

Appendix S1

SUPPLEMENTARY METHODS

Finnish healthcare system and registries

Finland has universal healthcare, which is primarily funded by taxation. Thus, all permanent residents in Finland (in 2019 the entire population of Finland was approximately 5.6 million) regardless of their financial situation are entitled to public healthcare at the same level. Thus, the real-world data (RWD) in the Finnish social and healthcare registries covers all individuals living in Finland and is not skewed in terms of any selection criterion. In addition, health record data available via data lake technology enable extraction and analysis of large data sets including RWD on disease-related clinical and molecular characteristics. The information contained in the different registers can be linked into large entities utilizing a unique 11-digit personal identification number of every individual registered in the Finnish Population Information System.