**CAROTID INTIMA MEDIA THICKNESS MEASUREMENT PROMISES TO IMPROVE CARDIOVASCULAR RISK EVALUATION IN HEAD AND NECK CANCER PATIENTS**

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*Background*: Radiation treated head and neck cancer (HNC) patients are at high risk for developing radiation vasculopathy, as evidenced by an increased stroke risk. The benefits of screening and assessing the cardiovascular risk of HNC patients using carotid intima media thickness (CIMT) ultrasound are not known.

*Objective*: To determine the prevalence of high cardiovascular risk in patients without known cardiovascular diseases who received radiation for HNC, determine the percentage of screened patients who had a change in clinical management as a result of an increased CIMT, and to compare this risk assessment tool on patients’ risk classification using Framingham Risk Score (FRS) and Pooled Cohort Atherosclerotic Cardiovascular disease (ASCVD) Risk Equation (recommended by AHA/ACC Guidelines on the Assessment of Cardiovascular Risk).

*Methods*: Retrospective medical chart review was conducted on 134 radiation treated HNC patients. The main outcome measures were cardiovascular risk (as determined by CIMT) and clinical management. Also, the FRS and the Pooled Cohort ASCVD Risk Equation were used to compare classification with CIMT.

*Results:* Approximately 74% of the cases were at high cardiovascular risk using CIMT technique. Approximately half of the HNC patients screened had a change in clinical management characterized by recorded initiation of aspirin and recorded initiation or increase of statin therapies. The FRS and the Pooled Cohort ASCVD Risk Equation failed to detect 40-50% of cases found to be at high risk using the CIMT technique.

*Conclusion*: Carotid IMT identified a much greater percentage of radiation treated HNC patients at high cardiovascular risk compared to standard cardiovascular risk calculators. By more accurately identifying the patients at high risk, this may lead to more effective prevention, and therefore a reduction in cardiovascular events.