## Contents

Foreword .................................................................................................................. 3

Executive Summary ................................................................................................. 3

Recommendations ....................................................................................................... 6

1 Introduction ............................................................................................................... 7

   1.1 Aetiology of cancer ......................................................................................... 7

2 Demographics ........................................................................................................... 9

   2.1.1 Population .................................................................................................. 9

   2.1.2 Population projections ............................................................................... 10

   2.1.3 Ethnicity and migration ............................................................................. 10

   2.1.4 Deprivation ............................................................................................... 11

1 Cancer Incidence ..................................................................................................... 13

   Summary ................................................................................................................ 13

3.1 National Incidence ............................................................................................... 13

3.2 Local Incidence .................................................................................................... 13

4 Prevalence ................................................................................................................ 33

   Summary ................................................................................................................ 33

5 Mortality from Cancer .............................................................................................. 35

   Summary ................................................................................................................ 35

6 Cancer Related Hospital Admissions and Procedures ............................................. 56

7 Screening and Early Detection ................................................................................. 61

   Summary ................................................................................................................ 61

7.1 Breast screening ................................................................................................. 62

7.2 Cervical screening ............................................................................................. 65

7.3 Bowel screening ................................................................................................. 67

7.3 Awareness and early detection ........................................................................... 71

8.0 Treatment .............................................................................................................. 75

   Summary ................................................................................................................ 75

8.1 31 day performance .......................................................................................... 78

8.2 62 day performance .......................................................................................... 78

9.0 Survival .................................................................................................................. 80

   Summary ................................................................................................................ 80

9.1 1 year relative survival ...................................................................................... 81

9.2 5 year relative survival ....................................................................................... 82
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.3</td>
<td>Cancer Stage at Diagnosis</td>
<td>84</td>
</tr>
<tr>
<td>10.0</td>
<td>Financial costs of Cancer</td>
<td>85</td>
</tr>
<tr>
<td></td>
<td>Summary</td>
<td>85</td>
</tr>
<tr>
<td>10.1</td>
<td>Programme Budgeting</td>
<td>85</td>
</tr>
<tr>
<td>11.0</td>
<td>Cancer Risk factors</td>
<td>90</td>
</tr>
<tr>
<td>11.1</td>
<td>Tobacco and second hand smoke</td>
<td>90</td>
</tr>
<tr>
<td>11.2</td>
<td>Obesity and overweight</td>
<td>91</td>
</tr>
<tr>
<td>11.3</td>
<td>Nutrition other than obesity</td>
<td>93</td>
</tr>
<tr>
<td>11.4</td>
<td>Physical activity</td>
<td>93</td>
</tr>
<tr>
<td>11.5</td>
<td>Alcohol</td>
<td>94</td>
</tr>
<tr>
<td>11.6</td>
<td>Infectious diseases</td>
<td>94</td>
</tr>
<tr>
<td>11.6.2</td>
<td>Human papillomavirus (HPV)</td>
<td>94</td>
</tr>
<tr>
<td>12.0</td>
<td>Patient experience</td>
<td>96</td>
</tr>
<tr>
<td>13.0</td>
<td>Best Practice and nice guidance</td>
<td>97</td>
</tr>
<tr>
<td>14.</td>
<td>What we are doing locally</td>
<td>98</td>
</tr>
<tr>
<td></td>
<td>Recommendations</td>
<td>99</td>
</tr>
<tr>
<td></td>
<td>Glossary of terms</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>References</td>
<td>101</td>
</tr>
</tbody>
</table>
**FOREWORD**

The Cancer Health Needs Assessment has been produced by Luton Public Health Intelligence Team to inform and support health and social care professionals to make the right decisions around prevention, commissioning and providing quality services for the residents of Luton.

The aim of the Cancer Health Needs Assessment is to provide information and intelligence about death and disease, treatment, survival, access to services, costs, inequalities and patient experience.

Information will be central to the drive for better outcomes. Better information underpins stronger commissioning and patient choice, helping to deliver quality of services and outcomes and to make efficient use of resources.

**EXECUTIVE SUMMARY**

**Incidence**

- Between 2011 and 2013, there were 2,507 new cases of cancer diagnosed in Luton. skin, breast and prostate cancers are the most common cancers in Luton, followed by colorectal and lung Cancer.

- Incidence of many cancers is not significantly different to England however there are some exceptions, for example malignant melanoma in females all ages and females and persons 75 years and under which are all significantly lower than England.

- Incidences of skin cancer in males, females and persons all ages and ages 75 years and under are all significantly lower than England.

- Incidence of stomach cancer in persons 75 years and under is significantly higher in Luton than in England.

**Prevalence**

- In 2014/15 recorded prevalence of all cancers in Luton (1.5%) was significantly lower than England (2.3%).

- Prevalence of cancer within Luton GP practices ranges from 0.3% to 2.9% and a total of 10 practices have prevalence significantly lower than Luton (1.5%) and 10 practices have prevalence significantly higher than Luton.

**Mortality**

- Cancer is the second biggest cause of mortality within Luton.

- Cancer is responsible for 28% of all deaths each year in Luton - this equates to approximately 392 deaths per year (2012-14) in persons of all ages.
• Of these 392 deaths due to cancer 194 are premature deaths per year (i.e. in persons aged less than 75 years) and is the largest contributor to premature mortality within the borough (36%).

• Mortality due to cancer in Luton is mostly similar to England however leukaemia mortality in males all ages is significantly lower than England.

**Screening**

• In 2012/13 to 2014/15, Luton females aged 50-70 years screened for breast cancer in the last 36 months (69%) was below the national standard of 70% and also significantly below the national average 72.2%.

• In women aged 50-70 years screened for breast cancer in the last 36 months in GP practices 11 practices had uptake significantly lower than the CCG average and 9 practices had uptake significantly higher than the CCG average.

• Breast screening within 6 months of invitation in Luton was also significantly lower than England.

• 11 practices had uptake with 6 months significantly lower than the CCG average and 2 practices had uptake significantly higher than the CCG average.

• Women aged 25-64 years screened for cervical cancer in the target period in Luton (68.7%) was below the national standard of 80% and also significantly below the National average 73.5%.

• Nine practices had uptake of cervical screening within the target period significantly lower than the CCG average and 12 practices had uptake significantly higher than the CCG average.

• Bowel screening uptake in the last 30 months within Luton CCG for 2014/15 shows the uptake rate for Luton was 50.1%, significantly below the England rate of 57.9%.

• Ten practices had Bowel screening uptake in the last 30 months significantly lower and 9 practices significantly higher than Luton overall.

• Bowel screening uptake within six months of invitation within Luton 2014/15 shows the uptake rate was 48.4%, significantly below the England rate of 57.6%.

• Bowel screening uptake within six months of invitation eight practices had uptake significantly lower and seven practices significantly higher than Luton overall
Awareness and early detection

- Two week wait referrals (TWW) for all cancers are significantly lower in Luton than England.
- TWW for breast and lower GI cancers are significantly lower than England.
- Luton meets the standards in 31 day and 62 day performance and is not significantly different than England.

Survival

- Breast cancer one year survival rates in Luton are not significantly different than England. Trends in one year survival for breast cancer are increasing steadily in Luton and England.
- Trends in one year survival for lower gastro-intestinal (GI) cancer are increasing steadily in both Luton and nationally however, current rates in Luton are significantly lower than England.
- Lung cancer one year survival rates in Luton are not significantly different than England. Trends in one year survival for lung cancer are increasing steadily in Luton and England.
- Breast cancer five year survival rates in Luton are not significantly different than England. Trends in five year survival for breast cancer are increasing steadily in Luton and England.
- Trends in five year survival for lower GI cancer are increasing steadily in both Luton and nationally however, current rates in Luton are not significantly different than England.
- Five year lung cancer survival in Luton is significantly lower than England and while trends in 5 year survival in England are increasing they are decreasing in Luton.

Financial costs

- Luton spent a total of £ 9.2million in 2013/14 on cancer, this equates to approximately £4.4 million per 100,000 population.
- Luton has a higher total spend on cancer with better outcomes for mortality due to cancer in males 75 years and under compared to other CCGs nationally. However, for females the spend remains higher but the outcomes are worse.
- Luton has a higher total spend on cancer with better outcomes for mortality due to cancer considered preventable in males 75 years and under compared to other PCT’s nationally. However, for females the spend remains higher but the outcomes are worse.
RECOMMENDATIONS

Prevention and screening
1. A healthy lifestyle can have a large impact in cancer prevention as the cancers with the highest incidence all have lifestyle factors as important risk factors e.g. colorectal, breast, prostate and lung. Primary and community care should provide brief advice at every opportunity and refer to lifestyle services where appropriate.
2. Use the findings from the Cancer Research Accelerate, Coordinate, Evaluate (ACE) programme to increase uptake of cancer screening.
3. Review patient level data to determine any patterns among patients who are not being screened for cancer and follow up poor uptake groups to determine barriers and enablers to increase uptake of screening.
4. Implement GP good practice guidance in all practices on screening, with specific focus on bowel screening.

Early Detection and diagnosis
5. Develop a campaign on signs and symptoms of cancer with specific focus on females and skin and lung cancer.
6. Encourage all practices to participate in cancer diagnosis audit to help inform the development of programmes on signs and symptoms.

Treatment: improving experiences of care and support
7. Focus support of experience of cancer treatment on primary care (linked to good practice guidance) to ensure patients are feeling supported through their diagnosis.
8. Continue to monitor performance of provider waiting times with a greater focus on urology and lung pathways.

Aftercare
9. Embed within cancer pathway post treatment lifestyle advice and support for all patients. This should be linked to the Enhanced Recovery Programme.

Integrated commissioning
10. Ensure all cancer specifications are outcomes focused and linked to other relevant specifications.
1 Introduction

Cancer is a condition where cells in a specific part of the body grow and reproduce uncontrollably. The cancerous cells can invade and destroy surrounding healthy tissue, including organs. Cancer is a common condition. According to Cancer Research UK in 2013, 352,197 new cases of cancer were diagnosed in the UK (CRUK 2015). More than one in three people will develop some form of cancer during their lifetime. The earlier a cancer is found, the more likely it is that treatment will be successful. Awareness of cancer prevention is a national priority, since changes in diet and lifestyle can have a huge impact in the development of cancer.

Cancer continues to be one of the biggest causes of mortality in the UK, in 2014 there were 134,352 deaths from cancer in England. Cancer is also the largest contributor to premature mortality (deaths in people under 75 years old) in the UK with around 61,964 deaths per year in England. This equates to 41% of all deaths in people aged less than 75 years old. Currently, an estimated 2.5 million people are living with and beyond a cancer diagnosis (Macmillan 2015).

1.1 Aetiology of cancer

There are more than 200 different types of cancer. In the UK, the most common types of cancer are (NHS UK 2014):

![Cancer Types Pie Chart]

In Luton the same five types of cancer are responsible for around 70% of all cancer cases; this is similar to the national picture. The common cancers are:
Cancers can occur at any age, but the risk of developing cancer increases with age. Cancer is not common in children or young people. Some cancers are very common and others are very rare. Nearly a third (31%) of all cancers diagnosed in children are leukaemia (CRUK 2015). Teenagers and young people (aged 15-24) are more likely to be diagnosed with Hodgkin lymphoma, testicular cancer, melanoma and leukaemia. The most common types of cancer diagnosed in adults aged 25-49 are breast cancer, melanoma, bowel and cervical cancer (CRUK 2015).

The aetiology of cancer is not fully understood but it is believed that there are risk factors that can increase or influence a person’s risk of developing cancer. The risk factors include increasing age, infection, radiation, occupation, lifestyle choices such as smoking, eating unbalanced diet, alcohol intake and lack of regular exercise.

Research suggests that more than 40% of all cancers in the UK are linked to such risk factors. It is estimated that more than four in 10 cancer cases could be prevented by lifestyle changes, such as:
- not smoking
- keeping a healthy body weight
- cutting back on alcohol
- eating a healthy, balanced diet
- keeping active
- avoiding certain infections (like HPV)
- staying safe in the sun
- occupation (exposure to certain chemicals in the workplace)

Cigarette smoking is the single most important cause of preventable death in the UK. Smoking causes nearly a fifth of all cancers in the UK (including over 80% of lung cancers). Each year in the UK, around 17,000 cases of cancer are linked to being overweight or obese. Around 12,500 cancers in the UK each year are linked to alcohol (CRUK 2011).

There is also a genetic predisposition to cancer; it is believed that only around 5%-10% of cancers are thought to be caused by faulty inherited genes (American Cancer Society 2014).
2. Demographics

The health of the population of Luton tends to be slightly poorer than the England average. The poorer health outcomes are linked primarily to the levels of socioeconomic deprivation experienced by a significant segment of the population. This section will describe the numbers and projected growth of the population; demographics (eg age, gender, and ethnicity); population movement in and out of the borough; deprivation and poverty.

2.1.1 Population

The latest (2014) Office for National Statistics (ONS) Mid-Year Population Estimate for Luton was 211,000. In recent years, there has been convergence between the ONS figures and those of the Council due, in the main, to improved accuracy of ONS data as a result of increased enumeration in the 2011 Census and the subsequent rebasing of population figures.

Figure 2.1 shows the most densely populated areas of Luton are in the centre of the town. With an area of 4,336 hectares, the official (ONS) population figure translates into a population density of 48 people per hectare. This figure is greater than many London Boroughs.

Figure 2.1: Luton population density

Source: Census 2011, Office for National Statistics and Ordnance Survey
2.1.2 Population projections

Luton’s population is projected to grow significantly between 2011 and 2031, with the latest forecasts projecting growth of 25% in the next 20 years (LBC 2015). Key drivers for this are high levels of natural growth (more births than deaths) and international in-migration. Luton also has high population churn and a study found that 70% of the population in Luton in 2010 was either not born or not living in Luton at the time of the 2001 Census (Mayhew and Waples 2011).

Table 2.1 shows a summary of population projections for Luton. Key changes over the next 20 years are:

- Population of Luton is projected to increase by 50,400, a rise of 25%.
- School age population (5-15 year olds) is projected to increase by 7,850, a rise of 26%.
- Those aged 65-89 is projected to increase by 10,750 people, a rise of 47%.
- Very elderly population (90+) is projected to increase by 1,450 people, a rise of 153%.

An increase in the older population is likely to lead to an increase of cancer within the borough as age is a main risk factor of cancer, this will put more pressure on resources within the borough.

Table 2.1: Luton population projections by age from 2011 to 2031

<table>
<thead>
<tr>
<th>YEAR</th>
<th>0-4</th>
<th>5 to 15</th>
<th>16-17</th>
<th>18-64</th>
<th>65-89</th>
<th>90+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>16,700</td>
<td>30,150</td>
<td>5,400</td>
<td>127,400</td>
<td>23,050</td>
<td>950</td>
<td>203,650</td>
</tr>
<tr>
<td>2021</td>
<td>18,050</td>
<td>36,050</td>
<td>5,650</td>
<td>142,600</td>
<td>27,150</td>
<td>1,450</td>
<td>231,000</td>
</tr>
<tr>
<td>2031</td>
<td>18,650</td>
<td>38,000</td>
<td>6,600</td>
<td>154,550</td>
<td>33,800</td>
<td>2,400</td>
<td>254,050</td>
</tr>
<tr>
<td>2011-20 Change</td>
<td>1,350</td>
<td>5,900</td>
<td>250</td>
<td>15,200</td>
<td>4,100</td>
<td>500</td>
<td>27,350</td>
</tr>
<tr>
<td>2011-31 % Change</td>
<td>8.1%</td>
<td>19.6%</td>
<td>4.6%</td>
<td>11.9%</td>
<td>17.8%</td>
<td>52.6%</td>
<td>13.4%</td>
</tr>
<tr>
<td>2011-31 Change</td>
<td>1,950</td>
<td>7,850</td>
<td>1,200</td>
<td>27,150</td>
<td>10,750</td>
<td>1,450</td>
<td>50,400</td>
</tr>
<tr>
<td>2011-31 % Change</td>
<td>11.7%</td>
<td>25.0%</td>
<td>22.2%</td>
<td>46.6%</td>
<td>152.6%</td>
<td>24.7%</td>
<td></td>
</tr>
</tbody>
</table>

Table 2.1: Luton population projections by age from 2011 to 2031

<table>
<thead>
<tr>
<th>YEAR</th>
<th>0-4</th>
<th>5 to 15</th>
<th>16-17</th>
<th>18-64</th>
<th>65-89</th>
<th>90+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>8.2%</td>
<td>14.8%</td>
<td>2.7%</td>
<td>62.5%</td>
<td>11.3%</td>
<td>0.5%</td>
<td>100%</td>
</tr>
<tr>
<td>2021</td>
<td>7.8%</td>
<td>15.6%</td>
<td>2.5%</td>
<td>61.7%</td>
<td>11.8%</td>
<td>0.6%</td>
<td>100%</td>
</tr>
<tr>
<td>2031</td>
<td>7.3%</td>
<td>15.0%</td>
<td>2.6%</td>
<td>60.8%</td>
<td>13.3%</td>
<td>0.9%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Luton Borough Council using POPGROUP software and a ten year migration average. Components may not sum to totals due to rounding.

2.1.3 Ethnicity and migration

Figure 2.1.3 shows the board ethnic groups in the Luton population, with approximately 45% of the population being of Black and Minority Ethnic Origin (BME) or non-white. The ethnic composition of Luton fits a model known as ‘super-diversity’ in which there is an increasing number of BME communities within the population each with its own needs and cultures. Luton has a long history of migration into the area both from elsewhere in the UK and overseas. There have been long-standing African-Caribbean, Bangladeshi, Indian, Irish and Pakistani communities in Luton as a result of international migration. More recently, the migration patterns have become more complex. In the
mid-1990s, the opening of the University of Luton (now the University of Bedfordshire) caused a rapid growth in the student population of the town. This growth has been sustained with an increase in numbers of overseas students.

In the mid-2000s, the expansion of the European Union led to a significant increase in migration from eastern European countries, particularly Poland and Lithuania. 7% of Luton’s population is classed as ‘other white’ which is the group for non-British or Irish Europeans (but this group also includes people from other parts of the world including Americas and Australasia) (England has 4.6% of the population in this category). There has also been in-migration from African countries such as the Congo, Ghana, Nigeria, Somalia and Zimbabwe. There is also a Turkish population in Luton. More recently, National Insurance Registration data has demonstrated further increases in international migration with Romanians moving to the town after the change in law allowing them the right to work in the UK at the beginning of 2014. Analyses of translation service data also highlighted the levels of diversity in the town by identifying over 120 languages or dialects being spoken by residents. This provides corroborating evidence of Luton being super-diverse.

5% of the total population of Luton are Black African or Black African heritage (England 2.1%) and 5.9% Black Caribbean or Black Caribbean heritage (England 1.9%). 14.4% of the population are Pakistani (England 2.1%), 6.7% Bangladeshi (England 0.8%) and 5.2% Indian (England 2.6%).

**Figure 2.1.3: Ethnic composition of Luton**

<table>
<thead>
<tr>
<th>Broad Ethnic Groups in Luton</th>
<th>Broad Ethnic Groups in England</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>Any other ethnic group</td>
</tr>
<tr>
<td>54.7%</td>
<td>12.1%</td>
</tr>
</tbody>
</table>

Source: 2011 Census, ONS

2.1.4 Deprivation

There is no single generally agreed definition of deprivation. Deprivation is a concept that overlaps, but is not synonymous with, poverty. Absolute poverty can be defined as the absence of the minimum resources for physical survival, whereas relative poverty relates this to the standards of living of a particular society at a specific time.

The Index of Multiple Deprivation 2015 produced by Communities and Local Government (CLG) combines a number of indicators, chosen to cover a range of economic, social and housing issues, into a single deprivation score for each small area in England. This allows each area to be ranked relative to each other according to their level of deprivation.
Luton is ranked as the 59th (out of 326) most deprived local authority. In 2010 Luton was ranked as the 69th most deprived local authority in 2007 as the 87th (out of 354 authorities) and in 2004 the 101st most deprived local authority. This indicates that Luton is becoming relatively more deprived in comparison to the other local authorities of England and the trend of has been happening since 2004. (Figure 2.1.3). Luton has nine output areas in the top ten per cent most deprived areas in the country. Three of these are in Northwell, two in Farley and South wards and one in Biscot and Dallow wards.

Figure 2.1.4: Deprivation in Luton 2015.
1 Cancer Incidence

Summary

- Between 2011 and 2013, there were 2,507 new cases of cancer diagnosed in Luton. Skin, Breast and prostate cancers are the most common cancers in Luton, followed by colorectal and lung Cancer.

- Incidence of most cancers is not significantly different to England with the exceptions of malignant melanoma in females all ages and females and persons under 75 years which are all significantly lower than England.

- Incidence of skin cancer in males, females and persons all ages and ages under 75 years are all significantly lower than England.

- Incidence of stomach cancer in persons aged 75 and under is significantly higher in Luton than in England.

3.1 National Incidence

National data indicates for the majority of common cancer sites, males have higher incidence rates than females when difference in the age structure of the populations is taken into account (age standardised). With certain causes of cancer being higher in males, such as smoking and exposure to asbestos, it is to be expected that lung, bladder and other smoking related cancers are also higher in males. However, higher rates for males are also seen in many other cancer sites. For all cancers combined (excl. Non melanoma skin cancer NMSC), age standardised incidence rates are 14% higher for males compared to females. When breast, lung and sex-specific cancers are not included, age standardised incidence rates are 59% higher in males compared to females (DoH 2011).

The first national report on cancer incidence by ethnicity for multiple cancer sites was published in 2009 using HES data linked to cancer registrations. Whilst ethnicity recording was not complete for all registered cancers, results did show that some ethnic groups had higher incidence rates compared to white ethnic groups. For example, people from black ethnic groups have higher rates of myeloma and stomach cancer and males from black ethnic groups have higher rates of prostate cancer. Liver cancer is higher amongst people from asian ethnic groups compared to white ethnic groups, as is mouth cancer in females and cervical cancer in the over 65’s (CRUK 2009).

3.2 Local Incidence

All the data in this section relates to cancers diagnosed in the time period 2011-13 (unless otherwise stated). Where possible data for England is also provided to allow national
benchmarking and other demographically similar Local Authorities are included; trend data is also included if available.

**Figure 3.2.1** The contribution of specific cancers as a proportion of all new cancers in Luton, 2011-13

![Pie chart showing the contribution of specific cancers in Luton, 2011-13](image)

Source: HSCIC Indicators Portal

**Incidence all cancers**

**Figure 3.2.2** Incidence of all cancers in males, all ages, 2011-13

**Figure 3.2.3** Incidence of all cancers in females, all ages, 2011-13

![Graph showing incidence of all cancers in males and females, 2011-13](image)

Figure 3.2.2 above shows incidence of all cancers in males (all ages) for Luton and comparator local authorities, Luton has a directly age standardised rate (DSR) of 695.9 per 100,000 population (2011-13). This rate is not significantly different to England (680.7 per
100,000 population). The rate is significantly higher than both Redbridge and Slough. Figure 3.2.3 shows that incidence of all cancers in females (all ages) for Luton is 535.9 per 100,000 population which is not significantly different to the England rate of 539.7 per 100,000 population however; again the rate is significantly higher than both Redbridge and Slough.

Figure 3.2.4 shows that incidence of all cancers in persons (all ages) for Luton is 602.4 per 100,000 population which is not significantly different to the England rate of 598.2 per 100,000 population. Figure 3.2.5 shows the recent trends of cancer incidence in Luton and England. Recent trends in males, females and persons in both Luton and England show an increase in cancer incidence.

Figure 3.2.6 above shows incidence of all cancers in males (aged 75 years and under) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 428.3 per 100,000 population (2011-13). This rate is not significantly different to England (433.7 per 100,000 population). The rate is significantly higher than both Redbridge and Slough. Figure 3.2.7 shows that incidence of all cancers in females (aged 75 years and under) for
Luton is 397.4 per 100,000 population which is not significantly different to the England rate of 399.3 per 100,000 population. However, the rate is significantly higher than Redbridge.

Figure 3.2.8 shows incidence of all cancers in persons (aged 75 years and under) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 411 per 100,000 population (2011-13). This rate is not significantly different to England (433.7 per 100,000 population). The rate is significantly higher than both Redbridge and Slough.

Figure 3.2.9 above shows incidence of breast cancer in females (all ages) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 157.3 per 100,000 population (2011-13). This rate is not significantly different to England (166.4 per 100,000 population). Figure 3.2.10 shows that incidence of breast cancer in females (aged 75 years and under) for Luton is 132.6 per 100,000 population which is not significantly different to the England rate of 141.5 per 100,000 population.
Incidence of breast cancer

Figure 3.2.11 shows the recent trends of breast cancer incidence in Luton and England. Recent trends in females in both Luton and England show an increase in breast cancer incidence.

Incidence cervical cancer

Figure 3.2.12 above shows incidence of cervical cancer in females (all ages) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 11.8 per 100,000 population (2011-13). This rate is not significantly different to England (9.6 per 100,000 population). Figure 3.2.13 shows that trends in the incidence of cervical cancer in females (all ages for Luton have fluctuated recently. However this is likely due to the very small numbers involved annually as some year’s figures were suppressed (less than 5) and the average produced using two years of data.
Incidence colorectal cancer

Figure 3.2.14 Incidence of colorectal cancer in males, all ages, 2011-13

Figure 3.2.15 Incidence of colorectal cancer in females, all ages, 2011-13

Figure 3.2.14 above shows incidence of colorectal cancer in males (all ages) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 102.3 per 100,000 population (2011-13). This rate is not significantly different to England (95 per 100,000 population). The rate is significantly higher than Redbridge. Figure 3.2.15 shows that incidence of colorectal cancer in females (all ages) for Luton is 64 per 100,000 population which is not significantly different to the England rate of 62.8 per 100,000 population.

Figure 3.2.16 shows that incidence of colorectal cancer in persons (all ages) for Luton is 80.7 per 100,000 population which is not significantly different to the England rate of 77.2 per 100,000 population. However, it is significantly higher than Redbridge. Figure 3.2.17 shows the recent trends of colorectal cancer incidence in Luton and England. Recent trends in males, females and persons in both Luton and England show an increase in colorectal cancer incidence.
Figure 3.2.18 above shows incidence of all colorectal cancer in males (aged 75 years and under) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 60.4 per 100,000 population (2011-13). This rate is not significantly different to England (58.3 per 100,000 population) however; the rate is significantly higher than Redbridge.

Figure 3.2.19 shows that incidence of colorectal cancer in females (aged 75 years and under) for Luton is 38 per 100,000 population which is not significantly different to the England rate of 38.8 per 100,000 population.

Figure 3.2.20 shows incidence of colorectal cancer in persons (aged 75 years and under) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 48.9 per 100,000 population (2011-13). This rate is not significantly different to England (48.2 per 100,000 population). The rate is significantly higher than Redbridge.
Incidence lung cancer

Figure 3.2.21 Incidence of lung cancer in males, all ages, 2011-13

Figure above shows incidence of lung cancer in males (all ages) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 106.9 per 100,000 population (2011-13). This rate is not significantly different to England (94.7 per 100,000 population). The rate is significantly higher than Redbridge. Figure 3.2.22 shows that incidence of lung cancer in females (all ages) for Luton is 64 per 100,000 population which is not significantly different to the England rate of 64.4 per 100,000 population.

Figure 3.2.23 Incidence of lung cancer in persons, all ages, 2011-13

Figure 3.2.23 shows that incidence of lung cancer in persons (all ages) for Luton is 82.4 per 100,000 population which is not significantly different to the England rate of 77.4 per 100,000 population. However, it is significantly higher than Redbridge and significantly lower than Bradford. Figure 3.2.24 shows the recent trends of lung cancer incidence in Luton and England. Recent trends in males in both Luton and England are declining while trends are increasing in females. Trends in persons in Luton are increasing while in England
they are declining. This is reflective in the sharper increase among incidence of lung cancer among Luton women compared to national increases.

Figure 3.2.25 Incidence of lung cancer in males, aged 75 and under, 2011-13

Figure 3.2.26 Incidence of lung cancer in females, aged 75 and under, 2011-13

Figure 3.2.25 above shows incidence of lung cancer in males (aged 75 years and under) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 57.1 per 100,000 population (2011-13). This rate is not significantly different to England (54.0 per 100,000 population) however; the rate is significantly higher than Redbridge. Figure 3.2.26 shows that incidence of lung cancer in females (aged 75 years and under) for Luton is 46.8 per 100,000 population which is not significantly different to the England rate of 41.5 per 100,000 population. The rate was however higher than Redbridge.

Figure 3.2.27 shows incidence of lung cancer in persons (aged 75 years and under) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 51.7 per 100,000 population (2011-13). This rate is not significantly different to England (47.5 per 100,000 population). The rate is significantly higher than Redbridge.
Incidence malignant melanoma

**Figure 3.2.28 Incidence of malignant melanoma in males, all ages, 2011-13**

Figure 3.2.28 above shows incidence of malignant melanoma in males (all ages) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 18.6 per 100,000 population (2011-13). This rate is not significantly different to England (25.6 per 100,000 population).

**Figure 3.2.29 Incidence of malignant melanoma in females, all ages, 2011-13**

Figure 3.2.29 shows that incidence of malignant melanoma in females (all ages) for Luton is 14.6 per 100,000 population which is significantly lower than the England rate of 22.6 per 100,000 population.

**Figure 3.2.30 Incidence of malignant melanoma in persons, all ages, 2011-13**

Figure 3.2.30 shows that incidence of malignant melanoma in persons (all ages) for Luton is 16.5 per 100,000 population which is significantly lower than the England rate of 23.7 per 100,000 population.

**Figure 3.2.31 Incidence of malignant melanoma all ages, recent trends**

Figure 3.2.31 shows the recent trends of malignant melanoma incidence in Luton and England. Recent trends in males and person in both Luton and England are increasing while trends are increasing in females nationally while decreasing in Luton.
Figure 3.2.32 Incidence of malignant melanoma in males, aged 75 and under, 2011-13

Figure 3.2.33 Incidence of malignant melanoma in females, aged 75 and under, 2011-13

*Please note no data for Slough so excluded

Figure 3.2.32 above shows incidence of malignant melanoma in males (aged 75 years and under) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 15.3 per 100,000 population (2011-13). This rate is not significantly different to England (18.6 per 100,000 population). Figure 3.2.33 shows that incidence of malignant melanoma in females (aged 75 years and under) for Luton is 11.7 per 100,000 population which is significantly lower than the England rate of 19.3 per 100,000 population.

Figure 3.2.34 Incidence of malignant melanoma in persons, aged 75 and under, 2011-13

Figure 3.2.34 shows incidence of malignant melanoma in persons (aged 75 years and under) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 15 per 100,000 population (2011-13). This rate is not significantly different to England (18.9 per 100,000 population).
Incidence of oesophageal cancer

Figure 3.2.35 Incidence of oesophageal cancer in males, all ages, 2011-13

Figure 3.2.36 Incidence of oesophageal cancer in females, all ages, 2011-13

Figure 3.2.35 above shows incidence of oesophageal cancer in males (all ages) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 18.7 per 100,000 population (2011-13). This rate is not significantly different to England (22.6 per 100,000 population). Figure 3.2.36 shows that incidence of oesophageal cancer in females (all ages) for Luton is 12.2 per 100,000 population which is not significantly different to the England rate of 8.9 per 100,000 population.

Figure 3.2.37 Incidence of oesophageal cancer in persons, all ages, 2011-13

Figure 3.2.38 Incidence of oesophageal cancer all ages, recent trends

Figure 3.2.37 shows that incidence of oesophageal cancer in persons (all ages) for Luton is 15.3 per 100,000 population which is not significantly different to the England rate of 15.2 per 100,000 population. Figure 3.2.38 shows the recent trends of oesophageal cancer incidence in Luton and England. Recent trends in persons in Luton have been unstable while trends are increasing slightly nationally. This is reflective of the lower numbers in Luton and the effects of one or two cases can have on these small numbers.
Figure 3.2.39 Incidence of oesophageal cancer in males, aged 75 and under, 2011-13

*Please note no data for Slough so excluded*

Figure 3.2.39 above shows incidence of oesophageal cancer in males (aged 75 years and under) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 14.1 per 100,000 population (2011-13). This rate is not significantly different to England (9.6 per 100,000 population).

Figure 3.2.40 Incidence of oesophageal cancer in females, aged 75 and under, 2011-13

Figure 3.2.40 shows that incidence of oesophageal cancer in females (aged 75 years and under) for Luton is 4.5 per 100,000 population which is not significantly different to the England rate of 4.7 per 100,000 population.

Figure 3.2.41 Incidence of oesophageal cancer in persons, aged 75 and under, 2011-13

Figure 3.2.41 shows incidence of oesophageal cancer in persons (aged 75 years and under) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 9.2 per 100,000 population (2011-13). This rate is not significantly different to England (9.6 per 100,000 population).
Incidence of prostate cancer

Figure 3.2.42 Incidence of prostate cancer in males, aged 75 and under, 2011-13

Figure 3.2.43 Incidence of prostate cancer all ages, recent trends

Figure 3.2.42 above shows incidence of prostate cancer in males (aged 75 years and under) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 186.8 per 100,000 population (2011-13). This rate is not significantly different to England (179.5 per 100,000 population). Figure 3.2.43 shows that recent trends prostate cancer in males (all ages) for Luton and England are increasing.

Figure 3.2.44 shows incidence of prostate cancer in males (aged 75 years and under) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 118 per 100,000 population (2011-13). This rate is not significantly different to England (117.6 per 100,000 population).
Incidence of skin cancer

Figure 3.2.45 Incidence of skin cancer in males, all ages, 2011-13

![Bar chart showing incidence of skin cancer in males for Luton and comparator boroughs, with Luton having an age-standardised rate of 142.1 per 100,000 population.]

Source: ONS incidence data 2011-13; HSCIC Indicator Portal

Figure 4.2.46 Incidence of skin cancer in females, all ages, 2011-13

![Bar chart showing incidence of skin cancer in females for Luton and comparator boroughs, with Luton having an incidence rate of 64.3 per 100,000 population.]

Source: ONS incidence data 2011-13; HSCIC Indicator Portal

Figure 3.2.45 above shows incidence of skin cancer in males (all ages) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 142.1 per 100,000 population (2011-13). This rate is significantly lower than England (235.7 per 100,000 population). The Luton rate is also significantly lower than most of the comparator areas. Figure 3.2.46 shows that incidence of skin cancer in females (all ages) for Luton is 64.3 per 100,000 population which is significantly lower than the England rate of 144.4 per 100,000 population.

Figure 3.2.47 Incidence of skin cancer in persons, all ages, 2011-13

![Bar chart showing incidence of skin cancer in persons for Luton and comparator boroughs, with Luton having an incidence rate of 98.7 per 100,000 population.]

Source: ONS incidence data 2011-13; HSCIC Indicator Portal

Figure 3.2.47 shows that incidence of skin cancer in persons (all ages) for Luton is 98.7 per 100,000 population which is significantly lower than the England rate of 183.0 per 100,000 population.

Trends of skin cancer incidence have not been included due to some years containing very low numbers which have been suppressed.
Figure 3.2.48 above shows incidence of skin cancer in males (aged 75 years and under) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 69.2 per 100,000 population (2011-13). This rate is significantly lower than the England rate (124.3 per 100,000 population). Luton is also significantly lower than some of its comparators.

Figure 3.2.49 shows that incidence of skin cancer in females (aged 75 years and under) for Luton is 32.7 per 100,000 population which is significantly lower than the England rate of 89.7 per 100,000 population.

Figure 3.2.50 shows incidence of skin cancer in persons (aged 75 years and under) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 50.6 per 100,000 population (2011-13). This rate is significantly lower than England (106.3 per 100,000 population). Luton is also significantly lower than most of its comparators.
Incidence of stomach cancer

**Figure 3.2.51 Incidence of stomach cancer in males, all ages, 2011-13**

Figure 3.2.51 above shows incidence of stomach cancer in males (all ages) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 20.5 per 100,000 population (2011-13). This rate is not significantly different to England (18 per 100,000 population).

**Figure 3.2.52 Incidence of stomach cancer in females, all ages, 2011-13**

Figure 3.2.52 shows that incidence of stomach cancer in females (all ages) for Luton is 10.9 per 100,000 population which is not significantly different to the England rate of 7.5 per 100,000 population.

**Figure 3.2.53 Incidence of stomach cancer in persons, all ages, 2011-13**

Figure 3.2.53 shows that incidence of stomach cancer in persons (all ages) for Luton is 15.3 per 100,000 population which is not significantly different to the England rate of 12.1 per 100,000 population. The Luton rate is significantly higher than Hillingdon. **Figure 3.2.54**
shows the recent trends of stomach cancer incidence in Luton and England. Recent trends in males, females and persons in Luton and England have been decreasing steadily.

Figure 3.2.55 Incidence of stomach cancer in males, aged 75 and under, 2011-13

Figure 3.2.56 Incidence of stomach cancer in females, aged 75 and under, 2011-13

Figure 3.2.55 above shows incidence of stomach cancer in males (aged 75 years and under) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 13.2 per 100,000 population (2011-13). This rate is not significantly different to England (9.3 per 100,000 population). Figure 3.2.56 shows that incidence of stomach cancer in females (aged 75 years and under) for Luton is 6.7 per 100,000 population which is not significantly different to the England rate of 3.8 per 100,000 population.

Figure 3.2.57 Incidence of stomach cancer in persons, aged 75 and under, 2011-13

Figure 3.2.57 shows incidence of stomach cancer in persons (aged 75 years and under) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 9.2 per 100,000 population (2011-13). This rate is significantly higher than England (6.5 per 100,000 population). The Luton rate is also significantly higher than Hillingdon.
Figure 3.2.58 Incidence of bladder cancer in males, all ages, 2011-13

![Incidence of bladder cancer in males](image)

Figure 3.2.58 above shows incidence of bladder cancer in males (all ages) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 13.5 per 100,000 population (2011-13). This rate is not significantly different to England (15.5 per 100,000 population). Figure 3.2.59 shows that incidence of bladder cancer in females (all ages) for Luton is 4.4 per 100,000 population which is not significantly different to the England rate of 5.1 per 100,000 population.

Figure 3.2.60 Incidence of bladder cancer in persons, all ages, 2011-13

![Incidence of bladder cancer in persons](image)

Figure 3.2.60 shows that incidence of bladder cancer in persons (all ages) for Luton is 8.1 per 100,000 population which is not significantly different to the England rate of 9.3 per 100,000 population. Figure 3.2.61 shows the recent trends of bladder cancer incidence in Luton and
England. Recent trends in males, females and persons in Luton and England have been decreasing steadily.

Figure 3.2.62 Incidence of stomach cancer in males, aged 75 and under, 2011-13

Figure 3.2.63 Incidence of stomach cancer in persons, aged 75 and under, 2011-13

Figure 3.2.62 above shows incidence of bladder cancer in males (aged 75 years and under) for Luton and comparator boroughs, Luton has a directly age standardised rate (DSR) of 3.7 per 100,000 population (2011-13). This rate is not significantly different to England (4.4 per 100,000 population). Figure 3.2.63 shows that incidence of stomach cancer in persons (aged 75 years and under) for Luton is 2.3 per 100,000 population which is not significantly different to the England rate of 3.3 per 100,000 population.

*Due to low numbers females rates were not included.
4 PREVALENCE

Summary

- In 2014/15 recorded prevalence of all cancers in Luton (1.5%) was significantly lower than England (2.3%)
- Prevalence of cancer in Luton GP practices ranged from 0.3% to 2.9%

The prevalence section uses QOF data which is based on GP practices and the Clinical Commissioning Groups to which they belong. Therefore Luton CCG is now benchmarked against CCG’s and not local authorities as was the case in the incidence section.

Figure 4.1 Recorded prevalence of all cancers in persons, all ages, on GP QOF registers, Luton CCG and comparators, 2014/15
Prevalence of cancer within Luton GP practices ranges from 0.3% to 2.9% (Figure 4.2). A total of 21 practices have prevalence significantly lower than England and one practice has prevalence significantly higher than England.

*Note: These are crude rates and have not been standardised to account for age and gender and therefore care should be taken when interpreting these results as the reason could simply be a practice has an older population and therefore more likely to have higher cancer prevalence as age is a main risk factor of cancer.
5  MORTALITY FROM CANCER

Summary

- Cancer is the second biggest cause of mortality within Luton.
- Cancer is responsible for 28% of all deaths each year in Luton - this equates to approximately 392 deaths per year (2012-14) in persons of all ages.
- Cancer is also responsible for 194 premature deaths per year (persons aged less than 75 years) and is the largest contributor to premature mortality within the borough (36%).
- Mortality due to cancer in Luton is mostly similar to England however leukaemia mortality in males all ages is significantly lower than England.

National mortality from cancer

Nationally, for the majority of common cancer sites, males have higher cancer mortality rates than females. Similarly to cancer incidence, higher cancer mortality rates in males are seen across a broad range of cancer sites. For Oesophageal and bladder cancers, age-standardised cancer mortality rates were just under 3 times higher for males compared to females (rate ratio: 2.89).

For all cancers combined, age standardised mortality rates in males are 37% higher than females. This increases to being 72% higher when breast, lung and sex-specific cancers are excluded. Of the most common cancer sites analysed, all had significantly higher cancer mortality rates for males compared to females. Figure 5.0 shows male to female mortality rate ratio, where the rates for females are represented as 1 (the black line) as the comparator for the male mortality rates.
Luton mortality from cancer

Cancer is responsible for around 28% of all deaths annually in Luton, this equates to approximately 392 deaths per year (based on 2012/14 figures) in persons all ages. This places cancer as the second biggest cause of mortality within Luton, only behind cardiovascular disease, which accounts for 29% of deaths (n=411 approximately per annum).

Cancer is also responsible for 194 premature deaths per year i.e. persons aged less than 75 years and is also the largest contributor to premature mortality within the borough (36%). Figure 5.1 shows the contribution of specific cancer sites to the overall mortality (persons all ages) due to cancer within Luton in 2012 to 2014.

Deaths due to lung cancer are the biggest cause of mortality related to cancer, accounting for 23% of all cancer deaths in Luton between 2012 and 2014. Colorectal accounts for 10% and breast cancer and prostate cancers are responsible for 8% and 7%, respectively. The full breakdown of deaths due to cancer by specific site can be seen in figure 5.1 above.

Source: NHS Indicators portal
Deaths due to lung cancer are the biggest cause of premature mortality related to cancer, accounting for 24% of all cancer deaths in Luton between 2012 and 2014. Breast cancer accounts for 9% and colorectal cancer 8%. The full breakdown of premature deaths due to cancer by specific site can be seen in figure 5.2 above.

Figure 5.3 Mortality due to all cancers in males, all ages, 2012/14

Figure 5.4 Mortality due to all cancers in females, all ages, 2012/14

Figure 5.3 shows mortality due to all cancers in males of all ages living in Luton is 351.3 per 100,000 population (directly standardised rate - DSR), which is not significantly different to the England rate (340.9 per 100,000). The rate is significantly higher than Redbridge. Figure 5.4 shows mortality due to all cancers in females all ages in Luton is 242.5 per 100,000 population which is not significantly different to the England rate (232.2 per 100,000). The rate is significantly higher than Redbridge.

Figure 5.5 Mortality due to all cancers in persons, all ages, 2012-2014

Figure 5.6 Mortality due to all cancers all ages recent trends

Figure 5.5 shows mortality due to all cancers in persons of all ages living in Luton is 276.81 per 100,000 population (DSR), which is not significantly different to the England rate (276.8 per 100,000). Figure 5.6 shows recent trends in mortality due to all cancers in England, Luton, and Redbridge.
Figure 5.5 shows mortality due to all cancers in persons of all ages in Luton is 289.4 per 100,000 population (directly standardised rate – DSR), which is not different to the England rate (276.8 per 100,000 population). The rate is significantly higher than Redbridge.

Recent trends show in mortality due to all cancers in Luton and England for males, females and persons there is a steady decrease figure 5.6.

Figure 5.7 shows mortality due to all cancers in males ages 75 and under in Luton is 171.8 per 100,000 population (directly standardised rate – DSR), which is not different to the England rate (157.7 per 100,000 population). The rate is significantly higher than Redbridge.

Figure 5.8 shows mortality due to all cancers in females ages 75 and under in Luton is 136.3 per 100,000 population, which is not different to the England rate (126.6 per 100,000 population). The rate is significantly higher than Redbridge.
Figure 5.9 shows mortality due to all cancers in persons aged 75 and under in Luton is 149.2 per 100,000 population (directly standardised rate – DSR), which is not different to the England rate (141.5 per 100,000 population). The Luton rate is significantly higher than Redbridge. Figure 5.10 shows recent trends in Luton and England for males, females and persons are declining steadily.

Mortality due to breast cancer

Figure 5.11 shows mortality due to breast cancer in females of all ages living in Luton is 40.8 per 100,000 population (directly standardised rate - DSR), which is not significantly different to the England rate (35.4 per 100,000). Figure 5.12 shows recent trends in breast cancer mortality are declining in both Luton and England.

Figure 5.13 shows mortality due to breast cancer in females aged 75 years and under in Luton is 24.6 per 100,000 population (directly standardised rate – DSR), which is not different to the England rate (21.9 per 100,000 population).
Mortality due to cervical cancer

Figure 5.14 Mortality due to cervical cancer in females, all ages, 2012/14

Figure 5.15 Mortality due to cervical cancer all ages recent trends

Figure 5.14 shows mortality due to cervical cancer in females of all ages living in Luton is 1.9 per 100,000 population (directly standardised rate - DSR), which is not significantly different to the England rate (2.9 per 100,000). Figure 5.15 shows recent trends in cervical cancer mortality are declining in England while in Luton there is an overall decrease but also year on year variation.

*Note: Under 75 data suppressed due to low numbers.

Mortality due to colorectal cancer

Figure 5.16 Mortality due to colorectal cancer in males, all ages, 2012/14

Figure 5.17 Mortality due to colorectal cancer in females, all ages, 2012/14
Figure 5.16 shows mortality due to colorectal cancer in males of all ages living in Luton is 37.4 per 100,000 population (directly standardised rate - DSR), which is not significantly different to the England rate (35.6 per 100,000). Figure 5.17 shows mortality due to colorectal cancer in females all ages in Luton is 23.2 per 100,000 population which is not significantly different to the England rate (22.9 per 100,000).

Figure 5.18 shows mortality due to all cancers in persons of all ages in Luton is 29.6 per 100,000 population (directly standardised rate – DSR), which is not different the England rate (28.4 per 100,000 population). Recent trends in mortality due to all cancers in Luton and England for males, females and persons show there is a steady decrease figure 5.19.

Figure 5.20 shows mortality due to all cancers in males ages 75 and under in Luton is 15.3 per 100,000 population (directly standardised rate – DSR), which is not different to the
England rate (16.1 per 100,000 population). Figure 5.21 shows mortality due to all cancers in females ages 75 and under in Luton is 11.0 per 100,000 population, which is not different to the England rate (10.2 per 100,000 population).

**Figure 5.22** Mortality due to colorectal cancer in persons, ages 75 and under, 2012-2014

Figure 5.22 shows mortality due to all cancers in persons aged 75 and under in Luton is 13.2 per 100,000 population (directly standardised rate – DSR), which is not different to the England rate (13.1 per 100,000 population).

Mortality due to leukaemia

**Figure 5.23** Mortality due to leukaemia in males, all ages, 2012/14

**Figure 5.24** Mortality due to leukaemia in females, all ages, 2012/14

Figure 5.23 shows mortality due to leukaemia in males of all ages living in Luton is 6.0 per 100,000 population (directly standardised rate - DSR), which is *significantly lower* than the England rate (10.9 per 100,000). Figure 5.24 shows mortality due to leukaemia in females all ages in Luton is 5.9 per 100,000 population which is not significantly different to the England rate (6.2 per 100,000).
Figure 5.25 shows mortality due to leukaemia in persons of all ages in Luton is 6.2 per 100,000 population (directly standardised rate – DSR), which is not different to the England rate (28.4 per 100,000 population). Recent trends in mortality due to leukaemia in Luton and England for females and persons show there is a steady decrease figure 5.26. However, Luton trends show a slight increase in males.

Figure 5.27 shows mortality due to leukaemia in males ages 75 and under in Luton is 3.6 per 100,000 population (directly standardised rate – DSR), which is not different to the England rate (4.8 per 100,000 population). Figure 5.28 shows mortality due to leukaemia in females ages 75 and under in Luton is 2.6 per 100,000 population, which is not different to the England rate (2.9 per 100,000 population).
Mortality due to leukaemia

Figure 5.29 shows mortality due to leukaemia in persons aged 75 and under in Luton is 3.1 per 100,000 population (directly standardised rate – DSR), which is not different to the England rate (3.8 per 100,000 population).

Mortality due to lung cancer

Figure 5.30 shows mortality due to lung cancer in males of all ages living in Luton is 88.2 per 100,000 population (directly standardised rate - DSR), which is not different than the England rate (74.2 per 100,000). Figure 5.31 shows mortality due to lung cancer in females all ages in Luton is 50.3 per 100,000 population which is not significantly different to the England rate (48.5 per 100,000). The Luton rate is significantly higher than Redbridge.
Figure 5.32 shows mortality due to lung cancer in persons of all ages in Luton is 67.2 per 100,000 population (directly standardised rate – DSR), which is not different than the England rate (59.5 per 100,000 population). Recent trends in all age mortality due to lung cancer in Luton and England for males are decreasing however, in females there is a recent steady increase figure 5.33. In Luton persons there is also a slight increase while in England persons the trend is decreasing.

Figure 5.34 shows mortality due to lung cancer in males ages 75 and under in Luton is 44.2 per 100,000 population (directly standardised rate – DSR), which is not different to the England rate (39.0 per 100,000 population). Figure 5.35 shows mortality due to lung cancer in females ages 75 and under in Luton is 31.0 per 100,000 population, which is not different to the England rate (28.5 per 100,000 population). The Luton rate is significantly higher than Redbridge.
Mortality due to lung cancer

Figure 5.36 shows mortality due to lung cancer in persons aged 75 and under in Luton is 37.3 per 100,000 population (directly standardised rate – DSR), which is not different to the England rate (33.6 per 100,000 population). The Luton rate is significantly higher than Redbridge. Recent trends in premature mortality due to lung cancer in Luton and England for males are decreasing however, in females there is a recent steady increase in Luton but still a decline in England figure 5.37. In Luton and England persons the trend is decreasing.

Mortality due to oesophageal cancer

Figure 5.38 shows mortality due to oesophageal cancer in males of all ages living in Luton is 18.7 per 100,000 population (directly standardised rate - DSR), which is not different than the England rate (20.2 per 100,000). Figure 5.39 shows mortality due to oesophageal cancer
in females all ages in Luton is 9.7 per 100,000 population which is not significantly different to the England rate (7.4 per 100,000).

Figure 5.40 Mortality due to oesophageal cancer in persons, all ages, 2012-2014

Figure 5.41 Mortality due to oesophageal cancer all ages recent trends

Figure 5.40 shows mortality due to oesophageal cancer in persons of all ages in Luton is 14.0 per 100,000 population (directly standardised rate – DSR), which is not different than the England rate (13.2 per 100,000 population).

Recent trends in all age mortality due to oesophageal cancer in Luton for males, females and persons are increasing while in England the trend is decreasing. However, due to the small numbers involved there is wide variation year on year in Luton so care should be used when interpreting this data figure 5.41.

Figure 5.42 Mortality due to oesophageal cancer in males, ages 75 and under, 2012-2014

Figure 5.43 Mortality due to oesophageal cancer in females, ages 75 and under, 2012-2014
Figure 5.42 shows mortality due to oesophageal cancer in males ages 75 and under in Luton is 12.9 per 100,000 population (directly standardised rate – DSR), which is not different to the England rate (11.9 per 100,000 population). Figure 5.43 shows mortality due to oesophageal cancer in females ages 75 and under in Luton is 3.7 per 100,000 population, which is not different to the England rate (3.5 per 100,000 population).

Figure 5.44 shows mortality due to oesophageal cancer in persons aged 75 and under in Luton is 37.3 per 100,000 population (directly standardised rate – DSR), which is not different to the England rate (33.6 per 100,000 population).

Mortality due to prostate cancer

Figure 5.45 shows mortality due to prostate cancer in males of all ages living in Luton is 50.1 per 100,000 population (directly standardised rate - DSR), which is not significantly different
to the England rate (49.5 per 100,000). Figure 5.46 shows recent trends in prostate cancer mortality are declining in England but increasing in Luton.

**Figure 5.47 Mortality due to prostate cancer in males, aged 75 and under, 2012-2014**

![Graph showing prostate cancer mortality in males aged 75 and under, 2012-2014](image)

Figure 5.47 shows mortality due to prostate cancer in males aged 75 years and under in Luton is 12.8 per 100,000 population (directly standardised rate – DSR), which is not different to the England rate (11.4 per 100,000 population).

**Mortality due to stomach cancer**

**Figure 5.48 Mortality due to stomach cancer in males, all ages, 2012/14**

![Graph showing stomach cancer mortality in males, all ages, 2012/14](image)

Figure 5.48 shows mortality due to stomach cancer in males of all ages living in Luton is 11.1 per 100,000 population (directly standardised rate - DSR), which is not different than the England rate (11.5 per 100,000). Figure 5.49 shows mortality due to stomach cancer in females all ages in Luton is 8.5 per 100,000 population which is not significantly different to the England rate (4.9 per 100,000).
Figure 5.50 shows mortality due to stomach cancer in persons of all ages in Luton is 14.0 per 100,000 population (directly standardised rate – DSR), which is not different than the England rate (13.2 per 100,000 population). Recent trends in all age mortality due to stomach cancer in Luton and England for males, females and persons are decreasing figure 5.51.

Figure 5.52 shows mortality due to stomach cancer in males ages 75 and under in Luton is 7.3 per 100,000 population (directly standardised rate – DSR), which is not different to the England rate (5.0 per 100,000 population). Figure 5.53 shows mortality due to stomach cancer in females ages 75 and under in Luton is 4.5 per 100,000 population, which is not different to the England rate (2.2 per 100,000 population).
Mortality due to stomach cancer

Figure 5.54 shows mortality due to stomach cancer in persons aged 75 and under in Luton is 5.8 per 100,000 population (directly standardised rate – DSR), which is not significantly different to the England rate (3.5 per 100,000 population).

Mortality due to bladder cancer

Figure 5.55 shows mortality due to bladder cancer in males of all ages living in Luton is 13.5 per 100,000 population (directly standardised rate - DSR), which is not different than the England rate (15.6 per 100,000). Figure 5.56 shows mortality due to bladder cancer in females all ages in Luton is 4.4 per 100,000 population which is not significantly different to the England rate (5.1 per 100,000).
Figure 5.57 shows mortality due to bladder cancer in persons of all ages in Luton is 8.1 per 100,000 population (directly standardised rate – DSR), which is not different than the England rate (9.3 per 100,000 population). Recent trends in all age mortality due to bladder cancer in Luton and England for males, females and persons are decreasing figure 5.58.

Figure 5.59 shows mortality due to bladder cancer in males ages 75 and under in Luton is 3.7 per 100,000 population (directly standardised rate – DSR), which is not different to the England rate (4.4 per 100,000 population). Figure 5.60 shows mortality due to bladder cancer in persons ages 75 and under in Luton is 2.3 per 100,000 population, which is not different to the England rate (3.0 per 100,000 population).

*Due to small numbers female rates have not been included.
Mortality due to melanoma

Figure 5.61 Mortality due to melanoma in males, all ages, 2012/14

Figure 5.62 Mortality due to melanoma in females, all ages, 2012/14

Figure 5.61 shows mortality due to melanoma in males of all ages living in Luton is 5.5 per 100,000 population (directly standardised rate – DSR), which is not different than the England rate (5.2 per 100,000). Figure 5.62 shows mortality due to melanoma in females all ages in Luton is 2.8 per 100,000 population which is not significantly different to the England rate (3.0 per 100,000).

Figure 5.63 Mortality due to melanoma in persons, all ages, 2008-2010

Figure 5.64 Mortality due to melanoma all ages recent trends

Figure 5.63 shows mortality due to melanoma in persons of all ages in Luton is 4.3 per 100,000 population (directly standardised rate – DSR), which is not different than the England rate (4.0 per 100,000 population). Recent trends in all age mortality due to melanoma in Luton and England for males, females and persons are increasing figure 5.64.
Figure 5.65 shows mortality due to melanoma in males ages 75 and under in Luton is 4.9 per 100,000 population (directly standardised rate – DSR), which is not different to the England rate (3.1 per 100,000 population). Figure 5.66 shows mortality due to melanoma in persons ages 75 and under in Luton is 3.1 per 100,000 population, which is not different to the England rate (2.5 per 100,000 population).

Note: Due to small numbers female rates are not included
6 Cancer Related Hospital Admissions and Procedures

As part of understanding the local population needs and service provision for residents of Luton with cancer (diagnosed and undiagnosed) the following section explores some hospital procedures and admissions data. It is also important to understand the rate of emergency admissions for cancer, since these patients usually present at a later stage and are therefore at risk of worse outcomes. A number of factors are associated with increased rates of admission, and are therefore important to consider when targeting interventions to reduce avoidable admissions. These include age, socioeconomic deprivation, levels of morbidity in the population, Ethnicity, and environmental factors.

![Figure 6.0 In-patient or day-case colonoscopy procedures 2014/15](image1.png)

![Figure 6.1 In-patient or day-case colonoscopy procedures trends](image2.png)

Source: Cancer GP profiles

Figure 6.0 shows the crude rate per 100,000 population for colonoscopy procedures in Luton and comparator boroughs and England. Luton 484.6 per 100,000 is significantly lower than the national average (694.6). Luton also has one of the lowest rates among comparator boroughs. Figure 6.1 shows that trends are increasing in both Luton and England.
Figure 6.2 In-patient or day-case colonoscopy procedures, Luton GP practices, 2014/15

Source: Cancer GP profiles

Figure 6.3 shows there is wide variation in colonoscopy procedures within Luton CCG, with rates in practices ranging from 209.5 to 826.6. However only three practices have a rate significantly lower than the Luton CCG average and a further two have rates significantly higher than the CCG average.

Figure 6.3 In-patient or day-case sigmoidoscopy procedures 2014/15

Source: Cancer GP profiles

Figure 6.3 shows the crude rate per 100,000 population for sigmoidoscopy procedures in Luton and comparator boroughs and England. Luton 330.6 per 100,000 is significantly lower than the national average (430.7). Figure 6.4 shows that trends are increasing in both Luton and England.
Figure 6.5 In-patient or day-case sigmoidoscopy procedures, Luton GP practices, 2014/15

Source: Cancer GP profiles

Figure 6.5 shows there is wide variation in colonoscopy procedures within Luton CCG, with rates in practices ranging from 60.9 to 647.9. However only one practice has a rate significantly lower than the Luton CCG average and a further three have rates significantly higher than the CCG average.

Figure 6.6 In-patient or day-case sigmoidoscopy procedures 2014/15

Source: Cancer GP profiles

Figure 6.6 shows the crude rate per 100,000 population for upper GI endoscopy procedures in Luton and comparator boroughs and England. Luton 1094.2 per 100,000 is significantly lower than the national average (1142.1). Figure 6.7 shows that trends are increasing in both Luton and England.
Figure 6.8 In-patient or day-case sigmoidoscopy procedures, Luton GP practices, 2014/15

Source: Cancer GP profiles

Figure 6.8 shows there is wide variation in upper GI endoscopy procedures within Luton CCG, with rates in practices ranging from 722.7 to 1507.7. However only four practices have a rate significantly lower than the Luton CCG average and a further two have rates significantly higher than the CCG average.

Figure 6.9 Rate of emergency cancer presentations 2014/15

Source: Cancer GP profiles

Figure 6.9 shows the crude rate per 100,000 population for emergency presentations due to cancer in Luton and comparator boroughs and England. Luton 64.1 per 100,000 is significantly lower than the national average (89.7). Luton also has one of the lowest rates among comparator boroughs. Figure 6.10 shows that trends are decreasing in both Luton and England.
Figure 6.11 shows there is wide variation in emergency presentations due to cancer within Luton CCG, with rates in practices ranging from 15 to 161.32. However, only one practice has a rate significantly lower than the Luton CCG average.

*Please note very wide confidence intervals due to small numbers.*
7 SCREENING AND EARLY DETECTION

Summary

- In 2012/13 to 2014/15, Luton females aged 50-70 years screened for breast cancer in the last 36 months (69%) was below the national standard of 70% and also significantly below the National average 72.2%.

- In females aged 50-70 years screened for breast cancer in the last 36 months in GP practices 11 practices had uptake significantly lower than the CCG average and 9 practices had uptake significantly higher than the CCG average.

- Breast screening within 6 months of invitation in Luton was also significantly lower than England.

- 11 practices had uptake with 6 months significantly lower than the CCG average and 2 practices had uptake significantly higher than the CCG average.

- Females aged 25-64 years screened for cervical cancer in the target period in Luton (68.7%) was below the national standard of 80% and also significantly below the National average 73.5%.

- 9 practices had uptake of cervical screening within the target period significantly lower than the CCG average and 12 practices had uptake significantly higher than the CCG average.

- Bowel screening uptake in the last 30 months within Luton CCG for 2014/15 shows the uptake rate for Luton was 50.1%, significantly below the England rate of 57.9%.

- 10 practices had Bowel screening uptake in the last 30 months significantly lower and 9 practices significantly higher than Luton overall.

- Bowel screening uptake within 6 months of invitation within Luton 2014/15 shows the uptake rate was 48.4%, significantly below the England rate of 57.6%.

- Bowel screening uptake within 6 months of invitation 8 practices had uptake significantly lower and 7 practices significantly higher than Luton overall.

Early detection of cancer greatly increases the chances for successful treatment. There are two major components of early detection of cancer: education to promote early diagnosis and screening (WHO 2013). Currently there are screening programmes for breast, bowel and cervical cancers, the programmes screen people in the population who have yet to show symptoms of cancer. This approach aims to enable clinicians to detect cancer at an earlier stage and thus provides improved outcomes and higher survival rates in the population.
7.1 Breast screening

Women aged 50 and over are offered free breast screening every three years. An extension has been phased into the screening programme that extends the age range to people aged between 47 and 73 years. Women aged over the age limit are encouraged to make their own appointments.

The national standard for screening coverage for the breast screening programme is 70%. Screening coverage rates demonstrate the proportion of the population eligible to be screened who actually are screened within the relevant time period.

**Figure 7.1 Females, 50-70, screened for breast cancer in last 36 months (3 year coverage %) 2012/13 to 2014/15**

Figure 7.1 shows the proportion of females aged 50-70 years screened for breast cancer in the last 36 months in Luton CCG and comparator CCG’s. Luton (69%) was below the national standard of 70% and also significantly below the National average 72.2%. All comparators (with the exception of Solihull) were also significantly below the national average.
Figure 7.2 shows the proportion of females aged 50-70 years screened for breast cancer in the last 36 months in GP practices within Luton CCG. 11 practices had uptake significantly lower than the CCG average and 9 practices had uptake significantly higher than the CCG average.
Figure 7.3 shows the proportion of females aged 50-70 years screened for breast cancer within 6 months of invitation in Luton CCG and comparator CCG’s. Luton (67.2%) was significantly below the National average 72.8%. All comparators (with the exception of Solihull) were also significantly below the national average.
Figure 7.4 shows the proportion of females aged 50-70 years screened for breast cancer within 6 months of invitation in Luton GP practices, 2014/15. 11 practices had uptake significantly lower than the CCG average and 2 practices had uptake significantly higher than the CCG average.

### 7.2 Cervical screening

Cervical screening is an important way of preventing cancer as well as catching them at an early stage. Examination of Routes to Diagnosis have shown that cervical tumours diagnosed through screening route had better survival at one year than tumours diagnosed through any other route (Department of Health 2011). Cervical screening is therefore extremely important. Currently, in England five year coverage is very similar for both the 25-49 and the 50-64 age groups. Higher three and half year coverage is seen in females aged 25-49 and reflects the frequency with which females are invited screening.

The national standard for screening coverage for the cervical screening programme is 80%.
Figure 7.5 shows the proportion of females aged 25-64 years screened for cervical cancer in the target period in Luton CCG and comparator CCG’s. Luton (68.7%) was below the national standard of 80% and also significantly below the National average 73.5%. All comparators (with the exception of Solihull and Bradford Districts) were also significantly below the national average.
Figure 7.6 shows the proportion of females aged 25-64 years screened for cervical cancer in the target period in GP practices within Luton CCG. 9 practices had uptake significantly lower than the CCG average and 12 practices had uptake significantly higher than the CCG average.

Note: Target period means proportion of women aged 25-49 screened within the last 3 years and women aged 50-64 screened within the last 5 years.

7.3 Bowel screening
The NHS Bowel Cancer Screening Programme is offered every two years to everyone (registered with a GP) in England aged 60 to 74 years. People over 75 can also request a screening kit. There are considerations to expand the age range for screening. The test aims to detect polyps and other changes in the bowel that might develop into bowel cancer in the future. It can detect bowel cancer at a much earlier stage, before people are experiencing any obvious symptoms. This is very important, because bowel cancer is usually a very slow growing disease, and can be cured with a straightforward operation if it is detected before it has started to spread. Benign (harmless) polyps can also be removed quickly and easily in a simple procedure that will significantly reduce the risk of bowel cancer developing later. The national level of participation in the bowel screening programme is 60%.

Examination of routes to diagnosis for patients diagnosed in 2006-2008 (in England) showed that one year relative survival estimates for patients presenting through the screened route was statistically significantly higher than for any other Route.
Figure 7.7 shows the variation in bowel screening uptake in the last 30 months within Luton CCG and comparators for 2014/15. The uptake rate for Luton was 50.1%, significantly below the England rate of 57.9%. All comparators (with the exception of Solihull which was significantly higher than England) were also significantly below the national average.
Figure 7.8 shows the variation in bowel screening uptake in the last 30 months within Luton GP practices for 2014/15. The chart shows uptake ranged from just over 19% to around 63%. 10 practices had uptake significantly lower and 9 practices significantly higher than Luton overall.

Source: NCIN practice profiles
Figure 7.9 shows the variation in bowel screening uptake within 6 months of invitation within Luton CCG and comparators for 2014/15. The uptake rate for Luton was 48.4%, significantly below the England rate of 57.6%. All comparators (with the exception of Solihull which was significantly higher than England) were also significantly below the national average.

![Figure 7.9](image)

Figure 7.10 shows the variation in bowel screening uptake within 6 months of invitation within Luton CCG and comparators for 2014/15. The uptake rate for Luton was 48.4%, significantly below the England rate of 57.6%. All comparators (with the exception of Solihull which was significantly higher than England) were also significantly below the national average.

Figure 7.10 shows the variation in bowel screening uptake within 6 months of invitation within Luton GP practices for 2014/15. The chart shows uptake ranged from just over 27% to around 63%. 8 practices had uptake significantly lower and 7 practices significantly higher than Luton overall.

![Figure 7.10](image)
When compared to boroughs with a similar ethnic background Luton performs better than average and has sixth highest proportion.

7.3 Awareness and early detection

The National Awareness and Early Diagnosis Initiative - NAEDI - is a public sector/third sector partnership. The organisation is made up of a partnership between NHS England, Department of Health, Public Health England and Cancer Research UK and other organisations and the focus is to support and drive forward work on early diagnosis of cancer (CRUK 2015).

This work is necessary as research has shown that if cancer is diagnosed at an earlier stage the chances of the patient making a full recovery increase.

As part of the early diagnosis a two week wait referral (TWW) system was developed, this aims to ensure that all patients with an urgent referral due to suspicion of cancer is seen within 14 days of the referral.

Among this TWW system it is also important to understand how many of these referrals subsequently lead to a cancer being diagnosed (known as conversion rate) and how many new cancers are detected through the TWW system (detection rate).
The detection rate in Luton (49.5%) was not significantly different to the England average (48.4%) figure 7.11. However, in figure 7.12 there is large variation in Luton GP practices ranging from 30.1% to 100%. No practices had a detection rate significantly different than the CCG average.
Figure 7.12: Percentage of all new cancers detected through TWW referrals (detection rate) 2014/15

Figure 7.13: Percentage of all TWW referrals diagnosed with cancer (conversion rate) 2014/15
The conversion rate in Luton (8.9%) was not significantly different to the England average (8.2%) figure 7.13. However, Luton had a conversion rate significantly higher than a number of its comparators.

Figure 7.14: Percentage of all TWW referrals diagnosed with cancer (conversion rate) 2014/15

Figure 7.14 shows there is large variation in Luton GP practices ranging from 3.7% to 20%. Only one had a conversion rate significantly different (higher) than the CCG and England averages. It is important to note that this rate it dependant on the different types of cancers diagnosed at each GP practice. Guidance suggests that either a very high or very low number may warrant further investigation.
8.0 Treatment

**Summary**

- Two week wait referrals (TWW) for all cancers are **significantly lower** in Luton than England.
- TWW for breast and lower GI cancers are **significantly lower** than England.
- Luton meets the standards in 31 day and 62 day performance and is not significantly different than England.

**Treatment Standards**

In 2000 the Department of Health introduced new standards in maximum waiting times for diagnosis and treatment for patients with suspected cancer as part of the NHS Cancer Plan. These standards were reviewed in 2007 and are still in place. The two-week urgent referral (TWW) pathway for suspected cancer is a key part of the strategy for achieving earlier diagnosis and improved survival rates in England. There is a wide variation in urgent GP referral rates across England which merits further investigation.

However, it is important to emphasise that there is no “right” or “wrong” level of referral. At present, work is being undertaken to understand the reasons for this variation (NCIN 2010).

![Figure 8.1 Crude rate of two week wait referrals per 100,000 persons, all cancers, 2014/15](image)

![Figure 8.2 Crude rate of two week wait referrals per 100,000 persons, all cancers, Luton GP practices 2014/15](image)

Figure 8.2 shows Luton has a crude rate of 1,626.3 per 100,000 population of TWW referrals for all suspected cancers in 2014/15. This is significantly lower than England (2,707.7 per 100,000). Figure 8.2 shows the rate of referral among Luton GP practices ranges from 312 – 3,133 per 100,000 population. A total of 10 Luton practices have referral rates significantly lower than the Luton average and 8 practices have referral rates significantly higher than Luton.
Figure 8.3 Crude rate of two week wait referrals per 100,000 persons, breast cancer, 2014/15

Figure 8.3 shows Luton has a crude rate of 330.1 per 100,000 population of TWW referrals for breast cancer in 2014/15. This is significantly lower than England (481.9 per 100,000).

Figure 8.4 Crude rate of two week wait referrals per 100,000 persons, breast cancer, Luton GP practices 2014/15

Figure 8.4 shows the rate of referral among Luton GP practices ranges from 161 – 848 per 100,000 population. A total of 2 Luton practices have referral rates significantly lower than the Luton average and 5 practices have referral rates significantly higher than Luton.

Figure 8.5 Crude rate of two week wait referrals per 100,000 persons, lower GI cancers, 2014/15

Figure 8.5 shows Luton has a crude rate of 259.8 per 100,000 population of TWW referrals for lower GI cancer in 2014/15. This is significantly lower than England (420.7 per 100,000).

Figure 8.6 Crude rate of two week wait referrals per 100,000 persons, lower GI cancers, Luton GP practices 2014/15

Figure 8.6 shows the rate of referral among Luton GP practices ranges from 98 – 690 per 100,000 population. A total of 3 Luton practices have referral rates significantly lower than the Luton average and 4 practices have referral rates significantly higher than Luton.
Figure 8.7 shows Luton has a crude rate of 107 per 100,000 population of TWW referrals for lung cancer in 2014/15. This is not significantly different than the England rate of 100 per 100,000. Figure 8.8 shows the rate of referral among Luton GP practices ranges from 16 – 223 per 100,000 population. No Luton practices have referral rates significantly lower than the Luton average and 1 practice had referral rates significantly higher than Luton.

Figure 8.9 shows Luton has a crude rate of 226 per 100,000 population of TWW referrals for skin cancer in 2014/15. This is significantly lower than England (507 per 100,000). Figure 8.10 shows the rate of referral among Luton GP practices ranges from 68 – 604 per 100,000 population. A total of 3 Luton practices have referral rates significantly lower than the Luton average and 5 practices had referral rates significantly higher than Luton.
8.1 31 day performance

This standard is aimed at those patients who are diagnosed with cancer and require their first treatment. The aim is to ensure timely access to all forms of cancer treatment with the goal of improving clinical outcomes. There are a number of different standards relating to the 31 day performance, firstly there is number of patients whose initial treatment begins within 31 days of diagnosis, secondly the number of patients whose require further treatment, which begins within 31 days.

In order to comply with the 31 day standard organisations should maintain 96% of patients are treated within 31 days of diagnosis. Luton meets this standard with 99% of patients beginning treatment within 31 days and the subsequent treatment at 98%.

8.2 62 day performance

There are three standards of 62 day performance; these are patients treated within 62 days from a) urgent GP referral for suspected cancer to first treatment, b) following referral from an NHS screening service to first treatment for all cancer or c) following a consultant decision to upgrade a patient’s priority to first treatment. The acceptable performance for these standards is 85%.
Figure 8.2.1 Proportion of new cancer patients whose initial treatment began within 62 days of urgent referral from a GP, 2014/15 Q1

Figure 8.2.2 Proportion of new cancer patients from consultant screening service referral, whose first treatment was within 62 days, 2014/15 Q1

Figure 8.2.3 Proportion of new cancer patients whose initial treatment began within 62 days of priority upgrade from a consultant, 2014/15 Q1

Luton meets the standard of these indicators as do most of the comparator CCG’s.
9.0 Survival

Summary

- Breast cancer 1 year survival rates in Luton are not significantly different than England. Trends in 1 year survival for breast cancer are increasing steadily in Luton and England.

- Trends in 1 year survival for lower GI cancer are increasing steadily in both Luton and nationally however, current rates in Luton are significantly lower than England.

- Lung cancer 1 year survival rates in Luton are not significantly different than England. Trends in 1 year survival for lung cancer are increasing steadily in Luton and England.

- Breast cancer 5 year survival rates in Luton are not significantly different than England. Trends in 5 year survival for breast cancer are increasing steadily in Luton and England.

- Trends in 5 year survival for lower GI cancer are increasing steadily in both Luton and nationally however, current rates in Luton are not significantly different than England.

- 5 year lung cancer survival in Luton is significantly lower than England and while trends in 5 year survival in England are increasing they are decreasing in Luton.

Survival rates definition

The length of time that a person survives after a cancer diagnosis is one means of evaluating cancer treatment. Survival rate is defined as the percent of people who survive a disease such as cancer for a specified amount of time. For example, if the 5-year survival rate for a particular cancer is 34%, this means that 34 out of 100 people initially diagnosed with that cancer would be alive after 5 years. Survival rate does not indicate if a cancer is cured or if treatment is completed but may be used as proxy indicator of current cancer management and treatment.

It should be noted that stage of diagnosis may contribute in part to survival disparities locally and nationally for breast, cervical, colorectal, lung, and prostate cancers.
9.1 1 year relative survival

Figure 9.1 shows the 1 year survival rate for breast cancer in Luton in 2008/10 was 95.8%. This is not significantly different to the England average 96.5%. Trend data in figure 9.2 shows that trends in Luton and nationally for breast cancer 1 year survival are steadily increasing.

Figure 9.3 shows the 1 year survival rate for lower GI cancer in Luton in 2008/10 was 70.3%. This is significantly lower than the England average 76.4%. Trend data in figure 9.4 shows that trends in Luton and nationally for lower GI cancer 1 year survival are increasing although Luton has been significantly lower than England since 2004/06.
Figure 9.5 shows the 1 year survival rate for lung cancer in Luton in 2008/10 was 30.4%. This is not significantly different to the England average 32.8%. Trend data in figure 9.6 shows that trends in Luton and nationally for lung cancer 1 year survival are increasing.

9.2 5 year relative survival

Figure 9.2.1 shows the 5 year survival rate for breast cancer in Luton in 2004/06 was 83.8%. This is not significantly different to the England average 85.3%. Trend data in figure 9.2.2 shows that trends in Luton and nationally for breast cancer 5 year survival are increasing.
Figure 9.2.3 shows the 5 year survival rate for lower GI cancer in Luton in 2004/06 was 49%. This is not significantly different to the England average 54.6%. Trend data in figure 9.2.4 shows that trends in Luton and nationally for lower GI cancer 5 year survival are increasing.

Figure 9.2.5 shows the 5 year survival rate for lung cancer in Luton in 2004/06 was 5%. This is significantly lower than the England average 8.5%. Trend data in figure 9.2.6 shows that trends in Luton for lung cancer 5 year survival is decreasing while nationally they are increasing.
9.3 Cancer Stage at Diagnosis

Staging is based on knowledge of the way cancer progresses. Staging describes the severity of a person’s cancer based on the size and/or extent (reach) of the original (primary) tumor and whether or not cancer has spread in the body. Staging is important for several reasons:

- Staging helps the doctor plan the appropriate treatment.
- Cancer stage can be used in estimating a person’s prognosis.
- Knowing the stage of cancer is important in identifying clinical trials that may be a suitable treatment option for a patient.
- Staging helps health care providers and researchers exchange information about patients; it also gives them a common terminology for evaluating the results of clinical trials and comparing the results of different trials (National Cancer Institute 2015).

Figure 9.3.1 shows the proportion of lung cancers diagnosed in 2013 by stage at diagnosis. In Luton almost 70% of lung cancer in patients was diagnosed at stage 3 or 4. Late diagnosis of cancer often results in the disease spreading into different areas and therefore it is more difficult to treat effectively. This is likely to explain why Luton has poor survival rates for lung cancer after 5 years. Figure 9.3.2 shows the proportion of breast cancers diagnosed in 2013 by stage at diagnosis. In Luton over 80% of breast cancer in patients was diagnosed at stage 3 or 4.
10.0 **FINANCIAL COSTS OF CANCER**

**Summary**

- Luton spent a total of £9.2 million in 2013/14 on cancer, this equates to approximately £4.4 million per 100,000 population.

- Luton has a higher total spend on cancer with better outcomes for mortality due to cancer in males under 75 years compared to other PCT’s nationally. However, for females the spend remains higher but the outcomes are worse.

- Luton has a higher total spend on cancer with better outcomes for mortality due to cancer considered preventable in males under 75 years compared to other PCT’s nationally. However, for females the spend remains higher but the outcomes are worse.

10.1 **Programme Budgeting**

According to programme budgeting figures submitted Luton spent a total of £9.2 million in 2013/14 on cancer, this equates to approximately £4.4 million per 100,000 population. The highest proportion was spent in scheduled care day-case and elective (41.3%) this compared to 45% spent nationally. 14.8% was spent on non-elective admissions in Luton compared to 17.7% nationally. Figure 10.1 shows the breakdown of this expenditure in all the specific areas.
Figure 10.1 Breakdown in areas of spend on cancer as proportion of total cancer spend per 100,000 weighted population, 2013/14

- Scheduled Care: Daycase and elective (PBR)
- Unscheduled Care: Non-elective admissions (PBR)
- Unbundled/high cost: Critical Care
- Scheduled Care Outpatient - (PBR & Non-PBR)
- Primary Prescribing
- Unbundled/high cost: Other
- Running Costs

Source: Programme budgeting 2013/14

Figure 10.2 Breakdown in areas of spend on cancer as proportion of total cancer spend per 100,000 weighted population, compared to national average 2013/14

Source: Programme budgeting 2013/14
Figure 10.2 shows the breakdown of spend of cancer in Luton and compared to the national average. When compared to the national average Luton has different spend in community care (0%) in Luton compared to 7.7% nationally. Conversely spend in Luton for critical care is 13.4% compared to 4.7% nationally.

Figures 10.3 and 10.4 above show the relationship between spend and outcomes for all CCG’s in England in relation to total cancer spend in Luton and under 75 mortality cancer. Luton has a higher total spend on cancer with better outcomes for mortality due to cancer in males under 75 years compared to other CCG’s nationally. However, for females the spend remains higher but the outcomes are worse.

*Note yellow dots represent our ONS cluster comparator (Multicultural suburbs).
Figures 10.5 and 10.6 above show the relationship between spend and outcomes for all CCG’s in England in relation to total cancer spend in Luton and under 75 mortality cancer considered preventable. Luton has a higher total spend on cancer with better outcomes for mortality due to cancer considered preventable in males less than 75 years compared to
other CCG’s nationally. However, for females the spend remains higher but the outcomes are worse.

Figure 10.6 Mortality from cancer considered preventable in females under 75 year olds and Public Health spend relative to other CCG’s 2014/15

Source: SPOT tool 2014/15
11.0 Cancer Risk Factors

There are numerous risk factors that can increase or influence a person’s risk of developing cancer. These risk factors include increasing age, genetics and lifestyle choices such as smoking, diet, alcohol intake and lack of regular exercise. More than 40% of all cancers in the UK are linked to such risk factors (Cancer Research UK 2012)

It is believed that only around 5%-10% of cancers are thought to be caused by faulty inherited genes.

It is estimated that more than four in 10 cancer cases could be prevented by lifestyle changes, such as:

- not smoking
- keeping a healthy body weight
- cutting back on alcohol
- eating a healthy, balanced diet
- keeping active
- avoiding certain infections (like HPV)
- staying safe in the sun
- occupation (exposure to certain chemicals in the workplace)

Risk factors may cluster in individuals and the more risk factors present the greater the likelihood of ill health. Risk factors pose a potential harm to health while protective factors can help to mitigate such harms and can benefit a person’s health.

11.1 Tobacco and second hand smoke

Tobacco use is the single largest causative factor for cancer mortality; accounting for about 30% of all cancer deaths in developed countries (DoH 2011). Smoking causes the greatest number of preventable deaths each year, including lung cancer, chronic obstructive pulmonary disease (COPD), and heart disease. These are the big killers and major causes of ill-health in Luton.
Figure 11.1 shows recorded smoking prevalence in Luton in 2014/15 was 19.9%, which is significantly higher than England. The Luton prevalence is also significantly higher than most of the comparators.

11.2 Obesity and overweight

Overweight and obesity are both important and avoidable causes of cancer. In recent years, substantial evidence has pointed to the link from overweight and obesity to many types of cancer such as oesophagus, colorectal, breast, endometrium and kidney (WHO 2003). The prevalence of obesity has increased in the past 25 years in every age group, social class, ethnicity and gender. In England, most people are overweight or obese. Overweight and obese children are more likely to be obese when they reach adulthood.
Prevalence of obesity in Luton adults aged 16 and over in 2014/15 is 9.8%; this is significantly higher than the England average figure 11.2.1.

Prevalence of obesity in adults aged 16 and over in Luton GP practices, 2014/15
A total of 10 practices had prevalence significantly lower than Luton and 9 practices had prevalence significantly higher. Figure 11.2.2 shows prevalence of obesity in Luton GP practices in 2014/15.

![Figure 11.2.3 Prevalence of childhood obesity in reception year, 2014/15](image)

![Figure 11.2.4 Prevalence of childhood obesity in year 6, 2014/15](image)

Figure 11.2.3 shows prevalence of obesity in Luton reception year children in 2014/15 is 10.2%; this is \textit{significantly higher} than the England average of 9.1%. Figure 11.2.4 shows prevalence of obesity in Luton year 6 children in 2014/15 was 23.4%; this was \textit{significantly higher} than the England average of 19.1%.

### 11.3 Nutrition other than obesity

Dietary factors account for about 30% of all cancers in Western Countries and diet is second only to tobacco as a preventable cause. Dietary modification and regular physical activity are significant elements in cancer prevention and control. The composition of the diet is important since fruit and vegetables may have a protective effect by decreasing the risk for some cancer types such as oral, oesophageal, gastric and colorectal cancer. High intake of preserved meat or red meat might be associated with increased risk of colorectal cancer (WHO 2003). See table 11.1 below.

### 11.4 Physical activity

Department of Health recommends that adults (aged 19-64 years) should aim to be active daily. Over a week, activity should add up to at least 150 minutes (2½ hours) of moderate intensity activity in bouts of 10 minutes or more – one way to approach this is to do 30 minutes on at least 5 days a week. Being physically active can protect against chronic diseases, with regular physical activity seen to have a protective effect in reducing the risk of breast and colorectal cancer (DoH 2011). See table 11.1 below.
The proportion of people eating 5 a day (43.3%) in Luton is *significantly lower* than the national average (53.5%) and also 4 of the boroughs comparators. Similarly, the proportion who meet the recommended level of physical activity in Luton (45.1%) is also *significantly lower* than national levels (57%) and 2 of the comparators.

### 11.5 Alcohol

Another aspect of diet related to cancer risk is the high consumption of alcoholic beverages, which convincingly increases the risk of the oral cavity, pharynx, larynx, oesophagus, liver and breast cancers (WHO 2003).

It is estimated that about 6.7% of adults aged 16 and over in Luton drink at levels that are considered higher risk which puts them at risk of harm to their health; this is not different to the England proportion of 6.7%.

### 11.6 Infectious diseases

Some infectious diseases have been associated with the development of cancer, particularly human papillomavirus (HPV) with cervical cancer and hepatitis B and C with liver cancer.

#### 11.6.1 Human papillomavirus (HPV)

Two types of the human papillomavirus (HPV) are responsible for about 70% of all cervical cancers. Immunisation against HPV was introduced in the UK for girls in 2008. All girls aged 12 to 13 are offered HPV (human papilloma virus) vaccination as part of the NHS childhood vaccination programme. The vaccine protects against cervical cancer. (NHS 2014).

Women are still advised to attend for cervical screening tests, even if they have been immunised against HPV as the vaccine does not protect against all causes of cervical cancer.

According to the latest data (2013/14) Luton had a HPV coverage proportion of 86% and although this is an increase on the 2012/13 figure it is *significantly lower* than the National average (PHOF 2016).
11.6.2 Hepatitis B and C

Hepatitis B and C infections are major risk factors for hepatocellular carcinoma, which accounts for 80-90% of all liver cancers in the developing world and around 40% in the developed world (CRUK 2012). Hepatitis B is uncommon in England and cases are largely confined to certain groups, such as drug users. It is much more common in other parts of the world, such as China, central and Southeast Asia and sub-Saharan Africa. Most people infected with hepatitis B are able to fight off the virus and fully recover from the infection within a couple of months. However, a small minority of people develop long-term chronic hepatitis B. A vaccination is available for hepatitis B, which is recommended for people in high-risk groups, such as injecting drug users (NHS 2014).

Hepatitis C is the most common type of viral hepatitis in England. It is estimated that around 255,000 people in England have the condition. Hepatitis C is caused by the hepatitis C virus. In England, it is most commonly spread through sharing needles to inject drugs, which account for 9 out of 10 cases. Around one in four people will fight off the infection and will be free of the virus. In the remaining three out of four people, the virus will stay in their body for many years. This is known as chronic hepatitis C. Chronic hepatitis C can be treated by taking antiviral medications, although there can be unpleasant side effects. There is currently no vaccination for hepatitis C (NHS 2014).

The latest data for Luton shows that the proportion of children who received 3 doses of hepatitis B vaccine before their 1st birthday was estimated* to be 100% in 2014/15. The proportion of children who received 4 doses before their 2nd birthday was estimated to be 91% (PHOF 2016).

*Note estimated figures are used due to potential differences in Local Authority and PCT boundaries.
Patient responses and views on their treatment from start to finish are recorded by NHS trusts in the cancer patient experience survey (CPES). According to the 2012/13 CPES cancer patients from Luton and Dunstable Hospital NHS Foundation Trust (LDFT) had mixed perceptions and feelings of their journey through cancer treatment for different cancer types.

Table 12.0 Proportion of patients giving a very good or excellent rating of care by cancer type, 2012/13

<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>LDFT</th>
<th>Nationally</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast</td>
<td>92%</td>
<td>90%</td>
</tr>
<tr>
<td>Colorectal</td>
<td>91%</td>
<td>88%</td>
</tr>
<tr>
<td>Prostate</td>
<td>79%</td>
<td>87%</td>
</tr>
<tr>
<td>All cancers</td>
<td>87%</td>
<td>88%</td>
</tr>
</tbody>
</table>

Table 12.0 shows that for breast cancer, 92% of patients from LDFT gave a rating of very good or excellent, compared to 90% nationally. For colorectal cancer, 91% of the patients from LDFT gave a rating of very good or excellent, compared to 88% nationally. Prostate cancer had 79% of patients from LDFT gave a rating of very good or excellent, compared to 87% nationally. All cancers had 87% of patients from LDFT gave a rating of very good or excellent, compared to 88% nationally.

The following was taken from the National Cancer Patient Experience Survey 2015.

As asked to rate their care on a scale of zero (very poor) to 10 (very good), respondents gave an average rating of:

- 79% of respondents said that they were definitely involved as much as they wanted to be in decisions about their care and treatment
- 64% of respondents said that they thought the GPs and nurses at their general practice definitely did everything they could to support them while they were having cancer treatment
- when asked how easy or difficult it had been to contact their Clinical Nurse Specialist 91% of respondents said that it had been ‘quite easy’ or ‘very easy’
- 91% of respondents said that, overall, they were always treated with dignity and respect they were in hospital
- 99% of respondents said that hospital staff told them who to contact if they were worried about their condition or treatment after they left hospital
13.0 Best Practice and NICE Guidance

Cancer service guidance, Issued June 2004

Breast cancer (early & locally advanced): diagnosis and treatment Clinical guidelines, CG80 - Issued: February 2009

Breast cancer (advanced): diagnosis and treatment Clinical guidelines, CG81 - Issued: February 2009

Familial breast cancer: the classification and care of women at risk of familial breast cancer in primary, secondary and tertiary care (partial update of CG14) CG164

Lung cancer (CG121) summary of the published clinical guideline on Lung cancer

Colorectal (CSGCC)

In 1997, the Department of Health published a document called Improving Outcomes in Colorectal Cancer. NICE has now published an updated version for the NHS in England and Wales. Some of the original recommendations have been updated, and further recommendations have been added.

The key recommendations are:

- People who may have colorectal cancer should be offered rapid referral for endoscopy
- Endoscopy should be available for diagnosis
- People should be treated by a multidisciplinary team
- Colorectal teams treating people with rectal cancer should have special training
- People who need emergency treatment should be treated by a colorectal cancer team
- Information and support should be improved
- Colonoscopic surveillance for prevention of colorectal cancer in people with ulcerative colitis, Crohn's disease or adenomas (CG118)
- Ulcerative colitis (CG166) Summary of the published clinical guideline on Ulcerative colitis.
- Gastrointestinal stromal tumours (unresectable/metastatic) - imatinib (TA209)
- Colorectal cancer (metastatic) - bevacizumab (TA212) Summary of the published technology appraisal on colorectal cancer (metastatic) - bevacizumab.
- Urological (CSGUC) Summary of the published cancer service guidance on Urological
- Prostate cancer (CG58) Summary of the published clinical guideline on Prostate cancer.
- Lower urinary tract symptoms (CG97)
14. **What we are doing locally.**

A cancer action strategy was agreed by Luton CCG in January 2015 and is attached in *Appendix 1*. Amongst other things, this identifies which bodies across the local system the CCG believes should take the lead for specific areas of work, e.g., LBC Public Health team should lead on community cancer prevention work.

LBC Public Health (PH) team itself has operated a volunteer-led community education outreach programme since the summer of 2013.

Initially funded by the ex-Mount Vernon Cancer network to address the perception that cancer was ‘falling between the cracks’ of public health education, it has since become part of the team’s wider public health outreach activity. This project has enjoyed successes in terms of achieving local publicity, building partnerships and recruiting and training volunteers across communities and instigating a range of community outreach opportunities amounting to hundreds of hours of activity. A small telephone survey undertaken and the beginning and 18 months into the project has indicated a modest upswing in local awareness of cancer issues, however, it should be noted that precise attribution will remain difficult in terms of people in the community reached and any direct links to early referrals/diagnosis, especially since the major ‘Be Clear on Cancer campaign has been running concurrently.
RECOMMENDATIONS

Prevention and screening
1. A healthy lifestyle can have a large impact in cancer prevention as the cancers with the highest incidence all have lifestyle factors as important risk factors e.g. colorectal, breast, prostate and lung. Primary and community care should provide brief advice at every opportunity and refer to lifestyle services where appropriate.
2. Use the findings from the Cancer Research Accelerate, Coordinate, Evaluate (ACE) programme to increase uptake of cancer screening.
3. Review patient level data to determine any patterns among patients who are not being screened for cancer and follow up poor uptake groups to determine barriers and enablers to increase uptake of screening.
4. Implement GP good practice guidance in all practices on screening, with specific focus on bowl screening.

Early Detection and diagnosis
5. Develop a campaign on signs and symptoms of cancer with specific focus on females and skin and lung cancer.
6. Encourage all practices to participate in cancer diagnosis audit to help inform the development of programmes on signs and symptoms.

Treatment: improving experiences of care and support
7. Focus support of experience of cancer treatment on primary care (linked to good practice guidance) to ensure patients are feeling supported through their diagnosis.
8. Continue to monitor performance of provider waiting times with a greater focus on urology and lung pathways.

Aftercare
9. Embed within cancer pathway post treatment lifestyle advice and support for all patients. This should be linked to the Enhanced Recovery Programme.

Integrated commissioning
10. Ensure all cancer specifications are outcomes focused and linked to other relevant specifications.
GLOSSARY OF TERMS

**Directly standardised rates**

The age-specific rates of the subject population are applied to the age structure of the standard population. This gives the overall rate that would have occurred in the subject population if it had the standard age-profile. Directly standardised rates can be compared over time and compared to numerous different areas at the same time as they all use the same European standard population.

**Indirectly standardised rates**

The age-specific rates of a chosen standard population (usually the relevant national or regional population) are applied to the age structure of the subject population to give an expected number of events. The observed number of events is then compared to that expected and is usually expressed as a ratio (observed/expected). A common example is the standardised mortality ratio (SMR). This means that a ratio can only be compared to the baseline and not to other areas i.e. wards cannot be compared to other wards, just to the baseline e.g. London or England.

**Crude rate**

This rate is commonly used when age specific rates are not available. It is simply the number of events e.g. number of people with lung cancer, divided by the number at risk of the event e.g. the resident population, multiplied by a number to give the rate per x population. This does not account for variation in populations e.g. age structure.

**95% confidence intervals**

Percentages and rates are reported with 95% CI. These give a degree of certainty around the proportions and rates and take into account random variation that can occur. By comparing the 95% CIs around estimates or a target, we can say whether statistically, there are differences or not in the estimates we are observing.
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