Theme: Cancer registry data: quality, methods, and tools

Evaluation of completeness of case ascertainment in Swiss cancer registration

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Background and Introduction

The value of population-based cancer registries (CRs) depends strongly on completeness of case ascertainment, *i.e.* the extent to which all diagnosed neoplasms are included in the registry database. This is the first comprehensive evaluation of completeness in Swiss cancer registration.

Materials and Methods

We applied simple quality measures, such as the proportion of cases for whom the death certificate is the first notification (DCN%), or the proportion of cases based on histology or cytology (MV%), as well as more developed methods such as the MI-Surv method of comparing the ratio of crude mortality and incidence rates with relative survival (RS) and the Flow method, which estimates the exact number of missed diagnoses. All 10 Swiss CRs in operation since at least 2006 are included. Diagnosis period was 2006-2011.

Results

Death certificates played a minor role for case finding (DCN≤6%) in all CRs for most types of cancer, except hepatic and pancreatic cancer. They were thus flagged as potentially under-registered in 8 of 10 CRs. Comparison of registry-specific MV% with all 10 combined CRs flagged a single unusual high value for hepatic cancer in one CR. For the MI-Surv method, the complement of five-year RS proportion (1-RS) was subtracted from the corresponding MI ratio. One type of cancer, lymphoid leukaemia, was systematically flagged in 6 of 8 CRs. The Flow method estimates completeness depending on year since diagnosis. The only diagnostic group which was systematically flagged in 6 of 7 registries at 3 years after diagnosis was lymphoid leukaemia.

Conclusions

Focusing on findings replicated by several methods, we identified only lymphoid leukaemia as potentially under-registered by most Swiss CRs. This was due to the high proportion of chronic types of leukaemia. As next steps, we will follow up flagged cancer types in individual CRs to substantiate these findings and identify ways of improvement.