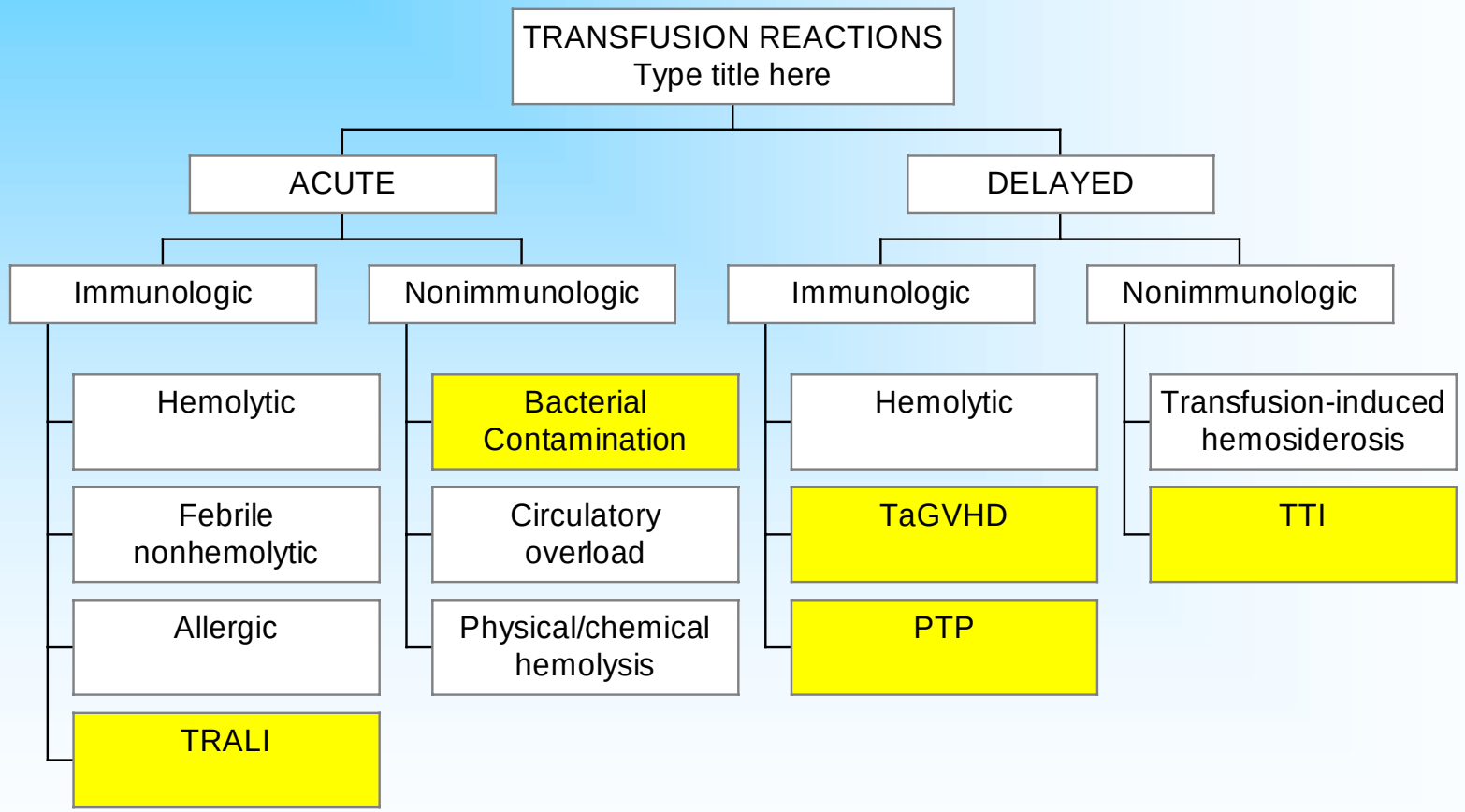
KEEPING BLOOD SERVICES IN THE LOOP

Dr Ridheesh Ahya

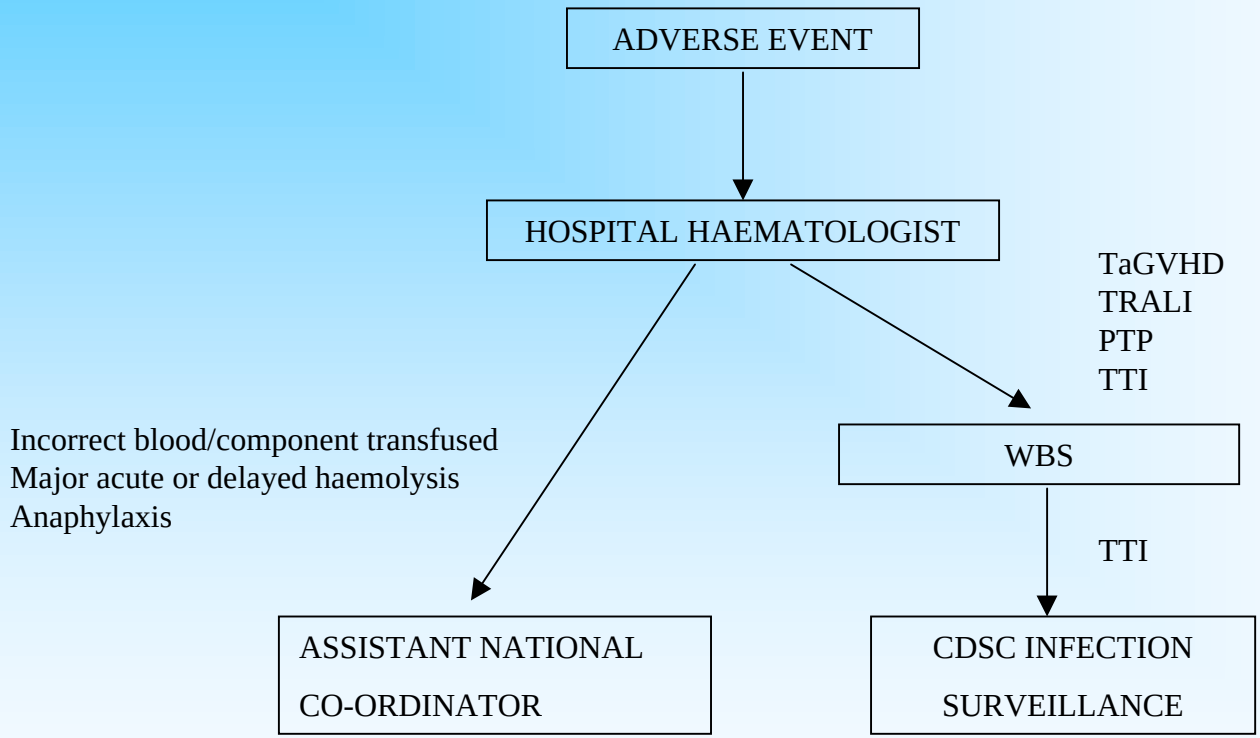
Consultant Haematologist

Welsh Blood service

Adverse effects of Transfusion



Reporting


ADVERSE EVENT
HOSPITAL HAEMATOLOGIST
TaGVHD
TRALI
PTP
TTI
Incorrect blood/component transfused
Major acute or delayed haemolysis
Anaphylaxis
WBS
TTI
ASSISTANT NATIONAL
CO-ORDINATOR
CDSC INFECTION
SURVEILLANCE

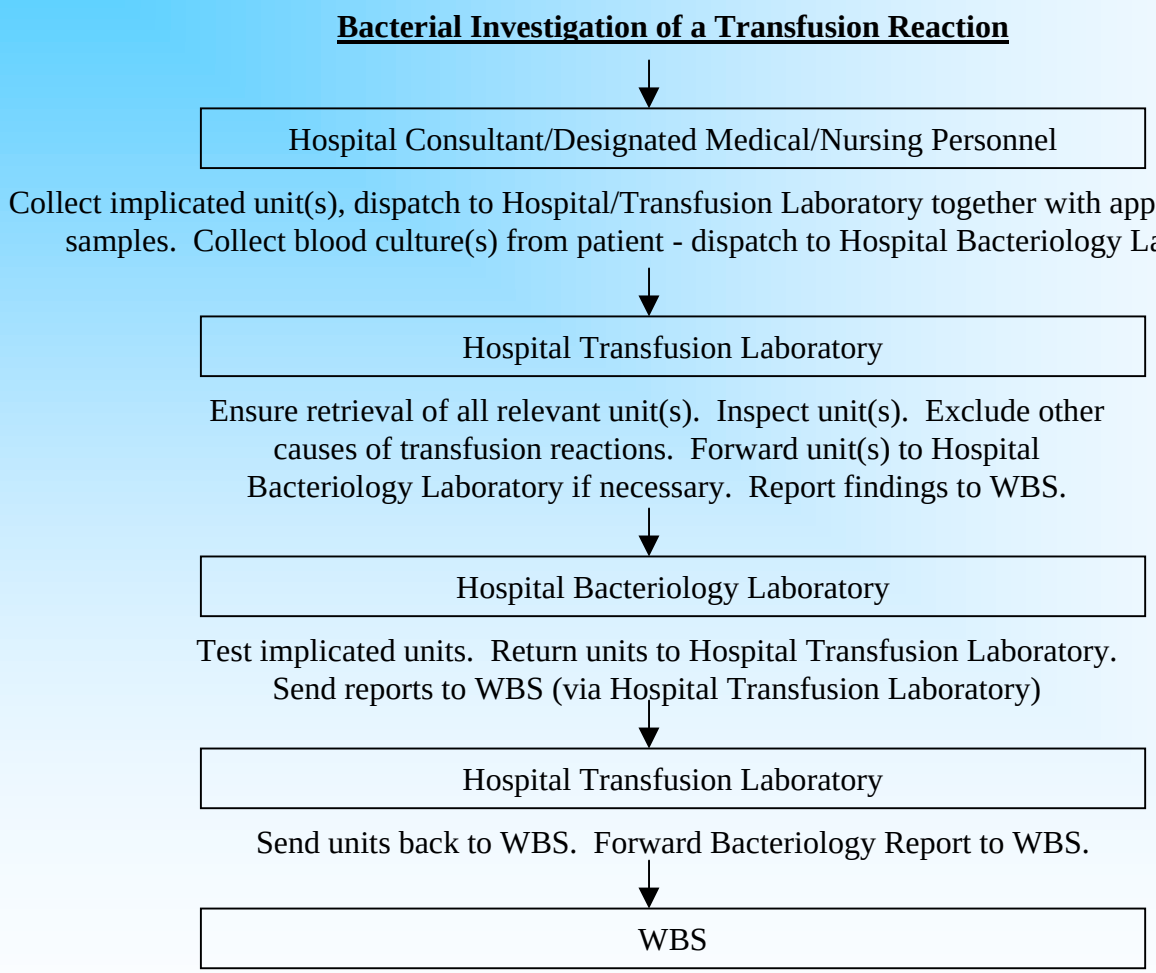
Transfusion Related Infections

Examples of TTI		
Potentially Resulting in Chronic Disease	**Resulting in Transient Illness without Long-Term Sequelae or in Asymptomatic Infection**	**Risk Exceedingly Low or Theoretical Only**
Hepatitis B Hepatitis C Human immunodeficiency virus Human T-cell lymphotropic virus Cytomegalovirus Chagas' disease Syphalis	Hepatitis A Hepatitis C TT virus Epstein-Barr virus	Creutzfeldt-Jakob disease Lyme disease Human herpesvirus-8 Parvovirus B19 Erlichiosis Babesiosis

Bacterial Contamination

- Fever with rigors
- DIC
- ARF
- Shock
- Skin flushing
- C/S and IV antibiotics
- WBS -routine monitoring of all platelets

Flow chart for Bacterial Reaction investigation



Bacterial Reaction
Role of Hospital Transfusion Laboratory

The role of the hospital transfusion laboratory is to co-ordinate the further investigation of all significant transfusion reactions. Where a bacterial cause is thought to be possible/likely it should:

- Ensure that all implicated units are retrieved.
- Inspect implicated units for any colour abnormality, gas, haemolysis, clots, leaks, pinholes or other defects and record findings.
- Dispatch all units to the hospital microbiology department (without delay) for sampling/testing and ensure that units are returned afterwards.
- Exclude other possible causes of transfusion reactions.
- Inform the Welsh Blood Service that a possible bacterial reaction has occurred and return all implicated units to the Welsh Blood Service after microbiological testing.
- Copy all relevant tests/reports to the Welsh Blood Service when available.

Note: All implicated units must be transported/stored at 4°C.

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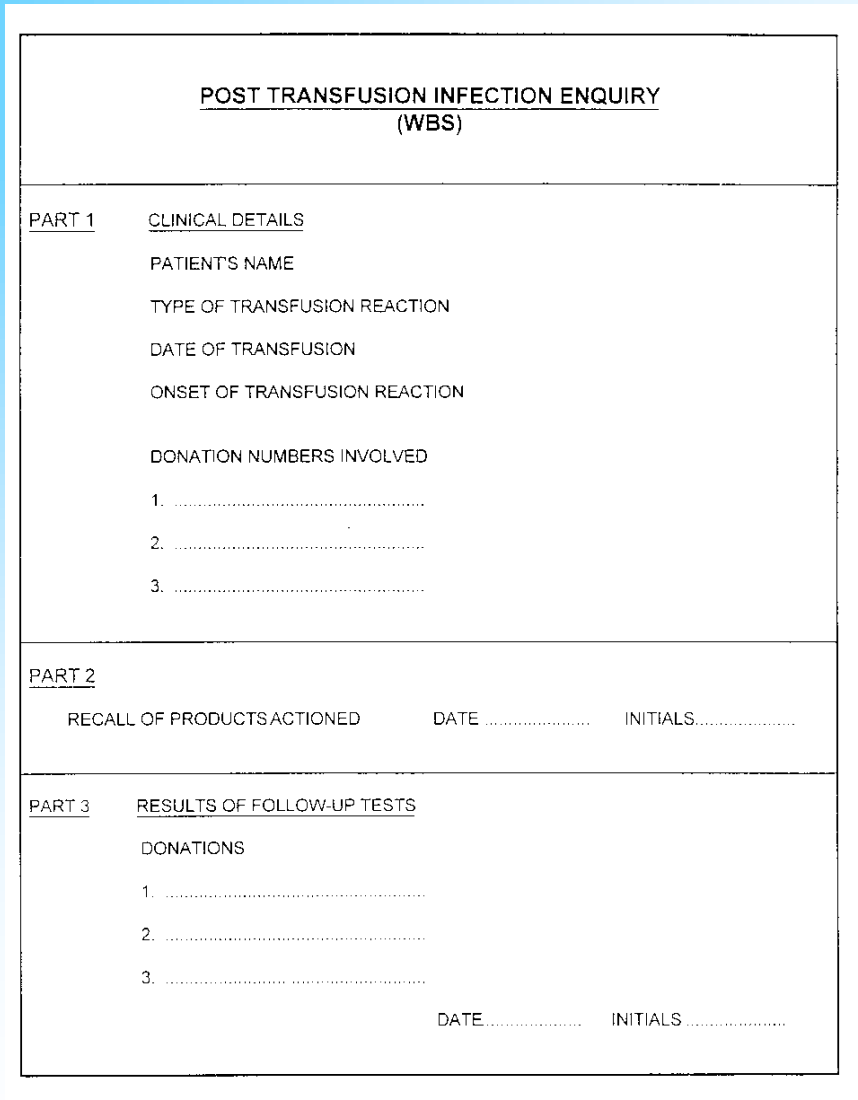


POST TRANSFUSION INFECTION ENQUIRY
(WBS)

PART 1 CLINICAL DETAILS

PATIENT'S NAME

TYPE OF TRANSFUSION REACTION

DATE OF TRANSFUSION

ONSET OF TRANSFUSION REACTION

DONATION NUMBERS INVOLVED

1. .....

2. .....

3. .....

PART 2

RECALL OF PRODUCTS ACTIONED DATE ..... INITIALS.....

PART 3 RESULTS OF FOLLOW-UP TESTS

DONATIONS

1. .....

2. .....

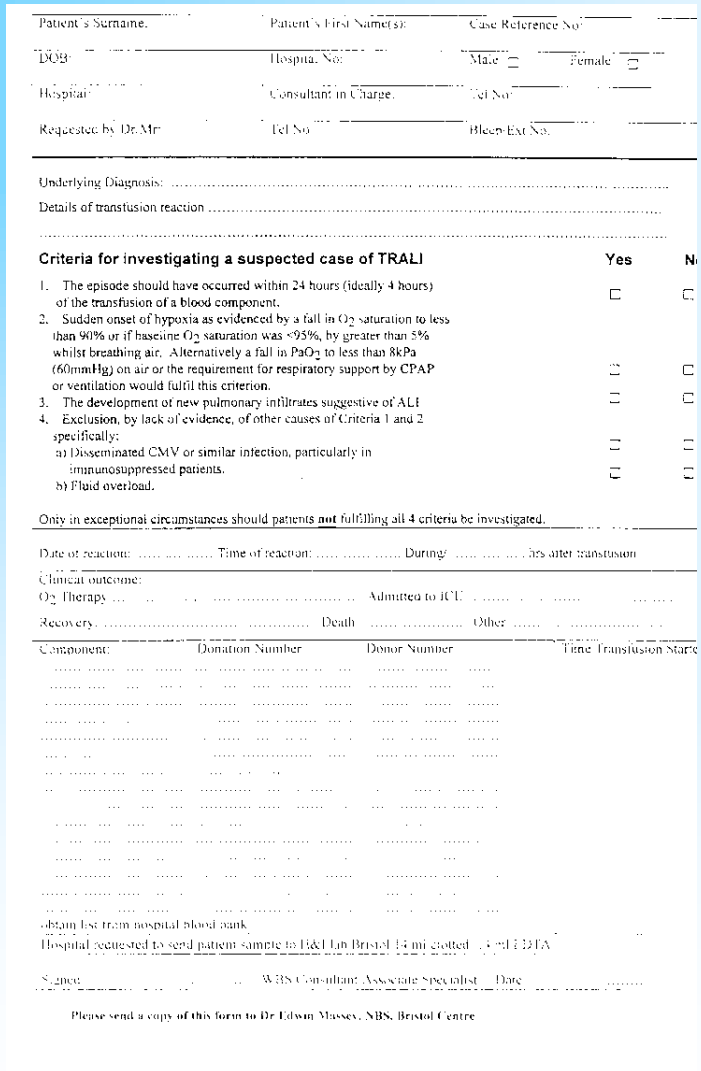
3. .....

DATE..... INITIALS .....

Transfusion Related Lung Injury

- Immediate Respiratory s/s
- CXR-bilateral infiltrates
- 90% donor WBC abs, 10% Pt WBC abs.
- Complex laboratory investigations
- WBS- Male only plasma for clinical use

TRALI-Criteria for investigation



Patient's Surname: Patient's First Name(s): Case Reference No:

DOB: Hospital No: Male ☐ Female ☐

Hospital: Consultant in Charge: Tel No:

Requestee by Dr./Mr: Tel No: Bleep/Ext No.

Underlying Diagnosis: .....

Details of transfusion reaction .....

.....

Criteria for investigating a suspected case of TRALI	Yes	No
1. The episode should have occurred within 24 hours (ideally 4 hours) of the transfusion of a blood component.	☐	☐
2. Sudden onset of hypoxia as evidenced by a fall in O_2 saturation to less than 90% or if baseline O_2 saturation was <95%, by greater than 5% whilst breathing air. Alternatively a fall in PaO_2 to less than 8kPa (60mmHg) on air or the requirement for respiratory support by CPAP or ventilation would fulfil this criterion.	☐	☐
3. The development of new pulmonary infiltrates suggestive of ALI	☐	☐
4. Exclusion, by lack of evidence, of other causes of Criteria 1 and 2 specifically:		
a) Disseminated CMV or similar infection, particularly in immunosuppressed patients.	☐	☐
b) Fluid overload.	☐	☐

Only in exceptional circumstances should patients **not** fulfilling all 4 criteria be investigated.

Date of reaction: ..... Time of reaction: ..... During/ ..... hrs after transfusion

Clinical outcome:

O_2 Therapy ... Admitted to ICU .....

Recovery ..... Death ..... Other .....

Component: Donation Number Donor Number Time Transfusion Started

.....

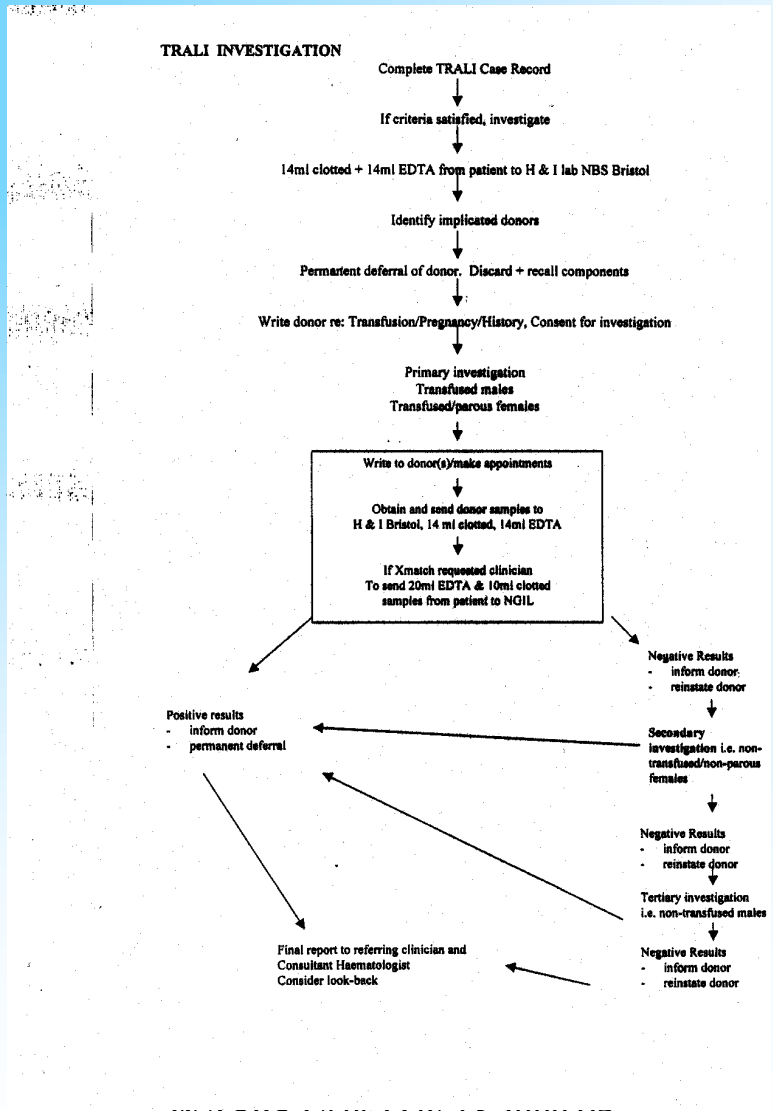
Obtain list from hospital blood bank

Hospital requested to send patient sample to H&I Lab Bristol 14 ml clotted / 4 ml EDTA

Signed: ..... WBS Consultant/Associate Specialist Date .....

Please send a copy of this form to Dr Edwin Massey, NBS, Bristol Centre

Keeping Blood Services in the Loop



Post Transfusion Purpura

- Severe thrombocytopenia
- Purpura
- Platlet alloabs usually anti HPA-1a
- IvIgG and or Plasmapheresis
- Platelets if life threatening bleeding

Transfusion Associated Graft verses Host Disease

- Marrow & Liver failure
- GI/Skin s/s
- Very high mortality
- No effective Rx
- Leucocyte filtration does not offer protection
- Prevention-Irradiated cellular components to “at risk patients”.

Keeping Blood Services in the Loop
Welsh Blood Service Notifications of Possible Transfusion Transmitted Reactions from January 03 to May 05

Category	Hospital	Soundex	Date Notified	Transfusion Period	Donors	Outcome
Hep B	Prince Charles	ST-520	22/12/03	Jan-Aug 2003	22	Non implicated
Hep B	UHW	TJ-500	16/12/03	25/07/03	4	1 donor with evidence of past but not current infection
Hep C	Prince Charles	JGF-600	08/06/04	24/12/03	2	None implicated
HIV	-	-	-	-	-	-
HTLV	-	-	-	-	-	-
Syphilis	-	-	-	-	-	-
CMV	-	-	-	-	-	-
Malaria	-	-	-	-	-	-
VCJD	-	-	-	-	-	-
TRALI	POW	-	27/5/03	27/5/03	1	Not fulfil criteria for investigation
TRALI	UHW	-	16/6/03	14/6/03	2	Not fulfil criteria for investigation
TRALI	Singleton	-	8/12/04	8/12/03	3	Not fulfil criteria for investigation
TRALI	POW	-	20/12/04	16/12/03	5	Not fulfil criteria for investigation
PTP	UHW	-	23/6/03	23/6/03	Several	Negative
Bact	Singleton	-	10/1/05	17/12/04	1	Negative
Bact	Morriston	-	15/2/05	13/2/05	1	Negative
Bact	RGH	-	04/4/05	30/3/05	2	Negative
TAGUID	-	-	-	-	-	-