Discussion on

“Serum metabolomics profiles predict coronary heart disease in the general population”

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Disclosures

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Metabolomics & CVD: Does BiomarCARE Raise the Bar?

• Largest population-based study of metabolomics and CVD
• Collaborative, consortium design
  – Statistical power
  – Ability to look at heterogeneity of effects
  – Adjusted for confounders
  – Adjusted for multiple comparisons
• Population-based with analysis of incident events
Biology of Phosphotidylcholines (PCs)

- Class of phospholipids
- Major component of biological membranes
- Previously associated with decreased risk of Alzheimer's Disease, diabetes
- Markers of dietary DHA intake
- Possible anti-inflammatory effects
Should we start measuring these in our patients?

• How do we interpret these results?
  – Confounders
  – Thresholds of risk

• Does this add to what we already know about our patients?
  – Independent vs. incremental risk prediction
  – Magnitude of effect

• Would measurement change how we manage the patient?
  – Is this pathway modifiable?
  – Effect of medications
Metabolomics & CVD: The Bar Needs To Be Raised Even Higher!

- Need for consortia
- Metabolomics platforms
  - Heterogeneity of platforms
  - Standardization
  - Nomenclature
- Need for functional validation
- Quantitative science efforts
- Integrated omics
  - Systems biology
  - Mendelian randomization