New genetic risk factors for blood cancer identified as powerful diagnostic tool

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Testing for genetic risk factors could improve treatment for myeloma – a cancer of the blood and bone marrow – by helping doctors identify patients at risk of developing more aggressive disease.

New research, published in the *Journal of Clinical Oncology*, found as few as nine genetic features would need to be tested to identify high-risk patients who might benefit from intensive treatment.

The study, led by researchers at The Institute of Cancer Research, London, is the first to link genetic mutations in myeloma cells to the chances of surviving the disease.

The research was funded by Myeloma UK, Cancer Research UK and the NIHR Biomedical Research Centre at The Royal Marsden NHS Foundation Trust and The Institute of Cancer Research (ICR).

Researchers used genetic sequencing to analyse all of the genes of 463 patients enrolled in the Myeloma XI clinical trial.

The study identified 15 genes that were significantly mutated in a subset of patients with myeloma – and mapped how having these mutations related to long-term survival.

The researchers found that testing for nine of these mutated genes, in combination with a test to determine the stage of myeloma, identified 90 per cent of patients with very aggressive disease who died prematurely.

Read full, original post: Genetic test could improve blood cancer treatment