OPTIONS VALIDVARNAME=ANY;

/\*libname user "D:\SNUlab\SAS\dump"; \* work로 대체; \*/

libname zio "/userdata08/room553/data\_source/user\_data/zio";

libname million "/userdata08/room553/data\_source/user\_data" inencoding="asciiany";

libname outdata "/userdata08/room553/data\_source/user\_data/outdata";

libname target "/userdata08/room553/data\_source/user\_data/0119";

\* 이하 생성되는 Outgs\_~ 파일은 매칭 후 데이터임;

\* 이하 생성되는 Outgs\_~\_p 파일은 매칭 후 case/control followup 기간까지 맞춰서 outcome\_new, TIME\_new를 생성해놓은 파일임;

**proc** **freq** data=zio.nhid\_antihis\_npd\_exam;

table drink smoke;

**run**;

/\*data zio.nhid\_antihis\_npd\_exam; \*/

/\*set zio.nhid\_antihis\_npd\_exam; \*/

/\*drop drink smoke; \*/

/\*run; \*/

\* 음주, 흡연 변수 합치기; \*이거 일단 좀 보류;

/\*data zio.nhid\_antihis\_npd\_exam; \*/

/\*set zio.nhid\_antihis\_npd\_exam; \*/

/\*if drk\_freq = 0 then drink = 0; \*/

/\*else if drk\_freq = 1 then drink = 1; \*/

/\*else if drk\_freq = \*/

/\*drink = drk\_freq + drk\_amount;\*/

/\*if smk\_term = 0 then smoke = 0; \*/

/\*else smoke = smk\_term + smk\_amount; \*/

/\*run; \*/

/\*\* 각 약물 복용 변수별 table 만들기; \* 약물 복용 변수만 순서대로 바꿔가면서; \*/

/\*\* control 그룹은 아예 복용 안한 anti = 0인 14만명만 뽑기; \*/

/\*data zio.nhid\_antihis\_npd\_exam\_psm; \*/

/\*set zio.nhid\_antihis\_npd\_exam; \*/

/\*if medi\_max\_0\_5 = 1 or anti = 0; \*/

/\*run; \*/

\* logistic - medi\_sum\_category;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam;

class sex\_type medi\_sum\_category(ref='0') past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model npd\_all (event='1') =

medi\_sum\_category

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

\* logistic - medi\_max\_category;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam;

class sex\_type medi\_max\_category(ref='0') past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model npd\_all (event='1') =

medi\_max\_category

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

\* logistic unadjusted model - medi\_sum\_category;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam;

class medi\_sum\_category(ref='0');

model npd\_all (event='1') =

medi\_sum\_category / link=logit technique=fisher;

**run**;

\* logistic unadjusted model - medi\_max\_category;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam;

class medi\_max\_category(ref='0');

model npd\_all (event='1') =

medi\_max\_category / link=logit technique=fisher;

**run**;

\* 그룹별 descriptive;

**data** zio.nhid\_antihis\_npd\_exam\_des;

set zio.nhid\_antihis\_npd\_exam;

if medi\_max\_1y\_more = **1**;

**run**;

**proc** **means** data=zio.nhid\_antihis\_npd\_exam n nmiss mean median min max std;

**run**;

\* 실험군에서만;

\* nhid\_antihis\_npd\_exam\_case;

**proc** **freq** data=zio.nhid\_antihis\_npd\_exam\_case;

table npd\_all \* medi\_sum\_category;

**run**;

**proc** **freq** data=zio.nhid\_antihis\_npd\_exam\_case;

table npd\_all \* medi\_max\_category;

**run**;

\* psmatch 전 logistic;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_case;

class sex\_type medi\_sum\_category(ref='0') past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model npd\_all (event='1') =

medi\_sum\_category

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

\* psmatch 전 logistic;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_case;

class sex\_type medi\_max\_category(ref='0') past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model npd\_all (event='1') =

medi\_max\_category

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

\* logistic unadjusted model - medi\_sum\_category;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_case;

class medi\_sum\_category(ref='0');

model npd\_all (event='1') =

medi\_sum\_category / link=logit technique=fisher;

**run**;

\* logistic unadjusted model - medi\_max\_category;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_case;

class medi\_max\_category(ref='0');

model npd\_all (event='1') =

medi\_max\_category / link=logit technique=fisher;

**run**;

\* 실험군에서 60세 이상만 뽑기;

**data** zio.nhid\_antihis\_npd\_exam\_case\_60;

set zio.nhid\_antihis\_npd\_exam\_case;

if age >= **60**;

**run**;

\* 실험군, 60세 이상 crosstable;

**proc** **freq** data=zio.nhid\_antihis\_npd\_exam\_case\_60;

table npd\_all \* medi\_sum\_category;

**run**;

**proc** **freq** data=zio.nhid\_antihis\_npd\_exam\_case\_60;

table npd\_all \* medi\_max\_category;

**run**;

\* psmatch 전 logistic;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_case\_60;

class sex\_type medi\_sum\_category(ref='0') past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model npd\_all (event='1') =

medi\_sum\_category

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

\* psmatch 전 logistic;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_case\_60;

class sex\_type medi\_max\_category(ref='0') past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model npd\_all (event='1') =

medi\_max\_category

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

\* logistic unadjusted model - medi\_sum\_category;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_case\_60;

class medi\_sum\_category(ref='0');

model npd\_all (event='1') =

medi\_sum\_category / link=logit technique=fisher;

**run**;

\* logistic unadjusted model - medi\_max\_category;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_case\_60;

class medi\_max\_category(ref='0');

model npd\_all (event='1') =

medi\_max\_category / link=logit technique=fisher;

**run**;

\* 실험군 질병별로 확인;

\* H10;

\* psmatch 전 logistic;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_h10;

class sex\_type medi\_sum\_category(ref='0') past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model npd\_all (event='1') =

medi\_sum\_category

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

\* psmatch 전 logistic;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_h10;

class sex\_type medi\_max\_category(ref='0') past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model npd\_all (event='1') =

medi\_max\_category

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

\* logistic unadjusted model - medi\_sum\_category;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_h10;

class medi\_sum\_category(ref='0');

model npd\_all (event='1') =

medi\_sum\_category / link=logit technique=fisher;

**run**;

\* logistic unadjusted model - medi\_max\_category;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_h10;

class medi\_max\_category(ref='0');

model npd\_all (event='1') =

medi\_max\_category / link=logit technique=fisher;

**run**;

\* J30;

\* psmatch 전 logistic;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_j30;

class sex\_type medi\_sum\_category(ref='0') past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model npd\_all (event='1') =

medi\_sum\_category

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

\* psmatch 전 logistic;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_j30;

class sex\_type medi\_max\_category(ref='0') past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model npd\_all (event='1') =

medi\_max\_category

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

\* logistic unadjusted model - medi\_sum\_category;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_j30;

class medi\_sum\_category(ref='0');

model npd\_all (event='1') =

medi\_sum\_category / link=logit technique=fisher;

**run**;

\* logistic unadjusted model - medi\_max\_category;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_j30;

class medi\_max\_category(ref='0');

model npd\_all (event='1') =

medi\_max\_category / link=logit technique=fisher;

**run**;

\* J45;

\* psmatch 전 logistic;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_j45;

class sex\_type medi\_sum\_category(ref='0') past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model npd\_all (event='1') =

medi\_sum\_category

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

\* psmatch 전 logistic;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_j45;

class sex\_type medi\_max\_category(ref='0') past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model npd\_all (event='1') =

medi\_max\_category

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

\* logistic unadjusted model - medi\_sum\_category;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_j45;

class medi\_sum\_category(ref='0');

model npd\_all (event='1') =

medi\_sum\_category / link=logit technique=fisher;

**run**;

\* logistic unadjusted model - medi\_max\_category;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_j45;

class medi\_max\_category(ref='0');

model npd\_all (event='1') =

medi\_max\_category / link=logit technique=fisher;

**run**;

\* L23;

\* psmatch 전 logistic;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_l23;

class sex\_type medi\_sum\_category(ref='0') past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model npd\_all (event='1') =

medi\_sum\_category

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

\* psmatch 전 logistic;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_l23;

class sex\_type medi\_max\_category(ref='0') past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model npd\_all (event='1') =

medi\_max\_category

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

\* logistic unadjusted model - medi\_sum\_category;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_l23;

class medi\_sum\_category(ref='0');

model npd\_all (event='1') =

medi\_sum\_category / link=logit technique=fisher;

**run**;

\* logistic unadjusted model - medi\_max\_category;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_l23;

class medi\_max\_category(ref='0');

model npd\_all (event='1') =

medi\_max\_category / link=logit technique=fisher;

**run**;

\* L50;

\* psmatch 전 logistic;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_l50;

class sex\_type medi\_sum\_category(ref='0') past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model npd\_all (event='1') =

medi\_sum\_category

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

\* psmatch 전 logistic;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_l50;

class sex\_type medi\_max\_category(ref='0') past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model npd\_all (event='1') =

medi\_max\_category

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

\* logistic unadjusted model - medi\_sum\_category;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_l50;

class medi\_sum\_category(ref='0');

model npd\_all (event='1') =

medi\_sum\_category / link=logit technique=fisher;

**run**;

\* logistic unadjusted model - medi\_max\_category;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_l50;

class medi\_max\_category(ref='0');

model npd\_all (event='1') =

medi\_max\_category / link=logit technique=fisher;

**run**;

\* 대조군에서만; \* 대조군 사용 안하기로 결정;

\* nhid\_antihis\_npd\_exam\_noncase;

\* 각 약물 복용 변수별 table 만들기; \* 약물 복용 변수만 순서대로 바꿔가면서;

\* control 그룹은 아예 복용 안한 anti = 0인 8.4만명만 뽑기;

**proc** **freq** data=zio.nhid\_antihis\_npd\_exam\_noncase;

table npd\_all \* medi\_sum\_category;

**run**;

**proc** **freq** data=zio.nhid\_antihis\_npd\_exam\_noncase;

table npd\_all \* medi\_max\_category;

**run**;

\* psmatch 전 logistic;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_noncase;

class sex\_type medi\_sum\_category(ref='0') past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model npd\_all (event='1') =

medi\_sum\_category

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

\* psmatch 전 logistic;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_noncase;

class sex\_type medi\_max\_category(ref='0') past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model npd\_all (event='1') =

medi\_max\_category

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

\* psm model을 logistic 으로 확인;

\* 전체;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_psm;

class

sex\_type

medi\_sum\_category\_all (ref='0')

past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model medi\_sum\_category\_all (event = '1') =

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_psm;

class

sex\_type

medi\_max\_category\_all (ref='0')

past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model medi\_max\_category\_all (event = '1') =

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

\* 실험군;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_case\_psm;

class

sex\_type

medi\_sum\_category\_all (ref='0')

past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model medi\_sum\_category\_all (event = '1') =

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_case\_psm;

class

sex\_type

medi\_max\_category\_all (ref='0')

past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model medi\_max\_category\_all (event = '1') =

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

/\* PS Match - ------------------------------------------------------------------------------------------------------------------------------------------- \*/

**data** zio.nhid\_antihis\_npd\_exam\_psm;

set zio.nhid\_antihis\_npd\_exam;

if medi\_max\_category = **0** then medi\_max\_category\_all = **0**; else medi\_max\_category\_all = **1**;

if medi\_sum\_category = **0** then medi\_sum\_category\_all = **0**; else medi\_sum\_category\_all = **1**;

**run**;

**data** zio.nhid\_antihis\_npd\_exam\_case\_psm;

set zio.nhid\_antihis\_npd\_exam\_case;

if medi\_max\_category = **0** then medi\_max\_category\_all = **0**; else medi\_max\_category\_all = **1**;

if medi\_sum\_category = **0** then medi\_sum\_category\_all = **0**; else medi\_sum\_category\_all = **1**;

**run**;

**data** zio.nhid\_antihis\_npd\_exam\_ncase\_psm;

set zio.nhid\_antihis\_npd\_exam\_noncase;

if medi\_max\_category = **0** then medi\_max\_category\_all = **0**; else medi\_max\_category\_all = **1**;

if medi\_sum\_category = **0** then medi\_sum\_category\_all = **0**; else medi\_sum\_category\_all = **1**;

**run**;

**proc** **freq** data=zio.nhid\_antihis\_npd\_exam\_psm;

table npd\_all \* medi\_sum\_category\_all;

**run**;

**proc** **freq** data=zio.nhid\_antihis\_npd\_exam\_psm;

table npd\_all \* medi\_max\_category\_all;

**run**;

**proc** **freq** data=zio.nhid\_antihis\_npd\_exam\_case\_psm;

table npd\_all \* medi\_sum\_category\_all;

**run**;

**proc** **freq** data=zio.nhid\_antihis\_npd\_exam\_case\_psm;

table npd\_all \* medi\_max\_category\_all;

**run**;

**proc** **freq** data=zio.nhid\_antihis\_npd\_exam\_ncase\_psm;

table npd\_all \* medi\_sum\_category\_all;

**run**;

**proc** **freq** data=zio.nhid\_antihis\_npd\_exam\_ncase\_psm;

table npd\_all \* medi\_max\_category\_all;

**run**;

ODS GRAPHICS ON;

**proc** **psmatch** data = zio.nhid\_antihis\_npd\_exam\_psm ;

class

sex\_type

medi\_sum\_category\_all

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq;

psmodel medi\_sum\_category\_all(Treated = '1') =

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq;

match method = greedy(k=**5**) stat=lps caliper=**0.1**;

assess lps allcov / weight = none plots=(boxplot barchart);

output out(obs=match)= outdata.Outgs\_all lps=\_Lps matchid = \_MatchID;

**run**; \* optimal 메모리 부족;

ODS GRAPHICS ON;

**proc** **psmatch** data = zio.nhid\_antihis\_npd\_exam\_case\_psm ;

class

sex\_type

medi\_max\_category\_all

past\_htn past\_stk past\_htdz past\_dm past\_cc;

psmodel medi\_max\_category\_all(Treated = '1') =

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq;

match method = greedy(k=**1**) stat=lps caliper=**0.1**;

assess lps allcov / weight = none ;

/\*plots=(boxplot barchart);\*/

output out(obs=match)= outdata.Outgs\_case lps=\_Lps matchid = \_MatchID;

**run**; \* optimal 메모리 부족;

ODS GRAPHICS ON;

**proc** **psmatch** data = zio.nhid\_antihis\_npd\_exam\_ncase\_psm ;

class

sex\_type

medi\_sum\_category\_all

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq;

psmodel medi\_sum\_category\_all(Treated = '1') =

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq;

match method = greedy(k=**5**) stat=lps caliper=**0.1**;

assess lps allcov / weight = none plots=(boxplot barchart);

output out(obs=match)= outdata.Outgs\_noncase lps=\_Lps matchid = \_MatchID;

**run**; \* optimal 메모리 부족;

/\* draw histogram of propensity score \*/ \* 공단 서버 문제로 안그려짐;

**proc** **univariate** data=outdata.Outgs\_all noprint;

class medi\_sum\_category\_all;

histogram \_PS\_ / normal (color=red) nrows=**2**;

**run**;

**proc** **univariate** data=outdata.Outgs\_case noprint;

class medi\_sum\_category\_all;

histogram \_PS\_ / normal (color=red) nrows=**2**;

**run**;

**proc** **univariate** data=outdata.Outgs\_noncase noprint;

class medi\_sum\_category\_all;

histogram \_PS\_ / normal (color=red) nrows=**2**;

**run**;

**proc** **freq** data=outdata.Outgs\_all;

table npd\_all\*medi\_sum\_category\_all;

**run**;

**proc** **freq** data=outdata.Outgs\_case;

table npd\_all\*medi\_max\_category\_all;

**run**;

**proc** **freq** data=outdata.Outgs\_noncase;

table npd\_all\*medi\_sum\_category\_all;

**run**;

\* logistic after psm;

**proc** **logistic** data=outdata.Outgs\_all;

class sex\_type medi\_sum\_category\_all(ref='0') past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model npd\_all (event='1') =

medi\_sum\_category\_all

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

\* logistic after psm;

**proc** **logistic** data=outdata.Outgs\_case;

class sex\_type medi\_max\_category(ref='0') past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model npd\_all (event='1') =

medi\_max\_category

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

\* logistic after psm;

**proc** **logistic** data=outdata.Outgs\_noncase;

class sex\_type medi\_sum\_category\_all(ref='0') past\_htn(ref='0') past\_stk(ref='0') past\_htdz(ref='0') past\_dm(ref='0') past\_cc(ref='0')

drk\_freq(ref='0') drk\_amount (ref='0') smk\_term(ref='0') smk\_amount(ref='0') exec\_freq(ref='0');

model npd\_all (event='1') =

medi\_sum\_category\_all

age

sex\_type

g1e\_bmi

past\_htn past\_stk past\_htdz past\_dm past\_cc

drk\_freq drk\_amount smk\_term smk\_amount

exec\_freq / link=logit technique=fisher;

**run**;

**proc** **logistic** data=zio.nhid\_antihis\_npd\_exam\_psm;

class medi\_max\_category(ref='0');

model npd\_all (event='1') =

medi\_max\_category / link=logit technique=fisher;

**run**;

\* 비율 확인을 위해, 매칭된 데이터에다 1년 이상, 6개월 이상, 6개월-1년, 3개월-6개월, 30일 이상 변수만 떼다 붙이기;

**proc** **sql**;

create table check\_n as

select p.\*, q.anti\_1year

from outdata.Outgs\_anti3mon\_NPD4 as p left join zio.nhid\_antihis\_npd10\_1year as q

on p.indi\_dscm\_no = q.indi\_dscm\_no;

**quit**;

**proc** **sql**;

create table check\_n as

select p.\*, q.anti\_6mon

from check\_n as p left join zio.nhid\_antihis\_npd10\_6mon as q

on p.indi\_dscm\_no = q.indi\_dscm\_no;

**quit**;

**proc** **sql**;

title 'count';

select sum(npd\_final4)/sum(medi\_all\_sum)

from check\_n

where anti\_1year = **1**;

**quit**;

**proc** **sql**;

title 'count';

select sum(npd\_final4)/sum(medi\_all\_sum)

from check\_n

where anti\_6mon = **1**;

**quit**;

**proc** **sql**;

title 'count';

select sum(npd\_final4)/sum(medi\_all\_sum)

from check\_n

where anti\_3mon = **1**;

**quit**;

**proc** **sql**;

title 'count';

select sum(npd\_final4)/sum(medi\_all\_sum)

from check\_n

where anti\_3mon = **0**;

**quit**;

**proc** **sql**;

title 'count';

select count(distinct indi\_dscm\_no)

from check\_n

where anti\_1year = **1**;

**quit**;

**proc** **sql**;

title 'count';

select count(distinct indi\_dscm\_no)

from check\_n

where anti\_6mon = **1**;

**quit**;

**proc** **sql**;

title 'count';

select count(distinct indi\_dscm\_no)

from check\_n

where anti\_3mon = **1**;

**quit**;

**proc** **sql**;

title 'count';

select count(distinct indi\_dscm\_no)

from check\_n

where anti\_3mon = **0**;

**quit**;

\* 60세 이상 / 10세 미만 그룹 확인;

**data** check\_n2;

set check\_n;

if age < **20**;

**run**;

title min;

**proc** **sql**;

select min(age)

from check\_n;

**quit**;

**proc** **freq** data=check\_n2;

table npd\_final4\*anti\_3mon;

**run**;

**proc** **sql**;

title 'count';

select sum(npd\_final4)/sum(medi\_all\_sum)

from check\_n2

where anti\_1year = **1**;

**quit**;

**proc** **sql**;

title 'count';

select sum(npd\_final4)/sum(medi\_all\_sum)

from check\_n2

where anti\_6mon = **1**;

**quit**;

**proc** **sql**;

title 'count';

select sum(npd\_final4)/sum(medi\_all\_sum)

from check\_n2

where anti\_3mon = **1**;

**quit**;

**proc** **sql**;

title 'count';

select sum(npd\_final4)/sum(medi\_all\_sum)

from check\_n2

where anti\_3mon = **0**;

**quit**;

**proc** **sql**;

title 'count';

select count(distinct indi\_dscm\_no)

from check\_n2

where anti\_1year = **1**;

**quit**;

**proc** **sql**;

title 'count';

select count(distinct indi\_dscm\_no)

from check\_n2

where anti\_6mon = **1**;

**quit**;

**proc** **sql**;

title 'count';

select count(distinct indi\_dscm\_no)

from check\_n2

where anti\_3mon = **1**;

**quit**;

**proc** **sql**;

title 'count';

select count(distinct indi\_dscm\_no)

from check\_n2

where anti\_3mon = **0**;

**quit**;

/\* PS Match - R06\_1year END. ------------------------------------------------------------------------------------------------------------------------------------------- \*/