

Better Cancer Care:

**An Aid to Planning
Cancer Services**

**Cancer Incidence Projections for Scotland (2006-2020)
Updated to Reflect 2006-Based Population Projections**

27 October 2008

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Cancer Incidence Projections for Scotland (2006-2020).**

The projections based on incidence trends observed during 1961-2000 and Government Actuary Department 2006-based population projections for Scotland.

Prepared by Katharine Sharpe, November 2007 based on incidence rates projected by Diane Stockton in the 2004 update. ISD Epidemiology and Statistics Group, NHS National Services Scotland.

INTRODUCTION AND SUMMARY

This document updates the projections of cancer incidence for Scotland (2001-2020) published by the Scottish Executive in November 2004.¹

The projections are based on incidence trends observed during 1961 to 2000 and Government Actuary Department 2006-based population projections for Scotland, published October 2007². These 2006-based population projections replace the 2002-based populations used in the original document.³

It is predicted that there will be almost 175,000 cases of cancer diagnosed in Scotland during 2016-20 (around 35,000 cases per annum). Overall, it is predicted that there will be a 3.7% increase in the number of people diagnosed with cancer during the five year period. This reflects that relative to the 2002-based population projections, the 2006-based population projections predict an increase in all age categories.

Table 1: Predicted Incidence in 2016-2020 by Cancer Site

Cancer (ICD code)	Comparison of estimated cases in 2016-2020			
	2006-base	2002-base	Difference (N)	Difference (%)
Head and Neck (C00-C14, C30-C32)	6,796	6,570	226	3.4%
Oesophagus (C15)	6,641	6,420	220	3.4%
Stomach (C16)	3,846	3,701	145	3.9%
Colorectal (C18-C20)	25,579	24,643	936	3.8%
Lung (C33-C34)	21,518	20,747	771	3.7%
Pancreas (C25)	4,246	4,101	145	3.5%
Melanoma skin (C43)	5,991	5,717	274	4.8%
Breast (C50)	24,431	23,696	735	3.1%
Cervix (C53)	1,041	993	49	4.9%
Corpus Uteri (C54)	3,024	2,944	80	2.7%
Ovary (C56)	4,420	4,294	126	2.9%
Prostate (C61)	16,034	15,405	629	4.1%
Testis (C62)	1,432	1,304	128	9.8%
Renal (C64)	4,870	4,708	162	3.5%
Bladder (C67, D09.0, D41.4)	10,171	9,781	390	4.0%
Brain, meninges and CNS (C70-C72)	2,298	2,207	91	4.1%
Hodgkin lymphoma (C81)	727	686	41	6.0%
Non-Hodgkin lymphoma (C82-C85)	7,378	7,122	256	3.6%
Leukaemia (C91-C95)	4,488	4,320	168	3.9%
Other and unspecified	20,050	19,324	725	3.8%
Total 5 year period	174,982	168,684	6,298	3.7%
Average per annum	34,996	33,737	1,260	

All cancers are predicted to increase in terms of numbers of new cases. The increase in incidence is greatest for colorectal, lung and breast cancers, reflecting that these cancers represent the greatest proportion of all cancers.

Cancer of the testis, cervix, Hodgkin lymphoma and skin melanoma all show the greatest percentage change in incidence reflecting the general increase in projected population and the increase in the younger age ranges in particular. The age range with the largest proportion of the increased incidence for each of these cancers is provided below.

Cancer Site	Age Range with greatest incidence increase (2006 v 2002)
Testis	25-44
Cervix	30-49
Hodgkin Lymphoma	25-34
Skin melanoma	25-44 males 25-54 females

POPULATION PROJECTIONS

The population projections provided by the Government Actuary Department have been revised in comparison to the 2002-based projections used for Cancer in Scotland: Sustaining Change, Cancer Incidence Projections (2001-2020).

The most notable change is an increase in the 20-34 age range for both males and females, followed by an increase in the 35-59 age range. In addition, the population projections for males have increased more compared to the female projection.

Table 2: Changes in the population projections: 2006-based projections compared to 2002-based projections

Sex	Age	Difference (%) 2006b v 2002b			Difference (N) b2006-b2002		
		2006-10	2011-15	2016-20	2006-10	2011-15	2016-20
F	15-19	1.2%	1.4%	2.5%	9,509	10,351	16,595
	20-34	5.2%	7.8%	8.1%	121,994	184,683	189,178
	35-59	1.8%	3.0%	5.0%	84,168	136,741	217,177
	60-74	0.8%	1.2%	1.8%	15,372	26,729	42,231
	75+	0.6%	1.7%	3.1%	7,520	21,891	43,307
	Total	2.2%	3.4%	4.6%	238,563	380,395	508,488
M	15-19	2.4%	3.7%	5.9%	19,909	27,781	39,970
	20-34	6.8%	10.6%	12.4%	157,159	251,264	287,315
	35-59	2.3%	4.1%	6.8%	101,364	171,570	268,527
	60-74	1.0%	1.9%	2.8%	17,471	35,926	57,737
	75+	0.6%	2.3%	5.3%	4,224	19,456	50,640
	Total	3.0%	5.0%	7.1%	300,127	505,997	704,189

Differences in the population projections reflect the different assumptions for long term fertility, male and female life expectancy and the annual long term net migration applied. The assumptions for the 2002-based projections are compared with those for the 2006-based population projections and are summarised below⁴.

Projection	Long term fertility (total fertility rate)	Life Expectancy - Males	Life Expectancy - Females	Annual Long Term Net Migration
2002	1.60	78.4	83.2	-1,500
2006	1.65	80.4	84.8	+8,500

¹ Cancer in Scotland: Sustaining Change, Cancer Incidence Projections for Scotland (2001-2020)
<http://www.scotland.gov.uk/Resource/Doc/30859/0012657.pdf>

² Population projections by the Office for National Statistics, Projected population by age last birthday in five year age bands

http://www.gad.gov.uk/Demography_Data/Population/Index.asp?v=Principal&chkDataTable=yy_5y&chkDataGraph=&y=2006&dataCountry=scotland&subTable=Search+again

³ Because population projections are not a precise science the Government Actuarial Department (GAD) in consultation with the General Registrar's Office (GRO) for Scotland develop alternative or variant projections. One of these projections is defined as the principal, medium or central variant. In both the original and updated projections of cancer incidence, the principal projections have been used.

⁴ Fertility, mortality and net migration assumptions underpinning principal projections are described in more detail in 'Projected Population of Scotland (2006-based)' published by GRO October 2007.

<http://www.gro-scotland.gov.uk/files1/stats/projected-population-of-scotland-2006-based/projected-population-of-scotland-2006-based.pdf>

More detail on assumptions for 2002-based projections are available in 'Projected Population of Scotland (2002 Based)'

<http://www.gro-scotland.gov.uk/statistics/publications-and-data/popproj/02population-projections/the-base-population-and-assumptions-used-in-the-projection.html>

