

## **IND-010: Predictors of Quality of Cancer Care: development of process indicators in the region of the Comprehensive Cancer Centre Northern Netherlands**

*Gort M., Otter R., Broekhuis M.*

### **Objective:**

The objective of this project is to develop process indicators as predictors for outcome quality of cancer care on the basis of existing databases. A prerequisite is that these indicators can be monitored and can lead to improvement of the organisation.

### **Methods:**

The region of the Comprehensive Cancer Centre Northern Netherlands (CCCN) covers 2.2 million inhabitants, with 11,000 new cancer patients/year being diagnosed. The CCCN is a network organisation of 1000 GPs, 17 hospitals, 4 radiotherapy departments and 7 pathological laboratories, which aims to improve the quality of cancer care. The CCCN has developed and executed a number of activities to guarantee and improve this quality in the region. These activities include:

- the development of clinical guidelines on diagnosis and treatment
- the evaluation of the implementation of these guidelines
- external audits of the organisation of cancer care
- patient satisfaction research
- research on quality of life
- pattern-of-care studies
- a population-based cancer registry.

All of these activities have resulted in rich databases. By combining the data from these databases, it is possible to relate the data on structure and process of care to outcome data.

To create a framework of how these different data should be related, an extensive literature study was first completed about the relationship between outcomes on the one hand, and organisation structure and process of (cancer) care variables on the other. This raises the question on which level (individual, group, hospital) internal and outcome indicators can be related. Second, a preliminary multilevel analysis of the different databases was conducted. The data are related at the different levels, for patients as well as for care providers.

### **Results:**

There is a complete set of data on process, structure and outcome for 15 of the 17 hospitals. Ninety-two percent of all cancer patients in the region are treated in these 15 hospitals. External audits were conducted twice in all hospitals in the region except 1, between 1994 and 1996 and between 1999 and 2001. Both demographical data and data on the kind of cancer, the date of diagnosis, treatment, and the outcome of therapy can be extracted from the regional cancer registry. The 15 hospitals co-operated in a patient satisfaction study, which provided information on different items of care, such as interpersonal aspects, satisfaction with caregivers, technical quality, access to care and patient education. The patients also evaluated their quality of life.

Most literature on assessment of quality of care focuses only on the technical and interpersonal aspects of care. However, the present study also focuses on the co-ordination of care because of the multidisciplinary character of cancer care. Thus, the first phase of this research concentrated among other things on (1) the relationship between mutual consultation between different care providers (internal aspect) and patient satisfaction with the co-ordination between care providers (outcome) and (2) the relationship between organisation of patient education (internal aspect) and patient satisfaction with patient education (outcome).

### **Conclusions:**

It can be concluded that there is sufficient and adequate data to conduct an initial bottom-up analysis of the different databases in order to develop predictive structure and process indicators for the outcome of quality of cancer care.