ABSTRACT
Cardiovascular risk stratification remains the cornerstone of preventive cardiology, yet there are limited data on contemporary practice, especially in primary care. Physicians perform risk assessment. The present study was performed to gain insight into how Canadian primary care physicians incorporate traditional and emerging cardiovascular risk factors in determining cardiovascular risk.

We conducted a prospective cross-sectional survey of 652 Canadian primary care physicians with representation from each province. Using a validated questionnaire, we evaluated their perceptions around cardiovascular risk assessment, treatment thresholds, and novel biomarkers of vascular risk.

The majority of physicians (75%) perform CV risk assessment in eligible patients on an annual basis with 67% using the Framingham Risk Score (FRS) to estimate CV risk. However, 31% of physicians estimate risk by counting the number of risk factors or by relying on clinical experience. Usage of other risk calculators such as PROCAM or Reynolds Risk Score was negligible. Although 88% of physicians were aware that FRS estimates 10 year risk of CHD death and MI, 31% were unable to characterize FRS thresholds for high risk. Family history was identified as the most important single risk factor more often (27%) than was age (21%), hypertension (16%), central obesity (11%), dyslipidemia (8%) or smoking (8%). Although family history was considered important, only 45% of physicians correctly used a positive family history to roughly double the FRS, as per the Canadian Lipid Guidelines. Eighty percent of physicians considered waist circumference as a vital sign, although only 6% reported measuring this routinely. Importantly, 46% of physicians consider the presence of metabolic syndrome (MS) to equate with high FRS, and only 13% felt that MS equates with intermediate FRS. In addition to clinical and biochemical assessments, 58% of physicians identified carotid ultrasound as the best imaging technique for screening in primary prevention. Coronary CT was considered the best imaging technique for screening asymptomatic individuals by 24% of physicians.

This study indicates that 2/3 of Canadian primary care physicians employ the FRS for risk stratification, but also consider family history and central obesity/MS as important risk markers. However, waist circumference is rarely documented. The majority of physicians did not appropriately stratify risk based upon the presence of either a positive family history or the MS. Of some concern is the observation that one quarter of physicians felt that coronary CT was the imaging modality of choice for screening in primary prevention.

INTRODUCTION
Appropriate cardiovascular risk stratification is imperative for the optimal application of preventive therapies. Despite the availability of evidence-based guidelines for cardiovascular prevention, studies continue to demonstrate a persisting care gap in clinical medicine.

OBJECTIVE
To evaluate the current perceptions of primary care physicians regarding cardiovascular risk assessment and treatment thresholds.

STUDY DESIGN
Recruitment of Participants
2225 primary care physicians, from 10 Canadian provinces, were invited by mail between October 2008 and May 2009 to complete a validated 32-question survey aimed at determining their current practice of global cardiovascular risk assessment and the subsequent treatment algorithms employed.

Data Handling
Completed surveys were returned to the Canadian Cardiovascular Research Network where the entries were read with DataFax 3.9 software. The data were anonymized by two investigators (H.T. and A.Q.) who were blinded to the identities of the physicians.

RESULTS
The blue bar in each figure denotes the most correct answer.