**Supplementary Text 1. Effect decomposition methodology explained**

This method of mediation analysis allowed for estimation of the total effects, controlled direct effects (direct effect of exposure if there is no mediator), reference interaction effect (additive interaction: non-zero if setting both exposure and mediator to “present” differs from sum of the effect of having only the exposure or mediator present=public health relevance), mediated interaction (additive interaction that operates only if exposure has an effect on mediator), and pure indirect effect (effect of the mediator in the absence of exposure multiplied by the effect of exposure on the mediator: non-zero if the mediator affects the outcome when the exposure is absent and the exposure itself affects the mediator).10,11 “Exposure” was defined as the residence/SES combined measure. The methodology is applicable for dichotomous or continuous exposures; therefore we made specific two-category comparisons: urban/high-income vs. rural/low-income. The mediators of interest were healthcare visits. For each of the three provider visit types (PCP, non-oncology specialist, oncology specialist) we created a dichotomous variable that indicated whether the patient had at least once visit per year vs. no visits. Mediation findings helped us understand how an effect occurred, and interaction helps us understand for whom the effect occurred.