

The Royal College of Radiologists

Clinical Oncology UK workforce census 2014 report

Faculty of Clinical Oncology

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Foreword

I would once again like to express my sincere thanks to all clinical oncology heads of service in the UK for completing the census this year. I recognise that there are many competing requests for your time and am grateful that you have again supported the College by filling in the census in such a timely fashion. As evidence of your commitment and contribution you are listed in Appendix 1.

The RCR clinical oncology workforce census, now in its seventh year, provides powerful and robust data on the nature and location of consultant workforce throughout the UK. It provides timely information on changing working patterns not only amongst consultants but also cancer service providers in response to increased demand. The 2013 census data was used successfully to support a 2% increase in training numbers spread across two of the four home nations. While this is welcomed, the absolute uplift will not fill the demonstrable gaps in the longer term.

This year the census provides further evidence to support a workforce which is responding to increased demand by redistribution of workload amongst current staff. This is demonstrated by an increase in the number of consultants specialising in more than two tumour sites and also by the increased number of programmed activities (PAs) beyond ten being paid to established staff. These factors are almost certainly in part due to recruitment difficulties. It also demonstrates the evolving issues related to a highly feminised workforce.

However the data is received, the census remains the most accurate picture of the national clinical oncology workforce available and will be used to support discussions with all stakeholders around increased resource allocation throughout the four nations. Once again thanks for your contribution.

Dr Jeanette Dickson

Medical Director of Professional Practice, Clinical Oncology The Royal College of Radiologists

1. Introduction and methodology

The aim of the census is to obtain accurate data on the composition of the national UK clinical oncology workforce. The data enable the RCR to identify opportunities and challenges facing the workforce now and in the future and provide robust evidence which can be shared with national organisations such as the Centre for Workforce Intelligence (CfWI), who influence the future commissioning of the workforce.

Now in its seventh year, the 2014 clinical oncology workforce census captures information for consultant clinical and medical oncologists in substantive posts in all UK cancer centres.

The full set of questions for the 2014 census is provided in Appendix 2.

The 2014 census sought to capture data as of 1 October 2014. The census date should be borne in mind when reading the results due to the time elapsed between this date and the publication of this report.

The census data were collected online through a secure web portal. A link to the portal was emailed to the workforce lead at each of the 59 UK cancer centres so that they could complete the census.

The census is designed to be simple to complete to maximise the response rate and quality of data captured.

Census year	Census date	Census completion rate
2008	1 July 2008	100%
2009	1 October 2009	100%
2010	1 October 2010	100%
2011	1 October 2011	98% ^a
2012	1 October 2012	100%
2013	1 October 2013	98% ^b
2014	1 October 2014	100%

Census completion 2008 to 2014

a. Charing Cross Hospital did not complete the 2011 census. For reporting, 2010 data submitted by this centre has been used in place of 2011 data.

b. University Hospitals, Coventry and Warwickshire did not complete the 2013 census. For reporting, 2012 data submitted by this centre has been used in place of 2013 data.

All findings in this report relate to the UK clinical oncology workforce, with the exception of Section 3 which additionally reports on UK medical oncology workforce data.

All data are reported as headcount (HC) unless stated otherwise. Where whole-time equivalent

(WTE) is used the calculation conforms to the current NHS convention of excluding programmed activities (PAs) that exceed ten PAs, unless stated otherwise.

2. UK clinical oncology workforce - overview

The number of consultant clinical oncologists in substantive posts in the UK increased from 749 headcount (HC) in 2013 to 766 in 2014. This represents a 2% increase in the workforce, consistent over the past five years. These data are shown in Table 1. The gap between headcount and WTE has increased in 2014 and therefore remains an area for concern.

Expressed as WTEs, there are 699 consultant clinical oncologists employed in substantive posts

in the UK as of 1 October 2014. This equates to 10.9 WTE consultant clinical oncologists per million population (PMP) in the UK. Population figures are derived from 2013 estimates published by the Office for National Statistics.¹

The number of trainee clinical oncologists in UK training schemes as of 1 October 2014 is 384.

		2011	2012	2013	2014
Consultant	HC	715	729	749	766
	WTE ^a	671 ^b	677 ^b	691	699 [°]
Trainee	HC	-	377	376	384
Other grades	HC	79	88	73	77

Table 1. UK clinical oncology workforce – 2011 to 2014

a. WTE data available for consultant grade only.

b. Estimated research PAs deducted from previously reported 2011 and 2012 WTE data.

c. 2014 WTE figure including research PAs was 724.

Figure 1. UK clinical oncology consultant workforce – headcount and WTE, 2011 to 2014



As previously stated, where WTE data is shown, the calculation conforms to the current NHS convention of excluding PAs that exceed ten PAs. However, many consultants are contracted to work in excess of ten PAs. If all consultants were limited to a contractual maximum of ten PAs, a further 61 WTE consultants would be required immediately to replace the current excess. This would represent a 9% increase in the workforce, currently beyond the capacity that the training scheme can deliver.

Table 2 shows an overview of the clinical oncology workforce by UK country, including consultants, trainees and other grades.

		England	Northern Ireland	Scotland	Wales	UK total
Consultant	HC	639	22	62	43	766
	WTE ^a	586	20	58	35	699
Trainee	HC	321	15	33	15	384
Other grades	HC	65	4	4	4	77

Table 2. Clinical oncology workforce by UK country

a. WTE data available for consultant grade only and exclude research PAs.





3. Clinical and medical oncology consultant workforce – overview

The number of clinical and medical oncologists (WTE) holding substantive posts across the UK is

shown in Figure 3. The number per million of the population is shown in Table 3.

Figure 3. Clinical and medical oncology consultant workforce (WTE) by UK country and region



	Clinical oncologist WTEª	Medical oncologist WTE [♭]	Medical and clinical oncologist WTE	Population ¹	Oncologist WTE PMP
England – East Midlands	42.7	14.0	56.7	4,598,729	12.3
England – East	76.4	32.0	108.4	5,954,169	18.2
England – London	86.3	100.0	186.3	8,416,535	22.1
England – North East	30.1	12.0	42.1	2,610,481	16.1
England – North West	81.6	50.0	131.6	7,103,260	18.5
England – South Central ^c	52.1	32.0	84.1	4,273,216	19.7
England – South East ^c	44.3	13.0	57.3	4,519,410	12.7
England – South West	67.9	19.0	86.9	5,377,595	16.2
England – West Midlands	50.9	16.0	66.9	5,674,712	11.8
England – Yorks and Humber	53.3	46.0	99.3	5,337,710	18.6
England total	585.6	334.0	919.6	53,865,817	17.1
Northern Ireland	19.8	12.0	31.8	1,829,725	17.4
Scotland	58.5	34.0	92.5	5,327,700	17.4
Wales	35.4	12.0	47.4	3,082,412	15.4
UK total	699.3	392.0	1091.3	64,105,654	17.0

Table 3. Clinical and medical oncology consultant workforce (WTE) per million population by UK country and region

a. When calculating WTE, all those with PAs greater than ten were assumed to be 1.0 WTE in line with the current NHS convention. Research supporting professional activities (SPAs) were removed from SPA total individually before to calculating WTE.

b. Based on data from *Census of consultant physicians in the UK 2012: specialty report – medical oncology.*² 2012 WTE figures have been increased by 7% (predicted workforce expansion based on completion of certificate of training [CCT output] to estimate medical oncology WTEs for the purposes of this 2014 report.

c. South East (Office of National Statistics [ONS] region) covers both South Central and South East in the census report. South East (ONS region) =8,792,626; South Central (census region) =48.6% South East (census region) =51.4%.¹

As of 1 October 2014, there were 17.0 WTE clinical and medical oncologists per million population in the UK (the figure for 2013 was 16.5 WTE). Figure 4, opposite, shows the combined number of WTE oncologists, ie clinical and medical, per million population, across the regions and countries in the UK.

Nationally, non-surgical oncology services are delivered by a mixture of clinical and medical

oncologists working together in teams. There is often significant variation in the composition of those teams. By combining the number of WTE clinical and medical oncologists we have tried to show the full oncology provision nationally. Regional and national data on solely clinical oncology provision are shown on pages 18 and 19 of this report.



Figure 4. Clinical and medical oncology consultant workforce (WTE) per million population by UK country and region

A headcount figure of medical oncologists working in cancer centres was supplied by the census. Medical oncologists are also employed nationally with no links to cancer centres and those numbers have been obtained from the Royal College of Physicians of London (RCP) census data.² A number of assumptions have been made about medical oncology WTEs. The number and gender of consultants were obtained from the RCR and RCP censuses. Where data were unobtainable, the participation rate was applied pro rata across the whole medical oncology consultant workforce.

4. UK clinical oncology consultant workforce

The number of consultant clinical oncologists in substantive posts in the UK as of 1 October 2014 was 766. This figure includes NHS consultants, those described as holding mixed NHS/academic posts (on NHS contracts) and those holding wholly academic posts (on university contracts). The split across these groups is shown in Table 4.

Table 4. Type of consultant in clinical oncology

Туре	Count	% of total
NHS consultant	687	90%
Mixed NHS/academic	48	6%
Academic	28	4%
Other	3	<1%
UK total	766	100%

Predominant workload

The proportion of the consultant workforce reported to have a predominantly radiotherapy

workload is unchanged from 2013 at 14%. The data show that 85% of clinical oncologists undertake a balance of both radiotherapy and chemotherapy.

Table 5. Predominant workload of consultant clinical oncologists

Predominant workload	Number of consultants	% of consultants
Chemotherapy	11	1%
Radiotherapy	105	14%
Balance of both	655	85%



Figure 5. Predominant workload of consultant clinical oncologists

Age and gender of consultant workforce

Overall, almost half (46%) of the consultant clinical oncology workforce is female, while 65%

of trainees are female. The number of female oncologists exceeds the number of male oncologists up to the age of 50. Figures 6 and 7 illustrate the changing profile of the clinical oncology consultant workforce.









Less than full-time (LTFT) working

The 2014 census data shows that 25% of consultant clinical oncologists (194 out of 766) now work less than full-time (LTFT), an increase of 5% from 2013. For LTFT consultants, the median number of contracted PAs is 8.0 and the mean is 7.7.

There is a greater propensity for women to work LTFT; 40% of female consultant clinical oncologists (143 out of 356) fall into this category, compared to 12% of male consultants (51 out of 413).



Age

41-50



a. Age not known for one clinical oncologist.

The extent of LTFT working among women currently peaks in the age group 41–50. In this age group, 43% of female consultants (84 out of 194) work LTFT. Given the feminisation of the workforce, in particular the numbers of women entering the consultant workforce (65% of current

<40

trainees are female compared with 35% of consultants overall), the extent of LTFT working is highly likely to continue to increase in coming years, further widening the gap between the headcount and WTE figures.

61+

51-60



Figure 9. Headcount of male and female consultant clinical oncologists working LTFT

Programmed activities

The census collected data on the number of programmed activities (PAs) of each consultant clinical oncologist subdivided into direct clinical care (DCC), supporting professional activity (SPA) and additional responsibility (AR) PAs. Table 6 shows the mean number of contracted PAs for full-time NHS clinical oncologists in the UK in 2014. The mean number of contracted SPAs was 2.11, although in Wales it was higher at 2.81. Across the UK, 30% of full-time consultants are reported as having less than two SPAs in their job plan (an increase from 25% of consultants as reported in the 2013 census).

Country	DCC PAs	SPA PAs	AR PAs	Total PAs
England	8.84	2.07	0.16	11.07
Northern Ireland	10.11	1.93	0.00	12.04
Scotland	9.11	2.08	0.00	11.19
Wales	8.42	2.81	0.29	11.52
UK total	8.87	2.11	0.15	11.13

Table 6. Mean contracted PAs of full-time NHS consultants by UK country

Tumour site specialisation

each consultant. The findings are shown in Table 7 and Figures 10 and 11.

Tumour site-specialisation data are collected through the census. The census allows for more than one site specialty to be entered against

Table 7. Consultant site specialties (multi-response) by UK country^a

	England		Northern	Ireland	Scotland	l i	Wales		UK overa	all
	Count	%	Count	%	Count	%	Count	%	Count	%
Acute oncology	80	13%	0	0%	2	3%	0	0%	82	11%
Breast	211	33%	7	32%	15	24%	10	23%	243	<mark>32%</mark>
Central nervous system (CNS)/Neuro	88	14%	2	9%	8	13%	5	12%	103	13%
Colo-rectal	146	23%	7	32%	13	21%	8	19%	174	23%
Genito-urinary	190	30%	10	45%	12	19%	4	9%	216	<mark>28%</mark>
Gynaecology	91	14%	2	9%	10	16%	5	12%	108	14%
Haematological malignancy	76	12%	2	9%	7	11%	5	12%	90	12%
Head and neck	103	16%	3	14%	11	18%	8	19%	125	16%
Lung	173	27%	6	27%	21	34%	10	23%	210	27%
Paediatric	29	5%	2	9%	3	5%	1	2%	35	5%
Sarcomas	49	8%	2	9%	4	6%	3	7%	58	8%
Skin	87	14%	3	14%	6	10%	2	5%	98	13%
Thyroid	49	8%	1	5%	3	5%	3	7%	56	7%
Teen and young adult	13	2%	3	14%	0	0%	0	0%	16	2%
Upper gastrointestinal (GI) (including hepato-pancreato- biliary [HPB])	100	16%	4	18%	10	16%	9	21%	123	16%
Other	40	6%	2	9%	0	0%	8	19%	50	7%
Total	639	100 %	22	100 %	62	100 %	43	100 %	766	100 %

a. The sum of consultants reported against each site specialty exceeds the total number of consultants as the majority of job plans encompass two or more site specialties. For example, it should not be interpreted that there are 243 consultants solely specialising in breast cancer, rather that there are 243 consultants whose job plans include breast cancer.



Figure 10. Consultant site specialties (multi-response) overall UK headcount



Figure 11. Percentage of consultants in each site specialty by UK country

Figure 12 shows the number of consultants with one, two, three or four or more tumour site specialties. Just under two-thirds of consultants specialise in one or two tumour sites, as per RCR guidance on job planning.³ The rapidly emerging evidence base and operational commitments such as multidisciplinary teams (MDTs) and cross-site travelling make it increasingly difficult for those with more site specialties to maintain adequate continuing professional development (CPD) in all areas.

The number of consultants with three site specialties increased by 6%, from 184 in 2013 to 195 in 2014. During the same period, consultants with four or more sites increased by nearly 13%, from 72 to 81.



Figure 12. Number of site specialties per consultant clinical oncologist in the UK

Regional patterns

The number of WTE consultant clinical oncologists per million population in the UK as a whole was 10.9 (a slight increase from 10.8 in 2013). However, there remains significant variation across the UK. The figure ranges from 9.0 per million in the West Midlands at the lowest end of the scale, to 12.8 in the East of England region. These data are shown in Table 8.

Table 8. UK clinical	oncology consultant wo	rkforce (WTE) per	million population –	by UK country
and region				

Region/country	WTEs	Population ^a	WTEs PMP
England – East Midlands	42.7	4,598,729	9.3
England – East	76.4	5,954,169	12.8
England – London	86.3	8,416,535	10.3
England – North East	30.1	2,610,481	11.5
England – North West	81.6	7,103,260	11.5
England – South Central	52.1	4,273,216	12.2
England – South East	44.3	4,519,410	9.8
England – South West	67.9	5,377,595	12.6
England – West Midlands	50.9	5,674,712	9.0
England – Yorks & Humber	53.3	5,337,710	10.0
England total	585.6	53,865,817	10.9
Northern Ireland	19.8	1,829,725	10.8
Scotland	58.5	5,327,700	11.0
Wales	35.4	3,082,412	11.5
UK total	699.3	64,105,654	10.9

a. South East (ONS region) covers both South Central and South East in the census report. South East (ONS region) = 8,792,626; SC (census region) =48.6% SE (census region) =51.4%

Figure 13 shows the number of clinical oncologists per million population across the UK countries and regions. Appendix 3 additionally shows the number of WTE consultant clinical oncologists per million population within the catchment of each individual cancer centre.





Cross-site working patterns

The proportion of clinical oncology consultants working cross site is shown in Table 9 and Figure 14. In the UK, 60% of consultants deliver care at more than one site on a regular basis (this is up from 54% in 2013). Of these, 42% (up from 36% in 2013) do so with a split day, travelling to more than one site in a working day on a regular basis. In England, a quarter of consultants are employed at more than one NHS trust. In Wales, more than half of consultants are required to travel to more than one site in a working day on a regular basis.

	England	Northern Ireland	Scotland	Wales	UK total
Consultants	639	22	62	43	766
Employed at more than one trust	26%	0%	2%	2%	22%
Deliver care at more than one site on a regular basis	59%	68%	68%	63%	60%
Required to travel to more than one site in a working day on a regular basis	43%	32%	23%	58%	42%

Table 9. Cross-site working patterns by consultant clinical oncologists by UK country

Figure 14. Percentage of consultant clinical oncologists working across different sites by UK country

Attrition

The census gathered data on those leaving the workforce. Ten consultants, just over 1% of the

consultant workforce, left clinical oncology in the UK during 2014. This compares with eight leaving in 2013, 20 in 2012 and ten in 2011. Table 10 shows the reasons given for leaving.

Table 10. Reasons for attrition in the UK consultant clinical oncology workforce

Attrition type	Count
Retired	7
Other	2
Resigned from NHS	1
Total	10

The census collects data on who has retired in the previous 12 months. A number of colleagues are 'retiring and resuming'. On tracking the data over the past four years, it has been found that no person entered as retired appears in the following years' returns, implying that the census question on retirement has been interpreted as finally stopping work, rather than 'retiring and resuming'. In addition, in the two years before stopping work no person has appeared to reduce PAs, implying that consultants reduce work more than three years in advance of retirement (if at all).

Of the ten who left their post in 2014, seven were retirements. The mean age at retirement was 61, while the median age was 63. This is compared to the median age of 60 between 2010 and 2013. Of the seven retirees, three worked on a full-time basis immediately before retirement.

To gain an understanding of the clinical oncology posts likely to become vacant, each workforce lead was asked to state if any of the consultants in their department were expected to retire in the next 12 months. These data, and using a retirement age of 60 (based on trends from previous years), form the basis for estimating likely retirements in the next five and ten years – see Figure 15, opposite. Those expected to retire in the next 5 years make up 16% of the consultant workforce (compared to 20% estimated in the 2013 census report). One-third of consultants are expected to retire in the next ten years (the same estimate in 2013).

Figure 15. Percentage of clinical oncology consultants estimated to retire in the next five and ten years by UK country and region

In the next ten years, regions most likely to be impacted by forthcoming retirements are the East Midlands and North East with 41% of consultants expected to leave the workforce. In the East Midlands retirements are frontloaded with a forecasted 32% retiring within the next five years. In addition, the East Midlands has the second lowest number of clinical oncologists WTE per million population (9.3) in the UK. These facts in combination remain a cause for concern again in 2014.

Based on a retirement age of 60 it is possible to predict the site specialties where there are likely to be future workforce needs, as seen in Figure 16, overleaf.

Figure 16. Estimated number of UK consultant clinical oncologists expected to retire in the next five and ten years by site-specialty

The census data shows that 31% of the 16 consultants specialising in teen and young adult conditions are expected to retire in the next five years and 54% of the 56 consultants specialising in thyroid cancers are expected to retire in the next ten years. Most consultant job plans encompass two or more site specialties and therefore the retirement of an individual is likely to have an impact across specialties

Site-specialty	Consultants (total)	<i>Consultants expected to retire within next ten years (cumulative total)</i>
Breast	243	95
Genito-urinary	216	67
Colo-rectal	174	69
Skin	98	35
Lung	125	52
CNS/neuro	103	40
Head and neck	90	37
Gynaecology	108	39
Thyroid	56	30
Haematological malignancy	210	39
Upper GI (including HPB)	123	40
Sarcomas	58	28
Other	50	25
Paediatric	35	11
Acute oncology	82	14
Teen and young adult	16	6

Table 11. Estimated retirements of UK consultant clinical oncologists in the next five and ten years by site specialty.

Unfilled posts

In addition to consultant clinical oncologists *in post*, the workforce census also captured information on unfilled posts as of 1 October 2014. As the census is a snapshot at a given point in time, some of these posts may have been appointed to during the remainder of the year.

A total of 47 unfilled consultant posts were identified across the UK clinical oncology workforce. Unfilled posts accounted for 6% of all (813) consultant clinical oncology posts in the UK. Of the 47 unfilled posts, 40% (n=19) were filled by locums on the census date of 1 October 2014. As reported for the 2013 census, the 2014 data also suggest that finding suitable candidates to fill vacant posts remained difficult in most areas. It was reported in 2013 that 36% of unfilled posts were not appointed to. This figure decreased to 25% in 2014. However, particular difficulties are experienced in the East Midlands and South West, with 50% of unfilled posts not being appointed to. These data are shown in Table 12 and Figure 17.

The numbers of unfilled posts and regions with unfilled posts in 2014 are very similar to that in 2013. Those regions experiencing difficulties recruiting in one year are more likely to experience difficulties in subsequent years, which is a worrying trend.

Region/country	2014 total posts ^a	2014 unfilled posts	2014 failed to appoint ^b	2013 failed to appoint ^b
England – East Midlands	44	6	3	2
England – East	85	5	0	3
England – London	95	1	0	0
England – North East	32	3	0	0
England – North West	89	3	1	1
England – South Central	63	9	3	1
England – South East	49	0	0	0
England – South West	70	6	3	0
England – West Midlands	53	6	0	0
England – Yorks & Humber	59	3	1	0
England total	639	42	11	7
Northern Ireland	22	0	0	0
Scotland	62	4	1	3
Wales	43	1	0	2
UK total	813	47	12	12

Table 12. Unfilled consultant clinical oncology posts by UK country and region, 2014 and 2013

a. Total substantive posts, including unfilled.
b. 'Failed to appoint' posts have either been advertised with no applicants or interviewed with no suitable 'appointable' applicant.

Figure 17. Number of unfilled consultant posts that failed to appoint by UK country and region, 2012–2014^a

a. Regions and countries with no posts failing to appoint in 2012, 2013 or 2014 not shown.

5. Routine-hours working

Many services are feeling increased pressure due to lack of capacity. Questions were included in the census about routine length of working days and seven-day working. The majority of UK cancer centres are routinely open for between 8 and 10 hours on weekdays for the delivery of radiotherapy and chemotherapy. One-in-five cancer centres (20%) routinely offer nonemergency radiotherapy either on Saturday or both days of the weekend, compared with 15% offering non-emergency chemotherapy.

These data can be seen in Figures 18 and 19.

Table 13. Radiotherapy services routinely open on weekdays and weekends by UK country

	England	Northern Ireland	Scotland	Wales	UK total
Number of centres	50	1	5	3	59
Weekday openings – number of hours					
Less than 8 hours	2	0	1	0	3
8–10 hours	37	1	3	3	44
More than 10 hours	10	0	1	0	11
Varies depending on weekday	1	0	0	0	1
Not open	38	1	5	2	46
Saturday only	7	0	0	0	7
Saturday and Sunday	5	0	0	1	6

Figure 18. Weekly opening hours of UK cancer centres providing radiotherapy services

	England	Northern Ireland	Scotland	Wales	UK total
Number of centres	50	1	5	3	59
Weekday openings – number of hours					
Less than 8 hours	2	0	0	1	3
8–10 hours	33	1	3	2	39
More than 10 hours	13	0	1	0	14
Varies depending on weekday	2	0	1	0	3
Weekend openings – non-emergency chemot	herapy				
Not open	41	1	4	2	48
Saturday only	7	0	0	0	7
Saturday and Sunday	2	0	1	1	4

Table 14. Chemotherapy services routinely open on weekdays and weekends

Figure 19. Weekly opening hours of UK cancer centres providing chemotherapy services

Additional information provided by workforce leads suggests that the opening hours of cancer centres have been extended:

- 'Had to extend opening hours between August and December 2014 to cater to increased demand which has since subsided.'
- 'Two radiotherapy machines open 4.5 hours on Saturday and Sunday. Six machines running 10.5 hours per day. Increase in capacity required due to increase in demand (8,000 extra fractions from April 2014 when patients were transferred from [named hospital] to [named hospital] with 3 months'

notice). Had to use private provider in [named hospital] for 9 months temporarily to supply about 2,000 of these fractions.'

 'As most of the radiographers are female, many with family responsibilities, we previously found getting therapy radiographers to work extended hours, when we had funding for CHART, was very difficult, and I suspect the same issue would apply to trying to introduce routine weekend working. We do provide an emergency radiotherapy service as required at weekends already.'

- 'Inpatient chemotherapy is open at weekends, day-case and outpatient chemotherapy not so.'
- 'Open bank holidays.'
- 'Radiotherapy and chemotherapy departments housed in a PFI building, so constrained by the contracted opening hours of this building (09:00–17:00). Negotiations currently in process to allow extended working days on Linacs, as a solution for increasing demand.'
- 'Radiotherapy is now starting to work extended days in October due to capacity issues and linac replacement.'
- 'Radiotherapy is occasionally given at weekends dependant on patient needs. Radiotherapy and chemotherapy are sometimes given on bank holidays (and substitute bank holidays) as dependant on patient needs, eg if Christmas/New Year might result in a significant break from treatment.'
- 'Saturday AM is only for infusions and blood transfusion not chemotherapy due to capacity issues in pharmacy. Weekends in radiotherapy are for emergencies.'

- Some patients are treated on weekend days even if they are not emergency. For example, if they are inpatients to try and get them home quicker, or if there has been a service day and a patient only has one fraction left to go.'
- Started routinely offering chemotherapy appointments on a Saturday morning.
- 'We also run an ambulatory chemotherapy service which operates at the weekends. There is 7-day 24 hour chemotherapy cover for inpatients.'
- 'As a specialist cancer hospital we deliver chemotherapy 24/7.'
- 'We have on-call service over weekends. Occasionally we work weekends to cover for breakdown and missed treatments and CHART.'
- 'We have some routine gap treatments for radiotherapy some weekends and bank holidays.'
- 'We open at weekends for emergencies, and for routine category A patients on Saturdays to cover bank holidays and unscheduled machine downtime.'

6. Conclusion

The 2014 clinical oncology workforce census contains very interesting and provocative data. The strength of the complete 100% data return lies not only in its timeliness but also its robustness. Again, thanks are due to all those who gave their time to upload the data. This data was used as evidence in the 2014 commissioning round to secure increases in funded training posts in England and Scotland. We hope to be successful again in the 2015 commissioning round. The clinical oncology workforce continues to show an expansion of approximately 2% per annum as predicted from CCT data. The gap between headcount and WTE in 2014 remains high. The feminisation of the trainee population means this gap is likely to continue to widen with time.

For the first time we have obtained specific data on research PAs. Although essential to the development of the specialty, they do not contribute to DCC and, for the purposes of calculating service provision across the country, they have been removed. Significant regional variations remain in the available clinical oncology workforce. It is difficult to believe that this variation can have no impact on the uptake of advanced radiotherapy techniques and, further downstream, patient outcomes.

The mean age at retirement has increased this year for the first time since the census started. It remains to be seen whether this is the start of a new trend or merely a transitory fluctuation.

Retirements will disproportionately impact certain populations as well as tumour types. Trainees can use this data as an opportunity to develop the site specialisations that would make them more competitive in locations where they would wish to work.

One function of the RCR is to help define professional standards. It is discouraging that tumour site specialisation and travelling time within job plans has not aligned more quickly to the published standards.³ It is likely that the latter, at least, would improve consultant efficiency by releasing time in job plans. This trend may reflect the increasing pressure on departments, especially those with unfilled posts, to cover service needs. Again the potential impact on implementation of novel techniques cannot be ignored.

There remains evidence that workforce capacity is not keeping pace with demand. Services are stretched, not just in terms of clinical oncologist time, but also radiographer, physicist and nursing time. An increasing emphasis on seven-day access to routine care continues. More than 20% of centres are now offering routine access to radiotherapy at the weekend. For chemotherapy services, the proportion is 18%. While this addresses the footprint of services, it cannot be safely delivered without a significant workforce expansion, regardless of efficiencies or skill mix.

Approved by the Clinical Oncology Faculty Board: 19 June 2015.

References

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- 2. Royal College of Physicians. *Census of consultant physicians in the UK 2012: specialty training report medical oncology.* London, Royal College of Physicians, unpublished data.
- 3. The Royal College of Radiologists. *A guide to job planning in clinical oncology.* London: The Royal College of Radiologists, 2012.
- 4. National Clinical Analysis and Specialised Applications Team. 2010/11 RTDS provider populations method B (v3). London: National Clinical Analysis and Specialised Applications Team, 2012.

Appendix 1. 2014 census completions

Aberdeen Royal Infirmary Addenbrooke's Hospital Beatson West of Scotland Cancer Centre **Belfast City Hospital** Bristol Haematology & Oncology Centre **Castle Hill Hospital Cheltenham General Hospital Colchester General Hospital Cumberland Infirmary Derriford Hospital** Dorset Cancer Centre, Poole Hospital Edinburgh Cancer Centre, Western General Hospital Glan Clwyd Hospital Guy's & St Thomas' Cancer Centre Imperial College Cancer Centre **Ipswich Hospital** Kent Oncology Centre Leicester Royal Infirmary Lincoln County Hospital Mount Vernon Cancer Centre Musgrove Park Hospital NCCC, the Freeman Hospital New Cross Hospital Ninewells Hospital & Medical School Norfolk and Norwich University Hospital North Middlesex University Hospital Northampton General Hospital Nottingham University Hospital, City Hospital Campus Oxford Cancer Centre, Churchill Hospital, Oxford Peterborough City Hospital Portsmouth Oncology Centre, Queen Alexandra's Hospital Queen Elizabeth Hospital Queens Hospital, Romford **Raigmore Hospital Royal Berkshire Hospital Royal Cornwall Hospital** Royal Derby Hospital Royal Devon & Exeter Hospital (Wonford) Royal Free Hospital **Royal Marsden Hospital Royal Preston Hospital Royal Shrewsbury Hospital** Royal Surrey County Hospital **Royal Sussex County Hospital**

Dr Leslie Samuel Dr Richard Benson Dr David Dodds Professor Joe O'Sullivan Dr Matthew Beasley Dr Rajarshi Roy Dr Jo Bowen Dr D Muthukumar Mr Jim Methven Dr Sarah Pascoe Dr Maxine Flubacher Dr Carolyn Bedi Dr Win Soe Dr Shahreen Ahmad Dr Danielle Power Dr Christopher Scrase **Dr Sharon Beesley** Dr David Peel Dr Miguel Panades Dr Mark Harrison Dr Petra Jankowska Dr Ian Pedley Dr Rozenn Allerton Dr Richard Casasola Dr Thomas Roques Dr Girija Anand Dr Amanda Bisset Dr Daniel Saunders Dr Claire Blesing Dr Catherine Jephcott Dr Daniel Dubois Dr Daniel Ford Dr Sherif Raouf Dr Carol MacGregor Dr James Gildersleve Dr Toby Talbot Dr Rengarajan Vijayan Dr Elizabeth Toy Dr Katharine Pigott Dr Imogen Locke Dr Geraldine Skailes Dr Sheena Khanduri Ms Lauren Webb Dr Fiona Mckinna

Royal United Hospital Bath Singleton Hospital South Devon Hospital Southend Hospital St Bartholomews Hospital St James's Institute of Oncology, Leeds The Christie Hospital The Clatterbridge Cancer Centre The James Cook University Foundation Hospital University College Hospital University Hospital of North Midlands University Hospital Southampton University Hospitals, Coventry and Warwickshire Velindre Hospital Weston Park Hospital Dr Mark Beresford Dr Delia Pudney Dr Anna Lydon Dr Imtiaz Ahmed Dr Paula Wells Professor David Dodwell Dr John Logue Ms Susan Birch Dr Nick Wadd Dr Yen Ching Chang Ms Danielle Baker Dr Geoff Sharpe Dr Lydia Fresco Dr Tom Crosby Dr Patricia Fisher

Appendix 2. 2014 census questions

1.1 Your organisation – details

- Workforce lead full name
- Cancer centre name
- Country/region
- Contact details

1.2 Permanent staff details - clinical oncology

- Name
- Gender
- Grade:
 - Consultant
 - Associate specialist
 - Clinical assistant
 - Specialty doctor
 - o Trust grade
 - o Other
- Contracted PAs (Consultants only)
 - o DCC PAs
 - SPA PAs
 - SPAs allocated to research
 - o AR (Additional responsibility) PAs
 - TOTAL PAs (calculated as DCC + SPA + AR PAs)
- Full- or part-time
- Cross-site working
 - o Employed at more than one trust
 - Deliver care at more than one site on a regular basis
 - o Required to travel to more than one site in a working day on a regular basis
- Type of post
 - o NHS
 - o Academic
 - o NHS & Academic
- Predominant workload:
 - o Chemotherapy
 - o Radiotherapy
 - o Balance of both
- Please select site specialty (check all that apply):
 - Acute oncology
 - o Breast
 - o CNS/Neuro
 - o Colo-rectal
 - Upper GI (including HPB)
 - o Genito-urinary
 - o Gynae
 - o Haematological malignancy

- o Head and neck
- o Lung
- Paediatric
- o Sarcomas
- o Skin
- Thyroid
- o Teen and young adult
- o Other

- Expected to retire by 1 October of 2015
- Left since 1 October 2014
- Reason for leaving
 - Moved to another NHS post
 - $\circ \quad \text{Resigned from the NHS} \\$
 - Retired from the NHS
 - o Other
- Permanent staff details medical oncology
 - o Full-time time consultant medical oncologists (headcount)
 - Part-time time (<10 PAs) consultant medical oncologists (headcount)

1.3 Unfilled permanent posts – clinical oncology

- Unfilled post status:
 - o Funded but not yet advertised
 - Advertised but not yet interviewed
 - o Advertised but no suitable applicants to interview
 - o Interviewed but no suitable applicants to appoint
 - o Appointed but not yet taken up
 - Period unfilled (to nearest month) dropdown menu.
- Grade
 - o As per 1.2
- Total contracted PAs of post
- Full- or part-time
- Please select primary area of interest/specialist interest
 - As per 1.2
- Locum filled?
 - o Yes/no
 - o If yes, how long has it been filled by a locum? (dropdown menu, to nearest month)

1.4 Routine working hours

All cancer centres kindly provided information on their routine working hours for the first time in 2013. To build on this data, we would like to collect this information again for 2014.

Radiotherapy

For the month of September 2014, please enter routine (non-emergency) radiotherapy service opening hours at your centre:

- o Weekdays; weekends
- Not open; open <8 hours; open 8–10 hours; open >10 hours
- Would you say the routine opening hours you have entered for radiotherapy for September represent a typical month for the year to date? Yes/No
- o If no, please explain (free text max 500 characters)
- Chemotherapy

For the month of September 2014, please enter routine (non-emergency) chemotherapy service opening hours at your centre:

- o Weekdays; weekends
- Not open; open <8 hours; open 8–10 hours; open >10 hours
- Would you say the routine opening hours you have entered for chemotherapy for September represent a typical month for the year to date? Yes/No
- If no, please explain (free text max 500 characters)

1.5 Comments

Please use the space provided below to enter any further workforce details you feel are relevant to your census submission but have not already been captured and/or provide general feedback to the College regarding the census.

Appendix 3. Clinical oncologists by UK cancer centre

Cancer centre	Consultant WTEs	Catchment population ^a	Consultant WTEs PMP ^b
UK overall	699.3	64,105,654	10.9
Aberdeen Royal Infirmary	5.8	617,334	9.4
Addenbrooke's Hospital (Cambridge)	18.1	1,434,233	12.6
Beatson West of Scotland Cancer Centre (Glasgow)	26.0	2,571,731	10.1
Belfast City Hospital	19.8	1,856,475	10.7
Bristol Haematology & Oncology Centre	11.5	1,089,020	10.5
Castle Hill Hospital (East Riding of Yorkshire)	11.0	1,034,653	10.6
Cheltenham General Hospital	10.5	1,098,667	9.6
Christie Hospital (Manchester)	33.7	3,308,866	10.2
Clatterbridge Cancer Centre (Wirral)	25.8	2,259,382	11.4
Cumberland Infirmary (Carlisle)	3.0	305,967	9.8
Derriford Hospital (Plymouth)	8.0	461,213	17.3
Dorset Cancer Centre, Poole Hospital	6.9	726,670	9.4
Edinburgh Cancer Centre, Western General Hospital	17.3	1,396,465	12.4
Essex County Hospital (Colchester)	9.7	712,099	13.6
Glan Clwyd Hospital (North Wales)	7.0	712,619	9.8
Guy's & St Thomas' Cancer Centre (London)	17.7	1,725,839	10.3
Imperial College Cancer Centre (London)	11.0	1,193,416	9.2
Ipswich Hospital	6.9	359,340	19.3
James Cook University Foundation Hospital (Middlesbrough)	11.5	1,029,949	11.2
Kent Oncology Centre (Maidstone & Canterbury)	16.9	1,808,750	9.3
Leicester Royal Infirmary	6.7	932,330	7.2
Lincoln County Hospital	6.0	575,137	10.4
Mount Vernon Cancer Centre (Middlesex)	19.5	1,972,670	9.9
Musgrove Park Hospital (Taunton)	7.3	391,784	18.6
NCCC, the Freeman Hospital (Newcastle)	18.6	1,787,490	10.4
New Cross Hospital (Wolverhampton)	7.0	862,710	8.1
Ninewells Hospital & Medical School (Dundee)	6.9	509,014	13.6
Norfolk and Norwich University Hospital	9.8	857,546	11.4
North Middlesex University Hospital (London)	7.2	583,995	12.4
Northampton General Hospital	7.0	598,944	11.7
Nottingham University Hospital, City Hospital Campus	13.0	1,121,082	11.6

Oxford Cancer Centre, Churchill Hospital, Oxford	21.0	1,630,370	12.9
Peterborough City Hospital	3.5	273,349	12.6
Portsmouth Oncology Centre, Queen Alexandra's Hospital	8.0	801,540	9.9
Queen Elizabeth Hospital (Birmingham)	15.8	1,966,156	8.0
Queen's Hospital, Romford (Essex)	8.9	597,324	14.9
Raigmore Hospital (Inverness)	2.5	359,571	7.0
Royal Berkshire Hospital (Reading)	7.7	728,396	10.6
Royal Cornwall Hospital (Truro)	5.0	410,279	12.2
Royal Derby Hospital	10.0	717,523	13.9
Royal Devon & Exeter Hospital	10.6	582,810	18.1
Royal Free Hospital (London)	4.1	391,317	10.5
Royal Marsden Hospital (London)	19.8	2,173,490	9.1
Royal Preston Hospital	19.1	1,469,324	13.0
Royal Shrewsbury Hospital	6.0	460,953	13.0
Royal Surrey County Hospital (Guildford)	15.5	1,267,502	12.2
Royal Sussex County Hospital (Brighton)	12.0	940,045	12.7
Royal United Hospital (Bath)	5.0	439,626	11.4
Singleton Hospital (Swansea)	8.8	916,225	9.6
South Devon Hospital (Torbay)	3.3	247,965	13.1
Southend Hospital	9.1	672,188	13.5
St Bartholomew's Hospital (London)	6.1	1,098,169	5.6
St James's Institute of Oncology (Leeds)	26.1	2,851,257	9.1
University College Hospital (London)	11.5	884,433	13.0
University Hospital Southampton	15.5	1,287,906	12.0
University Hospitals of North Midlands	10.0	669,081	14.9
University Hospitals, Coventry and Warwickshire	12.1	1,055,699	11.5
Velindre Hospital (Cardiff)	19.6	1,527,041	12.8
Weston Park Hospital (Sheffield)	16.2	1,790,726	9.1

a. Based on data from Radiotherapy provider populations 2010/11 population data for all catchment areas have been increased by 1.018 to ensure total UK population matches the Office for National Statistics' figure of 64.1 million.⁴

b. Per million population.

Citation details

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