The Framingham Study has shown that the population at risk of Atherothrombotic Disease (ATD) differs from those not at risk by a number of conditions termed risk factors and differs not in kind but in severity of those risk factors. The chief risk factors are cigarette smoking, dyslipidemia, and hypertension. Dyslipidemia is measured by the Cholesterol Retention Fraction (CRF, defined as \((LDL-HDL)/LDL\)). Hypertension is determined by systolic blood pressure (SBP). CRF-SBP plot positions are known for 870 people who developed some form of clinical ATD during the 1978-2018 timeframe. When the CRF-SBP plots of these 870 patients are plotted on a graph, a threshold line can be drawn with CRF-SBP plot loci of \((0.74,100)\) and \((0.49,140)\) when the precipitation method of HDL-cholesterol measurement is used. Above this threshold line lie the plots of 85% of all ATD patients of any age. If cigarette smoking status is accounted for, then only 6% of ATD patients can not be predicted by CRF-SBP plot position above the threshold line and/or cigarette smoking status. These plots may be stratified into CRF-SBP cohorts and the average age of ATD onset calculated. Current cigarette smoking is associated with early onset ATD (aged 64 years or less) in virtually all cohorts; past cigarette smoking, with cohorts having CRF values of 0.70 or higher; never smoking, with cohorts having CRF values of 0.75 or higher. The population at risk of ATD can be identified and the average age of ATD onset predicted.