



**Supplementary Figure 3.** Log-minus-Log survival plots by CKM stage. Log-minus-log survival plots were used to assess the proportional hazards assumption across CKM stages. The survival curves appear roughly parallel for most of the follow-up period, supporting the proportional hazards assumption. Some minor convergence of lines between stages 3 and 4 was observed toward the end of the follow-up, but the overall patterns remained consistent with proportionality. CKM, cardiovascular-kidney-metabolic.