

MOSAIC LOSS OF Y CHROMOSOME (LOY)

It has been known for many years that loss of the Y chromosome in males is associated with aging (1).

In a recent article Wilson et al. (2), using single-cell RNA and ATAC sequencing (Assay for Transposase-Accessible Chromatin with high-throughput sequencing) studied gene expression and Y loss in the kidney. Gene expression analysis revealed that a subset of kidney cells acquire a proinflammatory transcription profile, that these damaged cells have the greatest percentage of LOY, and their presence predicts future decline in kidney function.

Furthermore, they suggest applying their approach to other tissues.

1. <https://link.springer.com/article/10.1007/s00439-017-1799-2>
2. <https://genomebiology.biomedcentral.com/articles/10.1186/s13059-024-03173-2>