Equality of Access to Transplant for Ethnic Minority Patients Through Use of Cord Blood and Haploidentical Transplants

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Ethnicity and transplant study
STHTC Nov 2013

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Background

- Allogeneic (donor) transplant may be the only chance of cure for many patients with blood cancers, such as leukaemia and lymphoma
- However, donors must share a similar tissue type with the patient
- About 1/3 of patients will have a sibling with the same tissue type
- Other patients must find an unrelated donor, but the massive variation in tissue types between individuals makes this difficult
- This difference is particularly marked between people of different ethnicities

- Even today, the majority of donors listed by unrelated donor registries are of white northern European (WNE) descent.

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Ethnic minorities

- Therefore, provision of unrelated donors to patients of ethnic minority descent has historically been poor compared to WNE patients
- In a Dutch study from 1996-2000 a ‘suitable’ unrelated donor was found in 36%, compared to 68% in WNE.
- 32% transplanted, compared to 59% of WNE

- Typically, those who could not find a donor were either not transplanted or used less suitable donors associated with higher risk of complications from transplant and a poorer prognosis

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Why this study?

- Expansion of number of donors listed in donor registries worldwide, and development of new sources of stem cells:
  - Cord blood
  - Haploidentical (half-matched related donor) transplantation

- However, few contemporary studies have been performed to show the impact of these strategies on donor provision, and ability of transplant centres to get such patients to transplant

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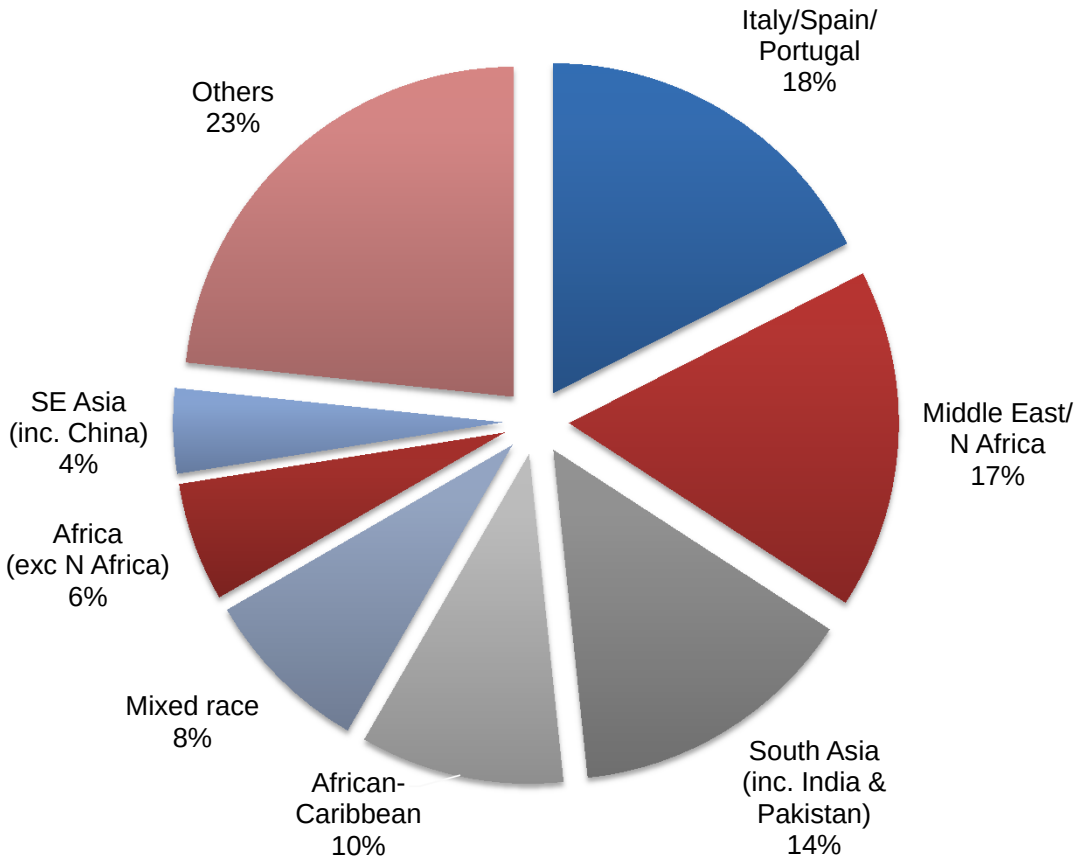
Study

- 332 patients
- 4 UK transplant centres
- 25.3% non-white Northern European
- Almost entirely adult (98%)
- No significant difference in disease between WNE and other ethnicities
- Followed up from time of referral for donor search



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Donors found, by ethnicity

	% with fully matched (10/10) donor available (CT)	% with suitable donor (9 or 10/10) identified (CT)
White Northern European	69.3%*	96.3%*
Other ethnicity	20.5%*	61.4%*

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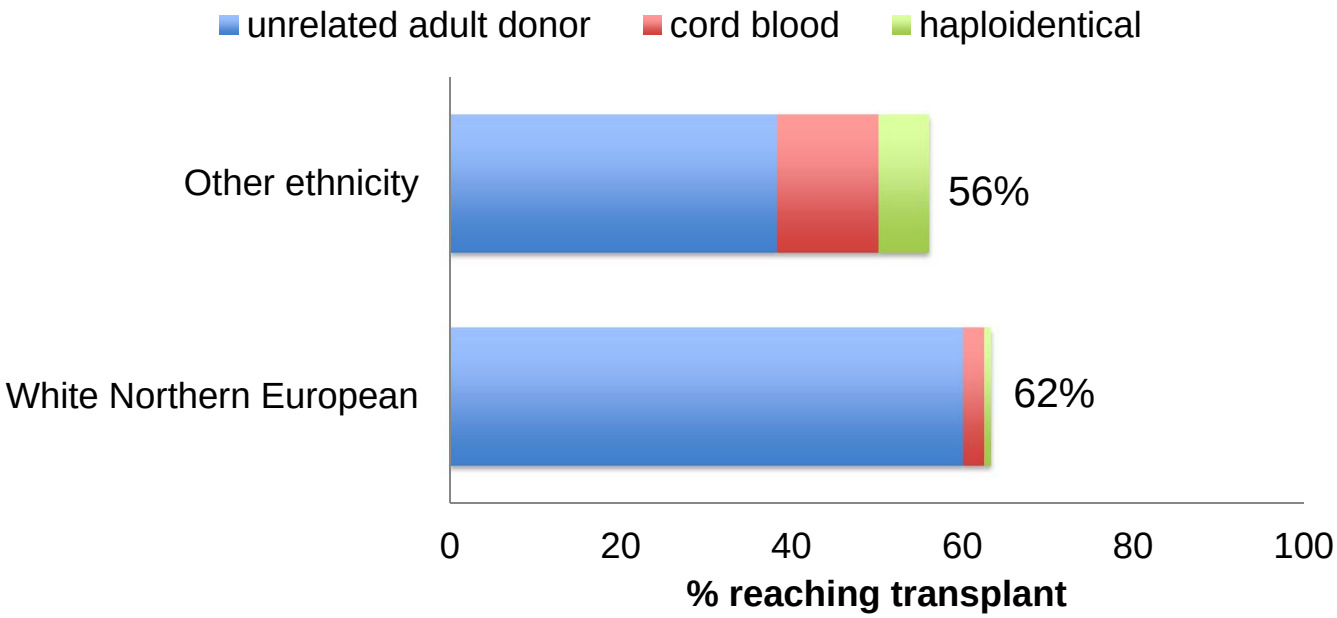
Patients achieving transplant, by ethnicity



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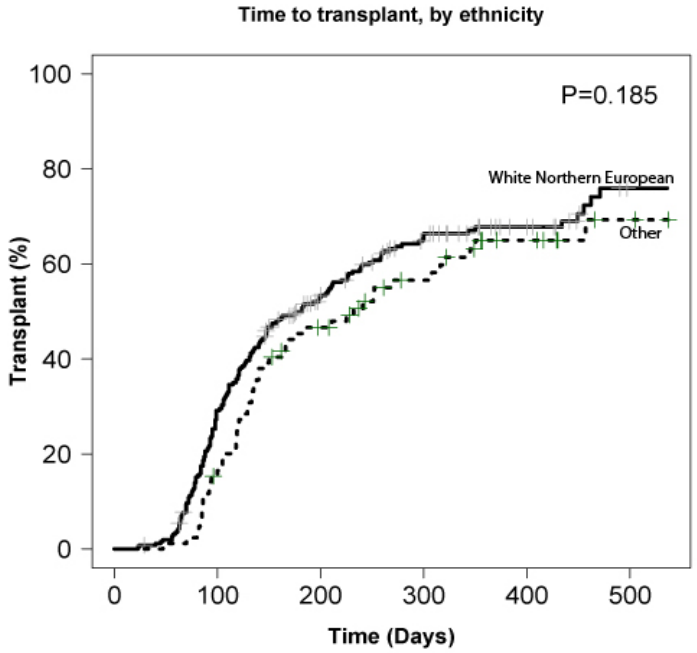
Effect of ethnicity on time to transplant



Average time to transplant:

WNE: 110 days
Non-WNE: 132 days

(statistically significant)

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Conclusions

- Time to transplant continues to improve from historical levels for all patients, but particularly for those of non-WNE background
- 61.4% of non-WNE patients were able to find a 9/10 or 10/10 matched donor. This represents a significant improvement on historical estimates.
- The use of cord blood or haploidentical transplants has ‘leveled the playing field’ for non-WNE patients seeking transplants other than with a HLA-identical sibling

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Conclusions

- We do not yet know, however, whether cure rates and survival with new donor sources, such as cord blood or haploidentical donors, are as good as unrelated adult donors
- Recruitment of ethnic minority donors still needs to improve
- These results were achieved using an expert graft identification and advisory service (GIAS), provided by Anthony Nolan, which uses donor selection expertise within the organisation to make sure the best donors are selected. GIAS identifies early on those patients who are unlikely to find a suitable donor so that cord blood or haplo options can be pursued in a timely fashion.

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