Evolution of subclinical atheromatosis in primary prevention of oncologic population. A cohort study.

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Introduction: Coronary heart disease and cancer share multiple pathophysiological mechanisms. Studies have shown, many oncologic patients will develop cardiovascular events. However, there is little evidence regarding endothelial dysfunction of patients with oncologic history in primary cardiovascular prevention, and the impact it may have on the development of subclinical atheromatosis.

Purpose: This study aims to evaluate the prevalence of oncologic history in primary cardiovascular prevention, analyze the proportion of typical cardiovascular risk factors and evaluate cancer as a biological modulator of subclinical atheromatosis.

Methods: A cross-sectional study was conducted using patient records from primary cardiovascular prevention consults that included screening for subclinical atheromatosis in the carotid and ileo-femoral territory, from September 2020 to April 2022. Population characteristics were established using univariate and bivariate analysis.

Results: The study included 5209 patients, divided into Group 1 (non-oncologic patients) 5071 and Group 2 (oncologic patients) 138 (97.2 vs 2.8%). Group 2 patients were predominantly older, with a higher percentage of women and hypertension history. Adjusted linear regression analysis was performed regarding the total plaque area in relation to the oncological history. Evidence showed cancer history increases total plaque area by an average of 8 mm (95% CI of 0.2 mm to 16 mm).

Conclusion: Patients with oncologic history had a greater number and increased total area of plaques, indicating cancer is a positive modulator for the increase in total plaque area size adjusted for typical risk factors. These findings highlight the need for better cardiovascular control in oncologic patients. Further research is needed to corroborate these results and determine the underlying pathophysiological mechanisms.

Variable	Coef	p-value	95% interval
AGE	2.28	0.000	(2.15;2.43)
GENDER	25.28	0.000	(22.71;27.85)
DYSLIPIDEMIA	6.49	0.000	(3.83;9.15)
SMOKING	22.58	0.000	(18.81;26.35)
HTN	13.33	0.000	(10.49;16.17)
DIABETES	11.93	0.000	(7.16;16.7)
CANCER	8.24	0.045	(0.19;16.29)
CONSTANT	-113.69	0.000	(-121.1;-106.27)

MODEL	
OBSERVATIONS	4836
ADJ R-SQUARED	0.3164
P-VALUE	0.0000

Biography: Since 2020 the Cardiovascular Research Group of Hospital Universitario Austral is investigating about the relationship between cancer and atherosclerosis. We understand that cancer is a significant cardiovascular risk factor, as many studies about secondary prevention of major cardiovascular events have shown. However, not many studies have been conducted about

primary prevention and atherosclerosis. Therefore, we focused on this topic and want to show the findings we have made in this conference.