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FAX NOTIFICATION
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TO: Hospital Blood Bank, Charge Technologist
******Please forward copies to********
Chief Executive Director
Medical Director

FROM: Ahmed Coovadia, Hospital Liasion Specialist

DATE: 2008-06-10

SUBJECT: **New Labelling Nomenclature For HLA-Matched Platelets**

Effective August 05, 2008, CBS Central Ontario will introduce a new labelling nomenclature for HLA-matched platelets.

HLA-matched platelets:
To simplify the labelling of products for patients refractory to platelet transfusions due to HLA-antibodies, a new 4 letter labelling code is being introduced.

HLA typing for platelets is made up of two HLA-A and two HLA-B antigens. To classify the level of match between donor and patient typing, a letter is assigned to each antigen of the donor's typing to come up with a 4 letter code.

"M" denotes "matched". Donor's antigen is the same as the patient's antigen.
"A" denotes "acceptable". Donor's antigen is closely related to the patient's antigen.
"N" denotes "mismatch". Donor's antigen is not related to the patient's antigen but represents an "acceptable mismatch".

A product labelled as "MMMM" means that the donor's HLA match is completely matched to the patient's HLA typing. A product labelled "NNNN" would indicate that the donor antigens are not matched to the patient's antigens but rather it is an acceptable mismatch (i.e: antigen-negative) unit and therefore should result in a platelet increment.

What is an "acceptable mismatch"?

An "acceptable mismatch" is an antigen that is not the target of the patient's HLA-antibody. To understand this in greater detail, please read on.

Process of HLA typing and HLA antibody testing:

When a patient becomes refractory to platelet transfusions, patient samples are collected for HLA typing and HLA antibody testing.

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HLA antibody identification is done by two methods. The first test determines if allo-antibodies are present. Patient's serum is tested against special beads coated with multiple HLA antigens. This test result is reported as PRA (% reactive antigens). In some cases, not only can the extent of antibody reactivity be determined, but the target antigens can be identified. In most cases, a second test is required to determine antibody specificity.

This second test, known as Single Antigen Testing, tests the patient's serum against a panel of beads coated with a single HLA antigen. Thus, the antibody specificity can be identified. This test also identifies antigens that are NOT targeted by the patient's antibody. As the patient's antibody is not directed to these antigens, these can be labelled as "acceptable mismatch" antigens.

When CBS receives a request for HLA-matched platelets, the patient's HLA type and antibody specificity are entered into a computer program. A list is generated of CBS platelet donors who are the best matches for the patient because the donors' HLA type:
a) is the closest match to the patient; or
b) does not have any antigens to which the patient makes antibodies.

For most patients with a high PRA (50-100%) and/or a rare HLA typing, the platelet product provided will fall in the second category.

If you have any questions, please contact Ahmed Coovadia, Hospital Liaison Specialist (416-313-4452) or Zofia Salomon de Friedberg, HLA/Platelet Immunobiology Lab (416-313-4567).

Sincerely,

Ahmed Coovadia,
Hospital Liasion Specialist
Central Ontario Region

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