

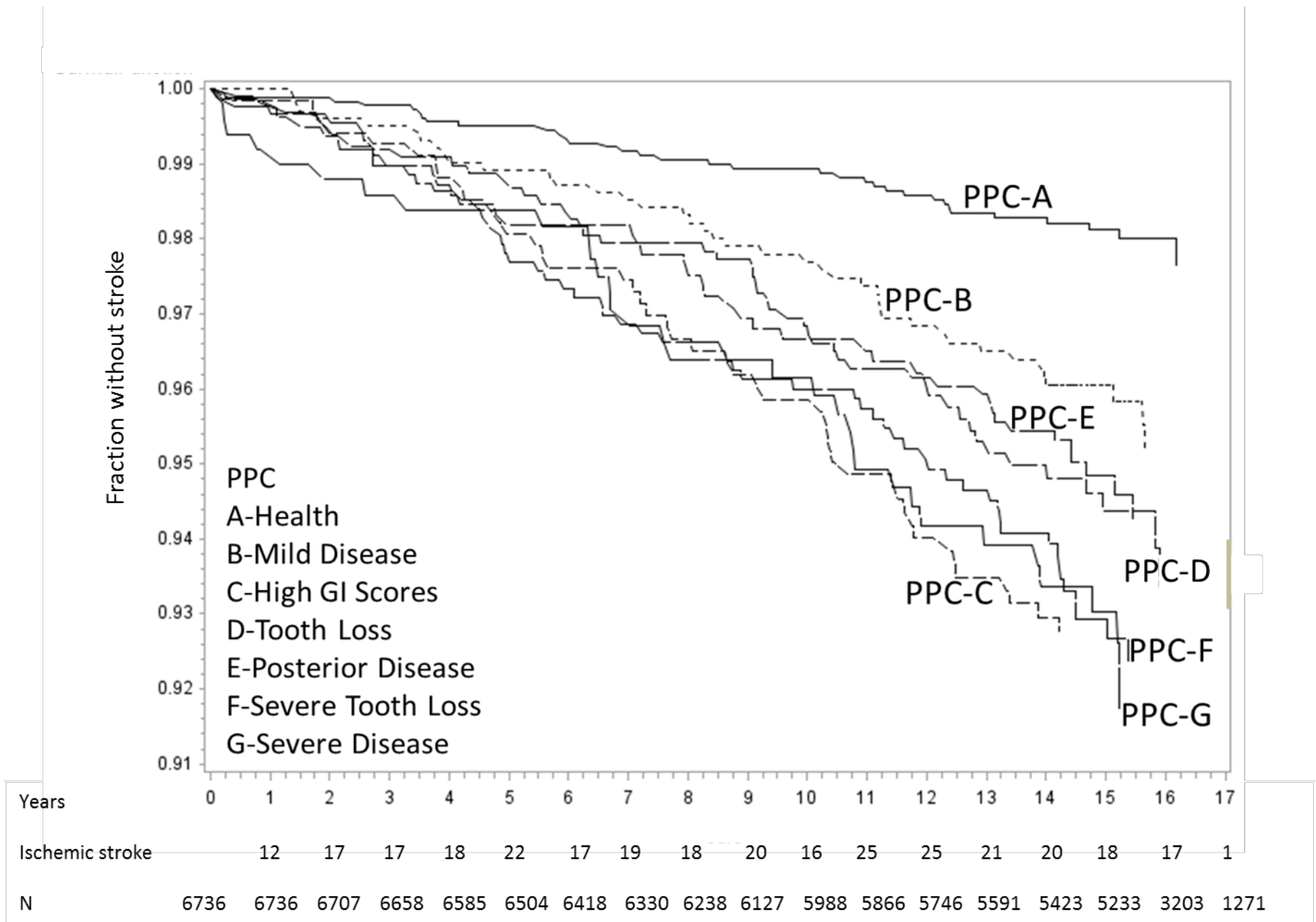
ONLINE SUPPLEMENTAL-DATA:

Individuals were classified into mutually exclusive latent classes based on their responses to a set of observed categorical variables. Both the Akaike Information Criterion (AIC) and the Bayesian Information Criterion (BIC) were used to determine the optimal number of latent classes while maintaining clinically relevant categories. We used Milligan and Cooper's ^[1] recommendation for the maximum number (n) of classes, suggesting stopping when the newly added class (n+1) is not clinically distinct from the previous number (n) of identified classes. Additionally, we verified that mean posterior probabilities of correct class assignment were >0.7 , which according to Nagin ^[2] indicates adequate class separation and membership precision. In the first step of LCA, the person-level LCA was used to classify individuals into seven latent classes based on 224 dichotomous variables (derived from 7 tooth-level variables, using the clinical parameters referred to above for each of 32 teeth). The class membership probabilities represent the overall proportions of individuals in each of seven latent classes or periodontal profiles classes. Posterior probabilities, the probability of event A occurring given that event B occurred, of each individual's membership into each class (conditional upon the 224 items, or as many of them as were observed for that individual) were computed using the model parameters from the first step. ^[3] The seven levels of PPC show a trend towards an increased stroke risk. Incident strokes based on the periodontal profile classes (PPC) over 15 years are depicted in the Kaplan Meier curve (Supplemental Figure).

REFERENCES:

1. Milligan GW, Cooper MC. An examination of procedures for determining the number of clusters in a data set. *Psychometrika* 1985;50:159-179.
2. Nagin D. *Group-Based Modeling of Development*: Harvard University Press; 2009.
3. Morelli, T., K. L. Moss, Beck J, Preisser JS, Wu D, Divariset al. Derivation and Validation of the Periodontal and Tooth Profile Classification System for Patient Stratification. *J Periodontol* 2017; 88(2):153-165.

Supplemental Figure



Supplemental Figure: By 15 years, the primary outcome (incident ischemic stroke) had occurred in 34 (1.9%) out of 1831 with PPC-A, 41(4.0%) out of 1032 with PPC-B, 45(6.5%) out of 699 with PPC-C, 41(5.2%) out of 787 with PPC-D, 48(4.9%) out of 990 with PPC-E, 57(6.4%) out of 889 with PPD-F and 33(6.7%) out of 493 with PPC-G. The numbers at risk were the numbers of patients who were alive without an event and still being followed at the beginning of each time point.