

# Virtual Crossmatch Newsletter No.5



## The Virtual Crossmatch (VXM) Working Group is pleased to advise the next phase of the transition to VXM will commence from 1 July 2022.

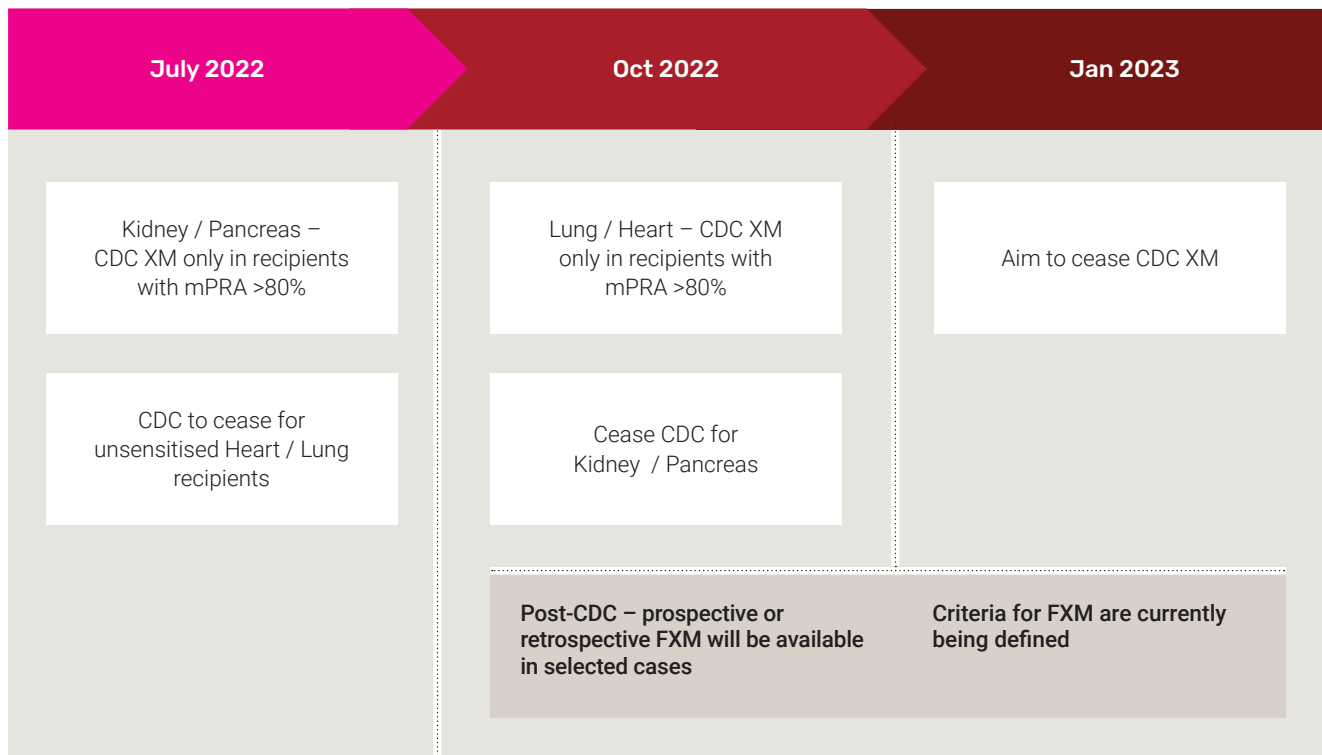
The Australian organ donation and transplantation system currently uses complement-dependent cytotoxicity (CDC) crossmatches to determine compatibility between organ donor and transplant recipients. Internationally many transplant programs have moved to conducting virtual crossmatches (VXM) which can provide greater detail regarding the compatibility of the donor organ and recipient. There is currently a significant project underway to transition to a national virtual crossmatch program within the Australian organ donation for transplantation system.

## Why are we transitioning to Virtual Crossmatch?

- ▶ The level of detail for donor HLA typing and recipient HLA antibody screening has increased substantially over time, which means that the chance of 'missing' a significant antibody is now extremely low.
- ▶ Internationally there has been a shift to virtual crossmatches which can provide a more rapid assessment of compatibility without compromising transplant outcomes.
- ▶ Because the utility of CDC has reduced substantially over time, it is no longer the test of choice in most transplant programmes worldwide. This has resulted in the equipment and reagents for CDC becoming increasingly difficult to source, and we are likely to run out within 6-9 months.

Further information on the transition to VXM project can be found here ([What's new - OrganMatch | DonatLife](#))

## What you need to know and when



## Organ group implementation

### Kidney / Pancreas

- ▶ From July 2022 – move to prospective CDC only for recipients with:
  - >80% mPRA
  - Previous allograft
- ▶ Aim to cease CDC entirely by end of October 2022
- ▶ Commence sharing sera for >80% mPRA monthly from July
  - Note this will mean prospective FXM will not be possible for interstate offers if mPRA <80%
  - A retrospective FXM can still be performed on request if low level DSA present

### Lung

- ▶ Algorithm in development
- ▶ Units should work with local labs to:
  - determine antigens for exclusion
  - categorise patient sensitisation level
- ▶ CDC to be ceased for “unsensitised” patients from July 2022
- ▶ Algorithm implementation proposed for October 2022
- ▶ From October – move to CDC only for recipients with >80% mPRA or clinically urgent
- ▶ Aim to have no lung CDC trays from January 2023

### Heart

- ▶ Algorithm in discussion with heart group
- ▶ Units should work with local labs to:
  - determine antigens for exclusion
  - categorise patient sensitisation level
- ▶ CDC to be ceased for “unsensitised” patients from July 2022
- ▶ Algorithm implementation date TBC – final quarter 2022
- ▶ From October – move to CDC only for recipients with >80% mPRA or clinically urgent
- ▶ Aim to have no heart CDC trays from January 2023

### Liver

- ▶ CDC not routinely performed
  - currently VXM / DSA assessment
  - CDC (or FXM from Jan 2023) by request

## Managing sensitised patients as we phase out CDC XM

- ▶ Upon entry to waiting list: lab and clinical team review antibody profile
- ▶ Define exclusions:
  - Repeat mismatch with DSA – usually exclude at any MFI
  - MFI > threshold agreed with clinical team
  - MFI < threshold but shared epitope identified by lab
  - MFI < threshold currently but significantly higher in historic sera

**Goal:** not to leave antigens as acceptable if you would not accept them

- ▶ When there is an organ offer that is medically suitable:
  - VXM / DSA assessment
  - If DSA present – criteria for prospective / retrospective FXM are being developed currently

## Further information

Further resources on the transition to VXM project can be found on the OrganMatch [Website](#). This includes:

- ▶ Previous VXM project newsletters
- ▶ VXM glossary of terms and;
- ▶ VXM frequently asked questions

Virtual crossmatching elearning is also available through the Lifeblood transfusion online learning [site](#).

Further information or questions please contact [projects@tsanz.com.au](mailto:projects@tsanz.com.au).