

The Cord Blood Post-Thaw Data Clinic:

Helping you to work out what good looks like

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Introduction and Background

As part of the UK Cord Initiative, Anthony Nolan (AN) and NHS Blood and Transplant (NHSBT) run the Post-Thaw Data Clinic (PTC) to help answer queries around cord blood unit (CBU) post-thaw data interpretation, which can be both complex and confusing. This service is designed to complement the BSHI selection advisory panel (BSHI SAP).

Aims

The aim of this project was to provide Transplant Centres (TCs) with convenient access to support from five expert bankers from AN and NHSBT Cord Blood Banks to:

- Assist with the interpretation of post-thaw data
- Promote best practice for CBU selection
- Resolve queries requiring Cord Blood Banker expertise and provide reassurance
- Decrease the number of late cancellations due to product related issues.

Materials and Methods

Queries were submitted to a dedicated inbox and forwarded to the PTC panel for data interpretation and their opinions within 24 hours of the request (Figure 1)

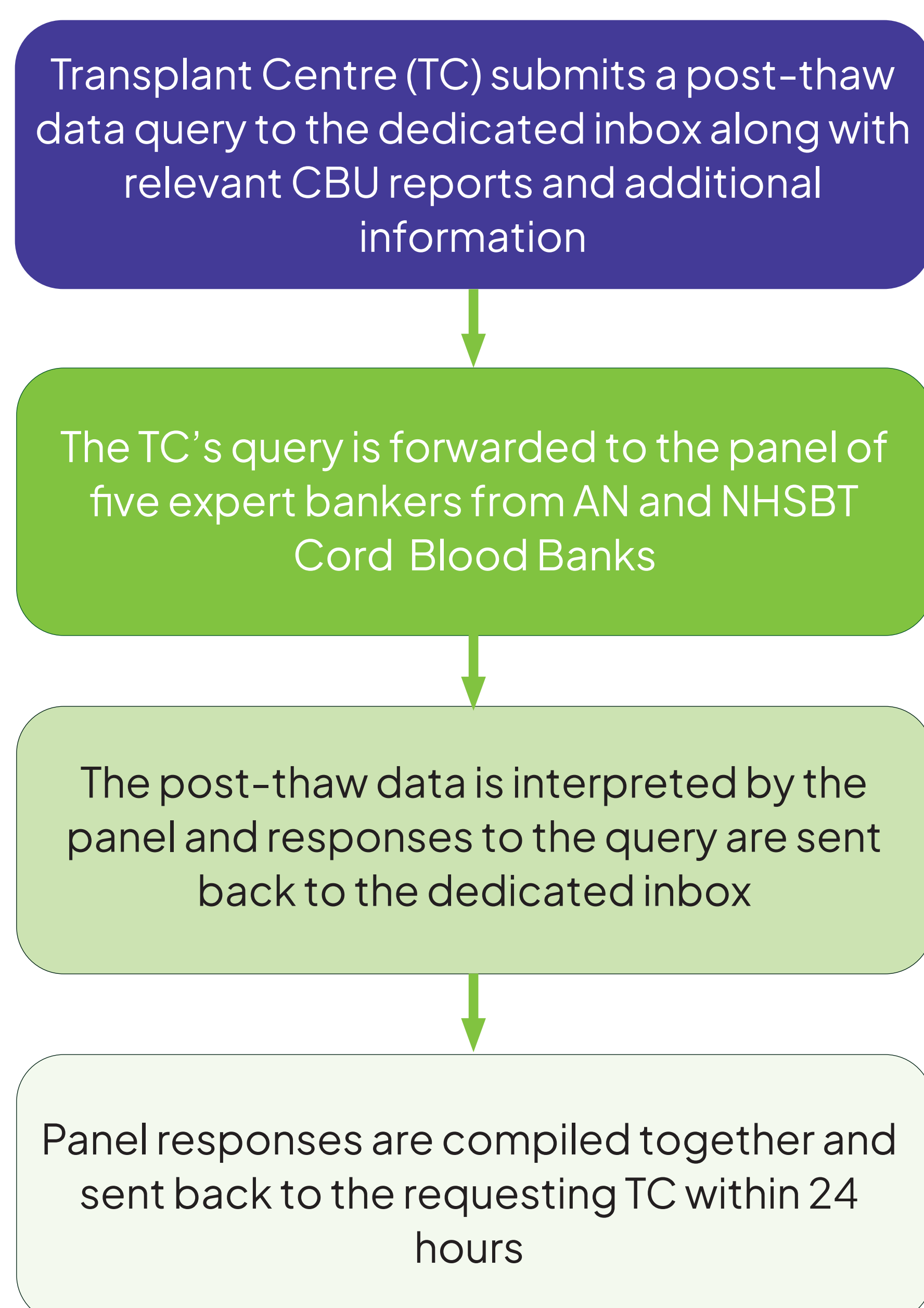


Figure 1. The Post-Thaw Data Clinic process

Results

From our first query submitted in April 2022, up to December 2023, we received 75 queries for 58 patient cases from 11 different TCs. 94% of queries were responded to within 24 hours. More than 50% of queries were regarding international CBUs.

Query topics varied, with 49% of requests asking for an overview from the panel. The remaining queries covered a variety of specific parameters (Figure 2).

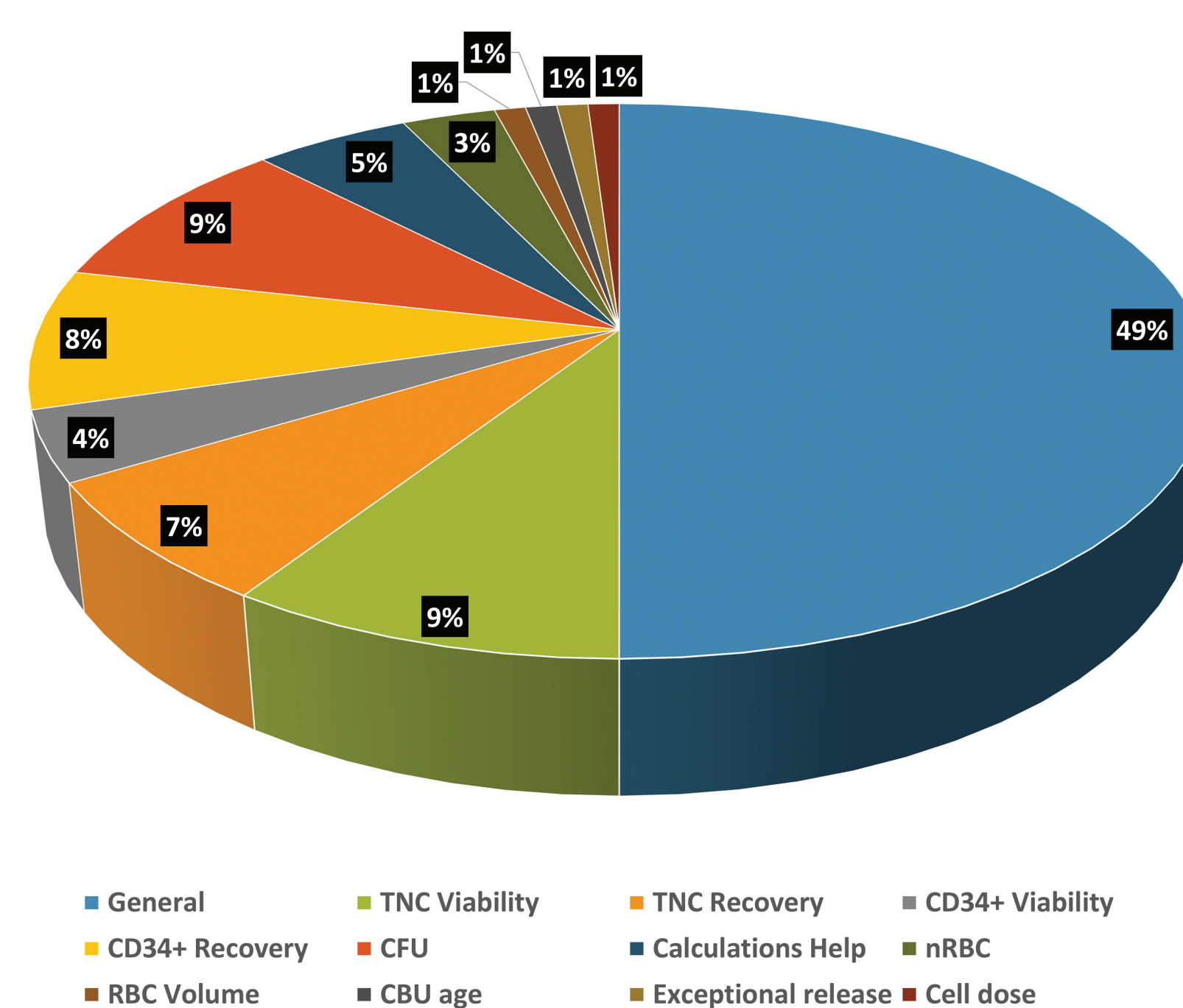


Figure 2. The topics of queries submitted to The Post-Thaw Data Clinic

Discussion with the PTC panel and the prompt advice sent to the TCs' influenced their decisions as shown below (Figure 3).

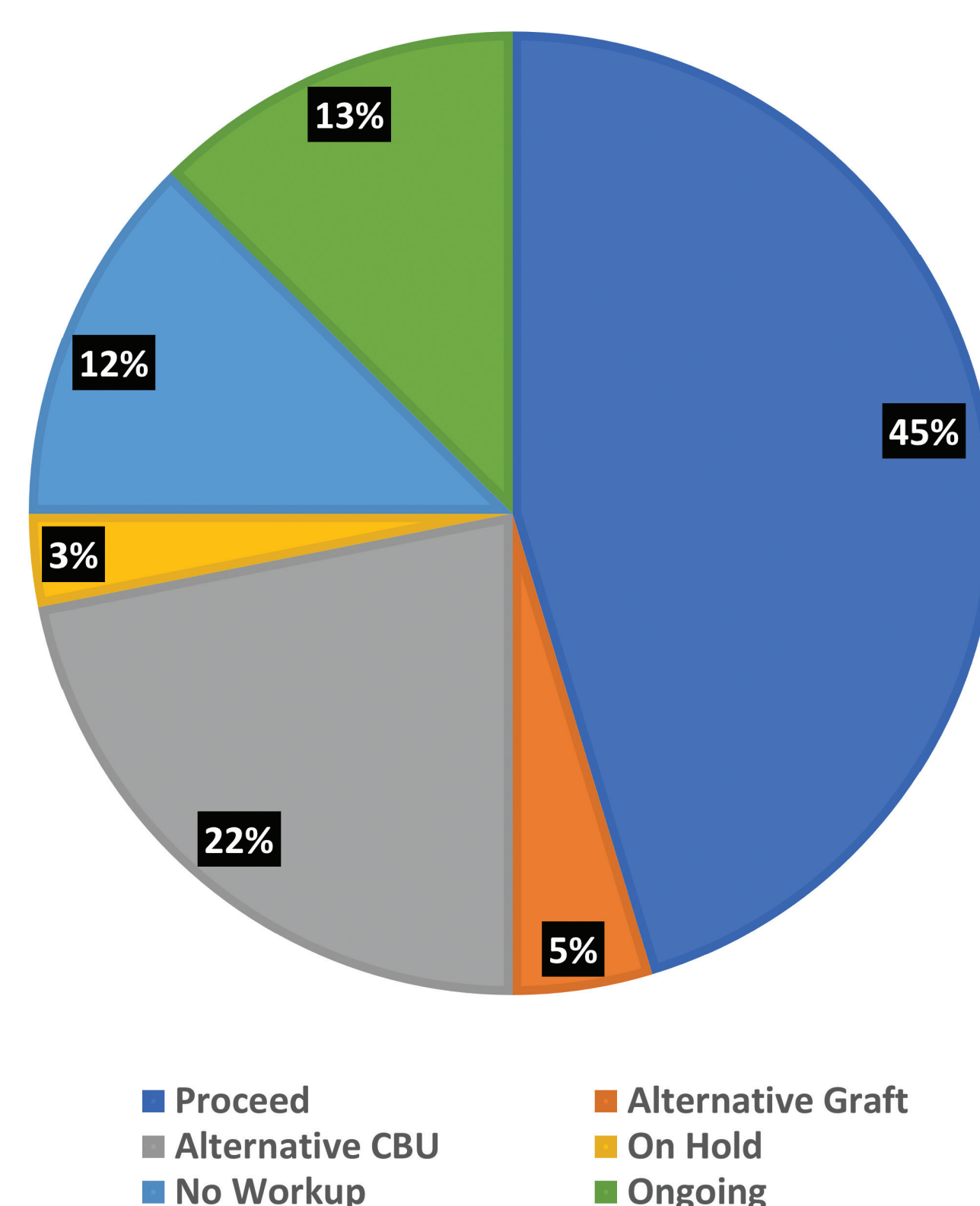


Figure 3. The Post-Thaw Data Clinic outcomes

Conclusions

This service has proved valuable to TCs; in 72% of cases the TCs were able to make prompt decisions following the PTC panel advice. In 27% of cases identification of quality issues by the PTC panel led to the TC selecting an alternative graft. Late cancellations due to product-related issues were reduced from 7% to 2.6%, thereby reducing time to transplant and ensuring optimal graft selection. Following this successful trial, with excellent feedback, the PTC is now business as usual and being well utilised by UK TCs.

Example 1: An international CBU was reviewed as the TC were looking to submit workup forms, but CFU data came back as 'no growth'. This was a tricky one to judge with the lack of CFU growth, but the CBU report looked fine otherwise.

Opinion – A risk assessment was required on the lack of CFUs vs urgency. Although this CBU was from a reputable bank, the holistic assessment of all post-thaw data provided did not definitively indicate potency in the absence of CFU data.

Outcome – An alternative international CBU was requested for shipment and the patient was infused.

Example 2: TC asked for a general review of the post-thaw data for an international CBU of interest.

Opinion – Recoveries were fine but CFU was poor with ClonE of 1.8%, with 81% total CFU loss. The panel requested a second thaw – repeat thaw results were even worse.

Outcome – An alternative graft source was selected.

Example 3: TC asked for a review of two CBUs up for consideration for dUCBT.

Opinion – One of the CBUs was considered to be fine, but the other had unacceptable CD34+ recovery and unsuitable cell dose for the patient weight. Another CBU was recommended as a substitute.

Outcome – The patient was infused with the CBU deemed acceptable by the panel and the substitute CBU as part of a dUCBT.

References

- Seventh Edition NetCord-FACT International Standards for Cord Blood Collection, Banking, and Release for Administration (2020). Available at: <https://www.factglobal.org/standards/cbb-standards/>
- HTA Guide to Quality and Safety Assurance for Human Tissues and Cells for Patient Treatment (January, 2021) Paragraph 243 onwards-Import