

## Project Summaries for 2002

**Dr Timothy Card - University Hospital – Nottingham**

**Grant awarded £28,542 (1 Year)**

### ***A very large population based study of the morbidity and mortality related to Inflammatory Bowel Diseases***

Although Inflammatory Bowel Diseases are far less likely to cause the death of those who suffer from them now that was the case a few decades ago, there are still a small number of people who die from them. There is also a known increase in the risk of certain cancers, and of a number of other dangerous conditions (such as PSC, and pulmonary embolism) associated with Inflammatory Bowel Disease which might increase the death rate among IBD patients when compared to the rest of the population. There has however from some time now been increasing evidence that when all patients are looked at (rather than those most severe cases who are more likely to be referred to teaching hospitals), there is no significant increase in the risk of death associated with having IBD. Despite this, patients continue to have difficulty obtaining life insurance, and are often charged inflated premiums when they do obtain it. The justifications for this relate to weaknesses in the research showing that IBD patients are not at increased risk. Specifically, these studies have in general been quite small, have not always included patients who have had their illness long enough to be at increased risk of cancer, and compare the patients to the general population rather than to other life-insurance policy holders. We are proposing a study in the largest GP database in the world (the General Practice Research Database (GPRD)), which will be far larger than any previous study, and will contain the necessary data to overcome the previous problems.

Another major cause for concern in recent years has been the fact that IBD patients have an increased risk of developing osteoporosis. Despite the increase in risk of osteoporosis there is to date little evidence to show how much the risk of fractures in bone is increased. What evidence there is comes from two studies only one of which showed an increased risk in Ulcerative Colitis as well as Crohn's Disease and neither of which could clearly show whether the diseases or the drugs used to treat them are the important risk factors. The data required to look at mortality risk will also allow us to look at these questions since as well as data on all illnesses it contains data on prescriptions.

We plan to buy from the Medicines Control Agency all GPRD data on any patient who has been diagnosed with IBD. We will also be provided with data on five non-IBD patients of the same age and sex matched to each patient. We will then compare the numbers of deaths occurring in IBD patients to those in non-IBD patients. We will have data available on smoking, alcohol use, and other major illnesses which will allow us to correct for any effect that

differences in these things between the IBD patients, and non-IBD patients has.

The study is large enough to allow us to be 90% certain of detecting a difference in the risk of dying even if the difference is as small as 10%. Because of this, if we show no difference the study should be convincing evidence that none exists. We will also look at what patients with IBD die of. If they are not increased risk of death overall, then it may be that their increased risk of dying due to IBD itself or to the other diseases associated with it are balanced by a reduction in the risk of dying from some other condition(s).

In addition to looking at deaths in IBD patients we will also look at fractures. We will look at the risk in IBD patients compared to non-IBD patients, and will also attempt to assess whether any difference is purely due to corticosteroids; (To do this we will need to assess the severity of IBD separately from the use of steroids, which we will do by using data on immunosuppressive drugs, hospital admissions, and operations).