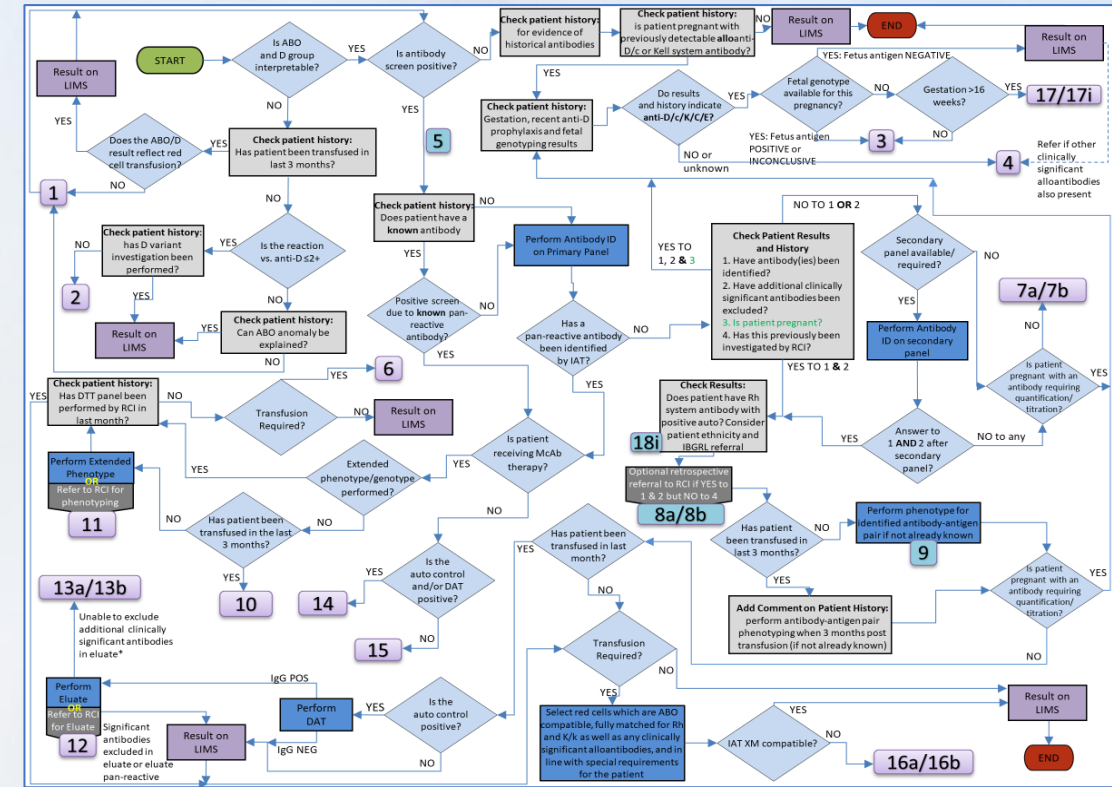
To move through the pathways, go to the start box, then answer the questions

YES NO

Answer yes or no, then move along the pathway

7a/7b

When you reach a decision point, check the supporting information table and either refer to RCI or result in-house



Point	Supporting Information
7a/7b	<ul style="list-style-type: none"> POTENTIAL 'DRY' REFERRAL POINT: 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. NHSBT may be able to successfully conclude these investigations as a 'dry' referral (7a) but in other instances a 'wet' referral may be required to enable further testing to conclude the investigation (7b). 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.



Single specificity antibody
Two simple antibodies
Non-specific reactions



Optional retrospective referral for reference cases which have not previously been seen by RCI

Antenatal referrals are excluded from dry pathway



Reactivity in an eluate

A new sample may be required for repeat eluates



Incompatible crossmatch for unknown reasons

'Dry' Referral Points

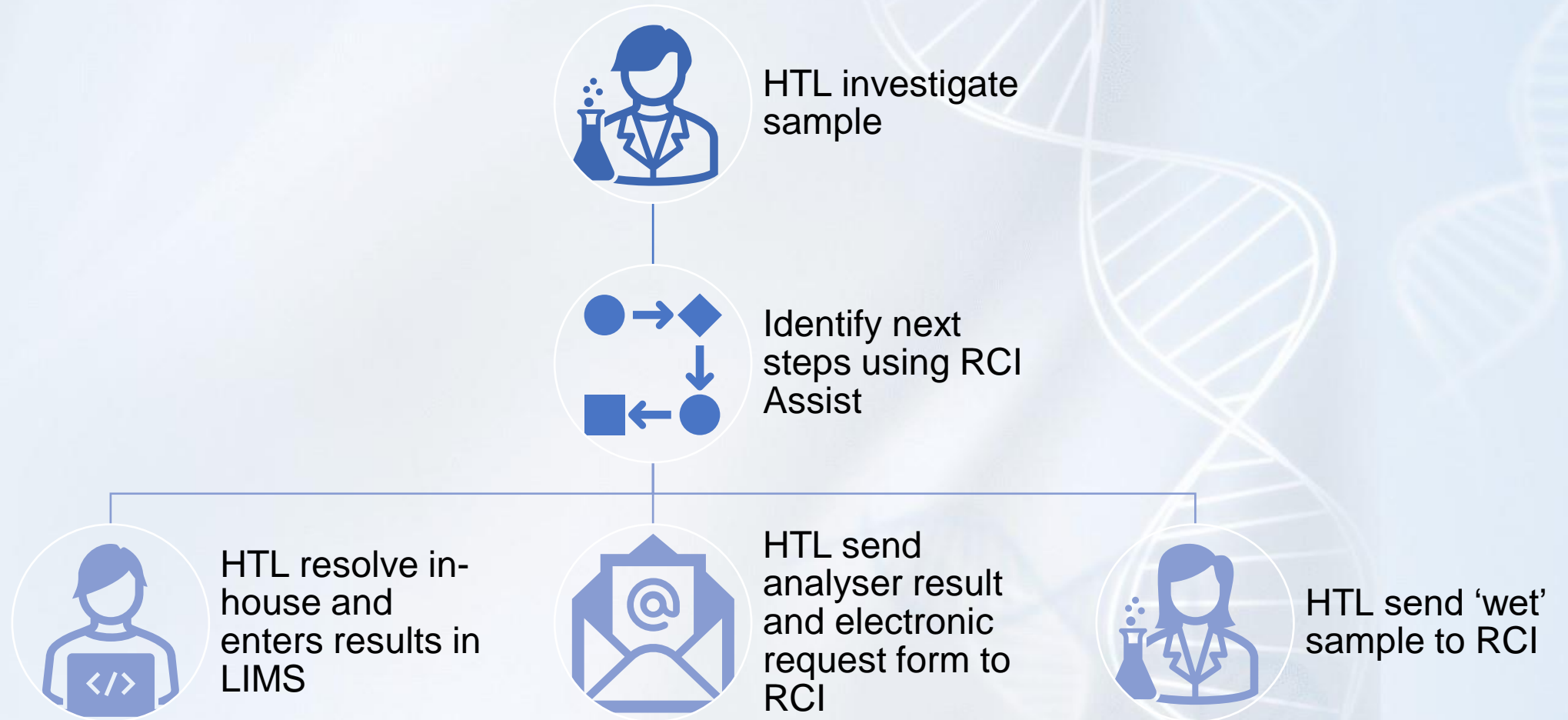


Methods for pilot



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HTL Side



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HTL to use RCI Assist to determine referral point

Complete Remote Interpretation Service Referral Form

Download required panel information

Email RCI nhs.net from nhs.net email

Call RCI

Receive call to say Remote Interpretation report is ready



'Dry' referral

HTL send analyser result and electronic request form to RCI

Analyser results must contain:

- Patient Identifiable Data
- Sample number
- ABO/D results
- Enzyme (NaCl) panel
- IAT panel
- 3 cell screen
- auto-control
- Extended RhK if performed
- Any additional panels
- Batch numbers expiry dates
- Antigam



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FRM7270/1.1 – RCI Remote Interpretation Service (RIS) Referral Form **NHS**
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Effective date: 07/03/2023

Please complete ALL sections fully. It is the responsibility of the referrer to ensure that all information provided is accurate as this may influence the advice provided by RCI.

Once completed, please email this form along with a .pdf copy of the analyser results to your local RCI centre (select centre below for contact details). RCI must be telephoned to inform them of the request for remote referral.

Select RCI Centre

Hospital Referral Information:			
Hospital Name:	Click here to enter text.	Hospital NHS Code:	Click here to enter text.
Consultant:	Click here to enter text.	DATE:	Click or tap to enter a date.
Contact Name:	Click here to enter text.	Contact Number (Phone):	Click here to enter text.
Referral Type:	Choose an item.	Algorithm Referral Point:	Choose an item.

Patient Details:			
Surname:	Click here to enter text.	First Name:	Click here to enter text.
DOB:	Click here to enter text.	Gender:	Click here to enter text.
NHS Number:	Click here to enter text.	Hospital Number:	Click here to enter text.
Type of patient:	Choose an item.	Diagnosis:	Click here to enter text.
EDD (if Pregnant):	Click or tap to enter a date.	Hospital Sample ID No:	Click here to enter text.

Clinical Details			
ABO Blood Group:	Choose an item.	D Type:	Choose an item.
Antibodies:	Click here to enter text.	Previous DAT	Click here to enter text.
Previous Transfusions?	Select	Received Anti-D Ig:	Click here to enter text.
Recent Hb and Date:	Click here to enter text.	Date of last Transfusion:	Click or tap to enter a date.
Historical Phenotyping	Click here to enter text.		

Other relevant clinical information. Please provide further details including antibodies specificity / techniques / bleed size if FMH / monoclonal antibody therapy / transplant history:
Click here to enter text.

Current Sample Findings:			
ABO Blood Group:	Choose an item.	D Type:	Choose an item.
Antibody screen:	Click here to enter text.	Antibodies Identified:	Click here to enter text.
DAT:	Click here to enter text.		

Crossmatch Request at Hospital (units will not be provided by RCI following a remote referral):

Number units requested:	Click here to enter text.	Special Requirements:	Choose an item.
DATE Required:	Date Required	Time Required:	Click here to enter text.

NHSBT Report - RCI Use Only:

Report comments
Caveat part one
Caveat part two

Controlled if copy number stated on document and issued by QA
(Template Version 03/02/2020)

Cross-Referenced in Primary Document: SOP5700 Page 1 of 1



Sample Results Grifols Laboratory

2023012516 Patient ID: 2023012516

Name: nodia Gender: Female
Surname: rodenas Date of birth: 30/12/1996

Profile: 11 Ab ID (AHG) Double Check: not done
Profile Run: 25/01/2023 17:51:32 QC Status: No QC
Executed by: The User Instrument: EFexis 1 Validated by: System Admin

Results:

713007230000102601								713007230000102602		
1	2	3	4	5	6	7	8	9	10	11
4+	4+	-	4+	-	4+	4+	-	-	4+	4+

Authorise:

2023012516 Patient ID: 2023012516

Name: nodia Gender: Female
Surname: rodenas Date of birth: 30/12/1996

Profile: Xmatch (AHG) Double Check: not done
Profile Run: 25/01/2023 17:51:32 QC Status: No QC
Executed by: The User Instrument: EFexis 1 Validated by: System Admin

Results: XM Coombs : Comp

713007230000102602
X

Authorise:

02/02/2023 16:17:20 Printed by: Demo User Page 2 out of 2



Antigram example



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2/2/23, 4:17 PM

Grifols - Blood Typing Manager

Ant Body Identificas Un Report

Grifols Laboratory

2023012516



Patient ID 2023012516

Name: Lucia

Gender: Female

Surname: Mercedes

Date of birth: 00/01/1988

Prod No: 3P S Green (Neutral), 1P 40 D (RHG)

User: De no User

Status: Pending Validation

Order Ref: 07/01/2023 15:50:05

Result: Panagglutination

Notes:

T	DONOR	Ii-ir					Kell			Duffy		Kidd		Lewb		P		RhS				Lect. 3g		Other Antigens		Results			
		i	C	E	c	e	Cw	K	k	Kpa	Fya	Fyb	Jka	Jkb	Lea	Leb	P1	M	N	S	s	Lwa	Xga	Goa	Js ^a		AHG		
Identisera Diana - Extend-Identisera Diana P - Extend P		LOT 22013 EXPIRY DATE 25/02/2023 v.1.0																											
1	2007524	+	+	0	0	+	0	+	+	0	+	+	+	0	0	+	+	+	0	+	+	0	+	0	0	nt	1	4+	
2	2007525	0	+	0	+	+	0	0	+	0	+	0	0	0	0	+	+	+	0	+	0	+	0	0	nt	2	4+		
3	2007526	+	0	0	+	+	0	0	+	0	+	0	+	0	+	0	0	+	0	+	0	+	0	+	0	+	nt	3	-
4	2005880	0	0	+	+	+	0	0	+	0	+	0	0	0	+	+	+	0	+	0	0	+	0	0	nt	4	4+		
5	2004752	+	0	+	+	0	0	0	+	0	+	0	+	0	+	+	0	+	0	+	0	0	0	0	nt	5	-		
6	2003782	+	+	0	0	+	+	0	0	+	+	+	0	+	+	+	+	0	0	+	0	+	0	0	nt	6	4+		
7	2006980	0	0	0	+	+	0	+	0	+	0	+	0	+	+	+	0	+	0	+	0	+	0	0	nt	7	4+		
8	2005738	0	0	0	+	+	0	0	+	0	+	+	0	+	0	0	+	0	+	0	+	0	+	0	nt	8	-		
9	2007527	0	0	0	+	+	0	0	+	0	+	0	+	0	+	+	0	+	0	+	0	+	0	+	0	nt	9	-	
10	2007528	0	0	0	+	+	0	0	+	0	+	0	+	0	+	+	+	+	0	+	0	0	0	0	nt	10	4+		
11	2004370	+	+	0	0	+	0	0	+	0	+	0	+	0	+	+	+	0	+	0	0	0	0	0	nt	11	4+		
12	2004116	0	0	0	+	+	0	+	0	+	0	+	0	+	+	+	0	+	0	+	0	+	0	0	nt	12			
13	2007529	+	0	+	+	0	0	0	+	0	+	+	0	+	0	+	+	0	0	+	0	+	0	0	nt	13			
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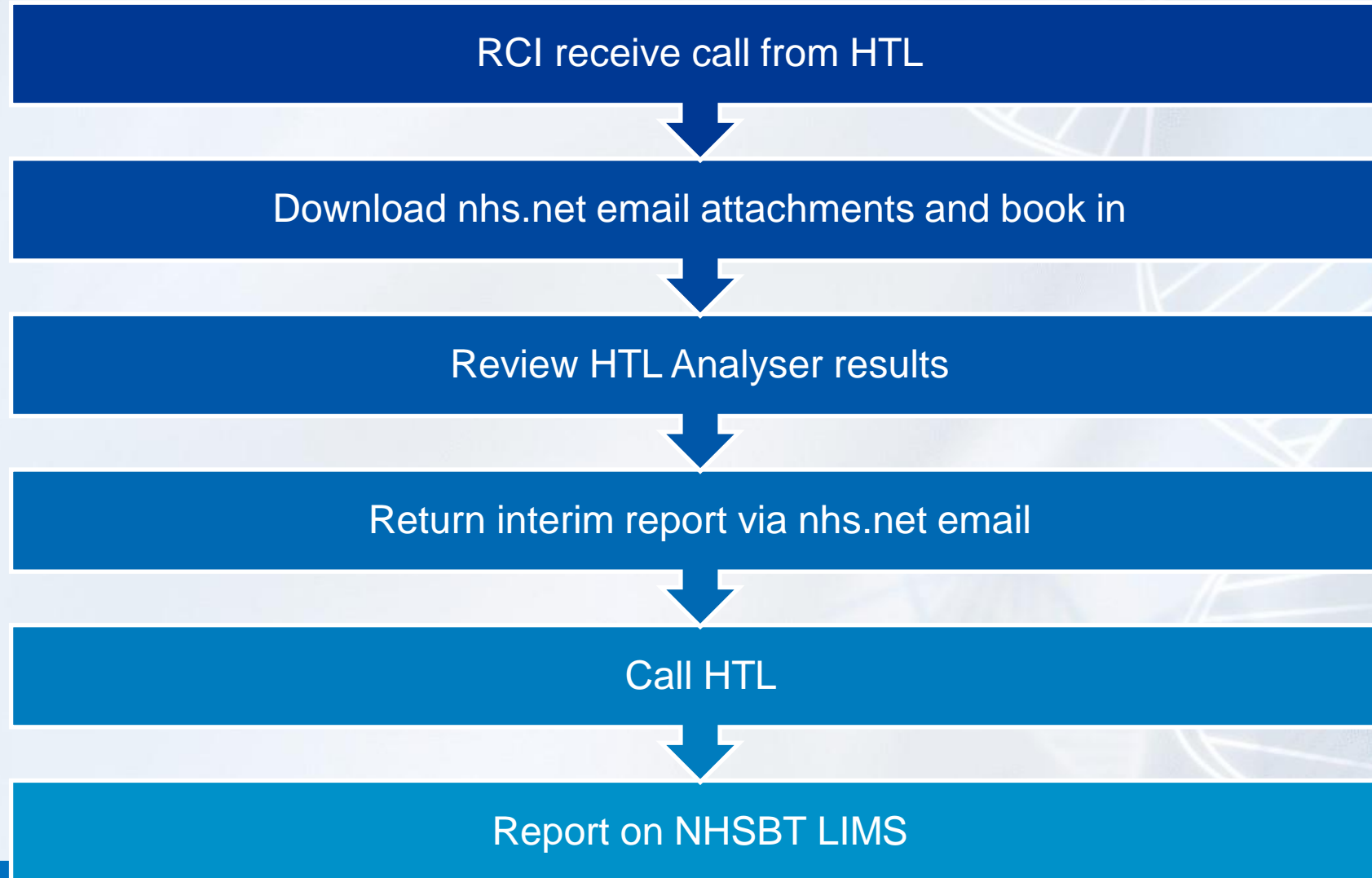


RCI Side



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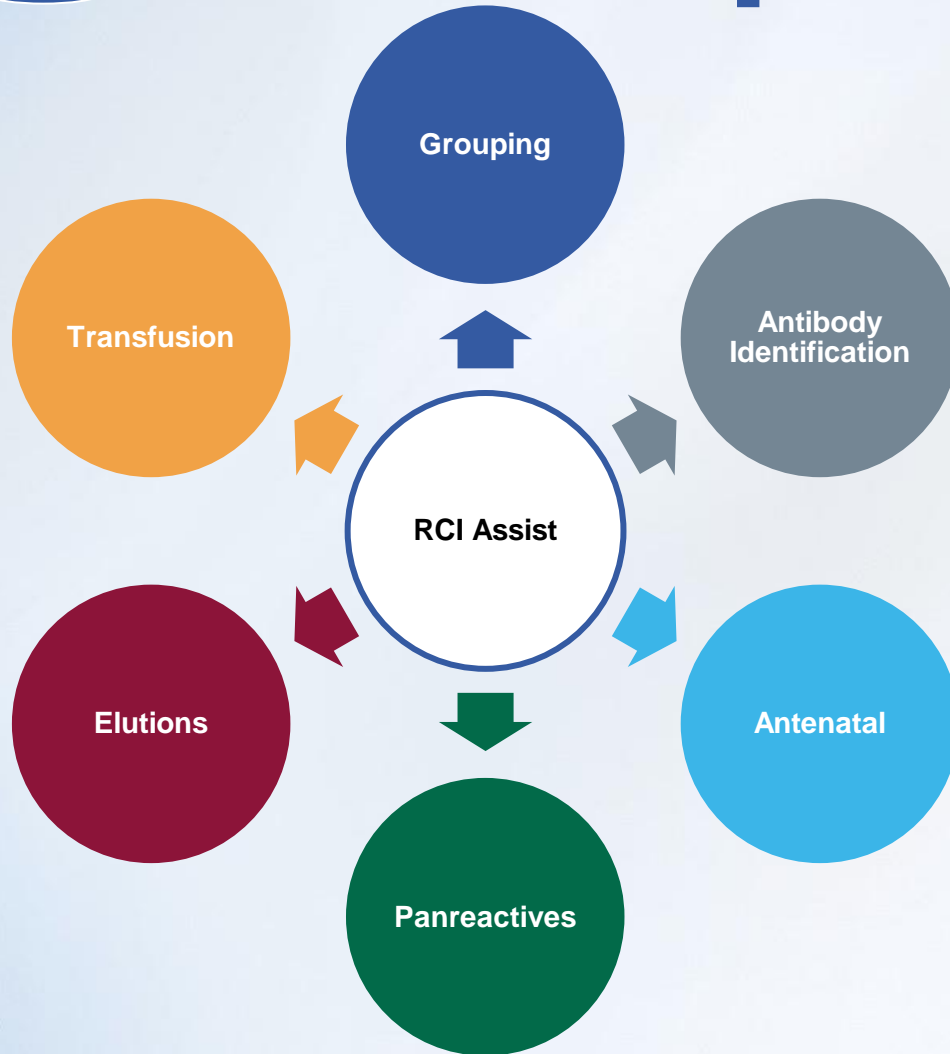


Data capture



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Quantitative data was captured to identify which RCI Assist decision point referrals were made, including the four 'dry' referral points.

Data was analysed and compared to data collected in a retrospective review that also included a control group of non-pilot hospitals.

Qualitative data was collected to assess if staff felt more confident and reassured about investigations.



What did we see



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Single specificity antibody
Two simple antibodies
Non-specific reactions



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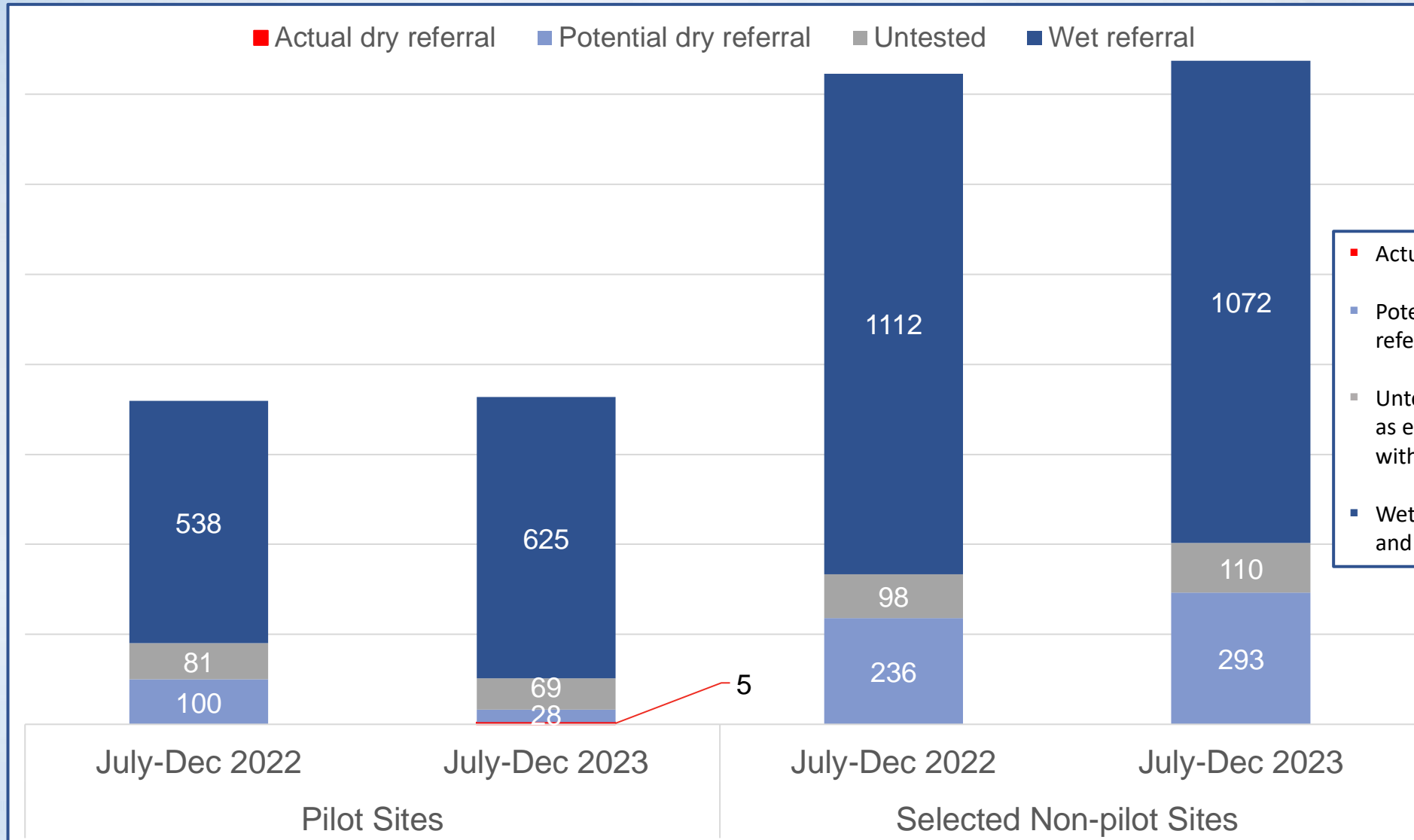
'Dry' Referral Points

Referral type breakdown



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- Actual dry referral – processed as dry referrals
- Potential dry referral – met criteria for dry referral but not processed as dry referral
- Untested – received by RCI but not processed as either second phlebotomy event or issue with sample quality
- Wet referral – outside of scope for dry referral and processed by RCI



Results



Of the referrals analysed during the pilot, 5% 'dry' referrals were received from the pilot sites, versus 14% expected



In the control group, 20% were observed, versus 16% expected



Qualitative data showed staff felt more confident when using RCI Assist



The aim of the pilot was to support hospitals resolve more referrals themselves by providing HTL staff reassurance in their investigations. This is reflected in the quantitative and qualitative data



This negated the need for remote interpretation

Results



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“RCI Assist provides a comfort blanket for those multi-disciplinary staff working in Blood Transfusion and gives them confidence when processing samples”

*Kimberley Garnett, Blood Transfusion Manager,
Path Links Pathology*



“RCI assist is a potential game changer for the way in which valuable resources and expertise is shared, particularly relating to improving and supporting training and confidence levels”

*Patricia Richards, Blood Transfusion Scientific Lead,
East and South East London Pathology Partnership*



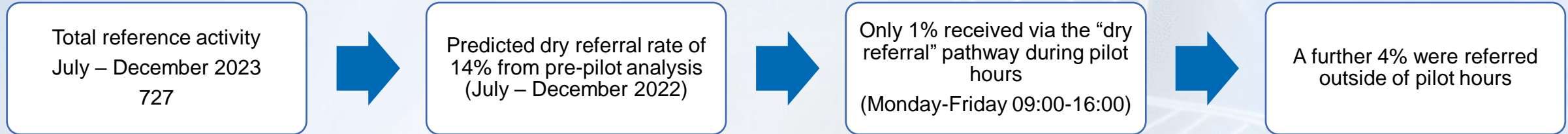
RCI Assist



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without remote interpretation



There was a reduction in the number of referrals of less complex cases in the pilot sites (14% to 5%)

There has been an increase in the number of referrals of less complex cases in the selected non-pilot (16% to 20%)

This seems to indicate that the referral support tool is effective in standardising work and reducing simpler referrals to RCI

The training burden for Remote Interpretation across expected user base was considered too great to justify inclusion in RCI service provision

The reduction in referrals has come from use of the referral support tool itself



What next?



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Digital development of RCI Assist is underway and expected to be rolled out to HTLs served by NHSBT in the coming year. Using RCI Assist has the potential to:



How does it work?

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

YES NO

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

Elutions

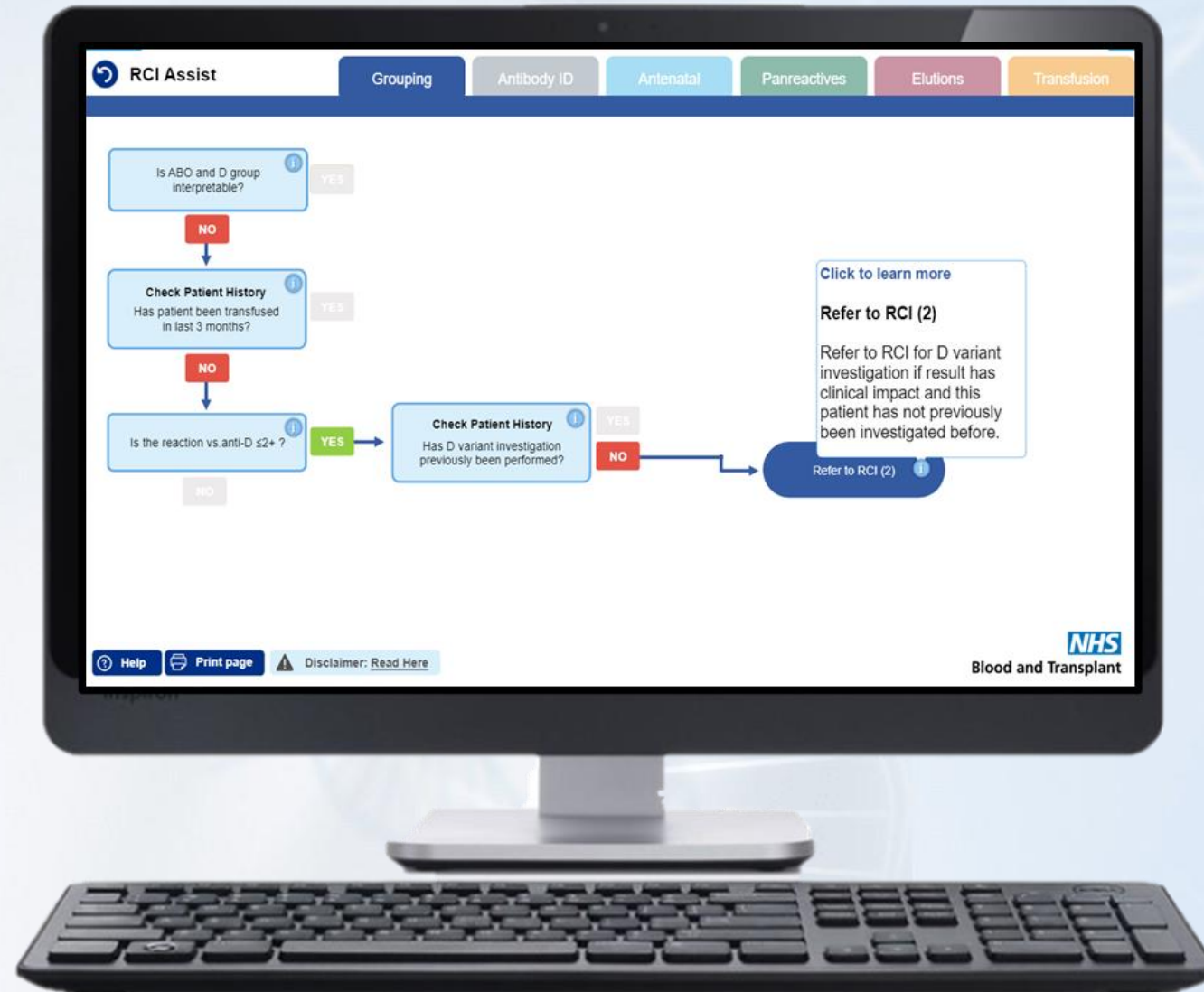
To jump straight to a section, select the required tab



To get supporting information about a topic, click the information icon

Input result on LIMS

Reach a decision point and either refer to RCI or result in-house



Is ABO and D group interpretable?



YES

NO



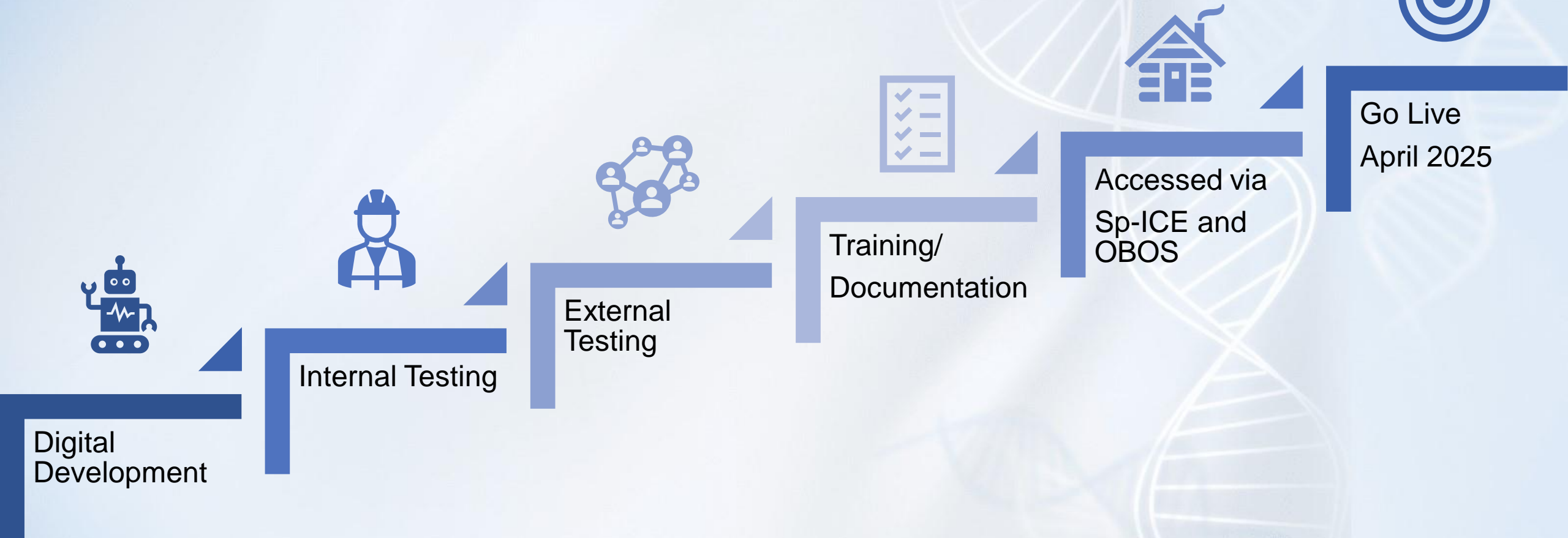


Roll out plan



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Digital Development

Internal Testing

External Testing

Training/
Documentation

Accessed via
Sp-ICE and
OBOS

Go Live
April 2025



Acknowledgements



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**Staff at RCI Tooting and East and South-East London Pathology Partnership
Transfusion 2024 and NHSBT Digital Learning Team**



Thank you



Any questions?