



Cancer Registry of Crete: Geographical variation of lung cancer and smoking trends



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Purpose

➤ Greece lacks systematic records of lung cancer (LC). The Cancer Registry of Crete (CRC) is the only population-based regional registry in Greece operating since 1992, that collects data on lung cancer mortality/morbidity and selected risk factors.

Overall aim: to discuss the spatio-temporal variation of LC in Crete. Special focus is given to smoking habits of LC patients and its effect on survival.

Methods

❖ LC patients' records (1992-2013) regarding medical history and smoking habits were obtained from the CRC's database.

❖ Age-Standardized Incidence Rates (ASIR), prevalence of smoking among LC patients and Population-Attributed Fraction (PAF) for smoking and LC mortality were estimated.

❖ Kaplan-Meier curves for LC patients grouped according to smoking status were exported.

❖ Spatio-temporal statistics were performed to assess the geographical variations of LC and smoking ($\alpha=0.05$).

Results - I

□ Around 9% of new cases in Crete are accredited to LC - Both genders: 40.2, males: 73.1, females: 11.8 new LC cases/100,000/year.

□ An increase of LC morbidity for both genders is observed; females present significant increasing longitudinal trends (P value<0.05).

□ Variations were observed among smoking categories

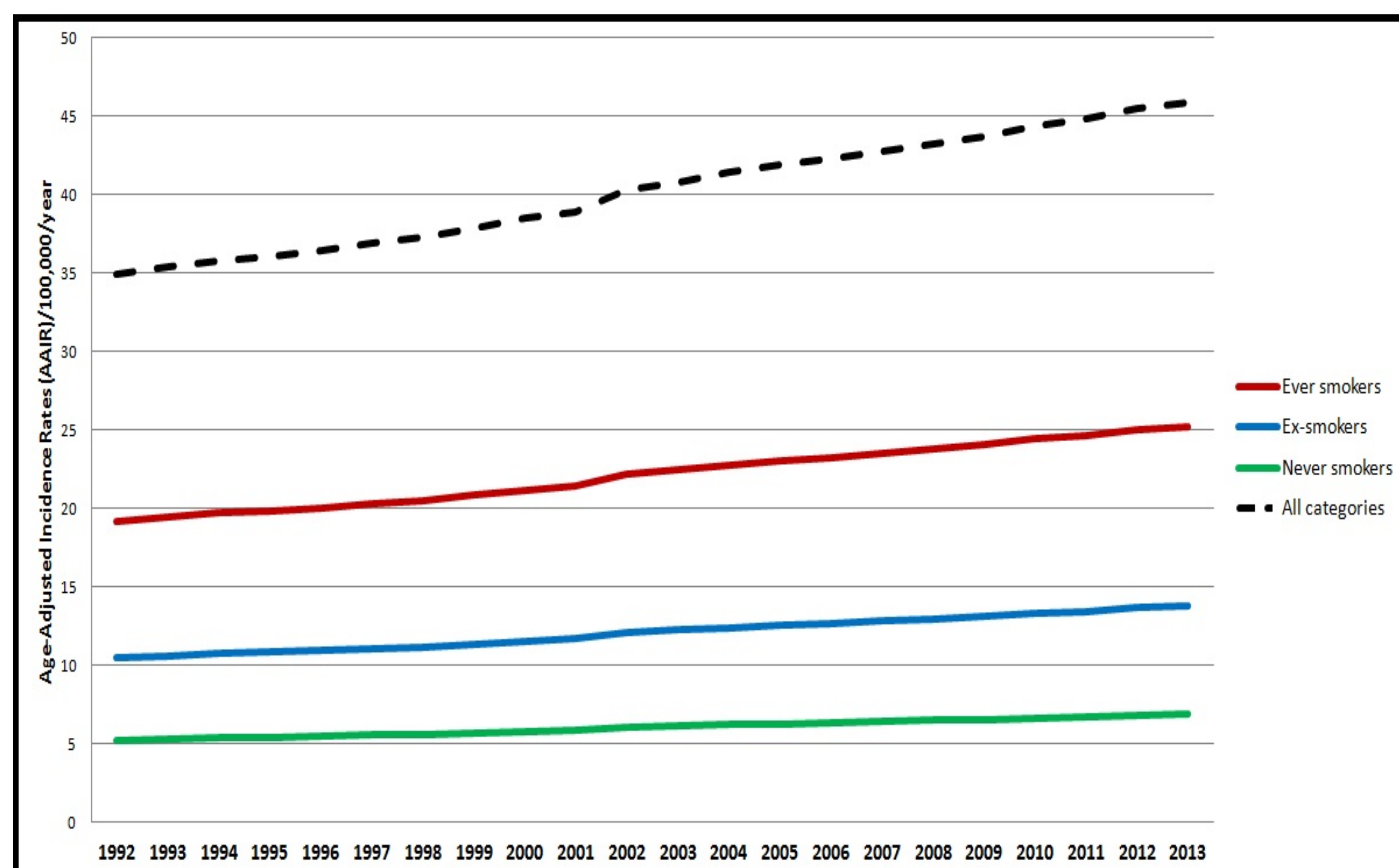


Figure 1: AAIR/100,000/year among smoking categories

Results - II

□ The PAF of LC mortality is 86% for both genders (males: 89%, females: 78%), while significant variation is observed among the different geographical regions of Crete.

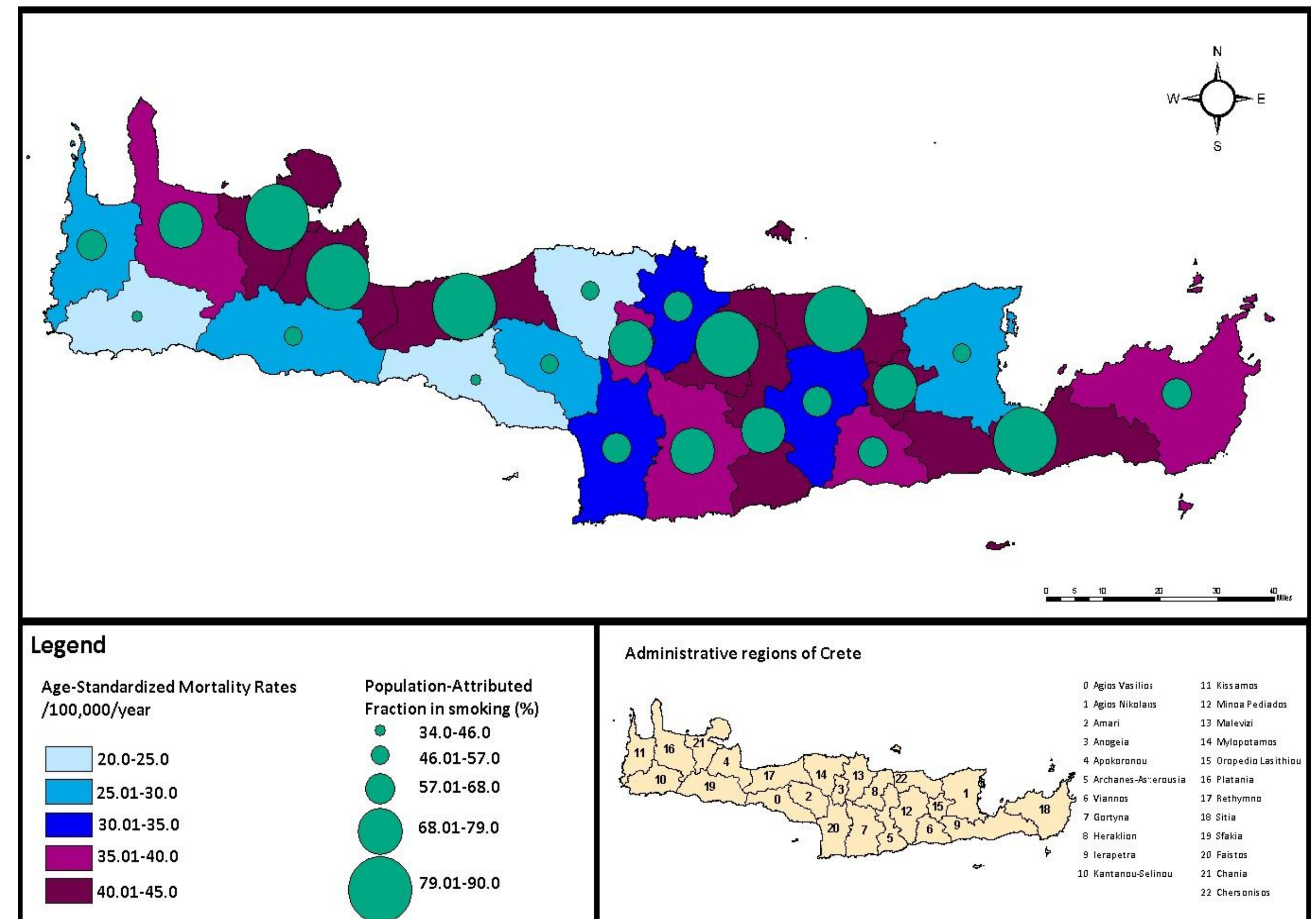


Figure 2: Geographical distribution of ASMR and PAF(%) per municipality in Crete

□ Smokers living in the south-east urban regions present higher risk of dying ($ExpB=2.2$; 95%CI= 1.271-3.514).

□ An 11% of never-smokers survive LC for 10 or more years after diagnosis, while survival is lower for ever-smokers (7%).

Discussion

➤ Literature stresses that smoking-attributed LC mortality has been increasing rapidly in developing countries and countries in which people consider tobacco smoking as a part of their culture or lifestyle.

➤ Greece is an example of such a country, as a result of the demographic effect, and the tendency of moving towards the (what is locally considered to be) European lifestyle (e.g. smoking, westernized pattern of diet).

Conclusion

There is a constant increase of LC rates especially among females and smokers in specific municipalities. This outlines the need for targeted geographically-oriented preventive measures.

Future research

✓ Individual level studies to explore the role of other factors, including diet and occupational/environmental exposures.

Affiliations:

1. Cancer Registry of Crete

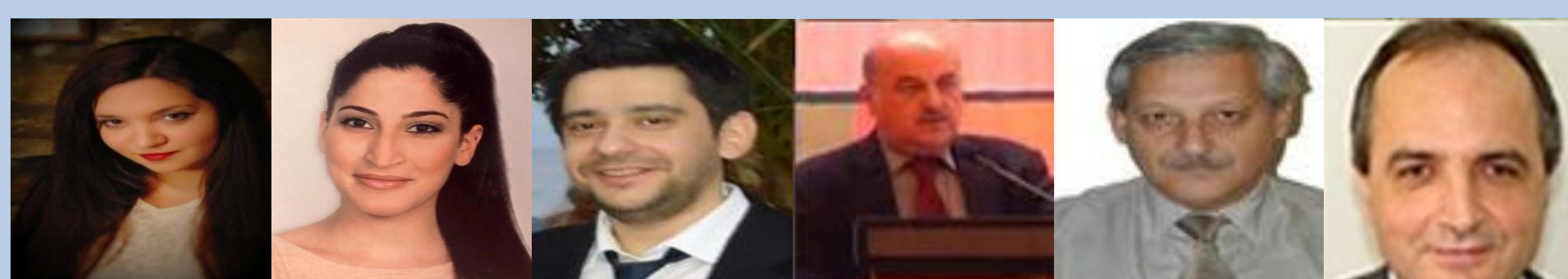


Figure: CRC's team. Photos are placed according to authors order.



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