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Canadian Longitudinal Study on Aging
Étude longitudinale canadienne sur le vieillissement

CLSA Approved Project

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Project Title
The genetics and epidemiology of aortic stenosis and coronary artery disease in the Canadian population

Project Summary
Aortic stenosis (AS) is the leading cause of valvular heart disease in the developed world. Apart from replacement of the aortic valve, there is currently no treatment for this disease. Over the last decade, more than a dozen genetic changes that contribute to AS have been identified. However, most of these variations have only a small effect. Identifying these variants could highlight new genes and pathways that contribute to AS and CAD (Coronary Artery Disease). To do this, we will compare the frequency of variants between individuals with AS or CAD and those without. These variants are identified with modern DNA technologies. By using different databases and statistical approaches, we expect to identify variants with a high probability of being disease-causing that are likely associated with AS or CAD. We believe that these variants will be present in genes that are mostly expressed in the heart or that are present in molecular pathways implicated in cardiac diseases.

Keywords
cardiovascular diseases, genetics, risk factors, genome-wide association studies