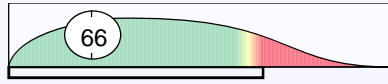


Patient: _____ Order Number: _____
 Age: 58 Completed: _____
 Sex: F Received: _____
 MRN: _____ Collected: _____

CV Factors

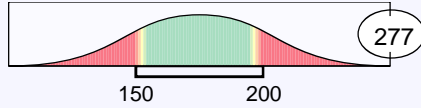
Triglycerides

Ref Range mg/dL
 <= 200 300



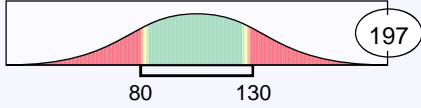
Total Cholesterol

Ref Range mg/dL
 150 200



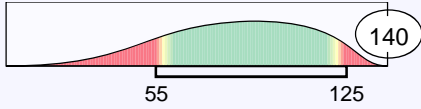
LDL Cholesterol

Ref Range mg/dL
 80 130



Apo B

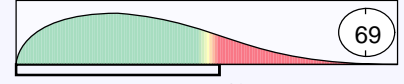
Ref Range mg/dL
 55 125



Independent CV Factors

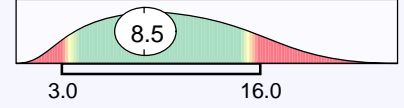
Lp(a)

Ref Range mg/dL
 <= 40 75



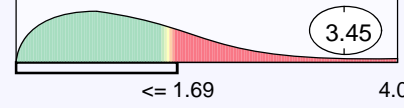
Homocysteine

Ref Range umol/L
 3.0 16.0



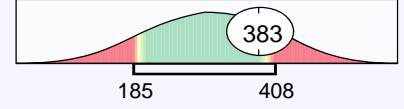
C-Reactive Protein

Ref Range mg/L
 <= 1.69 4.00



Fibrinogen

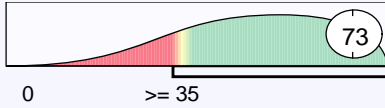
Ref Range mg/dL
 185 408



Protective Factors

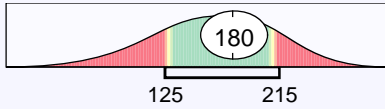
HDL Cholesterol

Ref Range mg/dL
 0 >= 35



Apo A-1

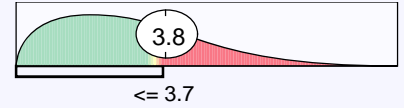
Ref Range mg/dL
 125 215



Ratios

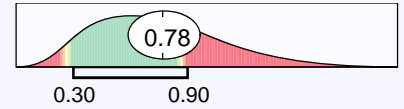
Total Cholesterol / HDL

Ref Range
 <= 3.7

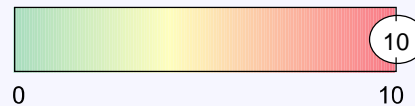


Apo B / Apo A-1

Ref Range
 0.30 0.90



Cardiovascular Risk Index



Very Low: 0
 Moderate: 1 - 4
 High: 5 - 9
 Very High: >= 10

Commentary

The **triglyceride** level is WITHIN the REFERENCE range. Since triglycerides are a strong risk factor, normal levels are associated with decreased risk of cardiovascular disease and reflect a protective status of this patient's lipid and biochemical make-up.

Commentary

Total **Cholesterol** is in the HIGH risk range for this individual. Despite cholesterol's important role in cell structure and steroid metabolism in the body, elevated levels remain an important issue in cardiovascular disease, and should be addressed. Generally speaking, the higher the cholesterol, the higher the cardiovascular risk, particularly with younger-aged people. Carotid plaque formation and increased occurrence of cerebrovascular disease and myocardial infarction are also associated with high total cholesterol.

HDL cholesterol is found to be in the PROTECTIVE range. This elevated HDL reflects a degree of cardioprotection. This is due to an enhanced ability for scavenging of excess cholesterol from the cells, thus preventing accumulation in the vascular smooth muscle or endothelium. High HDL exerts a positive influence even with moderate elevations in LDL or total cholesterol levels.

Apolipoprotein A-1 is WITHIN the REFERENCE range. As a component of HDL cholesterol, Apo A-1 is associated with a protective effect regarding cardiovascular risk. Levels of this marker typically correlate with the HDL level, so any variation from this pattern may be of note. Normal Apo A-1 is particularly auspicious in adolescents with a family history of MI or other cardiovascular disease, as low levels have been shown to be good predictors of future risk.

Apolipoprotein B is ABOVE the REFERENCE range for this person. Since this is a structural component of LDL cholesterol, high levels are associated with increased cardiovascular risk. Research shows that elevation of this marker may indicate the presence of atherosclerotic processes. Along with low Apo A-1 levels, high Apo B correlates well with the degree of stenosis of the carotid and coronary arteries.

LDL cholesterol is in the HIGHER RISK range. This indicates an increased risk for cardiovascular pathology for this patient. Long-term studies show that elevated LDL is the strongest predictor of MI occurrence in addition to associations with coronary artery disease and atherosclerosis. Significantly elevated LDL levels are important to address in the context of other risk factors and may be modified via nutritional, lifestyle and pharmacological strategies.

Lipoprotein(a) [Lp(a)] is ABOVE the OPTIMAL level. Elevated Lp(a) has received much attention as a key genetic component for cardiovascular risk. Lp(a) has the capacity to encourage persistence and growth of fibrin clots while also promoting fatty deposits on endothelial surfaces. Elevated serum Lp(a) levels can also be an accurate indicator of risk for cerebral infarction. There are therapeutic strategies capable of modifying Lp(a) levels, so although levels are genetically determined, positive changes may be attained.

Homocysteine is WITHIN the REFERENCE range. As elevated homocysteine is a factor which increases cardiovascular risk, normal levels are highly desirable and beneficial. Continued attention to nutritional influences such as vitamin B6, B12 and folic acid will help maintain this level.

C-Reactive Protein (CRP) is ABOVE the OPTIMAL range. In certain cases, elevated CRP is a powerful, independent risk factor for cardiovascular disease. CRP is acknowledged to be an acute-phase reactant for systemic inflammation, tissue damage and immune activation via infection. Elevated CRP can be related to chronic infections with CMV, Chlamydia pneumoniae, Herpes virus and H. pylori. Of these, H. pylori and C. pneumoniae are under investigation for their association with cardiovascular disease.

Fibrinogen is WITHIN the REFERENCE range. Fibrinogen is one of the participants in the clotting process and is manufactured by the liver. As fibrinogen is associated with increased cardiovascular risk via enhancement of coagulation and increased blood viscosity, such normal levels are desirable to maintain.

The **ratio of Total Cholesterol to HDL** is in the MODERATE RISK range. This ratio is indicative of skewed metabolic and dietary factors. This elevated ratio is one factor comprising increased cardiovascular risk.

Apo B / Apo A-1 ratio is in the OPTIMAL range, suggesting cardioprotection. This ratio is regarded as an important component of cardiovascular risk, the apolipoproteins being a more refined gauge of risk than HDL & LDL levels.

There are multiple factors that influence the risk of the development and the progression of cardiovascular

Commentary

disease. The **Cardiovascular risk index** developed by GSDL is designed to reflect only the markers demonstrated in this profile. The number presentation on the bar graph does not reflect actual cardiac risk, this is a Relative Risk Index and is for educational purposes only.