One-year relative survival rates for patients diagnosed with cancer of the oesophagus, stomach, primary liver, gallbladder, biliary tract and pancreas in England, 1985-2009

Upper Gastrointestinal Cancer Site Specific Clinical Reference Group (UGI SSCRG)

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Introduction

The National Cancer Intelligence Network (NCIN) Upper Gastrointestinal Cancer Site Specific Clinical Reference Group (UGI SSCRG) is responsible for analyses of national data for oesophago-gastric (OG) cancers (including oesophageal and stomach cancer) and primary hepatic, pancreatic and biliary cancers (including primary liver, biliary tract, gallbladder and pancreatic cancer). Thames Cancer Registry is the lead registry for the UGI SSCRG.

Survival for patients with these cancer types is lower in England than in Europe. This report aims to investigate whether one-year survival for men and women in England has improved.

Methods

Data for this report were extracted in August 2012 from the UK Cancer Information Service (UKCIS).

Relative survival measures the survival of cancer patients in comparison to survival in the general population to estimate the effect of cancer. It assumes that some patients will die of other causes and compares the observed survival with that expected for the general population. The cohort of people is similar with respect to age, sex and year of observation. The expected survival rate is estimated using aggregated all-cause mortality data. There are several different methods of calculating relative survival and the UKCIS uses the method described by Parkin and Hakulinen.¹

One-year relative survival rates presented in this report are based on patients diagnosed between 1985 and 2009 in England. The final year of follow-up was 2010. The survival rates are calculated from five-year periods. These periods overlap, for example 1985-1989 followed by 1986-1990 up to 2004-2008, and finally 2005-2009.

The relative survival rates are given for male and female patients resident in England who were diagnosed with cancers of the oesophagus (International Classification of Diseases 10th Revision code C15), stomach (ICD-10 C16), primary liver (ICD-10 C22), gallbladder (ICD-10 C23), other and unspecified parts of biliary tract (from now on referred to as biliary tract) (ICD-10 C24), and pancreas (ICD-10 C25).

¹ Cancer Registration: Principles and Methods, IARC Scientific Publications No. 95, Lyon, 1991
Summary of results

One-year relative survival rates have improved for each of the cancer types. The survival rates in men improved slightly more than in women. For the latest period, 2005-2009, one-year survival was lowest for pancreatic cancer at 19.3% for men and 18.3% for women. The highest survival was observed for biliary tract cancer at 57.0% for men and 48.9% for women. The largest absolute improvement in survival rates over the whole period was seen in biliary tract cancer, increasing by more than 20 percentage points.

Relative survival is valuable to see the impact of cancer on survival and is advantageous as it does not depend on the accuracy of the reported cause of death. However, this means it is not possible to disentangle mortality related to cancer from other causes. Future analysis could take into account other factors that may influence survival, such as stage of disease and treatment received. This may provide more robust evidence of improvements in one-year survival.

This report has shown that one-year survival is improving for all of the upper gastrointestinal cancer types presented. This may be associated with more effective multidisciplinary working in recent years. However one-year survival for these cancers in England is still low. Initiatives aimed at raising awareness of symptoms, earlier diagnosis and improving treatments will be essential. It is important that survival continues to be monitored to make sure improvements continue.
Results
Number of cases by cancer type and five-year period of diagnosis, England, 1985-2009*

<table>
<thead>
<tr>
<th>Cancer type</th>
<th>Oesophageal cancer</th>
<th>Stomach cancer</th>
<th>Primary liver cancer</th>
<th>Gallbladder cancer</th>
<th>Biliary tract cancer</th>
<th>Pancreatic cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICD-10 code</td>
<td>C15</td>
<td>C16</td>
<td>C22</td>
<td>C23</td>
<td>C24</td>
<td>C25</td>
</tr>
<tr>
<td><strong>Period</strong></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>1985-1989</td>
<td>11,871</td>
<td>8,363</td>
<td>27,704</td>
<td>17,033</td>
<td>2,586</td>
<td>1,654</td>
</tr>
<tr>
<td>1986-1990</td>
<td>12,286</td>
<td>8,550</td>
<td>27,327</td>
<td>16,643</td>
<td>2,689</td>
<td>1,662</td>
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<tr>
<td>1987-1991</td>
<td>12,532</td>
<td>8,719</td>
<td>26,607</td>
<td>16,303</td>
<td>2,770</td>
<td>1,718</td>
</tr>
<tr>
<td>1988-1992</td>
<td>12,869</td>
<td>8,961</td>
<td>26,410</td>
<td>15,899</td>
<td>2,888</td>
<td>1,792</td>
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<tr>
<td>1989-1993</td>
<td>13,238</td>
<td>9,193</td>
<td>25,933</td>
<td>15,586</td>
<td>3,047</td>
<td>1,910</td>
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<td>1990-1994</td>
<td>13,656</td>
<td>9,384</td>
<td>25,444</td>
<td>14,975</td>
<td>3,238</td>
<td>2,032</td>
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<tr>
<td>1991-1995</td>
<td>13,921</td>
<td>9,476</td>
<td>24,850</td>
<td>14,410</td>
<td>3,333</td>
<td>2,129</td>
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<tr>
<td>1992-1996</td>
<td>14,252</td>
<td>9,522</td>
<td>24,464</td>
<td>13,950</td>
<td>3,515</td>
<td>2,281</td>
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<tr>
<td>1993-1997</td>
<td>14,595</td>
<td>9,562</td>
<td>24,095</td>
<td>13,583</td>
<td>3,700</td>
<td>2,433</td>
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<tr>
<td>1994-1998</td>
<td>14,764</td>
<td>9,630</td>
<td>23,740</td>
<td>13,236</td>
<td>3,872</td>
<td>2,549</td>
</tr>
<tr>
<td>1995-1999</td>
<td>14,976</td>
<td>9,716</td>
<td>23,425</td>
<td>12,871</td>
<td>4,130</td>
<td>2,685</td>
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<tr>
<td>1996-2000</td>
<td>15,456</td>
<td>9,854</td>
<td>23,215</td>
<td>12,696</td>
<td>4,562</td>
<td>2,899</td>
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<tr>
<td>1997-2001</td>
<td>15,976</td>
<td>10,029</td>
<td>22,821</td>
<td>12,419</td>
<td>4,854</td>
<td>3,063</td>
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<tr>
<td>1998-2002</td>
<td>16,438</td>
<td>10,076</td>
<td>22,325</td>
<td>11,999</td>
<td>5,220</td>
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<td>21,488</td>
<td>11,626</td>
<td>5,562</td>
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<td>2000-2004</td>
<td>17,460</td>
<td>10,010</td>
<td>20,774</td>
<td>11,362</td>
<td>5,861</td>
<td>3,600</td>
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<td>2001-2005</td>
<td>17,824</td>
<td>10,014</td>
<td>20,080</td>
<td>10,877</td>
<td>6,160</td>
<td>3,774</td>
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<tr>
<td>2002-2006</td>
<td>18,139</td>
<td>9,978</td>
<td>19,423</td>
<td>10,487</td>
<td>6,592</td>
<td>3,936</td>
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<td>2003-2007</td>
<td>18,449</td>
<td>9,992</td>
<td>18,848</td>
<td>10,195</td>
<td>6,987</td>
<td>4,162</td>
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<td>2004-2008</td>
<td>18,856</td>
<td>9,914</td>
<td>18,546</td>
<td>9,883</td>
<td>7,451</td>
<td>4,406</td>
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<td>2005-2009</td>
<td>19,226</td>
<td>9,902</td>
<td>18,234</td>
<td>9,577</td>
<td>8,078</td>
<td>4,819</td>
</tr>
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</table>

* Each five-year period includes four diagnosis years from the previous five-year period.
In males diagnosed with oesophageal cancer the one-year relative survival in the earliest period (1985-1989) was 24.2%. In the most recent period (2005-2009) the survival rate was almost double at 43.3%. The absolute difference was +19.1 percentage points.

In females diagnosed with oesophageal cancer the one-year relative survival in the earliest period (1985-1989) was 24.9%. In the most recent period (2005-2009) the survival rate increased to 37.8%. The absolute difference was +12.9 percentage points.

(UKCIS data extracted August 2012)
Stomach cancer (ICD-10 C16) – One-year relative survival with 95% confidence intervals

Males

In males diagnosed with stomach cancer the one-year relative survival in the earliest period (1985-1989) was 26.8%. In the most recent period (2005-2009) the survival rate increased to 43.6%. The absolute difference was +16.8 percentage points.

Females

In females diagnosed with stomach cancer the one-year relative survival in the earliest period (1985-1989) was 26.5%. In the most recent period (2005-2009) the survival rate increased to 39.5%. The absolute difference was +13.1 percentage points.

(UKCIS data extracted August 2012)
Liver cancer (ICD-10 C22) – One-year relative survival with 95% confidence intervals

Males

In males diagnosed with liver cancer the one-year relative survival in the earliest period (1985-1989) was 12.9%. In the most recent period (2005-2009) the survival rate more than doubled to 28.4%. The absolute difference was +15.5 percentage points.

Females

In females diagnosed with liver cancer the one-year relative survival in the earliest period (1985-1989) was 12.9%. In the most recent period (2005-2009) the survival rate almost doubled to 25.1%. The absolute difference was +12.2 percentage points.

(UKCIS data extracted August 2012)
In males diagnosed with gallbladder cancer the one-year relative survival in the earliest period (1985-1989) was 18.9%. In the most recent period (2005-2009) the survival rate increased to 33.2%. The absolute difference was +14.4 percentage points.

In females diagnosed with gallbladder cancer the one-year relative survival in the earliest period (1985-1989) was 17.8%. In the most recent period (2005-2009) the survival rate increased to 28.3%. The absolute difference was +10.5 percentage points.
Biliary tract cancer (ICD-10 C24) – One-year relative survival with 95% confidence intervals

**Males**

In males diagnosed with biliary tract cancer the one-year relative survival in the earliest period (1985-1989) was 33.1%. In the most recent period (2005-2009) the survival rate increased to 57.0%. The absolute difference was +24.0 percentage points.

**Females**

In females diagnosed with biliary cancer the one-year relative survival in the earliest period (1985-1989) was 27.5%. In the most recent period (2005-2009) the survival rate increased to 48.8%. The absolute difference was +21.3 percentage points.

(UKCIS data extracted August 2012)
Pancreatic cancer (ICD-10 C25) – One-year relative survival with 95% confidence intervals

Males

In males diagnosed with pancreatic cancer the one-year relative survival in the earliest period (1985-1989) was 12.9%. In the most recent period (2005-2009) the survival rate increased to 19.3%. The absolute difference was +6.4 percentage points.

Females

In females diagnosed with pancreatic cancer the one-year relative survival in the earliest period (1985-1989) was 11.3%. In the most recent period (2005-2009) the survival rate increased to 18.3%. The absolute difference was +7.0 percentage points.
FIND OUT MORE:

Thames Cancer Registry is the lead cancer registry for upper gastrointestinal cancers.

The NCIN is a UK-wide initiative, working closely with cancer services in England, Scotland, Wales and Northern Ireland, and the NCRI, to drive improvements in standards of cancer care and clinical outcomes by improving and using the information it collects for analysis, publication and research. In England, the NCIN is part of the National Cancer Programme.