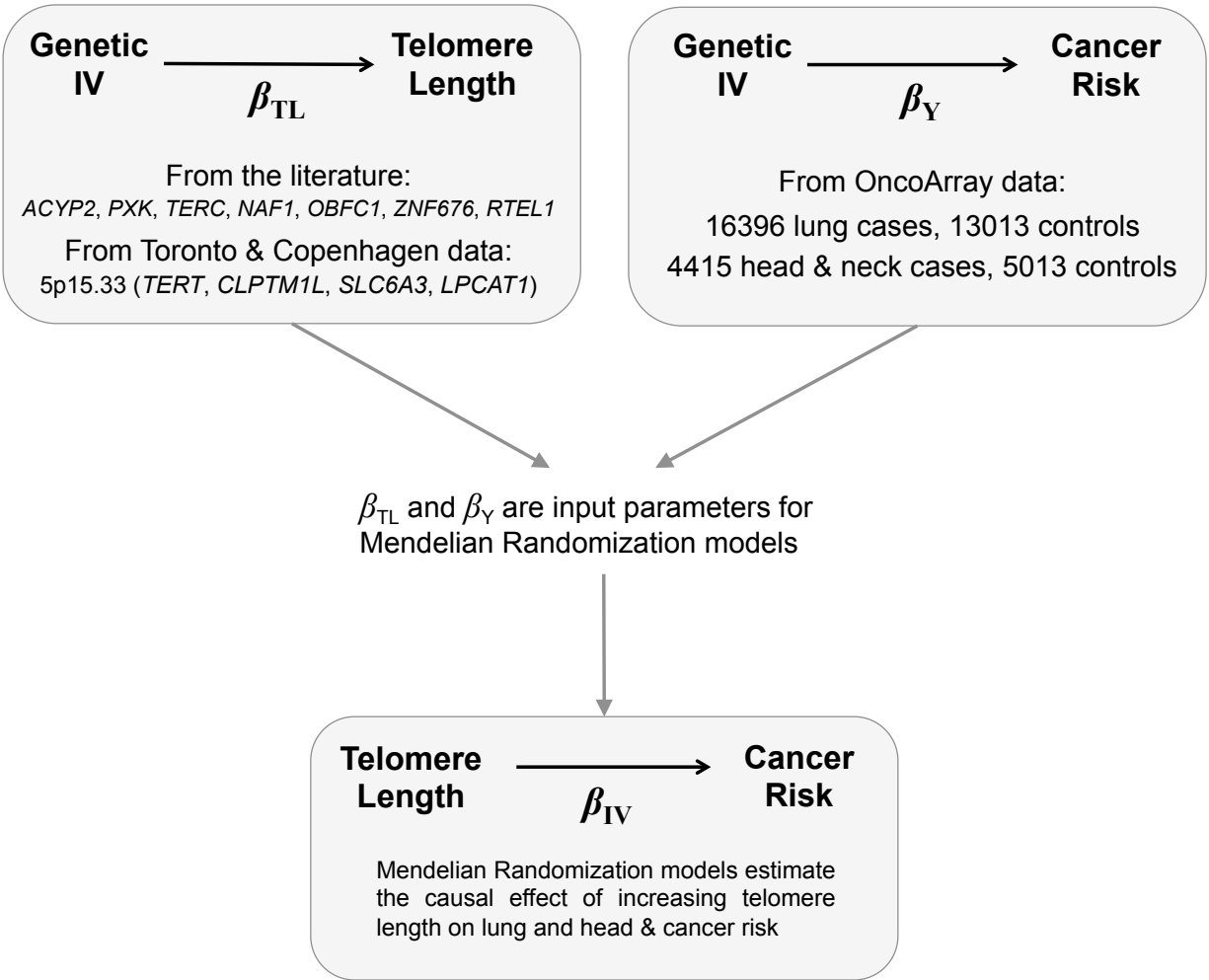
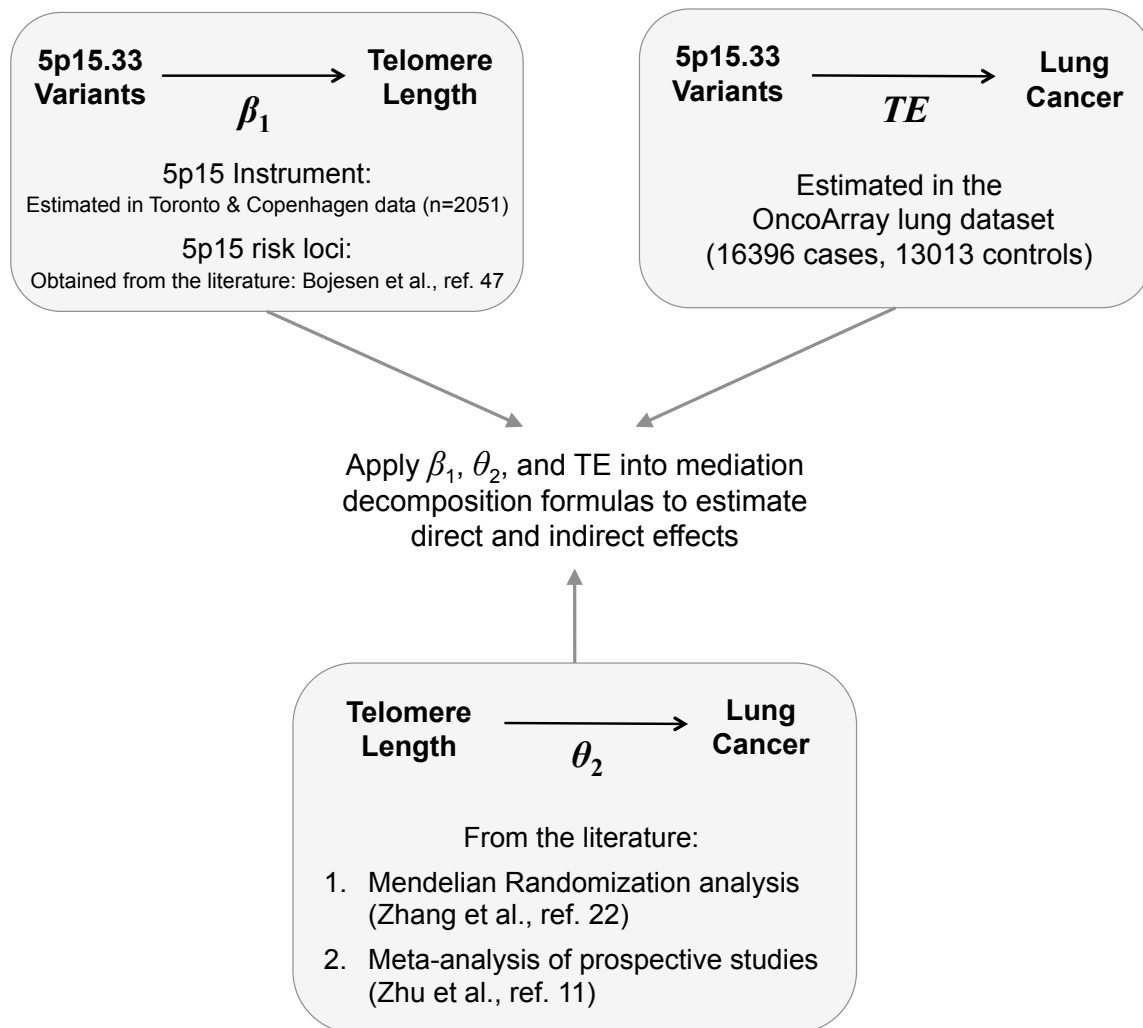


Supplementary Figure 1: Outline of the Mendelian Randomization analysis and data sources for the parameters used to estimate the causal effect of telomere length on lung and head and neck cancer risk



Abbreviations:
IV Instrumental variable
TL Telomere length

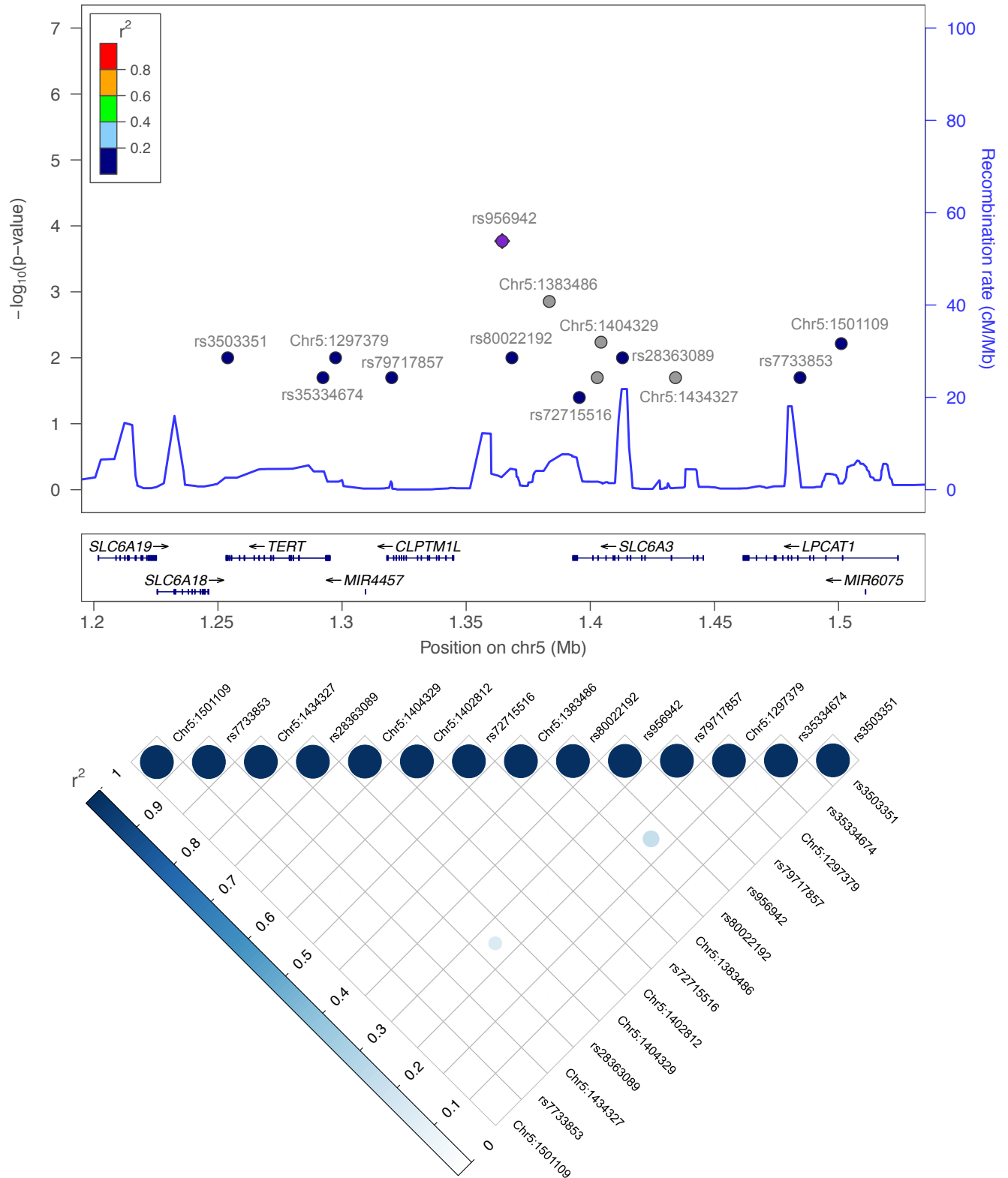
Supplementary Figure 2: Outline of the mediation analysis and data sources for the parameter estimates used to decompose the total effect on lung cancer risk into natural indirect effects (NIE), mediated by telomere length, and natural direct effects (NDE)



Abbreviations:

IV	Instrumental variable
TE	Total effects

Supplementary Figure 3: Regional linkage disequilibrium structure of the genetic variants included in the 5p15.33 instrument for telomere length, estimated using 1000 Genomes Phase 3 data and OncoArray (n=13,013) for populations of $\geq 80\%$ European ancestry



Supplementary Figure 4: Funnel plots for the evaluation of directional pleiotropy depicting instrumental variable (IV) strength plotted against ratio estimates for each genetic IV, with the summary causal estimate indicated by the vertical dotted line

