

# Incidence of coronary artery anomalies in a series of 4535 patients undergoing coronary angiography, from northern Greece.

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## Background and Objectives

Widespread application of coronary angiography has resulted in more frequent detection of coronary artery anomalies (CAA) and their clinical significance is becoming better appreciated. Accurate topographic identification is of paramount importance, in order to estimate the clinical risk and plan subsequent management. Since geographic variations in the incidence of CAA have been reported, our aim was to estimate their incidence in a population from northern Greece, which has not been previously studied.

## Materials and Methods

A series of 4.535 coronary angiograms, performed between January 2004 and April 2009 in our institution, was retrospectively reviewed for the presence of coronary artery anomalies

## Results

	N	% of Study Population	% of CAA
Cx originating from the right SoV	19	0,42	31,1
Separate ostia for LAD and Cx inside the left SoV	16	0,35	26,2
RCA arising from the ascending aorta or posterior SoV	14	0,31	22,9
Absent Cx (superdominant RCA)	3	0,06	4,9
RCA originating from the left SoV	3	0,06	4,9
Single coronary artery from the right SoV (septal type)	2	0,04	3,3
Coronary artery fistulae	4	0,09	6,5
Total	61	1.35	

LAD, left anterior descending; Cx, circumflex; RCA, right coronary artery; SoV, sinus of Valsalva; SP, study population.

The overall incidence of isolated coronary artery anomalies was 1.35% (mean age: 61.6±15.6 years, range: 38-82 years, males: 82%). Regarding the anomalous origin of the Cx from the right SoV, three distinct variants were identified: a) separate ostia for Cx and RCA (8/19, 42.1%), b) common ostium (6/19, 31.6%) and c) Cx arising from the proximal segment of the RCA (5/19, 26.3%). In all cases the anomalous Cx had a course posterior to the aorta. In 9.8% (6/61) of the patients with CAA, aortic valve disease was also evident.

## Conclusions

The incidence of coronary artery anomalies in our study population was 1.35%. The most common type was the origin of the Cx from the right sinus of Valsalva. Although geographic variations in the incidence of CAA have been reported, these results are in agreement with previously published large angiographic series.