

# ANALYSIS OF THYROID CANCER MORTALITY BETWEEN 1975 AND 2011 IN ANDALUSIA, SPAIN

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## INTRODUCTION AND OBJECTIVES

The incidence of Thyroid Cancer (TC) is low, but rising over time. Some studies point to a possible increase in mortality rate (MR) from this cancer in certain areas of Spain and Andalusia. Our purpose was to analyze the TC mortality in Andalusia and study how it has changed in the last years. We also analyzed differences by age, sex and geographic area.

## MATERIAL AND METHODS

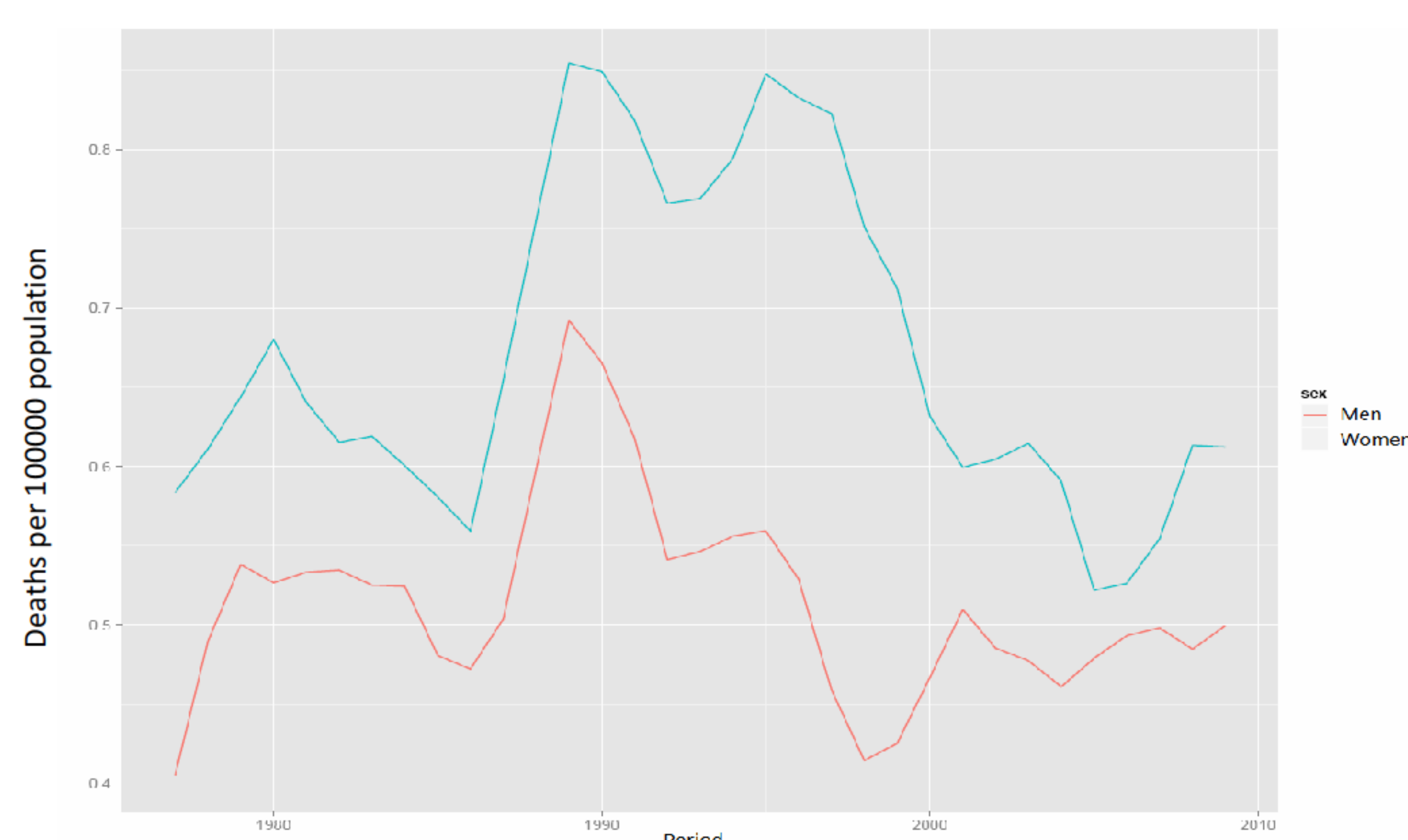
- All deaths from Thyroid Cancer were collected between January 1, 1975 and December 31, 2011. These deaths were classified by age, sex and province. Data was obtained from the mortality register of The Andalusian Statistics and Cartography Institute and from The Regional Ministry of Health. As a population denominators we used the data provided by the National Institute of Statistics (July 1st of each year).
- We calculated specific MR standardized by the direct method (standardized per 100000 population, sex and age), and by the indirect method (SMR or Standardized Mortality Ratio) for all Andalusia and for each province.

## RESULTS

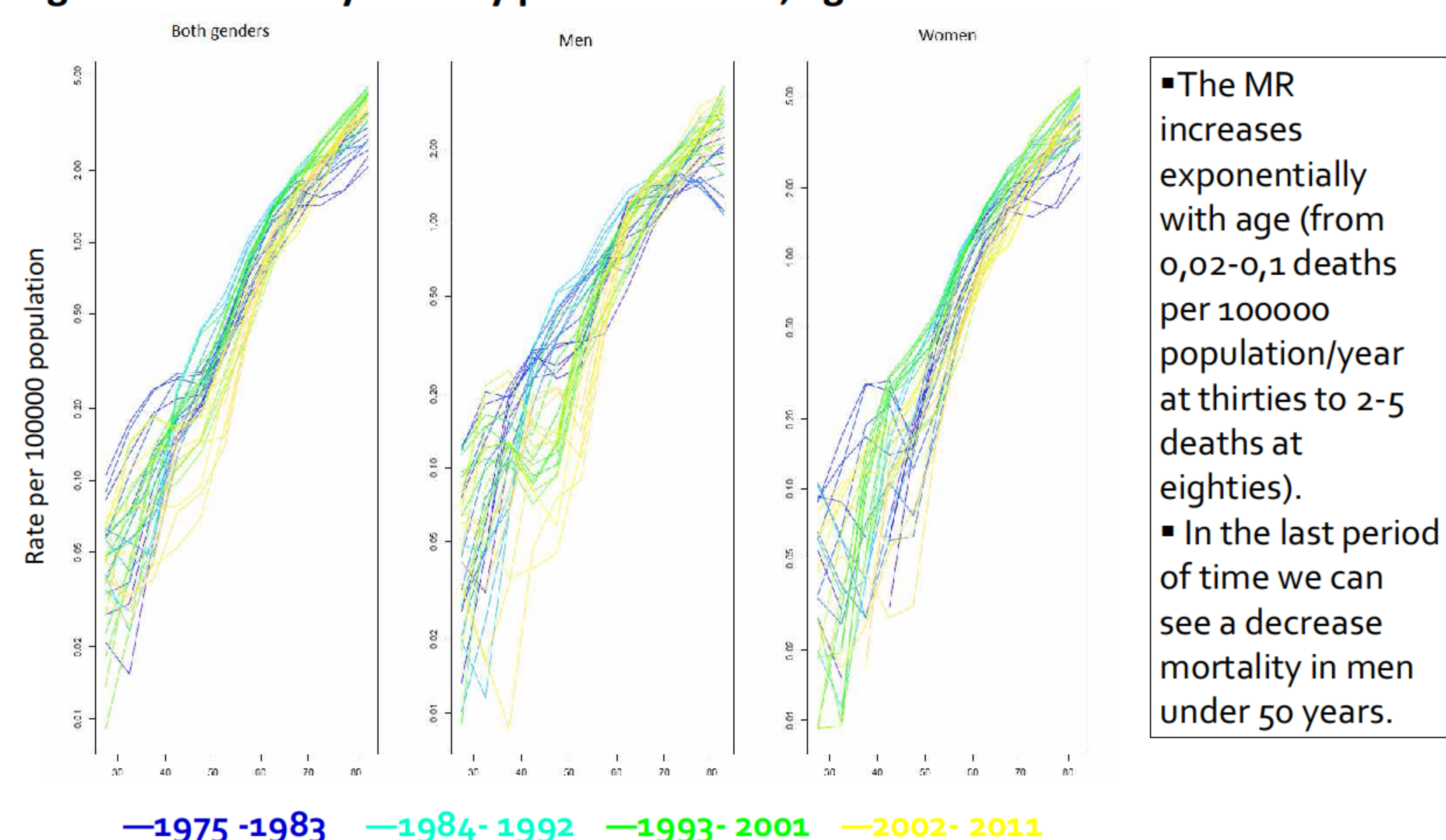
**Table 1. Deaths from Thyroid Cancer in Andalusia (1975-2011)**

Total (n)	Women	Men
1199	774 (62.1%)	425 (37.9%)

**Figure 1. Standardized Mortality Rate from TC in Andalusia (Smoothed)**

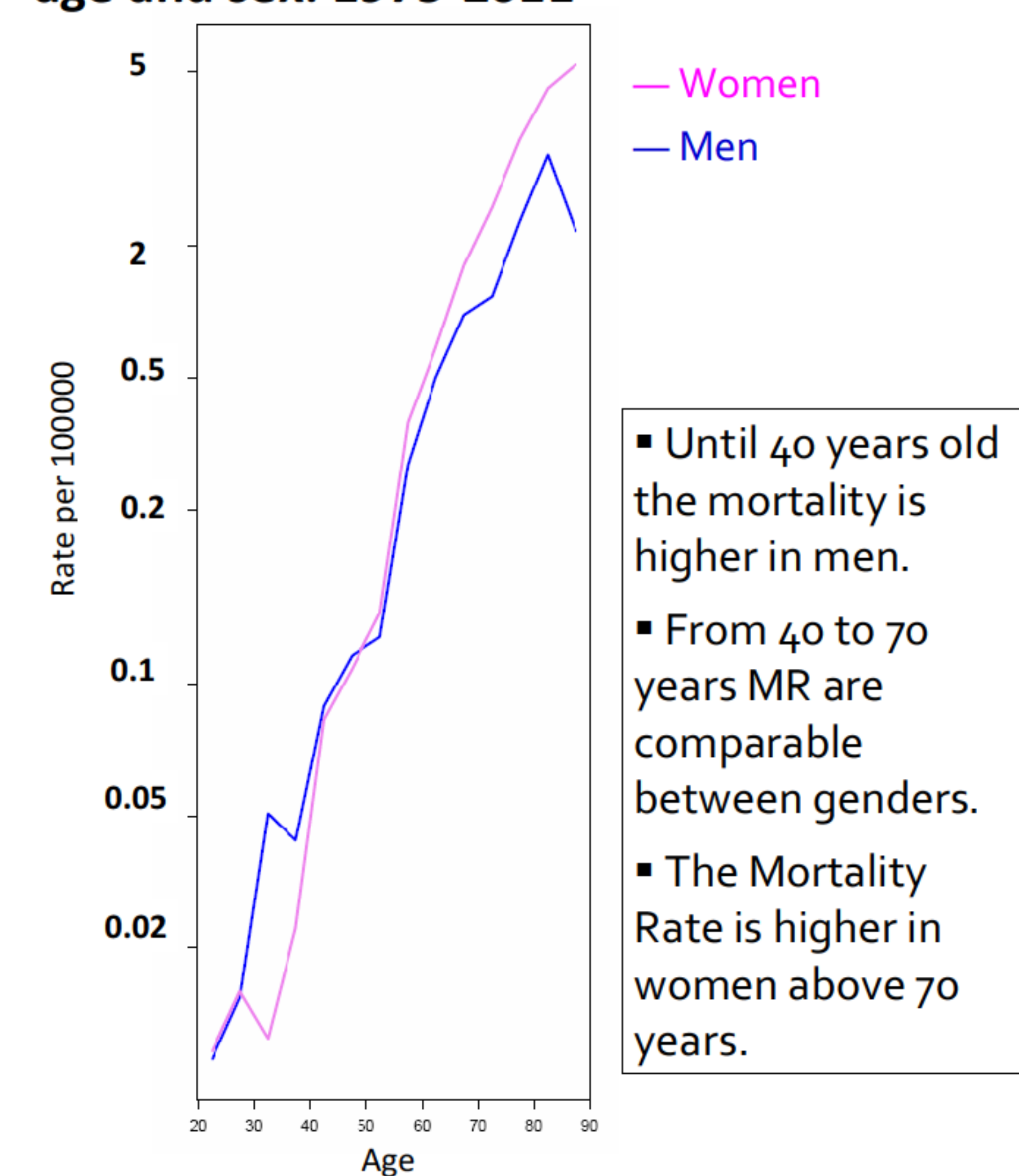


**Figure 2. Mortality Rate by period of time, age and sex**

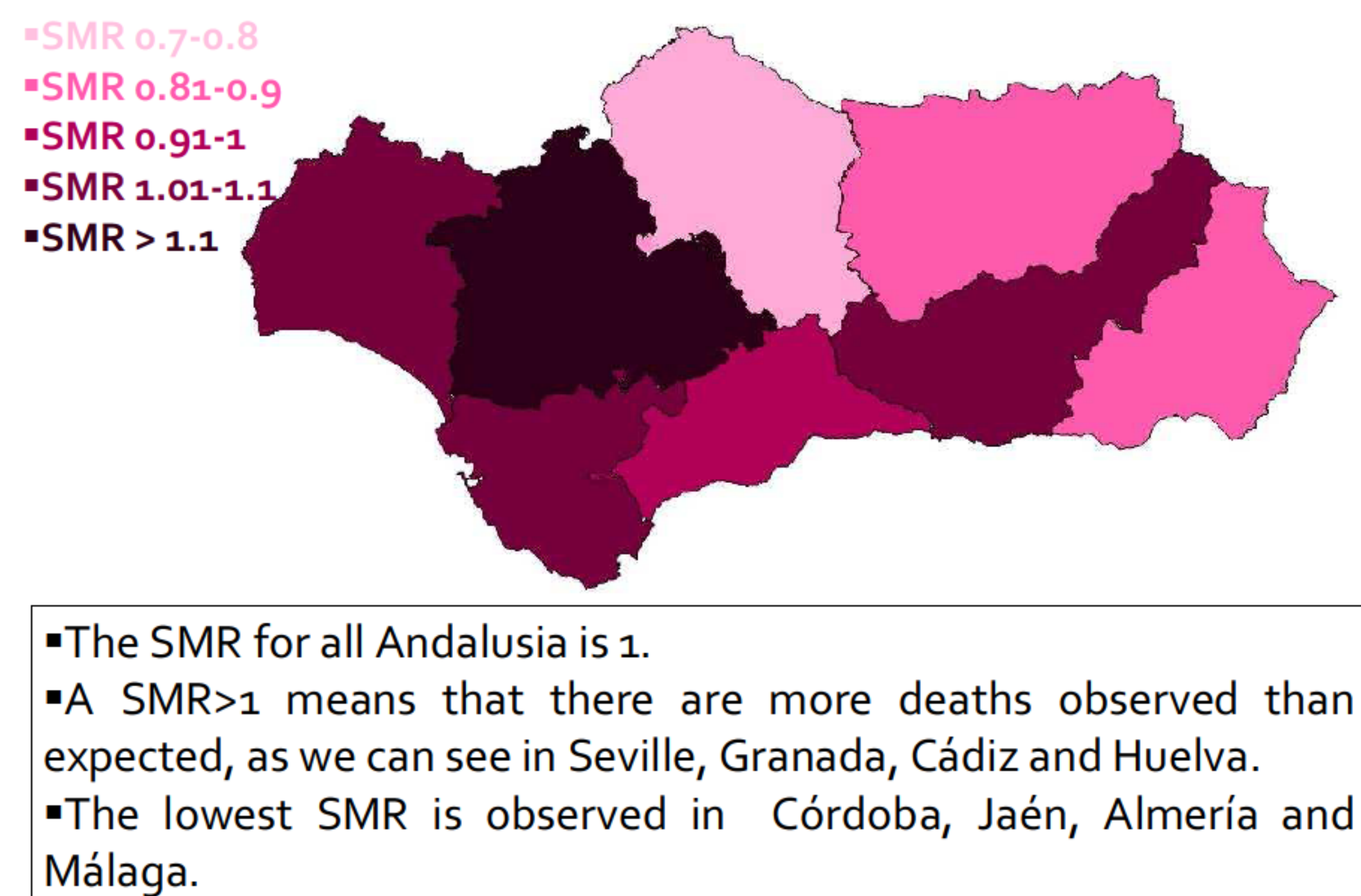


- In these 37 years the MR has not changed significantly
- Women: 0,5- 1 deaths per 100000 population/year.
- Men: 0,4-0,7 deaths per 100000 population/year.

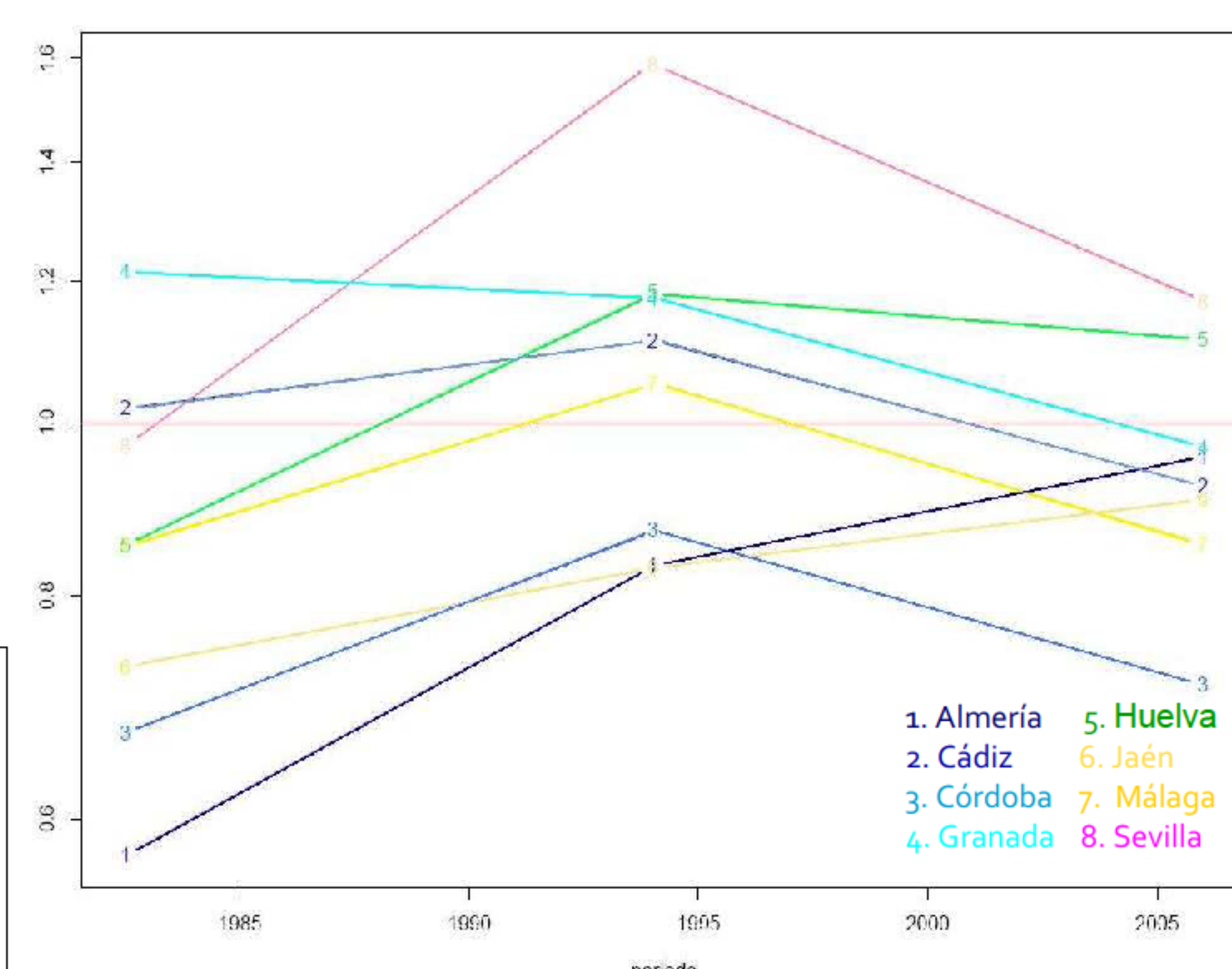
**Figure 3. Comparison of mortality by age and sex: 1975-2011**



**Figures 4 and 5. Standardized Mortality Ratio (SMR) by province : 1975-2011**



- The SMR for all Andalusia is 1.
- A SMR > 1 means that there are more deaths observed than expected, as we can see in Seville, Granada, Cádiz and Huelva.
- The lowest SMR is observed in Córdoba, Jaén, Almería and Málaga.



## CONCLUSIONS

- Mortality from Thyroid Cancer in Andalusia has remained stable over the last 37 years. Overall mortality is higher in women than in men, but if we consider groups of age, we find a higher mortality rate in men over 40s. It is specifically in this group where we can see a drop in mortality in the last period of time (ten years).
- There are differences in mortality in the Andalusian provinces. It is necessary to analyze the factors involved.