

OrganMatch

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What does OrganMatch mean for me?

Replacing the National Organ Matching System (NOMS)

The current organ matching application - NOMS - has been expanded over a period of 20 years. In more recent times, NOMS has demonstrated a limited ability to support the current and future needs of the solid organ transplant sector. It also offers limited transparency and visibility to the transplanting clinical community.

Objectives for the OrganMatch project

The project objectives for the state of the art new system are

- Replace NOMS while retaining the functionality to deliver patient specific outcomes and being adaptable for future scientific advancements
- Host a centralised rules engine which can be easily configured to meet future requirements and changes to algorithms for organ allocation
- Provide technology that enables a precision medicine approach for organ allocation and matching
- Enable self-service reporting for specific user groups, such as clinicians
- Support both laboratory and clinical users

Improvements over NOMS

OrganMatch will provide a number of improvements over the current NOMS systems.

- Ability to use molecular data in matching for all pathways – LDD, TWL, and KPD.
- Ability to clearly define unacceptable antigens from three sources – antibodies, previous mismatches, and immunological matching.
- Ability to create more flexible trays by creating recipient set queries – e.g. trays for highly sensitised patients, transplant unit based trays etc.
- 'Match Event' to give a view of all comparisons and checks done between the donor and recipients to give a detailed understanding of the match outcomes.
- Improved functionality to add and manage notes, along with the ability to add attachments.
- Notifications for important events.

Additional features for the transplant community

OrganMatch will provide increased transparency to clinicians and transplant coordinators by enabling direct access to information through a web based application.

- Access to 'Match Profile' for your associated recipients
 - Shows all the relevant information that influence matching – Current enrolment and status, HLA Typing, Unacceptable & Acceptable Antigens, cPRA, Dialysis start date etc.
- Access to all clinical reports directly from a portal
 - Reports such as Antibody report, Crossmatch report etc. will be published into the portal once reviewed and authorised by the labs
 - Ability to run waiting list any time directly from the portal

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- Receive notifications (in the portal) for important events like change of status to indicate a recipient becoming Active or Offlist
- Do data analytics under an agreed governance to influence better understanding of recipient's match history, and factors affecting match outcomes
- Run simulation projects before introducing wide impact changes such as new and changes to existing algorithms.

Access to the system

Access to the system will be enabled through a web browser, optimised for Google Chrome v48+, and two factor authentication. Lab staff, clinicians, and clinical coordinators that need access will be registered as users, and will use SMS or phone call two factor authentication to securely log in.

Sneak peek into what is currently being developed

The screenshot shows the OrganMatch web portal interface. It features a sidebar with navigation options like 'Match profile', 'Search', 'Reports', and 'Settings'. The main content area displays a 'Match profile' for a kidney transplant recipient. Key sections include 'HLA typing', 'Antibody screening', 'Living donor', and 'Transplant details'. The 'HLA typing' section shows a table with columns for A, B, C, DRB1, DQB1, DQA1, DPB1, DPA1, DRB3, DRB4, and DRB5. The 'Antibody screening' section shows a table with columns for Donor, Recipient, and Match. The 'Living donor' section shows a table with columns for Donor, Recipient, and Match. The 'Transplant details' section shows a table with columns for Organ, Pathway, Transplant, Hospital, Hospital Reference, and Provider.

The screenshot shows the Australian Red Cross Blood Service Antibody Report for a kidney transplant recipient. The report includes sections for 'Person details', 'Endpoints', 'HLA typing profile', and 'Unacceptable and acceptable antigen profile - TWL'. The 'Person details' section shows the patient's name, gender, date of birth, and ABO type. The 'Endpoints' section shows a table with columns for Organ, Pathway, Transplant, Hospital, Hospital Reference, and Provider. The 'HLA typing profile' section shows a table with columns for A, B, C, DRB1, DQB1, DQA1, DPB1, DPA1, DRB3, DRB4, and DRB5. The 'Unacceptable and acceptable antigen profile - TWL' section shows a table with columns for Match cPRA, Antigen Screened, Previous Donor Mismatch, Other Unacceptable Antigens, and Acceptable Antigens.

Further information

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