

Multiple primary malignant tumours trend in two hospital-based cancer registries in Spain (1995-2008)

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Background

In the last three decades, advances in therapies have considerably increased the chance of surviving from a cancer. At this time more cancer patients face the problem of subsequent malignancies possibly related to the carcinogenic effects of treatment for the first cancer or to a common aetiology of both tumours.

Objective

To study the time trend of multiple primary malignancies, metachronic or synchronic, in two hospital-based cancer registries located in Zaragoza and Barcelona (Spain) whose catchment areas have different cancer incidence.

Methods

We analysed the annual evolution (1995-2008) of second and third malignant neoplasias in subjects registered at the hospital-based cancer registries located at the Hospital Clínico Universitario in Zaragoza (RHCUZ) and at the Hospital del Mar (RTHMar) in Barcelona.

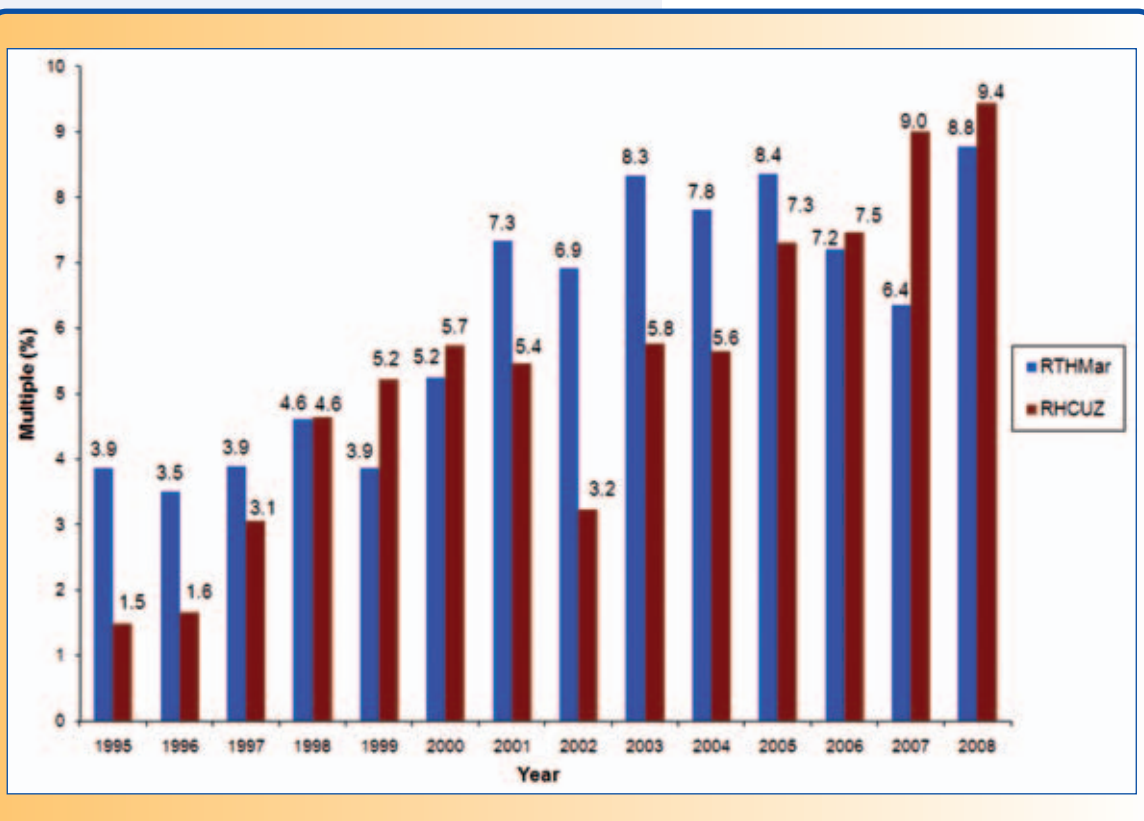
All non-melanoma skin cancers were excluded from this analysis.

Results

During the study period, 1,292 out of 22,500 new cases registered were multiple primary cancers in the RHCUZ, and 1,048 out of 18,047 new cases were multiples in the RTHMar. In both registries around 6% of the all patients with cancer have multiples malignancies considering the whole period.

We observed a continuous increase in the percentage of multiple primary cancer during the study period. The percentage of multiple tumours was 1.5% in 1995 and 9.4% in 2008 at the RHCUZ, and it changed from 3.9% to 8.8%, respectively, at the RTHMar. The most common sites associations were oesophagus-mouth-larynx, lung-larynx, leukaemia-lymphoma, prostate-pancreas, and bladder-leukaemia at the RHCUZ. At the RTHMar it was larynx-lung, bladder-lung, prostate-colorectal, bladder-prostate and colorectal-lung.

The patients with primary cancer that more frequently developed a second tumour were those with cancer of the lung (8.5%), bladder (6.6%) and colorectal (6.4%) at the RHCUZ and those with cancer of the larynx (19.9%), bladder (11.3%) and prostate (7.4%) at the RTHMar.



Conclusions

We observed an overall increase of patients developing a new cancer in both registries during the last decade. Careful analysis of the magnitude and temporal patterns of the site-specific excess risks, as well as study the contribution of treatment exposures and other factors, will facilitate the development of optimal follow-up plans. Management approaches should include patient education, screening, and other prevention strategies.