**FROM SURROGATE BIOMARKERS TO DETECTION OF ATHEROSCLEROSIS: ARE WE READY FOR A PARADIGM SHIFT IN PRIMARY CVD PREVENTION STRATEGIES?**

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Clearly, there is an urgent need for improved risk assessment to accurately identify not only “higher risk," but also those at “very low risk” for appropriate allocation of finite resources to reduce the CVD burden in a cost-effective manner. Improved risk assessment is highly desirable as this approach aims to target intensive treatments to the highest-risk patients to make prophylactic pharmacotherapy cost-effective from a societal stand point. One can argue for a paradigm shift in our basic approach to primary CVD prevention from shifting the focus of using surrogate biomarkers to detection of the disease process itself, i.e., subclinical atherosclerosis. In this regard, of the available tests, detection of atherosclerosis coronary artery calcium (CAC) by noncontract CT can be viewed as a metric of disease rather than a surrogate biomarker which has proven consistent for prognostication, discrimination, calibration and reclassification for CVD. Apart from ability to identify those high-risk individuals among whom a majority of events occur, absence of CAC confers a very low risk for future CVD events with an estimated very low event rates of approximately 1 per 1,000 patient-years. In summary, novel biomarkers cannot rule out disease, they can only be used in an attempt to raise risk estimates, while the detection of atherosclerosis with CAC is more informative for appropriate risk stratification since it is actually measuring disease as well identifying those individuals who will benefit from lipid lowering therapies motivating them to comply with more aggressive secondary prevention strategies.