Lenalidomide induction and maintenance maximizes outcome for newly diagnosed transplant eligible myeloma patients irrespective of risk status: Long-term follow-up of the Myeloma XI trial

Graham Jackson1, Charlotte Pawlyn2,3, David Cairns4, John Jones4, Bhuvan Kishore5, Mamta Garg6, Cathy Williams7, Kamaraj Karunanithi8, Jindriska Lindsay9, Nigel Russell7, Matthew Jennier10, Gordon Cook4, Mark Drayson11, Roger Owen12, Walter Gregory4, Martin Kaiser2,3 Faith Davies13 and Gareth Morgan13

Background

1. Immunomodulatory (IMiD) compounds are effective therapies for multiple myeloma (MM) acting via modulation of the CUL4 E3-ubiquitin ligase cereblon.
2. Based on their structure, individual IMiD compounds have different substrate specificities altering both their efficacy and side effect profile. These mechanistic differences impact the optimum sequencing of these agents as induction and maintenance.
3. Within the UK NCRI Myeloma XI trial we compared triplet induction regimens containing Lenalidomide (Len) or Thalidomide (Thal) and maintenance treatment with Len or observation.
4. With extensive long term follow up data we have explored the interaction of the induction and maintenance use of Thal and Len before and after autologous stem cell transplant (ASCT).

Myeloma XI

Myeloma XI is a phase III trial with pathways for transplant eligible (TE) and transplant ineligible (TNE) newly diagnosed myeloma patients. The transplant eligible pathway is presented in this analysis.

CRD was associated with significantly longer PFS than CTD: HR 0.86

CRD was associated with significantly longer OS than CTD: HR 0.81

Response at the end of induction was associated with outcome

Conclusions

1. With long term follow up CRD induction for newly diagnosed transplant eligible myeloma patients was associated with both a PFS and OS benefit compared to CTD and was better tolerated.
2. The benefit of Lenalidomide maintenance over observation was consistent across all risk groups.
3. The use of Lenalidomide as both induction and maintenance was associated with the best outcomes.

Optimum outcomes were seen in those receiving Len as both induction and maintenance therapy

Contact

1. Department of Haematology, Newcastle University, Newcastle, UK
2. The Institute of Cancer Research, London
3. University College London Hospital
4. Clinical Trials Research Unit, Leeds Institute of Clinical Trials Research, University of Leeds, Leeds
5. University Hospital Birmingham NHS Trust
6. University of Birmingham, Institute for Cancer Studies
7. Centre for Clinical Haematology, Nottingham University Hospital, Nottingham
8. University Hospital of North Midlands, Stoke-on-Trent
9. East Kent Hospitals University NHS Foundation Trust, Canterbury
10. University Hospital, Leeds
11. Perlmutter Cancer Center, NY Langone Health, New York, USA
12. Clinical Trials Research Unit, Leeds Institute of Clinical Trials Research, University of Leeds, Leeds
13. Centre for Clinical Haematology, Nottingham University Hospital, Nottingham

Email: graham.jackson@newcastle.ac.uk, charlotte.pawlyn@icr.ac.uk

Acknowledgements

The study was supported in part by the UK NCRI Haematological Oncology Clinical Studies Group. We would like to thank all the patients and staff at our 50 centres throughout the UK whose participation made this study possible. We are grateful to all principle investigators for their dedication and commitment to recruiting patients to the study.

GHJ has received honoraria from Celgene, Amgen, Roche, Janssen, Sanofi.

The study was carried out on behalf of the UK NCRI Haematological Oncology Clinical Studies Group.

For full details of other authors please see abstract book.