Summary of Results Male transmission was evident in 25 fams and female transmission was observed in 6. NHL and MM cases had at least 1 unaffected generation (gen) between them in 8 pedigrees, and the diseases occurred in sequential (13 fams) or the same gen in 10 fams. MM was the diagnosis (dx) in the youngest affected gen in 9 pedigrees, NHL in 13 pedigrees and both occurred in the youngest gen in 9 fams. The median age at dx of 29 NHL patients for whom data were available was 55 yrs (range, 20–99 yrs), and the median age at dx of 26 MM cases was 56 yrs (range, 30–82 yrs). Ten of 26 MM patients were <50 years old at dx. The presence or absence of anticipation could be assessed in 15 of the 31 pedigrees. All 15 displayed anticipation in terms of succeeding gens developing NHL or MM at an earlier age than did the previous gens (median –19 yrs, range –6 to –56 yrs).

Conclusions We demonstrate anticipation in 15 assessable fams with both NHL and MM, a feature of familial MM that we previously reported (Despande HA, *et al*: Br J Haematol 1998). More advanced, aggressive disease at dx in the youngest gen is another feature of anticipation, and was observed in 9 of 13 fams in which it could be assessed. Demonstration of anticipation in all 15 evaluable fams suggests a genetic basis for the relationship between these two B-cell disorders. The increase of same sex sib pairs among affected sib pairs implicates a locus on a pseudo-autosomal region of the X chromosome as potentially responsible for this observation, as we have previously reported for Hodgkin's lymphoma (Horwitz M, Wiernik PH, *Am J Hum Genet* 1999). Myeloma and non-Hodgkin's lymphoma may have common genetic causation; molecular studies of these fams are planned.

MP7 **FAMILIES WITH BOTH NON-HODGKIN'S LYMPHOMA (NHL) AND MYELOMA (MM): ANTICIPATION AND MALE TRANSMISSION**

PH Wiernik, JP Dutcher. *Cancer Research Foundation, Chappaqua, NY, United States*

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Purpose of Study To determine whether genetic rather than environmental factors may be responsible for the occurrence of these neoplasms in families.

Methods Used We interrogated our registry of >700 pedigrees of families (fams) with multiple hematologic malignancies. We identified 31 fams with both NHL and MM in their pedigrees. In 16 pedigrees a parent and child were affected (12 father-child pairs and 4 mother-child pairs). Fifteen affected sib pairs were identified in the 31 fams, 10 same sex pairs and 5 male-female pairs. Six of the 31 pedigrees had only 1 affected pair. More distant relationships were observed in other fams.