Model Selection in Survival Analysis of EXT2 Gene Polymorphisms with Age at on set of Type 2 Diabetes

Research Article

Appendix

The following program using PROC PHREG showed one SNP rs4755230, sex, alcohol use, smoking status, and BMI as the predictors for the AAO of T2D. The rs4755230 has 3 genotypes - A_A, A_G and G_G, respectively; while the G_G genotype was considered as the reference.

```
proc phreg data= t2daao;
class sex(ref="1") obesity(ref="1")  alcohol(ref="1") smoking(ref="1") rs4755230 (ref = "G_G")/param=ref;
model Aaot2d*status(0) = sex BMI alcohol smoking rs4755230 / risklimits ;
hazardratio rs475230;
run;
```

The following program using PROC LIFEREG showed one SNP rs4755230, sex, alcohol use, smoking status, and BMI as the predictors for the AAO of T2D through the Weibull distribution. Other parametric models can be tested by changing the dist (distribution) option in the model.

```
proc lifereg data= t2daao;
class sex11 alcohol smoking rs4755230 ;
model Aaot2d*statust2d(0) = sex11 BMI alcohol smoking rs4755230 / dist=WEIBULL;
run;
```

The following program was used to test the proportional hazards assumption using the ASSESS option of PROC PHREG.

```
proc phreg data= t2daao;
class sex alcohol smoking rs4755230;
model aaot2d*statust2d(0) = sex11 bmi alcohol smoking rs4755230 / risklimits ;
assess var=(bmi) ph / crpanel resample seed =1000;
run;
```

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