



The Virtual Crossmatch (VXM) Working Group is pleased to advise the next stage of the transition to VXM will commence from 18 October 2021.

What you need to know

- ▶ All transplant units should ensure that patients who are on a transplant waitlist have now been enrolled in OrganMatch.
- ▶ The Organ Offer List (OOL) is changing and will no longer include complement-dependent cytotoxicity (CDC) results as part of the initial report. This means that OOL reports will be available sooner. An updated OOL report with CDC results will be published once they become available.

Enrolling waitlist patients in OrganMatch

- ▶ All transplant waitlist patients must be enrolled in OrganMatch in order for tissue typing labs to complete HLA antibody screening and process transplant offers.
- ▶ Visit the [OrganMatch website](#) for further information on how to access the system and check patient enrolment status.

For transplant waitlist patients it is critical that:

- ▶ up to date serum is available for HLA antibody testing (within the last three months)
- ▶ any HLA antibodies have been identified and antigens for exclusion updated by the tissue typing lab
- ▶ details of any potential patient sensitising events such as blood transfusions are added into OrganMatch as soon as possible – this can be done from the Transplantation Portal directly.

Changes to the Organ Offer List (OOL)

- 1 When there is a deceased donor, HLA typing will occur and the tissue typing lab will generate an initial OOL using OrganMatch – this will:
 - a **include** a DSA assessment detailing the presence or absence of Donor Specific HLA antibodies
 - b **not include** CDC crossmatch results.
- 2 The initial OOL will be used by the DonatLife Agency and Transplant Units to make organ offers and commence allocation processes – in most cases significantly earlier than currently provided.
- 3 Once CDC crossmatch results are available, a final OOL will be issued.

What will OOL reports look like?

NSW Transplantation & Immunogenetics Services				ORGAN OFFER LIST				Australian Red Cross Lifeblood	
State Restricted Waiting	Rank: 3	Score: 40,000,110	Offer Status						
Donor Name Withheld - D21-0879	Donor Hospital: Bankstown Lidcombe Hospital	Recipient	Eligible for offer						

Histocompatibility assessment

Overall match assessment

Histocompatibility summary

Class I DSA identified
CDC crossmatch is in progress – CDC crossmatch results to follow

Donor HLA typing profile

A	B	C	DRB1	DQB1	DQA1	DPB1	DPA1	DRB3	DRB4	DRB5
*02	*35	*04	*03:01	*02	*01	*02:01	*01	*02		
*-	*50	*17	*13	*06	*06	*-	*-	*03		

Recipient HLA typing profile

A	B	C	DRB1	DQB1	DQA1	DPB1	DPA1	DRB3	DRB4	DRB5
*02:03	*46:01	*01:02	*03:01	*02:01	*01:02	*04:01	*01:03	*02:02		
*33:03	*58:01	*03:02	*12:02	*05:02	*05:01	*21:01	*-	*03:01		

DSA Assessment

Assessment

Class I DSA identified

Where can I find out more information?

Further information about the project can be found below or by visiting the [OrganMatch website](#). A webinar hosted by TSANZ featuring VXM Clinical Lead A/Prof Ross Francis and VXM Laboratory Lead Rhonda Holdsworth will be held on 5 October 2021. Further information and can be found on the [TSANZ website](#).

Why are we transitioning to Virtual CrossMatch?

The Australian organ donation and transplantation system currently uses CDC crossmatches to help determine compatibility between organ donors and transplant recipients. Internationally, many transplant programs have moved to conducting virtual crossmatches (VXM) which can provide a more rapid assessment of compatibility without compromising transplant outcomes for low risk recipients.

This shift internationally has resulted in the equipment and reagents required for CDC being phased out, and Australian stocks will run out within 12–18 months. The aim in Australia is to transition to VXM for most transplant offers. A small number of physical crossmatches will still be required for selected high risk recipients – eventually this will be a flow crossmatch (FXM) instead of a CDC crossmatch.

When will the transition to VXM occur?

The transition to VXM will occur in three phases.

Phase 1	Phase 2	Phase 3
Now <ul style="list-style-type: none">▶ All transplant waitlist patients listed in OrganMatch.▶ Frequency of HLA antibody screening (Luminex) increases from one to four times a year (and after any sensitising events).▶ Clinical transplant units work with tissue typing laboratories to identify antigens for exclusion for sensitised patients and list in OrganMatch.▶ Donation offers will be made based on these exclusions in phase 2.	Phase 2a – October 2021 <ul style="list-style-type: none">▶ At the time of a deceased donor offer, an early OOL list w/o CDC results will be generated using DSA assessment.▶ CDC crossmatching will still be done and an updated OOL generated later – this will allow for a faster turnaround of suitability results than is currently experienced. <hr/> Phase 2b – January 2022 <ul style="list-style-type: none">▶ For kidney and pancreas patients – CDC crossmatching will be limited to sensitised recipients only.▶ All heart and lung transplant recipients will continue to have a CDC.▶ Retrospective flow crossmatches (FXM) can be performed if required.	From July 2022 <ul style="list-style-type: none">▶ VXM processes will be introduced for all transplant recipients.▶ A small number of prospective FXM may be performed in identified sensitised recipients.▶ Retrospective FXM will be performed if the recipient is sensitised.

Regular post-implementation review will occur to ensure the effectiveness and safety of the National Histocompatibility Guidelines.