

# Prevalence of cancer and its impact on prognosis of acute coronary syndrome population

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**CPC'2016**

O PULSAR DA CIÊNCIA, AO RITMO DO CORAÇÃO.

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# BACKGROUND

- Cancer and cardiovascular disease are the two most prevalent diseases around the world.<sup>1</sup>
- Coronary artery disease is frequently encountered in cancer patients. It may predate the development of cancer or result from treatment of cancer itself.<sup>2</sup>
- The treatment options available for this population are based on those studied in general population.<sup>3</sup>
- Few studies have been focused on the relationship between malignancy and acute coronary syndromes (ACS).



## Purpose

We aimed to evaluate the incidence of malignancy in an acute coronary syndrome population and its impact on outcome.

1- Fuster V, Voute J. MDGs: chronic diseases are not on the agenda. *Lancet*. 2005;366:1512–1514.

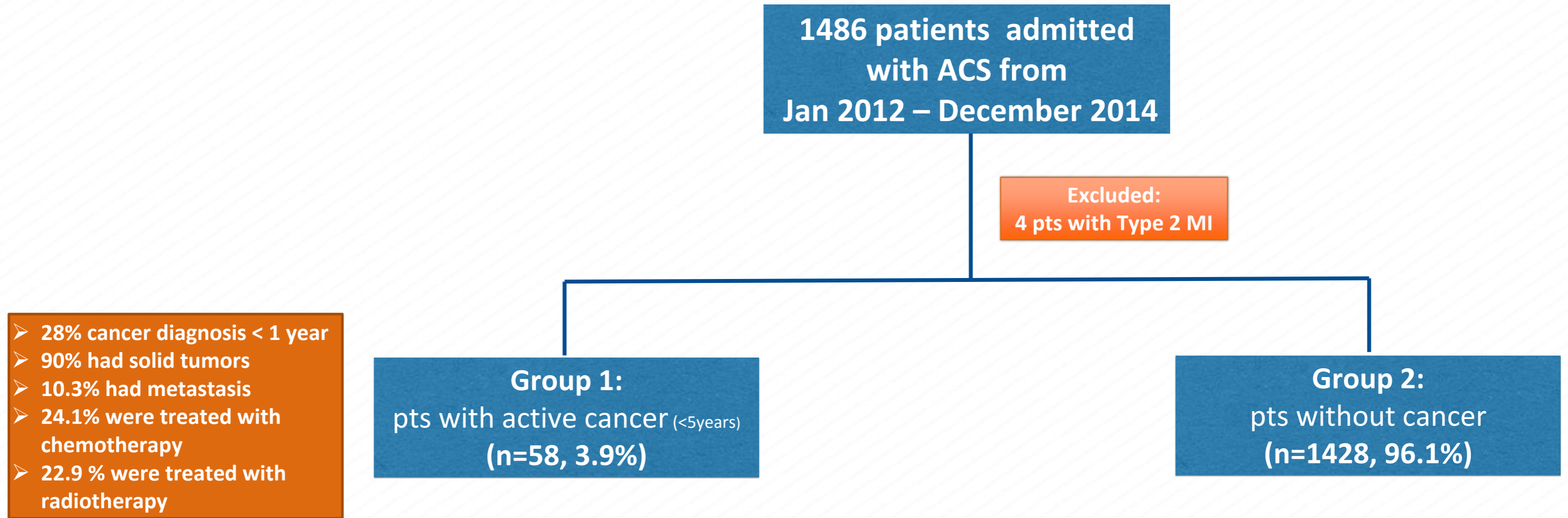
2- Heidenreich PA, Schinttger I, Strauss HW, et al. Screening for coronary artery disease after mediastinal irradiation for Hodgkin's disease. *J Clin Oncol*. 2007;25:43–49.

3- Yusuf SW, Daraban N, Abbasi N et al. Treatment and outcomes of acute coronary syndrome in the cancer population. *Clin Cardiol*. 2012;35(7):443-50. doi: 10.1002/clc.22007.





# METHODS



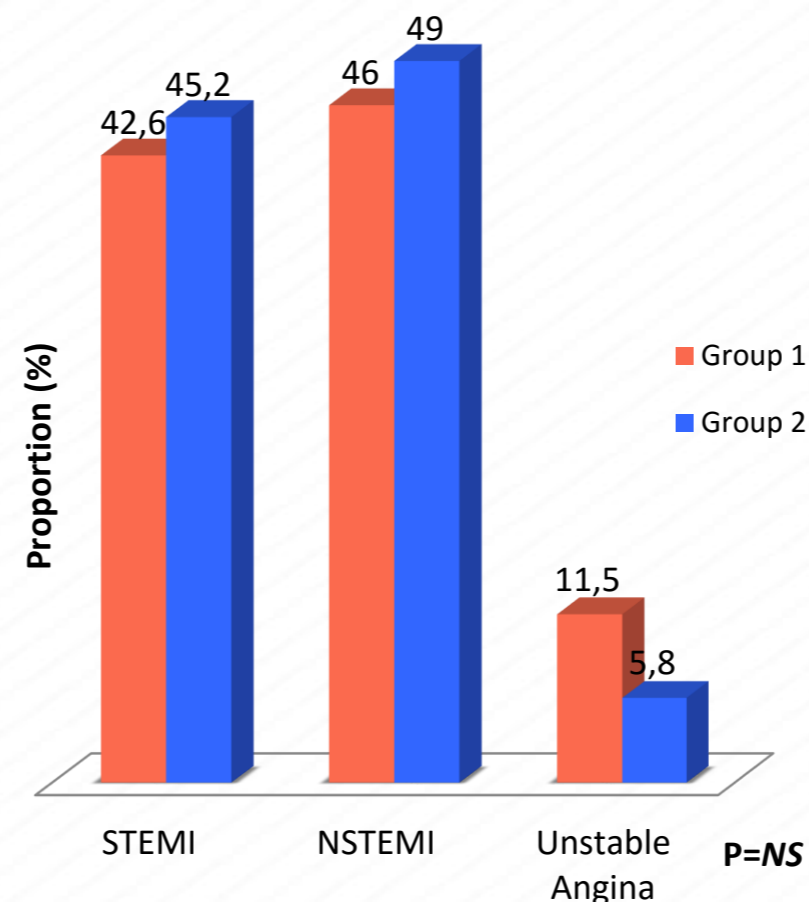
- For each group we compared clinical features and adverse events.
- Primary endpoint was the occurrence of death at 1 year; follow-up was completed in 98% of patients.

# RESULTS

## • Baseline Patients' Characteristics on Admission

Variables	Group 1	Group 2	P
Age (years)	69 ± 11	63 ± 13	<b>0.001</b>
Women (%)	20.7	21.7	0.8
<b>Cardiovascular Risk Factors</b>			
Hypertension (%)	65.5	62.9	0.78
Diabetes (%)			
Dyslipidaemia (%)	46.6	57.6	0.105
Smoking (%)	22.4	31.9	0.15
Previous smoker (%)	36.2	20.0	<b>0.05</b>
<b>Previous Vascular Disease</b>			
Myocardial Infarction (%)	20.7	14.5	0.18
Angina (%)	19.0	15.5	0.46
PTCA (%)	8.6	10.0	1.0
CABG (%)	6.9	4.4	0.33
Stroke (%)	15.5	7.4	<b>0.038</b>
Peripheral artery disease (%)	12.1	4.1	<b>0.012</b>

## • Clinical Presentation



Variables	Group 1	Group 2	P
Anaemia (%)	46.6	23	<b>&lt;0.001</b>
Renal insufficiency (eGFR<60 ml/min) (%)	42.1	24.3	<b>0.004</b>
Killip class > 1 (%)	19	12.9	0.17
LVEF < 50% (%)	75.9	55.7	<b>0.002</b>
Severe coronary artery disease (%)	32.1	27.1	0.45



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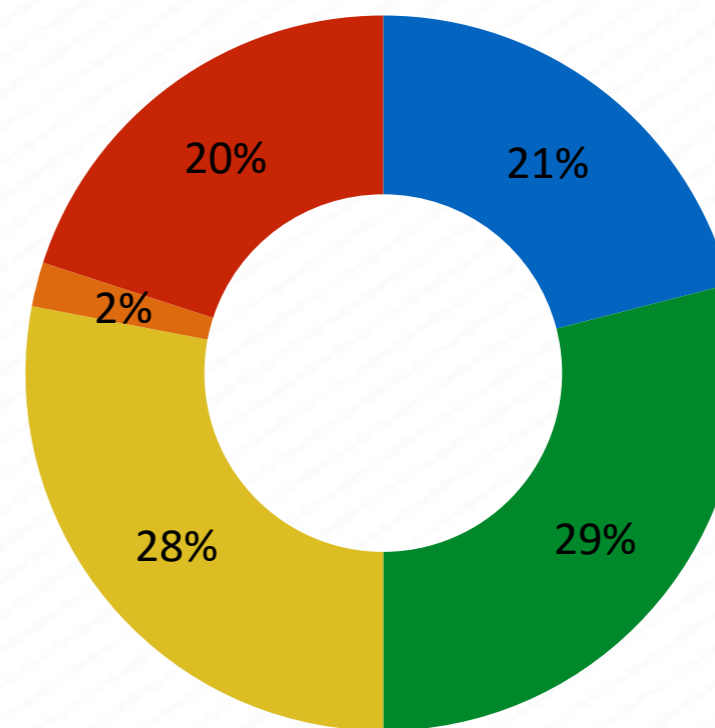


# RESULTS

- In hospital medical treatment and procedures*

Variables	Group 1	Group 2	P
Revascularization (%)	79.3	86.8	NS
PTCA in 2 <sup>nd</sup> time (%)	1.8	10.3	NS
CABG (%)	19	12.9	<b>0.037</b>
<b>Medical Treatment</b>			
Aspirin (%)	100	99.3	NS
Clopidogrel (%)	94.8	98.9	0.035
Beta blockers (%)	86.2	89.1	NS
ACE inhibitors (%)	94.8	92.4	NS
Statins (%)	100	98.4	NS
Diuretics (%)	27.6	19.2	<b>0.008</b>
Inotropic (%)	3.4	5.3	NS

- Revascularization options in cancer population*



■ not revascularized ■ BMS ■ DES ■ POBA ■ CABG



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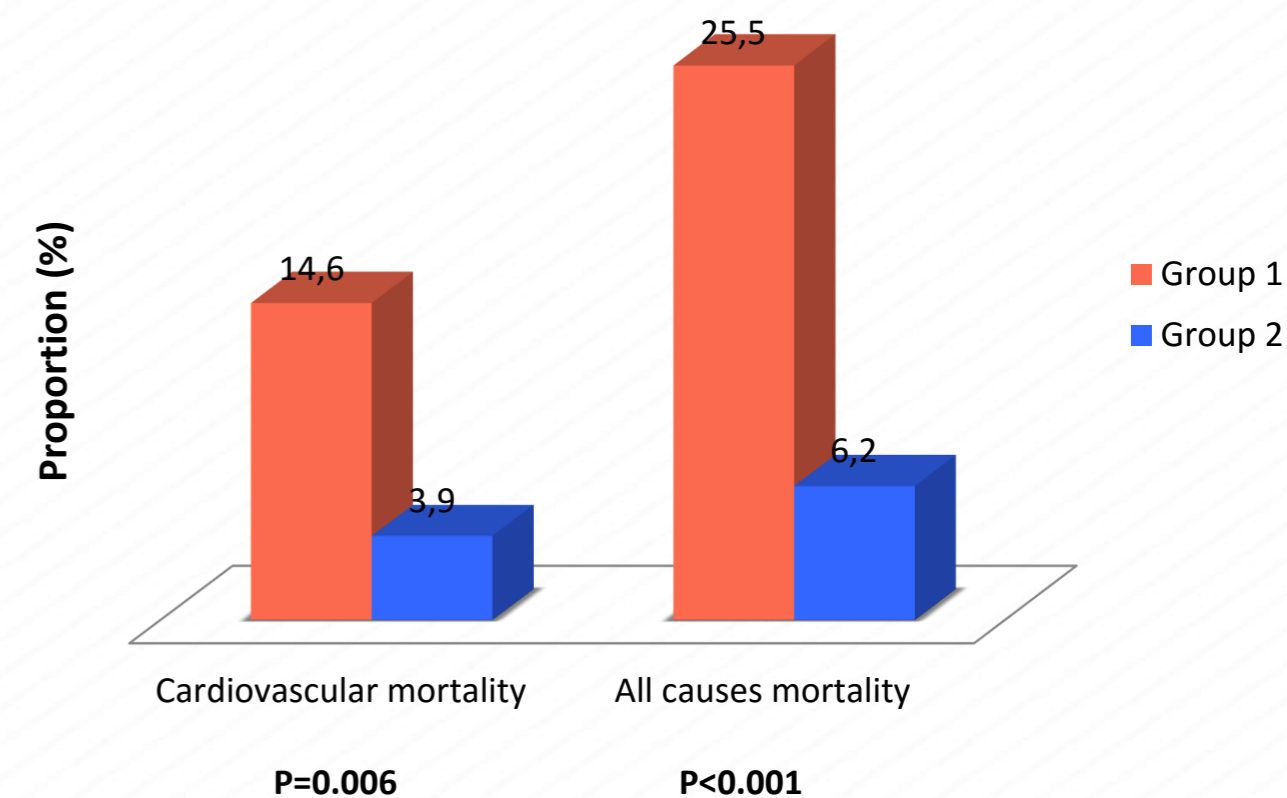
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# RESULTS

## • *In-hospital adverse events*

Variables	Group 1	Group 2	P
Blood transfusion (%)	4.0	1.6	0.207
Acute heart failure (%)	41.4	26.5	<b>0.016</b>
Reinfarction (%)	1.7	2.2	0.78
Post-infarction angina (%)	12.1	5.1	<b>0.016</b>
New onset atrial fibrillation (%)	6.9	2.8	<b>&lt;0.001</b>
In-hospital mortality (%)	3.4	2.4	0.65

## • *One-year mortality events analysis*



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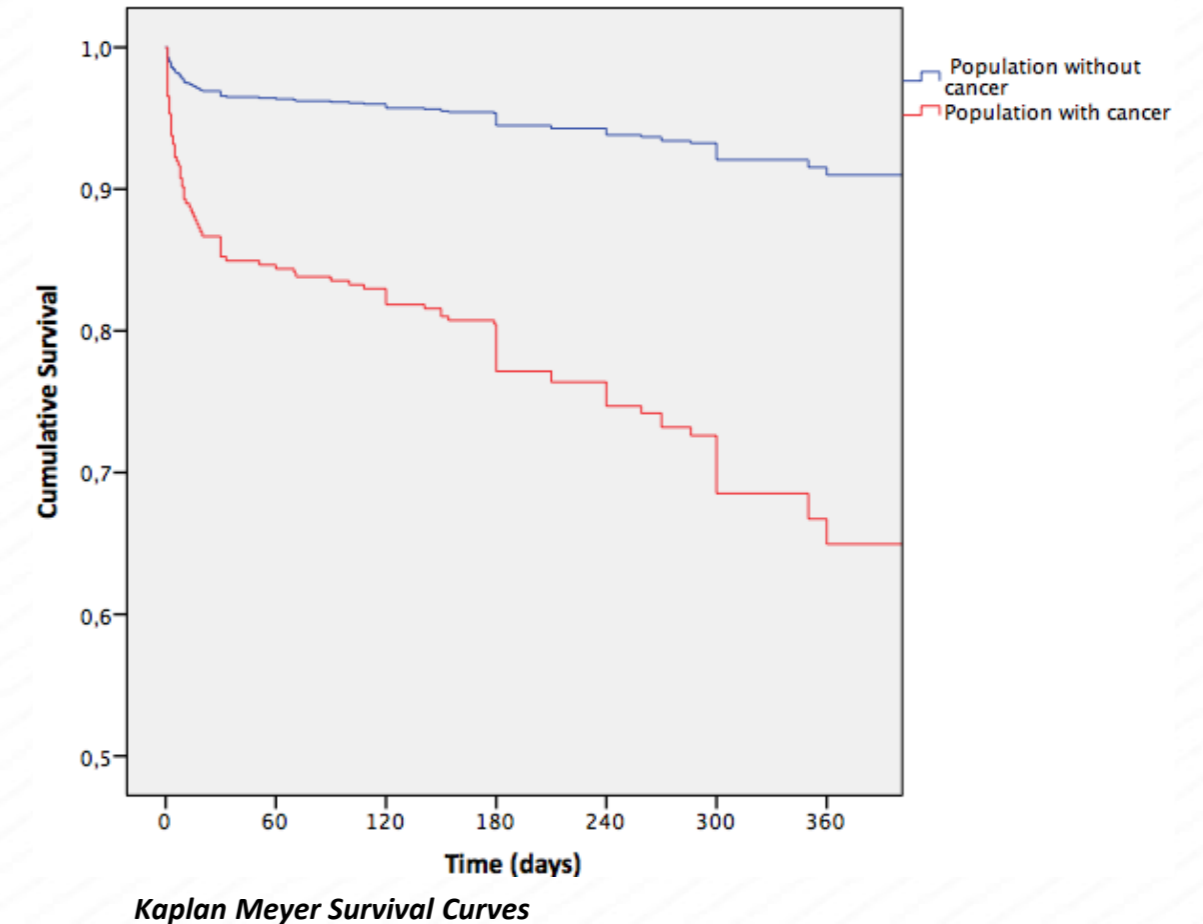
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# RESULTS

- *Cox Regression - independent predictors of all causes long term mortality*

Variables	OR	95% CI		P
		inferior	superior	
Age > 60 years old	1.03	1.00	1,06	<b>0.047</b>
eGRF < 60 ml/min	2.98	1.52	5.86	<b>&lt;0.001</b>
Left ventricle function > 50%	0.28	0.13	0.59	<b>0.001</b>
Acute heart failure	3.72	2.05	6.77	<b>&lt;0.001</b>
Active cancer	2.45	1.33	4.49	<b>0.004</b>



# CONCLUSION

- In our population the incidence of cancer was 3.9%. This population were older and had more comorbidities.
- The medical treatment used in cancer population was, in general, the same used in cohort without cancer, but a high percentage of patients received a more conservative approach.
- Patients with cancer had long term worse prognosis. After adjusting for confounders, the presence of malignancy reveals as one of the independent predictors of mortality.