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***SAS CODE FOR HINTS CYCLE 4***;
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DATA work.HINTS4_CYCLE4;
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SET tmp1.hints4cycle4_public;
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if HeardGeneticTest in (-9) then Gentestknowledge=.;  
if HeardGeneticTest=1 then Gentestknowledge=1;  
if HeardGeneticTest=2 then Gentestknowledge=2;
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```
if education in (-9) then education2=.;  
if education in (1,2) then education2=4;  
if education=3 then education2=3;  
if education in (4,5) then education2=2;  
if education in (6,7) then education2=1;  
label education2="Highest level of education completed";
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```
if Genetics_Cancer in (-9,-5,-1) then Genetics_Cancer_rc=.;  
if Genetics_Cancer=1 then Genetics_Cancer_rc=1;  
if Genetics_Cancer=2 then Genetics_Cancer_rc=2;  
if Genetics_Cancer=3 then Genetics_Cancer_rc=3;  
if Genetics_Cancer=4 then Genetics_Cancer_rc=4;
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if Genetics_Cancer_rc in (1,2,3) then Genetics_Cancer_rc2=1;  
if Genetics_Cancer_rc=4 then Genetics_Cancer_rc2=2;
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```
if Behaviors_Cancer in (-9,-5,-1) then Behaviors_Cancer_rc=.;  
if Behaviors_Cancer=1 then Behaviors_Cancer_rc=1;  
if Behaviors_Cancer=2 then Behaviors_Cancer_rc=1;  
if Behaviors_Cancer=3 then Behaviors_Cancer_rc=1;  
if Behaviors_Cancer=4 then Behaviors_Cancer_rc=2;
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```
if Behaviors_Cancer in (-9,-5,-1) then Behaviors_Cancer_rc2=.;  
if Behaviors_Cancer=1 then Behaviors_Cancer_rc2=1;  
if Behaviors_Cancer=2 then Behaviors_Cancer_rc2=2;  
if Behaviors_Cancer=3 then Behaviors_Cancer_rc2=3;  
if Behaviors_Cancer=4 then Behaviors_Cancer_rc2=4;
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```
if SeekCancerInfo in (-6,-2,-1) then SeekCancerInfo_rc=.;  
if SeekCancerInfo=1 then SeekCancerInfo_rc=1;  
if SeekCancerInfo=2 then SeekCancerInfo_rc=2;
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```
if CancerConfidentGetHealthInf in (-9,-5) then CancerConfident=.;  
if CancerConfidentGetHealthInf=1 then CancerConfident=1;  
if CancerConfidentGetHealthInf=2 then CancerConfident=1;  
if CancerConfidentGetHealthInf=3 then CancerConfident=2;  
if CancerConfidentGetHealthInf=4 then CancerConfident=2;  
if CancerConfidentGetHealthInf=5 then CancerConfident=3;
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```
if InternetCancerInfoSelf in (-9,-6,-2,-1) then InternetCancerInfoSelf_rc=.;  
else InternetCancerInfoSelf_rc=InternetCancerInfoSelf;
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```
if ConfidentInfoSafe in (-9,-5) then ConfidentInfoSafe_rc=.;  
else ConfidentInfoSafe_rc=ConfidentInfoSafe;
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```
if RatherNotKnowChance in (-9,-5,-1) then RatherNotKnowChance_rc=.;  
if RatherNotKnowChance in (1,2) then RatherNotKnowChance_rc=1;
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if RatherNotKnowChance in (3,4) then RatherNotKnowChance_rc=2;

if ChanceGetCancer in (-9,-5) then ChanceGetCancer_rc=.;
if ChanceGetCancer in (1,2) then ChanceGetCancer_rc=1;
if ChanceGetCancer=3 then ChanceGetCancer_rc=2;
if ChanceGetCancer in (4,5) then ChanceGetCancer_rc=3;

if maritalstatus in (-9,-5) then maritalstatus_rc=.;
if maritalstatus=1 then maritalstatus_rc=1;
if maritalstatus in (2,3,4,5,6) then maritalstatus_rc=2;

if age in (-4,-9) then age_rc=.;
if age ge 18 and age le 34 then age_rc=1;
if age ge 35 and age le 49 then age_rc=2;
if age ge 50 and age le 64 then age_rc=3;
if age ge 65 and age le 74 then age_rc=4;
if age ge 75 then age_rc=5;

if IncomeRanges in (-9) then IncomeRanges_rc=.;
if IncomeRanges in (1,2,3) then IncomeRanges_rc=4;
if IncomeRanges in (4,5) then IncomeRanges_rc=3;
if IncomeRanges in (6,7) then IncomeRanges_rc=2;
if IncomeRanges in (8,9) then IncomeRanges_rc=1;

if race_cat2 in (-9) then race_cat2_rc=.;
if race_cat2 in (11) then race_cat2_rc=1;
if race_cat2 in (12) then race_cat2_rc=2;
if race_cat2 in (14,16,31,32,33,34,35,36,37,51,54) then race_cat2_rc=3;

if Whereseekhealthinfo in (-9,-6,-5,-2,-1) then Whereseekhealthinfo_rc=.;
else Whereseekhealthinfo_rc=Whereseekhealthinfo;

if selfgender in (-9,-5) then selfgender_rc=.;
else selfgender_rc=selfgender;

if GeneralHealth in (-9,-5) then GeneralHealth_rc=.;
else GeneralHealth_rc=GeneralHealth;

if GeneralHealth_rc in (1,2,3) then GeneralHealth_rc2=1;
if GeneralHealth_rc in (4,5) then GeneralHealth_rc2=2;

if RaceEthn5 in (-9) then RaceEthn5_rc=.;
else RaceEthn5_rc=RaceEthn5;

if RaceEthn5_rc in (3,4,5) then RaceEthn5_rc2=3;
else RaceEthn5_rc2=RaceEthn5_rc;

run;
proc freq data=work.HINTS4_CYCLE4;***NEW AGE RECODE VARIABLE***;
table age_rc;
run;
PROC FREQ DATA=work.HINTS4_CYCLE4;***does age and level of education have a
significant role?***;
TABLES (age education2 )* Gentestknowledge/CHISQ RELRISK;

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RUN;***DATA SHOWS AN ASSOCIATION BETWEEN AGE AND EDUCATION WITH A SIGNIFICANT
P VALUE****;
proc freq data=work.HINTS4_CYCLE4;*****Genetic Test Knowledge***;
table Gentestknowledge;
run;
proc freq data=work.HINTS4_CYCLE4;*****Genetics and Cancer risk***;
table Genetics_Cancer_rc;
run;
proc freq data=work.HINTS4_CYCLE4;*****Genetics and Cancer risk***;
table Genetics_Cancer_rc2;
run;
proc freq data=work.HINTS4_CYCLE4;*****Health Behaviors and Cancer***;
table Behaviors_Cancer_rc;
run;
proc freq data=work.HINTS4_CYCLE4;****Health Behaviors and Cancer (4
categories)****;
table Behaviors_Cancer_rc2;
run;
proc freq data=work.HINTS4_CYCLE4;*****Level of Education***;
table education2;
run;
proc freq data=work.HINTS4_CYCLE4;*****Seeking Cancer Information***;
table SeekCancerInfo_rc;
run;
proc freq data=work.HINTS4_CYCLE4;*****Cancer Confidence***;
table CancerConfident;
run;
proc freq data=work.HINTS4_CYCLE4;*****Internet cancer info seeking for
self****;
table InternetCancerInfoSelf_rc;
run;
proc freq data=work.HINTS4_CYCLE4;*****Confidence info safe****;
table ConfidentInfoSafe_rc;
run;
proc freq data=work.HINTS4_CYCLE4;*** Rather not know chances of getting
cancer*****;
table RatherNotKnowChance_rc ;
run;
proc freq data=work.HINTS4_CYCLE4;***Chances of getting cancer*****;
table ChanceGetCancer_rc;
run;
proc freq data=work.HINTS4_CYCLE4;***Marital Status*****;
table maritalstatus_rc;
run;
proc freq data=work.HINTS4_CYCLE4;****Race*****;
table race_cat2_rc;
run;
proc freq data=work.HINTS4_CYCLE4;****Age*****;
table age_rc;
run;
proc freq data=work.HINTS4_CYCLE4;****Income*****;
table IncomeRanges_rc;
run;
proc freq data=work.HINTS4_CYCLE4;****Where do you see health
information****;
table Whereseekhealthinfo_rc;
run;

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proc freq data=work.HINTS4_CYCLE4;****Gender****;
table selfgender_rc;
run;
proc freq data=work.HINTS4_CYCLE4;****General Health Status****;
table GeneralHealth_rc;
run;
proc freq data=work.HINTS4_CYCLE4;****Health Status Recoded****;
table GeneralHealth_rc2;
run;
proc freq data=work.HINTS4_CYCLE4;**** RACE 3 CATEGORIES****;
table RaceEthn5_rc2;
run;
proc freq data=work.HINTS4_CYCLE4;**** RACE 5 CATEGORIES****;
table RaceEthn5_rc;
run;
PROC FREQ DATA=work.HINTS4_CYCLE4;*****3 RACE CATEGORY BIVARIATE MODEL****;
TABLES (education2 age_rc RaceEthn5_rc2 IncomeRanges_rc selfgender_rc
Behaviors_Cancer_rc Gentestknowledge)* Genetics_Cancer_rc2/CHISQ RELRISK
nocol nopercnt;
RUN;
PROC FREQ DATA=work.HINTS4_CYCLE4;*****5 RACE CATEGORY BIVARIATE MODEL****;
TABLES (education2 age_rc RaceEthn5_rc IncomeRanges_rc selfgender_rc
Behaviors_Cancer_rc Gentestknowledge)* Genetics_Cancer_rc2/CHISQ RELRISK
nocol nopercnt;
RUN;
proc logistic data=work.HINTS4_CYCLE4;**FINAL MODEL**;
class education2 age_rc RaceEthn5_rc2 IncomeRanges_rc selfgender_rc
Behaviors_Cancer_rc Gentestknowledge/ param=ref ref=first order=internal;
model Genetics_Cancer_rc2 = education2 age_rc RaceEthn5_rc2 IncomeRanges_rc
selfgender_rc Behaviors_Cancer_rc Gentestknowledge/ rsq lackfit;
run;

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