

**Title:** Geographic variation in cancer incidence in Latin-language countries

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**Abstract**

**Objectives**

We assessed variations in cancer incidence between Latin-speaking countries and between areas within those countries. We analysed data from 103 cancer registries (CRs) affiliated to the Group for Cancer Epidemiology and Registration in Latin Language Countries (GRELL), published in *Cancer Incidence in Five Continents*, vol. XI (2008-2012) and covering 110 million persons. Our aim was to uncover areas of particularly high or low cancer incidence that can be subsequently investigated to identify factors responsible for incidence highs and lows.

**Methods**

Age-standardized incidence rates (based on world population) were estimated for all cancers combined by sex. CRs were grouped by geographic area according to the coefficient of variation of incidence proposed by Crocetti et al. (*Eur J Cancer Prev* 2017).

**Results**

Over the period 2008-2012 there were 1,151,221 and 978,472 incident cancer cases in males and females, respectively, in the 103 CRs. Countries with highest within-country variations in incidence were Ecuador, Brazil, Colombia, and Italy for males; and Brazil, Ecuador, France (with overseas territories) and Italy for females. For males, areas with lowest rates were Manabi and the Pacific area in Ecuador, and Northern Colombia (89.1; 109.4; 139.3); highest rates were in the Azores (Portugal), Florianopolis (Brazil), and metropolitan France (382; 380.7; 372.5). For females lowest rates were in Manabi and the Pacific area (Ecuador), and Southern Argentina (102; 137.8; 149); while highest rates were in Florianopolis, Belgium and Northeast Italy (325.3; 287.4; 274.9). We also identified variations in the distribution of cancer types diagnosed by area, both for males and females.

**Conclusions**

Our study has revealed major variations in all-cancer incidence between continents, countries and regions within countries. These data will be a starting point for further studies on specific cancers that aim to identify reasons for cancer incidence highs and lows.

Preference: Oral presentation

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