

Canadian Transplant Registry

Version Changes

2022-02-17 – Release Notes 5.1 (5.1.19.1)

Confidential (C)

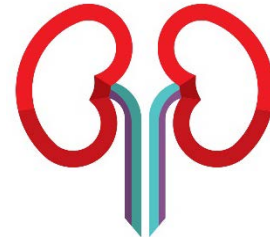
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Canadian Transplant Registry

Overview

Canadian Blood Services works with the Organ and Tissue Donation and Transplantation (OTDT) community across the country to facilitate inter-provincial 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 (Kidney Paired Donation, Highly Sensitized Patients, and National Organ Waitlist), and is used for linking the national potential 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
- Work is underway to expand this technology to serve even more patients in need of transplant

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 7 User Acceptance Testing (UAT) environments available in addition to the main CTR Production environment. For information regarding these environments, please consult <https://ctrstatus.otdcalculators.ca/>. Information about the status of these environments, as well as the Canadian Transplant Registry Integration Guide may be found there.

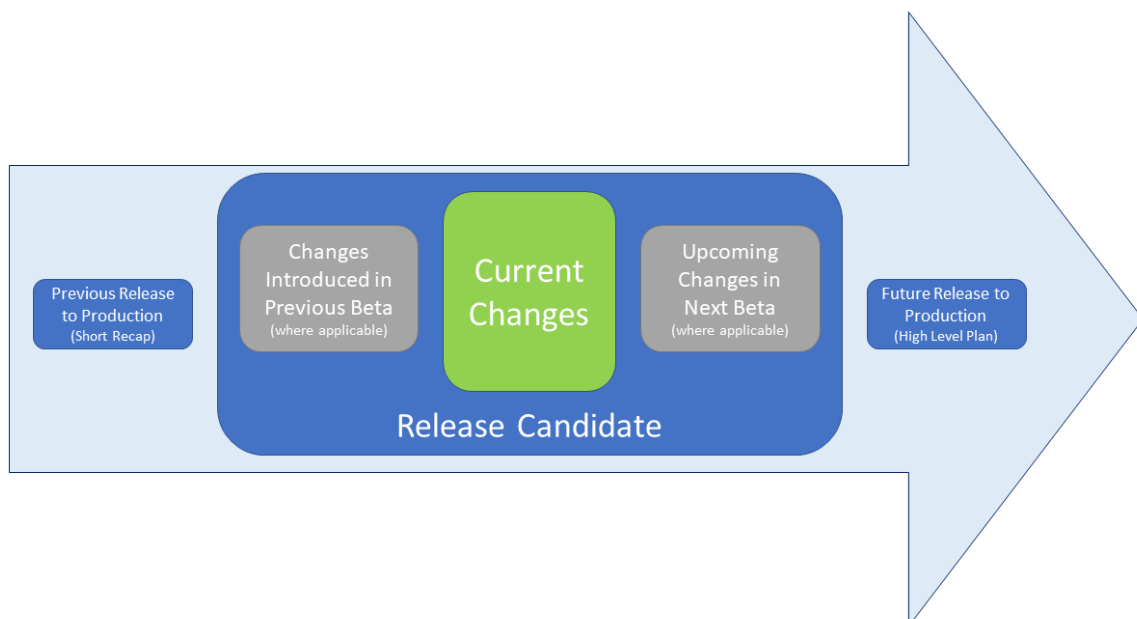


Change Document Format

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 in the version outlined on the document cover broken down by Fixes, Improvements, and New Features
- A high level plan of changes to come in the following release

Please note, when this document is addressing changes in a Beta Version, updates made in previous betas, as well as changes coming in the next beta will also be outlined.



Previous Release Notes - CTR Version 5.0

The release notes for 5.0.7.1, installed into CTR Production on 2021-07-22 may be found at the following link:

[CTR v5.0.7.1 Release Notes](#)

CTR Version 5.1 Release Candidate

CTR v5.1 – Update to HSP Kidney Eligibility

CTR 5.1 will include functionality to support changes to a patient's eligibility for the Deceased Waitlist HSP Kidney program – Inter-Provincial Organ Sharing (IPOS).

The changes to the eligibility criteria, which will be included in CTR version 5.1, will be controlled by a feature switch. This feature will allow enabling the updated eligibility criteria or keeping the eligibility criteria the same as they are today.

The eligibility criteria are expanding to, potentially, allow participation in the Deceased Waitlist HSP Kidney Program for patients who don't meet the criteria used today. The current eligibility criteria will not be removed and will continue to be evaluated for all patients.

To be eligible, all patients must have the following minimum data:

- An active Kidney organ request, for the Deceased Waitlist program
- Their blood group (ABO) is defined
- Their HLA Typing is entered and complete
- At least one HLA Serum result is entered, and the cumulative data is confirmed

The additions to the eligibility criteria are described below:

- Paediatric patients
 - Paediatric patients are automatically eligible, regardless of their cPRA
- Pre-Emptive patients
 - A patient is identified as **pre-emptive** for dialysis and their cPRA meets the minimum requirement

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- At this time, we understand that pre-emptive patients will need a minimum cPRA of 99.5% (this is subject to approval and change)

How does this change impact you?

- The eligibility rules are changing
- A paediatric patient's eligibility could change overnight
 - CTR will re-evaluate the eligibility of all paediatric patients nightly and, where necessary, the application will automatically update the patient's eligibility status
- A new field for capturing a patient's **pre-emptive** status is being added to the patient record

CTR v5.1 (5.1.19.1)

Fixes

Release Version	Reference	Category
5.1.2	CTRII-8885	Unexpected Error

Interface	Web Services / SOAP API
Web Service Endpoint	CTR3
Web Service Method	runHSPMatchOnDonor
Program	Deceased Wait List
Patient	Donor
Section	Allocation

Web Service Method **runHSPMatchOnDonor** returns no results if Kidney has Recovery/Not Sent for Transplant values

Setup:

- Need to have HSP Kidney allocation results in UI for specific donor
- Need to have either Right or Left Kidney or both set to Not Sent for Transplant in the recovery tab
- Alternatively, can set Dual Kidney to Not Sent for Transplant
- Alternatively, can set Right or Left Kidney but not both to Not Recovered or Recovered for reason other than Transplant

Steps:

- Run web service **runHSPMatchOnDonor**, for the donor matching setup criteria

Unexpected results:

- No allocation results are returned via web services
- Via web user interface, the correct allocation results are displayed

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Release Version	Reference	Category
5.1.3	CTRII-8897	Unexpected Error

Interface	Web Browser Interface
Web Service Endpoint	N/A
Web Service Method	N/A
Program	Kidney Paired Donation
Patient	Recipient
Section	Registration / Registered Pair

A recipient with an **Inactive** registered pair incorrectly displays the recipient as **KPD Eligible** when the recipient is not KPD eligible.

Setup:

- Recipient is KPD Eligible
- Recipient has their Registered Pair in a state of Inactive

Unexpected results:

- Recipient is showing as KPD Eligible

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Release Version	Reference	Category
5.1.3	CTRII-8924	Unexpected Error

Interface	Web Services / SOAP API
Web Service Endpoint	All
Web Service Method	updateAttachment
Program	Deceased Wait List
Patient	Recipient
Section	Organ Request / Attachments

Updating an existing attachment on a patient with a Lung organ request causes a null pointer exception.

Note: Reviewing production web service logs, this error was never seen.

Setup:

- Identify a recipient with a lung organ request
- Ensure recipient has attachment added

Steps:

- Submit a web service request for **updateAttachment** for the same attachment added to the lung recipient

Unexpected results:

- Update is not successful
- Null pointer exception is returned

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Release Version	Reference	Category
5.1.6	CTR11-8925	Unexpected Error

Interface	Web Services / SOAP API
Web Service Endpoint	All
Web Service Method	uploadAttachment
Program	Deceased Wait List
Patient	Recipient
Section	Organ Requests / Attachments

In attempting to add an attachment to a recipient organ request, the web service **uploadAttachment** fails, returning a null pointer exception.

This issue, caused by a database ID mismatch, would only happen for patients (recipients) that were created in the first/original version of CTR.

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Release Version	Reference	Category
5.1.6	CTR11-8934	Unexpected Error

Interface	Web Services / SOAP API
Web Service Endpoint	All
Web Service Method	uploadAttachment
Program	Deceased Wait List
Patient	Recipient
Section	Organ Requests / Attachments

When uploading an attachment to the recipient's Organ Request, and when referencing the section with only the ID (6), an error is returned.

When uploading an attachment to the recipient's Organ Request using the BIZ_REF value for referencing the section, the upload is successful.

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Release Version	Reference	Category
5.1.6	CTR11-9143	Unexpected Error

Interface	Web Services / SOAP API
Web Service Endpoint	CTR3
Web Service Method	N/A
Program	Deceased Wait List
Patient	All
Section	N/A

We have received reports of web service errors returning as **error.unknown**, while the same error in the web user interface returns a detailed message.

Updated the application, replacing the **error.unknown** values with the detailed error message.

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Release Version	Reference	Category
5.1.11, 5.1.12	CTR11-9120	Unexpected Error

Interface	Web Browser Interface
Web Service Endpoint	N/A
Web Service Method	N/A
Program	Kidney Paired Donation
Patient	Living Donor
Section	Dashboard / Living Donor

The quick links in the **Living Donor** section on the **Dashboard** were showing an incorrect count for the **New** and **On Hold** filters.

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Release Version	Reference	Category
5.1.12, 5.1.13	CTRII-9192	Unexpected Error

Interface	Web Services / SOAP API
Web Service Endpoint	CTR3
Web Service Method	uploadAttachment
Program	Deceased Wait List
Patient	All
Section	Attachments

Unexpectedly, an uploaded attachment would replace the existing attachment on the record. This issue was visible when the record had an attachment prior to the upload, and the upload of the new attachment was being made to the same section.

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Release Version	Reference	Category
5.1.18	CTRII-9291	Unexpected Error

Interface	Web Services / SOAP API
Web Service Endpoint	CTR3
Web Service Method	previewHsHeartMatch
Program	Deceased Wait List
Patient	Donor
Section	Allocation

In specific scenarios, the preview would incorrectly return zero (0) matches. We have seen this to happen when the *preview* requests were submitted rapidly, within a period of seconds that did not allow the previous request to complete.

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Release Version	Reference	Category
5.1.18	CTR11-9309	Unexpected Error

Interface	Web Browser Interface
Web Service Endpoint	N/A
Web Service Method	N/A
Program	All
Patient	All
Section	Attachments

When the filename of a document contains non-ASCII characters, the user would not be able to download the document. The upload was successful, but an error would be presented when attempting to download the document.

The application has been updated to replace non-ASCII characters in the filename of any document attached to a record.

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Release Version	Reference	Category
5.1.11, 5.1.12	CTR11-9120	Unexpected Error

Interface	Web Browser Interface
Web Service Endpoint	N/A
Web Service Method	N/A
Program	Kidney Paired Donation
Patient	Living Donor
Section	Dashboard / Living Donor

The quick links in the **Living Donor** section on the **Dashboard** were showing an incorrect count for the **New** and **On Hold** filters.

Improvements

Release Version	Reference	Category
5.1.4	CTRII-8907	Usability Improvement

Interface	Web Services / SOAP API
Web Service Endpoint	CTR3
Web Service Method	updateDonorOrganState
Program	Deceased Wait List
Patient	Donor
Section	N/A

Based on a specific scenario, detailed below, an error is returned as expected but the error is not clearly stating the issue.

Setup:

- Call method **updateDonorOrganState()**
- Ensure request contains <notRecoveredStateReason>
- Request is missing <recoveredState>

Fix:

- Return a meaningful error message
- Example:

```
Donor organ [RIGHT_KIDNEY] recovery state is required when
NotRecoveredStateReason [ id[29], bizRef[INFECTION_SEPSIS] ] is
provided.
```

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Release Version	Reference	Category
5.1.2, 5.1.3, 5.1.4, 5.1.8, 5.1.9, 5.1.10, 5.1.12	CTRII-8887, CTRII-8927, CTRII-8941, CTRII-9003, CTRII-9121, CTRII-9144, CTRII-9171, CTRII-9189	Documentation

Interface	JavaDocs
Web Service Endpoint	CTR3
Web Service Method	N/A
Program	N/A
Patient	N/A
Section	N/A

Updates include:

- Display JavaDocs version in the header
- Updated JavaDocs, correcting broken links
- Document sample SOAP requests for the Attachment methods
- Add details regarding the **sendAlerts** element
- Updated the **Attachment** documentation
- Updates to lookup table values

<https://documents.otdcalculators.ca/javadochHeart>

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Release Version	Reference	Category
5.1.1, 5.1.3	CTRII-6155, CTRII-8835, CTRII-8855, CTRII-8888	Usability Improvement

Interface	Web Browser Interface
Web Service Endpoint	N/A
Web Service Method	N/A
Program	All
Patient	All
Section	All

Various usability improvements:

- Add “loading” splash screen during the initialization of CTR
- Add mouseover tooltips to icons used in the application to identify fields required for various program activities (e.g., activation, eligibility)
- Remove the “dash” in the patient editor window, which was directly after the **ABO** label – replaced the dash with a colon
- Fixed the column filter on the **Sent for Transplant** column, in the **DWL Offers** screen

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Release Version	Reference	Category
5.1.2, 5.1.4	CTRII-8262, CTRII-8938, CTRII-8889, CTRII-8912	Usability Improvement

Interface	Web Browser Interface
Web Service Endpoint	N/A
Web Service Method	N/A
Program	Kidney Paired Donation
Patient	Recipient
Section	Various

Updated / Improved Messages and Information:

- Added messaging in a banner, which will identify the fields that may be updated on a Waitlist TBD Recipient
- Updated warning message when reassigning a Transplant Centre in an end offer
- Updates to Match Run Communication template

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Release Version	Reference	Category
5.1.4, 5.1.5, 5.1.7, 5.1.9, 5.1.14	CTRII-8852, CTRII-8976, CTRII-8980, CTRII-8984, CTRII-8985, CTRII-8986, CTRII-8987, CTRII-8988, CTRII-8989, CTRII-9122, CTRII-9135, CTRII-9136	Usability & Performance Improvements

Interface	Web Browser Interface
Web Service Endpoint	N/A
Web Service Method	N/A
Program	All
Patient	All
Section	Dashboard and Donor/Recipient Lists

Improvement performance on the following:

- National Organ Waitlist
- Dashboard **My Patients** quick access lists of donors/recipients
- Dashboard **My Offers** quick access lists of donor/recipients/offers

Users were experiencing delays when attempting to load a filtered view of patients based on various criteria available from the Dashboard. These improvements have greatly reduced the delay previously experienced.

New Features

Release Version	Reference	Category
5.1.5, 5.1.7	CTRII-8945, CTRII-9010	New Feature & Functionality

Interface	Web Browser Interface
Web Service Endpoint	N/A
Web Service Method	N/A
Program	Kidney Paired Donation
Patient	All
Section	Activation / Registration

New functionality that allows a user the ability to identify a Kidney Paired Donation registered pair as **Not Transplant Compatible**.

The application determines compatibility based on data entered (e.g., Blood group, HLA Typing and HLA Serum), but there are reasons when a registered pair would not be transplant compatible.

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Release Version	Reference	Category
5.1.6, 5.1.7, 5.1.8	CTRII-8991, CTRII-8992, CTRII-8993, CTRII-9035, CTRII-9036, CTRII-9112	New Feature & Functionality

Interface	Web Browser Interface
Web Service Endpoint	N/A
Web Service Method	N/A
Program	Deceased Wait List / Kidney
Patient	All
Section	Organ Request / HLA

The features described below are part of the **IPOS Kidney Project**, which is expected to be completed for the release of CTR 5.1.

This release includes many of the updates needed to support this project but ends where the Allocation process starts. Future releases will include updates to the Allocation process, which will include updated ranking rules for paediatric and pre-emptive patients.

Eligibility for HSP Kidney – Deceased Wait List Kidney

- New field that allows identifying a patient as Pre-Emptive
 - Future releases will include support for Web Services to update this value
- Changes to Deceased Wait List Kidney Eligibility
 - The eligibility changes may be enabled/disabled
 - When enabled, the following will apply:
 - A patient may be eligible pre-emptively if their cumulative cPRA is greater or equal to **a specific value**
 - The minimum cumulative cPRA will no longer apply to paediatric patients – paediatric patients will be eligible with any cPRA value

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Release Version	Reference	Category
5.1.7, 5.1.8, 5.1.11, 5.1.12, 5.1.13, 5.1.14, 5.1.15, 5.1.16	CTRII-9016, CTRII-9017, CTRII-9018, CTRII-9019, CTRII-9020, CTRII-9021, CTRII-9024, CTRII-9027, CTRII-9104, CTRII-9127, CTRII-9028, CTRII-9104, CTRII-9105, CTRII-9109, CTRII-9127, CTRII-9139, CTRII-9182, CTRII-9235	New Feature & Functionality

Interface	Web Browser Interface
Web Service Endpoint	N/A
Web Service Method	N/A
Program	All
Patient	Recipient
Section	HLA

The features described below are part of the **Willing to Cross Project**, which is expected to be completed for the release of CTR 5.1.

Willing to Cross Permissions

- The application has been updated to separate the HLA and Willing to Cross permissions – this will allow defining a user who only has **read-only** access to HLA while having **edit** permission to Willing to Cross values

Willing to Cross Data-Entry

- Support for entering patient Willing to Cross values
- There are no web service changes currently
- Future releases will provide support for Willing to Cross values in allocation

Willing to Cross Summary Data on the Recipient HLA Screen

- Adjusted cPRA
- State of the Organ/Program Willing to Cross Participation
- Patient's Willing to Cross Eligibility by Organ/Program

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Release Version	Reference	Category
5.1.12, 5.1.13, 5.1.14, 5.1.15, 5.1.16	CTRII-9153, CTRII-9160, CTRII-9161, CTRII-9162, CTRII-9164, CTRII-9232, CTRII-9248	New Feature & Functionality

Interface	Web Browser Interface
Web Service Endpoint	N/A
Web Service Method	N/A
Program	Kidney Paired Donation
Patient	Recipient / Donor
Section	Match Criteria / Health Blood Group

Support for capturing ABO Incompatible (ABOi) data on donors and recipients participating in the Kidney Paired Donation program.

This functionality allows capturing ABO subtyping values for a donor and the willingness of a recipient to match to a subtyped donor.

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Release Version	Reference	Category
5.1.12, 5.1.13, 5.1.14, 5.1.16, 5.1.17	CTRII-9174, CTRII-9175, CTRII-9176	New Feature & Functionality

Interface	Web Browser Interface
Web Service Endpoint	N/A
Web Service Method	N/A
Program	Kidney Paired Donation
Patient	N/A
Section	Match Run Processing

The Kidney Paired Donation (KPD) Match Run processing has been updated to split the process into two actions, still triggered by the KPD Administrator.

The purpose of this change is to improve usability, allowing for analysis earlier in the process.

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Release Version	Reference	Category
5.1.19	CTRII-9165, CTRII-9167, CTRII-9168, CTRII-9172, CTRII-9190, CTRII-9191	New Feature - Monitoring

Interface	Application Monitoring
Web Service Endpoint	N/A
Web Service Method	N/A
Program	N/A
Patient	N/A
Section	N/A

The application has additional health check monitoring tools, which will assist with identifying possible server/network issues sooner.

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Release Version	Reference	Category
5.1.12	CTRII-9152, CTRII-9188	New Feature – Post TX

Interface	Web Browser Interface
Web Service Endpoint	N/A
Web Service Method	N/A
Program	All
Patient	Recipient
Section	Post-Transplant / Serum Creatinine

A new data-entry field has been added to the Post-Transplant Serum Creatinine section.

Known Issues

There are no known issues in 5.1.19.1.

CTR v5.1 Future Changes in Release Candidate (Known/Anticipated)

There are no known updates remaining in CTR v5.1.19.1.

Upcoming Changes CTR Version 5.2

The following is a list of the currently anticipated updates coming to CTR in the 5.2 Release and is accurate at the time of document distribution.

- Enhancement to the Domino Chain for End Offer Recipient Assignment
- Update Canadian cPRA Calculator Data

Customer Support

For assistance with the information contained in this document, please contact our CTR Customer Solutions Team via email at 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.