

Chapter 01:

Introduction

Cancer is a major public health issue in Ireland and is a considerable burden on the individuals who develop the disease, the families and friends of cancer patients and on the health services that treat and care for such patients. However in many ways cancer is an extremely misunderstood disease with the common perception that it is unavoidable and is almost always fatal, both misconceptions adding to the stress those with a connection to the disease must feel. Fortunately over the last several decades a much greater understanding of how cancer develops suggests that a high proportion of cancers in the population could be prevented simply by leading healthier lifestyles while continuous improvements in available screening, treatments and diagnostic methods mean that at the beginning of the twenty-first century, approximately half of the people diagnosed with cancer in Europe survive at least five-years.¹ While some measure of hope rests with that statement, the fact that the terms “half of” and “five-years” are used rather than the terms “100%” and “completely cured” demonstrate that there is a long way to go in the fight against cancer.

However this fight is not just one of treatment and cure, but also one of prevention. Unfortunately the number of cancer cases diagnosed globally each year is rising with an increase of 50% expected between 2000 and 2020². This is due almost exclusively to the combination of cancer being a disease that occurs primarily among the elderly², and to the increases in life expectancy throughout the world. Age, however, is not the only factor causing the increase in cancer levels with lifestyle choices also leading to a general decline in the health of the population resulting in increased susceptibility to cancer.^{3,4} Since other hereditary and environmental factors also play a part it is clear that the challenge in reducing the number of diagnoses of cancer as a result of prevention, through education and environmental and social change, is every bit as challenging as the development of new treatments.

There are thus extensive issues surrounding the global burden of cancer that involve people from many different backgrounds throughout the world from medical researchers and charities to health service professionals and health policy makers. They tackle the crucial issues of prevention, treatment and care but their activities would be for naught without ways of monitoring their successes and failures within a population wide context. This role is performed by organisations known as cancer registries that collect comprehensive information on all new cases of cancer occurring in a defined population. Most also collect information on cancer deaths in the same population and store this information securely and permanently for the purpose of data analysis. Their primary goal is one of education and information provision, the former assisting the general public to make informed decisions about lifestyles, symptoms, the benefits of screening and the issues of treatment, the latter so that informed decisions can be made by policy makers in the fight against cancer.

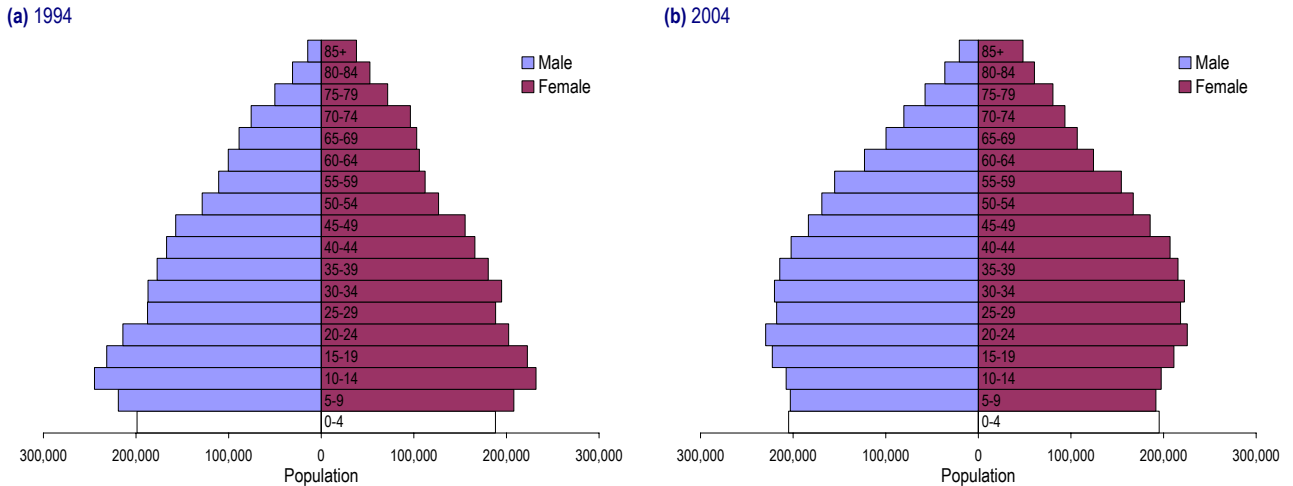
Many countries throughout the world have at least one cancer registry serving their population. Some countries have more than one covering the whole population (e.g. United Kingdom) while other countries monitor cancer levels in the entire country using a few registries that cover only a small percentage of the population (e.g. France). In Ireland there are two cancer registries; the Northern Ireland Cancer Registry (NICR) and the National Cancer Registry of Ireland (NCRI). Both of these were established in 1994 and cover the population of Northern Ireland (NI) and the Republic of Ireland (ROI) respectively. They are both population based cancer registries and regularly produce reports on their catchment areas, provide online statistics for users of cancer data and have significant research programs leading to the production of scientific papers in internationally recognized journals. Additionally both registries use internationally agreed standards, so figures on rates of occurrence or survival for different countries can be compared. Consequently they both feed into international collaborations such as EUROCARE¹, which is a European wide study of cancer survival, and IARC (International Agency on Research for Cancer) compendiums such as “Cancer Incidence in Five Continents”.⁵

1.1: Cancer in Ireland

The fight against cancer in Ireland faces many challenges in the years ahead, many of which are common across the globe but differing demographics, lifestyles, poverty levels and health services in different countries mean that the emphasis and resources are directed towards different areas.

In Ireland the most rapidly changing factor affecting cancer levels is the changing population size and age distribution. In Ireland the 2004 population was 5,754,036, a 10.0% increase since 1994 (12.8% in Republic of Ireland, 4.1% in Northern Ireland). In addition the average age of the population in Ireland is increasing with a rise in the percentage of the population aged 60 and over from 15.8% to 16.2% and a decrease in the percentage of the population aged under 15 from 24.7% to 20.9% between 1994 and 2004^{6,7} (Fig. 1.1). With the recent increase in the number of countries in the European Union (EU) also expected to result in a further increase in the population due to immigration, the annual number of cancer cases is set to rise.

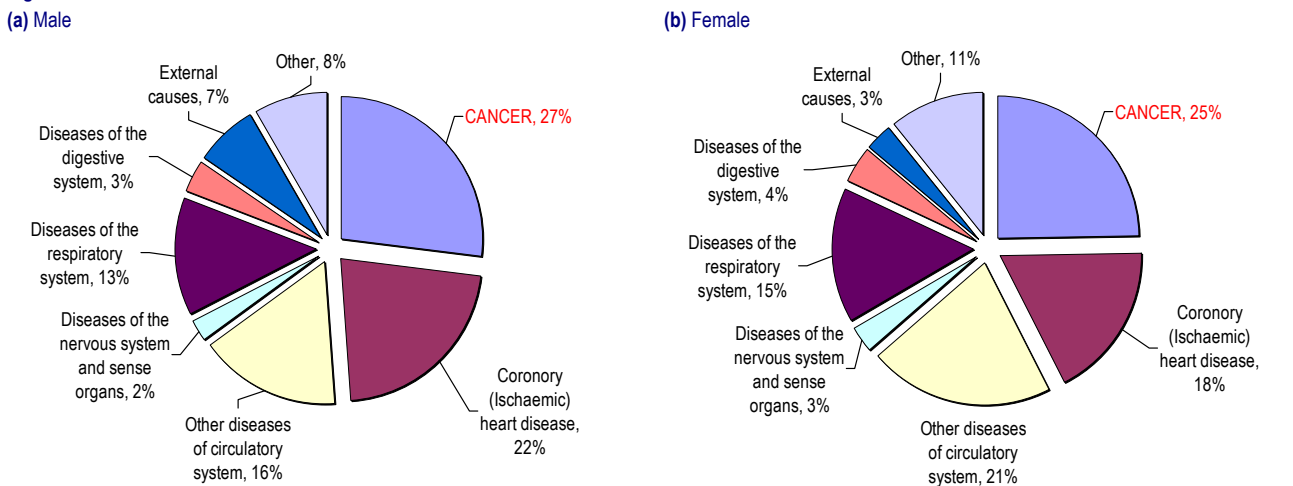
Figure 1.1: Population of Ireland by sex and five-year age group: 1994 & 2004



Source: NISRA⁶/DOHC⁷

The burden this will have on the health services of Northern Ireland and Republic of Ireland cannot be underestimated, as one in three members of the population will develop a cancer by the time they reach 75 years of age. In addition cancer was responsible for approximately one quarter of all deaths occurring in Ireland between 2001 and 2004 during which it was the most common cause of death leading coronary heart disease, stroke and other diseases of the circulatory and respiratory systems^{8,9} (Fig. 1.2). However, new treatments are continuously being made available through the health services in Ireland, which improve survival possibilities for people with cancer. In addition screening programs, even though they are more common in Northern Ireland than Republic of Ireland, assist in the early detection of various cancers, which is an important factor in the ability to treat the disease effectively. Both allow us to be optimistic that increases in cancer mortality due to demographic change can be combated.

Figure 1.2: Common causes of death in Ireland: 2001-2004



Source: NISRA⁸/CSO⁹

Outside of demographic factors, risk factors for cancer can be broken down into genetic factors and lifestyle choices. While little can be done with regard to the first, lifestyle factors are controllable by individuals. Health services in Northern Ireland and Republic of Ireland undertake and promote measures to reduce the development of cancer as a result of these factors. Two particular factors that have the most potential to reduce the level of preventable cancers are tobacco control and maintaining a healthy body weight through diet and exercise. Smoking bans in work and public places and extensive anti-tobacco legislation will help in the control of

tobacco related cancers, particularly lung cancer, although with one quarter of adults in Ireland still smoking much has yet to be done. Obesity is increasingly recognised as a risk factor for cancer development and five fruit/vegetable portions per day messages and fitness campaigns may thus impact upon diet and obesity related cancers, however, the connection between these factors and cancer has still to penetrate the public consciousness. Other risk factors include excessive alcohol consumption, unprotected sexual activity and over exposure to the sun. More still needs done to increase public understanding of the link between these lifestyle choices and cancer (along with other health problems) thereby helping the control of this disease through prevention.

1.2: Third All-Ireland Report

The levels of cancer are constantly affected by changing demographics, new developments in treatment and care, screening programs and public health awareness, with variations in these factors by geographic area, so it is necessary to carefully monitor cancer levels in all of Ireland as well as separately. With that in mind NICR and NCRI introduce the third all-Ireland cancer statistics report entitled “Cancer in Ireland: A comprehensive report”, which like the first two reports (released in 2001¹⁰ and 2004¹¹) aims to give a comprehensive review of cancer in Ireland. It is aimed at both the general public and health professionals and covers a range of cancer related topics including:

- Incidence and mortality: the number of cases and deaths due to cancer each year and how the numbers vary by age and gender;
- Treatment: percentages of patients receiving different types of treatment for specific cancers and years;
- Survival: rates of patients surviving cancer for different lengths of time and how surviving a given length of time increases chances of long-term survival;
- Prevalence: estimates of the numbers of people living in Ireland who have been diagnosed with the disease;
- Trends in cancer incidence and mortality;
- Geographic variations in incidence and mortality;
- International comparisons of incidence and survival;
- Factors influencing treatment and survival.

The report covers the period of time from 1994-2004, which at the time of report production was the most up to date data available for all of Ireland. In addition the report specifically focuses on malignant cancer, which is one of four cancer behaviours, the other three being benign, insitu and uncertain. With the exception of insitu and uncertain brain tumours however these are fairly easy to treat and are rarely fatal. Only malignant cancers are thus included in this report.

Overall the report will give one of the most detailed and comprehensive looks at cancer in Ireland and the process of its registration thus far. We hope that it will help inform medical and health policy makers in the decisions they face and will also in some small way educate the general public in how they can help protect themselves against cancer by living a healthier lifestyle, checking for symptoms and availing of screening programs available to them.