

# Canadian Transplant Registry

## Version Changes

2024-08-26 – Release Notes 5.6 (5.6.10.1)

This document contains all version changes from 5.5.9.1 to 5.6.10.1.

Public (P)

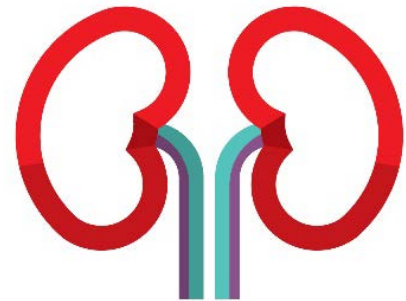
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# Canadian Transplant Registry

## Overview

Canadian Blood Services works with the Organ and Tissue Donation and Transplantation (OTDT) community across the country to facilitate interprovincial organ sharing and to improve national system performance through the development of leading practices, professional education, public awareness, and data analysis and reporting.



The Canadian Transplant Registry (CTR) is an innovative technology that generates value in terms of quality, safety and efficiency through its capabilities for supporting all donors, candidate listing, offer management, allocation and pre- and post-transplant data. CTR is a national web-based computer program that supports Canada's national programs (such as Kidney Paired Donation, Highly Sensitized Patients, and National Organ Waitlist), and is used for linking the national recipient waitlist with actual organ donors. CTR provides timely access to high quality organ donation and transplantation information for patient care, system management, and accountability.

### CTR features:

- Advanced capabilities for allocating living and deceased donor organs and for generating the important data needed to improve transplant system performance
- Improved access to transplants for highly sensitized patients
- Increased effectiveness and efficiency of national organ sharing programs for living donors and for patients who are critically ill
- State of the art, high quality human leukocyte antigen typing and antibody analysis, that is the most comprehensive of any matching system in the world – leading to more successful transplantation and less rejection
- Real-time information sharing and file uploads to facilitate the decision-making process and create efficiency by eliminating faxes and phone calls
- Can be used on any device – computer, tablet, even mobile phone
- With more than 400 users from coast to coast, CTR currently supports Canada's national programs – Kidney Paired Donation, Highly Sensitized Patients and National Organ Waitlist



## Use of this Change Document



These release notes assume that the user has valid access to CTR to perform the required functions of their role. In order to receive the proper level of access, a request may be made through Customer Support.

CTR currently has 14 User Acceptance Testing (UAT) environments available in addition to the main CTR Production environment. For information regarding these environments, please consult our [Status Page](#). Information about these environments, relevant links, as well as the Canadian Transplant Registry Integration Guide and other documents may be found there.

## Change Document Format

The release notes / list of changes contained in this document will be broken down into key sections:

- A recap or link to the changes introduced in the previous release to the production environment
- New changes contained broken down by Fixes, Improvements, and New Features
- A high level plan of changes to come in the following release

The format for each change introduced will be outlined as follows:

Release Version <sup>1</sup>	Reference <sup>2</sup>	Category <sup>3</sup>
5.2	CTRII-8752	Feature
Feature Title <sup>4</sup>		
Enhancement to the Domino Chain - End Offer Recipient Assignment		

5	<b>Interface</b>	Web Browser Interface
	<b>Web Service Endpoint</b>	N/A
	<b>Web Service Method</b>	N/A
	<b>Program<sup>6</sup></b>	Kidney Paired Donation
	<b>Patient<sup>7</sup></b>	All
	<b>Section<sup>8</sup></b>	Match Run / Offer Management

**Description: <sup>9</sup>**

Functionality available to a Kidney Paired Donation (KPD) Program Administrator, which allows them the ability to identify potential recipient candidates from the Deceased Waitlist Program, based on a KPD donor.

This functionality is extended to allow finding and assigning potential recipients to the end-offer in a domino chain.

**Legend**

1. Version of CTR in which the change has been applied.
2. Internal CTR reference number. May be used when communicating with CTR regarding the change.
3. Type of change introduced, broken into three categories: Fixes, Improvements, and (New) Features.
4. For new features, a short description of the change.
5. The area that is affected by the change. Web Browser Interface (UI), or Web Services / API. For Web Service changes, the affected endpoints and methods will also be outlined.
6. The CTR program being updated.
7. The patient in CTR affected by the change – Donor, Recipient, or All.
8. The section in CTR affected by the change.
9. A plain language description of the change. This area may also contain references to other internal CTR IDs that are associated with the change. Where applicable, screenshots or diagrams of the updates may be included to support the description.

## Previous Production Updates

### Recap of CTR Version 5.5 Changes (Implemented 2024-05-02)

#### Application Update – Deceased Waitlist / High Status Heart

- High Status Heart Notification Performance: DWL High-Status Heart Allocation
- HS Heart Offer Proposed SMS messages sent out before Make HS Heart Offer request completed

#### Application Update – Deceased Waitlist / cPRA Calculator

- updateRecipientHlaSerumTestResult(): Sometimes returns error "The cPRA calculation has failed."

#### Application Update – Deceased Waitlist

- Allocation - Remove Kidney as the default selected organ
- downloadOfferAttachment(): Permission check

#### Fixes – Deceased Waitlist

- WS CTR3 - updateAttachment issue with swapped attachmentID and ownerID
- WS CTR3 - updateAttachment and upLoadAttachment allows changes to Offlist Organ Request
- WS CTR2 - uploadAttachment() issues - Recipient
- WS CTR2 - deleteAttachment() for donor ASSESSMENT section does not work
- updateDonor() - Lazy load exception bug CTR3 endpoint
- updateRecipientByNationalRecipientID() - Lazy load exception bug CTR3 endpoint
- updateDonor() - Lazy load exception bug CTR2 endpoint
- updateRecipientByNationalRecipientID() - Lazy load exception bug CTR2 endpoint
- WS CTR2 - uploadAttachment for ORGAN\_REQUEST where ID <> CTR1\_ID throws NPE
- CTR3 Web Service - downloadOfferAttachment does not support Recipient Attachments
- WS CTR3 - cannot upload multiple attachments for ORGAN\_REQUEST where ID <> CTR1\_ID

#### Application Update – Kidney Paired Donation

- KPD End Offer Eligibility Report - Must Select Donor ID from Drop-Down
- KPD Match Filter Criteria - Update label for ABO Sub-Type
- KPD Match Run Eligible report - include Donor ABO sub-type
- Update label for ABO Subtype Match Filter Criteria

#### Fixes – Kidney Paired Donation

- Offer Details: Cannot add a comment to Domino End Offer of EXECUTED Match Run
- Issue with resizing Print Dialog for Offer Details/Chain Details
- Invalid filtering behavior for Offer State on KPD Offer list

## Upcoming Production Updates

### Summary of CTR Version 5.6 Changes

#### National Organ Waitlist

- Support for filtering by organ
  - Sub-categories have been added for each organ. This change removes the need to change filters on the default National Waitlist to view specific and non-urgent medical statuses.

#### Deceased Donation

- Default Filter by Entry Date
  - A filter is automatically applied to the Entry Date field. This change reduces the time to load the Deceased Donors list.

#### Deceased Waitlist

- Recovery History
  - Cross Clamp Date / Time updates are now visible on the Donor Recovery tab

#### General Improvements and Fixes

- Broadcast Messages
  - The login screen will now support the ability to display informational messages
- Recently Visited Records
  - If applicable to the user's activities, this section will include a list of recently visited donor and/or recipient records. The list is currently limited to 5 recently visited unique records.
- Drag and Drop File Upload
  - In any area of the application, where a file may be uploaded / attached, a user may drag a file onto the section.
- Fix of Recipient List Filters
  - Columns corrected to apply Height and Weight filter criteria
- Allocation Tab Filters
  - A new button, labelled Local, was added to each of the organ tab to filter patients to the same ODO as the donor
- Fix of Patient and Offer List Filters
  - Default filtering for grids accessed from the side menu has been corrected

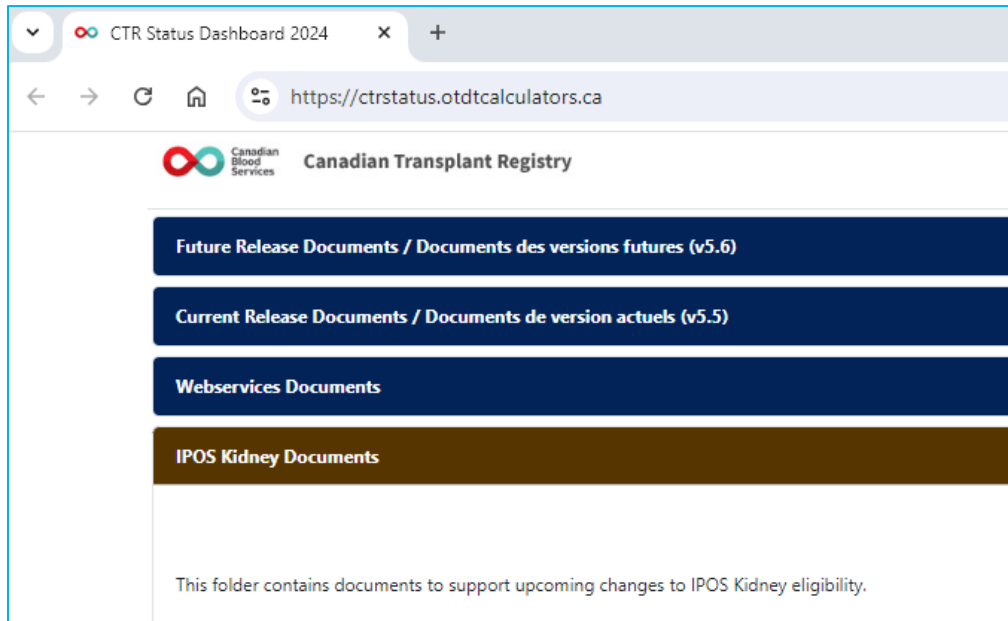
#### Unexpected Result Fix

- DWL Waitlist / DWL No Longer Urgent Notifications
  - When an urgent status Heart patient is updated to a state of transplanted, the DWL No Longer Urgent notification will be distributed as expected.

## IPOS Kidney Update

### IPOS Kidney Changes to be Enabled in CTR Version 5.6

The new IPOS Kidney functionality will be enabled with the release of CTR v5.6. Documentation of these updates may be found on the [CTR Status Page](#) under the “IPOS Kidney Documents” tab.



#### Update Introduced in v5.6

With the introduction of cPRA one decimal precision for the IPOS Kidney program, Webservice Users will have the option of having either a rounded (half up) integer value or a one decimal precision value returned to them when using the impacted webservice methods as outlined below. The value being returned will not impact patient ranking as that work is completed within CTR.

Example of a rounded integer being returned:

- If cPRA is calculated in CTR as 94.5, a value of 95 will be returned via webservices.
- If cPRA is calculated in CTR as 94.4, a value of 94 will be returned via webservices.

Example of a single decimal being returned:

- If cPRA is calculated in CTR as 94.5, a value of 94.5 will be returned via webservices.
- If cPRA is calculated in CTR as 94.4, a value of 94.4 will be returned via webservices.

**Note:** Default return will be set to *Single Decimal*. If the preferred return is *Integer*, please contact Customer Support prior to release.

## Webservice Methods Impacted

The following webservice methods will be affected by this update:

### CTR 3 Endpoints / JavaDoc Link

- [getHSPMatchforDonor](#)
  - Returns [WslPOSMatchResult](#)
- [getHsHeartMatchResults](#)
  - Returns [WslPOSMatchResult](#)
- [runHSPMatchOnDonor](#)
  - Returns [WslPOSMatchResult](#)
- [runHsHeartMatch](#)
  - Returns [WslPOSMatchResult](#)
- [previewHsHeartMatch](#)
  - Returns [WsPreviewIPOS\\_Match](#)
- [previewHSPMatchForDonor](#)
  - Returns [WsPreviewIPOS\\_Match](#)
- [listWaitlistRecipients](#)
  - Returns [WSWaitlistSearchResult](#)
- [findRecipientTransplants](#)
  - Returns [WSTransplantCore](#)
- [updateHSPTransplant](#)
  - Returns [WSTransplantCore](#)
- [updateRecipientHlaSerumTestResult](#)
  - Returns [WSHlaSerumTests](#)
- [findAllRecipientHlaSerumTestResults](#)
  - Returns [WSHlaSerumTests](#)

### CTR2 Endpoints

- getHSPMatchforDonor
- runHSPMatchOnDonor
- previewHSPMatchForDonor
- listWaitlistRecipients
- findAllRecipientHlaSerumTestResults
- updateRecipientHlaSerumTestResult

### CTR1 Endpoints

- getHSPMatchforDonor
- runHSPMatchOnDonor
- previewHSPMatchForDonor
- listWaitlistRecipients
- ***findRecipientHlaByNationalRecipientId***
- ***findAllRecipientHlaSerumTestResults***
- ***updateRecipientHlaSerumTestResult***

**Note:** For the CTR1 Methods highlighted in **purple**, a rounded up Integer will be returned to the user even if the default return has been set to Single Decimal. The value being returned will not impact patient ranking as that work is completed within CTR.



## CTR Version 5.6 Release Candidate

### Application Update – National Organ Waitlist

Release Version	Reference	Category
5.6	CTR00-9847	Application Update
<b>Title</b>		
National Organ Waitlist - Usability Improvements		

<b>Interface</b>	Web Browser Interface
<b>Web Service Endpoint</b>	N/A
<b>Web Service Method</b>	N/A
<b>Program</b>	National Organ Waitlist
<b>Patient</b>	Recipients
<b>Section</b>	Recipients by Organ Request

#### Description:

The functionality for viewing the National Waitlist has been updated to allow for viewing patients seeking specific organs, without needing to apply a filter to the list.

The original National Waitlist still exists.

Sub-categories have been added for each organ. Each of the organ-specific lists will have their own default filter and will be limited to the organ selected.

This change is expected to improve the usability and performance of each list. This change removes the need to change filters on the default National Waitlist to view specific and non-urgent medical statuses.

The screenshot displays the 'National Waitlist - Kidney' interface. On the left is a sidebar menu with options: National Waitlist, Heart, » Kidney (selected), Liver, Lung, Pancreas, Small Bowel, and Stomach. The main content area shows a table of patient data with columns: ODO, National Patient ID, Local ID, TX Type, Organ, Eligibility, and MS. Two rows are visible:

ODO	National Patient ID	Local ID	TX Type	Organ	Eligibility	MS
SK-STP	<a href="#">CTR052043</a>	localId11-17162976513	Single	Kidney	HSP: No	2MU
ON-TGLN	<a href="#">CTR048329</a>	59812	Single	Kidney	HSP: No	1

Additional interface elements include a top navigation bar with 'Refresh', 'Print', 'Help', and 'Export' icons, and a 'Recently Visited' section at the bottom of the sidebar.

## Application Update – Deceased Donation

Release Version	Reference	Category
5.6	CTR11-9867	Application Update
<b>Title</b>		
Deceased Donor List - Performance Improvement - Default Filter by Entry Date		

<b>Interface</b>	Web Browser Interface
<b>Web Service Endpoint</b>	N/A
<b>Web Service Method</b>	N/A
<b>Program</b>	Deceased Donation
<b>Patient</b>	Donors
<b>Section</b>	Deceased Donor List

### Description:

To help improve the performance of the Deceased Donor list, a filter is automatically applied to the **Entry Date** field. This field will be filtered to entries that have an Entry Date within the last two months of the current date. This change reduces the time to load the Deceased Donors list.

The screenshot shows the 'Deceased Donor' interface. At the top, there are icons for Add, Refresh, Print, Help, and Export. Below these are columns for Age, Death Type, Entry Date (ET), Case, HLA Ready, Retrieval Hospital, and City of Retrieval Hospital. A dropdown menu is open over the 'Entry Date (ET)' column, showing options for sorting (Ascending/Descending), columns, and filters. The 'Filters' option is selected, and a sub-menu is open with 'After' checked. A calendar for June 2024 is displayed, with the 19th and 21st highlighted in red boxes. A 'Today' button is at the bottom of the calendar.

## Application Update – Deceased Waitlist

Release Version	Reference	Category
5.6	CTR11-10054	Application Update
<b>Title</b>		
Cross Clamp Date changes not showing in Recovery History		

<b>Interface</b>	Web Browser Interface
<b>Web Service Endpoint</b>	N/A
<b>Web Service Method</b>	N/A
<b>Program</b>	Deceased Waitlist
<b>Patient</b>	Donor
<b>Section</b>	Recovery

### Description:

When viewing the History details on the Donor Recovery tab, the Cross Clamp Date / Time updates were not included in previous versions.

The audit of the Cross Clamp Date / Time field was always recorded, but the History view did not include the details.

The information is now visible on the Donor Recovery tab.

The screenshot shows the 'Recovery' tab selected in the top navigation bar. A 'History: Recovery' pop-up window is open, displaying a table of historical updates. The table has two columns: 'Update Time (ET)' and 'Field'. The 'Field' column lists various updates, including 'Right lobe: State Change Date / Time', 'Right lobe: Program', 'Right lobe: Organ', 'Right lobe: Consented State', and 'Right lobe: Organ Type'. Red arrows point to the 'History' button in the top navigation bar and the 'History: Recovery' pop-up window.

Update Time (ET)	Field
2024-08-28 13:00:00	Right lobe: State Change Date / Time
2024-08-28 13:00:00	Right lobe: Program
2024-08-28 13:00:00	Right lobe: Organ
2024-08-28 13:00:00	Right lobe: Consented State
2024-08-28 13:00:00	Right lobe: Organ Type

## Application Update – General Improvements and Fixes

Release Version	Reference	Category
5.6	CTR11-9944	Application Update
<b>Title</b>		
Broadcast Messages - Publicly Display Messages on Login Screen		

<b>Interface</b>	Web Browser Interface
<b>Web Service Endpoint</b>	N/A
<b>Web Service Method</b>	N/A
<b>Program</b>	N/A
<b>Patient</b>	N/A
<b>Section</b>	Login Screen

### Description:

When logging into the Canadian Transplant Registry, the login screen will now support the ability to display informational messages, known as Broadcast Messages.

Prior to this update, Broadcast Messages were only displayed on the Dashboard once the user was successfully logged into the application.

The screenshot shows the login page for the Canadian Transplant Registry. It includes a 'Sign In' section with fields for 'Username' and 'Password', both marked as required. There are 'Sign In' and 'Forgot Password' buttons. A 'Welcome Test Broadcast' message is displayed in a red-bordered box, stating: 'Welcome to the Canadian Transplant Registry. This is a sample broadcast message that is available on the login page.' Below this is a yellow box with the text: 'Having trouble logging in? Is your account locked out? Click Here for assistance.' An 'IMPORTANT NOTICE' section follows, detailing user responsibilities and privacy policies. A 'Resources' sidebar on the right lists various links like 'Canadian cPRA Calculator' and 'MELD-Na Calculator'. At the bottom, contact information for the support team is provided.

Release Version	Reference	Category
5.6	CTR00-9898	Application Update
<b>Title</b>		
Recently Visited Records (Donors and Recipients) By User		

<b>Interface</b>	Web Browser Interface
<b>Web Service Endpoint</b>	N/A
<b>Web Service Method</b>	N/A
<b>Program</b>	All
<b>Patient</b>	All
<b>Section</b>	Dashboard

**Description:**

To assist with usability and access to donor and recipient records, a new section has been added to the main Dashboard left-hand navigation panel.

The new section is titled **Recently Visited**. If applicable to the user’s activities, the menu bar will include a list of recently visited donor and/or recipient records. The list is currently limited to 5 recently visited unique records.

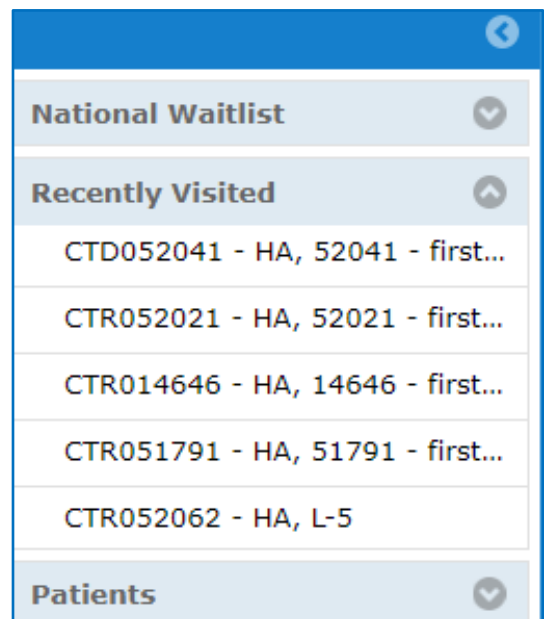
The most recently visited record will be displayed at the top. As new records are visited, the oldest record will be removed from the list.

Clicking on any of the sub-menu items in the Recently Visited section will open the associated record.

Sub-menu items will include the following information, if applicable:

- CTR ID
- Last Name
- First Name
- Local ID

Hovering over the sub-menu item will display the text that is not visible in the left-hand panel.



Release Version	Reference	Category
5.6	CTR11-9960	Application Update
<b>Title</b>		
Implement Drag and Drop File Upload		

<b>Interface</b>	Web Browser Interface
<b>Web Service Endpoint</b>	N/A
<b>Web Service Method</b>	N/A
<b>Program</b>	All
<b>Patient</b>	All
<b>Section</b>	File upload in any section

### Description:

The application has been updated to support drag-and-drop file attachment capabilities.

In any area of the application, where a file may be uploaded / attached, a user may drag a file onto the section rather than having to click the **Browse** button and navigating the folders to the desired file.

The ability to browse the folders and files is still supported.

**Attachment**

File:  
You can drag and drop files Browse...

! This field is required

Description:

! This field is required

Include on Side-By-Side:  
 Yes     No

Update    Cancel

Release Version	Reference	Category
5.6	CTR11-9947	Application Update
<b>Title</b>		
Fix of Recipient List Filters for Height and Weight		

<b>Interface</b>	Web Browser Interface
<b>Web Service Endpoint</b>	N/A
<b>Web Service Method</b>	N/A
<b>Program</b>	All
<b>Patient</b>	Recipient
<b>Section</b>	Recipient List

**Description:**

When viewing the **Recipients** list, the **Height** and **Weight** columns are now correctly applying filter criteria.

The screenshot shows the 'Recipients' list interface. At the top, there are navigation icons: Add, Refresh, Print, Help, and Export. Below these is a table with columns: Active Offer, National Patient ID, Organ(s), Urgent, Age, Height (cm), Weig... (kg), and cPRA(s). The 'Height (cm)' and 'Weig... (kg)' columns are highlighted in light blue, and red arrows point to the filter icons (downward triangles) in their headers. The table contains three rows of data:

Active Offer	National Patient ID	Organ(s)	Urgent	Age	Height (cm)	Weig... (kg)	cPRA(s)
No	XXXXXXXXXX	Heart	No	11.6	140	32.4	
No	XXXXXXXXXX	Lung	No	13.2	144.5	31.5	0
No	XXXXXXXXXX	Liver Kidney	No No	14.5	135	32.9	

At the bottom of the interface, there is a pagination bar showing 'Page 1 of 1' and 'Displaying 1 - 3 of 3' items per page.

<b>Release Version</b>	<b>Reference</b>	<b>Category</b>
5.6	CTRII-9969	Application Update
<b>Title</b>		
Local Filtering on Allocation Tab Update		

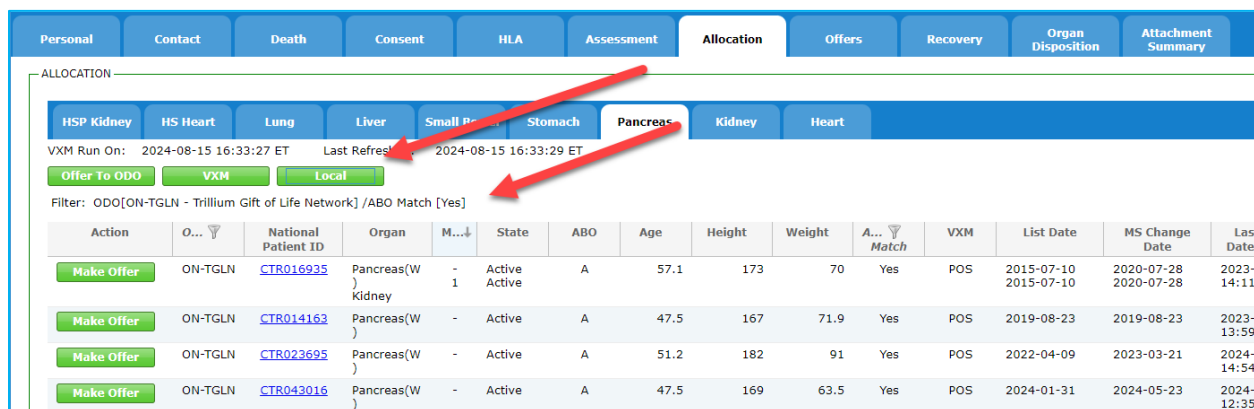
<b>Interface</b>	Web Browser Interface
<b>Web Service Endpoint</b>	N/A
<b>Web Service Method</b>	N/A
<b>Program</b>	Deceased Waitlist
<b>Patient</b>	All
<b>Section</b>	Donor Allocation Virtual Cross Match Results

**Description:**

An update was made to the local allocation organ virtual cross match tabs for each organ. When viewing a Deceased Donor’s record, accessing the **Allocation** tab displays various tabs. The first two are for national sharing of Kidney and Heart, and the other tabs provide virtual cross match (vXM) information.

A new button, labelled **Local**, was added to each of the organ tabs. Clicking the new button will automatically apply a filter to the list of patients in the lists. The filter is based applied to the Organ Donation Organization (ODO), column, limiting the patients to the same ODO as the donor. A filter will also be applied to the ABO Match column, limiting the patients to those who are ABO compatible with the donor. The Kidney tab applies one extra filter on the VXM column, limiting the results to patients who are Virtual Cross Match negative with the donor.

All filters and sorts may still be set or updated as needed.





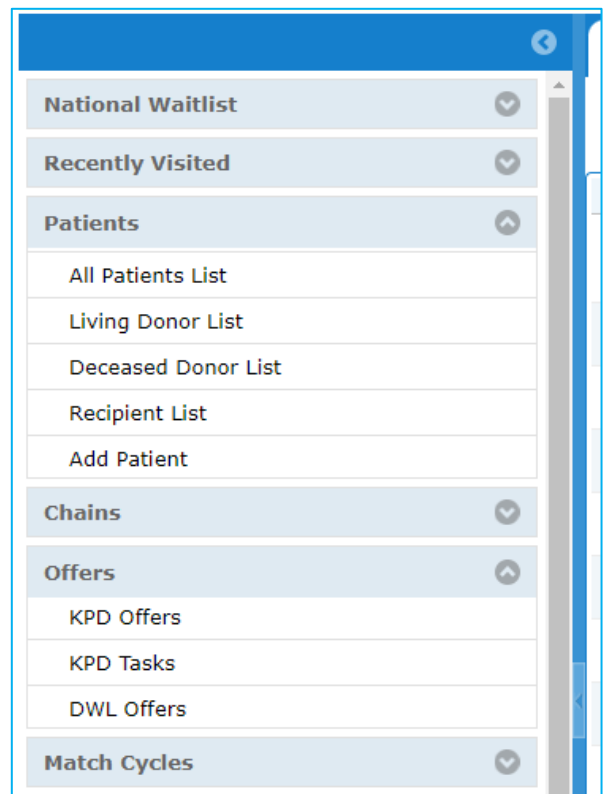
Release Version	Reference	Category
5.6	CTR11-10035	Application Update
<b>Title</b>		
Default Filtering Fix for Grids Accessed from Side Menu		

<b>Interface</b>	Web Browser Interface
<b>Web Service Endpoint</b>	N/A
<b>Web Service Method</b>	N/A
<b>Program</b>	All
<b>Patient</b>	All
<b>Section</b>	Patient and Offer lists, when opened from the left-hand navigation menu

**Description:**

When using the left-hand navigation menu on the dashboard to open a Patient List or Offer List, some of the default filtering options were not correctly applied in previous versions.

The default filtering for the various lists has been corrected.



## Unexpected Result – Deceased Waitlist

Release Version	Reference	Category
5.6	CTR11-9926	Unexpected Result
<b>Title</b>		
DWL Waitlist / DWL No Longer Urgent Notifications - Not being triggered as expected		

<b>Interface</b>	Notifications: Email and SMS
<b>Web Service Endpoint</b>	N/A
<b>Web Service Method</b>	N/A
<b>Program</b>	Deceased Waitlist
<b>Patient</b>	Recipient
<b>Section</b>	Organ Request, Medical Status

### Description:

An unexpected scenario was happening with notifications and patients with a Heart organ request.

In situations where an urgent status Heart patient was updated to a transplanted state, the application would incorrectly distribute a notification indicating the patient was newly added to the registry.

This issue has been corrected. When an urgent status Heart patient is updated to a state of transplanted, the **DWL No Longer Urgent** notification will be distributed as expected.

## CTR Version 5.6 Known Issues

1. With single decimal precision enabled, when a cPRA calculation ends in a decimal zero, the results returned via webservices may not display the zero. Other decimal values that do not end in zero will be returned with the decimal intact. For example, a cPRA value of 97.7% will be returned as 97.7% whereas a cPRA value of 97.0% may be returned as 97%. This does not affect calculations or ranking. It is a display issue only.
2. **Historical** cPRA serum results will display in the user interface with a decimal zero (87% will now display as 87.0%). This does not affect historical data or accuracy. It is a display issue only.

## CTR Version 5.7 (2025)

The scope of CTR 5.7 is currently under consideration.

## Customer Support

For assistance with the information contained in this document, please contact our CTR Customer Solutions Team via email at [transplantregistry@blood.ca](mailto:transplantregistry@blood.ca) or call 1-855-274-2889.

If you are calling outside of normal office hours, dial '1' to speak to on-call CTR Customer Support personnel.