CONTENTS

Contents	1
Purpose	2
1. Test Results	2
2. Matching Donors with Recipients on the Transplant Waiting List (TWL) Pathway	2
2.1 Matching a Donor	2
2.2 Rematching a Donor	6
3. Matching Donors with Recipients via Match Profile Comparison	7
4. Matching Increased Viral Risk Donors	10
4.1 Matching Includes National Recipient	
4.2 No National Recipients Matched	
5. Matching a Domino Donor	13
6. Transplant Waiting List Matching Screen	19
6.1 Adding Results in XM Results Tab	
Appendix 1: Readiness Criteria for Deceased Donors	24
Definitions	24
Referenced External Documents	24
Referenced Internal Documents	25
Change history	25
Electronic signature	25

PURPOSE

This document describes the process used by Tissue Typing laboratories for organ donor test results and matching processes in OrganMatch.

The deceased organ donor record is created in OrganMatch through a transfer of data from the Electronic Donor Record (EDR). Refer to *OM-042 Automated Deceased Donor Enrolments- Laboratory Portal* for further information.

1. TEST RESULTS

A deceased organ donor requires HLA typing and ABO results to be authorised prior to matching. Refer to Appendix 1 for readiness criteria.

The test results are added to the person record via the **Samples & test results** section.



The HLA typing results should be entered as 1 field unless they are the exception where the HLA antigen group is the same but there are serological differences. For example, B62 is authorised as B*15:01 and B75 is authorised as B*15:02.

Refer to OM-055 Result Entry and Authorisation- Laboratory Portal for further information on result entry.

2. MATCHING DONORS WITH RECIPIENTS ON THE TRANSPLANT WAITING LIST (TWL) PATHWAY

2.1 MATCHING A DONOR

1. From a donor's Match profile expand the Enrolments for transplant section

Male 70 years 6 months (30/08/1952)	OM ID 0086022 OM Lab NSW	Donor ID D23-0290 Hospital Royal Prince Alfred Ho	Person Profile
			Generate Match profile report
Histocompatibility profile			
Donor information			
Enrolments for transplant			
Donor - N/A - TWL			
Enrolment status			
Ready ✔ Yes	Status N/A	Reason N/A	
Match KDPI (Percentile)	First Kidney Allocation		
96	Left Kidney		Proceed to matching
Organ Program/s 11			
Kidney			

2. Check the donor is ready for matching. If there is a cross (x) under **Ready**, return to the **Person Profile** and click on the cross on the enrolment to view the reasons.

		_		
Enrolm	ent status	;		
Ready			- 81	
AA 1.1				
× NO				
Match k	(DPI (Perce	ntile)		
materri		indic)		
-				
			_	
Enrolment				×
The state of the s				(#Edit
Waiting Time	Date Enrolled			
N/A	27/04/2023			
Transplant Role *	Donor Type *	First Kidney Allocation	Outcome	
Orman Program *	LACADAD	Last Nurwy	manded	
N/A				
Pathway				
TWL				
Unacceptable Antigen List				
Organs				
-				T record/s found
Organs	Status	Reason	Comments	
Kidney	Available			
KDPI				
Match	Audit			
KDRI (Raw)	KDRI (Ram)			
	KDPI (Percentile)			
KDP1 (Percentile)				
KDPI (Percentile) -				
KDPI (Percentile)				Close

3. Click Proceed to matching.



4. The Matching OM Lab default to the users lab but can be changed from the dropdown selection, if required to do so.

Matching OM Lab *	
NSW	\sim

5. From the **Organ Program** list, select the program to match. This list is based on the organs available in the donor enrolment.

gan Program *	
Kidney	\sim

6. The Type of Matching list default to Algorithm matching but Match profile comparison is also available from the dropdown. See **3. Matching Donors with Recipients via Match Profile** Comparison.



7. From the Algorithm list, select the algorithm to be run. Repeat this process to run each algorithm.



8. Click Match.



Note: Once the user has clicked on the Match button in the TWL matching screen, it will be disabled while the match is in progress.

The button will be enabled once the match is complete.

9. The matching progress is displayed.

Match Outo	ome	
High Level Co events.	mpatibility check complete. Saving match	
100%		
Ranking recip Generating O	ients OL	
	ОК	

10. Click **OK** when matching is complete.

Match Outcome	
Match complete. 🗸	
100%	
Ranking recipients Generating OOL	~
	ОК

If the following error occurs, rerun the match.

latch Outcome	
Match completed with errors please	e rerun. 😢
100%	
Ranking recipients	
Generating OOL	~
	ОК

11. Proceed to Section 6. Transplant Waiting List Matching Screen.

2.2 REMATCHING A DONOR

There are instances where a donor needs to be rematched if the HLA typing or the KDPI has been updated or an AB blood group donor where too few recipients have been listed. If rematching occurs all previous results will be replaced, and the match event assessments will need to be completed again.

1. From a donor's **Person details**, click **View TWL Match**.



2. Select the Matching Parameters for the organ to be rematched.

✓ Matching Parameters							
Matching OM Lab *	~	Organ Program * Kidney	~	Type of Matching * Algorithm matching	~	Algorithm * Kidney Standard v2	~

3. Click Match.



4. A confirmation box will pop up to warn the user that results will be replaced. Click Yes.



5. Add the **Reason** for rerunning the match and click **OK**.

Reason for re-running this algorithm.	×
Reason	
Updated KDP	
	Cancel OK

6. Proceed to Section 6. Transplant Waiting List Matching Screen.

3. MATCHING DONORS WITH RECIPIENTS VIA MATCH PROFILE COMPARISON

The match profile comparison function enables recipients to be selected for a comparison between donor and recipient match profiles.

For Match Profile Comparisons to be run:

- The donor needs to be enrolled in an organ program and ready.
- The donor and recipient need to be enrolled on the TWL pathway.
- The recipient does not need to be ready and can be on hold.
- 1. From a donor's Match profile expand the Enrolments for transplant section

Male 70 years 6 months (30/08/1952)	OM ID 0086022 OM Lab NSW	Donor ID D23-0290 Hospital Royal Prince Alfred Ho	Person Profile
			E Generate Match profile report
Histocompatibility profile			
Donor information			
Enrolments for transplant			
Donor - N/A - TWL			
nrolment status			
leady	Status	Reason	
Yes	N/A	N/A	
fatch KDPI (Percentile)	First Kidney Allocation		
6	Left Kidney		Proceed to matching
Organ Program/s 11			
M 1			

2. Check the donor is ready for matching. If there is a cross (x) under **Ready**, return to the **Person Profile** and click on the cross on the enrolment to view the reasons.



3. Click Proceed to matching.



4. The Matching OM Lab default to the users lab but can be changed from the dropdown selection



5. From the **Organ Program** list, select the program to match. This list is based on the organs available in the donor enrolment.

1122	×
Lung	•

6. From the Type of Matching list, select **Match profile comparison** and click **Select recipients**.

Match profile comparison	~
	Select recipients

7. All recipients enrolled in the organ program selected will be displayed in the **Recipient List**. The list of recipients can be filtered using the below criteria.

✓ Filters	5								
OM Labor	atory		Transplant Hospita	ls		ABO	R	ady	Reset Filters
NSW		\sim	All		\sim	All	~	All	~
Status									
All		\sim							
									102 record/s found
Include	Last Name ↑↓	First Name ↑↓	DoB ↑↓	OM ID ↑↓	OM Lab	1↓ Transplant Hospital 1↓	ABO ↑↓	Ready ↑↓	On Hold Reason ↑↓
			19/12/1961	0083496	NSW			×	Waiting for hos
			15/10/1964	0080049	NSW	St Vincent's Ho	А	~	
0			23/10/1954	0082633	NSW	St Vincent's Ho	0	~	

8. Select the recipients you wish to include in the Match profile comparison.



9. Click Save.



10. Click Match.



Note: Once the user has clicked on the Match button in the TWL matching screen, it will be disabled while the match is in progress.

The button will be enabled once the match is complete.

11. The Match event row is added above the rows created via algorithm matching.

											21 record/s found
Organ Program	Algorithm	Rank	Score	Last Name	First Name	OM Lab	DoB	Age(Years)	Offer Status	Transplant Hospital	Published Status
ung	Match Profile Comparison	22	11			NSW	23/10/1954	68		St Vincent's Hospital - Sydney - Lung Unit	Unpublished
ung	Match Profile Comparison	4				NSW	02/01/1957	66		St Vincent's Hospital - Sydney - Lung Unit	Unpublished
ung	Lung Standard v1		6.114.400			NSW	05/08/1984	38		St Vincent's Hospital - Sydney - Lung Unit	Unpublished
ung	Lung Standard v1		6,114,000			NSW	10/10/1961	61		St Vincent's Hospital - Sydney - Lung Unit	Unpublished

7. Proceed to Section 6. Transplant Waiting List Matching Screen.

4. MATCHING INCREASED VIRAL RISK DONORS

Deceased donors can be designated Increased Viral Risk when certain risk behaviours exist in their history. These donors are allocated only to recipients who have specifically consented to these transplants.

Note: There are jurisdiction variation in process for using this functionality in OrganMatch.

When allocating an IVR donor, it is necessary to run the allocation without the IVR setting first to see if there are any recipients allocated under the National algorithm (as described in *OM-012 Principles of Kidney Matching Algorithms*). If there are, these National patients must have a DSA assessment completed and included on the list. The remaining recipients must then be assessed for consent to the IVR register. Any recipients that have not consented are excluded from the list with a comment added to the Match Event Outcome "Not consented for IVR donors".

4.1 MATCHING INCLUDES NATIONAL RECIPIENT

1. Complete the Histocompatibility assessment for all recipients matching via the National Algorithm. Refer to *OM-008 Match Event Assessments- Laboratory Portal* for further information.



2. For all state matched recipients review the Extended Accepted criteria in Match Parameters.

nor			Recipient - Kide	ney - TWL - 3 years 4 mi	onths (waiting time)			
xtended acceptance of	riteria		Extended acc	eptance criteria				
epC Ab pos 1 No enal parameters	TRK K No	Increased Viral Risk # No	Accept HepC A R No Accept ABO	b pos Accep ¥ No	t TRK	Accept Increased Viral	l Risk	
Match (DP) (Percentile)		× No Renal param	rters					
		EPTS S TWL renal pa	rameters	Max KDPI 10015	0	Dialysis Start Date 29/01/2020		
			Paediatric Stat Ves	15	State Matching U -	igency 1	National Matching Urgen	iy.

If the Accept Increased Viral Risk is Yes, continue with the Histocompatibility assessment as per step 1.
 If the Accept Increased Viral Risk is No, select the Offer Status as Not Offered- Not Compatible and add a note in the comments section "Not consented for IVR donors".

✓ Match event outcomes			
Matched Date:	Algorithm Assessment	Block Reason	
27/04/2023 10:00	Yes	-	
Offer Status	Offer Response	Reason	Transplanted
Not compatible - not offered	-	-	
Comments			
Not consented for IVR donors.			

4.2 NO NATIONAL RECIPIENTS MATCHED

If there are no national recipient matches the donor is rematched against recipients willing to accept a donor with increased viral risk.

1. Go to the **Person details** and click **Samples & test results**.



2. Click the **Extended acceptance criteria** tab.

✓ Samples	& test results						
Samples	HI A antibody screen results	Antibody consolidation	HI A typing results	Non-HI & antibody results	Crossmatch	Blood group	Extended accentance criteria
bumpico	The canabody screen results	, interest of the second	no cyping results	non ner anaboa ji couro	crossmatem	blood group	Extended deceptance entend
Only match w	ith recipients willing to accept:						
HepBc Ab pos	a H	epC Ab pos	TRK		Increased Vi	al Risk	
			No		No		

3. Click Edit and select Yes for Increased Viral Risk.



4. Click Save.



- 5. A notification is generated to the Laboratory Portal to Verify Increased Viral Risk.
- 6. A second user is required to verify **Increased Viral Risk**. Click on Samples & test results and click the **Extended acceptance criteria** tab.

✓ Samples & test results							
Samples HLA antibody	creen results Antibody consolidat	tion HLA typing results	Non-HLA antibody results	Crossmatch	Blood group	Extended acceptance criteria	
Only match with recipients wi	ling to accept:						
HepBc Ab pos	HepC Ab pos	TRK		Increased Vi	ral Risk 📵		
No	No	No		Yes			

7. Click Edit and click Verify/unverify.



8. In the Verify/unverify Extended Acceptance Criteria pop up, tick the Verified check box and click Submit.



 The donor is ready to be rematched against recipients willing to accept an increased viral risk donor. Refer to 2. Matching Donors with Recipients on the Transplant Waiting List (TWL) Pathway to proceed to matching.

5. MATCHING A DOMINO DONOR

A domino donor occurs when a recipient requiring a lung transplant (Recipient 1) receives a heart and lung from a deceased organ donor. Recipient 1 then donates their heart to Recipient 2 who requires a heart transplant. A new enrolment is added for Recipient 1 and Recipient 2.

1. Go to the Person details for Recipient 1 and click on Program enrolments.



2. Click Add Enrolment.



3. Select Donor for Transplant Role, Living Directed as Donor Type, Heart as Organ Program and LDD as Pathway.

Enrolment informa	ation				
Fransplant Role *		Donor Type *			
Recipient Donor		Living Directed	\sim		
Organ Program *		Status		Reason *	
Heart	\checkmark	On Hold Active		In Progress	~
Pathway					
	~				

4. Click Save.



5. Go to the Person details for Recipient 2 and click on Program enrolments.



6. Click Add Enrolment.



7. Select Recipient for Transplant Role, Heart as Organ Program and LDD as Pathway.

Enrolment inform	ation			
Transplant Role *		Donor Type *		
Recipient Dono	r	N/A		
Organ Program *		Status	Reason *	
Heart	\sim	On Hold Active	In Progress	\sim
Pathway				
	~			

8. Click Save.



9. Click **Personal links** and click **Add Personal Link**.



10. Search for Recipient 1 in **Name of Person** and select them from the dropdown.

me of Person *						
ICEt						
lCEt	isYkp		0084603	16/08/1968	Female	NSW
lease Select		\sim				
						Cancel Save

11. Select the Relationship Type as Other (Unrelated).

~

12. Click Save.

13. Click on the Heart LDD enrolment, click Edit and click Add Recipient- Donor Link.

Add Recipient-Donor Link

14. Select Recipient 1 from the drop down.

ame of Pe	rson *					
Please Sele	ect					\sim
						Q
Please Sel	ect					
alCEt	isYkp	0084603	16/08/1968	Female	NSW	

15. Click Add.



16. Click Save.



17. Click Match Profile.



18. Click Enrolments for transplant.



19. Under the Heart LDD enrolment, click **Proceed to matching**.

ady	Status	Reason		Proceed to matching
Yes	On Hold	In Progress		
oviders insplant Hospital	Hospital Reference	Transplant Provider	Role	
Vincent's Hospital - Sydney - Lung Unit (NSVSL)	6278462			
nical Hospital	Hospital Reference	Clinical Provider	Role	

20. Tick the **Select for Matching** check box for Recipient 1.



21. Click Match.



22. Once the match is complete click View Match Event.

Match Complete!	Match	Outcome	
Close View Match Event	0	Match Complete!	
			Close View Match Event

23. Complete the Histocompatibility assessment. For further information see *OM-009 Match Event Assessments- Laboratory Portal.*

6. TRANSPLANT WAITING LIST MATCHING SCREEN

The **Transplant waiting list matching** screen is displayed after the **Proceed to matching** button is clicked and after TWL matching has occurred.

Male 23 year	s 3 months (01/01/2000)			OM ID 00 OM Lab N	86381 ISW		Donor ID Hospital					Match Profile
Matching Para	ameters											
tching OM Lab			Organ Program				Type of Match	hing *			Algorithm *	
4SW		\sim	Kidney			~	Algorithm n	natching		~	Kidney Standard v2	~
												Match
Matching Rec	ipients											
									Match Run L	og 🕞 View N	otes 🛛 Generate OOL report 🗳	Enable Generate OOL in DP
✓ Filters												
												Reset Filters
Find Person			Transplant Hos	pitals			Organ Progra	im			Algorithm	
			All			~	All			~	All	~
Offer Status			Rank From		Rank	То		Age(Yea	rs) From		Age(Years) To	
All		~	***		***			***			***	
Matching recipie	Ats XM results											
											W Number of Mat	thes to Display I Publish 30 record/s found
rgan Program	Algorithm	Rank	Score	Last Name	First Name	OM Lab	DoB	Age(Years)	Offer Status	Transplant H	lospital	Published Status
dney	State Unrestricted Waiting	1	30,100,110			NSW	24/01/2014	9		Children's H	ospital Westmead - Renal Unit	Unpublished
idney	State Unrestricted Waiting	2	30.000,063			NSW	08/05/1970	52		John Hunter	Hospital - Renal Unit	Unpublished

By default, OrganMatch displays all matches that generated using the Kidney National algorithm and the top 30 recipient matches for the other Kidney Algorithms. The number to display can be expanded to any number between 30 and 100, by clicking on **Number of Matches to Display**.



The **Match Run Log** displays information about when the matching algorithm was run and the user who matched. When the **Match Run Log** is clicked, a pop up table displays the information relating to the matching for the donor.



							T record/s found
rgan Program	Matching OM Lab	Type of Matching	Algorithm Selected	Match Executed By	Match Run Date Time	Re-run?	Reason for Re-run
idney	NSW	Algorithm matching	Kidney Standard v2		20/04/2023 15:07	No	N/A
			«. c 1 >	» 5 ¥			
							Close

There are two tabs displayed in the screen, Matching recipients and XM results.

The **Matching recipients** tab has a list of ranked recipients created as a result of matching. The filters can be used to define a set of criteria for the recipients to be displayed.

Clicking on a row will navigate to the match event for the donor and recipient. For further information see *OM-*009 Match Event Assessments- Laboratory Portal.

6.1 ADDING RESULTS IN XM RESULTS TAB

Flow crossmatch results performed prospectively can be added to the donor record via the **XM results** tab. Refer to *Flow Crossmatching Clinical Guidance document* (Flow Crossmatch Clinical Guidance) for more information on when Flow crossmatching may be required.

1. From the Transplant waiting list matching screen, click the XM results tab.

Aatching	g OM Lab	•			Organ Prog	iram *
NSW				~	Kidney	
✓ Mat	ching Rec	cipients				
> Fil	ters					
Match	ing recipie	AM resul	ts			
Sort Ord	er: Defa	ault Rank				
Select	Rank †↓	Last Name †↓	First Name †↓	Serum Sa Referenc	ample ↑↓	Serum Sample †↓ Date
	1					
	1					

2. Click Edit to add crossmatch results.



- 3. The XM results tab will auto populate with 1 row for FXM-T-IgG and 1 row for FXM-B-IgG and the following fields are set with default values:
 - Rank from the OOL section of the TWL matching screen for that recipient.
 - Last Name from the OOL section of the TWL matching screen for that recipient.
 - First Name from the OOL section of the TWL matching screen for that recipient.
 - Cell Sample Reference Most recent Cell sample reference for the donor.
 - Cell Sample Date.
 - Cell Treatment default to "Pronase".
 - Crossmatch Type FXM-T-IgG/FXM-B-IgG.
 - Additive default to "Neat".

Unverify 4 Verify All												C#Ed
ect Rank Last Name First Name	Serum Sample Reference	Serum Sample Date	Result		Verified	Channel Shift from threshold	Cell Sample Reference		Cell Sample Date	Cell Treatment	Crossmatch Type	XM Date
0 1	Piease Sele 🗸		Please Sele	×	×		534524t35	~	20/03/2023	Pronase 🗸	FXM-T-IgG 🗸 🗸	dd/mm/yyyy
0 1	Please Sele V		Please Sele	\sim	×		534524:35	v	20/03/2023	Pronase V	FXM-8-lgG V	dd/mm/yyyy

- 4. Add the crossmatch results by populating the below fields as required:
 - Serum Sample Reference
 - Result
 - Channel Shift from Threshold
 - XM Date
 - Result Score
 - Additive
 - Test Reference

Note: XM Date is a mandatory field and needs to be populated for any results appearing in the table before saving. To enter results for a specific recipient, filter the results by searching for the recipient in the **Find Person** filter.

* Fillers			
Find Person			

5. Select the test result row and click **Duplicate** to make a duplicate of the row. The duplicate is shaded green.

lect Rank	Last Name	First Name	Serum Sample Reference		Serum Sample Date	Result		Verified	Channel Shift from threshold	Cell Sample Reference		Cell Sample Date	Cell Treatme	rit.	Crossmatch Type	XM Date
8 1		0	5-23-840-A	~	01/03/2023	Please Sele	v	×		53452435	×	20/03/2023	Pronose	\times	EXM-T-lgG 🗸 🗸	21/03/2023
a 1			5-23-840-A	Y	01/03/2825	Please Sele	¥	×		534524:35	~	20/03/2023	Pronase	~	DOM-T-lgG 🗠	21/03/2023

6. The duplicate row created can also be deleted by selecting the row and clicked **Delete**.

ect Rank	Last Name	First Name	Serum Sample Reference		Serum Sample Date	Result		Verified	Channel Shift from thresbold	Cell Sample Reference		Cell Sample Date	Cell Treatm	int	Crossmatch Type	XM Dute
1			5-25-840-A	¥	01/03/2023	Please Sele	v	*		534524635	×	20/03/2023	Pronase	×	FXM-T-IgG 🗸 🛩	21/03/2023
8 1	0		S-23-840-A	×	01/03/2023	Please Sele	×	×		134524(35	×	20/03/2023	Fronase	~	FXM-T-IgG 🗸	21/03/2023

7. Click the **Verify All** button to verify all the crossmatch results entered on the screen. Results need to be verified to appear in the match event assessment. For further information see *OM-009 Match Event Assessments- Laboratory Portal*.



8. Click Yes.



9. If the results need to be modified, click **Edit** and select crossmatch results to updated and click **Unverify**.

elect R	ank	Last Name First N	ime Serun Referi	m Sample rence	Serum Sample Date	Result	Verified	Channel Shift from threshold	Cell Sample Reference	Cell Sample Date	Cell Treatment	Crossmatch Type	XM Date	5
0 1			S-23-6	-840-A	01/03/2023	Negative	~		534524t35	20/03/2023	Pronase	FXM-T-IgG	21/03/2023	
8 1			5-23-	840-A	01/03/2023	Negative	~		534524t35	20/03/2023	Pronase	FXM-8-IgG	21/03/2023	

10. Click **Yes** to confirm the unverification.

0	Are you sure you want to unverify the selected crossmatch results?	
	No Yes	

Once crossmatch results have been entered and match event assessments have been completed, the Organ Offer List (OOL) can be generated by clicking **Generate OOL report**. For further details on the OOL see *OM-007 Report Generation- Laboratory Portal*.

APPENDIX 1: READINESS CRITERIA FOR DECEASED DONORS

Criteria	Donor Requirements
HLA typing	Authorised for:
	• HLA-A – 1 field
	• HLA-B – 1 field
	• HLA-DRB1 – 1 field
Location	OM Lab entered
Samples	ABO final and ABO confirmed
	Extended Acceptance Criteria Verified (if applicable)
Height & Weight	• Height (cm)
	• Weight (kg)

DEFINITIONS

Term/abbreviation	Definition
FXM	Flow cytometry crossmatch
ОМ	OrganMatch
OOL	Organ Offer List
TWL	Transplant Waiting List

REFERENCED EXTERNAL DOCUMENTS

Document Title	Source
Flow Crossmatching Clinical Guidance document	Flow Crossmatch Clinical Guidance

REFERENCED INTERNAL DOCUMENTS

Document number	Source
OM-007	Report Generation- Laboratory Portal
OM-009	Match Event Assessments- Laboratory Portal
OM-012	Principles of Kidney Matching Algorithms
OM-042	Automated Deceased Donor Enrolments- Laboratory Portal
OM-055	Result Entry and Authorisation- Laboratory Portal

CHANGE HISTORY

Version number	Effective date	Summary of change
1	18/04/2023	First version of document
2	14/06/2023	Sprint 44 updates:Disable match button while match is in progress.
3	Refer to footer	 Added section for test results. Added section for rematching a donor. Added sections for matching IVR donors and domino donors. Added appendix for readiness criteria for deceased donors. Added reference to flow crossmatch guidelines

ELECTRONIC SIGNATURE

Author	REBECCA SCAMMELL
Approver(s)	NARELLE WATSON