NHS BLOOD AND TRANSPLANT

KIDNEY ADVISORY GROUP - H&I UPDATE REPORT

5th October 2026

1. LAY SUMMARY AND REPORT OVERVIEW

Histocompatibility and Immunogenetics (H&I) laboratories, often referred to as "Tissue Typing", are linked with transplant centres. They are involved in the assessment of patient and donor compatibility pre-transplant. This work involves comparison of the Human Leucocyte Antigen (HLA) proteins produced by an individual to provide an assessment of the level of HLA matching and immunological compatibility between the recipient and potential donors. Antibodies produced against non-self HLA proteins can lead to rejection of a donor organ. Transplantation in the presence of donor-directed HLA antibodies should be avoided wherever possible. H&I laboratories support deceased and living solid organ transplantation through HLA typing potential donors and providing compatibility assessments for recipient-donor pairs. HLA information for kidney recipients, pancreas recipients and donors is provided by the H&I laboratories and stored in the National Transplant Database (NTxD) for use in the matching and offering algorithms.

This report includes updates/information on:

- national deceased donor HLA typing discrepancies [Section 2]
- recent H&I incidents reported to NHSBT with potential impact on kidney transplantation [Section 3]
- Calculated reaction frequency calculator update [Section 4]

The contents of this report are intended for informational and discussion purposes only.

2. HLA DECEASED DONOR CHARACTERISATION – DISCREPANCY MONITORING

The HLA data generated during initial donor characterisation work is used to support the assessment of immunological compatibility for transplantation, particularly for patients with pre-existing anti-HLA antibodies. It is therefore important for the advisory group to be aware of incidents relating to errors in donor characterisation HLA typing.

There have been nine incidents related to deceased donor characterisation between January and August 2026:

- 4/9 attributed to human error, or failure of checking processes, by the donor characterisation H&I laboratories prior to submission of HLA information to ODT-Hub. No impact on offering for 3/4 incidents; one investigation pending. The laboratory analyser reports were accurate for all donors.
- 3/9 attributed to technical issues/limitations of the commercial assays used for HLA typing of deceased donors. One impacted HLA-B (allelic; no impact on offering) and two impacted HLA-DPB1, which is a known challenge for the assays.
- 1/9 attributed to incorrect manual entry by ODT-Hub (preventable by DCERT). This error could have impacted on offering but was identified prior to offering commencement. The information submitted to ODT-Hub was accurate.
- 1/9 attributes to the agreed reporting process for a rare HLA-DPB1 type not being followed. Investigation and corrective action are in progress. The laboratory analyser report was accurate.

The occurrence of further incidents relating to human error will be monitored and discussed nationally with H&I laboratories and the British Society for Histocompatibility and Immunogenetics (BSHI) to identify ways to minimise errors in the future. An annual discrepancy report that will be published in early 2027 (previous reports available here); it is expected that the discrepancy rate will increase from 0.11% in 2025 to ~0.5% in 2026 based on the above incidents.

There are now ten H&I laboratories (50%) routinely utilising the Donor Characterisation Electronic Results Transfer (DCERT) process. The use of a DCERT process removes the manual transcription of HLA data into NTxD by ODT-Hub Organ Allocation Specialists. It is hoped that the remaining laboratories will be onboarded by the end of 2026.

3. **NHSBT INCIDENTS RELATED TO H&I:**

Clinical incidents related to HLA data reported to NHSBT-ODT are regularly reviewed and discussed at the NHSBT Clinical Audit, Risk and Effectiveness (CARE) meetings. In addition to the donor characterisation HLA type errors discussed in Section 2, errors potentially impacting

pancreas/islet transplant recipients reported between March and August 2026 are documented in **TABLE 1** below:

Description	Incident Number(s) ODT-INC-	Event Date
Crossmatch material issue (no/insufficient spleen)	9912 10158 10248	10/03/2026 05/06/2026 09/07/2026
Incorrect laboratory analyser report attached to HLA summary*	10068 10387	07/05/2026 27/08/2026
NTxD/LivingPath Patient Registration Error	10006	16/04/2026
NTxD HLA data limitation	10072	07/05/2026
Incorrect HLA data sent to recipient laboratory*	10322	29/07/2026

Advisory group members should be aware of the potential human errors in the process (*) leading to incorrect HLA information being communicated between the donor H&I laboratories, ODT-Hub and recipient centres/laboratories. **This is a reminder to always check donor identifiers on paperwork upon receipt**.

4. CALCULATED REACTION FREQUENCY (cRF) CALCULATOR UPDATE

The integration of HLA-DP unacceptable antigens in the Excel-based NHSBT-ODT calculated reaction frequency (cRF) calculator tool is in progress, with validation currently being undertaken. This will bring the Excel tool in line with the offering algorithm (i.e. the cRF information provided at the point of offering on the local lists).

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