

## Cholesterol 1,2,3™

### **Skin Cholesterol Predicts History of Myocardial Infarction**

**Background:** We previously reported that skin cholesterol levels predict the presence of angiographic disease. It remains unknown whether a correlation with MI history can be discerned; particularly after adjustment for extent of angiographic disease.

**Methods:** Skin cholesterol measurement, coronary angiography, and traditional risk factor evaluation was performed in 649 individuals, at 3 sites (CCF n=147, THC. n=179, SMH, n=323). Skin cholesterol was determined non-invasively using the Cholesterol 1,2,3 system (IMI). Angiographic outcome was determined qualitatively and categorized as 0%, 1-49% or >50% for the LAD, LCX and RCA. History of myocardial infarction (MI) was also recorded.

**Results:** Skin cholesterol quintiles were significantly associated with MI history. Once adjustment for extent of disease was performed the relationship remained significant. (Table)

**Conclusion:** Individuals with higher skin cholesterol levels were significantly more likely to have had a previous MI than patients skin cholesterol values in the lowest quartile, even after adjusting for severity of angiographic disease. This suggests skin cholesterol as a potential predictor of acute coronary events.

Odds ratios (with 95% confidence intervals and p-values) estimating the relative risk of prior MI associated with each successive skin cholesterol quartile.

<b>Skin Cholesterol Quartile</b>	<b>Adjusted for Framingham and Site Adjusted</b>	<b>Adjusted for Framingham, Site and Extent of Dx</b>
≤ 102	1.0	1.0
103-122	1.9 (1.2-3.0) 0.01	1.8 (1.1-2.9) 0.03
123-143	1.6 (1.0-2.7) 0.047	1.3 (0.8-2.2) 0.27
> 143	2.2 (1.4-3.6) 0.002	2.0 (1.2-3.3) 0.008

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