

### Multimedia Appendix 11

Spearman rank correlation between 6 social determination features and prospective lung cancer risk scores. Low-educated population: the percentage of the a combination of the 18-24 year old population with less than high school graduate diploma and  $\geq 25$ -year-old population with less than 12th grade diploma in the area; High-educated population: the proportion of people who received college or associate's degree or bachelor's and higher degree.

