Supplement 1. Analysis of propensity score

To control for confounding factors between the two cohorts, we applied propensity score matching at a ratio of 1:4 for statin users cohort (n=30,790) to the matched comparison cohort (n=123,160). The propensity score, which represents the probability of receiving statins, was calculated for each patient by using a logistic regression model with covariates of sex, age, baseline comorbidities, including hypertension, hyperlipidemia, cardiovascular disease, congestive heart failure, peripheral vascular disease, cerebrovascular disease, chronic kidney disease, chronic obstructive pulmonary disease, and malignant neoplasms, and use of co-medications, including anti-hypertensive agents, non-statin lipid-lowering drugs, nonsteroidal anti-inflammatory drugs (NSAIDs), and low-dose aspirins.

/* ********************************************* */
/*SAS codes for the analysis of propensity score */
/* ********************************************* */

/*"AGE"=age
 "SEX"=sex
 "ht" = hypertension (ICD-9-CM codes:401.xx to 405.xx)
 "hf" = hyperlipidemia (ICD-9-CM code:272.x)
 "cad" = cardiovascular disease (ICD-9-CM codes:410.xx-414.xx)
 "chf" = congestive heart failure (ICD-9-CM code:428.0)
 "pvd" = peripheral vascular disease (ICD-9-CM code:443.9)
 "crd" = cerebrovascular disease (ICD-9-CM codes:430-438)
 "ckd" = chronic kidney disease (ICD-9-CM code:585.9)
 "copd" = chronic obstructive pulmonary disease (ICD-9-CM codes:490-496)
 "cancer" = malignant neoplasms (ICD-9-CM codes:140-239)
 "Anti" = use of anti-hypertensive agents [Anatomic Therapeutic Chemical (ATC) codes C02 and C08]
 "lipid" = use of non-statin lipid-lowering drugs (ATC codes C10AB, C10 AC, C10AD, and C10 AX)
 "NASID" = use of nonsteroidal anti-inflammatory drugs (NSAIDs) (ATC code M01A)
 "aspirin" = use of low-dose aspirins (ATC code B01AC06)*/

data DA_propensity ;set f.statin_unmatch;
group=eat;
keep id group AGE SEX ht hf cad chf pvd crd ckd copd cancer Anti lipid NASID Aspirin;
run;
PROC LOGiSTIC DESCENDING DATA=DA_propensity;
MODEL group=AGE SEX ht hf cad chf pvd crd ckd copd cancer Anti lipid NASID Aspirin;
OUTPUT OUT=out_ps PROB=ps XBETA=logit_ps;
   /*"logit_ps"= propensity score*/
RUN;

/* ********************************************** */
/* Matching Macro */
/* 4:1 matching without replacement using GMATCH macro */
/* ********************************************** */
%MEND GMATCH;

%MEND GMATCH;
%gmatch(data=out_ps,group=group, id=id,mvars= age sex logit_ps,wts=1 1 1, dmaxk=1 0 0.2410251589, dist=1, ncontls=4, seedca=234098,seedco=0489,out=a.ccm,print=y);