

**Appendix 1**

Risk score = [expression of PFKL\*(0.0126885770464336)] + [expression of NT5E\*(0.0522122581133259)] + [expression of GNPNAT1\*(0.00164583109062707)] + [expression of TSTA3\*(0.00519392576432534)] + [expression of PAICS\*(0.0120775092707441)] + [expression of ACADM\*(-0.0209796570547055)] + [expression of UGDH\*(-0.00472964233641674)] + [expression of SUCLA2\*(0.0258098276906908)] + [expression of NMNAT2\*(0.0510632189619637)] + [expression of GK\*(-0.0666887568790942)] + [expression of POLR2K\*(8.8822917139983e-05)] + [expression of EPRS\*(0.00126708936051028)] + [expression of AK3\*(-0.0117789112417967)] + [expression of NME3\*(-0.00732514613298537)] + [expression of TYMP\*(-0.00117584855229708)] + [expression of G6PD\*(0.00207677026142319)] + [expression of ENPP6\*(-0.307188879693507)] + [expression of MTHFD2\*(0.00219421734272339)] + [expression of PLA2G2D\*(-0.0512629123469395)] + [expression of CEL\*(0.00378918646617738)] + [expression of RDH16\*(0.0373224337052466)] + [expression of QPRT\*(0.0140363310679199)] + [expression of IDO1\*(-0.00459888439752152)] + [expression of IL4I1\*(-0.00513015793687663)].