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
Better Cancer Care: An Aid to Planning Cancer Services


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 2007\(^2\). 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

<table>
<thead>
<tr>
<th>Cancer (ICD code)</th>
<th>Comparison of estimated cases in 2016-2020</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2006-base</td>
</tr>
<tr>
<td>Head and Neck (C00-C14, C30-C32)</td>
<td>6,796</td>
</tr>
<tr>
<td>Oesophagus (C15)</td>
<td>6,641</td>
</tr>
<tr>
<td>Stomach (C16)</td>
<td>3,846</td>
</tr>
<tr>
<td>Colorectal (C18-C20)</td>
<td>25,579</td>
</tr>
<tr>
<td>Lung (C33-C34)</td>
<td>21,518</td>
</tr>
<tr>
<td>Pancreas (C25)</td>
<td>4,246</td>
</tr>
<tr>
<td>Melanoma skin (C43)</td>
<td>5,991</td>
</tr>
<tr>
<td>Breast (C50)</td>
<td>24,431</td>
</tr>
<tr>
<td>Cervix (C53)</td>
<td>1,041</td>
</tr>
<tr>
<td>Corpus Uteri (C54)</td>
<td>3,024</td>
</tr>
<tr>
<td>Ovary (C56)</td>
<td>4,420</td>
</tr>
<tr>
<td>Prostate (C61)</td>
<td>16,034</td>
</tr>
<tr>
<td>Testis (C62)</td>
<td>1,432</td>
</tr>
<tr>
<td>Renal (C64)</td>
<td>4,870</td>
</tr>
<tr>
<td>Bladder (C67, D09.0, D41.4)</td>
<td>10,171</td>
</tr>
<tr>
<td>Brain, meninges and CNS (C70-C72)</td>
<td>2,298</td>
</tr>
<tr>
<td>Hodgkin lymphoma (C81)</td>
<td>727</td>
</tr>
<tr>
<td>Non-Hodgkin lymphoma (C82-C85)</td>
<td>7,378</td>
</tr>
<tr>
<td>Leukaemia (C91-C95)</td>
<td>4,488</td>
</tr>
<tr>
<td>Other and unspecified</td>
<td>20,050</td>
</tr>
<tr>
<td><strong>Total 5 year period</strong></td>
<td><strong>174,982</strong></td>
</tr>
<tr>
<td><strong>Average per annum</strong></td>
<td><strong>34,996</strong></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Cancer Site</th>
<th>Age Range with greatest incidence increase (2006 v 2002)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Testis</td>
<td>25-44</td>
</tr>
<tr>
<td>Cervix</td>
<td>30-49</td>
</tr>
<tr>
<td>Hodgkin Lymphoma</td>
<td>25-34</td>
</tr>
<tr>
<td>Skin melanoma</td>
<td>25-44 males \25-54 females</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Sex</th>
<th>Age</th>
<th>Difference (%) 2006b v 2002</th>
<th>Difference (N) b2006-b2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>15-19</td>
<td>1.2%</td>
<td>1.4%</td>
</tr>
<tr>
<td></td>
<td>20-34</td>
<td>5.2%</td>
<td>7.8%</td>
</tr>
<tr>
<td></td>
<td>35-59</td>
<td>1.8%</td>
<td>3.0%</td>
</tr>
<tr>
<td></td>
<td>60-74</td>
<td>0.8%</td>
<td>1.2%</td>
</tr>
<tr>
<td></td>
<td>75+</td>
<td>0.6%</td>
<td>1.7%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2.2%</td>
<td>3.4%</td>
</tr>
<tr>
<td>M</td>
<td>15-19</td>
<td>2.4%</td>
<td>3.7%</td>
</tr>
<tr>
<td></td>
<td>20-34</td>
<td>6.8%</td>
<td>10.6%</td>
</tr>
<tr>
<td></td>
<td>35-59</td>
<td>2.3%</td>
<td>4.1%</td>
</tr>
<tr>
<td></td>
<td>60-74</td>
<td>1.0%</td>
<td>1.9%</td>
</tr>
<tr>
<td></td>
<td>75+</td>
<td>0.8%</td>
<td>2.3%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>3.0%</td>
<td>5.0%</td>
</tr>
</tbody>
</table>

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 below.

<table>
<thead>
<tr>
<th>Projection</th>
<th>Long term fertility</th>
<th>Life Expectancy - Males</th>
<th>Life Expectancy - Females</th>
<th>Annual Long Term Net Migration</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>1.60</td>
<td>78.4</td>
<td>83.2</td>
<td>-1,500</td>
</tr>
<tr>
<td>2006</td>
<td>1.65</td>
<td>80.4</td>
<td>84.8</td>
<td>+8,500</td>
</tr>
</tbody>
</table>

27 October 2008

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.


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