Repeated genetic testing is necessary in relapsed myeloma since the risk profile might be worse after treatment compared to baseline, especially in the era of novel agents

128 Multiple myeloma patients with paired bone marrow samples

Retrospective analyis of fluorescence *in situ* hybridization results

Cytogenetic evolution investigation

- IgH translocations (t(4;14); t(11;14); t(14;16)) Hyperdiploid karyotypes → No significant changes between primary diagnosis and relapse
- IgH translocations with unknown partners → More frequent at relapse
- High-risk cytogenetic abnormalities (deletion 17p and/or gain1q21) → More frequent at relapse

  - Associated with dismal outcome regardless whether were present at diagnosis or developed at relapse only
  - Developed more frequenty by patients with relapse after novel agent-based induction compared to those being treated with conventional chemotherapy

Merz *et al.*, Haematologica, 2017