Titel:

Longitudinal dynamics of somatic mutations in ageing blood

Abstract:

Clonal haematopoiesis of indeterminate potential (CHIP) increases rapidly in prevalence beyond age 60 and has been associated with increased risk for malignancy, heart disease and ischemic stroke. CHIP is driven by somatic mutations in hematopoietic stem and progenitor cells (HSPCs). These mutations can increase the proliferative advantage over cells carrying no or only neutral mutations, causing clonal expansion and contributing to disease risk. We quantified the expansion of mutations over 12 years in older age using longitudinal sequencing and developed a filtering method that considers individual mutational context alongside mutation co-occurrence to quantify the growth potential of variants within individuals.