



Bilal,
blood donor



Cara,
*blood recipient and cord blood
stem cell donor*



2022–2023: Mid-year review

Presentation by Dr. Graham Sher, Chief Executive Officer
Open Board Meeting
December 1, 2022



**Canadian
Blood
Services**

BLOOD
PLASMA
STEM CELLS
ORGANS
& TISSUES

Continued to ensure that Canadian patients have reliable access to safe, high-quality products in the first half of 2022–2023

- Continued delivering safe, high-quality products and services while ensuring fiscal responsibility.
- Continued to respond successfully to the changing COVID-19 environment.
- Introduced changes to how we do business to improve the availability of vital products for Canadian patients.
- The employee experience, the donor experience and a deep commitment to diversity, equity and inclusion continue to guide our actions.

Adaptability and resilience in a challenging environment

Fresh blood products

- Continued to successfully manage inventory levels.

Plasma and plasma protein and related products

- Expanded our plasma footprint to improve plasma sufficiency albeit managing various construction challenges.
- Maintained sufficient immunoglobulin inventory levels.

Stem cells

- The program continues to adapt and implement strategies to minimize impact to operations, employees, donors and patients. Cord blood collections impacted due to supply chain issues.

Organs and tissues

- Donation and transplantation rates have improved but have not yet returned to pre-pandemic rates.

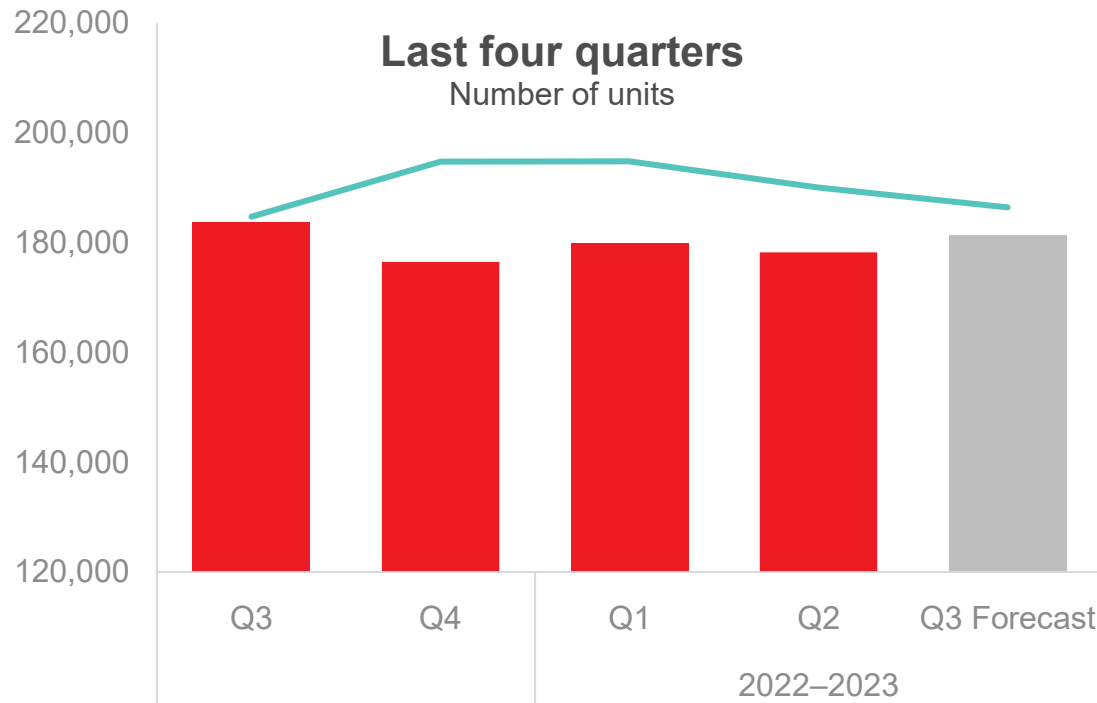
Blood for Life

We continued to successfully manage the supply and demand of blood products

- Inventory management was ongoing through the year in response to lifting of COVID-19 public restrictions, changing donor behaviour, staffing impacts and external conditions.
- Collection and recruitment plans, including carefully timed "immediate need" messaging, were optimized to ensure no impact to patients.
- Onboarded 387 hospitals and 10 distribution centres to the online ordering platform. New milestone reached in August with 10,000 orders processed, representing 72 per cent of hospital orders.

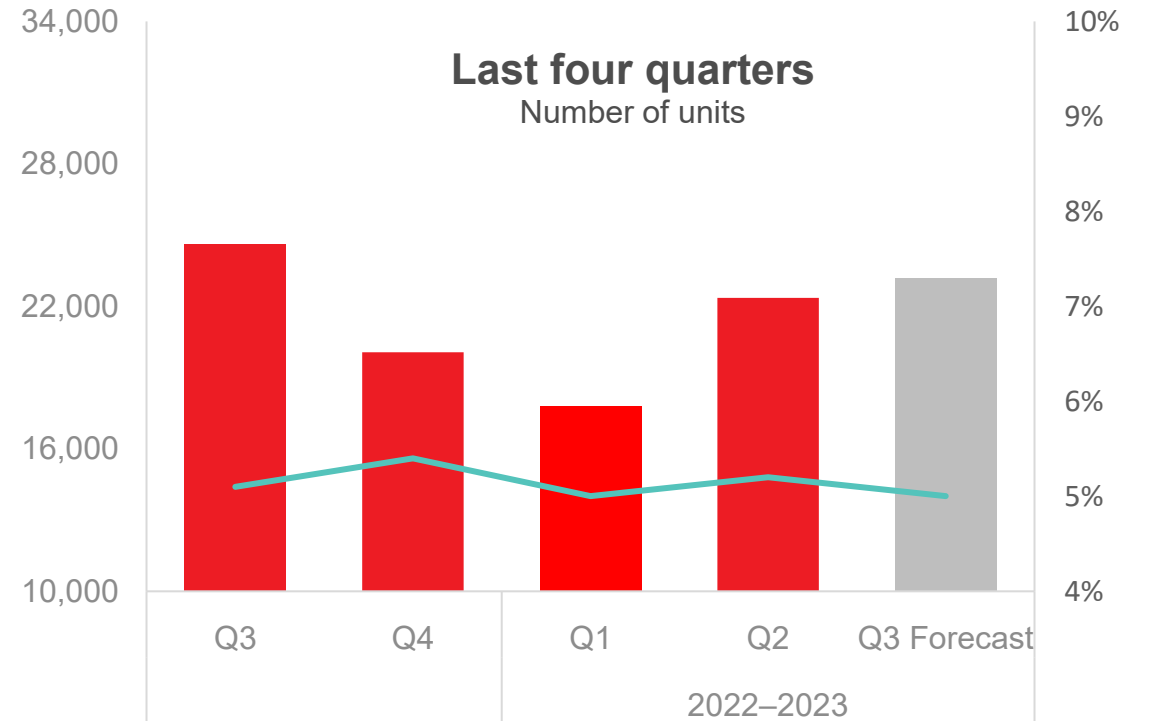
Red blood cell (RBC) shipments and collections returned to pre-pandemic levels while inventory and discard rates decreased

RBC shipments and whole blood collections



● RBC shipments — Whole blood collections

RBC opening inventory and discard rates



● RBC inventory — Discard rate (%)

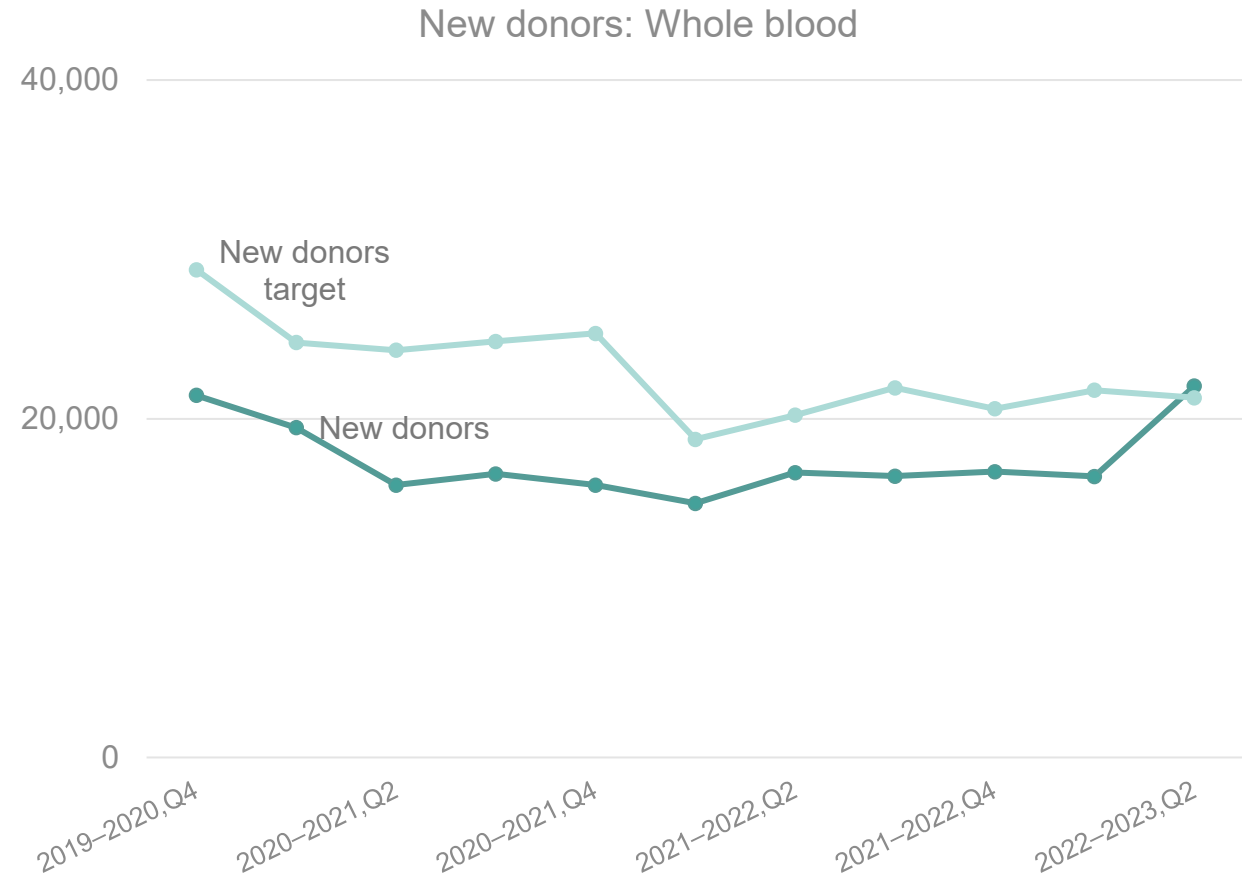
Active donor base increasing

- With marketing, earned media and resumption of in-person recruitment, the whole blood donor base increased from a low point in Q4 2020–2021.
- Transition of some donors from whole blood to the plasma program.



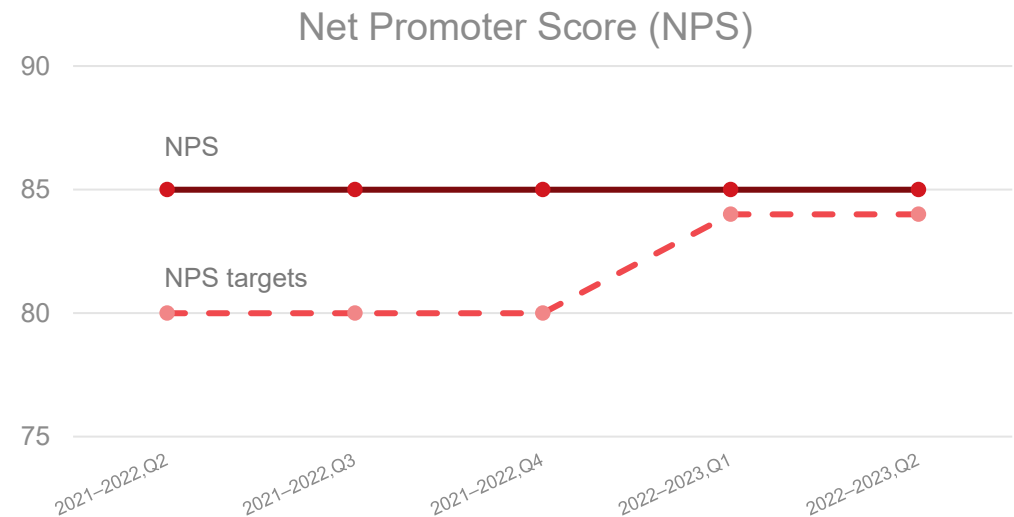
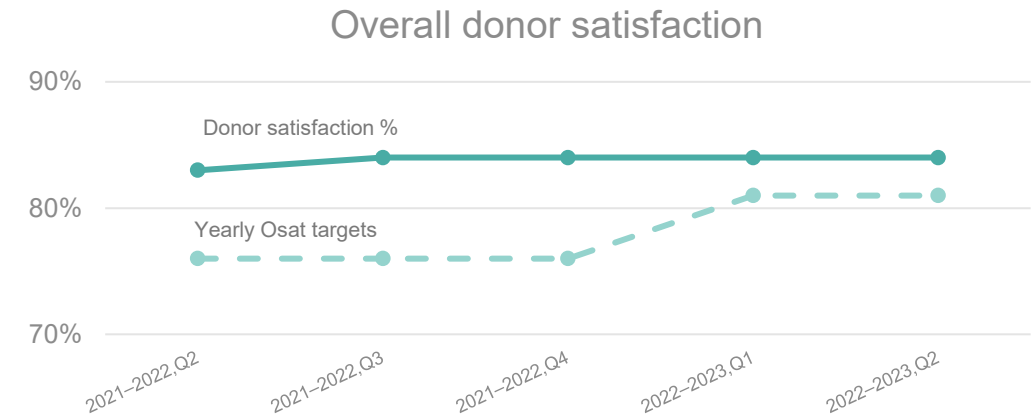
Above target acquisition of new whole blood donors in Q2 2022-2023

- In Q2 Canadian Blood Services recruited over 20,000 new whole blood donors for the first quarter since the pandemic began.



Continued to focus on the donor experience

- The overall satisfaction and net promoter score (NPS) among donors has remained steady for the last five quarters during COVID-related impacts.
- Our donor experience management ecosystem continues to advance the use of voice-of-donor in decision making. This has helped reduce variances across regions and sites.
- We aim to keep overall donor satisfaction and donor NPS scores at a minimum of 81 per cent and 84 respectively this fiscal.

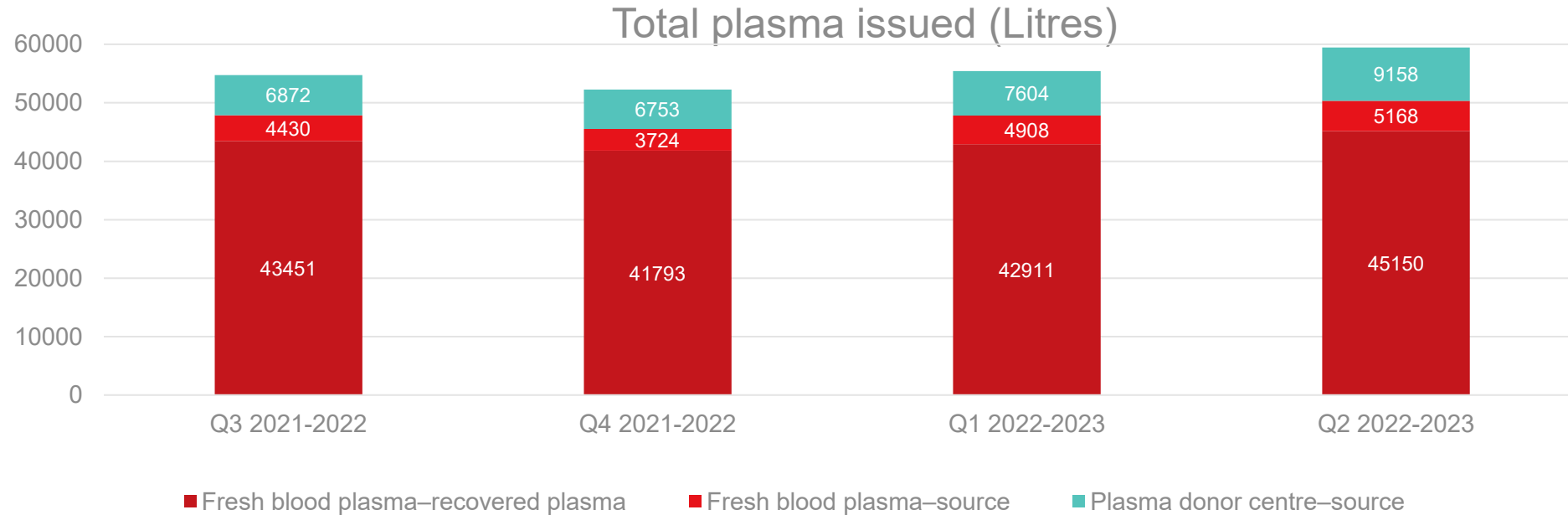


Plasma for Life

Plasma at Canadian Blood Services

- Across our fresh blood and plasma programs we collect plasma from unpaid donors in Canada for two purposes:
 - To meet the transfusion needs of Canadian patients.
 - For biological therapies called plasma protein and related products (PPRPs), which treat Canadian patients with a variety of life-threatening conditions.
 - Over 20 specific proteins are purified from human plasma; immunoglobulin (Ig) is one of the most commonly used products, and rate is increasing.
 - Canadian Blood Services is responsible for ensuring an appropriate level of plasma sufficiency in Canada to secure immunoglobulin for Canadian patients.

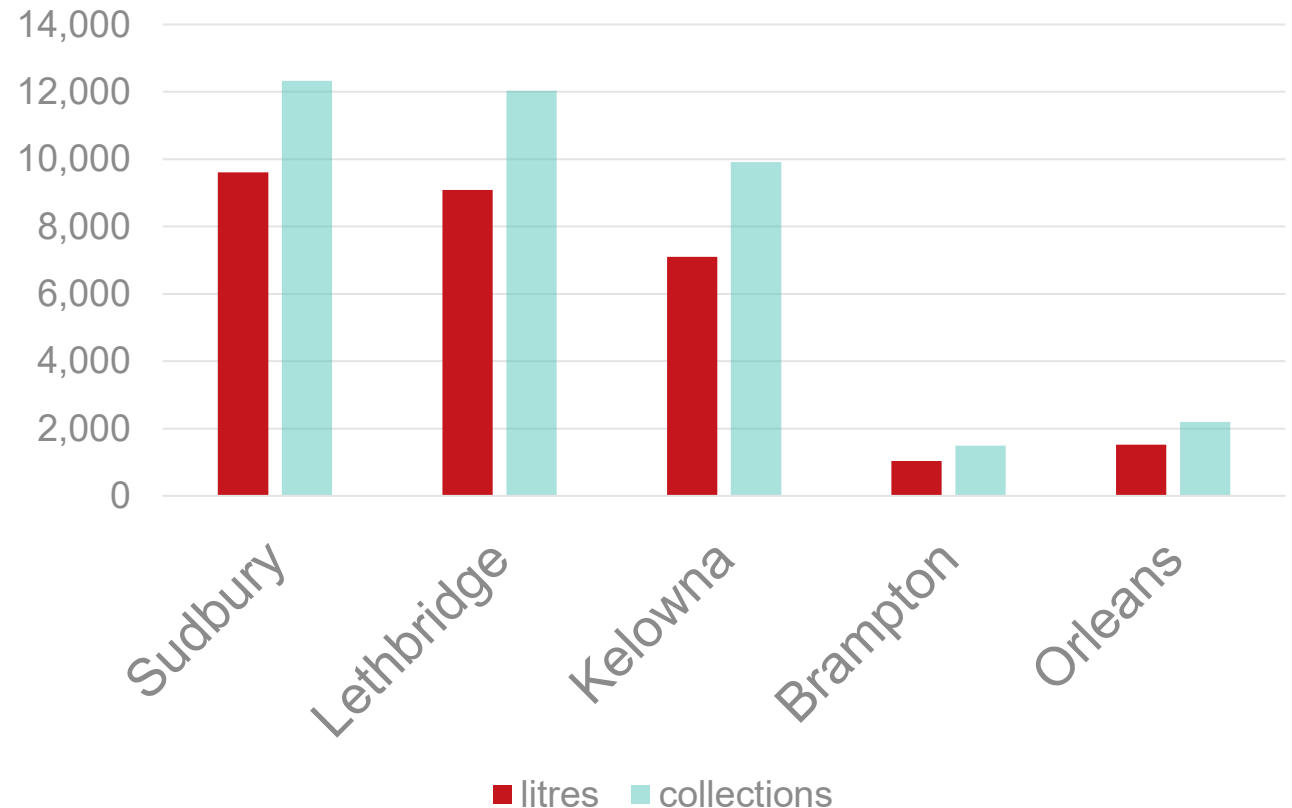
Total plasma sent for fractionation



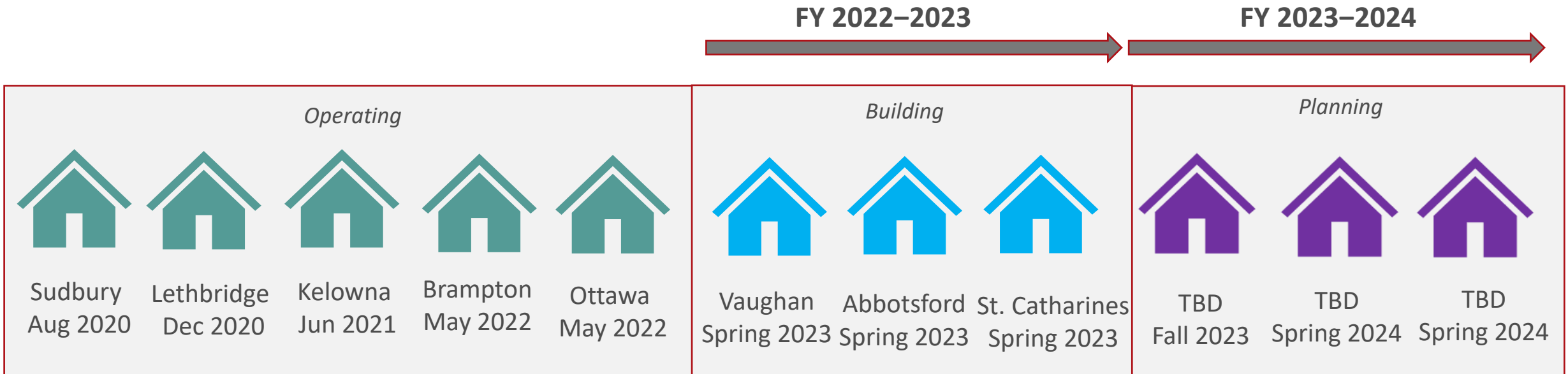
- Close to 60,000 litres of plasma were sent for fractionation in Q2, an increase of 7.3 per cent versus the previous quarter.
- Plasma sufficiency for immunoglobulin grew to 16 per cent.
- 76 per cent of product is recovered from whole blood donations, nine per cent from apheresis plasma programs at mixed centres, and 15 per cent from plasma donor centres.

Ensuring the security of supply of immunoglobulin

- At the end of the second quarter of 2022-2023 fiscal year, the plasma sufficiency rate climbed to 16 per cent, after remaining flat at 15 per cent since Q1 last fiscal year
- Since opening the first plasma donor centre in Sudbury in August 2020, the program has sent more than 50,000 litres of source plasma for fractionation



Ensuring the security of supply of immunoglobulin



16% 25%

Estimated sufficiency when operating at capacity with the incremental increase from the blood network

Risk based decision-making

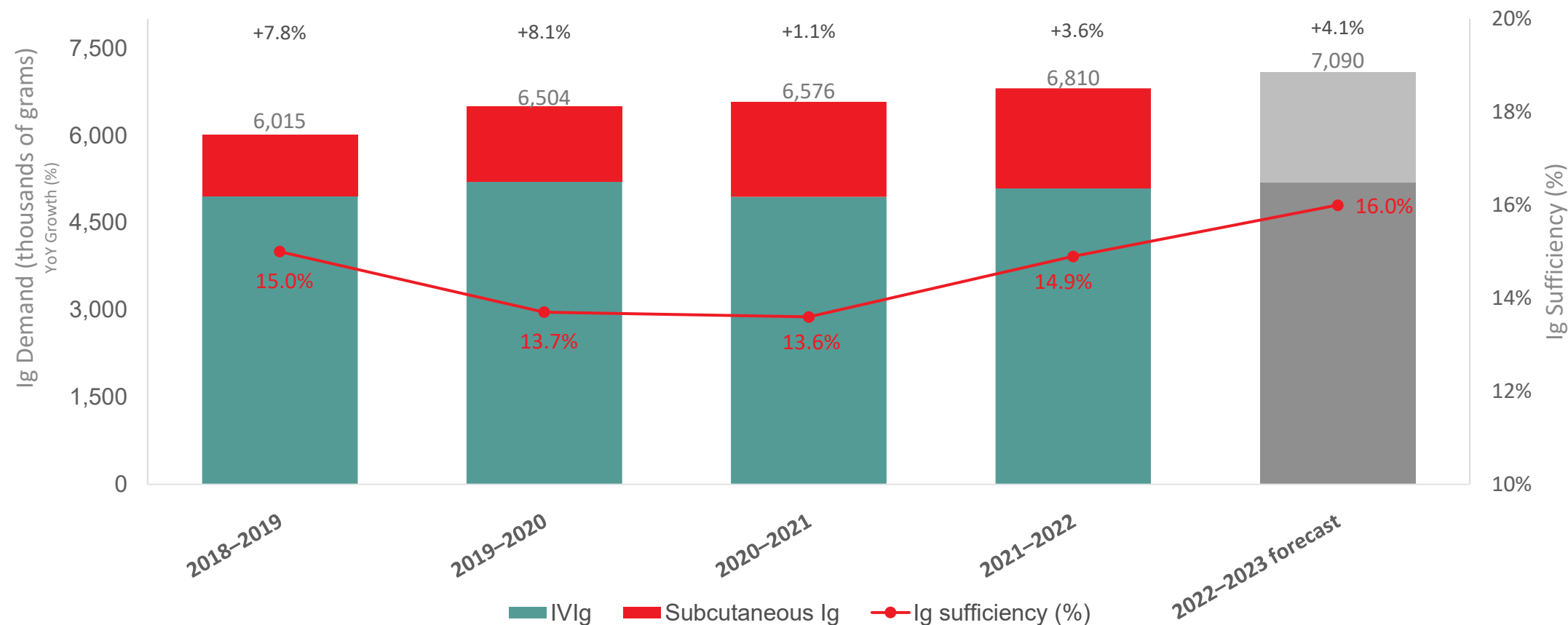
- Global shortage of immunoglobulins for years.
- Impacts of the pandemic further elevated risk and exposed domestic vulnerabilities.
- Conducted a refreshed risk analysis informed by patients, clinicians and other stakeholders.
- Recommendations:
 - *Undertake risk mitigation measures with urgency.*
 - *Pursue a range of 50 to 64 per cent as a target for domestic plasma sufficiency.*
 - *Leverage both not-for-profit and commercial sectors.*
 - *Continue working with the National Emergency Blood Management Committee.*
 - *Maintain active monitoring of the supply and demand for immunoglobulins.*

Contract with Grifols

- Following a rigorous procurement process, a long-term agreement was reached between Canadian Blood Services and Grifols.
- This agreement will move us closer to an end-to-end supply chain (from plasma collection to fractionation and product distribution) for immunoglobulin as soon as possible.
- The agreement is governed by non-encroachment, non-competition and governance controls.
- Grifols is on track to open a domestic fractionation facility.

Demand for immunoglobulin (Ig) continues to grow, but at a slower pace than pre-pandemic

Five-year utilization trend



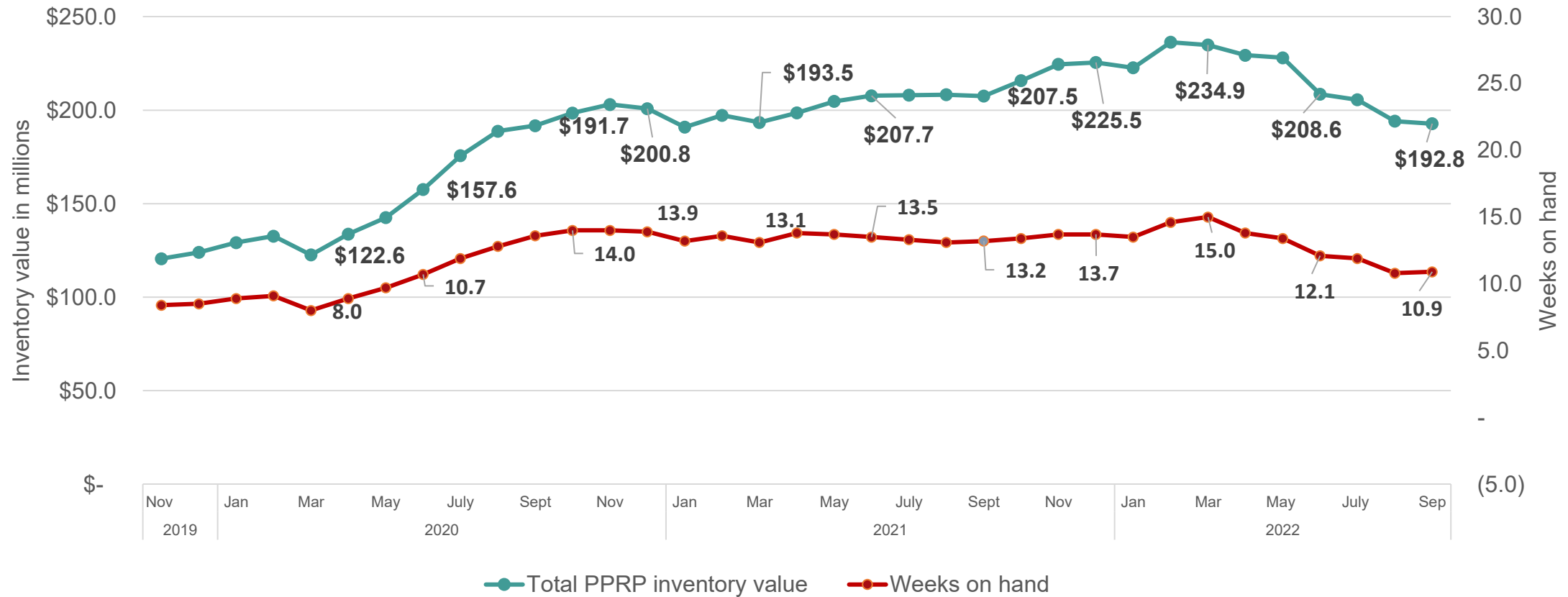
Continued to mature the plasma protein and related products program to benefit patients

- Completed reviews and made recommendations for alpha-1 antitrypsin augmentation therapy (Zemaira®) and recombinant von Willebrand factor (Vonvendi®).
 - To date, all product reviews have been completed within the target of five months.
- Completed a request for proposals (RFP) for plasma-derived products. Received positive stakeholder feedback on RFP process changes.

Continued to mature the plasma protein and related products program to benefit patients

- Approval from Alberta to initiate a pilot project to distribute take-home products through specialty pharmacies. The first product will be emicizumab (Hemlibra®).
- Expanded pilot project involving integrating pharmacists into hemophilia care teams to include adult patients. Interim results demonstrate significant savings.

Total plasma protein and related products (PPRPs) inventory



- Inventory was proactively increased in the face of supply chain concerns at the outset of the pandemic and is returning to target levels.

Stem Cells for Life

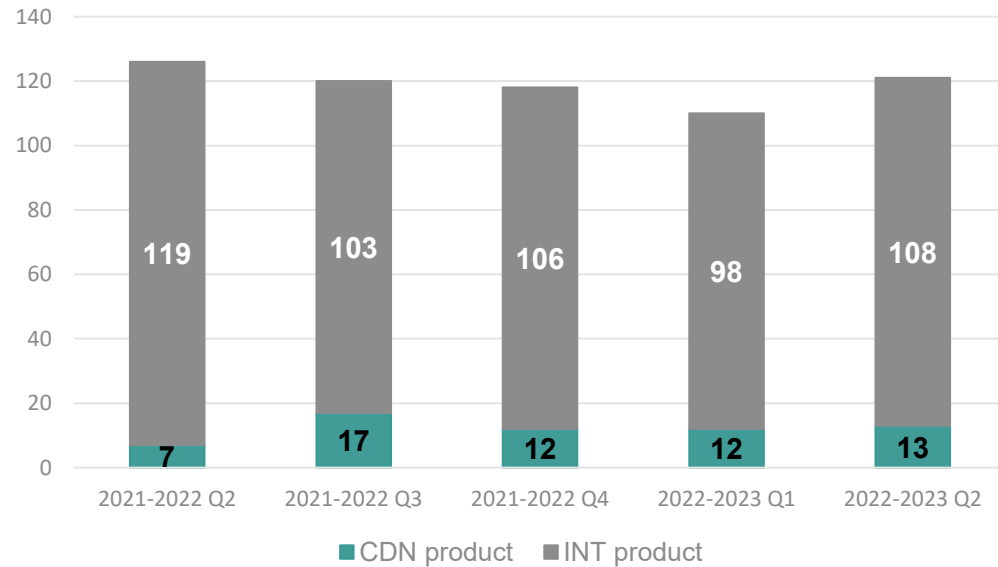
The stem cell program has been active with continued focus on meeting patient needs

- Activities to support the registry include a return to in-community events, improvements to the online registration process, and new recruitment initiatives.
- Cord blood unit distribution continued while processing was paused for four months due to supply chain issues.
- The processing facilities continue to collaborate with stakeholders in the manufacturing of CAR–T cells to support patients.

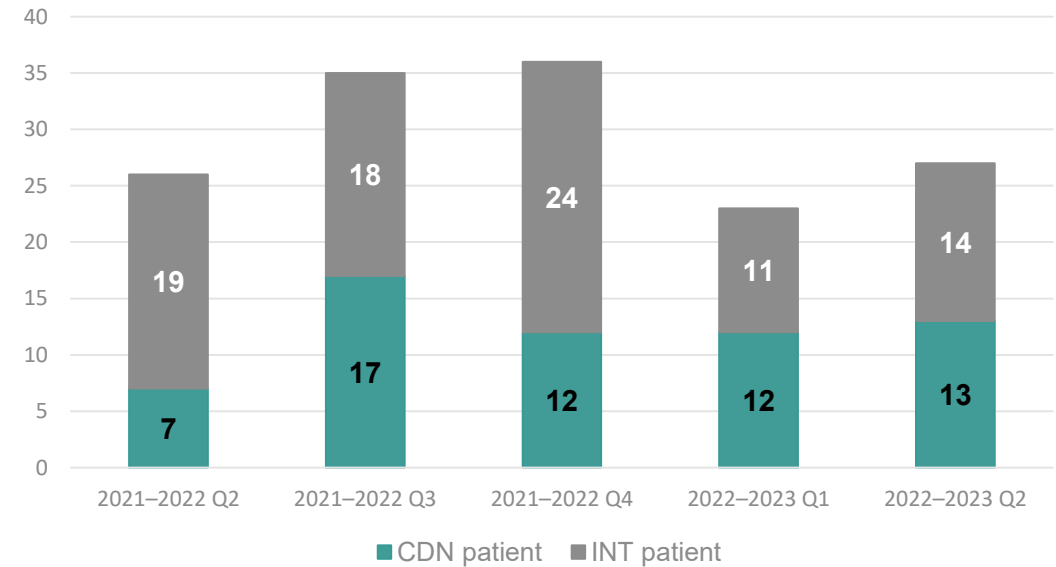
Stem cell registry

The number of donor products for patients receiving transplants remains consistent, with a reduction in use by international patients.

Stem cell registry: Canadian patients



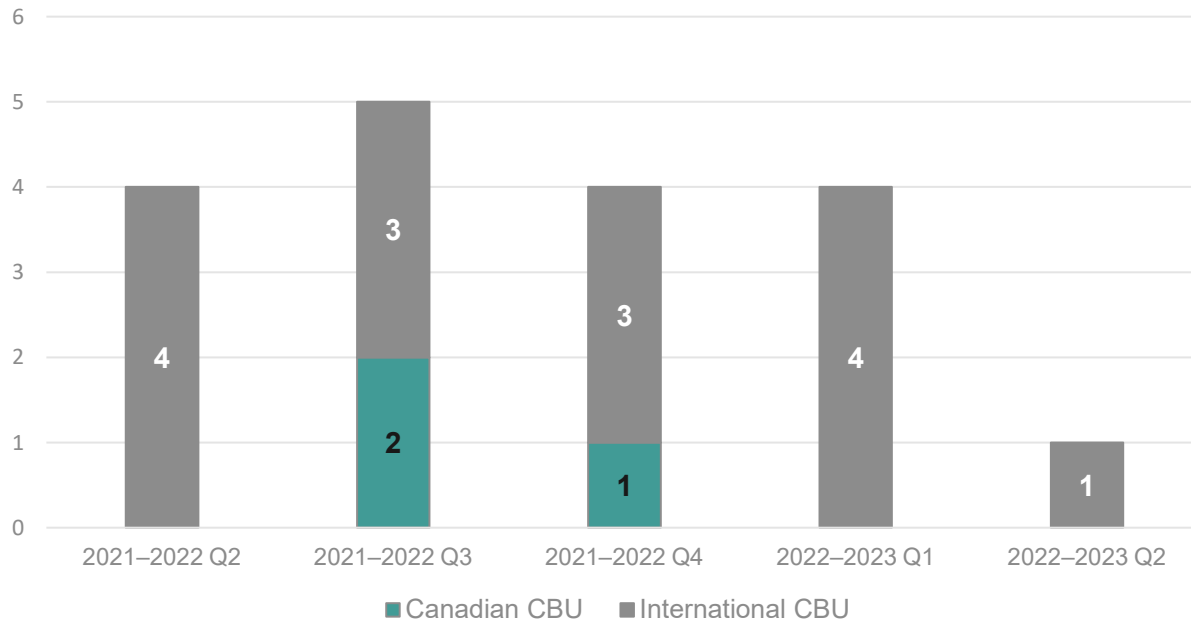
Stem cell registry: Canadian donors



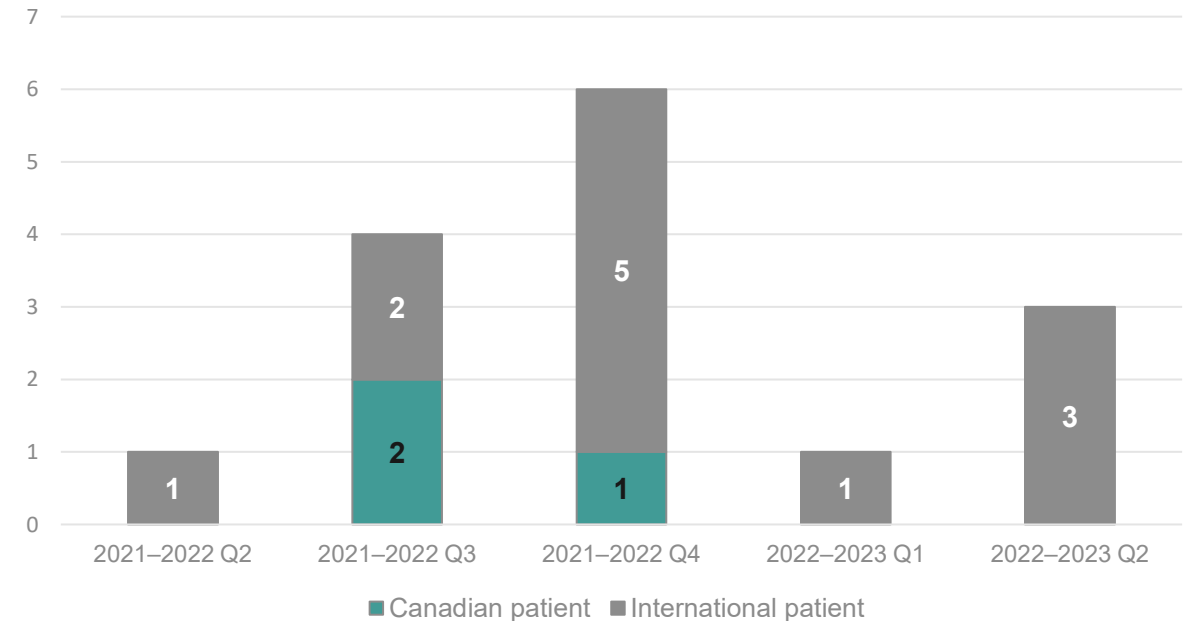
Cord blood bank

Banked cord cell units continue to be ordered by transplant centres. The increase in orders seen during the early period of the pandemic may have been temporary.

Cord blood bank: Canadian patients



Cord blood bank: Canadian donors



Organs and Tissues for Life

System Progress Data Dashboard 2021

Organ and Tissue Donation and Transplantation

Results as of Dec 31, 2021



Contributing Programs

Donation

Donation by
Donor Type

Living
Donation

International
Donation
Rates

Donor
Utilization

Transplantation

Transplants by
Donor Type

Transplants
by Organ

International Transplantation Rates

Patients Waiting

Patients Waiting
for an Organ
Transplant

Deaths on
Transplant
Waitlist

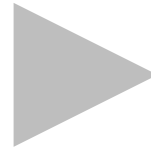
Comparison of donation and transplantation rates

April to Sept. 2022–2023 compared to April to Sept. 2021–2022

Deceased donation

↑ 9%

Q1&Q2 Totals:
2021–22: 371
2022–23: 405



Transplantation

Kidney: ↑ 7%

Liver: ↓ 4%

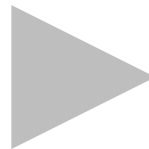
Lung: ↓ 6%

Heart: ↓ 18%

Living donation

↓ 10%

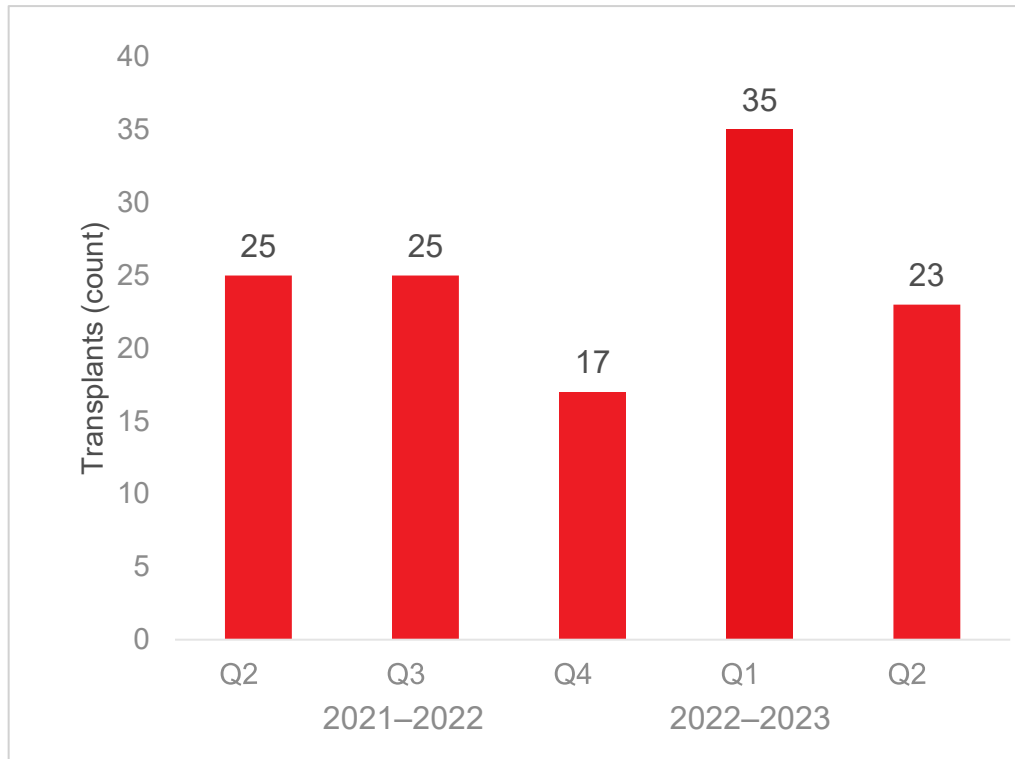
Q1&Q2 Totals:
2021–22: 297
2022–23: 266



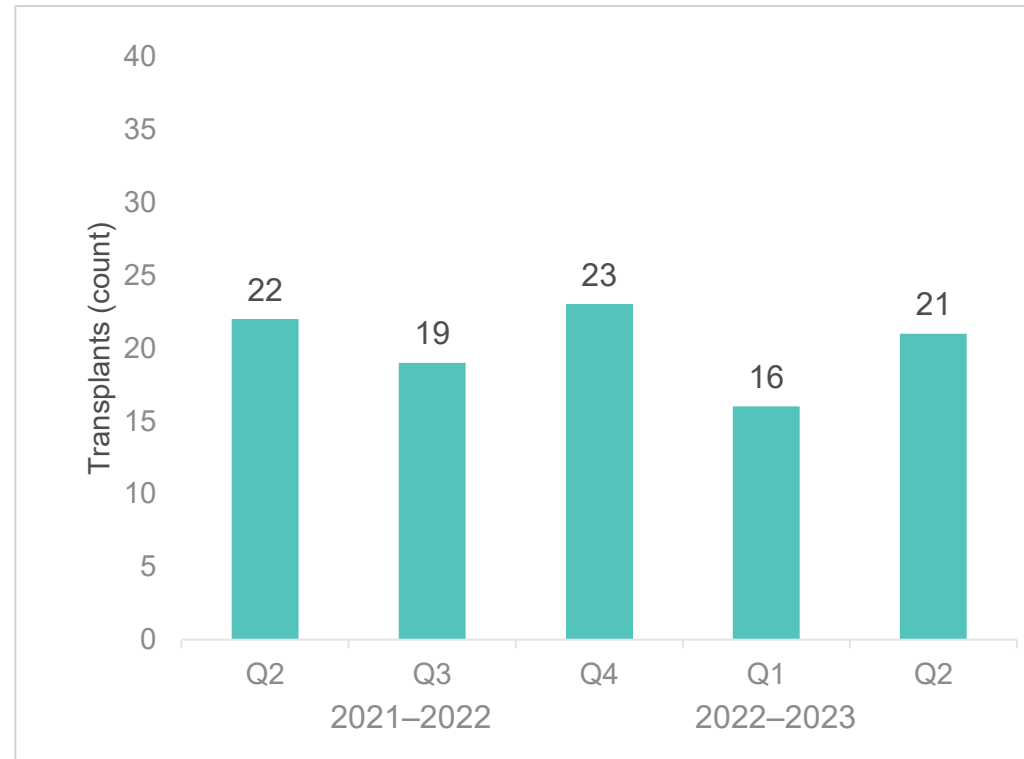
Kidney : ↓ 8%

The number of transplants facilitated are within expected performance levels for the programs

Kidney Paired Donation (KPD) program



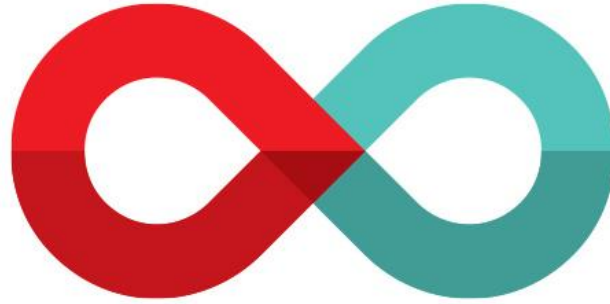
Highly Sensitized Patients (HSP) program



Kidney Paired Donation program and Highly Sensitized Patient program facilitated 95 transplants that would not otherwise have occurred.

System development

- Many education and awareness activities were undertaken to support annual awareness events in April, leading to significant improvements in engagement on social media, in the traditional media and with elected officials.
- Translated two online public education and awareness tools for living donation into additional languages to increase accessibility for diverse audiences.
- In collaboration with stakeholders, produced an updated guidance document to ensure patients who opt for medical assistance in dying (MAiD) can consider organ and tissue donation as part of their end-of-life process.



Gagandeep,
blood donor

Cole,
blood recipient



Safety, surveillance, innovation, quality and research

Monitoring emerging pathogens and other threats of concern

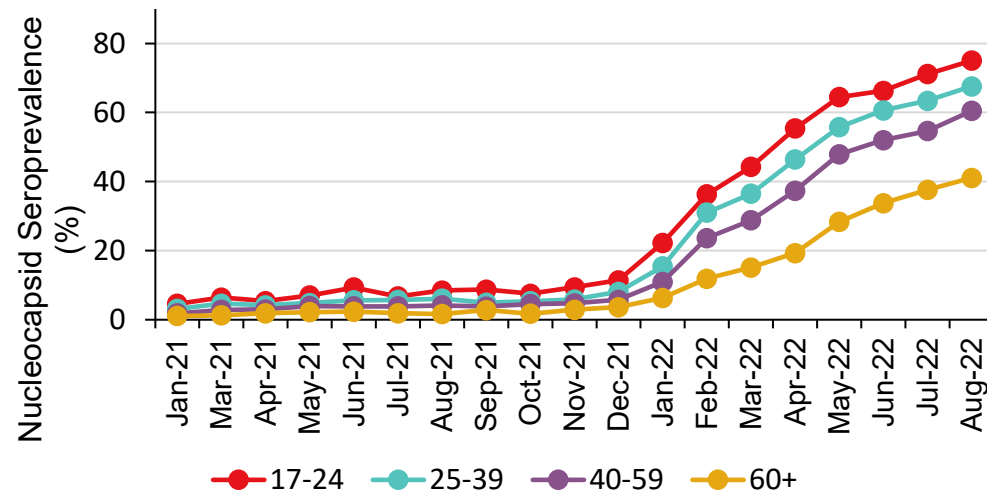
There is no change in the safety profile derived from surveillance activities on transfusion-transmissible pathogens.

Notable events in reporting period:

- *Monkeypox virus*: Introduced donor eligibility criteria and product recall manual information relating to recent illness or contact with monkeypox.

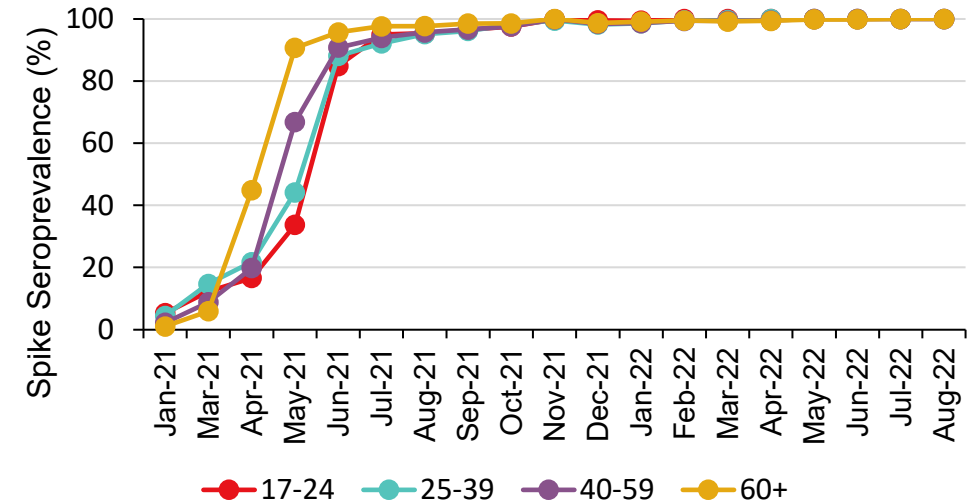
Continued contributions to the federal COVID-19 Immunity Task Force

Nucleocapsid seroprevalence by age group



Evidence of natural immunity from infection (anti-N seroprevalence) by age between January 2021 and August 2022

Spike seroprevalence by age group

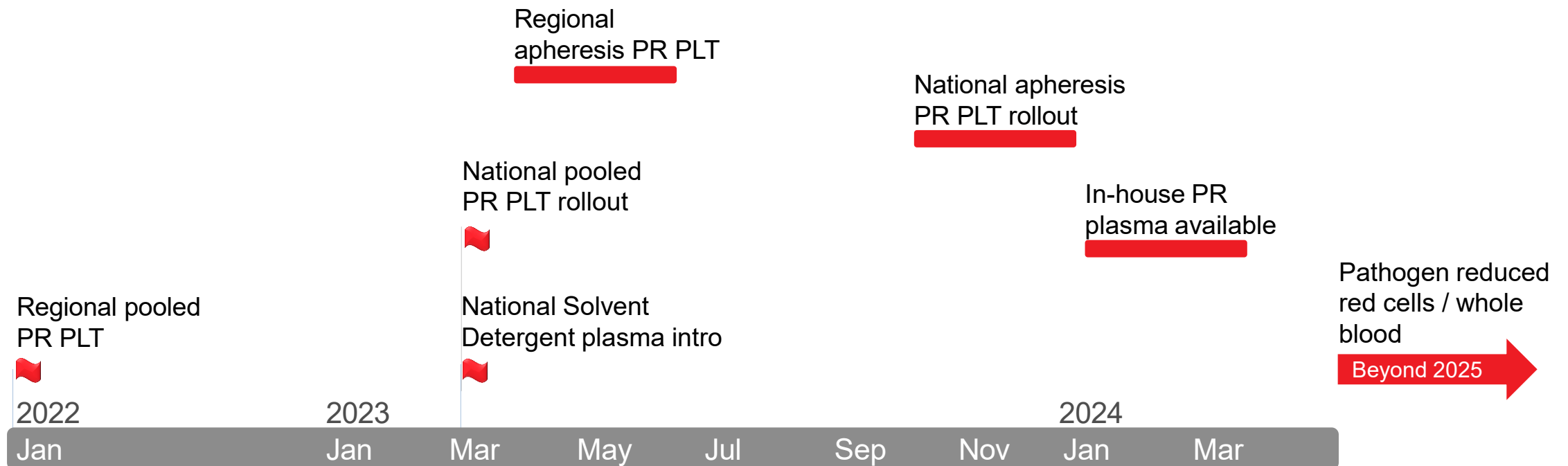


Evidence of primarily vaccine-related antibodies (anti-S seroprevalence) January 2021 to August 2022

Pathogen inactivation roadmap

Milestones achieved in 2022, to date:

- **Pooled pathogen reduced platelets (PR PLT) and Apheresis PR PLT:** Supplier received licence amendment approval for seven-day platelet expiration.
- **Apheresis PR PLT:** Development studies completed.



Quality indicators

All indicators of the quality index met /are close to targets

Performance indicator	Target	Quarterly average
Number of fresh blood products recalled due to errors, accidents or post-donation information	≤ 300	251
Number of serious errors or accidents related to fresh blood products	0	0.5
Number of Health Canada critical observations	0	0
Number of adverse transfusion reactions	<20	11.5
Number of type A non-conformance reports	≤ 2	0
Number of serious stem cell events	0	0
Number of recalled plasma units for fractionation	<150	46
Timely execution of supplier recalls	timely response	Yes
Number of quality indicators meeting target	8 out of 8	7 out of 8

High-impact research and development

Introducing new products

- Health Canada has approved our licence amendment submission for leukoreduced, cold-stored whole blood. Initial application for Canadian Armed Forces.

Advancing patient care

- Launched a developmental study, which marks the first step to develop a broader future-state genomics testing program.

Evolving donation policy

- Cumulative diabetes deferral policy changes from 2012–2022 decreased annual deferrals from 450 to 22 donors, while ensuring donor safety.
- Launched a risk based decision-making project to analyze our current policies and procedures for Malaria.
- Launched a review of criteria for variant Creutzfeldt-Jakob disease.

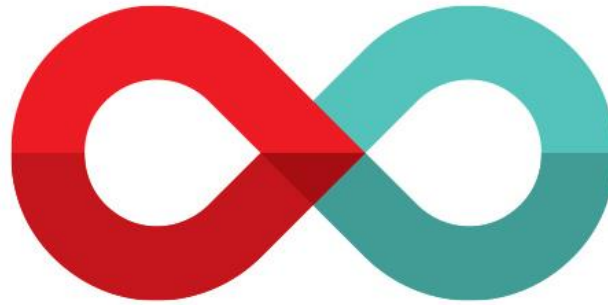
Third-party evaluations of research activities

2022 Stakeholder Research Study demonstrated that majority of stakeholders see:

- ✓ Relevance
- ✓ Quality
- ✓ Impact

Federal government evaluation of the Blood Research and Development Program:

- ✓ Evaluation completed
- ✓ Results pending



Albert,
plasma donor



Linda,
plasma recipient

Workforce and organizational highlights

Identified where to enhance the employee experience

- Employee Experience Program:
 - Improve the experience of front-line staff.
 - Implement hybrid work arrangements.
 - Digitizing to better connect all employees.
 - Modernize talent programs.
- Launched enterprise-wide LinkedIn Learning platform:

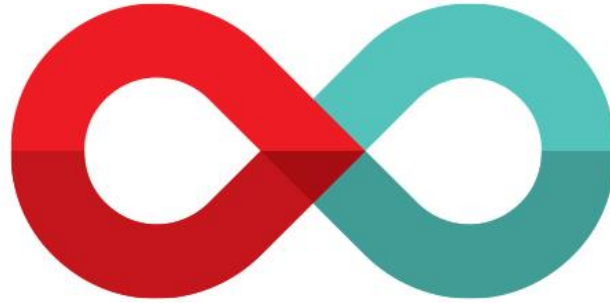
	2022–2023	
	Q1	Q2
% All employees who activated their LinkedIn Learning license	45%	51%
% Frontline employees who have activated their license	26%	28%

Supported the mental and physical well-being of the workforce

- Executed the mental well-being strategy with three areas of focus:
 - Safeguard psychological safety and well-being for all employees.
 - Engage the organization in building resilience.
 - Improve support for employees experiencing mental well-being challenges.
- Execution highlights include:
 - 180 people leaders trained in mental health first aid.
 - Published mental health crisis guidelines.
 - Equipped internal coaches to deliver resilience coaching.
 - Introduced new wellness supports including Insight Timer app for guided meditation and weekly mindfulness drop-in.



Danny,
stem cell donor



Tom,
*stem cell recipient
and financial donor*

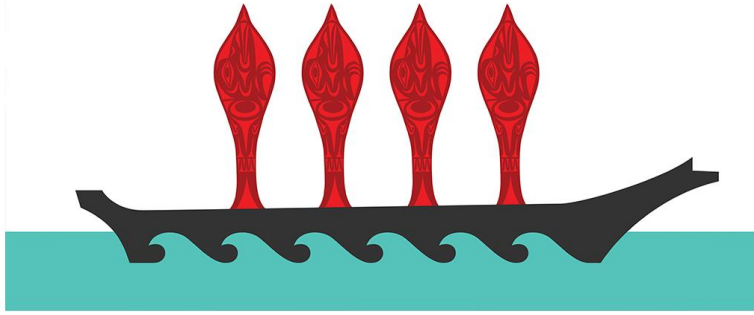
Diversity, equity and inclusion

New sexual behaviour-based screening implemented in September

- All donors, regardless of gender or sexual orientation, are asked questions about sexual behaviour.
- This eligibility change represents an important milestone on our continual journey to build a more diverse, equitable and inclusive national transfusion and transplantation system.

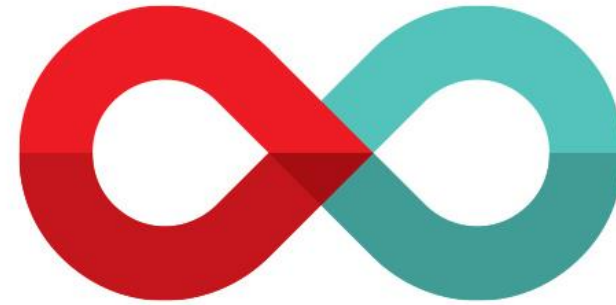


Reconciliation Action Plan



Diversity, equity, inclusion (DEI) and Indigenization

- Empowering employees and advancing DEI and Indigenization fluency, skills and competencies through education and training.
- Advancing organizational inclusion through learning and development.
- Public launch of the Reconciliation Action Plan.
- Community engagement strategies and guidelines.
- Evolution of our DEI strategy and action plan.
- Expansion of internal employee resource groups.



Lauren,
kidney donor

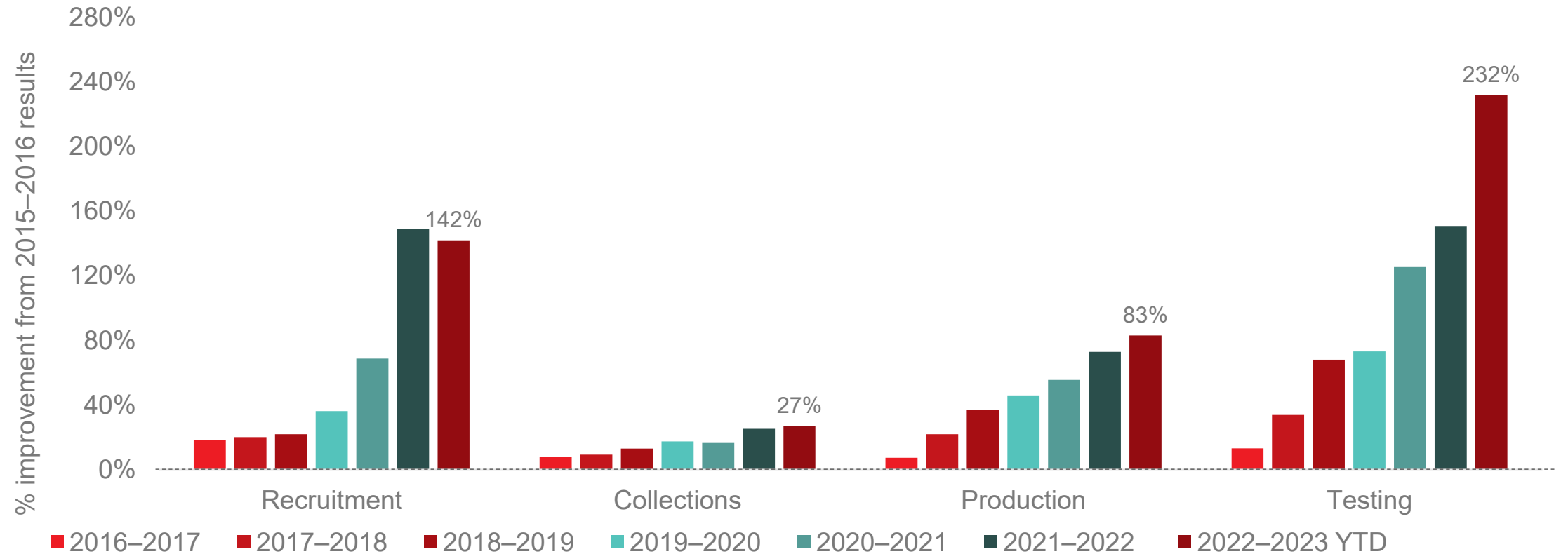


Gurjit,
kidney recipient

Financial results

Productivity results: 2022–2023 year-to-date results

Productivity results strong in 2022–2023 YTD. Productivity performance measures tracking to target or better.



2022–2023 summary financial results

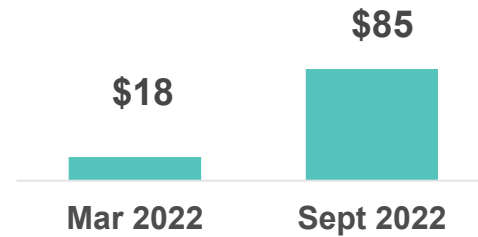
As at Sept 30, 2022 (charts in millions of dollars).

WORKING CAPITAL

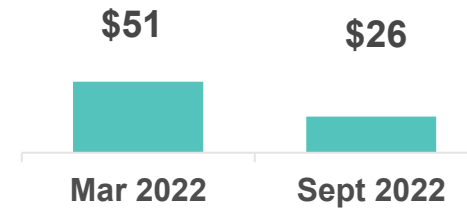


ASSETS

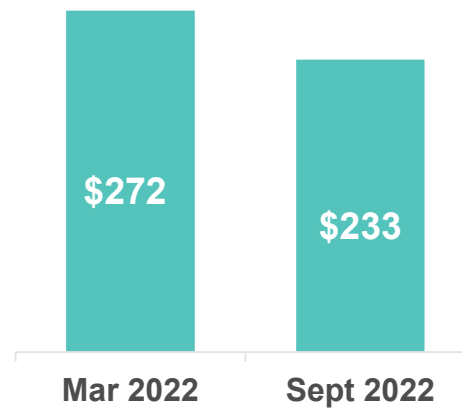
UNRESERVED CASH



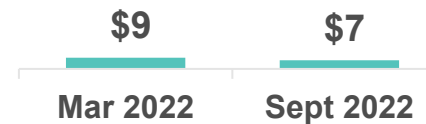
RECEIVABLES



INVENTORY

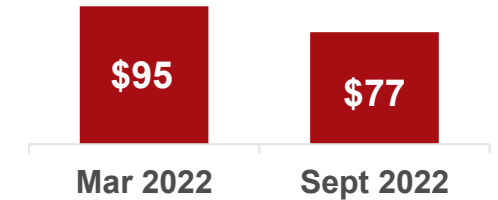


PREPAIDS



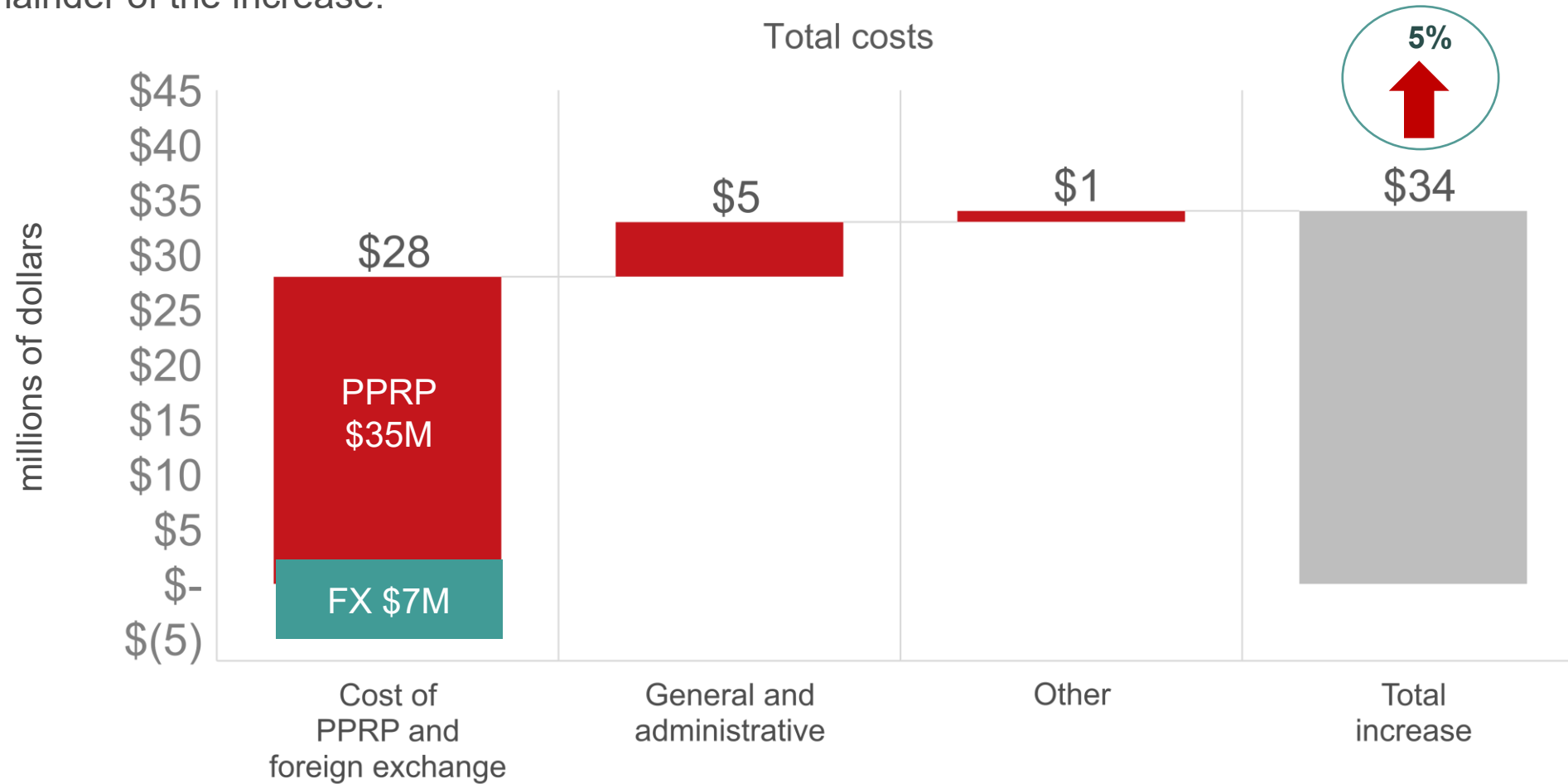
LIABILITIES

ACCOUNTS PAYABLE & OTHER



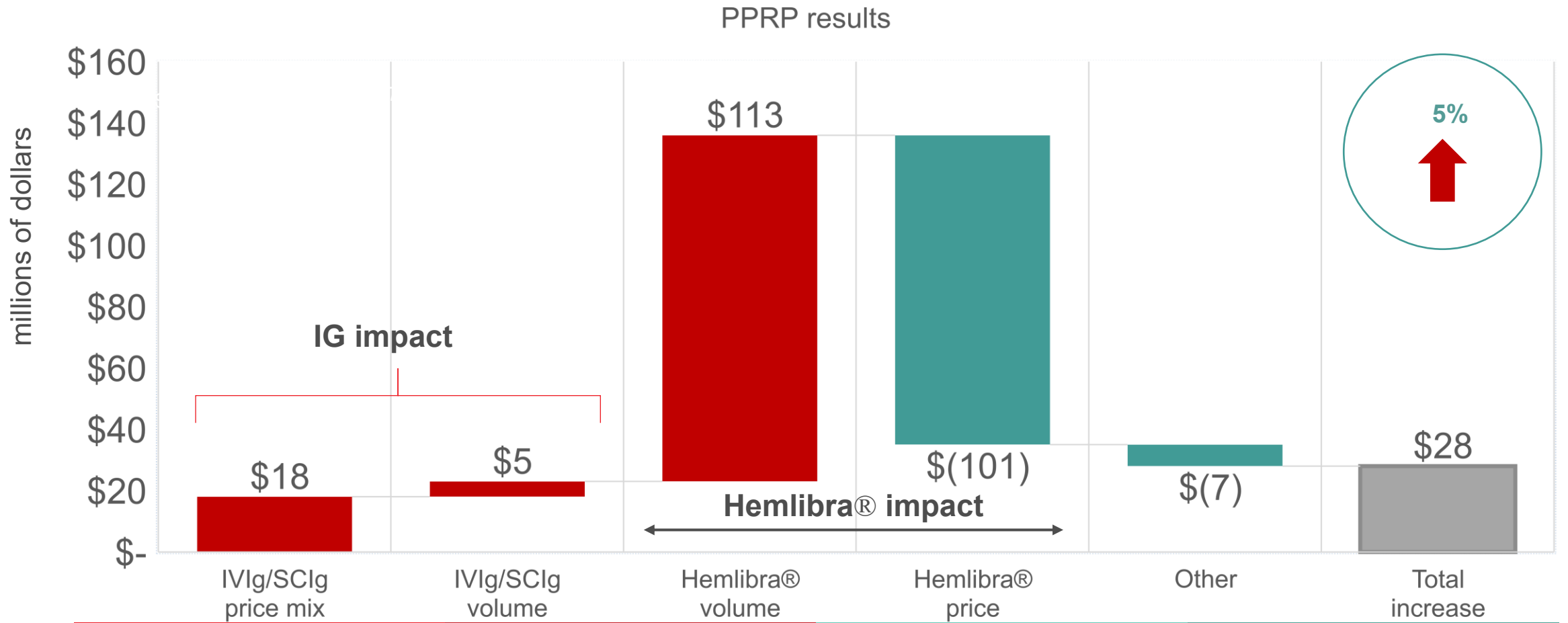
Summary financial results Sept 2021 to Sept 2022

Costs have increased from the prior year by 5%, mainly relating to plasma protein and related products (PPRP). Investments in modernization projects, information technology and marketing to increase the donor base drove the remainder of the increase.



Cost of PPRP and foreign exchange Sept 2021 to Sept 2022

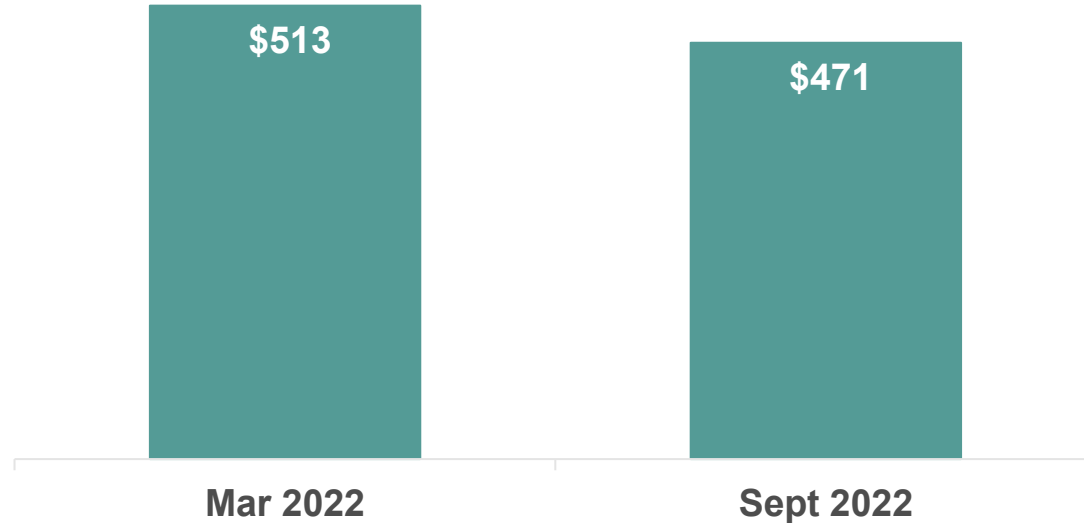
Year over year changes in costs. The main driver of the increase is PPRP costs relates to immunoglobulin (price mix and utilization), and a significant increase in Hemlibra utilization offset by a price reduction.



2022–2023 summary financial results

As of Sept 30, 2022 (charts in millions of dollars).

MARKET VALUE OF INVESTMENTS, CAPTIVE INSURANCE OPERATIONS



INVESTMENT RETURNS



Market returns:

\$41 million loss or -7.9% *

- Market volatility and rising interest rates
- Comparable with benchmarks

Increasing resilience, adaptability, diversity, inclusivity and strength in Canada's Lifeline

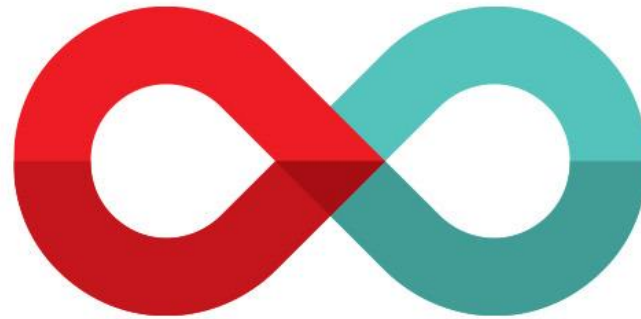
- In the first half of 2022–2023 we continued to deliver safe high-quality products introducing new ways of doing business.
- We strengthened our agility and resilience and successfully applied the lessons learned from the pandemic to other disruptive events.
- We will work-relentlessly to prepare for the next changes on the horizon and innovate to meet the future needs of Canadian health care.



Together, we are Canada's Lifeline



Brenda,
blood donor



Aizad,
blood recipient