

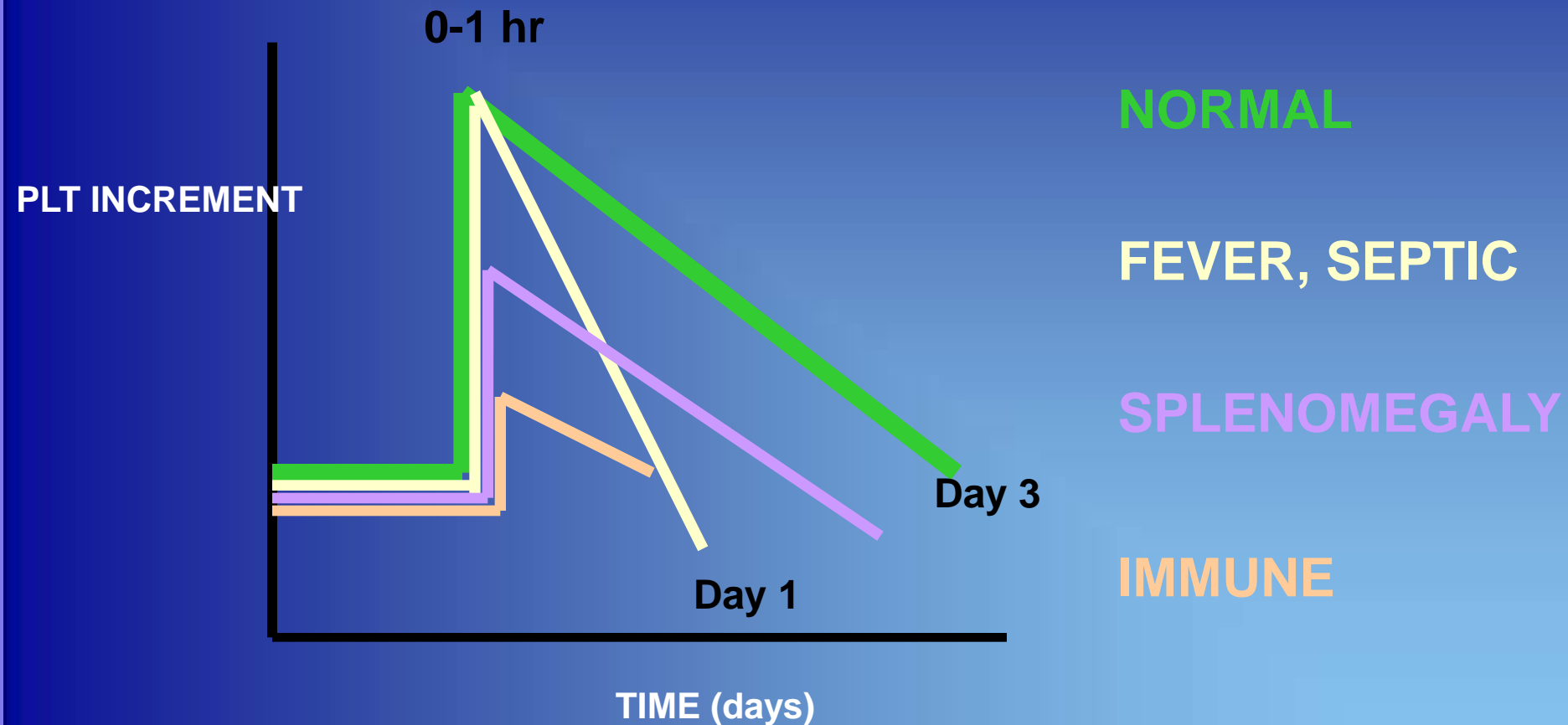
Patients needing HLA matched platelet support... an exploration of the challenges

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Canadian Blood Services

Learning Objectives

- Review the process for obtaining platelets for patients
- Explain the rate-limiting-steps in the process
- Using case histories, illustrate challenges to obtaining the “best” product

Why do I think the patient needs HLA-matched platelets?



Timeline:

Refractory patient

Send samples for testing/request matched plts

Testing complete

Request list of potential donors

Recruit donors

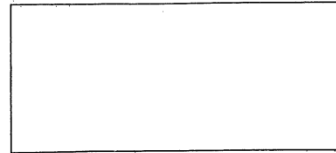
Collect from donor

Regular CBS testing for units

Release unit and transport to referring hospital

Requisition for testing

CANADIAN BLOOD SERVICES-PATIENT SERVICES
 HLA/PLATELET IMMUNOBIOLOGY LABORATORY
 67 COLLEGE STREET
 TORONTO, ONTARIO M5G 2M1
 Phone: 416-313-4567
 Fax: 416-313-4675



REQUEST FOR SPECIAL CELL TYPING AND ALLOANTIBODY SCREENING FOR PATIENTS REFRACTORY TO PLATELET TRANSFUSION

PATIENT	Name: _____	
	ID No/Date of Birth: _____	ABO/Rh: F <input type="checkbox"/> M <input type="checkbox"/>
	Diagnosis: _____	Previously transfused? Yes <input type="checkbox"/> No <input type="checkbox"/>
	REASON FOR REQUESTING TEST:	
	Refractory to platelet transfusion? <input type="checkbox"/>	Screening pre-transplant? <input type="checkbox"/>
	Suspected Post Transfusion Purpura (PTP)? <input type="checkbox"/>	
	Date specimen collected: _____	
HOSPITAL	REFERRING PHYSICIAN	
	Name: _____	
	Telephone: _____	
	Fax: _____	
Mail Report to:		


Please Indicate (√) the test(s) required:		
1) CELL TYPING		2) ALLOANTIBODY SCREENING
Lymphocytes (HLA Class I) _____		HLA (refractory patients) _____
Platelets (HPA) (suspected PTP). _____		HLA (Pre-BMT) _____
		Platelet (suspected PTP) _____
SPECIMEN REQUIREMENTS:		SPECIMEN REQUIREMENTS:
5 - 20mL of anticoagulated blood (EDTA, ACD)		2 - 5 mL of serum
		Please note:
		For investigation of Neonatal Alloimmune Thrombocytopenia, use the "Request for Investigation of NAIT" form.
Please Note: All HLA related testing is referred out		

Form# TFHL: 013
 Effective Date: 2008-07-01
 Approved By: K. J. Ellis
 Date: 2008-06-09

What do I do now?

- ✓ Confirm HLA typing done
- ✓ Forward results to CBS (lab or Apheresis)
(416-313-4675 or 416-974-9851)
- ✓ Forward request for HLA/HPA matched platelets
(416-974-9424 or 416-974-9851)

Request for HLA/HPA matched platelets

 Canadian Blood Services it's in you to give	REQUEST FOR HLA/HPA MATCHED PLATELETS
DATE: _____	
CONTACT NAME: _____	
TELEPHONE #: _____	FAX #: _____
PATIENT'S NAME: _____ DOB: _____	
HOSPITAL: _____	HOSP #: _____
HEALTH #: _____	
DIAGNOSIS: _____	TRANSPLANTATION: ALLO <input type="checkbox"/> AUTO <input type="checkbox"/>
DATE: _____	PHYSICIAN: _____
NUMBER OF UNITS: _____ CMV REQUIREMENTS: _____	
START DATE: _____	
PRIORITISE HLA/HPA MATCH: Yes <input type="checkbox"/> OR <input type="checkbox"/>	PRIORITISE TRALI RISK REDUCTION: YES <input type="checkbox"/>
ABO: _____ Rh: _____	CMV STATUS: _____
HLA TYPE: _____	HPA TYPE: _____
HLA ANTIBODIES: NO <input type="checkbox"/> YES <input type="checkbox"/>	PRA: _____
TEST DATE: _____	METHOD: LCT <input type="checkbox"/> AHG <input type="checkbox"/> ELISA <input type="checkbox"/> FLOW <input type="checkbox"/>
ANTIBODY SPECIFICITY: _____ _____ _____	
COMMENTS: _____ _____ _____	
Operating Procedure Reference: 03 790	1000101860 2009.02.25

- HLA Typing
- PRA
- Antibody results
- Acceptable antigens

Histocompatibility Laboratory Report

HLA Typing Results

	A*	B*	Bw	C*	DRB1*	DRB3/4/5*	DQB1*	Tested Date
[REDACTED]	01	08						Sep/28/2011
	01	37						Sep/23/2011

All typing done by PCR-SSO and supplemented by PCR-SSP as required.
 HLA typed elsewhere when indicated by: †

Antibody Screen Results

Sample Date	Sample #	Test	Result PRA%	Specificity	CPRA	Comments	Tested Date
Sep/23/11	11-202350	Single Antigen I	Positive	A:11 2 23 24 25 26 29 3 30 31 32 33 34 43 66 68 69 74 B:13 18 27 35 38 39 41 42 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 67 7 71 72 73 75 76 77 78 81 82 Cw:10 9	99		Sep/29/11

Ab Scr Lum III, QS Lum III, Ab ID III = Luminex Antibody Screening III. C1 = Class I, C2 = Class II.

Comments

ANTIBODY PROFILE
 See above listed results and specificities for the current and historical sera.

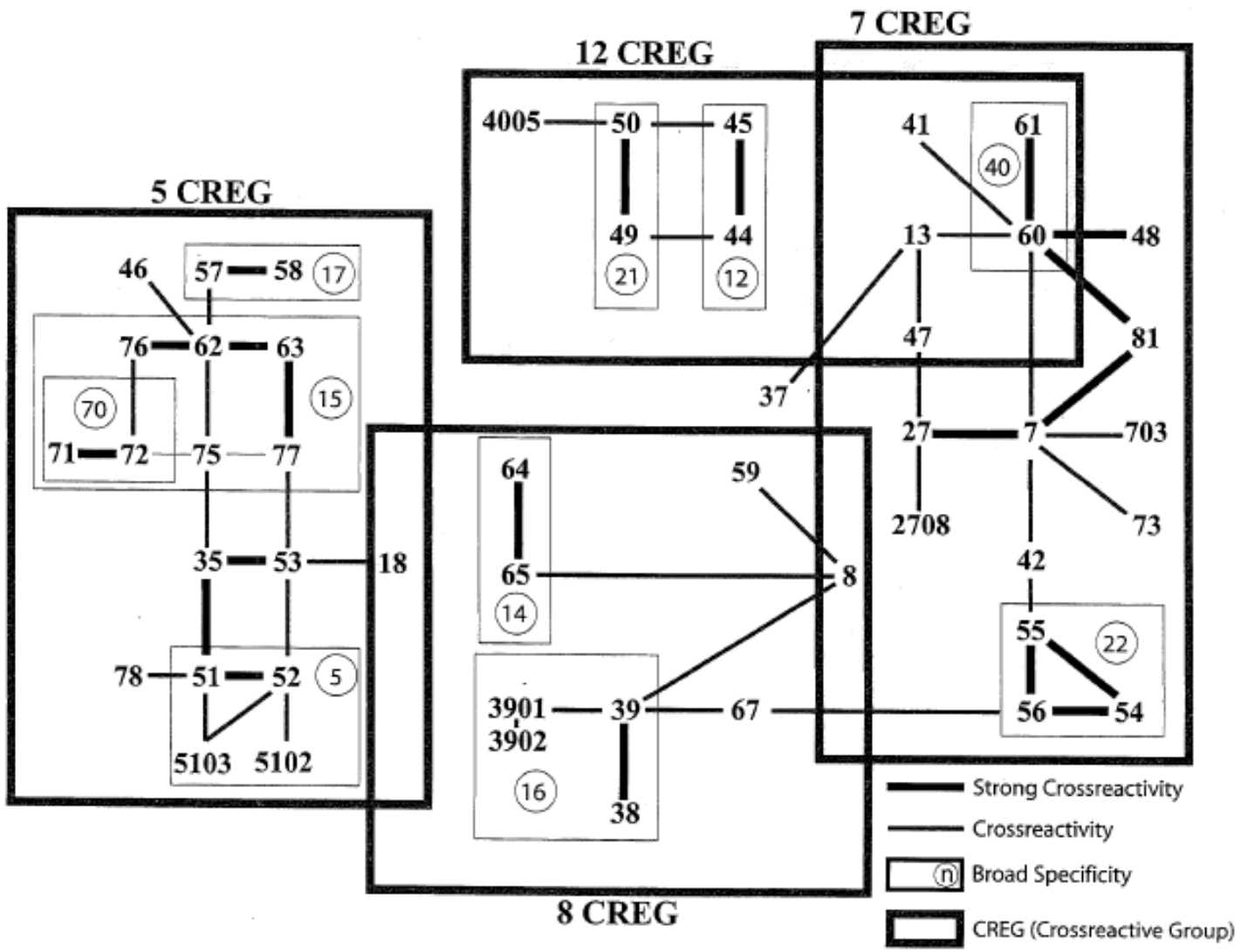
ACCEPTABLE ANTIGENS:

HLA-A 1 36 80

HLA-B 8 37

CBS ID#: 232-11

Class I CREG's



What do the letters on the little blue cards mean?

- The MAN nomenclature is used to indicate the quality of the match between donor and patient based on the patient typing and antibody results.
- M: match
- A: acceptable
- N: mismatch
- MMMM, MMMA, MMAA, MAAA
- AAAA, AAAN, AANN, ANNN
- NNNN

The unexpected happens...

- Discrepant results
- No results
- The platelet count did what???

Patient 1

<u>A*</u>	<u>B*</u>	<u>Bw</u>	<u>C*</u>
01	37		06
--	--		--

<u>Sample Date</u>	<u>Sample #</u>	<u>Test</u>	<u>Result/PRA%</u>	<u>Specificity</u>	<u>CPRA</u>	<u>Con</u>
Mar/21/11	11-194716	Single Antigen I	Positive	A:11 36 80 B:13 27 38 44 47 49 51 52 53 56 57 58 59 63 64 75 77 Cw:1 10 12 14 15 16 17 18 2 4 5 7 8 9	61	
Feb/28/11	11-193972	Single Antigen I	Positive	B:39 41 45 50 54 55 60 61 67 26 76 Cw:17		

Patient 1 con't

<u>Sample Date</u>	<u>Sample #</u>	<u>Test</u>	<u>Result/ PRA%</u>	<u>Specificity</u>
Apr/07/11	11-195454	Single Antigen I	Positive	A:36 80 B:13 27 38 44 47 49 51 52 53 56 58 59 63 64 75 77 Cw:1 10 12 14 15 16 18 2 4 5 6 9
Mar/21/11	11-194716	Single Antigen I	Positive	A:11 36 80 B:13 27 38 44 47 49 51 52 53 56 57 58 59 63 64 75 77 Cw:1 10 12 14 15 16 17 18 2 4 5 7 8 9

Patient #2

<u>A*</u>	<u>B*</u>
01	18
1101	46

Antibody Screen Results

<u>Sample</u> <u>Date</u>	<u>Sample #</u>	<u>Test</u>	<u>Result/</u> <u>PRA%</u>	<u>Specificity</u>
May/18/10	10-183077	Single Antigen I	Positive	A:11 B:37 57 58 76 Cw:15 17 2
Jan/19/09	09-163935	PRA Class I	0	
Jan/19/09	09-163935	Single Antigen I		B37

PLEASE NOTE: The patient has developed quite a pronounced anti-HLA-A*1102 (the patient has been typed as A*1101) for safety sake it might be best to avoid platelets typed as HLA-A*11 as HLA-A*1102 would not be rare in the Canadian donating population.

The platelets did what???

Patient #2

<u>A*</u>	<u>B*</u>
01	18
1101	46

Antibody Screen Results

<u>Sample</u> <u>Date</u>	<u>Sample #</u>	<u>Test</u>	<u>Result/</u> <u>PRA%</u>	<u>Specificity</u>
May/18/10	10-183077	Single Antigen I	Positive	A:11 B:37 57 58 76 Cw:15 17 2
Jan/19/09	09-163935	PRA Class I	0	
Jan/19/09	09-163935	Single Antigen I		B37

PLEASE NOTE: The patient has developed quite a pronounced anti-HLA-A*1102 (the patient has been typed as A*1101) for safety sake it might be best to avoid platelets typed as HLA-A*11 as HLA-A*1102 would not be rare in the Canadian donating population.

What was that again?

Platelet antigens: HLA, HPA, Rh...

- Positive for anti-HLA antibodies
- is there a platelet specific antibody?
- Allo- not autoantibody

Patient 2 (con't)

Platelet Typing



Not Tested

**Platelet Antibody
Screening**



Positive (anti-HPA-1b)

- Where do I find the requisitions?



The screenshot shows a website interface for Diagnostic Services. On the left is a vertical navigation menu with a red header 'Book An Appointment' and several green buttons with white text and downward-pointing chevrons. The central area features a large image of a person in a white lab coat and blue gloves using a microscope, with the text 'Diagnostic Services' overlaid in red and green. To the right of the image is a small printer icon. Below the image are four colored buttons: 'About' (green), 'Locations' (dark grey), 'Resources' (red), and 'Reports' (orange), each with a white upward-pointing chevron icon and a brief description of the page content.

Book An Appointment

- ▼ Why Should I Donate?
- ▼ Can I donate?
- ▼ What Can I Donate?
- ▼ How Can I Get Involved?
- ▼ What Should I Know?
- ▼ Forms
- ▼ Hospitals & Physicians

Diagnostic Services

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Transfusion Medicine Web Resources

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Edmonton



Saskatchewan



Winnipeg



Toronto



Toronto Centre

Diagnostic Services
Canadian Blood Services
67 College St
Toronto, ON, M5G 2M1



 Printer-friendly

Toronto

- ▶ Toronto Centre
- Sample Requisition Acceptance Criteria
- Reference Services
- Test Request Forms
- Request Test Results
- Critical Values
- Information Memos

Diagnostic Services Toronto offers patient focused services to hospitals and private laboratories within the Central Ontario and Hamilton regions. The laboratory is located in the Canadian Blood Services facility on College St in Toronto.

Upon request of an authorized health care provider, the laboratory

Test Request Forms

Diagnostic Services
Toronto Centre

 Printer-friendly

Toronto

- Toronto Centre
- Sample Requisition Acceptance Criteria
- Reference Services
- ▶ Test Request Forms
- Request Test Results
- Critical Values
- Information Memos

The test request forms / requisitions are available for viewing / printing.

[Request for Serological Investigation](#) 

[Requisition for Antibody Investigation \(NIRL\)](#) 

[Request for Investigation of NAIT](#) 

[Request for Special Cell Typing and Alloantibody Screening for Patients](#)

[Refractory to Platelet Transfusion](#) 

[TRALI Patient Data](#) 