

## Correlation between cytotoxic T-cell responses and graft versus host disease

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Transplantation antigens other than those coded for the MHC almost certainly can be considered to play a role in the success of graft exchange between HLA identical siblings. This can be concluded from the results obtained in human bone marrow transplantation.

Since cytotoxic T-cells (CTLs) may play a role in graft rejection and/or Graft-versus-Host-Disease (GvHD), we studied the appearance of CTL activity in 21 recipients after HLA genotypically identical bone marrow transplantation. Post-transplant lymphocytes from 9 out of 13 patients suffering from GvHD demonstrated CTL activity (see table), which was directed against patients pre-transplant lymphocytes.

Table	<u>Bone-marrow recipients</u>	<u>anti-host cytotoxic activity</u>	
		<u>yes</u>	<u>no</u>
	no GvHD	0	8
	GvHD	9	4

p = 0.001

Further characterization of these 9 CTL populations revealed a series of non HLA antigens requiring one or more self class I HLA antigens in order to be recognized.

Based on our comprehensive panel analyses (using these 9 CTL populations), the most common (and hopefully the strongest immunogenic) non HLA antigens are possibly among these first series. Large scale expansion of our 9 CTL populations enables us to perform prospective donor typing when preferred for example in those cases where more than one donor is available.

For reference see: E. Goulmy, Class I restricted human cytotoxic T lymphocytes directed against minor transplantation antigens and their possible role in organ transplantation. Prog. Allergy, 1985, 36: 44-72.