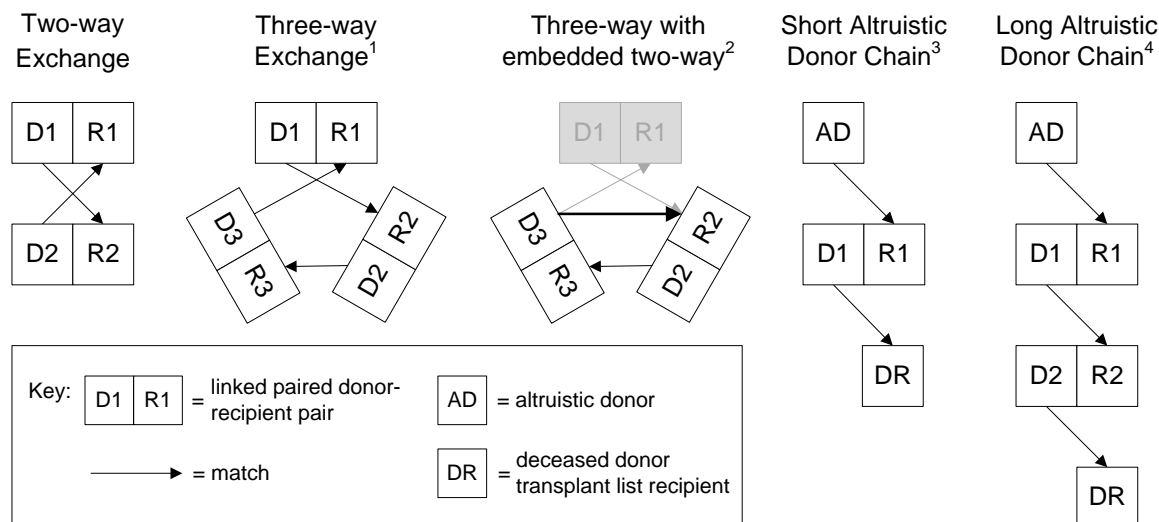


## Living Donor Kidney Matching Run Process

1 Living donor kidney matching runs are carried out quarterly, in January, April, July and October, to identify two-way and three-way paired exchanges, and short and long altruistic donor chains:



2 Identify the optimal combination of exchanges from all of those possible – using the following optimality criteria:

- maximise the number of effective two-way exchanges (including three-way exchanges with embedded two-way exchanges<sup>2</sup>)
- subject to (i), maximise the total number of transplants
- subject to (i)-(ii), minimise the number of three-way exchanges
- subject to (i)-(iii), maximise the number of embedded two-way exchanges in the three-way exchanges<sup>2</sup>
- subject to (i)-(iv), the overall **match score** is maximised (ie the sum of scores calculated for each potential transplant in all exchanges in the result)

### Match scores

A score is calculated for each potential transplant in an exchange, based on the following factors:

- Previous matching run points**<sup>3</sup> – the number of quarterly matching runs in which the recipient has previously participated, multiplied by 50
- Sensitisation points** – 0-50 points (for 0-100% sensitised)
- HLA mismatch points** – 15, 10, 5 or 0 points for mismatch levels 1, 2, 3 or 4, respectively. *Note: HLA mismatch requirements for an individual recipient can be specified at time of registration.*
- Donor-donor age difference points** – 3 points awarded if donor-donor age difference  $\leq 20$  years. *Note: the maximum donor age acceptable for an individual recipient can be specified at time of registration.*
- Local exchange points**<sup>5</sup> – 20 points for local exchanges within 5 areas of the UK

<sup>1</sup> from April 2008

<sup>2</sup> from January 2010

<sup>3</sup> from January 2012

<sup>4</sup> from April 2015

<sup>5</sup> to October 2011 only

Note: compatible pairs included from January 2012