NHS
Blood and Transplant

Special Requirements

Lab Matters. 5th December 2016

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NHSBT

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Special requirements

- Frozen components and platelets
- HEV negative
- Irradiated
- CMV negative

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Frozen components and platelets

- “Club ’96”

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Frozen components and platelets

- “Club ’96”
- 1st January 1996 – UK food chain deemed ‘safe’ from vCJD.

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NHSBT – risk reduction

- Excluded “at risk” donors – including those to have had a transfusion or solid organ transplant since 1980
- Leucodepletion
- Importing plasma from US MB treated plasma
- 2012 decision made to continue to provide MBFFP for all recipients born on or after 1996

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Solvent Detergent treated plasma

- Alternative to MBFFP
- Not produced by NHSBT
- Inactivates lipid envelopes
- Pros and Cons for both
  - Availability
  - Price
  - Supply

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Platelets

2007 DoH requests...

- at least 80% platelets come from single donors to minimise the risk of vCJD

2008 (Jan) SABTO inaugural meeting

2008 (July) SABTO recommendations

- 'the UK blood service should move as far as possible towards 100% apheresis platelets, but that as a minimum, 80% of platelets should be collected by apheresis

"to minimise risk of transmission of vCJD"

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Platelets

- 2013 (Sept) SABTO
  - reconsidered recommendation following better understanding of risk of whole blood vCJD infectivity and the prevalence of vCJD
  - 80% minimum provision of apheresis platelets no longer necessary
  - Both pooled and apheresis platelets should be resuspended in Platelet Additive Solution (PAS)
  - Each UK blood service should set their own level of apheresis to collect.
- DoH has accepted this recommendation

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Platelets

- NHSBT
  - 2015 – plan to move from 80% to 60% apheresis platelets by April 2016 with further review at that point.
  - April 2016 – producing 61% apheresis (and 39% pools) but are shortly moving to 57%
  - NHSBT are considering the potential to move to 53% by May 2017 and then 50% by November 2017
  - This is subject to rigorous review of apheresis demand in order to ensure that all demand for apheresis units continues to be met at these lower levels.

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Indications for Apheresis

- Neonates
- Paediatrics (where available) N*ever been recommended but recognised as best practice.*
- Patients requiring HLA and HPA selected components due to presence of HLA / HPA antibodies or in cases of NAIT
- Patients requiring IgA deficient components due to being IgA deficient and having had a previous reaction.

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“Club ’96”

- “Special” group of patients
- Potential “clean” donor pool
- Previously contained
- Now need to be far more alert

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Hepatitis E negative components

- SaBTO have recently recommended that certain groups of patients who are immunocompromised / immunosuppressed receive HepE negative components.
- This recommendation is being applied to both cellular components (red cells, platelets and granulocytes) and plasma components (FFP and cryo)

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Hepatitis E negative components

Patients who require HEV negative components

- **Patients awaiting solid organ transplant (SOT)** – from 3 months prior to date of planned elective SOT or from the date of listing for a solid organ transplant.
- **Patients who have had SOT** – for as long as the patient is taking immunosuppressants.
- **Patients with acute leukaemia** – from diagnosis (unless/until decision made not to proceed with stem cell transplant).
- **Patients awaiting allogeneic stem cell transplant** – from 3 months prior to the date of planned transplant and up to 6 months following transplant, or for as long as the patient is immunosuppressed.
- **Extra corporeal procedures** – e.g. dialysis, extra-corporeal circulatory support is included if within above indications.

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Irradiated blood

- Has been treated with either gamma or X-rays. This prevents the donor white cells replicating and mounting an immune response against a vulnerable patient causing transfusion-associated graft-versus-host disease (TA-GvHD).

- For those patients at risk, all red cell, platelet and granulocyte concentrates should be irradiated.

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CMV negative blood

Only indicated for:

- Intrauterine transfusions
- Neonates up to 28 days post ***expected date of delivery.***
- Pregnancy – only for elective transfusions – not during labour or delivery

Organ transplant patients do not require CMV negative blood

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Summary of ‘special requirements’

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	CMV neg	Irradiated	HEV neg
BMT/SCT	N	Y	Allografts only
7 Days before stem cell harvest	N	Y	N
Hodgkin's disease	N	Y	N
Acute Leukaemia	N	N	Y (unless not for transplant)
Purine analogues and related drugs	N	Y	N
Alemtuzumab	N	Y	N
Congenital T cell immunodeficiency	N	Y	N
HIV	N	N	N
HLA matched products	N	Y	N
Solid organ transplants			Y
Neonates <28 d	Y	(if previous IUT)	N
Intra uterine transfusion	Y	Y	(provided as routine)
Pregnancy (elective transfusion only)	Y	N	N