**Supplementary Figure:** Existing publications applying Mendelian randomization within a cancer context

The number of MR studies published annually has increased rapidly since the early 2000s, reachingapproximately 226 publications in 2016 alone. However, the proportion of these studies examining the causal effects of one or more traits on cancer incidence or progression has remained modest (see **Figure** below).

Using results from PubMed, the figure above represents the proportion of all published MR studies per year that assessed cancer incidence or progression as an outcome. Blue bars represent the number of all MR cancer studies (all MR studies=blue bars + orange bars) published from 2003-2016. PubMed search strategy for all MR studies: (mendelian randomization analysis[MeSH Terms]) OR "mendelian randomization" OR "mendelian randomisation"; PubMed search strategy for MR cancer studies: (((cancer) OR neoplasms[MeSH Terms])) AND (((mendelian randomization analysis[MeSH Terms]) OR "mendelian randomization") OR "mendelian randomisation")