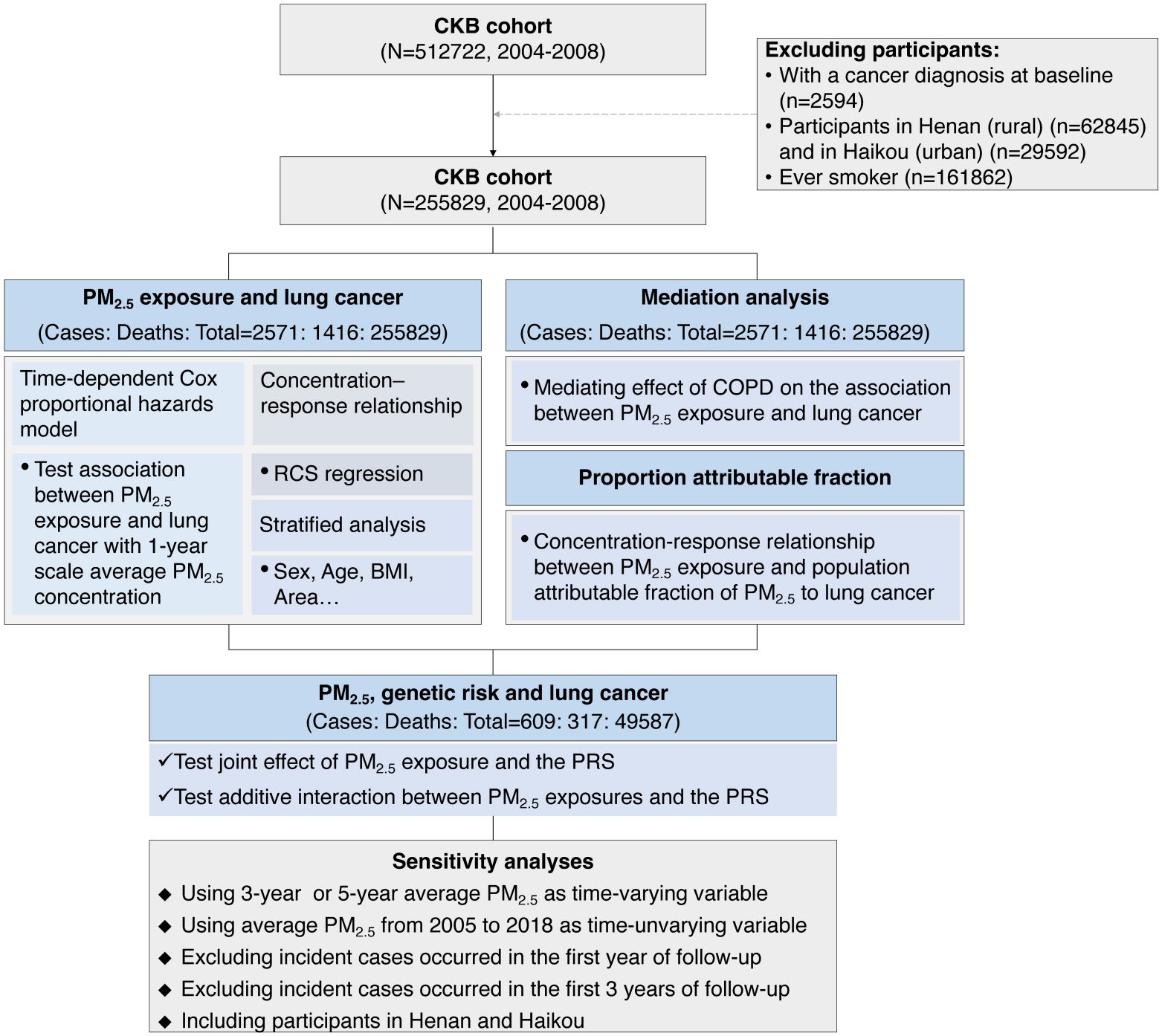

CKB cohort
(N=512722, 2004-2008)
Excluding participants:
• With a cancer diagnosis at baseline (n=2594)
• Participants in Henan (rural) (n=62845) and in Haikou (urban) (n=29592)
• Ever smoker (n=161862)
CKB cohort
(N=255829, 2004-2008)
PM2.5 exposure and lung cancer
(Cases: Deaths: Total=2571: 1416: 255829)
Time-dependent Cox proportional hazards model
• Test association between PM2.5 exposure and lung cancer with 1-year scale average PM2.5 concentration
Concentration–response relationship
• RCS regression
Stratified analysis
• Sex, Age, BMI, Area…
Mediation analysis
(Cases: Deaths: Total=2571: 1416: 255829)
• Mediating effect of COPD on the association between PM2.5 exposure and lung cancer
Proportion attributable fraction
• Concentration-response relationship between PM2.5 exposure and population attributable fraction of PM2.5 to lung cancer
PM2.5, genetic risk and lung cancer
(Cases: Deaths: Total=609: 317: 49587)
✓Test joint effect of PM2.5 exposure and the PRS
✓Test additive interaction between PM2.5 exposures and the PRS
Sensitivity analyses
◆ Using 3-year or 5-year average PM2.5 as time-varying variable
◆ Using average PM2.5 from 2005 to 2018 as time-unvarying variable
◆ Excluding incident cases occurred in the first year of follow-up
◆ Excluding incident cases occurred in the first 3 years of follow-up
◆ Including participants in Henan and Haikou