## **Description of Additional Supplementary Files**

File Name: Supplementary Data 1

Description: The lists of the NHANES and UK Biobank features and the features used in all

mortality risk scores and feature elimination experiments.

File Name: Supplementary Data 2

Description: The NHANES foreground samples when calculating the SHAP values for the

1-year mortality prediction model.

File Name: Supplementary Data 3

Description: The NHANES foreground samples when calculating the SHAP values for the

3-year mortality prediction model.

File Name: Supplementary Data 4

Description: The NHANES foreground samples when calculating the SHAP values for the

5-year mortality prediction model.

File Name: Supplementary Data 5

**Description:** The NHANES foreground samples when calculating the SHAP values for the

10-year mortality prediction model.

File Name: Supplementary Data 6

Description: The SHAP values for the NHANES 1-year mortality prediction model.

File Name: Supplementary Data 7

**Description:** The SHAP values for the NHANES 3-year mortality prediction model.

File Name: Supplementary Data 8

**Description:** The SHAP values for the NHANES 5-year mortality prediction model.

File Name: Supplementary Data 9

**Description:** The SHAP values for the NHANES 10-year mortality prediction model.