

CLONAL EXPANSION IN AGING

Replicating tissues accumulate mutations with age. Some mutations can confer a fitness advantage to a stem cell, leading to clonal expansion. The esophagus is the best studied tissue in this respect (1).

The data in the UK Biobank, as is usually the case with Biobank data, comes from blood samples. Berstein et al. (2) mined the 200,618 exomes available in the UK Biobank to identify genes subjected to positive selection. They identified 17 of these genes. Data were validated in 10,837 whole genomes from hematopoietic colonies derived from single cells. The results were correlated with clinical phenotypes, also available at the bank.

The authors note that studies of this kind are scarce, and that other proliferating tissues should be studied.

1. <https://www.nature.com/articles/s41588-021-00957-1>
2. <https://www.nature.com/articles/s41588-024-01755-1>