Foreword

The UK clinical oncology workforce census is a powerful tool to inform the present and projected future demands in clinical oncology and the wider non-surgical oncology workforce. We are very pleased that the census has once again received a 100% response rate from cancer centres in the UK. The census is a unique openly published resource that gives a detailed view of the evolving patterns of working across the UK and highlights regional differences for further exploration. The ongoing census is of help directly to Heads of Service in planning their departmental needs and is an important national resource which feeds into wider initiatives such as the Cancer Research UK (CRUK) commissioned review of non-surgical oncology and lobbying Health Education England around training numbers.
The census is a powerful tool to inform the present and projected future demands in clinical oncology and the wider non-surgical oncology workforce.
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.</td>
<td>Movements of consultants between UK countries</td>
<td>40</td>
</tr>
<tr>
<td>12.</td>
<td>Medical oncologists</td>
<td>42</td>
</tr>
<tr>
<td>13.</td>
<td>Trainee consultant clinical oncologists – numbers and trends</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>Workforce predictions</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>Workforce projections over the next five years</td>
<td>48</td>
</tr>
<tr>
<td>14.</td>
<td>Workforce supply and demand – indications of workforce shortages</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>Demand for services</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>Cancer treatment techniques and technologies</td>
<td>49</td>
</tr>
<tr>
<td>15.</td>
<td>England – regional breakdown of consultant clinical oncologist – numbers and trends</td>
<td>50</td>
</tr>
</tbody>
</table>

References  58

Appendix A
Background and methodology  59
Background  59
Survey methods  59
Data accuracy  59
Collection of information and response rate  59
Presentation of results  59
Data analysis method  59

Appendix B
Census questions 2016  60

Appendix C
Whole-time equivalent consultant clinical oncologists by cancer centre and per million population  65

Appendix D
2016 census completions  69
Aims
The census collects comprehensive and accurate information on the numbers, distribution and activities/working patterns of all clinical oncologists in UK cancer centres. The RCR is uniquely placed to gather this information through the network of named individual Heads of Service which we hold for every centre providing NHS radiotherapy in the UK. This report seeks to inform local and national oncology workforce planning and policy and communications on these matters between relevant departments and bodies. Given the clinical and financial importance of ensuring an efficient and effective workforce, and the cost and complexity of NHS workforce planning itself, it is vital that decisions are based upon comprehensive, accurate and timely data, which provide a clear picture of the current and predicted future workforce. Cancer is increasingly prevalent due to the aging population, with the prediction that one in two people in the UK will be diagnosed with some form of cancer during their lifetime; treatments are improving and for many patients cancer is becoming a chronic illness with ongoing resources needed over many years. Workforce planning for NHS cancer service delivery is clearly of high priority within the national picture.

Key findings
There is evidence of workforce shortages, leading to increased consultant clinical oncologist workload, which increases the risk of burnout, potentially leading to further shortages.

The 2016 census shows that there has been an increase in the workload of full-time consultant clinical oncologists, as measured by increases in:

- Mean programmed activities (PAs)
- Additional responsibilities
- The number of consultants with 12 PAs or more
- The number of radiotherapy services opening at the weekend.

The increased workload is likely driven by workforce shortages as indicated by the growing number of vacant positions. There is a high and constantly rising demand for cancer services; increased cancer prevalence has resulted in many more patients receiving treatment for much longer periods than previously. Accordingly to Cancer Research UK, prevalence is predicted to rise by more than 3% a year as more people are either living with, or surviving cancer.

As an indicator of the workforce shortage, if all consultants were limited to ten PAs, a further 78 consultants would be required to cover the excess. This is an increase from the 2015 figure of 67 and the 2014 figure of 61 and would be equivalent to a 9% increase in the workforce. This is a concerning picture, in particular as anecdotal evidence (and The Royal College of Physicians 2015–2016 census) suggests many consultants work significantly more than their contracted hours.
Increased workloads over prolonged periods can be associated with an increase in stress levels and a decrease in employee engagement. High workloads can result in consultants not having sufficient time to complete their work to the highest quality levels, including following best practice guidelines and within desired timeframes. This could impact on the quality of care and patient experience.

Consultant clinical oncologists work in stressful roles; they frequently deal with emotionally challenging situations, such as discussing the diagnosis, prognosis and sometimes transition to palliative care with patients and their families. A University of London meta-analysis (of 43 existing studies from 14 countries, including the UK, published in 2017) revealed that many oncologists were struggling with the burden of dealing with suffering patients, distressed relatives and heavy workloads. It found that a third of cancer doctors were suffering from high burnout, defined as high emotional exhaustion, and a quarter had mental health problems.

Given the demands of the profession, dedicated time (allocated via supporting professional activities [SPAs] in job plans) is clearly required to comply with clinical governance and revalidation requirements, including mandatory training, audit, continued professional development and appraisal. It is therefore worrying that many consultant clinical oncologists continue to have fewer than 1.5 SPAs in their job plan with the mean SPAs decreasing between 2011 and 2016. The 2016 census showed 17% (n=145) of the 859 consultant clinical oncologists have fewer than 1.5 SPAs in their job plans (though the trends are positive with decreased numbers and percentage of consultants in the 'fewer than 1.5 SPA' bracket). Where SPAs fall below the minimum threshold of 1.5, there are clear dangers in terms of clinical governance and patient safety.

Evidence of future increase in oncology workforce shortages

The census reported a 4% increase in the UK consultant clinical oncologist headcount from 2015 to 2016. However, two-thirds of this headcount growth was locum appointments, not substantive posts. Growth in terms of substantive posts was only 1.4%.

Arguably a better indicator of workforce trends is the number of whole-time equivalent (WTE) consultant clinical oncologists per million people in the UK, which increased by 2.5% between 2015 and 2016.

Notably, workforce trends are highly variable by country and region. Scotland, for example, reported no growth in the number of consultant clinical oncologists over the six-year period from 2011 to 2016.

The 2016 census showed rising attrition rates (including, but not limited to, retirement). Workforce attrition was 2.6% in 2010, 3% in 2015 and rose to 4% in 2016. The 2016 census also reported an increase in the number of consultants expected to retire in the next year, so attrition in 2017 is expected to be at least 4%.

Workforce projections (section 14) show that growth in consultant clinical oncologists (substantive and locum posts) is likely to drop to 1% in 2017 and remain below 1% for the next five years. This growth will not be sufficient to meet the rising demand for cancer services.
1. The workforce in numbers – headcount, participation rates, whole-time equivalents and trends

Headcount

Table 1 shows the headcount of consultant clinical oncologists in the UK by country, comparing the 2015 and 2016 totals.

<table>
<thead>
<tr>
<th></th>
<th>England</th>
<th>Northern Ire</th>
<th>Scotland</th>
<th>Wales</th>
<th>UK total</th>
<th>2015 UK total</th>
<th>% change 2015 to 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultants (substantive posts)</td>
<td>683</td>
<td>29</td>
<td>66</td>
<td>44</td>
<td>822**</td>
<td>811</td>
<td>1.40%</td>
</tr>
<tr>
<td>Locum consultants</td>
<td>34</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>37</td>
<td>17</td>
<td>117.60%</td>
</tr>
<tr>
<td>Trainees</td>
<td>323</td>
<td>14</td>
<td>34</td>
<td>22</td>
<td>393</td>
<td>366</td>
<td>7.40%</td>
</tr>
<tr>
<td>Other grades</td>
<td>68</td>
<td>5</td>
<td>2</td>
<td>7</td>
<td>82</td>
<td>82</td>
<td>0.00%</td>
</tr>
<tr>
<td>Total</td>
<td>1,108</td>
<td>50</td>
<td>103</td>
<td>73</td>
<td>1,334</td>
<td>1,276</td>
<td>4.50%</td>
</tr>
</tbody>
</table>

*Respondents were asked to include employed staff on long-term leave (for example, maternity or sick leave). Monitoring of long-term leave was not included within the scope of this survey, but is a consideration for workforce planning.

**Please note that 822 is the UK total headcount of consultant clinical oncologists. The total number of filled clinical oncologist posts is 828 (12 consultants are employed in two part-time posts concurrently).

Consultants

The number of consultant clinical oncologists working in each of the 62 cancer centres/hospitals across the UK varies between two and 42 (with a mean of 14).

Between October 2015 and October 2016:

The headcount of consultant clinical oncologists in substantive posts (that is, excluding locums) increased from 811 to 822 (a 1.4% increase).

The locum consultant oncologist headcount increased from 17 to 37 (a 117.6% increase). A locum doctor is one who is standing in for an absent doctor or temporarily covering a vacancy in an established post or position. In two-thirds of cases (23 out of the 37 posts), the reason given for the appointment of a locum was to cover a vacant position. Maternity cover was the reason given for appointing a locum in three posts.
The total consultant clinical oncologist headcount (substantive posts and locum posts) increased by 32 from 827 to 859 (a 4% increase). Approximately two-thirds of this increase in headcount (20 posts) is accounted for by the increase in locum appointments.

Locum consultants make up 4% of the consultant clinical oncologist headcount. The flexibility associated with locum posts can be of significant benefit to individuals and organisations; however, there are also some disadvantages to locum posts. NHS Improvement states that trusts should only use locums as a last resort to fill short-term staffing gaps, due to cost implications and the potential to put quality at risk.5

Workforce participation rates

Less than full-time (LTFT) working can be measured using the workforce participation rate, which is determined by the WTE number of consultants (see below for definition) divided by the headcount number of consultants. The participation rate for the 2016 census is 0.93 (the same as the 2015 census figure). Limitations of this method include the fact that the WTE number does not capture contracted work above the cap of ten programmed activities (so, for example, a consultant contracted to work 12 programmed activities [PAs] has a WTE figure of 1.0, which is the same as a consultant contracted to work ten PAs).

As a comparator, the British Medical Association (BMA) reported a 2014 participation rate of 0.95 for consultant hospital doctors (with very little variation since 2010 when the participation rate was 0.94).6 This suggests that consultant clinical oncologists are slightly more likely to work less than full-time (LTFT) than other types of consultants.

Whole-time equivalents

Definition of whole time equivalent (WTE)

A standard full-time (or WTE) NHS consultant contract includes ten PAs, which is equivalent to 40 hours of work per week (or 37.5 hours in Wales). While many consultants are contracted to work more than ten PAs, to calculate WTE values, this report conforms to the NHS convention of calculating one WTE as ten PAs (that is, it excludes programmed activities that exceed ten for all consultants who are contracted to work above ten PAs). As in previous census reports, the calculation of WTE numbers takes into account a consultant’s direct clinical care (DCC) and supporting professional activities (SPA), but excludes their research and additional responsibility programmed activities.
Trends

Figure 1 shows the 4% growth in the number of consultant clinical oncologists (including locums) from 2015 to 2016 (a rise from 827 to 859). This is in line with growth from 2010 to 2015, which averaged at 4%. As a comparator, the BMA reported a 13% increase in the number of consultants between 2009 and 2014 (a mean annual increase of 2.7%).

The UK total of 859 consultants is equivalent to 803 WTEs. The WTE consultant clinical oncologist workforce has grown by 23% over the seven-year period from 2010 to 2016. The mean WTE annual growth is also 4%.

Figure 1. UK consultant clinical oncologists – headcount and WTEs – seven-year trends (2010–16)
Figure 2 shows the six-year trends in the number of consultant clinical oncologists in each UK country.

- There has been steady growth (of around 4.5% per annum) in the average number of consultants in England over the six-year period (2011–2016).
- Northern Ireland shows significant growth (of around 9.5% per annum) in the number of consultant clinical oncologists; in particular there has been strong growth from 22 consultants in 2014 to 31 consultants in 2016 (a new cancer centre opened in 2016).
- Scotland reports a very slight decline over the six-year period from 68 to 67 consultants.
- Wales reports slow growth (of around 1.5% per annum) and a drop from 46 to 44 consultants between 2015 and 2016.

*The England data shows the total number of consultants in England divided by ten to give a regional average (mean) value.
Figure 3 shows the four-year trends (2013–2016) in the number of WTE consultant clinical oncologists in each UK country. The trends shown are very similar to the headcount trends shown in Figure 2.
Figure 4. Number of WTE consultant clinical oncologists per million people by UK country – four-year trends (2013–2016)

Consultant clinical oncologists per 1 million people

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>England</td>
<td>10.6</td>
<td>10.9</td>
<td>11.8</td>
<td>12.1</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>10.9</td>
<td>10.8</td>
<td>13.6</td>
<td>15.6</td>
</tr>
<tr>
<td>Scotland</td>
<td>11.0</td>
<td>11.4</td>
<td>11.4</td>
<td>12.0</td>
</tr>
<tr>
<td>Wales</td>
<td>11.5</td>
<td>11.3</td>
<td>13.3</td>
<td>12.9</td>
</tr>
<tr>
<td>UK – Overall</td>
<td>10.8</td>
<td>10.9</td>
<td>11.9</td>
<td>12.2</td>
</tr>
</tbody>
</table>
According to the Office of National Statistics (ONS), the UK population grew to an estimated 65.6 million in 2016, an increase of 1.5 million people since 2014. The growth rate over the past year has been approximately 0.8% (this has been fairly consistent since 2005). Net international migration continued to be the main driver of the increase, but there was also an increase in births and fewer deaths. The annual population growth varied across the UK – in England it was 0.9%, Wales 0.5%, Scotland 0.6% and Northern Ireland 0.6%.

ONS projects that the population will grow steadily, passing 70 million people in 2026 (growth of around 0.64% per annum). The percentage of the population that is 65 years or older increased between 1975 and 2016, from 14.1% of the population to 18%. It is projected to continue to grow to nearly a quarter of the population by 2045. The projected population growth and the aging population are important considerations for the provision of health and social care services, including cancer care (the risk of most cancers increases with age).

Figure 4 shows that there has been a 2.5% increase from 11.9 to 12.2 WTE consultant clinical oncologists per million people in the UK between 2015 and 2016. There is considerable variation in the number of consultant clinical oncologists per million population between countries, with Northern Ireland having 15.6 WTE consultant clinical oncologists per million people, compared to Scotland and England, where there are 12.
2. Less than full-time working

Between October 2015 and October 2016, the percentage of consultant clinical oncologists working LTFT increased from 23% to 28%. As a comparator, the Royal College of Physicians 2015–2016 census reported 20% of consultant physicians as working LTFT, with significant variation between specialties.2 There are significant gender differences, with 44% of female consultant clinical oncologists working LTFT in 2016, compared to 14% of males.

LTFT is defined as working less than ten contracted PAs per week, which is the equivalent to a 40-hour working week (or a 37.5-hour working week in Wales).

Family and childcare commitments are likely to be a key factor influencing LTFT working. Seeking a good work–life balance may also be an influencing factor. From 2014 UK employees have the legal right to request flexible working.8

Figure 5. Percentage of UK consultant clinical oncologists working LTFT – seven-year trends (2010–2016)
Table 2. Mean number of PAs worked for LTFT workers, split by country and by gender

<table>
<thead>
<tr>
<th>Country</th>
<th>Females</th>
<th>Males</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>England</td>
<td>7.8</td>
<td>6.5</td>
<td>7.4</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>8.3</td>
<td>6.8</td>
<td>7.8</td>
</tr>
<tr>
<td>Scotland</td>
<td>8.5</td>
<td>8</td>
<td>8.4</td>
</tr>
<tr>
<td>Wales</td>
<td>7.2</td>
<td>7</td>
<td>7.1</td>
</tr>
<tr>
<td>Total</td>
<td>7.8</td>
<td>6.6</td>
<td>7.5</td>
</tr>
</tbody>
</table>

Table 2 shows that the mean number of contracted PAs for LTFT UK consultant clinical oncologists is 7.5, which is equivalent to a 30-hour week. The mean is slightly higher for female LTFT workers (7.8) compared to males (6.6) and is variable across countries. As a comparator, the Royal College of Physicians 2015–2016 census reported the mean contracted PAs for LTFT workers as 6.7. A high mean PA for LTFT workers could indicate that the nature of the role is such that it is difficult to undertake if working below a relatively high threshold number of hours each week.

Table 3. Percentage and mean PAs of consultant clinical oncologists working LTFT by age*

<table>
<thead>
<tr>
<th>Age</th>
<th>Full-time</th>
<th>LTFT</th>
<th>Total</th>
<th>% LTFT</th>
<th>Mean PAs LTFT</th>
</tr>
</thead>
<tbody>
<tr>
<td>30–39</td>
<td>86</td>
<td>39</td>
<td>125</td>
<td>31%</td>
<td>8.0</td>
</tr>
<tr>
<td>40–49</td>
<td>301</td>
<td>122</td>
<td>423</td>
<td>29%</td>
<td>7.7</td>
</tr>
<tr>
<td>50–59</td>
<td>163</td>
<td>50</td>
<td>213</td>
<td>23%</td>
<td>7.1</td>
</tr>
<tr>
<td>60–69</td>
<td>35</td>
<td>28</td>
<td>63</td>
<td>44%</td>
<td>6.8</td>
</tr>
<tr>
<td>Total</td>
<td>585</td>
<td>239</td>
<td>824</td>
<td>28%</td>
<td>7.5</td>
</tr>
</tbody>
</table>

*35 consultants (4%) are not included in Table 3 as their age is not known.

Table 3 shows that the 60–69 age group are more likely to work LTFT than younger age groups (44%, compared to the UK mean of 28%). As a comparator, the Royal College of Physicians 2015–2016 census reported 37% of consultants over 60 working LTFT.

Table 3 also shows that the mean number of PAs worked by LTFT workers decreases with age. In 2016, the LTFT workers in the 30–39 age group were contracted to work eight PAs, equivalent to a 32-hour week, whereas the LTFT workers in the 60–69 age group were contracted to work 6.8 PAs, equivalent to a 27-hour week.
Table 4 shows that consultant clinical oncologists who gained their primary medical qualification overseas are much less likely to work LTFT than UK graduates. Only 9% of international medical graduates (IMGs) (13% of female IMGs) work LTFT, compared to 34% of UK graduates.

Table 5 shows that consultant clinical oncologists in mixed NHS and academic roles are slightly more likely to work LTFT than those in NHS roles (30% compared to 28%), while those in academic roles are the least likely (21%) to work LTFT. However, as the numbers of academic and NHS and academic roles are small, it isn’t possible to draw any firm conclusions from this. It is possible that some academic time for consultant clinical oncologists is not included in the above figures, as it is not NHS-funded and included in regular working hours (and associated NHS job plans), for example, if the research is funded by ‘soft money’ (money from commercial funders, research councils, charities and so on).

Table 4. Percentage and mean PAs of consultant clinical oncologists working LTFT by location of primary medical qualification*

<table>
<thead>
<tr>
<th>Place of primary medical qualification</th>
<th>Full time</th>
<th>Part time</th>
<th>Total</th>
<th>% working part time</th>
</tr>
</thead>
<tbody>
<tr>
<td>International medical graduate</td>
<td>181</td>
<td>18</td>
<td>199</td>
<td>9%</td>
</tr>
<tr>
<td>UK graduate</td>
<td>432</td>
<td>223</td>
<td>655</td>
<td>34%</td>
</tr>
<tr>
<td>Unknown</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>618</td>
<td>241</td>
<td>859</td>
<td>28%</td>
</tr>
</tbody>
</table>

* Data from the General Medical Council (GMC) list of registered medical practitioners was used to establish the university and country of primary medical qualification.8

Table 5. Percentage of consultant clinical oncologists working LTFT by employment type

<table>
<thead>
<tr>
<th>Employment type</th>
<th>Full time</th>
<th>Part time</th>
<th>Total</th>
<th>% working part time</th>
<th>Mean PAs (DCC + SPA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic</td>
<td>19</td>
<td>5</td>
<td>24</td>
<td>21%</td>
<td>6.9</td>
</tr>
<tr>
<td>NHS</td>
<td>562</td>
<td>221</td>
<td>783</td>
<td>28%</td>
<td>7.6</td>
</tr>
<tr>
<td>NHS and academic</td>
<td>33</td>
<td>14</td>
<td>47</td>
<td>30%</td>
<td>5.3</td>
</tr>
<tr>
<td>Other/not known</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>20%</td>
<td>8.5</td>
</tr>
</tbody>
</table>
The workforce participation rate is variable by UK country, with Scotland having the highest participation rate of 0.96, indicating a low level of LTFT and Wales having the lowest participation rate of 0.91, indicating a higher rate of LTFT working as shown in Figure 6.

There are of course both benefits and disadvantages of LTFT working for individuals and organisations. Planning for LTFL roles requires special consideration as outlined in the RCR’s Guide to job planning in clinical oncology.4

Table 6. Workforce participation rates and percentage of consultant clinical oncologists working LTFT by UK country

<table>
<thead>
<tr>
<th>UK country</th>
<th>LTFT consultants</th>
<th>Full-time consultants</th>
<th>Total consultants</th>
<th>% consultants working LTFT</th>
<th>Participation rate</th>
<th>WTE of LTFT staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>England</td>
<td>204</td>
<td>513</td>
<td>717</td>
<td>28%</td>
<td>0.93</td>
<td>156</td>
</tr>
<tr>
<td>Wales</td>
<td>13</td>
<td>31</td>
<td>44</td>
<td>30%</td>
<td>0.91</td>
<td>9</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>9</td>
<td>22</td>
<td>31</td>
<td>29%</td>
<td>0.94</td>
<td>7</td>
</tr>
<tr>
<td>Scotland</td>
<td>15</td>
<td>52</td>
<td>67</td>
<td>22%</td>
<td>0.96</td>
<td>13</td>
</tr>
<tr>
<td>UK – total</td>
<td>241</td>
<td>618</td>
<td>859</td>
<td>28%</td>
<td>0.93</td>
<td>185</td>
</tr>
</tbody>
</table>
3. Gender and age breakdown of consultant clinical oncologists

There are more male consultant clinical oncologists in the workforce than female: 52% compared to 48%. As a comparator, the Royal College of Physicians 2015–2016 census reported the consultant population as being 66% male and 34% female (with considerable inter-specialty variation). Figure 6 shows an increase in the percentage of female consultant clinical oncologists in the workforce, and this trend is likely to continue over the next few years as 65% of the 2016 trainee consultant clinical oncologists are female (though this is somewhat counterbalanced by a very high proportion of international medical graduates being male).

*The gender of five consultant clinical oncologists is not known, so they are excluded from the above graph.
Figure 7 further indicates a trend towards a higher percentage of female consultant clinical oncologists, with the younger age groups predominantly female and the older age groups predominantly male.

**Figure 7. Consultant clinical oncologist headcount by age group and gender**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>30–39</td>
<td>68</td>
<td>57</td>
</tr>
<tr>
<td>40–49</td>
<td>232</td>
<td>191</td>
</tr>
<tr>
<td>50–59</td>
<td>92</td>
<td>121</td>
</tr>
<tr>
<td>60–69</td>
<td>10</td>
<td>53</td>
</tr>
</tbody>
</table>

*35 consultants (4%) are not included in the above chart as their age is not known.*
Figure 8. Age profile of consultant clinical oncologists – four-year trends (2014–2016)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>30–39</td>
<td>16</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>40–49</td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>50–59</td>
<td></td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>60–69</td>
<td>8</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Not known</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>
The mean age of consultant clinical oncologists is 47. Almost half (49%) of consultant clinical oncologists are in the 40–49 age range. Of the current workforce, 7% are 60 or over, so are approaching retirement (this group is predominantly male).

Figure 8 shows no significant change in the age profile of consultant clinical oncologists from 2014 to 2016 (that is, no evidence of an aging workforce). However, it covers very broad age ranges and a short time period, so further analysis is required to understand more subtle trends.

There is no significant variation in the mean age of 47 across UK countries. The mean is slightly lower (46) in Northern Ireland and Scotland and slightly higher (48) in Wales.

### 4. Consultant workload – contracted programmed activities

The census collects information on the number of contracted PAs worked per week for each consultant clinical oncologists, subdivided into direct clinical care (DCC) and supporting professional activities (SPA). DCC refers to work directly relating to the prevention, diagnosis or treatment of illness (but also includes administration and travel relating to that work). SPAs are activities undertaken to comply with clinical governance and revalidation requirements, including mandatory training, audit, continued professional development and appraisal (but can also include supporting activities such as teaching and training).

![Figure 9. Mean contracted DCC and SPA PAs per week for full-time NHS consultant clinical oncologists – six-year trends (2011–2016)](image)

Figure 9 shows the mean contracted DCC and SPA PAs for full-time consultant clinical oncologists over the six-year period from 2011 to 2016. The chart shows an increase in the mean number of DCC PAs and total PAs (in particular from 2012 to 2013). The mean contracted PAs in 2016 is 10.9, equating to a 44-hour week (a significant increase from ten PAs reported in 2010, equating to a 40-hour working week). This excludes additional responsibilities and hours worked above contracted PAs.
Table 7 shows the mean contracted PAs for full-time consultant clinical oncologists working in NHS posts, split by UK country. It excludes those working in academic and mixed/NHS academic posts. Northern Ireland reported the highest number of mean contracted PAs in 2016 (11.5). In Wales the mean PAs increased considerably from 10.7 in 2015 to 11.3 in 2016. Across the UK, the mean contracted PAs in 2016 was 11.0, a slight increase from 10.7 in 2015.

The mean contracted DCC + SPA PAs reported by the Royal College of Physicians is therefore ten, which is significantly lower than the 11 reported for consultant clinical oncologists. The mean number of PAs reported as actually worked by the Royal College of Physicians was around 10% above the contracted workload. Anecdotal evidence suggests that this is also true of consultant clinical oncologists, who work a significant number of hours above their contracted workload. The RCR recommends that for consultants who constantly work in excess of their contracted PAs, as supported by a job-planning diary, either a reduction in workload, or an increase in PAs should be sought.4 No consultant should work more than 48 hours for their trust (equivalent to 12 PAs), the limit under the European Working Time Directive, unless they have decided to opt out.4

Table 7. Mean contracted DCC and SPA PAs per week for full-time NHS consultant clinical oncologists by UK country, 2015 and 2016

<table>
<thead>
<tr>
<th></th>
<th>2016 DCCs</th>
<th>2016 SPA PAs</th>
<th>2016 total (DCC + SPA PAs)</th>
<th>2015 total (DCC + SPA PAs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>England</td>
<td>9.0</td>
<td>2.0</td>
<td>10.9</td>
<td>10.7</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>9.7</td>
<td>1.8</td>
<td>11.5</td>
<td>11.5</td>
</tr>
<tr>
<td>Scotland</td>
<td>9.0</td>
<td>1.9</td>
<td>10.9</td>
<td>11.1</td>
</tr>
<tr>
<td>Wales</td>
<td>8.4</td>
<td>2.8</td>
<td>11.3</td>
<td>10.7</td>
</tr>
<tr>
<td>UK – overall</td>
<td>9.0</td>
<td>2.0</td>
<td>11.0</td>
<td>10.7</td>
</tr>
</tbody>
</table>

As a comparator, the Royal College of Physicians 2015–2016 census reported the mean number of contracted PAs for full-time consultant physicians as shown in the dark blue table below:2
Table 8 shows that 28% of full-time consultant clinical oncologists are contracted to work 12 PAs or more. This is a slight increase from the 25% reported in the 2015 census.

<table>
<thead>
<tr>
<th>Number of PAs</th>
<th>Number of consultants</th>
<th>Percentage of consultants</th>
</tr>
</thead>
<tbody>
<tr>
<td>10–10.99</td>
<td>291</td>
<td>47%</td>
</tr>
<tr>
<td>11–11.99</td>
<td>153</td>
<td>25%</td>
</tr>
<tr>
<td>12 (exactly)</td>
<td>129</td>
<td>21%</td>
</tr>
<tr>
<td>&gt;12</td>
<td>42</td>
<td>7%</td>
</tr>
<tr>
<td>Not known</td>
<td>3</td>
<td>0%</td>
</tr>
</tbody>
</table>

**Balance of (DCC and SPA) programmed activities**

As guidance, the RCR suggests a balance for consultant clinical oncologists of 7.5 PAs for DCC and 2.5 for SPAs. The minimum number of SPAs required to support an individual’s revalidation is 1.5. The RCR highlight (in their *Guide to job planning in clinical oncology*) that the ideal mix of DCC and SPA activities at departmental and individual level needs to be identified through the job-planning process, taking into account a variety of factors.

The 2016 census data shows there is little difference between full-time and LTFT staff when looking at the percentage of time spent undertaking DCC activities compared to SPA activities. Full-time staff are contracted to spend 82% of time on DCC activities and 18% of time on SPA activities. Part-time staff are contracted to spend 80% of time on DCC activities and 20% on SPA activities. These percentages are for NHS staff only (they exclude those undertaking academic roles and mixed NHS/academic roles).
In total, 192 (31%) full-time consultant clinical oncologist have 2.5 or more SPAs in their job plan (meaning that 69% of job plans fall short of the RCR’s general guidance of 2.5 SPAs). However, Figure 10 shows a decrease in the percentage of full-time consultants with ‘1.49 SPAs or fewer’ from 91 (16%) in 2014 to 56 (9%) in 2016.

Table 9 shows that the average contracted SPAs for the 241 part-time consultant clinical oncologists is 1.5, noticeably lower than the RCR recommendation of 2.5 SPAs. For individuals working LTFT, the minimum SPA allocation required for revalidation is identical to full-time workers (1.5 SPAs).

In total, 17% (n=145) of the 859 consultant clinical oncologists have fewer than 1.5 SPAs in their job plans. Where SPAs fall below the minimum threshold, there are clear dangers in terms of clinical governance and patient safety.
Additional PAs
Additional work undertaken as a clinical director, audit lead, clinical tutor and similar roles, should be identified as additional supporting activities. These activities should be reflected in the job plan by a reduced DCC component, additional payment or both. Of the 166 consultant clinical oncologists, (19%) were reported as having additional responsibilities in the 2016 census, an increase from 125 (15%) in the 2015 census. Just under a third (53 of the 166) of consultants with additional responsibilities are LTFT workers.

Figure 11. Additional responsibility PAs held by consultant clinical oncologists in the UK, 2016

<table>
<thead>
<tr>
<th>Number of consultants</th>
<th>0.99 or less</th>
<th>1–1.99</th>
<th>2–2.99</th>
<th>3–3.99</th>
<th>4–4.99</th>
<th>5 or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td>80</td>
<td>26</td>
<td>8</td>
<td>9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Research PAs
Clinical oncology is a research-driven specialty: understanding the science underpinning practice and demonstrating benefit through clinical trials is key to improving care for patients. Just under 10% of the workforce (81) of consultant clinical oncologists were recorded in the 2016 census as having research PAs in their job plans. Research PAs are slightly less common in LTFT workers, where only 8% have research PAs in their job plans. Where research PAs were present in job plans, the mean was 1.5 (equivalent to six hours per week).

Just under 3% (n=24) of consultant clinical oncologists work in academic posts. The mean SPAs for these posts is five and the mean DCC PAs is five (these means include full-time and LTFT posts).
5. **Type of consultant clinical posts and working patterns**

There has been no significant shift over the past 12 months in the percentages detailed in Table 10.

### Table 10. Type of consultant post held by clinical oncologists, 2016

<table>
<thead>
<tr>
<th>Type of post</th>
<th>Headcount</th>
<th>Percentage of consultants</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHS</td>
<td>783</td>
<td>91%</td>
</tr>
<tr>
<td>Mixed NHS/academic</td>
<td>47</td>
<td>5%</td>
</tr>
<tr>
<td>Academic</td>
<td>24</td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>

### Table 11. Predominant workload of consultants – headcount (and percentage of workforce), 2010–2016

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemotherapy</td>
<td>9 (1%)</td>
<td>11 (1%)</td>
<td>10 (1%)</td>
<td>14 (2%)</td>
</tr>
<tr>
<td>Radiotherapy</td>
<td>137 (20%)</td>
<td>105 (14%)</td>
<td>117 (14%)</td>
<td>137 (16%)</td>
</tr>
<tr>
<td>Balance of both</td>
<td>541 (79%)</td>
<td>655 (85%)</td>
<td>700 (85%)</td>
<td>706 (82%)</td>
</tr>
</tbody>
</table>

The consultant workload split between chemotherapy, radiotherapy and ‘balance of both’ has remained fairly steady since 2010 with the 2016 split being 2% chemotherapy, 16% radiotherapy and 82% ‘balance of both’.
In October 2016, 64% of consultants delivered care at more than one site on a regular basis, 20% were employed at more than one trust and 42% were required to travel to more than one site in a working day on a regular basis. Time spent travelling between sites in a working day is clearly unproductive time and should be kept to a minimum. Table 12 shows an increase since 2014 in the number (and percentage) of consultants employed at more than one trust and delivering care at more than one site on a regular basis.

The ability of clinical oncologists to cover multiple sites, modalities and geographical areas is a major benefit in terms of workforce flexibility and likely positive patient experience. However, there is a risk of overloading and degrading the quality of the service. Skill mix using associated health professionals in extended roles is essential to try to meet the increasing demands on non-surgical oncology.

Table 12. Cross-site working patterns by UK consultant clinical oncologists, 2014–2016

<table>
<thead>
<tr>
<th>Number (and percentage) of consultants</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed at more than one trust</td>
<td>164.5 (22%)</td>
<td>163 (20%)</td>
<td>170 (19.8%)</td>
</tr>
<tr>
<td>Delivered care at more than one site on a regular basis</td>
<td>457 (60%)</td>
<td>527.5 (64%)</td>
<td>549 (63.9%)</td>
</tr>
<tr>
<td>Required to travel to more than one site in a working day on a regular basis</td>
<td>316 (42%)</td>
<td>350.5 (42%)</td>
<td>363 (42.3%)</td>
</tr>
</tbody>
</table>
6. Tumour site specialties

The RCR recommends that a consultant should normally undertake no more than two broad areas of site specialist practice, as it is difficult for a clinician to remain up to date in too wide an area of practice.\(^4\) Table 13 shows that just over a third of consultants (34%) have three or more site specialities (this does not vary significantly between different age groups). This is slightly lower than the 36% reported in 2014 and 2015.

Of full-time NHS consultant clinical oncologists working full time, 41% have three or more site specialties and 22% of those working LTFT have three or more site specialities. For those working LTFT in particular (given that the mean SPA PAs is 1.5), the feasibility of keeping up to date on three or more site specialties needs to be carefully considered when job-planning.

Table 13. Number of tumour site specialties per consultant clinical oncologist in the UK, 2014–2015

<table>
<thead>
<tr>
<th>Number of site specialties</th>
<th>Number (and percentage) of consultants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2014</td>
</tr>
<tr>
<td>One</td>
<td></td>
</tr>
<tr>
<td>One</td>
<td>136 (18%)</td>
</tr>
<tr>
<td>Two</td>
<td>354 (46%)</td>
</tr>
<tr>
<td>Three</td>
<td>195 (25%)</td>
</tr>
<tr>
<td>Four or more</td>
<td>81 (11%)</td>
</tr>
</tbody>
</table>

Table 14 (overleaf) shows decreases in the number of consultant clinical oncologists specialising in the site specialities highlighted in red, including head and neck and haematological malignancy. Increases are highlighted in green, including upper gastrointestinal and genitourinary. Where the decreases represent a high proportion of the site-specialist group, this could indicate a skill shortage (or increase in a skill shortage) if demand has not decreased proportionally. Consultant clinical oncologist site specialists in thyroid and haematological malignancy have both decreased by more than 5%.

Generally, there are well-established regional networks enabling smaller cancer centres to access expertise from consultants in site specialties/cancers which are less common or where there is pressure on a site specialty. These arrangements are being reviewed in England by NHS Specialist Commissioning.
Table 14. Consultant site specialties (multi-response) by UK country – 2015–2016 differences

<table>
<thead>
<tr>
<th>Specialty</th>
<th>England</th>
<th>Northern Ireland</th>
<th>Scotland</th>
<th>Wales</th>
<th>UK total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oncology</td>
<td>99</td>
<td>100</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Breast</td>
<td>224</td>
<td>221</td>
<td>-3</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>Central nervous system</td>
<td>95</td>
<td>97</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Colorectal</td>
<td>149</td>
<td>149</td>
<td>0</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Genitourinary</td>
<td>204</td>
<td>212</td>
<td>8</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Gynaecology</td>
<td>98</td>
<td>97</td>
<td>-1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Haematological malignancy</td>
<td>81</td>
<td>76</td>
<td>-5</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Head and neck</td>
<td>113</td>
<td>108</td>
<td>-5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Lung</td>
<td>177</td>
<td>173</td>
<td>-4</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Paediatric</td>
<td>29</td>
<td>29</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Sarcomas</td>
<td>51</td>
<td>51</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Skin</td>
<td>88</td>
<td>94</td>
<td>6</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Teen and young adult</td>
<td>12</td>
<td>12</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Thyroid</td>
<td>55</td>
<td>49</td>
<td>-6</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Upper gastrointestinal (including hepatobiliary)</td>
<td>108</td>
<td>115</td>
<td>7</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Other</td>
<td>54</td>
<td>45</td>
<td>-9</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>1,637</td>
<td>1,628</td>
<td>-9</td>
<td>61</td>
<td>67</td>
</tr>
</tbody>
</table>
ONS 2015 statistics show that breast (15.4%), prostate (13.4%), lung (12.5%) and colorectal (11.6%) cancer continue to account for over half of the malignant cancer registrations in England for all ages combined.12
Figure 13 shows the percentage and number of consultant clinical oncologists specialising in each site area split by age. There are similar numbers of consultants over 55 and under 40 (approximately 125). Among consultants specialising in acute oncology and head and neck, the percentage (and number of consultants) is greater in the under-40 age range than in the over-55 age range. In contrast the percentage (and number) of consultants specialising in breast and sarcomas is greater in the over-55 age group (that is, those approaching retirement) than in the under-40 age range. This is a potential indicator of future shortages in site specialties.

<table>
<thead>
<tr>
<th>Site Specialism</th>
<th>&lt;40</th>
<th>40–55</th>
<th>&gt;55</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oncology</td>
<td>28</td>
<td>68</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Breast</td>
<td>28</td>
<td>171</td>
<td>49</td>
<td>5</td>
</tr>
<tr>
<td>Central nervous system</td>
<td>17</td>
<td>72</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>Colorectal</td>
<td>27</td>
<td>113</td>
<td>33</td>
<td>5</td>
</tr>
<tr>
<td>Genitourinary</td>
<td>35</td>
<td>172</td>
<td>28</td>
<td>5</td>
</tr>
<tr>
<td>Gynaecology</td>
<td>11</td>
<td>79</td>
<td>18</td>
<td>5</td>
</tr>
<tr>
<td>Haematological malignancy</td>
<td>14</td>
<td>56</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>Head and neck</td>
<td>28</td>
<td>92</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>Lung</td>
<td>35</td>
<td>151</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>Paediatric</td>
<td>4</td>
<td>25</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Sarcomas</td>
<td>5</td>
<td>42</td>
<td>12</td>
<td>5</td>
</tr>
<tr>
<td>Skin</td>
<td>18</td>
<td>65</td>
<td>18</td>
<td>5</td>
</tr>
<tr>
<td>Teen and young adult</td>
<td>2</td>
<td>10</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Thyroid</td>
<td>6</td>
<td>41</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Upper gastrointestinal &amp; hepatobiliary</td>
<td>22</td>
<td>95</td>
<td>19</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>35</td>
<td>11</td>
<td>5</td>
</tr>
</tbody>
</table>

*Data labels show the headcount of clinical oncology consultants in each age group in each site specialism.
7. **Weekend radiotherapy and chemotherapy services**

**Routine/non-emergency services**

There has been an increase in radiotherapy services open on Saturdays from 21% (13 centres) in October 2015 to 31% (19 centres) in October 2016. There has been no change in Sunday opening between 2015 and 2016. In both years, seven centres (11%) opened on Sundays.

Feedback indicated that machine service days and bank holidays are two considerations taken into account when planning radiotherapy service opening hours.

**Figure 14. Percentage of cancer centres in the UK providing weekend radiotherapy services, 2014–2016**

<table>
<thead>
<tr>
<th>% of cancer centres</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>78</td>
<td>12</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>79</td>
<td>10</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>69</td>
<td>20</td>
<td>11</td>
<td></td>
</tr>
</tbody>
</table>

- **Not Open**
- **Saturday only**
- **Saturday and Sunday**

**Routine/non-emergency services**

In October 2016, 19% of centres (n=12) provided weekend chemotherapy services. There has been no significant change in weekend chemotherapy opening hours since 2014.

**Figure 15. Percentage of cancer centres in the UK providing weekend chemotherapy services, 2014–2016**

<table>
<thead>
<tr>
<th>% of cancer centres</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>81</td>
<td>12</td>
<td>11</td>
<td>13</td>
</tr>
<tr>
<td>81</td>
<td>11</td>
<td>8</td>
<td>6</td>
</tr>
</tbody>
</table>

- **Not Open**
- **Saturday only**
- **Saturday and Sunday**
8.
Unfilled posts in clinical oncology

Table 15. Number of unfilled consultant clinical oncology posts by UK country – four-year trend (2013–2016)

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>England</td>
<td>24</td>
<td>42</td>
<td>15</td>
<td>33</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Scotland</td>
<td>6</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Wales</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Total UK</td>
<td>33</td>
<td>47</td>
<td>21</td>
<td>42</td>
</tr>
<tr>
<td>Of which, posts advertised but failed to appoint</td>
<td>12</td>
<td>12</td>
<td>9</td>
<td>23</td>
</tr>
<tr>
<td>% failed to appoint</td>
<td>36%</td>
<td>26%</td>
<td>43%</td>
<td>55%</td>
</tr>
<tr>
<td>Vacancy rate*</td>
<td>5%</td>
<td>7%</td>
<td>3%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Vacancy rates

NHS Improvement define the vacancy rate as the percentage of WTE staff in post against planned workforce levels. A vacancy is defined as a post which the trust is actively trying to fill. The vacancy rate in 2016 is 5%. As a broad comparator, the ONS reported a 3% vacancy rate for ‘human health and social work’ industry sector vacancies in 2016, suggesting that recruitment for consultant clinical oncologists is more challenging than for many other health and social sector posts.

*The calculation is slightly simplistic as it assumes all the vacancies are full time, when in fact 90% were full time. However, given that the mean PAs for LTFT posts is 7.5, this simplification is unlikely to have a significant effect on the vacancy rate value.

Vacancy rates and unfilled posts are likely to be an underestimate of the extent of vacant positions, as trusts may not actively recruit when they predict that a vacant post will be very difficult to appoint. In addition, some Heads of Service report difficulty in securing the necessary funding for new posts.
Unfilled posts

There has been a significant increase from 21 to 42 in the number of unfilled consultant clinical oncology posts between 2015 and 2016. Of the 42 2016 consultant clinical oncology vacancies, 16 are covered by locums. Three-quarters (n=12) of the locums providing cover have been in post for six months or longer, indicating difficulties filling these posts.

There has also been a significant increase in the number of posts which have been advertised, but have failed to appoint. Table 15 shows a total of 23 posts that have been advertised but failed to appoint in 2016, significantly more than the nine ‘failed to appoint’ posts reported in 2015, indicating recruitment difficulties.

In the case of posts which were advertised, but had failed to appoint, census respondents were asked about their plan of action (this was a free-text non-mandatory field). Many trusts indicated a willingness to be flexible with regards to the job plan, for example, one Head of Service stated:

‘Acute need for a further clinical oncologist to support breast practice. Am re-advertising but am prepared to be flexible over final job description and [there] maybe some scope for internal shuffling if the right person comes along.’

Another stated, ‘a clinical oncology academic post unfilled over several years was converted to an NHS medical oncology post.’

Others were planning to appoint locums into substantive posts, recruit from overseas, restructure other department jobs to take on the extra workload and/or cover the workload at another hospital within the same trust. Some Heads of Service expressed concern that their hospital location and/or type of hospital appeared to make recruitment more difficult. Others stated that difficulty recruiting to other posts (such as registrars) was having a knock on effect in terms of the consultant clinical oncologist workload. A couple of trusts reported problems with locum appointments not meeting quality standards.
As shown in Figure 16, approximately three-quarters (76%) of consultant clinical oncologist unfilled posts have been vacant for four or more months. Approximately one-third of the unfilled posts (36%) have been vacant for eight or more months.

Difficulty filling vacant posts for consultant clinical oncologists indicates a workforce shortage.
9. Consultant workforce attrition (including retirement)

Between October 2015 and October 2016, 33 consultant clinical oncologists left the workforce, which is approximately 4% of the consultant workforce. This attrition is higher than the 25 consultants (approximately 3%) reported as leaving the previous year (and the 2.6% attrition rate reported in 2010) as shown in Table 16.

Table 16. Number and mean age of consultant clinical oncologists who left the workforce between October 2015 and October 2016

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of consultants</th>
<th>Mean age</th>
</tr>
</thead>
<tbody>
<tr>
<td>England</td>
<td>26</td>
<td>59</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>Scotland</td>
<td>4</td>
<td>56</td>
</tr>
<tr>
<td>Wales</td>
<td>2</td>
<td>58</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>33</strong></td>
<td><strong>58</strong></td>
</tr>
</tbody>
</table>

The primary reason for leaving is retirement, however, in many cases the reason/s for leaving are not known.

The age of those leaving the consultant workforce range from 40–69, with the mean age being 58.

Where the reason for leaving was reported as retirement, the mean age was 62.5. This is in line with 2010–2015 data, which shows the mean age of retirement of consultant clinical oncologists as between 60 and 64. It is also in line with the Royal College of Physicians 2015–2016 census which reported the mean age of retirement of consultant physicians as 62.2, the mean age for males being 62.7 and the mean age for females being 61.4.²

The minimum pension age for members of the NHS pension scheme is 50 or 55 depending on the particular scheme they are members of.¹⁴

Table 17. Gender and employment type of consultants who left the workforce between October 2015 and October 2016

<table>
<thead>
<tr>
<th>Gender</th>
<th>Full-time</th>
<th>LTFT</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>4</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Male</td>
<td>18</td>
<td>7</td>
<td>25</td>
</tr>
</tbody>
</table>
More males than females (25 compared to 8) left the workforce between October 2015 and October 2016. This equates to a 2% attrition rate for females and a 6% attrition rate for males.

One-third of the leavers (n=11) were working LTFT prior to leaving. This is slightly higher than the national average of 28% of consultants working LTFT, likely representing the slightly higher percentage of older consultants working LTFT.

Table 18. Number and mean age of consultant clinical oncologists who expect to leave the workforce between October 2016 and October 2017

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of consultants</th>
<th>Mean age</th>
</tr>
</thead>
<tbody>
<tr>
<td>England</td>
<td>24</td>
<td>61</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>0</td>
<td>N/A</td>
</tr>
<tr>
<td>Scotland</td>
<td>2</td>
<td>65</td>
</tr>
<tr>
<td>Wales</td>
<td>3</td>
<td>63</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>29</strong></td>
<td><strong>61</strong></td>
</tr>
</tbody>
</table>

By October 2017, 29 consultants are reported as expecting to retire. This is significantly higher than the 2015 census figure of 16 consultants reported as expecting to retire in the upcoming year. The mean age of those planning to retire before October 2017 is 61. The Royal College of Physicians 2015–2016 census reported that, of those who stated that they plan to retire early, the most common reasons given were ‘pressure of work’ and ‘dissatisfaction with the NHS’.

The number of consultants reported as ‘expecting to retire’ in the next year tends to be lower than the number of actual retirees reported the following year. Under-reporting in this context is understandable as consultants may not formulate firm retirement plans, or share those plans with their employers, a year ahead (and retirement plans may change). Workforce attrition is therefore expected to be at least 4% (34 consultants) between October 2016 and October 2017.

The cut in the lifetime allowance (the overall amount of pension savings a person can have at retirement without incurring a tax charge) from £1.25 million to £1 million could be a factor incentivising early retirement among older consultant clinical oncologists.
Clinical oncology in the UK is provided by a mixed UK and international workforce. The 2016 census showed that just under a quarter (23%) of consultant clinical oncologists are international medical graduates (IMGs) from one of 42 countries (and just over three-quarters graduated from UK medical colleges). In comparison, the 2015 workforce census reported that 22% of consultant clinical oncologists were IMGs, from one of 35 countries.

In summary, there has been a small (1%) increase in IMG consultant clinical oncologists from 2015 to 2016, together with an increase (from 35 to 42) in the number of countries where the primary medical qualification was undertaken. IMGs are predominantly male (74%).

Table 19. Consultant clinical oncologists – percentage of IMGs by UK country*

<table>
<thead>
<tr>
<th>Region</th>
<th>IMGs</th>
<th>UK graduates</th>
<th>Total</th>
<th>% IMGs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scotland</td>
<td>15</td>
<td>51</td>
<td>66</td>
<td>23%</td>
</tr>
<tr>
<td>Wales</td>
<td>8</td>
<td>36</td>
<td>44</td>
<td>18%</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>6</td>
<td>25</td>
<td>31</td>
<td>19%</td>
</tr>
<tr>
<td>England</td>
<td>170</td>
<td>543</td>
<td>713</td>
<td>24%</td>
</tr>
<tr>
<td>UK total</td>
<td>199</td>
<td>655</td>
<td>854</td>
<td>23%</td>
</tr>
</tbody>
</table>

*Five consultant clinical oncologists are not included in the above chart, as the country in which they graduated from medical school is not known.

Table 19 shows that the percentage of consultant clinical oncologists who are IMGs is slightly variable by country.

IMGs are much more likely to work as locums than UK graduates. Of the 37 locum consultant clinical oncologists, 18 (49%) are IMGs, 15 (40%) are UK graduates and in four cases (1%) the country of primary medical qualification is not known.

Considerations for IMGs and their employers include Home Office immigration rules, GMC registration requirements, ethical and legal frameworks in UK healthcare, as well as the cultural context of the UK (including the languages spoken). Several of these factors, including Home Office immigration rules, are subject to change from time to time. Currently, ‘consultant in clinical oncology’ is on the shortage occupation list, a government list of roles where there are not enough workers in the domestic UK labour market to meet demand. Inclusion in the list means that employers don’t have to meet the requirements of the resident labour market test, which can significantly speed up the recruitment process.

There is currently considerable uncertainty about the impact of the UK leaving the European Union (EU), with possible changes to the rights and status of EU nationals living and working in the UK (and those of UK nationals living and working in the EU).
This uncertainty increases the complexity and difficulty of long-term workforce planning and is likely already having an impact on decisions taken by (UK and international) current and future consultant clinical oncologists regarding the location of their studies and employment (for example, in 2016 Universities and Colleges Admissions Service [UCAS] reported a significant drop in EU applications to UK universities).

**Countries in which IMGs gained their qualification**

Over half of the 199 IMGs working in the UK clinical oncology workforce gained their primary medical qualification in Asia. 92 consultants undertook their primary medical qualification in India and 15 consultants undertook it in Pakistan, representing 46% and 11% of the IMG workforce respectively.

Just over a quarter (26%) of the IMGs (52 consultants/6% of the workforce) gained their primary medical qualification in an EU country. 16 EU countries are represented, with no EU country training more than ten medical graduates currently practising as consultant clinical oncologists in the UK.

---

**11. Movements of consultants between UK countries**

Table 20 shows the extent to which the 76% of consultant clinical oncologists who undertook their primary medical training in the UK have remained in the same UK country as their initial training.

Of the consultant clinical oncologists who undertook their primary medical qualification in England, 91% are employed in England. This contrasts with Scotland, where only 37% of those who undertook their primary medical qualification in Scotland are employed in Scotland. 58% of Scottish medical graduates, currently working as consultant clinical oncologists are working in England.

<table>
<thead>
<tr>
<th>Country of primary medical qualification</th>
<th>Consultant clinical oncologists employed in:</th>
<th>Total</th>
<th>% of medical graduates practising in country of primary medical qualification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>England Northern Ireland Scotland Wales</td>
<td></td>
<td></td>
</tr>
<tr>
<td>England</td>
<td>476 2 18 25</td>
<td>521</td>
<td>91%</td>
</tr>
<tr>
<td>Scotland</td>
<td>50 3 32 1</td>
<td>86</td>
<td>37%</td>
</tr>
<tr>
<td>Wales</td>
<td>12 1 1 10</td>
<td>24</td>
<td>42%</td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>5 19 0 0</td>
<td>24</td>
<td>79%</td>
</tr>
<tr>
<td>Total UK graduates working as consultant clinical oncologists</td>
<td>543 25 51 36</td>
<td>655</td>
<td></td>
</tr>
</tbody>
</table>
Table 21. UK medical graduates working as consultant clinical oncologists – university of primary medical qualification

<table>
<thead>
<tr>
<th>University of primary medical qualification</th>
<th>Number of consultants</th>
</tr>
</thead>
<tbody>
<tr>
<td>London</td>
<td>247</td>
</tr>
<tr>
<td>Cambridge</td>
<td>40</td>
</tr>
<tr>
<td>Oxford</td>
<td>33</td>
</tr>
<tr>
<td>Edinburgh</td>
<td>33</td>
</tr>
<tr>
<td>Birmingham</td>
<td>32</td>
</tr>
<tr>
<td>Glasgow</td>
<td>26</td>
</tr>
<tr>
<td>Southampton</td>
<td>25</td>
</tr>
<tr>
<td>Queens Belfast</td>
<td>24</td>
</tr>
<tr>
<td>Wales</td>
<td>24</td>
</tr>
<tr>
<td>Nottingham</td>
<td>22</td>
</tr>
<tr>
<td>Manchester</td>
<td>21</td>
</tr>
<tr>
<td>Sheffield</td>
<td>20</td>
</tr>
<tr>
<td>Leicester</td>
<td>20</td>
</tr>
<tr>
<td>Bristol</td>
<td>18</td>
</tr>
<tr>
<td>Leeds</td>
<td>17</td>
</tr>
<tr>
<td>Dundee</td>
<td>16</td>
</tr>
<tr>
<td>Liverpool</td>
<td>15</td>
</tr>
<tr>
<td>Newcastle</td>
<td>11</td>
</tr>
<tr>
<td>Aberdeen</td>
<td>11</td>
</tr>
</tbody>
</table>
Table 21 shows that a high number (247/38%) of UK graduates working as consultant clinical oncologists undertook their primary medical qualification at the University of London (an average of 12 University of London graduates have been added to the GMC Clinical Oncology Specialist Register per year over the past five years, a slight increase from the average of ten, ten–15 years ago).

The high number of University of London graduates is likely to be a key reason why London has fewer recruitment difficulties than other regions.

12. Medical oncologists

It takes a highly skilled, multidisciplinary (and often large) team to deliver cancer treatment to patients. Consultant clinical oncologists work closely with medical oncologists, haematologists, radiographers, nurses and many others in delivering cancer care across the UK.

Clinical oncology and medical oncology are complementary disciplines of non-surgical oncology. While there is some overlap, each discipline has its unique set of clinical skills. Oncologists in both disciplines generally specialise in a limited number of disease sites or tumour types. Both disciplines support clinical trials and research in their fields.

Clinical oncologists are specialist physicians who are trained in the care of the full range of malignant diseases. They are the only medical specialist group trained in the assessment of, treatment with and prescribing of radiotherapy for patients. Clinical oncologists are also trained in the use of systemic therapies in the management of cancer. The data outlined in section 5 indicates that for 82% of consultant clinical oncologists the predominant workload is a balance of both chemotherapy and radiotherapy.

Medical oncologists are physicians who specialise in the management and treatment of patients with cancer, but in particular specialise in the administration of systemic therapies. They do not prescribe or administer radiotherapy treatments.

The below chart shows the Royal College of Physicians annual census data for medical oncologists. Headcount has increased from 2005 to 2016 by an average of 9% per annum.

<table>
<thead>
<tr>
<th>Year</th>
<th>England</th>
<th>Northern Ireland</th>
<th>Scotland</th>
<th>Wales</th>
<th>United Kingdom</th>
<th>% annual increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>181</td>
<td>7</td>
<td>16</td>
<td>5</td>
<td>209</td>
<td>2%</td>
</tr>
<tr>
<td>2006</td>
<td>197</td>
<td>7</td>
<td>20</td>
<td>5</td>
<td>229</td>
<td>10%</td>
</tr>
<tr>
<td>2007</td>
<td>221</td>
<td>8</td>
<td>22</td>
<td>6</td>
<td>257</td>
<td>12%</td>
</tr>
<tr>
<td>2008</td>
<td>248</td>
<td>9</td>
<td>22</td>
<td>7</td>
<td>286</td>
<td>11%</td>
</tr>
<tr>
<td>2009</td>
<td>276</td>
<td>8</td>
<td>25</td>
<td>9</td>
<td>318</td>
<td>11%</td>
</tr>
<tr>
<td>2010</td>
<td>287</td>
<td>8</td>
<td>26</td>
<td>10</td>
<td>331</td>
<td>4%</td>
</tr>
<tr>
<td>2011</td>
<td>304</td>
<td>7</td>
<td>28</td>
<td>13</td>
<td>352</td>
<td>6%</td>
</tr>
<tr>
<td>2012</td>
<td>330</td>
<td>12</td>
<td>34</td>
<td>11</td>
<td>387</td>
<td>10%</td>
</tr>
<tr>
<td>2013</td>
<td>361</td>
<td>13</td>
<td>35</td>
<td>13</td>
<td>422</td>
<td>9%</td>
</tr>
<tr>
<td>2014</td>
<td>373</td>
<td>14</td>
<td>34</td>
<td>13</td>
<td>434</td>
<td>3%</td>
</tr>
<tr>
<td>2015</td>
<td>420</td>
<td>17</td>
<td>37</td>
<td>14</td>
<td>488</td>
<td>12%</td>
</tr>
<tr>
<td>2016</td>
<td>478</td>
<td>17</td>
<td>39</td>
<td>16</td>
<td>550</td>
<td>13%</td>
</tr>
</tbody>
</table>

The data in Table 22 have been validated using RCR census data (and GMC data) and similar trends and numbers are observed.
Table 23 shows the total number of WTE medical and clinical oncologists per country (in the WTE total column). The table also shows the population covered per WTE oncologist. There is significant variation between UK countries with oncologists in Wales covering the largest population – just under 57,000 people per WTE oncologist and Northern Ireland covering the smallest population – just over 42,000 people per WTE oncologist.

<table>
<thead>
<tr>
<th></th>
<th>Clinical oncologists</th>
<th>Medical oncologists</th>
<th>WTE total (clin and med onc)</th>
<th>Population (2016)</th>
<th>of which… over 65 yrs</th>
<th>Population per WTE</th>
<th>Over 65 population per WTE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>England</strong></td>
<td>716</td>
<td>478</td>
<td>436</td>
<td>1105</td>
<td>55,268,067</td>
<td>9,882,800</td>
<td>50,013</td>
</tr>
<tr>
<td><strong>Northern Ireland</strong></td>
<td>31</td>
<td>17</td>
<td>15</td>
<td>44</td>
<td>1,862,137</td>
<td>297,700</td>
<td>42,256</td>
</tr>
<tr>
<td><strong>Scotland</strong></td>
<td>67</td>
<td>39</td>
<td>36</td>
<td>100</td>
<td>5,404,700</td>
<td>998,800</td>
<td>53,957</td>
</tr>
<tr>
<td><strong>Wales</strong></td>
<td>44</td>
<td>16</td>
<td>15</td>
<td>55</td>
<td>3,113,150</td>
<td>634,500</td>
<td>56,752</td>
</tr>
<tr>
<td><strong>UK – total</strong></td>
<td>858</td>
<td>550</td>
<td>501</td>
<td>1,304</td>
<td>65,648,054</td>
<td>11,813,800</td>
<td>50,337</td>
</tr>
</tbody>
</table>
13. Trainee consultant clinical oncologists – numbers and trends

RCR data show that 238 doctors completed their clinical oncology specialty training between 2012 and 2016; annual numbers varied between 40 and 56 per year, the mean being 48. Similarly, GMC data show 262 doctors were added to the clinical oncology specialist register between 2012 and 2016; annual numbers varied between 45 and 60, the mean being 52. The small difference (four per year) between the RCR and GMC datasets is likely due to two factors:

1. Timing differences between the two datasets – there is sometimes a time lag between the RCR recommendation that a doctor is added to the GMC specialist register and the recommendation being implemented (or rejected).
2. Alternate routes to GMC specialist registration, in particular for overseas doctors (with recognised European Economic Area (EEA) equivalent qualifications, or following a GMC assessment of the specialist training undertaken and/or the specialist qualifications awarded).

For those who completed training between 2012 and 2015, the average (mean) time between the date they obtained their primary medical qualification and the date they started their clinical oncology RCR training programme is 5.8 years, though this is variable by gender and by country of primary medical qualification, as shown in Table 24.

Table 24. Mean time (in years) taken between obtaining primary medical qualification and starting RCR clinical oncology specialty training (for those who completed between 2012–2015)

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>4.8</td>
<td>5.5</td>
<td>5.1</td>
</tr>
<tr>
<td>Overseas</td>
<td>7.8</td>
<td>7.5</td>
<td>7.5</td>
</tr>
<tr>
<td>Total</td>
<td>5.1</td>
<td>6.7</td>
<td>5.8</td>
</tr>
</tbody>
</table>
UK medical graduates undertake two years of foundation training and two years of core medical training (CMT) before starting RCR clinical oncology specialist training (graduates may take time out to gain experience and/or undertake research in the UK or overseas before applying for specialty training and some may defer their studies by a year if they are not offered a clinical oncology training post in their preferred location).

The mean time taken to complete the RCR clinical oncology training (for those who completed between 2012 and 2016) is 6.8 years, though this varies by gender, as shown in Table 25.

Table 25. Mean time (in years) taken to complete RCR clinical radiology specialty training for those who completed between 2012–2016

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>7.3</td>
<td>6.3</td>
<td>7</td>
</tr>
<tr>
<td>Overseas</td>
<td>7</td>
<td>6.3</td>
<td>6.6</td>
</tr>
<tr>
<td>Total</td>
<td>7.3</td>
<td>6.3</td>
<td>6.8</td>
</tr>
</tbody>
</table>
The shortest possible time to complete the clinical oncology specialist training is around five years. Factors accounting for the mean of 6.8 years (median of 6.5 years) include taking time out for work reasons including research and overseas placements, for personal reasons (including maternity leave) and the need for some students to retake exams.

The mean time taken between primary medical qualification and completion of clinical oncology training (for those who completed between 2012 and 2016) is 12 years for UK graduates and 14 years for overseas graduates. The very obvious implication of this is the need for long-term workforce planning for clinical oncology.

Figure 17 outlines the number of available UK clinical oncology specialist training places and the number of those places filled by year between 2011 and 2016 (please note Scotland data is only available for 2014 onwards; data from 2011 to 2013 relates to England, Wales and Northern Ireland). The mean number of training places filled per year in this period is 53. There was a significant increase in training places made available in 2015, but only 73% of the places were successfully filled.

![Figure 17. Available training places and places filled in clinical oncology, 2011–2016](image-url)
Workforce predictions

Given that the average time taken to complete RCR specialist training in clinical oncology is roughly six years, and attrition is roughly 10% (over the length of the course), Figure 17 indicates that completions from 2017 to 2023 will average 48 (that is, no change from mean historical completions between 2012 and 2016).

A comparison of the GMC register (those with an active licence and addition to the clinical oncology speciality register in or before 2015) with the 2015 and 2016 census returns shows that 89% of clinical oncologists (with active GMC licenses) are reported as being in active NHS posts (substantive or locum) in the UK in 2015 or 2016. The other 11% who are not actively working as consultant clinical oncologists are understood to be working in other NHS roles, research roles, working abroad or working privately (NB the 11% does not include those on long-term sick leave, retirees or those on maternity leave, who are included within RCR census returns).

Workforce projections over the next five years

If 89% of the 48 predicted trainees completing their training between 2017 and 2023 take up NHS consultant clinical oncology posts in the UK, this amounts to 43 filled clinical oncology posts.

An estimated three consultants will also be added to the GMC clinical oncology specialist register via alternate routes (this is a very rough estimate, as the impact of Brexit and other factors is not yet known).

If the 2016 4% attrition rate does not increase further, this will result in 34 consultants leaving in 2017.

The net effect is a rise of 12 consultant oncologists in 2017, equating to an annual increase of 1%. This is a significant drop from the 4% annual increase reported between 2010 and 2016. The data indicate that the annual increase between 2018 and 2023 would be 1%, or slightly lower, unless there is a significant increase in the numbers of overseas consultant clinical oncologists added to the GMC specialist register via alternate routes.
14. Workforce supply and demand – indications of workforce shortages

The 4% average annual increase in the number of consultant clinical oncologists needs to be interpreted in the context of many complex factors in order to understand whether current workforce numbers can meet workplace demands (now and in the future). Key factors include:

1. **The level of demand for services.** There is no straightforward way to measure this, but the increase in cancer incidence and prevalence rates (along with waiting times) are significant indicators of demand.

2. **Changes in cancer treatment techniques and technologies,** which affect treatment complexity and timeframes.

3. **Key changes in other healthcare professional groups,** which affect consultant clinical oncologist workload (including, but not limited to, medical oncologists).

4. **Regional differences**

5. **The benefits and limitations of locum appointments** (given that most of the 4% increase in the workforce between 2015 and 2016 is accounted for by an increase in the number of locum appointments).

A detailed analysis of the above is beyond the scope of this report, but some key trends and considerations are as follows:

**Demand for services**

CRUK report that over the last decade UK incidence rates for all cancers combined have increased by 7%.\(^1\) They predict that UK incidence rates will rise a further 2% by 2035 to 742 cases per 100,000 people (ONS 2015 statistics reported 667.4 per 100,000 for males and 542.8 per 100,000 for females).\(^{12}\)

According to CRUK, prevalence is predicted to rise by more than 3% a year as more people are either living with, or surviving cancer.\(^1\) Increased prevalence is due to increased cancer incidence and falling death rates. Factors affecting increased prevalence include an aging population, earlier detection of cancer and continued improvements in treatment. A predicted one in two people in the UK born after 1960 will be diagnosed with some form of cancer during their lifetime.

Increased prevalence results in many more patients receiving treatment for much longer periods than previously signifying an increase in demand for cancer services.

**Cancer treatment techniques and technologies**

Along with increased survival comes the increased complexity of care for patients who tend to be older and more likely to have co-morbidities (other health problems which affect their eligibility for treatment and care needs). Their treatment therefore tends to be more diverse and complex, placing additional demand on services. According to CRUK, half (50%) of all cancer cases in the UK each year are diagnosed in people aged 70 and over (2012–2014).\(^1\) The trend of cancer treatments becoming more effective, diverse and complex is likely to continue.

Increased diversity and complexity of oncological treatments must be accompanied by robust quality assurance to increase the standardisation of practice (in line with best practice guidance and evidence) and reduce the risks of error. Time for quality assurance activities (for example, peer review), should be included in consultant job plans. The RCR published standards for volume definition and peer reviews of contours in 2017.\(^{17}\) For many cancer centres, there will be significant resource implications of implementing this good practice guidance.
At regional level, there is significant variation in headcount trends. The highest UK regional headcount growth (of consultant clinical oncologists between October 2015 and October 2016) was reported in London; London headcount increased from 100 to 118 (an 18% increase). In contrast, the East of England, the South East and the South West all saw headcount slightly decrease.

<table>
<thead>
<tr>
<th>Region</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Midlands</td>
<td>44</td>
<td>48</td>
<td>51</td>
</tr>
<tr>
<td>East of England</td>
<td>85</td>
<td>86</td>
<td>83</td>
</tr>
<tr>
<td>London</td>
<td>95</td>
<td>100</td>
<td>118</td>
</tr>
<tr>
<td>North East</td>
<td>32</td>
<td>34</td>
<td>36</td>
</tr>
<tr>
<td>North West</td>
<td>89</td>
<td>95</td>
<td>95</td>
</tr>
<tr>
<td>South Central</td>
<td>63</td>
<td>71</td>
<td>71</td>
</tr>
<tr>
<td>South East</td>
<td>49</td>
<td>54</td>
<td>53</td>
</tr>
<tr>
<td>South West</td>
<td>70</td>
<td>76</td>
<td>75</td>
</tr>
<tr>
<td>West Midlands</td>
<td>53</td>
<td>68</td>
<td>71</td>
</tr>
<tr>
<td>Yorks and Humber</td>
<td>59</td>
<td>61</td>
<td>65</td>
</tr>
</tbody>
</table>
Figure 19 shows that there is considerable difference between the number of WTE consultant clinical oncologists per million people across the English regions, with the South West region reporting the highest at 12.9 and the East Midlands reporting the lowest at 10.4.

Four English regions saw a decrease between 2015 and 2016 in the number of WTE consultant clinical oncologists per million people, namely the East, North West, South East and the South West.
The workforce participation rates are fairly variable by region, the highest being 0.97 in the East Midlands, indicating a low level of LTFT working, and the lowest in the South East, indicating a relatively high level of LTFT working.

Table 26. Workforce participation rates and percentage of consultant clinical oncologists working LTFT by UK region

<table>
<thead>
<tr>
<th>UK region</th>
<th>Less than full-time consultants (LTFT)</th>
<th>Full-time consultants</th>
<th>Total consultants</th>
<th>Percentage of consultants working LTFT</th>
<th>Participation rate</th>
<th>WTE of LTFT staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Midlands</td>
<td>10</td>
<td>41</td>
<td>51</td>
<td>20%</td>
<td>0.97</td>
<td>8</td>
</tr>
<tr>
<td>East</td>
<td>21</td>
<td>62</td>
<td>83</td>
<td>25%</td>
<td>0.94</td>
<td>16</td>
</tr>
<tr>
<td>London</td>
<td>34</td>
<td>84</td>
<td>118</td>
<td>29%</td>
<td>0.91</td>
<td>23</td>
</tr>
<tr>
<td>North East</td>
<td>10</td>
<td>26</td>
<td>36</td>
<td>28%</td>
<td>0.94</td>
<td>8</td>
</tr>
<tr>
<td>North West</td>
<td>31</td>
<td>64</td>
<td>95</td>
<td>33%</td>
<td>0.93</td>
<td>24</td>
</tr>
<tr>
<td>South Central</td>
<td>23</td>
<td>48</td>
<td>71</td>
<td>32%</td>
<td>0.93</td>
<td>18</td>
</tr>
<tr>
<td>South East</td>
<td>23</td>
<td>30</td>
<td>53</td>
<td>43%</td>
<td>0.9</td>
<td>17</td>
</tr>
<tr>
<td>South West</td>
<td>21</td>
<td>54</td>
<td>75</td>
<td>28%</td>
<td>0.96</td>
<td>17</td>
</tr>
<tr>
<td>West Midlands</td>
<td>16</td>
<td>55</td>
<td>71</td>
<td>22%</td>
<td>0.95</td>
<td>12</td>
</tr>
<tr>
<td>Yorkshire and Humberside</td>
<td>16</td>
<td>49</td>
<td>65</td>
<td>25%</td>
<td>0.94</td>
<td>12</td>
</tr>
<tr>
<td>England</td>
<td>204</td>
<td>513</td>
<td>717</td>
<td>28%</td>
<td>0.93</td>
<td>156</td>
</tr>
</tbody>
</table>
The number of vacant consultant clinical oncology posts is variable by region. The South West of England had 11 posts vacant; in comparison London, the North East and Yorkshire and Humberside had no vacancies. Geographical location is known to be a key influencing factor for trainees when applying for consultant posts, with some regions experiencing much more difficulty filling positions than others.

Table 27. Number and status of unfilled consultant clinical oncology posts by region, October 2016

<table>
<thead>
<tr>
<th>Region (England)</th>
<th>Advertised but failed to appoint</th>
<th>Advertised but not yet interviewed</th>
<th>Appointed but not yet taken up</th>
<th>Funded but not thought worth advertising</th>
<th>Funded but not yet advertised</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>South West</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>East Midlands</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>South Central</td>
<td>6</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>East of England</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>North West</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>South East</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>West Midlands</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>London</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>North East</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Yorkshire and Humberside</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>17</td>
<td>5</td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>33</td>
</tr>
</tbody>
</table>
Table 28 shows that approximately 5% of clinical oncology posts were vacant in 2016 (at the date of the census), with significant variation between regions.

Table 28. Percentages of unfilled consultant clinical oncology posts by region

<table>
<thead>
<tr>
<th>Country/region (England)</th>
<th>Unfilled consultant posts (WTEs)*</th>
<th>Consultants in post (WTEs)</th>
<th>WTE workforce including vacancies</th>
<th>Vacancies as % of workforce</th>
</tr>
</thead>
<tbody>
<tr>
<td>South West</td>
<td>10</td>
<td>71</td>
<td>81</td>
<td>13%</td>
</tr>
<tr>
<td>East Midlands</td>
<td>7</td>
<td>49</td>
<td>56</td>
<td>12%</td>
</tr>
<tr>
<td>South Central</td>
<td>7</td>
<td>66</td>
<td>73</td>
<td>10%</td>
</tr>
<tr>
<td>East of England</td>
<td>5</td>
<td>78</td>
<td>83</td>
<td>6%</td>
</tr>
<tr>
<td>South East</td>
<td>1</td>
<td>47</td>
<td>48</td>
<td>2%</td>
</tr>
<tr>
<td>North West</td>
<td>1</td>
<td>88</td>
<td>89</td>
<td>1%</td>
</tr>
<tr>
<td>West Midlands</td>
<td>1</td>
<td>67</td>
<td>68</td>
<td>1%</td>
</tr>
<tr>
<td>London</td>
<td>0</td>
<td>107</td>
<td>107</td>
<td>0%</td>
</tr>
<tr>
<td>North East</td>
<td>0</td>
<td>34</td>
<td>34</td>
<td>0%</td>
</tr>
<tr>
<td>Yorkshire and Humberside</td>
<td>0</td>
<td>61</td>
<td>61</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>32</strong></td>
<td><strong>669</strong></td>
<td><strong>701</strong></td>
<td><strong>5%</strong></td>
</tr>
</tbody>
</table>

*For the four part-time roles, Table 28 assumes the role to be 0.6 of a full-time position (to calculate the WTE).
Table 29 shows regional variations with regard to the age of consultant clinical oncologists. There is no significant variation in the mean age of 47 across regions and countries (or between UK and international medical graduates). In North East England and South Central England, over 25% of consultant clinical oncologist are over 55, so are likely to be approaching retirement.

Table 29. Age breakdown – consultant clinical oncologists by age and region

<table>
<thead>
<tr>
<th>Region (England)</th>
<th>30–34</th>
<th>35–39</th>
<th>40–44</th>
<th>45–49</th>
<th>50–54</th>
<th>55–59</th>
<th>60–64</th>
<th>65–69</th>
<th>Total</th>
<th>Consultants mean age</th>
<th>% workforce over 60</th>
<th>% workforce over 55</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Midlands</td>
<td>3</td>
<td>5</td>
<td>17</td>
<td>8</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>41</td>
<td>45</td>
<td>10%</td>
<td>17%</td>
</tr>
<tr>
<td>East of England</td>
<td>0</td>
<td>8</td>
<td>16</td>
<td>24</td>
<td>13</td>
<td>13</td>
<td>4</td>
<td>2</td>
<td>80</td>
<td>48</td>
<td>8%</td>
<td>24%</td>
</tr>
<tr>
<td>London</td>
<td>0</td>
<td>16</td>
<td>31</td>
<td>33</td>
<td>18</td>
<td>7</td>
<td>5</td>
<td>4</td>
<td>114</td>
<td>47</td>
<td>8%</td>
<td>14%</td>
</tr>
<tr>
<td>North East</td>
<td>0</td>
<td>6</td>
<td>9</td>
<td>4</td>
<td>6</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>34</td>
<td>48</td>
<td>12%</td>
<td>26%</td>
</tr>
<tr>
<td>North West</td>
<td>1</td>
<td>14</td>
<td>24</td>
<td>18</td>
<td>16</td>
<td>9</td>
<td>7</td>
<td>5</td>
<td>94</td>
<td>48</td>
<td>13%</td>
<td>22%</td>
</tr>
<tr>
<td>South Central</td>
<td>0</td>
<td>8</td>
<td>13</td>
<td>22</td>
<td>8</td>
<td>10</td>
<td>7</td>
<td>1</td>
<td>69</td>
<td>49</td>
<td>12%</td>
<td>26%</td>
</tr>
<tr>
<td>South East</td>
<td>0</td>
<td>4</td>
<td>20</td>
<td>12</td>
<td>9</td>
<td>7</td>
<td>1</td>
<td>0</td>
<td>53</td>
<td>47</td>
<td>2%</td>
<td>15%</td>
</tr>
<tr>
<td>South West</td>
<td>0</td>
<td>12</td>
<td>19</td>
<td>23</td>
<td>9</td>
<td>8</td>
<td>2</td>
<td>2</td>
<td>75</td>
<td>47</td>
<td>5%</td>
<td>16%</td>
</tr>
<tr>
<td>West Midlands</td>
<td>1</td>
<td>10</td>
<td>21</td>
<td>14</td>
<td>10</td>
<td>8</td>
<td>0</td>
<td>2</td>
<td>66</td>
<td>46</td>
<td>3%</td>
<td>15%</td>
</tr>
<tr>
<td>Yorkshire and Humberside</td>
<td>1</td>
<td>9</td>
<td>18</td>
<td>12</td>
<td>10</td>
<td>6</td>
<td>6</td>
<td>1</td>
<td>63</td>
<td>47</td>
<td>11%</td>
<td>21%</td>
</tr>
<tr>
<td>England</td>
<td>6</td>
<td>92</td>
<td>188</td>
<td>170</td>
<td>100</td>
<td>76</td>
<td>37</td>
<td>20</td>
<td>689</td>
<td>47</td>
<td>8%</td>
<td>19%</td>
</tr>
</tbody>
</table>
The percentage of consultant clinical oncologists who are international medical graduates is highly variable by region, with the highest percentage in the East Midlands (52%) and the lowest percentage in the South East (9%).

Table 30. Consultant clinical oncologists – percentage of IMGs by UK region

<table>
<thead>
<tr>
<th>Region (England)</th>
<th>IMGs</th>
<th>UK graduates</th>
<th>Total</th>
<th>% IMG</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Midlands</td>
<td>26</td>
<td>24</td>
<td>50</td>
<td>52%</td>
</tr>
<tr>
<td>West Midlands</td>
<td>27</td>
<td>42</td>
<td>69</td>
<td>39%</td>
</tr>
<tr>
<td>North East</td>
<td>11</td>
<td>25</td>
<td>36</td>
<td>31%</td>
</tr>
<tr>
<td>North West</td>
<td>25</td>
<td>69</td>
<td>94</td>
<td>27%</td>
</tr>
<tr>
<td>East of England</td>
<td>21</td>
<td>62</td>
<td>83</td>
<td>25%</td>
</tr>
<tr>
<td>Yorkshire and Humberside</td>
<td>15</td>
<td>50</td>
<td>65</td>
<td>23%</td>
</tr>
<tr>
<td>South Central</td>
<td>16</td>
<td>55</td>
<td>71</td>
<td>23%</td>
</tr>
<tr>
<td>South West</td>
<td>11</td>
<td>64</td>
<td>75</td>
<td>15%</td>
</tr>
<tr>
<td>London</td>
<td>13</td>
<td>105</td>
<td>118</td>
<td>11%</td>
</tr>
<tr>
<td>South East</td>
<td>5</td>
<td>48</td>
<td>53</td>
<td>9%</td>
</tr>
<tr>
<td>Total</td>
<td>170</td>
<td>543</td>
<td>713</td>
<td>24%</td>
</tr>
</tbody>
</table>
Table 31 shows the total number of WTE medical and clinical oncologists per English region (in the WTE total column). The table also shows the population covered per WTE oncologist. There is significant variation between UK regions with oncologists in East Midlands covering the largest population (and the largest over 65 population) – just under 70 thousand people per WTE oncologist and oncologists in London covering the smallest population – just under 37 thousand people (per WTE oncologist). However, detailed regional knowledge is required when drawing conclusions from Table 31.

### Table 31. Population per WTE oncologist by English region

<table>
<thead>
<tr>
<th>Region (England)</th>
<th>Clinical oncologists</th>
<th>Medical oncologists</th>
<th>WTE TOTAL (clin &amp; med oncs)</th>
<th>Population (2016)</th>
<th>Of which... over 65s</th>
<th>Population per WTE</th>
<th>Over 65 population per WTE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Headcount WTE</td>
<td>Headcount WTE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>East Midlands</td>
<td>50</td>
<td>49</td>
<td>20</td>
<td>19</td>
<td>68</td>
<td>4,724,437</td>
<td>895,710</td>
</tr>
<tr>
<td>East of England</td>
<td>83</td>
<td>78</td>
<td>34</td>
<td>32</td>
<td>110</td>
<td>6,130,542</td>
<td>1,184,408</td>
</tr>
<tr>
<td>London</td>
<td>118</td>
<td>107</td>
<td>143</td>
<td>131</td>
<td>238</td>
<td>8,787,892</td>
<td>1,021,124</td>
</tr>
<tr>
<td>North East</td>
<td>36</td>
<td>34</td>
<td>19</td>
<td>17</td>
<td>51</td>
<td>2,636,848</td>
<td>507,606</td>
</tr>
<tr>
<td>North West</td>
<td>95</td>
<td>88</td>
<td>66</td>
<td>60</td>
<td>148</td>
<td>7,219,623</td>
<td>1,321,967</td>
</tr>
<tr>
<td>South East (including South Central)</td>
<td>124</td>
<td>113</td>
<td>82</td>
<td>74</td>
<td>187</td>
<td>9,026,297</td>
<td>1,710,438</td>
</tr>
<tr>
<td>South West</td>
<td>75</td>
<td>71</td>
<td>29</td>
<td>26</td>
<td>97</td>
<td>5,515,953</td>
<td>1,190,935</td>
</tr>
<tr>
<td>West Midlands</td>
<td>71</td>
<td>67</td>
<td>27</td>
<td>25</td>
<td>92</td>
<td>5,800,734</td>
<td>1,061,201</td>
</tr>
<tr>
<td>Yorks and Humber</td>
<td>65</td>
<td>61</td>
<td>58</td>
<td>53</td>
<td>115</td>
<td>5,425,741</td>
<td>989,452</td>
</tr>
<tr>
<td>Total</td>
<td>716</td>
<td>669</td>
<td>478</td>
<td>436</td>
<td>1,105</td>
<td>55,268,067</td>
<td>9,882,800</td>
</tr>
</tbody>
</table>
References

8. www.gov.uk/flexible-working/overview (last accessed 8/8/17)
Background

The RCR first carried out the annual UK clinical oncology workforce census in 2008 and has repeated the exercise each year since. This report contains the results of the 2016 census. This report compares the 2016 results to previous years to outline trends, where relevant.

Survey methods

Standardised questions have been used year on year to allow for comparison of information and identification of trends over time. To facilitate data collection (and accuracy), 2015 staff data was provided to each cancer centre and Heads of Service were asked to update the details, providing details of leavers, new starters and staff changes (for substantive posts as of 1 October 2016). Data was collected through a web survey. Heads of Service were provided with unique logins and passwords.

Data accuracy

As in previous years, the survey was sent to Heads of Service for completion. Due to the use of consistent questions, established processes, data quality checks and the involvement senior staff, data accuracy is understood to be high.

Collection of information and response rate

The 2016 census achieved a 100% response rate from Heads of Service, with all 62 cancer centres in the UK submitting information (although one centre was supported by the RCR to give their census feedback by phone, rather than online).

Presentation of results

The workforce figures in this report are given as headcount, unless otherwise stated. Where a member of staff works part time across two regions, they will count as a headcount of one in each of the regions and as one in the UK total therefore the sum of the regional headcounts will be slightly higher than the UK headcount.

Data analysis method

The web survey results were exported into a Microsoft Excel file. Excel was then used to analyse the data and produce charts and tables for this report. The census data was mapped to GMC data to facilitate reporting on gender. It was also mapped to the RCR membership database to facilitate reporting on age. RCR training data is used to report the current numbers of trainees (and predict the future number of consultant clinical oncologists). A series of data quality checks were carried out to minimise the possibility of data errors in this report. The Royal College of Physicians provided the numbers of medical oncologists, which was used to validate the numbers received in the census.

Data is processed by the RCR in accordance with UK data protection legislation.

Queries regarding this report should be sent to: surveys@rcr.ac.uk
Appendix B. Census questions 2016

Section 1. Data protection guidelines

Section 2. Your organisation – details

2.1 Workforce lead full name
2.2 Hospital name/cancer centre
2.3 Trust name
2.4 Contact email
2.5 Contact telephone

Section 3. Staff details – clinical oncology, 1 October 2016

Please update the data in the table below to provide details of all consultant, locum and staff grade consultant clinical oncologists employed in a post in your oncology department(s), as of 1 October 2016.

Please include consultants, associate specialists, specialty doctors, trust grades, locums and clinical assistants. Please include those on long-term leave (for example, maternity or sick leave). Please do not include trainees.

We would additionally like to capture information on PA time dedicated to both research and training for those in academic or NHS/academic posts.

Please enter contracted PAs for all data sought.

On completion of each entry please tick the box marked ‘Accurate and complete as of 1 October 2016’; this will enable you to proceed to the next page.

3.1 Forename and surname
3.2 Gender
3.3 Grade
  ▪ Consultant
  ▪ Associate specialist
  ▪ Clinical assistant
  ▪ Specialty doctor
  ▪ Trust grade
  ▪ Other
3.4 Type of post
- NHS
- NHS and academic
- Academic
- Other

3.5 Contracted PAs
- DCC PAs
- SPA PAs
- AR (additional responsibility) PAs
- SPAs allocated wholly to research
- Academic PAs

3.6 Full time/part time
- Full time
- Part time

3.7 Predominant workload
- Chemotherapy
- Radiotherapy
- Balance of both

3.8 Site specialties
- Acute oncology
- Breast
- Central nervous system/neuro
- Colorectal
- Genitourinary
- Gynaecology
- Haematological malignancy
- Head and neck
- Lung
- Paediatric
- Sarcomas
- Skin
- Teen and young adult
- Thyroid
- Upper gastrointestinal (including hepatobiliary)
- Other
3.9 Employment type

- Employed as a locum? If yes...
- Obtained primary medical qualification in the UK?
- Completed a UK oncology training programme?
- Previously been in substantive consultant post?
- Period employed as locum up to 1 October 2016
- Expected duration of locum period (from 1 October 2016)
- Reason for locum position

3.10 Cross-site working

- Employed at more than one trust
- Delivered care at more than one site on a regular basis in the last 12 months
- Required to travel to more than one site in a working day on a regular basis

3.11 Expected to retire by October 2017

3.12 Left since October 2015

3.13 Confirm entry as accurate and complete as of 1 October 2016

Section 4. Unfilled posts – clinical oncology, 1 October 2016

Please enter details below of all funded unfilled substantive clinical oncology posts at your cancer centre, including satellite centres, as of 1 October 2016. Please enter posts even if subsequently suspended or lost, or currently filled by a locum.

These data are useful to the RCR as they identify the nature and extent of unfilled posts across the UK workforce. This informs workforce planning to help ensure future requirements can be met.

4.1 Unfilled post status

- Funded but not yet advertised
- Funded but not yet appointed
- Advertised but not yet interviewed
- Appointed but not yet taken up
- Advertised but failed to appoint
- Funded but failed to appoint and not contemplating further advertisement in next three months.

New free-text box outlining conversion of unfilled posts that failed to appoint. ‘If there were unfilled posts that failed to appoint to, please indicate what the plan is to do, ie conversion of post to general oncology, medical oncology, allied healthcare professionals, other?’
4.2 Grade
- Consultant
- Associate specialist
- Clinical assistant
- Specialty doctor
- Trust grade
- Other

4.3 Employment type (part time or full time, drop-down box)

4.4 Site specialties (see 3.7)

4.5 Unfilled period (to nearest month)

4.6 Locum filled (tick box)

4.7 Period filled by locum (to nearest month)

4.8 Have you sought applicants from outside the EU?

4.8.1 Please make any additional comments relating to recruitment from 1 October 2015 to 1 October 2016

Section 5. Staff details – medical oncology, 1 October 2016
Please indicate in the boxes below the number of full-time and part-time consultant medical oncologists employed by your cancer centre as of 1 October 2016.
- Full-time (headcount)
- Part-time (<10 PAs (headcount))

Section 6. Additional questions
The RCR would like to continue to include the names of centres and their staffing level (per catchment population) in the annual census report. A key advantage of this means centres can benchmark themselves against similar centres.

6.1 Do you grant permission for your centre to continue to be named in the annual census report?
- Yes
- No
All cancer centres provided information on their routine working hours in 2014 and 2015. To further build on this data, we would like to continue to collect this information for 2016.

6.2 For the month of September 2016, please enter the routine (non-emergency) radiotherapy service opening hours at your main centre

- Matrix of:
  - <8 hrs, 8–10 hrs, >10 hrs, Not open
  - Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday

6.3 Would you say the routine opening hours you have entered for radiotherapy for September 2016 represent a typical month for the year to date? Yes/No

If no, why?

6.4 For the month of September 2016, please enter the routine (non-emergency) chemotherapy service opening hours at your main centre

- Matrix of:
  - <8 hrs, 8–10 hrs, >10 hrs, Not open
  - Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday

6.5 Would you say the routine opening hours you have entered for chemotherapy for September 2016 represent a typical month for the year to date? Yes/No

If no, why?

6.6 Please use the space provided below to enter any further comments you wish to make regarding routine and extended hours working at your centre. (Free text)

6.7 Finally, please use the space provided below to enter any further workforce details you feel are relevant to your census submission and/or to provide feedback to the RCR regarding the census.
Appendix C.
Whole-time equivalent consultant clinical oncologists by cancer centre and per million population

<table>
<thead>
<tr>
<th>Cancer centre</th>
<th>Country</th>
<th>WTE consultant clinical oncologists 2016</th>
<th>Population 2016 estimate</th>
<th>WTE consultants per million population 2016</th>
<th>Change since 2015 (WTE consultant clinical oncologists)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aberdeen Royal Infirmary</td>
<td>Scotland</td>
<td>7.6</td>
<td>611,815</td>
<td>12.4</td>
<td>0.9</td>
</tr>
<tr>
<td>Addenbrooke’s Hospital, Cambridge</td>
<td>England</td>
<td>21.7</td>
<td>1,421,515</td>
<td>15.2</td>
<td>0.6</td>
</tr>
<tr>
<td>Altnagelvin Hospital, Londonderry**</td>
<td>Northern Ireland</td>
<td>5.8</td>
<td>372,420</td>
<td>15.6</td>
<td>2.8</td>
</tr>
<tr>
<td>Basingstoke and North Hampshire Hospital</td>
<td>England</td>
<td>2</td>
<td>145,780</td>
<td>13.7</td>
<td>0</td>
</tr>
<tr>
<td>Beatson West of Scotland Cancer Centre</td>
<td>Scotland</td>
<td>29.4</td>
<td>2,548,643</td>
<td>11.5</td>
<td>4.1</td>
</tr>
<tr>
<td>Belfast City Hospital**</td>
<td>Northern Ireland</td>
<td>23.2</td>
<td>1,489,680</td>
<td>15.6</td>
<td>1</td>
</tr>
<tr>
<td>Bristol Haematology and Oncology Centre</td>
<td>England</td>
<td>11.8</td>
<td>1,079,363</td>
<td>10.9</td>
<td>0</td>
</tr>
<tr>
<td>Castle Hill Hospital, East Riding of Yorkshire</td>
<td>England</td>
<td>12</td>
<td>1,025,478</td>
<td>11.7</td>
<td>1</td>
</tr>
<tr>
<td>Cheltenham General Hospital</td>
<td>England</td>
<td>12.5</td>
<td>908,761</td>
<td>13.8</td>
<td>1</td>
</tr>
<tr>
<td>Colchester General Hospital</td>
<td>England</td>
<td>9.8</td>
<td>705,784</td>
<td>13.9</td>
<td>−0.8</td>
</tr>
<tr>
<td>Cumberland Infirmary</td>
<td>England</td>
<td>3.7</td>
<td>303,254</td>
<td>12.2</td>
<td>0.7</td>
</tr>
<tr>
<td>Derriford Hospital, Plymouth</td>
<td>England</td>
<td>6</td>
<td>457,123</td>
<td>13.1</td>
<td>−1.9</td>
</tr>
<tr>
<td>Dorset Cancer Centre</td>
<td>England</td>
<td>7.9</td>
<td>720,226</td>
<td>10.9</td>
<td>0</td>
</tr>
<tr>
<td>Edinburgh Cancer Centre</td>
<td>Scotland</td>
<td>18.3</td>
<td>1,383,942</td>
<td>13.2</td>
<td>−0.1</td>
</tr>
<tr>
<td>Cancer centre</td>
<td>Country</td>
<td>WTE consultant clinical oncologists 2016</td>
<td>Population 2016 estimate</td>
<td>WTE consultants per million population 2016</td>
<td>Change since 2015 (WTE consultant clinical oncologists)</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>-------------</td>
<td>-----------------------------------------</td>
<td>---------------------------</td>
<td>---------------------------------------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>Glan Clwyd Hospital, Rhyl</td>
<td>Wales</td>
<td>6</td>
<td>703,293</td>
<td>8.5</td>
<td>−2</td>
</tr>
<tr>
<td>Guy's and St Thomas' Cancer Centre, London</td>
<td>England</td>
<td>21.1</td>
<td>1,710,534</td>
<td>12.4</td>
<td>3.9</td>
</tr>
<tr>
<td>Imperial College Cancer Centre, London</td>
<td>England</td>
<td>12.4</td>
<td>1,182,834</td>
<td>10.4</td>
<td>1.5</td>
</tr>
<tr>
<td>Ipswich Hospital</td>
<td>England</td>
<td>6</td>
<td>356,154</td>
<td>16.8</td>
<td>−1</td>
</tr>
<tr>
<td>Kent Oncology Centre</td>
<td>England</td>
<td>19.7</td>
<td>1,792,710</td>
<td>11</td>
<td>−0.8</td>
</tr>
<tr>
<td>Leeds Cancer Centre</td>
<td>England</td>
<td>28.9</td>
<td>2,825,973</td>
<td>10.2</td>
<td>2.8</td>
</tr>
<tr>
<td>Leicester Royal Infirmary</td>
<td>England</td>
<td>8.5</td>
<td>924,062</td>
<td>9.2</td>
<td>0</td>
</tr>
<tr>
<td>Lincoln County Hospital</td>
<td>England</td>
<td>9</td>
<td>570,037</td>
<td>15.8</td>
<td>2</td>
</tr>
<tr>
<td>Mount Vernon Cancer Centre, Hertfordshire</td>
<td>England</td>
<td>17</td>
<td>1,955,177</td>
<td>8.7</td>
<td>−1.5</td>
</tr>
<tr>
<td>Musgrove Park Hospital, Taunton</td>
<td>England</td>
<td>7.6</td>
<td>388,310</td>
<td>19.7</td>
<td>0.3</td>
</tr>
<tr>
<td>New Cross Hospital, Wolverhampton</td>
<td>England</td>
<td>8.8</td>
<td>855,060</td>
<td>10.3</td>
<td>0</td>
</tr>
<tr>
<td>Ninewells Hospital and Medical School, Dundee</td>
<td>Scotland</td>
<td>5.6</td>
<td>504,469</td>
<td>11.1</td>
<td>−2.7</td>
</tr>
<tr>
<td>Norfolk and Norwich University Hospital</td>
<td>England</td>
<td>9.8</td>
<td>849,941</td>
<td>11.5</td>
<td>−0.1</td>
</tr>
<tr>
<td>North Middlesex University Hospital</td>
<td>England</td>
<td>8.9</td>
<td>578,816</td>
<td>15.4</td>
<td>1.8</td>
</tr>
<tr>
<td>Northampton General Hospital</td>
<td>England</td>
<td>10.8</td>
<td>722,212</td>
<td>15</td>
<td>1.7</td>
</tr>
<tr>
<td>Northern Centre for Cancer Care, Newcastle upon Tyne</td>
<td>England</td>
<td>21.3</td>
<td>1,771,840</td>
<td>12</td>
<td>1.2</td>
</tr>
<tr>
<td>Nottingham University Hospital</td>
<td>England</td>
<td>10</td>
<td>1,111,141</td>
<td>9</td>
<td>−3.2</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>--------------</td>
<td>------------------------------------------</td>
<td>---------------------------</td>
<td>---------------------------------------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>Oxford Cancer Centre, Churchill Hospital</td>
<td>England</td>
<td>30.7</td>
<td>1,346,523</td>
<td>22.8</td>
<td>–0.3</td>
</tr>
<tr>
<td>Peterborough City Hospital</td>
<td>England</td>
<td>4.5</td>
<td>270,925</td>
<td>16.6</td>
<td>1</td>
</tr>
<tr>
<td>Queen Alexandra's Hospital, Portsmouth</td>
<td>England</td>
<td>8.9</td>
<td>794,432</td>
<td>11.3</td>
<td>–1</td>
</tr>
<tr>
<td>Queen Elizabeth Hospital, Birmingham</td>
<td>England</td>
<td>17.6</td>
<td>1,948,721</td>
<td>9</td>
<td>0.3</td>
</tr>
<tr>
<td>Queen's Hospital, Romford</td>
<td>England</td>
<td>10.5</td>
<td>592,027</td>
<td>17.7</td>
<td>1.9</td>
</tr>
<tr>
<td>Raigmore Hospital, Inverness</td>
<td>Scotland</td>
<td>3.8</td>
<td>356,368</td>
<td>10.7</td>
<td>1.3</td>
</tr>
<tr>
<td>Royal Berkshire Hospital</td>
<td>England</td>
<td>8.6</td>
<td>721,936</td>
<td>11.9</td>
<td>0</td>
</tr>
<tr>
<td>Royal Cornwall Hospital</td>
<td>England</td>
<td>7.5</td>
<td>406,641</td>
<td>18.4</td>
<td>0.8</td>
</tr>
<tr>
<td>Royal Derby Hospital</td>
<td>England</td>
<td>11</td>
<td>711,160</td>
<td>15.5</td>
<td>3</td>
</tr>
<tr>
<td>Royal Devon and Exeter Hospital</td>
<td>England</td>
<td>10.4</td>
<td>577,641</td>
<td>18</td>
<td>–0.8</td>
</tr>
<tr>
<td>Royal Free Hospital, London</td>
<td>England</td>
<td>3.6</td>
<td>387,846</td>
<td>9.3</td>
<td>0</td>
</tr>
<tr>
<td>Royal Marsden Hospital, London</td>
<td>England</td>
<td>25.5</td>
<td>2,154,216</td>
<td>11.8</td>
<td>3.4</td>
</tr>
<tr>
<td>Royal Preston Hospital</td>
<td>England</td>
<td>18</td>
<td>1,456,295</td>
<td>12.4</td>
<td>–1.1</td>
</tr>
<tr>
<td>Royal Shrewsbury Hospital</td>
<td>England</td>
<td>7</td>
<td>456,865</td>
<td>15.3</td>
<td>0</td>
</tr>
<tr>
<td>Royal Surrey County Hospital</td>
<td>England</td>
<td>14.9</td>
<td>1,256,263</td>
<td>11.8</td>
<td>–0.5</td>
</tr>
<tr>
<td>Royal Sussex County Hospital</td>
<td>England</td>
<td>12.9</td>
<td>931,709</td>
<td>13.9</td>
<td>0.2</td>
</tr>
<tr>
<td>Royal United Hospital Bath</td>
<td>England</td>
<td>4.6</td>
<td>435,728</td>
<td>10.6</td>
<td>–0.3</td>
</tr>
<tr>
<td>Singleton Hospital, Swansea</td>
<td>Wales</td>
<td>9.5</td>
<td>904,234</td>
<td>10.5</td>
<td>0</td>
</tr>
<tr>
<td>Cancer centre</td>
<td>Country</td>
<td>WTE consultant clinical oncologists 2016</td>
<td>Population estimate 2016</td>
<td>WTE consultants per million population 2016</td>
<td>Change since 2015 (WTE consultant clinical oncologists)</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>---------------</td>
<td>-----------------------------------------</td>
<td>--------------------------</td>
<td>---------------------------------------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>South Devon Hospital</td>
<td>England</td>
<td>3</td>
<td>245,766</td>
<td>12</td>
<td>−0.4</td>
</tr>
<tr>
<td>Southend Hospital</td>
<td>England</td>
<td>9.3</td>
<td>666,228</td>
<td>14</td>
<td>0</td>
</tr>
<tr>
<td>St Bartholomew’s Hospital, London</td>
<td>England</td>
<td>7.2</td>
<td>1,088,430</td>
<td>6.6</td>
<td>0.1</td>
</tr>
<tr>
<td>The Christie Hospital, Manchester</td>
<td>England</td>
<td>39.4</td>
<td>3,279,524</td>
<td>12</td>
<td>0.5</td>
</tr>
<tr>
<td>The Clatterbridge Cancer Centre, Wirral</td>
<td>England</td>
<td>27</td>
<td>2,239,346</td>
<td>12.1</td>
<td>0</td>
</tr>
<tr>
<td>The James Cook University Hospital, Middlesbrough</td>
<td>England</td>
<td>12.4</td>
<td>1,020,815</td>
<td>12.1</td>
<td>1.2</td>
</tr>
<tr>
<td>University College Hospital, London</td>
<td>England</td>
<td>17.9</td>
<td>876,590</td>
<td>20.4</td>
<td>3</td>
</tr>
<tr>
<td>University Hospital of North Midlands</td>
<td>England</td>
<td>11.6</td>
<td>663,148</td>
<td>17.5</td>
<td>0.6</td>
</tr>
<tr>
<td>University Hospital Southampton</td>
<td>England</td>
<td>15.7</td>
<td>1,276,485</td>
<td>12.3</td>
<td>0.3</td>
</tr>
<tr>
<td>University Hospitals, Coventry and Warwickshire</td>
<td>England</td>
<td>14.7</td>
<td>1,046,337</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>Velindre Hospital, Cardiff</td>
<td>Wales</td>
<td>24.8</td>
<td>1,507,054</td>
<td>16.4</td>
<td>1.2</td>
</tr>
<tr>
<td>Weston Park Hospital, Sheffield</td>
<td>England</td>
<td>20.3</td>
<td>1,774,846</td>
<td>11.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Worcester Oncology Centre</td>
<td>England</td>
<td>7.2</td>
<td>504,480</td>
<td>14.2</td>
<td>0</td>
</tr>
</tbody>
</table>

The ‘population estimate 2016’ column contains the 2015 census report population estimates uplifted by the 2015–2016 ONS population growth estimates as follows: England 0.9%, Wales 0.5%, Scotland 0.6%.


Northern Ireland**: Based on ONS 2016 population estimates of 1,862,100. The population split between the two cancer centres (Belfast and Altnagelvin) is unknown (and the number of cross-border patients is unknown), so the above table makes the assumption that 80% of NI patients are treated in Belfast. Users of this table should adjust the population figures accordingly if this split is incorrect.
Thank you to the following individuals for completing the 2016 census on behalf of their cancer centres.

<table>
<thead>
<tr>
<th>Full name</th>
<th>Hospital name / Cancer centre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Leslie Samuel</td>
<td>Aberdeen Royal Infirmary</td>
</tr>
<tr>
<td>Dr Richard Benson</td>
<td>Addenbrooke's Hospital</td>
</tr>
<tr>
<td>Dr David Stewart</td>
<td>Altnagelvin Hospital</td>
</tr>
<tr>
<td>Dr Sandra Tinkler</td>
<td>Basingstoke and North Hampshire Hospital, Royal Hampshire County Hospital</td>
</tr>
<tr>
<td>Dr David Dodds</td>
<td>Beatson West of Scotland Cancer Centre</td>
</tr>
<tr>
<td>Professor Joe O'Sullivan</td>
<td>Belfast City Hospital</td>
</tr>
<tr>
<td>Dr Matthew Beasley</td>
<td>Bristol Haematology and Oncology Centre</td>
</tr>
<tr>
<td>Dr Rajarshi Roy</td>
<td>Castle Hill Hospital</td>
</tr>
<tr>
<td>Dr Warren Grant</td>
<td>Cheltenham General Hospital</td>
</tr>
<tr>
<td>Dr D Muthukumar</td>
<td>Colchester General Hospital</td>
</tr>
<tr>
<td>Dr Yoodhvir Singh Nagar</td>
<td>Combined Hematology and Oncology Centre, Queen Alexandra's Hospital</td>
</tr>
<tr>
<td>Mr Jim Methven</td>
<td>Cumberland Infirmary</td>
</tr>
<tr>
<td>Dr Sarah Pascoe</td>
<td>Derriford Hospital</td>
</tr>
<tr>
<td>Dr Joseph Davies</td>
<td>Dorset Cancer Centre, Poole Hospital</td>
</tr>
<tr>
<td>Dr Carolyn Bedi</td>
<td>Edinburgh Cancer Centre, Western General Hospital</td>
</tr>
<tr>
<td>Dr Win Soe</td>
<td>Glan Clwyd Hospital</td>
</tr>
<tr>
<td>Professor George Mikhaeel</td>
<td>Guy's &amp; St Thomas' Cancer Centre</td>
</tr>
<tr>
<td>Dr Danielle Power</td>
<td>Imperial College Cancer Centre</td>
</tr>
<tr>
<td>Dr Christopher Scrase</td>
<td>Ipswich Hospital</td>
</tr>
<tr>
<td>Dr Sharon Beasley</td>
<td>Kent Oncology Centre</td>
</tr>
<tr>
<td>Dr Rachel Cooper</td>
<td>Leeds Cancer Centre, Leeds</td>
</tr>
<tr>
<td>Dr David Peel</td>
<td>Leicester Royal Infirmary</td>
</tr>
<tr>
<td>Dr Miguel Panades</td>
<td>Lincoln County Hospital</td>
</tr>
<tr>
<td>Dr Nicola Anyamene</td>
<td>Mount Vernon Cancer Centre</td>
</tr>
<tr>
<td>Dr Petra Jankowska</td>
<td>Musgrove Park Hospital</td>
</tr>
<tr>
<td>Dr Rozenn Allerton</td>
<td>New Cross Hospital</td>
</tr>
<tr>
<td>Dr Richard Casasola</td>
<td>Ninewells Hospital and Medical School</td>
</tr>
<tr>
<td>Dr Robert Wade</td>
<td>Norfolk and Norwich University Hospital</td>
</tr>
<tr>
<td>Dr Girija Anand</td>
<td>North Middlesex University Hospital</td>
</tr>
<tr>
<td>Ms Viv Kelly / Mr James Rogers</td>
<td>Northampton General Hospital</td>
</tr>
<tr>
<td>Full name</td>
<td>Hospital name / Cancer centre</td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
<td>-------------------------------------------------------------------</td>
</tr>
<tr>
<td>Dr Charles Kelly</td>
<td>Northern Centre for Cancer Care, Freeman Hospital</td>
</tr>
<tr>
<td>Dr Daniel Saunders</td>
<td>Nottingham University Hospital, City Hospital Campus</td>
</tr>
<tr>
<td>Dr Claire Blesing</td>
<td>Oxford Cancer Centre, Churchill Hospital, Oxford</td>
</tr>
<tr>
<td>Dr Catherine Jephcott</td>
<td>Peterborough City Hospital</td>
</tr>
<tr>
<td>Dr Daniel Ford</td>
<td>Queen Elizabeth Hospital</td>
</tr>
<tr>
<td>Dr Sherif Raouf</td>
<td>Queens Hospital, Romford</td>
</tr>
<tr>
<td>Dr Carol MacGregor</td>
<td>Raigmore Hospital</td>
</tr>
<tr>
<td>Dr James Gildersaleve</td>
<td>Royal Berkshire Hospital</td>
</tr>
<tr>
<td>Dr John McGrane</td>
<td>Royal Cornwall Hospital</td>
</tr>
<tr>
<td>Dr Rengarajan Vijayan</td>
<td>Royal Derby Hospital</td>
</tr>
<tr>
<td>Dr Elizabeth Toy</td>
<td>Royal Devon and Exeter Hospital (Wonford)</td>
</tr>
<tr>
<td>Dr Grant Stewart</td>
<td>Royal Free Hospital</td>
</tr>
<tr>
<td>Dr Imogen Locke</td>
<td>Royal Marsden Hospital</td>
</tr>
<tr>
<td>Dr Geraldine Skailes</td>
<td>Royal Preston Hospital</td>
</tr>
<tr>
<td>Dr Laura Pettit</td>
<td>Royal Shrewsbury Hospital</td>
</tr>
<tr>
<td>David Griffin-Mead</td>
<td>Royal Surrey County Hospital</td>
</tr>
<tr>
<td>Dr Ashok Nikapota</td>
<td>Royal Sussex County Hospital</td>
</tr>
<tr>
<td>Dr Mark Beresford</td>
<td>Royal United Hospital Bath</td>
</tr>
<tr>
<td>Dr Anna Lydon</td>
<td>South Devon Hospital</td>
</tr>
<tr>
<td>Dr Russell Banner</td>
<td>South West Wales Cancer Centre/Singleton Hospital</td>
</tr>
<tr>
<td>Dr Catherine Heath</td>
<td>University Hospital Southampton</td>
</tr>
<tr>
<td>Dr Imtiaz Ahmed</td>
<td>Southend Hospital</td>
</tr>
<tr>
<td>Dr Paula Wells</td>
<td>St Bartholomew’s Hospital</td>
</tr>
<tr>
<td>Dr Susan Davidson</td>
<td>The Christie Hospital</td>
</tr>
<tr>
<td>Susan Birch, Medical Workforce Manager</td>
<td>The Clatterbridge Cancer Centre</td>
</tr>
<tr>
<td>Dr Nick Wadd</td>
<td>The James Cook University Foundation Hospital</td>
</tr>
<tr>
<td>Dr Yen-Ching Chang</td>
<td>University College Hospital</td>
</tr>
<tr>
<td>Dr Apurna Jegannathen</td>
<td>University Hospital of North Midlands NHS Trust</td>
</tr>
<tr>
<td>Dr Lydia Fresco</td>
<td>University Hospitals, Coventry and Warwickshire</td>
</tr>
<tr>
<td>Dr Jacinta Abraham</td>
<td>Velindre Hospital</td>
</tr>
<tr>
<td>Dr Patricia Fisher; Mrs Lynda Campbell (PA)</td>
<td>Weston Park Hospital</td>
</tr>
<tr>
<td>Dr Clive Irwin/Dr Lisa Capaldi</td>
<td>Worcestershire Oncology Centre</td>
</tr>
</tbody>
</table>