

# Pancreatic Cancer Action

## UK Pancreatic Cancer Statistics 2012/13

Incidence, Mortality, Survival and Prevalence

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Pancreatic Cancer Action  
Chiltlee Manor, Haslemere Road, Liphook, Hampshire GU30 7AZ  
Tel: 0303 040 1770 enquiries@panact.org

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## Pancreatic cancer: UK Statistics Summary 2012/13

- In 2010, 8,455 people were diagnosed with pancreatic cancer.<sup>1</sup>
- In 2010, 7,921 people died from pancreatic cancer in the UK.
- Five-year survival is only three per cent. This figure has only seen marginal improvement in over forty years.
- Relative one year survival is less than 20% and the UK has one of the worst rates in Europe.
- 22 people a day die from pancreatic cancer.<sup>1</sup>
- Pancreatic cancer is the fifth leading cause of cancer death in the UK.<sup>2</sup>
- Pancreatic cancer receives only one per cent of overall research funding.<sup>3</sup>
- Only 10% of patients are eligible for potentially curative surgery due to late diagnosis.<sup>4</sup>
- Patients able to have surgery to remove the tumour have up to a 30 per cent chance of surviving five years.<sup>5</sup>
- 50% of people are diagnosed as an emergency in our A&E system.<sup>6</sup>
- The average life expectancy on diagnosis is four to six Months.<sup>7</sup>
- It is the UK's ninth most common cancer.<sup>8</sup>

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<sup>1</sup> This document relates to the latest available statistics on pancreatic cancer at the time of publication. Because the reporting system for incidence varies with the cancer registries across the countries of the United Kingdom and for mortality published by the ONS, there is usually a delay of approximately 18 months for the collation of incidence and of 12 months for the collation of mortality figures. This is why, in this 2012/13 report, we are citing figures from 2010.

## 1.0 Pancreatic Cancer Incidence and Mortality

### 1.1 UK Pancreatic Cancer Incidence in 2010 by country

Pancreatic Cancer Incidence 2010	England <sup>9</sup>	Wales <sup>10</sup>	Scotland <sup>11</sup>	Northern Ireland <sup>12</sup>	UK
Males	3,497	259	343	89	4188
Females	3,561	253	353	100	4267
Persons	7,058	512	696	189	<b>8455</b>
EASR *	9.5	10.6	9.1	8.2	9.35

Table 1 Pancreatic cancer incidence 2010 by country

In 2010, 8455 people were diagnosed with pancreatic cancer in the UK. The number of people diagnosed with pancreatic cancer in the UK has been steadily rising: in 2009 the number was 8,366 and in 2008, the number was 8,085 having risen from 7,684 in 2007. However, European age-standardised incidence rates (per 100,000) have remained constant (around 9.0) since 1993 (CRUK)<sup>13</sup>

### 1.2 UK Pancreatic Cancer Mortality in 2010 by country

Pancreatic Cancer Mortality 2010	England <sup>14</sup>	Wales <sup>15</sup>	Scotland <sup>16</sup>	Northern Ireland <sup>17</sup>	UK
Males	3,224	222	346	88	3,880
Females	3,389	230	323	99	4,041
Persons	6,613	452	669	187	<b>7,921</b>
EASR *	10	9.45	8.8	7.9	9.0

Table 2 Pancreatic cancer mortality by country

In 2008, 7,781 persons died from pancreatic cancer. In 2009 it had increased to 8,047 persons but the figure has dropped slightly in 2010 to 7,921. Approximately 22 people a day and nearly one person an hour will die from pancreatic cancer in the UK. Pancreatic cancer has one of the highest incidence to mortality ratios of ANY disease.

1.3 Average pancreatic cancer incidence and mortality in the UK 2007-2009<sup>18</sup>

	Males	Females	Persons
Newly diagnosed cases (3-year averages)	4052	4180	<b>8232</b>
Age-standardised rate per 100,000*	10.74	8.39	<b>9.57</b>
Deaths 2007-2009 (3 year averages)	3816	4038	<b>7854</b>
Age-standardised death rate per 100,000*	10.0	7.9	<b>8.95</b>

Table 3 Average Pancreatic Cancer Incidence & Mortality 2007-2009

While age is a significant risk factor for pancreatic cancer, 40% of cases in England between 2005 & 2009 occurred in those under the age of 69:

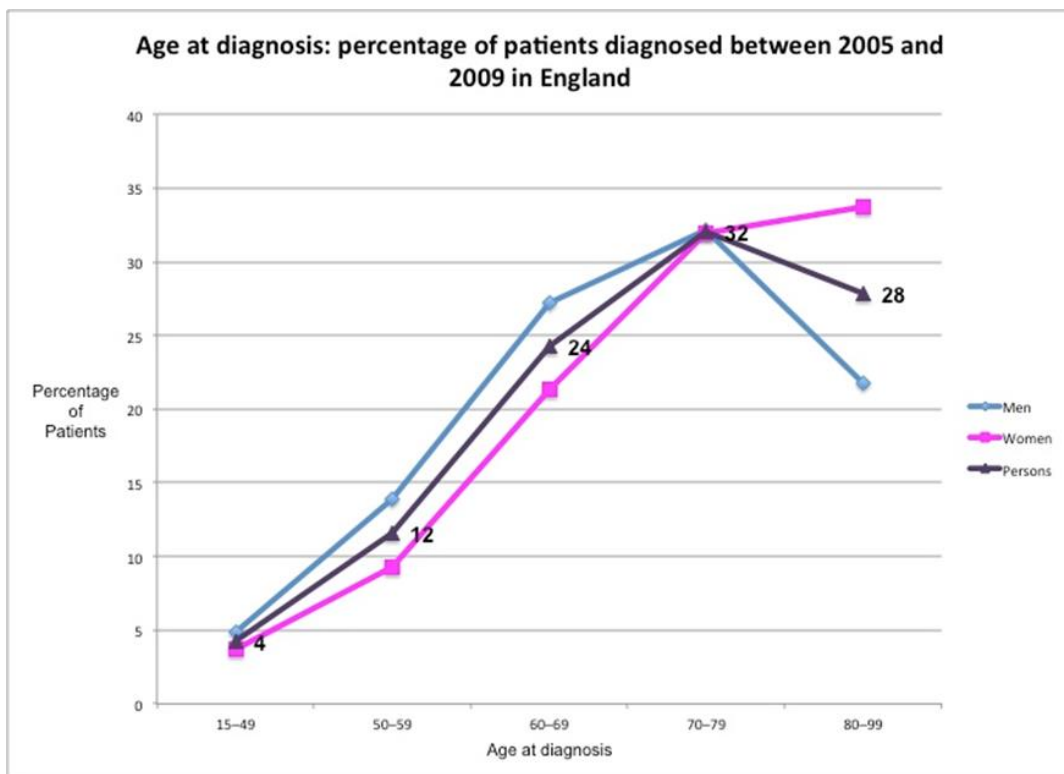


Figure 1 Age at diagnosis for patients diagnosed in England 2005-2009

## 2.0 Pancreatic Cancer Survival

### 2.1 UK Pancreatic cancer survival by country

Survival rates for pancreatic cancer are poor and the five-year survival rate has remained at around three per cent with only moderate improvement in over forty years<sup>19</sup>. Pancreatic cancer prognosis is often poor and can be attributable to the fact that pancreatic cancer is often diagnosed at a late stage where the cancer has progressed to a point where surgical removal is impossible. However, **patients who are diagnosed in time for surgery do considerably better and have a ~ 30% chance of surviving beyond five years after diagnosis**<sup>12</sup>

One-year survival rates have seen very moderate improvement due to an increased use of combination chemotherapy<sup>20</sup> and treatment of patients in pancreatic cancer specialist centres.

	Relative Survival	One-Year (%)	Five-Year (%)	Ten-Year 2007*
England <sup>18</sup>	Male	17.4	3.6	
	Female	19.1	3.8	
Wales <sup>21</sup>	Male	17.4	3.5	
	Female	15.9	3.7	
Scotland <sup>16</sup>	Male	15.3	3.6	
	Female	16.1	2.9	
Northern Ireland <sup>12</sup>	Male	14.2	2.8	
	Female	10.3	2.9	
UK Average	Male	16.1	3.4	2.9
	Female	15.4	3.3	2.7
	<b>Persons</b>	<b>15.7</b>	<b>3.3</b>	<b>2.8</b>
Rep of Ireland <sup>22</sup>	Persons	22.4	8.1	

Table 4 Relative one, five and ten year survival by country (per cent)

**England:** figures from those diagnosed between 2005-2009 & followed up to 2010

**Wales:** 1-yr figures from those diagnosed between 2005-2009; 5-yr figures from those diagnosed between 2000-2004

**Scotland:** figures from those diagnosed between 2004-2007

**N.Ireland:** 1-yr figures from those diagnosed between 2006-2010 and are estimates using the 'period' method. (see notes). 5-yr figures from those diagnosed between 2001-2005

**Rep of Ireland:** Figures from those diagnosed between 2007 and 2009, 5-year survival uses hybrid approach.

\* Ten-year survival predicted for patients diagnosed in 2007 (using the hybrid approach): England and Wales<sup>18</sup>

**2.2 Relative Survival comparison of major cancers for patients diagnosed in England 2005-2009 and followed up to 2010:**

Pancreatic cancer is the 5<sup>th</sup> leading cause of cancer death in the UK and has the worst survival rate of all the major cancers.

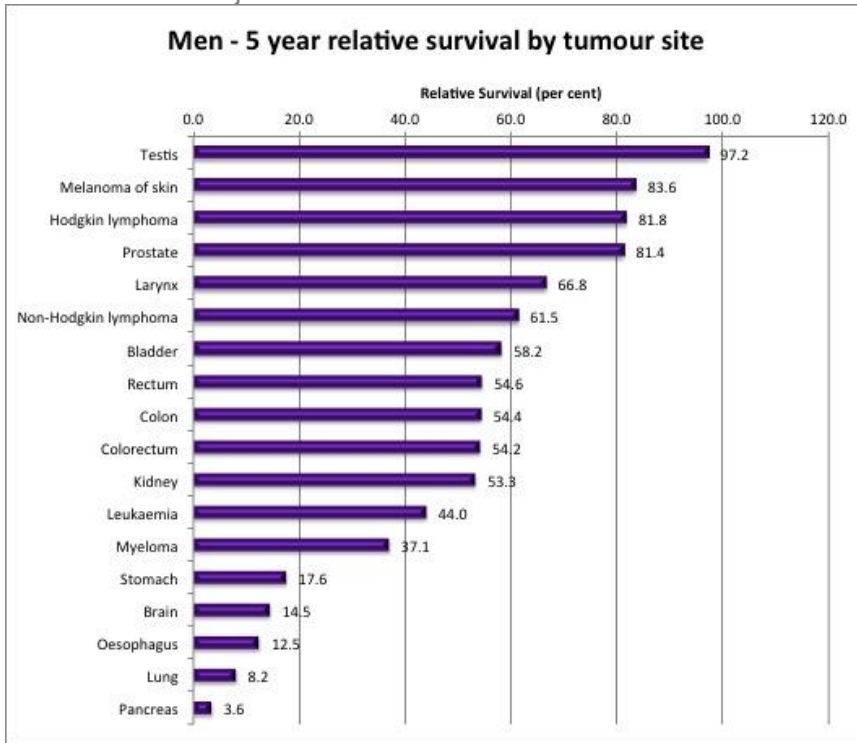


Figure 2 5-year relative survival by tumour site - MEN

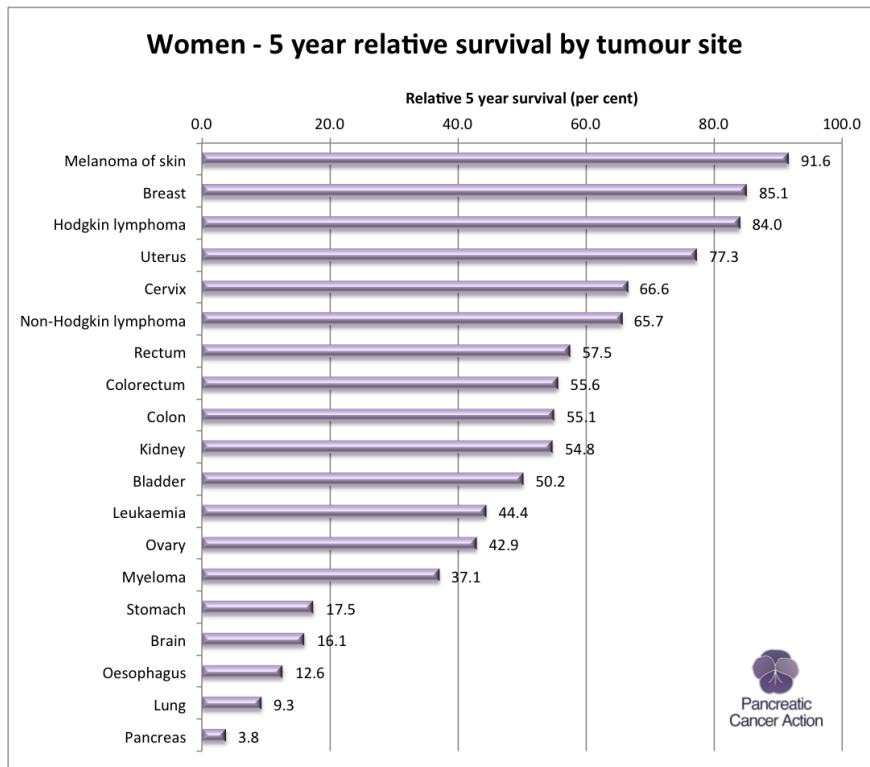


Figure 3 5-year survival by tumour site – WOMEN



### 2.3 One and five year survival by Cancer Network

Only four of England’s Cancer Networks matches the European average for one- year pancreatic cancer survival according to an NCIN report in 2008<sup>23</sup>. There is also a vast difference in one-year survival rates between the Cancer Networks. We do not yet understand exactly why these inequalities exist and a link between deprivation and pancreatic cancer survival may be one of the reasons<sup>24</sup>

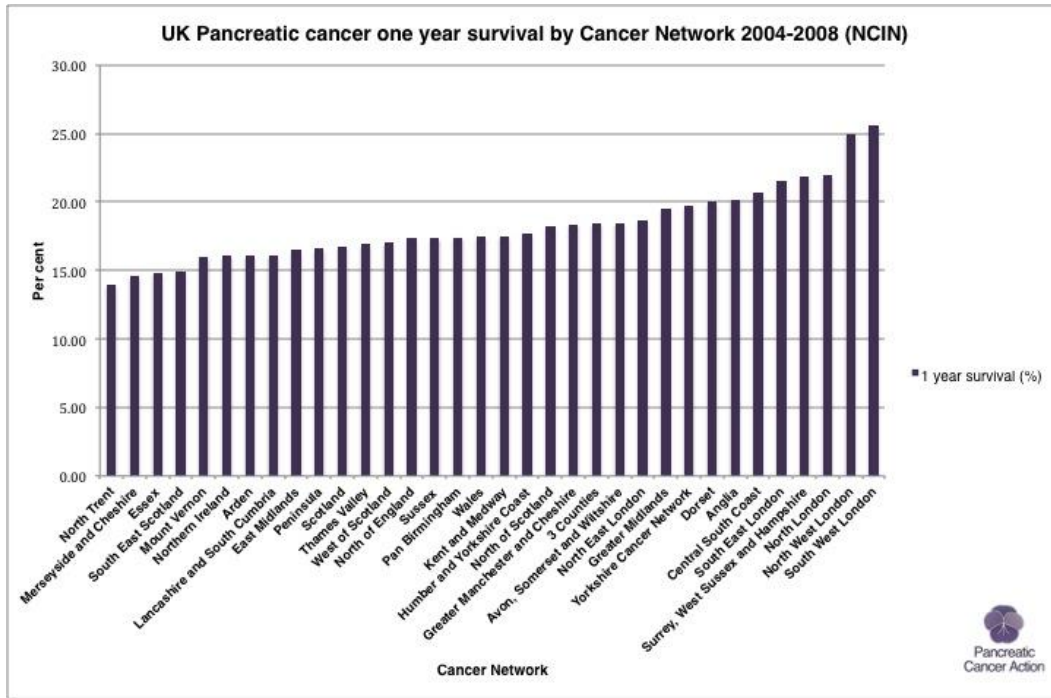


Figure 4 One year survival by cancer network

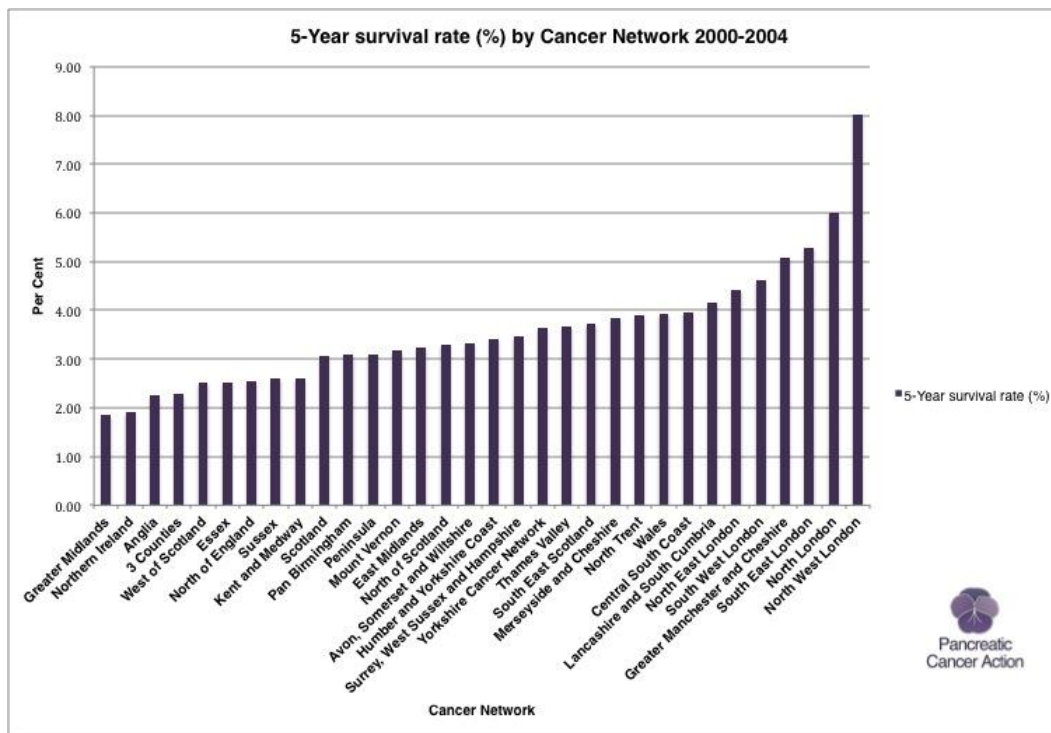


Figure 5 Five year survival by cancer network

2.4 Trends in Survival

2.4.1 One-year and five-year survival trends England<sup>18</sup>

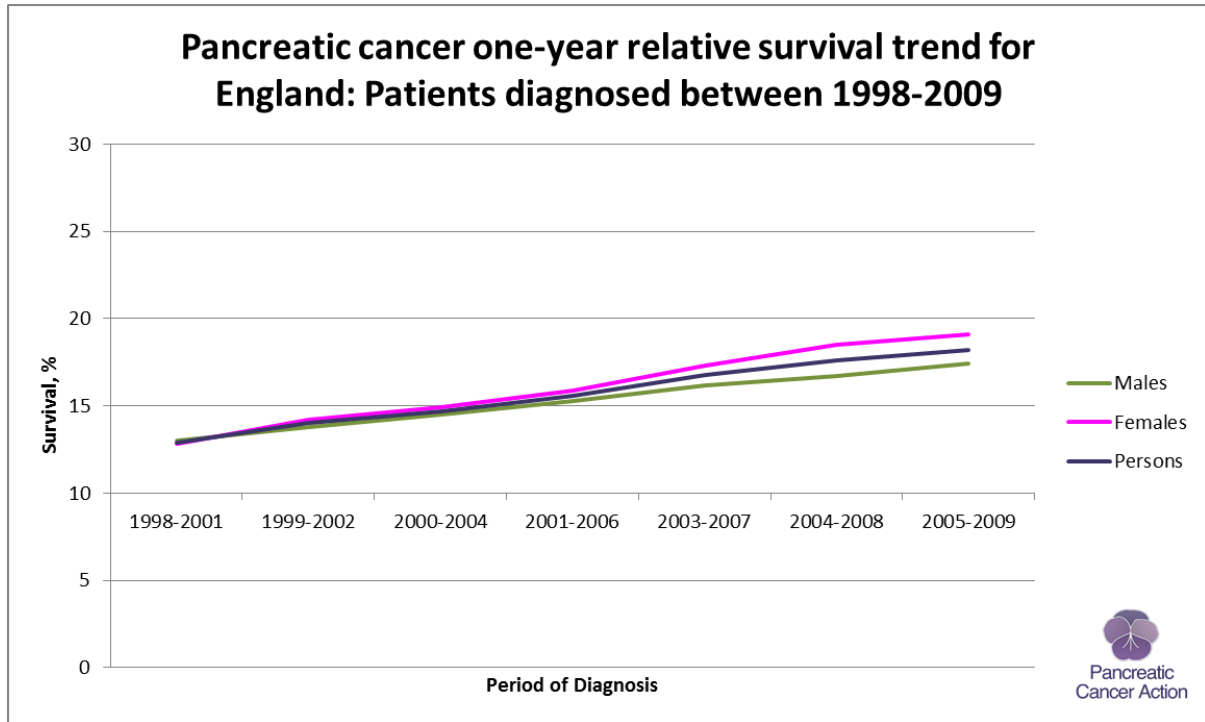


Figure 6 One year relative survival trend England 1998-2009

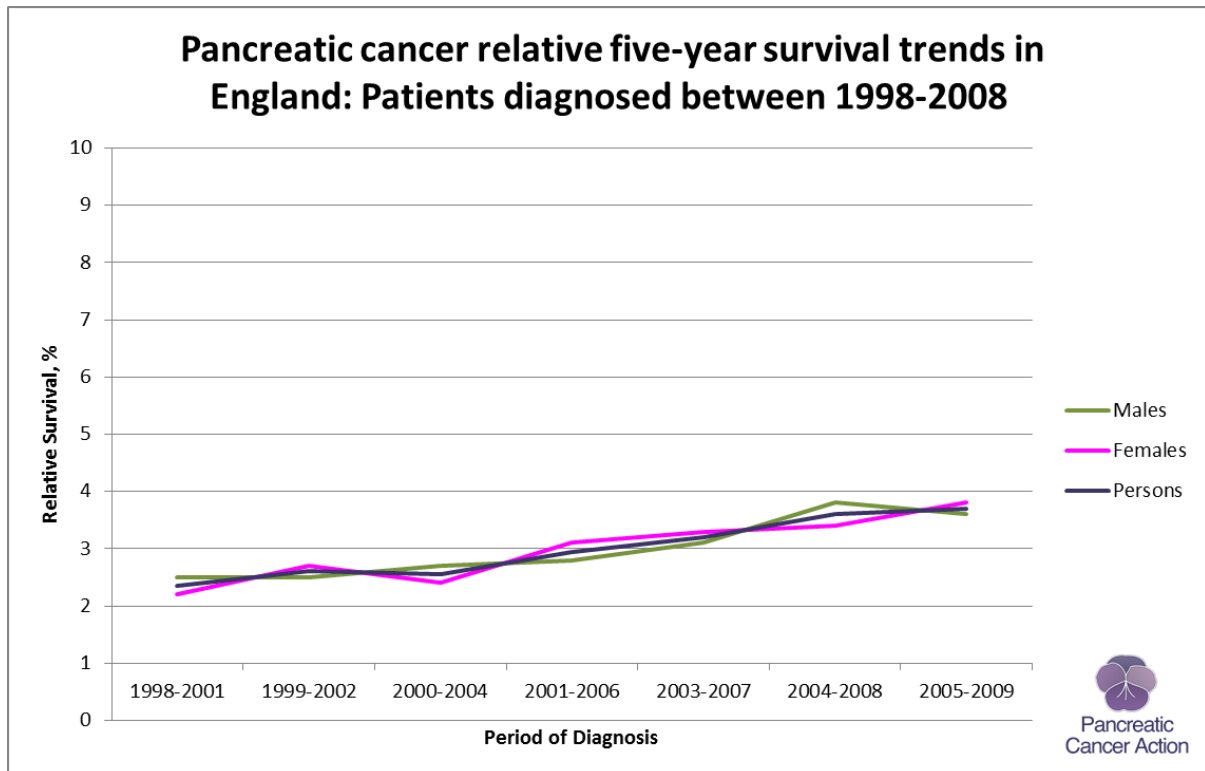


Figure 7 Five year relative survival trend England 1998-2009

4.5.3 One and five year survival by age group<sup>18</sup>

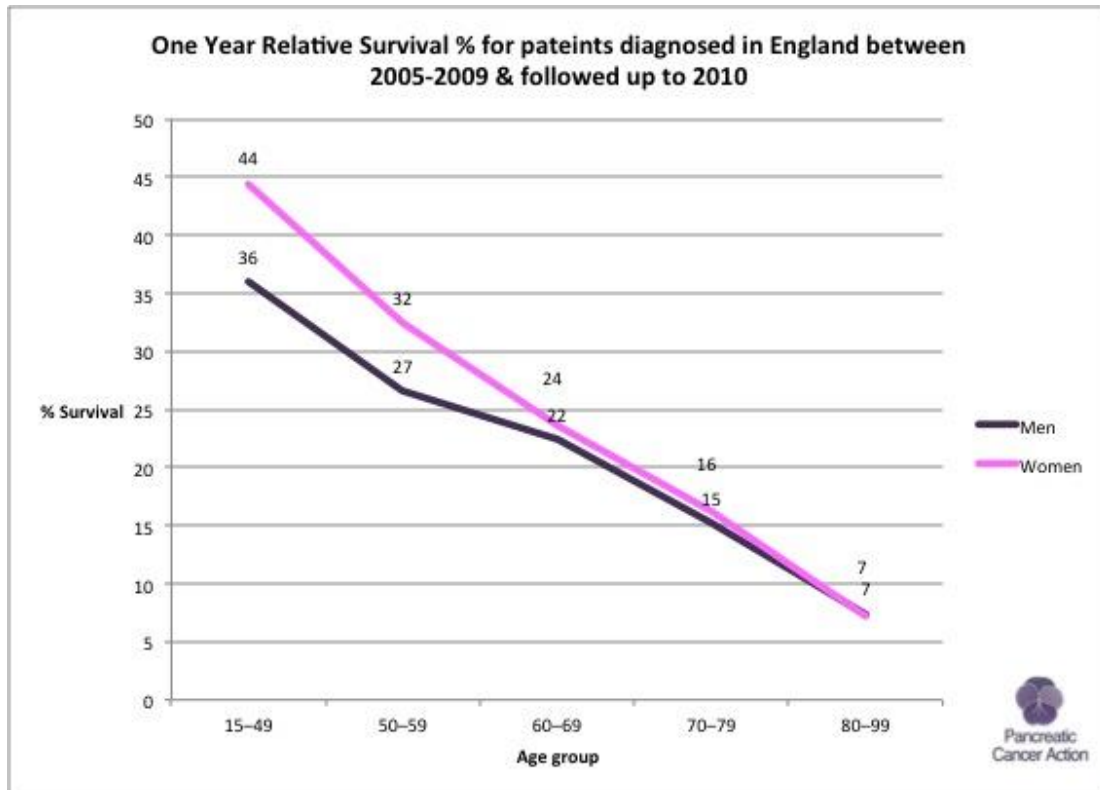


Figure 8 One Year Relative Survival by age group

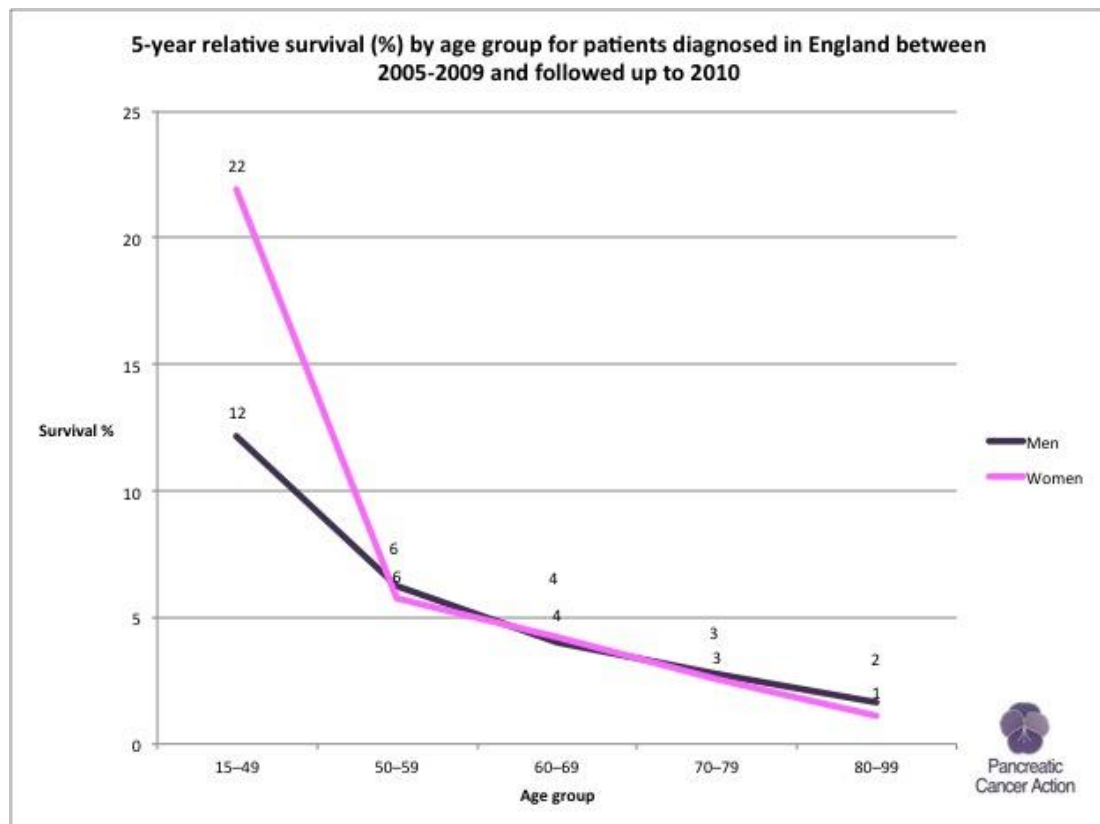


Figure 9 Five year relative survival by age group<sup>18</sup>

**4.5.4 Survival comparisons with other countries:**

The following table shows comparisons between the UK and other major Western nations, Australia, Canada and the USA for one-and five-year relative survival. The UK lags behind these nations for both one-and five-year survival.

Country	One-year relative survival	Five year relative survival
Australia <sup>25</sup>	22%	5.2%
Canada <sup>26</sup>	21%	6.0%
United States <sup>27</sup>	26%	6.0%
United Kingdom	16%	3.3%

Table 5 Survival comparisons Australia, Canada, USA & UK

The one-year UK pancreatic cancer relative survival rate lags behind the rest of Europe; the UK average is 17 per cent, the European average is 21 per cent and the best in Europe (Belgium) is 28 per cent.

The Cancer Reform Strategy in 2007<sup>28</sup> highlighted the requirement for one-year survival data as a proxy for early/late stage at diagnosis. This was due to the lack of availability of population-based staging data for most sites of cancer.

One of the conclusions of the EUROCORE study in 2009<sup>29</sup> was that poor one-year survival could be an indication of later stage disease at diagnosis and the potential to improve these figures could lie in earlier diagnosis of the disease.

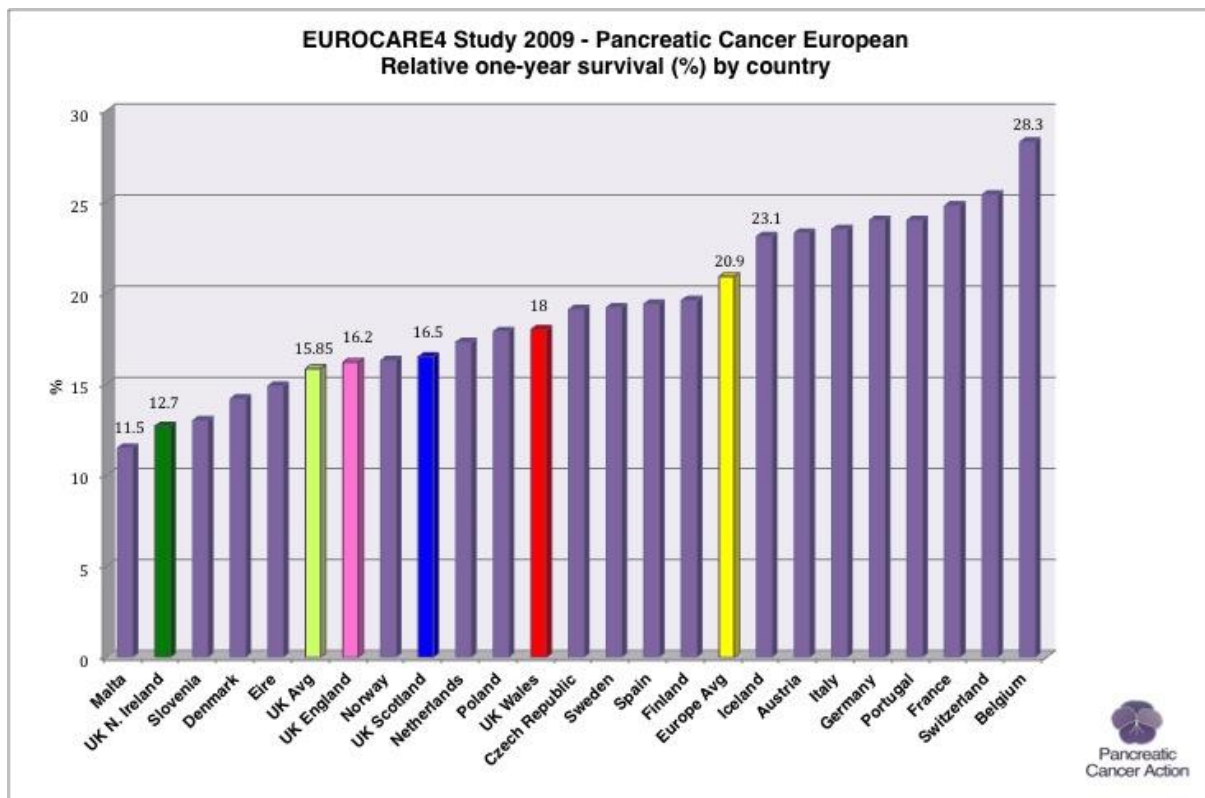


Figure 10 One-year survival comparisons in Europe (Eurocare4 2009)

## 5.0 Pancreatic Cancer Prevalence

Cancer prevalence is a measure of the number or proportion of people who are alive and have previously received a diagnosis of the selected cancer within a specified timeframe. For example, the ten-year prevalence in this report used NCIN data<sup>30</sup> that counted anyone who had ever had a previous diagnosis of pancreatic cancer within the previous ten years. For example, anyone with a diagnosis of pancreatic cancer since 31st December 1997, and who was still alive on 31st December 2006. Some of these patients would have been cured and others will be living with the disease. Therefore prevalence reflects both the incidence of cancer and its associated survival pattern.

Pancreatic Cancer Prevalence to 2006	One Year (patients)	1-year EASR	Five Year (patients)	5-year EASR	Ten Year (patients)	10-Year EASR
<b>Males</b>	1186	3.4	1896	5.5	2205	6.4
<b>Females</b>	1221	2.9	1886	4.6	2144	5.2
<b>Persons</b>	<b>2407</b>	<b>3.1</b>	<b>3784</b>	<b>5.0</b>	<b>4349</b>	<b>5.8</b>

Table 6 Pancreatic cancer 1, 5 and 10 year prevalence (figs to 2006)

Prevalence figures are influenced by both incidence and survival. The types of cancer with a relatively high incidence rate and a good prognosis will have a higher prevalence rate than those that don't. In the UK the most prevalent cancer in males is prostate cancer (127,630 patients' five-year) and in females it is breast cancer (177,063 patients five-year) Pancreatic Cancer is one of the least prevalent cancers in the UK. This fact could explain its relative media obscurity since most patients are not survivors and therefore cannot make their voices heard.

## 6.0 NOTES:

**Direct standardisation** removes effects due to differences in population structure and allows two areas with different demographic characteristics to be compared directly with each other. The age-standardised rate for an area is the number of events (per 100,000) that would occur in that area if the standard population lived there, and the age-specific rates of the area applied.

### The European Age-Standardised mortality /incidence/prevalence rate (EASR)

is a weighted sum of age-specific mortality/incidence/prevalence rates and is used to indicate the overall mortality/incidence/prevalence rate for a given country. In effect, it is the mortality/incidence/prevalence rate that would have been found if the population of that country had the same age-composition (proportion of total population in each five year age class) as a hypothetical European population. The rates are calculated by applying the age-specific rates for that country to a theoretical European standard population and expressed per 100,000 persons per year. These are the figures, which should be used when making comparisons between the different Cancer Networks or countries, if one wishes to account for differences in age distribution.

### Relative Survival

Relative survival is a measure of survival in a theoretical situation that cancer patients could only die from their cancer. It is the ratio of the observed survival of a given group of patients to the expected survival for a group of persons in the general population with the same characteristics (usually sex and age). It adjusts for the background mortality, which can change between different groups of patients and different years. The relative survival,

adjusted for background mortality, can also depend on a patient's age, so it is often presented as age-adjusted. The age groups and their weights in the age-adjusted analysis vary by site because of the different age-distribution profiles among cancer sites. Some patients are excluded from survival analysis due to internationally agreed rules; therefore numbers included in analysis may differ from numbers diagnosed in various periods.

### Period Approach

The 'Period approach' is an estimate of the relative survival of patients who are alive at any time in a defined period (here 2006-2010) and followed up to the end of the period. Depending on when these patients were diagnosed (which could be any time before end of follow-up), they can provide survival information at 1, 2, 3, 4, 5 years post-diagnosis. The period survival estimates are considered more 'up to date' because they are constructed using survival rates that are operative in the 'period'; they are analogous to the calculation of life-expectancy statistics which uses current age-specific death rates to estimate presently unknown death rates in the future. Period survival estimates are adjusted for background mortality and can be age-adjusted

## 7.0 References

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<sup>1</sup> Total UK 2010 mortality divided by 365 days = 21.7 per day

<sup>2</sup> CRUK The 20 Most Common Causes of Cancer Death: 2010  
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<sup>3</sup> NCRI CRD Data Package 2011 – available to download online  
<http://www.ncri.org.uk/default.asp?s=1&p=3&ss=6> (accessed 17/08/2012)

<sup>4</sup> White et al., (1999) in Sultana et al., (2007) Systematic review, including meta-analysis, on the management of locally advanced pancreatic cancer using radiation/combined modal therapy. British Journal of Cancer, 96, 1183-1190

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<sup>6</sup> NCIN (2012) Routes to Diagnosis 2006-2008, England Information Supplement

<sup>7</sup> Spalding and Williamson (2007) Pancreatic Cancer, Medicine Vol 35, pp 325-329

<sup>8</sup> CRUK the 20 most common cancers in the UK 2009 data are available to download online  
<http://info.cancerresearchuk.org/cancerstats/incidence/commoncancers/uk-cancer-incidence-statistics-for-common-cancers> (accessed Sept 2012)

<sup>9</sup> ONS Cancer Statistics Registrations England (Series MB1 – No 41 2010) Released 13 June 2012-07-17

<sup>10</sup> Welsh Cancer Intelligence and Surveillance Unit Cancer Incidence in Wales 2006-2010 Annual publication No SA 12/01

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