

Clinical oncology UK workforce census report 2017



Foreword

The management of cancer in the UK has rightly been identified as a governmental priority, based on the burden of suffering for individuals and their families and the economic consequences of cancer within the health system and wider society. The largest risk factor for cancer is age; a 70-year-old person is 100 times more likely to get cancer than a 20 year old.¹ Due to the aging population, one in two people in the UK will be diagnosed with some form of cancer during their lifetime.² We are just starting to see the beginning of this demographic shift.

The good news is that people with cancer are living longer as a result of earlier diagnosis and better treatments. Where cure is not possible, for many people cancer is becoming a chronic illness, with a series of remissions as a result of ongoing treatment over many years, requiring more discussion of options and supervision of ongoing complex treatments. Keeping abreast of developments in treatment and managing the expectations of patients and their families requires education, training and time. Without a cancer workforce the UK cannot deliver the cancer care that patients and their families expect and deserve.

This is the tenth year that the clinical oncology census has been published, providing a unique profile of the clinical oncology workforce in the UK, with a 100% return rate. This census is recognised as a key resource for workforce planning and core to the recent Cancer Research UK (2017) *Full team ahead: understanding the UK non-surgical cancer treatments workforce* publication.³

Dr David Bloomfield

Medical Director, Professional Practice
Clinical Oncology

Contents

Foreword	3
1. Executive summary	5
Objectives	5
Key findings	5
2. The UK oncology workforce in 2017	7
Consultant workforce: five-year trend	8
Tumour site specialisms	8
Programmed activities	10
Attrition	13
Recruitment	14
3. Workforce supply	20
Supply from UK specialist training	20
Supply from outside the UK	21
Estimated attrition	21
Flexible working: less than full-time (LTFT) working	22
4. Demand for services	25
Increased cancer prevalence	25
Implications of technological advances	25
Access to routine cancer services	25
Optimising skill-mix	26
5. Closing the gap between supply and demand	27
References	30
Appendix A. Census methodology	31
Appendix B. Census questions 2017	32
Appendix C. Census completions 2017	38



Without a cancer workforce the UK cannot deliver the cancer care that patients and their families expect and deserve

1. Executive summary

Objectives

The objectives of The Royal College of Radiologists' (RCR) 2017 workforce census are threefold:

1. To provide comprehensive, accurate and timely information on the number, distribution and working patterns of consultant-grade clinical oncologists employed in UK NHS cancer centres
2. To forecast future workforce numbers and working patterns, by analysing census data and trends together with RCR specialty training data
3. To estimate the extent to which future workforce supply and demand for cancer treatments are aligned.

The data and trends identified in this report will inform local and national oncology workforce training, planning and policy. Given the clinical and financial importance of ensuring an efficient and effective NHS workforce, it is vital that decisions are based upon accurate and timely data.

Key findings

Demand is increasingly outstripping supply leading to a shortfall in numbers

- More than 60 full-time consultant clinical oncologists are needed now to fill vacant posts. More than half of the reported vacant posts have resulted so far in a failure to appoint (in the 12-month period to October 2017). One in three are reported as having remained unfilled for 12 months or more, representing a significant increase on the equivalent 2016 figure of one in ten. This highlights how quickly the situation is deteriorating. The number of vacant posts in 2017 exceeds the number of trainees estimated to enter the UK consultant workforce every year for the next five years.
- Without significant change to the supply or the demand and delivery of cancer services, the shortfalls currently being experienced across the clinical oncology workforce will continue. There is estimated to be a shortfall of approximately 250 full-time consultant clinical oncologists by 2022. In the last five years, the whole-time equivalent (WTE) consultant clinical oncologist workforce has grown at an average of 4% per annum, however, the growth rate halved in the 12 months to October 2017 to just under 2%.^A

Increased pressure on services

- The time allocated to supporting professional activities (SPAs) for clinical oncologists is being steadily eroded. This compromises the ability to revalidate and means less time available to enhance techniques and services⁷ for patient benefit. In 2017, 160 consultant clinical oncologists had fewer SPAs than the minimum requirement of 1.5 to support an individual's revalidation.⁴

^AA WTE is a whole-time (or full-time) worker with a ten programmed activities (PAs) contract. This is equivalent to a 40-hour week in England, Northern Ireland and Scotland and equivalent to a 37.5-hour week in Wales. The calculation of WTEs throughout this report conforms to the NHS convention of calculating one WTE as ten PAs (that is, it excludes PAs that exceed ten). WTEs include direct clinical care (DCC) and supporting professional activities (SPA), but exclude research and additional responsibility PAs.

The number of individuals working more than ten programmed activities (PAs) each week is increasing, along with increased travel time between clinics. A further 80 full-time consultant clinical oncologists are needed now to meet the demand for cancer services in the UK to cover the excessive workload (that exists in addition to vacant posts) currently being covered by the existing workforce.³

- Almost one in ten full-time consultant clinical oncologists are contracted to work in excess of the European Working Time Directive (EWTD) of 48 hours per week. Excessive working is likely to lead to stress and burnout and should be avoided.⁵

Training numbers must increase in areas that can offer training

- National training numbers for clinical oncology must be increased in those areas that can recruit. There are potential trainees who are geographically limited and these trainees move to other specialties at recruitment if a training number is not available in the geographical area sought.
- Workforce planners must factor the continuing and marked rise in less than full-time working into projections and funding for future trainee numbers. The proportion of consultant clinical oncologists working less than full-time has risen from 21% in 2012 to 28% in 2017.

The loss of trained and experienced clinical oncologists

- The median age of retirement in 2017 is 60 meaning that half of clinical oncologists are leaving clinical practice by the age of 60, resulting in the loss of valuable skills and expertise. This is a reduction from a median age of 64 in the previous two years. If consultant clinical oncologists could be incentivised to continue to work full-time and retire at the age of 65, this has the potential to result in an estimated 100 fewer consultants (WTEs) retiring within the next five years. Older consultants are a valuable source of training and mentoring for younger consultants.
- Almost a quarter of consultants are international medical graduates (IMGs) yet they represented almost half of those leaving the workforce in 2017. Following the EU referendum, the NHS is finding it increasingly difficult to attract the clinical staff it needs from the EU. The proportion of European doctors gaining a licence in the UK has fallen from 25% of the total in 2014 to just 16% in 2017.⁶

2. The UK oncology workforce in 2017

The UK oncology workforce as of October 2017 is summarised in Table 1. Data for both clinical oncology and medical oncology are shown to reflect the joint approach of the specialties to the delivery of cancer services. The focus of the RCR census and subsequent content of this report is specific to the clinical oncology workforce.

Other grades include associate specialists, clinical assistants, specialty doctors and other trust-grade staff.

Table 1. UK oncology workforce, 2017

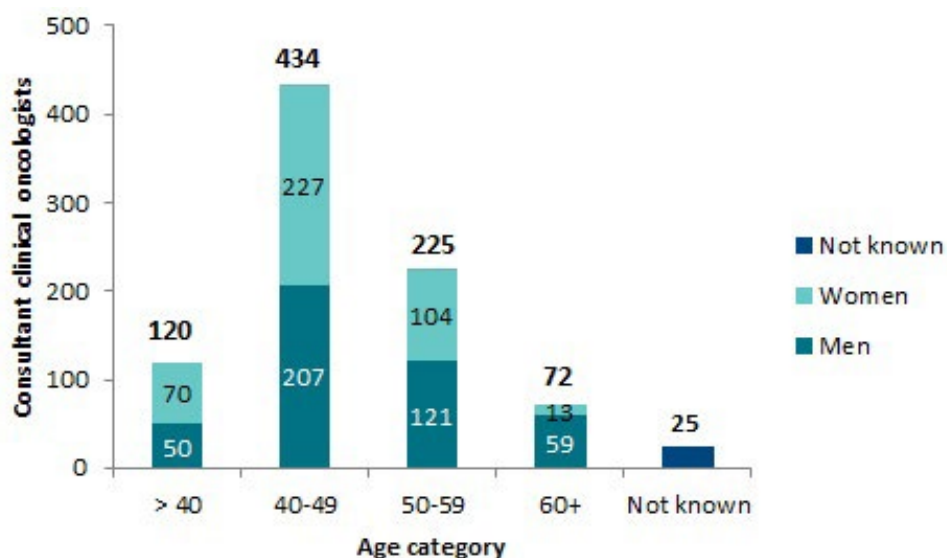
	Clinical oncology (headcount)	Medical oncology (headcount) ⁷	Oncology total (headcount)
Consultant-grade	876	550	1,426
Trainee	439	271	710
Other grades	90	NK	NK

NK = not known

The number of consultant clinical oncologists employed in a substantive or locum post in the UK rose by 2% to 876 (headcount) in the 12 months to October 2017. Taking into account working patterns and less than full-time (LTFT) working, the UK total of 876 consultant clinical oncologists translates to 817 WTEs.

Of the 876 consultant clinical oncologists in post in 2017, 91% (n=801) are employed in NHS consultant posts. The remainder hold academic posts (3%) or a combination of the two (6%). Of the 876, 96% (n=841) are employed in substantive posts and 4% (n=35) locum posts. Figure 1 provides an overview of the consultant clinical oncology workforce by age and gender.

Figure 1. UK consultant clinical oncology workforce, 2017 – by age and gender

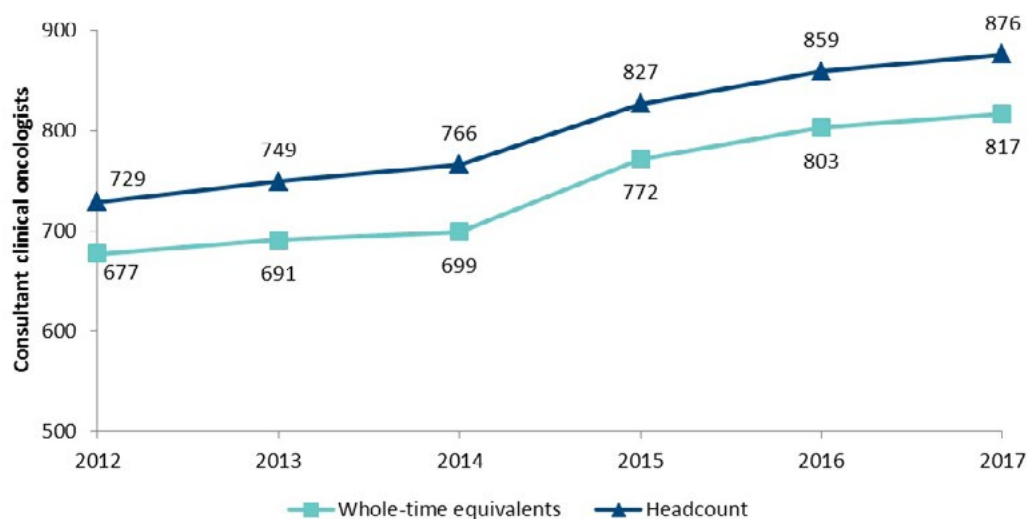


The overall number of trainee clinical oncologists in UK specialist training rose by 12% to 439 in the 12 months to October 2017. The rise is attributable to trainees taking longer to complete training, due to an increase in less than full-time (LTFT) training and out-of-programme activities. In 2017 there were 66 new entrants to training compared to 49 completions. Successful completion of specialist training in clinical oncology in the UK normally requires a minimum of five years of full-time training. Over the past five years, the average time taken to complete was 6.9 years. For those working LTFT the average duration of training was 8.2 years.

Consultant workforce: five-year trend

In the last five years, the consultant clinical oncology consultant workforce (WTE) has grown at an average of 4% per annum, however, the growth rate halved in the 12 months to October 2017 to just under 2%. Figure 2 shows the five-year trend.

Figure 2. UK consultant clinical oncology workforce – five-year trend



Set in the context of a UK population that is increasing, this slowing of growth presents challenges for meeting future demand. As well as growing, the population is aging. The risk of most cancers, along with co-morbidities, significantly increases with age, placing even greater demands on the future provision of cancer care.¹

Tumour site specialisms

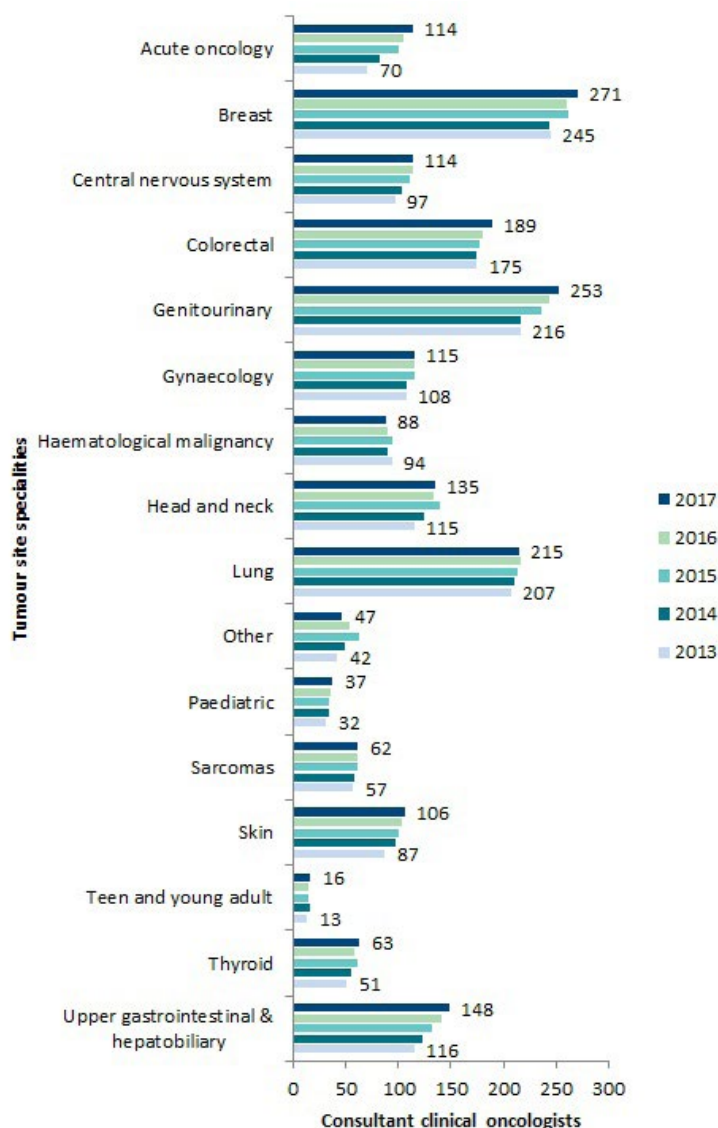
In line with the overall increase, the number of consultant clinical oncologists across most site specialties has increased in the 12 months to October 2017, in particular for acute oncology, upper gastrointestinal and hepatobiliary, genitourinary and breast oncology. A decrease has been seen for haematological malignancies as shown in Figure 3.

The RCR recommends that a consultant clinical oncologist should 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.⁸ In 2017, approximately two-thirds met these recommendations and had either one site speciality (20%) or two site specialties (47%). However, a third (33%) of consultants are reported as having three or more. The feasibility

of keeping up to date with three or more site specialties needs to be carefully considered when job planning.

The distribution of the workforce across tumour site specialties largely mirrors the most prevalent cancer types. Cancer Research UK data shows that breast (15% of all cancers), prostate (13%), lung (13%) and colorectal (11.5%) cancers continue to account for over half of all cancer registrations in the UK.⁹

Figure 3. Frequency of tumour site specialties undertaken by consultant clinical oncologists – five-year trend*

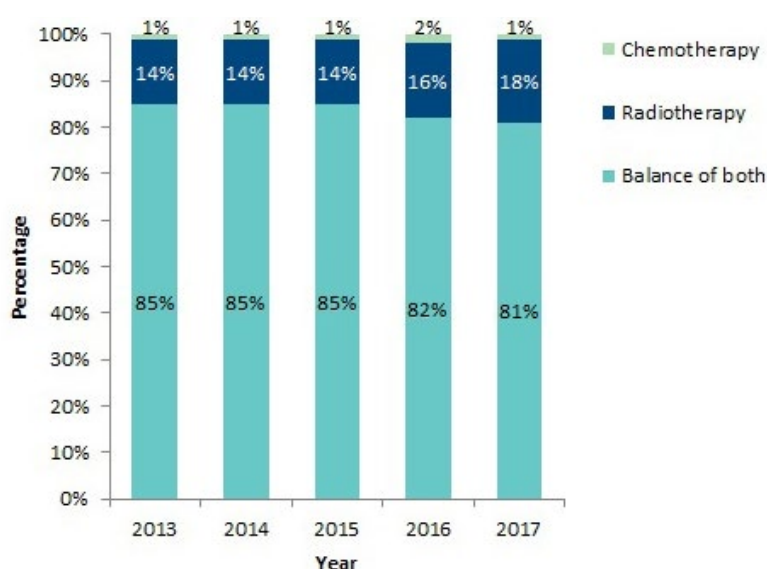


*The cumulative frequency of site specialties shown in Figure 3 exceeds the number of consultant clinical oncologists as the more than one site specialty could be reported per individual consultant clinical oncologist.

In addition to site specialty, the census shows that the job plan for four out of five consultant clinical oncologists (81%) covers both chemotherapy and radiotherapy to treat and manage cancer patients. There has been a small increase over the past five years in the percentage

of consultant clinical oncologists with a predominant workload of radiotherapy from 14% in 2013 to 18% in 2017. Very few consultant clinical oncologists (1%) have a predominant workload of chemotherapy. The five-year trend is shown in Figure 4.

Figure 4 Predominant workload of consultant clinical oncologists – five-year trend



Programmed activities

The census collects data from each UK cancer centre for contracted PAs worked per week for each consultant clinical oncologist, sub-divided into direct clinical care (DCC)^B and supporting professional activities (SPAs).^C

Direct clinical care and supporting professional activities

For a full-time consultant clinical oncologist, the mean number of total contracted PAs in 2017 was 11.5. This equates to a 46-hour working week. This excludes unpaid hours worked in addition to contracted PAs. Table 2 shows the contracted PAs of full-time consultant clinical oncologists in the UK.

Table 2. UK full-time consultant clinical oncologists – contracted programmed activities (PAs)

Year	DCC	SPA	Additional	Research	Total
2015	8.9	2.1	0.3	0.1	11.3
2016	9.0	2.0	0.2	0.2	11.4
2017	9.1	1.9	0.3	0.2	11.5

^BDCC refers to work directly relating to the prevention, diagnosis or treatment of illness, but also includes administration and travel relating to that work.⁸

^CSPAs are activities undertaken to comply with clinical governance and revalidation requirements, including mandatory training, audit and quality improvement, continued professional development and appraisal (but can also include supporting activities such as teaching and training).⁸

Over the past three years, there has been a slight increase in contracted PAs from 11.3 in 2015 to 11.5 in 2017. Full-time consultants are contracted to work one hour longer each week than three years ago.

In the last five years there has been an increase in contracted DCC PAs, from 8.8 DCCs in 2013 to 9.1 in 2017 and a corresponding decrease in contracted SPAs from 2.2 in 2013 to 1.9 in 2017 (see Figure 5).

Figure 5. UK full-time consultant clinical oncologists contracted DCC and SPAs – five-year trend

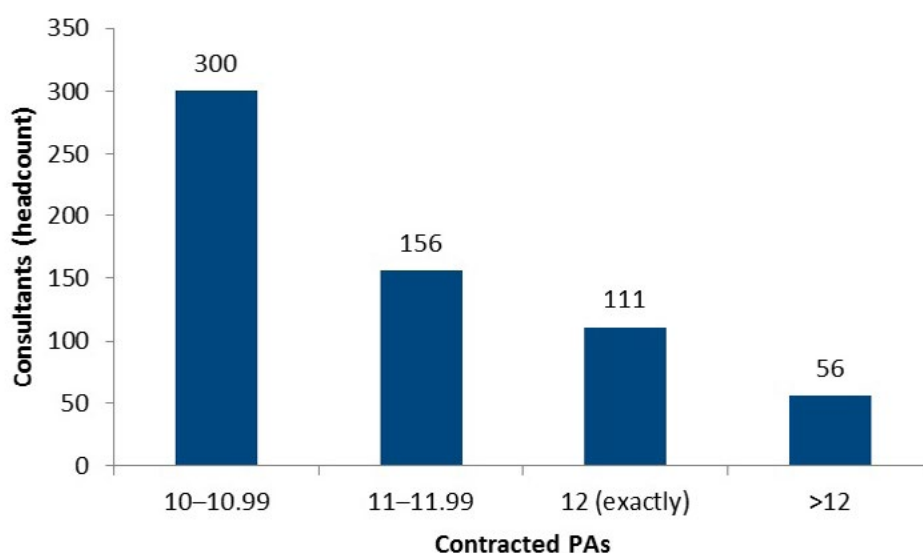


The Academy of Medical Royal Colleges states the minimum number of SPAs required to support an individual's revalidation is 1.5.⁴ In 2017, one in ten full-time consultant clinical oncologists (n=63) and one in three less than full-time (LTFT) consultants (n=97) had fewer than the minimum. This compromises the ability of doctors to keep their knowledge up to date and revalidate. Adequate SPA time is also important to enable consultants to undertake audit and quality improvement activities, leading to service improvements and enhanced techniques and services for patient benefit.

Nearly one in ten full-time consultant clinical oncologists (n=56) were contracted to work in excess of 12 PAs in 2017, equivalent to more than 48 hours per week as shown in Figure 6. The European Working Time Directive states no consultant should work more than an average of 48 hours, unless they have voluntarily decided to opt out.¹⁰ The RCR joined with the British Medical Association (BMA) and others to urge the Government to retain Working Time Regulations after the UK leaves the European Union.¹¹

To achieve alignment with the RCR recommended balance of 7.5 DCC PAs and 2.5 SPAs (that is, capping job plans at a total of ten PAs) would require an additional 80 full-time consultant clinical oncologists in post to cover the existing workload, and would represent a 9% increase on current consultant numbers.

Figure 6. UK full-time consultant clinical oncology workforce – contracted PAs



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 people living with cancer.

Much of the clinical research in the UK is undertaken by consultants within the NHS. Due to the pressures of service provision it can be difficult to carve out time for research.

Ninety-eight consultant clinical oncologists (11%) were reported as having research PAs in the 2017 census, an increase from 81 (10%) in 2016. For these 98 consultants, the mean number of contracted research PAs was 1.4, equivalent to just under six hours per week.

Additional responsibility PAs

Additional responsibilities undertaken as a clinical director, audit lead, clinical tutor and similar roles, should be formally identified in job plans as additional responsibility PAs.⁸

Overall, 217 (25%) consultant clinical oncologists were reported as having additional responsibility PAs in the 2017 census, an increase from 19% in 2016. For these 217 consultants, the mean number of contracted additional responsibility PAs was 1.5,

equivalent to six hours per week. The census data showed that these consultants did not have a commensurate reduction in DCC PAs to compensate.

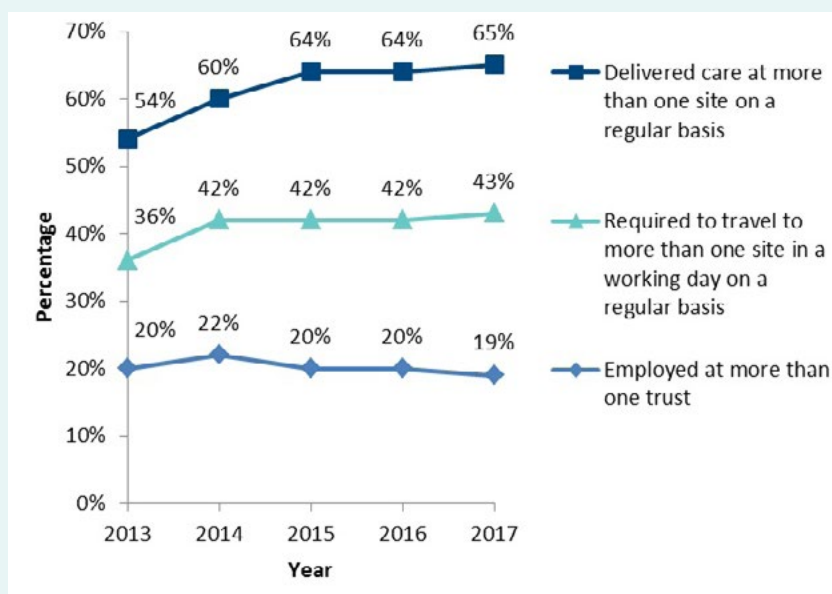
Cross-site working: travel time and DCC

The RCR *Guide to job planning in clinical oncology* states travel time between sites for clinical commitments should be treated as DCC time.⁸ An increase in travel time between sites reduces time available for core clinical work including seeing, assessing and supervising patients and radiotherapy planning.

Almost two-thirds (65%) of consultant clinical oncologists delivered care at more than one site on a regular basis in 2017. This has increased steadily in the last five years, up from 54% in 2013 as shown in Figure 7.

43% percent of consultant clinical oncologists were required to travel to more than one site in a working day on a regular basis. This has increased from 36% in 2013.

Figure 7. UK consultant clinical oncology workforce DCC and travel time – five-year trend



Attrition

In the 12 months to October 2017, 32 consultant clinical oncologists left the workforce. Taking into account LTFT-working, this translated to 29 WTEs leaving. This represents an annual attrition rate of 4%. The rate is unchanged on the previous year.

Almost half of the 32 'leavers' were IMGs even though this cohort constitutes just 23% of the UK consultant clinical oncology workforce overall. Reasons given for leaving included to work (or retire) overseas.

The age at leaving varied considerably. While the median age for those leaving to retire in 2017 was 60, the lowest age of those leaving for other reasons was 36.

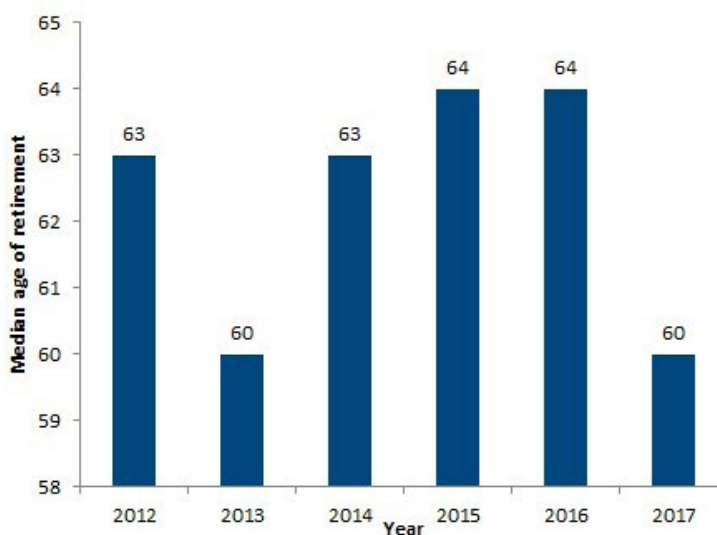
Attrition also impacts trainee clinical oncologist numbers and is discussed in Section 3 of this report.

Attrition through retirement

The primary reason reported in the RCR census for consultant-grade attrition in 2017 was retirement.⁹ The median age of retirement in 2017 was 60 (the mean age was 59). The average age at retirement has fluctuated over the past five years, ranging from 60 to 64 (Figure 8). The five-year median is 63.

Taken on its own, the median age of retirement in 2017 represents merely another fluctuation, but if identified in subsequent years of the census as the start of a trend for retiring earlier it would be a cause for considerable concern. Through years of experience and training, older consultants have built up valuable skills and experience and are often a source of mentoring and training for younger consultants. Section 3 of this report considers the effect retirement will have on the workforce and cancer service provision in coming years.

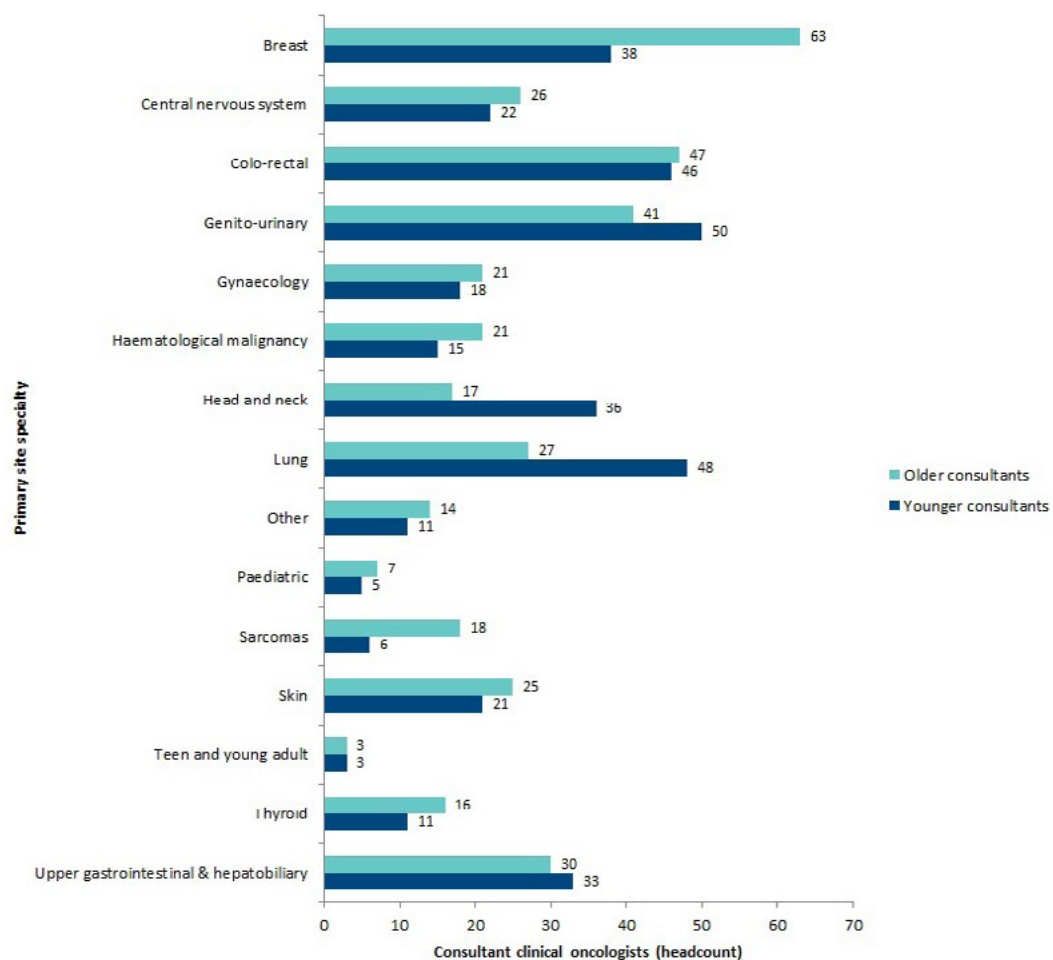
Figure 8. UK consultant clinical oncology workforce retirement age – last five years



⁹In the context of the RCR census data collection, retirement means retiring from working as a clinical oncologist on a permanent basis.

Figure 9 shows the site specialties of the youngest 20% and oldest 20% of consultant clinical oncologists as a means of highlighting potential tumour site-specific workforce shortages in coming years. Assuming no significant change in demand, a shortfall in the consultant workforce is predicted for sarcoma and breast cancers.

Figure 9. UK consultant clinical oncology workforce – by primary site speciality



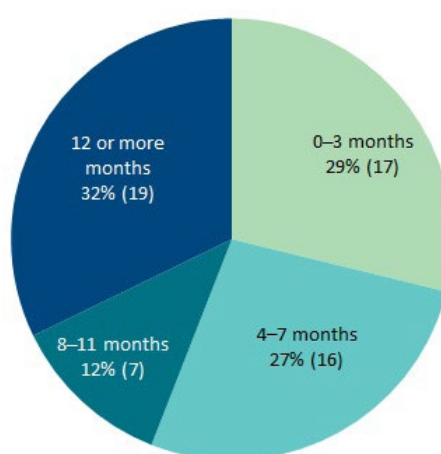
Recruitment

To meet the continued growth in demand for cancer services, recruitment to the clinical oncology workforce plays a vital role. Staffing levels vary greatly across the 62 cancer centres in the UK that contribute to the RCR census, ranging from those with consultant-grade staff of just two up to those with more than 40. This section reports on the recent experiences of recruitment to consultant posts.

Unfilled posts

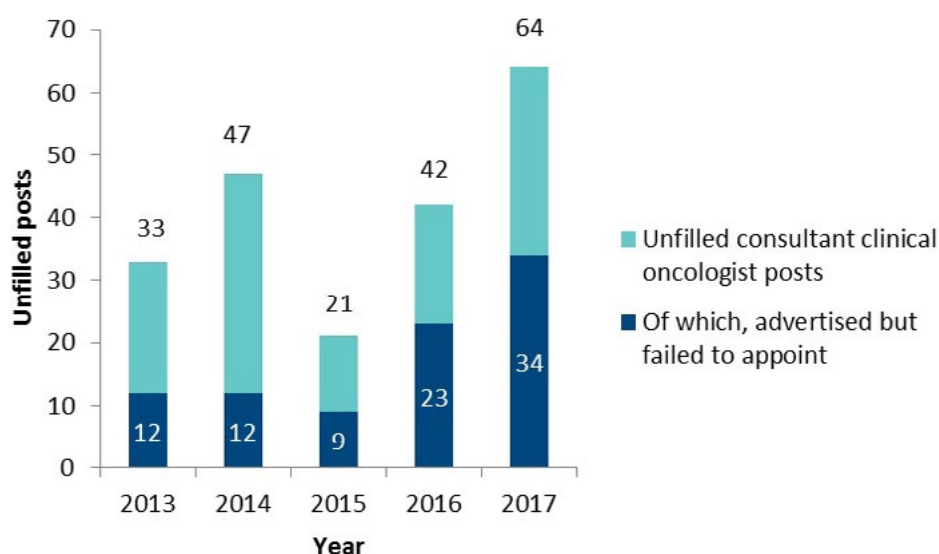
It continues to be very difficult for UK cancer centres to recruit the doctors they need. The census shows this is largely due to a diminishing pool of suitable candidates. Data collected through the RCR census highlights the scale of the challenge: of the 64 consultant clinical oncology posts reported as unfilled in the 2017 census, 19 have remained unfilled for 12 months or more. This represents almost one in three and is a significant increase on the equivalent 2016 figure of one in ten, highlighting how quickly the situation is deteriorating. Figure 10 shows the period for which posts are remaining unfilled across the UK.

Figure 10. Unfilled consultant clinical oncologist posts – period unfilled, 2017



Of the 64 unfilled clinical oncology consultant posts, respondents to the 2017 census categorised 34 as 'failed to appoint', an increase of 11 on the number reported in 2016. This increase reflects a longer-term trend towards difficulty filling consultant posts, illustrated in Figure 11.

Figure 11. Unfilled consultant clinical oncologists posts UK – five-year trend



On average, two site specialties were sought for each post. The most frequently sought specialties were breast, lung, colorectal and genitourinary. Table 3 shows the site specialties sought for the 64 unfilled posts in 2017.

Table 3. Site specialty requirements for unfilled consultant clinical oncologist posts*

Site specialty	Unfilled posts
Breast	17
Lung	16
Colorectal	15
Genitourinary	15
Acute oncology	12
Upper gastrointestinal (GI) (including hepatobiliary)	12
Central nervous system (CNS)/neuro	11
Head and neck	10
Gynaecology	10
Skin	9
Other	7

* More than one site specialty could be reported per individual consultant clinical oncologist.

Twenty-three of the 62 UK cancer centres (37%) have experienced failed attempts to recruit during 2017. Given this pattern, and evidenced by feedback from individual cancer centres, it is believed that the reported number of unfilled posts is likely to be an underestimate of the true scale as further attempts at recruitment are abandoned:

'For the first time in years at our establishment we have an unfilled post which has already been advertised twice and we have failed to appoint on the first occasion and no applicants on the second occasion.' Head of Service, UK cancer centre

The vacancy rate for the consultant clinical oncology workforce in 2017 was 7% (Table 4).**

Table 4. UK consultant clinical oncology workforce vacancy rate – five-year trend

	2013	2014	2015	2016	2017
Vacancy rate**	5%	7%	3%	5%	7%

** NHS Improvement definition of 'vacancy rate': The percentage of WTE staff in post against planned workforce levels¹²

Locum cover

Locum cover can ease the difficulties being faced by cancer centres as they struggle to recruit successfully to substantive posts. However, recruiting to locum posts is posing difficulties of its own, with fewer than half the 64 unfilled posts reported in 2017 covered by locums. Of the locums in post, nine have been in post for more than a year.

International recruitment

In 2017, overall 23% of consultant clinical oncologists working in UK cancer centres were IMGs. This figure includes IMGs who undertook their specialist training in the UK. General Medical Council (GMC) data indicates that 42% of consultants (across all specialties) are IMGs. This indicates low levels of international recruitment in clinical oncology compared to other specialties.

Table 5 shows the country of primary medical qualification for consultants.

Table 5. UK clinical oncology consultant workforce 2017 – country of primary medical qualification

Country of primary medical qualification	Count	%*
UK	677	77%
India	93	11%
Pakistan	17	2%
Spain	9	1%
Ireland	9	1%
South Africa	6	1%
Greece	6	1%
Germany	6	1%
Egypt	5	1%
Other: EEA	21	2%
Other: Non-EEA	27	3%
Total	876	100%

*Percentages are rounded, so may not total 100%.

This low level of international recruitment is also reflected when looking at data from previous years. Over the past five years:

- 85% of newly appointed consultants had completed UK specialist training (average of 42 WTE consultants per year)
- 9% resulted from European Economic Area (EEA) recruitment (average of four WTE consultants per year)^E
- 6% resulted from international (non-EEA) recruitment (average of three per year).^F

^EThis group undertook their primary medical qualification (PMQ) in the EEA and did not undertake UK specialist training, so likely joined the clinical oncology specialist register through the general system of assessment (GSA) route (which is open to overseas EEA [or Swiss] doctors with specialist qualifications and professional experience). It is not known if these consultants were residing in the UK or overseas at the point of recruitment.

^FThis group is non-EEA medical graduates, who have not undergone specialist training in the UK, so have likely joined the GMC consultant radiology specialist register via the Certification of Eligibility for Specialist Registration (CESR) route.¹⁰ It is not known if these consultants were residing in the UK or overseas at the point of recruitment.

Overcoming barriers to international recruitment

Overseas specialist oncology training tends to be split into radiation oncology and medical oncology training and differs notably from UK clinical oncology specialist training in this respect. This makes it more difficult to fill UK consultant clinical oncologist posts with candidates trained outside the UK:

'Despite significant revamping of the advert, we have not had any applicants. We have also looked to India/Asia and mainland Europe but without success, yet there is significant flexibility in the job descriptions.' Head of Service, UK cancer centre

3. Workforce supply

Influences on the supply of the consultant clinical oncology workforce include entrants from UK specialist training and from outside the UK, set against attrition from retirements and other leavers and the trend towards flexible working patterns.

Supply from UK specialist training

Table 6 shows the estimated number of Certificates of Completion of Training (CCTs) awarded and estimated subsequent number of new entrants to the consultant workforce in the next five years. The number of CCTs is expected to average 55 per year, higher than the average of 48 observed over the past ten years. This is attributable to current trainees taking longer to complete training, in part due to an increase in LTFT training and out-of-programme activities.

Successful completion of specialist training in clinical oncology in the UK normally requires a minimum of five years of full-time training. Trainees took an average of 6.9 years to complete UK clinical oncology specialist training in the five-year period up to 2017. Full-time trainees took an average of 6.2 years and LTFT trainees took an average of 8.2 years. In 2017, 29% of trainees were LTFT at the point of attaining their CCT compared to 23% in 2012. The effect of flexible working patterns and LTFT-working on future workforce supply is discussed further later in this section.

The 64 unfilled posts reported in 2017 (see Section 2) exceed the number of trainees estimated to enter the UK consultant workforce in each of the next five years (2018 to 2022 inclusive). Without significant changes to supply or delivery of cancer services, the shortfalls currently being experienced across the clinical oncology workforce will remain.

Table 6. Estimated clinical oncology CCTs – next five years

Year	Estimated CCTs	Estimated subsequent UK consultants*	Estimated subsequent UK consultants
	Headcount	Headcount	WTE**
2018	42	36	34
2019	46	39	36
2020	61	52	48
2021	73	62	58
2022	54	46	42
2018–2022 total	276	235	218
2018–2022 average	55	47	44

*Estimated attrition rate of 15%

**Estimated participation rate of 93% based on current scale of LTFT working

A comparison of RCR training and census data shows that 15% of those completing UK specialist training (CCTs) between 2008 and 2012 have not so far been appointed to a

consultant clinical oncology post in the UK. The attrition rate varied from the average of 15% dependent on country of primary medical qualification. The attrition rate was 13% for UK graduates (n=24) and 25% for non-UK graduates (n=13).

Supply from outside the UK

Census data show approximately three clinical oncologists who undertook their specialist training outside the UK are recruited to substantive NHS consultant posts each year. As mentioned in section two of this report, overseas specialist oncology training tends to be split into radiation oncology and medical oncology training and does not tend to cover both and so differs notably from UK clinical oncology specialist training. Relative to other medical specialties, this makes it more difficult to fill UK consultant clinical oncologist posts with candidates trained outside the UK.

Estimated attrition

To estimate the future impact of attrition on the clinical oncology workforce, attrition is considered from two perspectives: (i) attrition from retirements and (ii) attrition from 'other leavers'.

Retirements

On the assumption that the median retirement age remains unchanged, attrition in the next five years due to retirement is expected to total 164 consultants (WTEs).

In acknowledgement of the continuing shortfall in the consultant clinical oncology workforce, the following scenarios demonstrate the potential positive impact of postponing retirement on workforce attrition, summarised in Table 7.

Scenario 1: Median age of retirement remains at 60 representing no change from 2017.

Scenario 2: If consultant clinical oncologists could be incentivised to continue to work full-time and retire at the age of 65, this would result in approximately 64 WTE consultants retiring in the next five years (that is, an estimated 100 WTEs fewer than the current situation described in Scenario 1).

Scenario 3: If consultants could be incentivised to continue to work on LTFT contracts of six PAS (equivalent to a 24-hour week) and retire at the age of 65, this would result in approximately 104 WTE consultants retiring in the next five years (that is an estimated 60 WTEs fewer than the current situation described in Scenario 1).

Well-planned and executed retention strategies targeting those with a greater likelihood of leaving the NHS, including consultants approaching retirement age, would have a significant effect on reducing the workforce shortfall. A survey of senior doctors conducted in 2014 recommends retention policies should address ways of optimising the clinical contribution of senior doctors, while offering reduced workloads.¹³

Table 7. Effect of retention strategies/retirement age, next five years

	Estimated consultant retirements (WTEs), next five years
Scenario 1:	
Average retirement age of 60 (no change)	164
Scenario 2:	
Retirement at age 65	64
Scenario 3:	
Retirement at age 65 plus increased LTFT working	104

Other leavers

Assuming the annual 1.1% attrition rate for other leavers (that is, all leavers excluding retirements) remains unchanged, attrition in the next five years for this cohort is expected to total 43 consultants (WTEs).

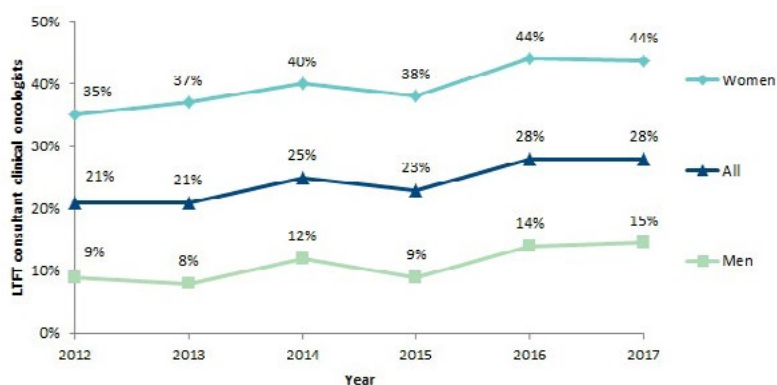
Flexible working: less than full-time (LTFT) working

LTFT is defined as working fewer than ten contracted PAs per week, which is the equivalent to a 40-hour working week in England, Northern Ireland and Scotland, and a 37.5 hour working week in Wales.

Five years ago, 21% of consultant clinical oncologists worked LTFT. This has risen to 28% in 2017 (shown in Figure 12). The rise is attributable to both men and women working LTFT; 15% of men and 44% of women were reported as working LTFT in 2017.

In 2017, there were 445 male and 423 female (and eight unknown) consultant clinical oncologists. Two-thirds (65%) of current clinical oncology trainees in the UK training scheme are women. The GMC reports an increase in the proportion of women (to 35%) across the consultant medical workforce, albeit with a high level of variability by speciality.¹⁴ Workforce planning for clinical oncology must factor in the reduction in workforce capacity as a result of the continued growth in flexible working for men and women.

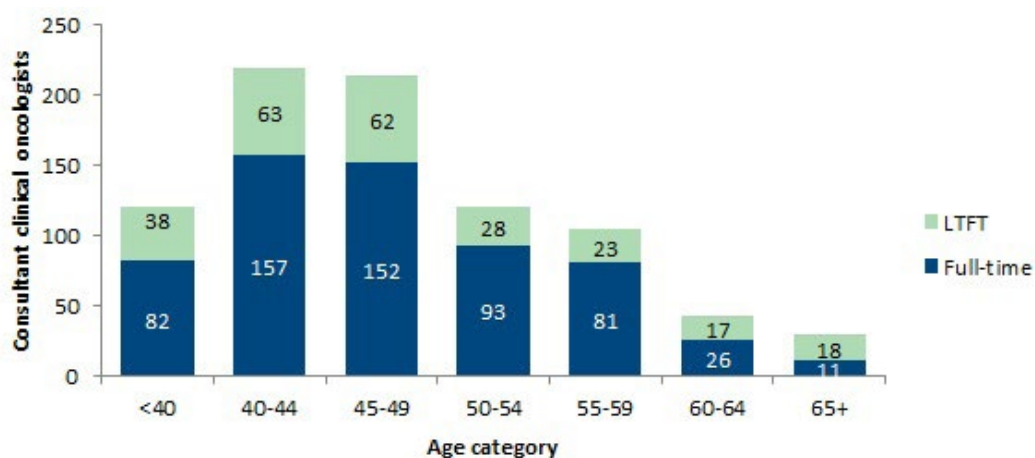
Figure 12. UK consultant clinical oncology workforce – LTFT working five-year trend



The mean number of contracted PAs for LTFT UK consultant clinical oncologists is 7.5, equivalent to a 30 hour working week. Fewer than ten consultant clinical oncologists are contracted for fewer than five PAs (equating to a 20-hour week).

Figure 13 shows LTFT-working by age group. Almost 50% of consultants aged 60 and over work LTFT. 22% of the 55–59 age group work LTFT.

Figure 13. UK consultant clinical oncology workforce LTFT working – by age*

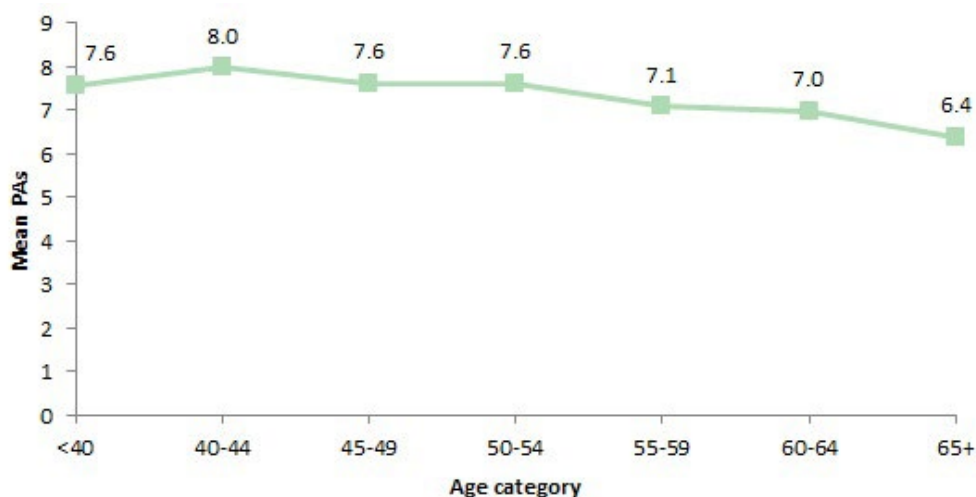


*Figure 13 excludes 25 consultants where age not known.

The mean number of PAs worked by LTFT workers decreases with age meaning not only are senior consultant clinical oncologists more likely to work LTFT than junior consultants, but when they do so they tend to work fewer hours. For example, LTFT consultant clinical

oncologists in the 40–44 age group are contracted to work a mean of eight PAs, equivalent to a 32-hour week, whereas the LTFT workers in the 65+ age group are contracted to work 6.4 PAs, equivalent to a 26-hour week. Mean PAs of LTFT consultant clinical oncologists across all age groups are shown in Figure 14.

Figure 14. Mean PAs of LTFT consultant clinical oncologists by age group



Consultant clinical oncologists who gained their primary medical qualification overseas appear to be significantly less likely to work LTFT than UK graduates (regardless of age or gender). Only 4% of EEA (excluding UK) graduates and 9% of IMGs (excluding EEA) work LTFT, compared to 35% of UK graduates (see Table 8).

Table 8. UK consultant clinical oncology workforce – LTFT working – country of PMQ

Country of PMQ	FT	LTFT	Total	% LTFT
UK	436	233	669	35%
EEA (excluding UK)	49	2	51	4%
IMGs (excluding EEA)	134	14	148	9%

The census did not capture reasons for individual LTFT working. Reasons may include combining with other roles in education, research and clinical leadership or improved work-life balance among others.

4. Demand for services

The number of people living with cancer is increasing; one in two people in the UK will be diagnosed with some form of cancer during their lifetime.² Cancer treatments are ever more complex and an increasing proportion of patients have multiple co-morbidities, increasing the time required to manage their treatment. For the cancer workforce to keep abreast of developments in treatment in addition to managing the expectations of patients and their families requires education, training and time.

Increased cancer prevalence

The number of new cases of cancer continues to rise. Around 1,000 new cancer cases are diagnosed each day in the UK.⁹

Implications of technological advances

Along with increased survival comes the increased complexity of care for patients who are older and often have co-morbidities (other health problems which affect their care needs and ability to withstand the toxicities of treatment). Their treatment therefore tends to be more individualised and complicated, placing additional demand on services. Increasing systemic therapeutic options are being developed and introduced at a rapid pace. This places an additional demand on the workforce to manage these therapies and their complications. Radiotherapy technology is also proceeding apace. Each development means more time spent in tasks supervising therapy.

Access to routine cancer services

As an indicator of demand, the census collects data on opening hours and access to routine radiotherapy and chemotherapy services.

Monday to Friday, 45 of the 62 (73%) UK cancer centres are open and providing routine/non-emergency radiotherapy services for between eight to ten hours. Approximately one in four (26%, n=16) are open for more than ten hours. One cancer centre (out of the UK total of 62) opens for fewer than eight hours.

Monday to Friday, 60% (n=37) of UK cancer centres are open and providing routine chemotherapy services for between eight to ten hours. Forty percent (n=25) are open for more than ten hours.

At weekends:

- 16 of the 62 UK cancer centres opened on Saturdays for routine radiotherapy services in 2017, down from 19 the previous year. Five also opened Sundays.
- 15 of the 62 UK cancer centres opened on Saturdays for routine chemotherapy services. Three also opened Sundays.
- Inclusive of the above, nine opened on Saturdays for routine radiotherapy *and* chemotherapy services.

Some centres not usually open on Saturday for routine radiotherapy services, opened from time to time to catch up from a bank holiday, machine servicing or when demand peaked.

As demand increases, the workforce is being stretched. The ability to resource cancer services outside of core hours and the capacity to deliver extra routine services is diminishing.

In addition to routine services, consultant clinical oncologists also provide 24/7 cover for emergencies.

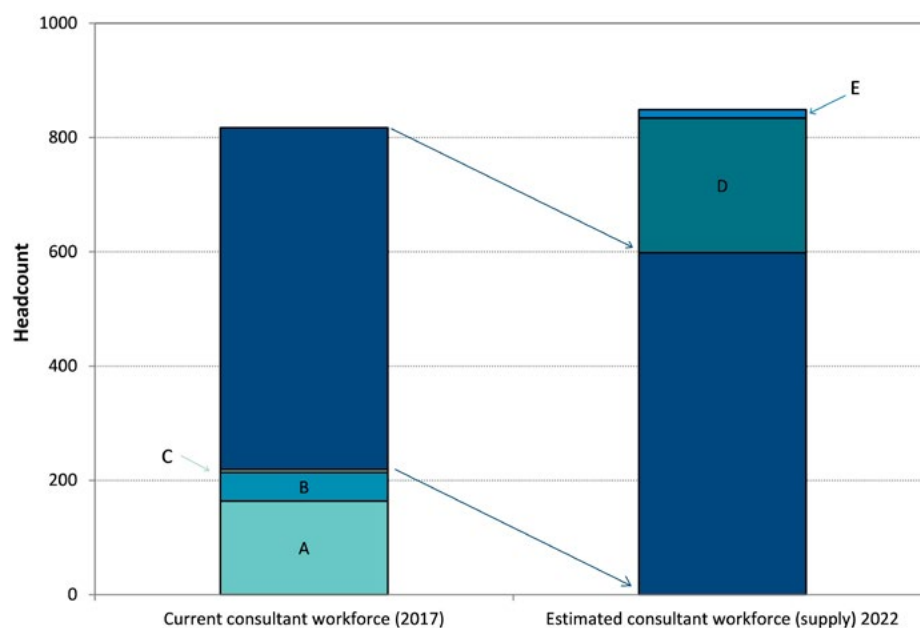
Optimising skill-mix

Many centres have embraced skill-mix for both radiotherapy and chemotherapy services.¹⁵ The limitations on skill-mix adoption generally relate to the availability of suitably experienced allied healthcare professionals rather than a desire for the status quo.

5. Closing the gap between supply and demand

To bring together the factors identified as contributing to the future workforce supply, Figure 15 illustrates the estimated supply for the five-year period to 2022.

Figure 15. UK consultant clinical oncology workforce estimated supply – next five years



Key – see below

Based on the below projections, there will be an estimated to be 855 WTE consultant clinical oncologists in post in five years' time (2022), equivalent to a 5% increase on 2017.

Projections, next five years to 2022:

▪ Current consultant workforce (2017)	817 WTEs
– (A) Retirements (median age 60)	-164 WTEs
– (B) Attrition: other	-43 WTEs
– (C) Increase in LTFT-working	-9 WTEs
– (D) Supply from UK training	+218 WTEs
– (E) Supply from outside the UK	+36 WTEs
▪ Estimated consultant workforce (supply) 2022	855 WTEs

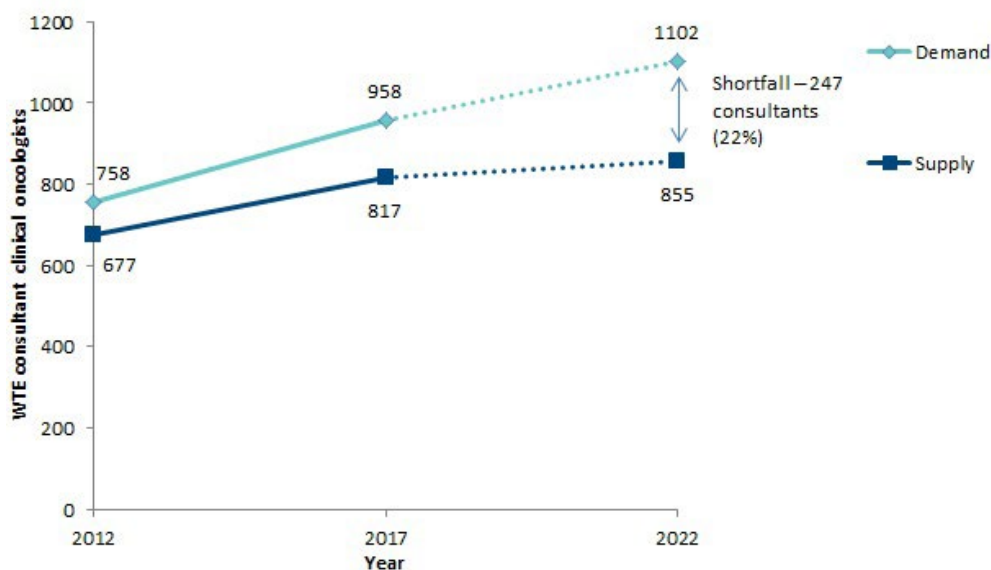
In the short-term, for the 34 unfilled posts advertised in 2017 that failed to appoint, cancer centres responding to the census provided feedback on what plans were in place, aside from re-advertising, to manage the current gap between supply and demand.

- Seven cancer centres planned to appoint locums to cover the shortfall.
- Four indicated plans to significantly amend the job description and re-advertise: *'We are working hard to review the job plan to make it more attractive.'* Head of Service, UK cancer centre
- Three planned to restructure to manage the workload
- Two planned to recruit from overseas
- Funding for four unfilled consultant posts was converted to other posts to partially cover the workload.

'Recruited medical oncologists in place of clinical oncologists as a result of flexible advertisements/developing workforce, but preference would have been for clinical oncologists for additional radiotherapy capacity.' Another stated *'We are looking to replace this post with a combination of a consultant radiographer and a medical oncologist, as we are not optimistic about sourcing another clinical oncologist.'* Head of Service, UK cancer centre

Figure 16 is a simplified illustration of the widening gap between the estimated supply of clinical oncology consultants (shown in Figure 15) and the estimated workforce required to meet demand for cancer services.

Figure 16. UK consultant clinical oncology workforce – estimated supply and demand – next five years



Assumptions

- 2017 actual supply: 817 WTEs
- 2017 estimated demand (958 WTEs) calculated as: in-post (817 WTEs) + unfilled posts (64 headcount equating to 61 WTEs) + additional posts required were all consultant contracts limited to maximum ten PAs (80 WTEs)
- 2022 estimated supply (855 WTEs) calculation: see previous page.
- 2022 estimated demand (1,102 WTEs) calculated as 3% increase per annum in line with estimated increase in cancer prevalence (see Section 4).

The gap between supply and demand is forecast to widen in the next five years from the current shortfall of 141 consultant clinical oncologist WTEs to an estimated shortfall of 247 WTEs in 2022.

References

1. www.cancerresearchuk.org/about-cancer/causes-of-cancer/age-and-cancer (last accessed 6/6/18)
 2. www.cancerresearchuk.org/about-us/cancer-news/press-release/2015-02-04-1-in-2-people-in-the-uk-will-get-cancer (last accessed 13/6/18)
 3. Cancer Research UK. *Full team ahead: understanding the UK non-surgical cancer treatments workforce*. London: Cancer Research UK, 2017.
 4. Academy of Medical Royal Colleges. *Advice on supporting professional activities in consultant job planning*. London: The Academy of Medical Royal Colleges, 2010.
 5. Royal College of Physicians. *NHS reality check 2017: delivering care under pressure*. London: Royal College of Physicians, 2017.
 6. <http://ourglobalfuture.com/reports/our-international-health-service/> (last accessed 22/6/18)
 7. Royal College of Physicians. *2016–17 census (UK consultants and higher specialty trainees)*. London: Royal College of Physicians, 2018.
 8. The Royal College of Radiologists. *Guide to job planning in clinical oncology, third edition*. London: The Royal College of Radiologists, 2015.
 9. www.cancerresearchuk.org/health-professional/cancer-statistics (last accessed 6/6/18)
 10. www.gov.uk/maximum-weekly-working-hours (last accessed 6/6/18)
 11. www.rcr.ac.uk/posts/rcr-calls-government-keep-working-time-regulations-after-brexit (last accessed 6/6/2018)
 12. NHS Improvement. *Technical guidance: workforce planning 2018/19*. London: NHS Improvement, 2018.
 13. Smith F, Lachish S, Goldacre MJ, Lambert TW. *Factors influencing the decisions of senior UK doctors to retire or remain in medicine: national surveys of the UK-trained medical graduates of 1974 and 1977*. *BMJ Open* 2017; **7**:e017650.
 14. General Medical Council. *The state of medical education and practice in the UK*. London: General Medical Council, 2017.
 15. www.cancerresearchuk.org/about-us/we-develop-policy/our-policy-on-cancer-services/non-surgical-cancer-treatments-workforce (last accessed 6/6/18).
-

Appendix A. Census methodology

The RCR gathers clinical oncology workforce data annually through an online census. The online census is completed by the Head of Service (or their delegate) at every NHS cancer centre providing radiotherapy in the UK. This data is analysed together with the GMC medical register and clinical oncology specialty training data held by the RCR.

Survey method

Standardised questions have been used year on year to allow for comparison of information and identify trends over time. To facilitate data collection (and data accuracy), 2016 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 2017). 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 2017 census achieved a 100% response rate from Heads of Service, with all 62 cancer centres in the UK submitting information.

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.

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

Queries

Queries regarding the census should be sent to: census@rcr.ac.uk

Appendix B. Census questions 2017

This appendix outlines the questions which were completed by cancer centres on the census website.

*Indicates a mandatory field.

Section 1. Data protection guidelines

I have read and accept The Royal College of Radiologists' Data Protection Guidelines in respect of the census data. [tick box]*

Section 2. Your organisation – details

The details below are based on information entered in the 2016 census and subsequent updates received by the RCR.

Please review and update accordingly.

2.1 Full name*

2.2 Cancer centre name*

2.3 Trust/health board*

2.4 Contact email*

2.5 Contact telephone*

Section 3. Staff details – clinical oncology

Please provide details of the following clinical oncology staff, as of 1 October 2017:

- Consultant clinical oncologists
- Associate specialists
- Specialty doctors
- Trust grade staff
- Clinical assistants

Please include:

- Locums
- Staff on long-term leave (e.g. maternity/paternity or sick leave)

Please do not include trainees or medical oncologists.

3.1 Forename

3.2 Surname*

3.3 Grade* [drop-down list with following options]

- Consultant clinical oncologist
 - Associate specialist
 - Clinical assistant specialty doctor
 - Trust grade
 - Other
-

3.4 NHS/academic* [drop-down list with following options]

- NHS
- NHS and academic
- Academic (university contract)
- Other
 - Direct clinical care (DCC) PAs*
 - Supporting professional activities (SPAs)*
 - Additional responsibility PAs*
 - Total PAs (This box is auto-filled with the total of the above three fields)

Employment type [drop-down list with following options]

- Full time
- Part time
- Research PAs (Please enter the PAs allocated to research/trials, funded by the NHS and/or 'soft money' i.e. an external body e.g. a charity)
- Academic PAs (academic roles only) (Please enter PAs allocated to research/trials funded by a university contract)

3.5 Predominant workload* [drop-down list with following options]

- Chemotherapy
- Radiotherapy
- Balance of both (not more than 60% [approximately] of workload dedicated one or the other)

3.8 Site specialties* [tick-box list – appears for consultants only – following options, multiple responses permitted]

- Acute oncology
- Breast
- CNS/neuro
- Colorectal
- Genitourinary
- Gynaecology
- Haematological malignancy
- Head and neck
- Lung
- Paediatric
- Sarcomas
- Skin
- Teen and young adult
- Thyroid
- Upper GI (including HPB)
- Other

3.9 Employment

- Employed as a locum? [checkbox]
If ticked ...
 - Obtained primary medical qualification in the UK? [drop-down list with following options]
 - Yes
 - No
 - Unknown
 - Completed a UK oncology training programme? [drop-down list with following options]
 - Yes
 - No
 - Unknown
 - Previously been in a substantive consultant post (at another trust)? [drop-down list with following options]
 - Yes
 - No
 - Unknown
 - Period employed as locum up to 1 October 2017 (drop down list with following options)
 - 1–3 months
 - 4–6 months
 - 7–9 months
 - 10–12 month
 - >12 months
 - Expected/actual duration of locum period from 1 October 2017 [drop down list with following options]
 - 1–3 months
 - 4–6 months
 - 7–9 months
 - 10–12 month
 - >12 months
 - Reason for locum position [drop down list with following options]
 - Cover for long-term (>1 month) sickness
 - To fill vacant/unfilled post
 - Maternity cover/parental leave cover
 - Other
-

3.10 Cross-site working

- Employed at more than one trust [checkbox]
- Delivered care at more than one site on a regular basis in the 12-month period to 1 October 2017 [checkbox]
- Required to travel to more than one site in a working day on a regular basis [checkbox]

3.11.1 Expected to retire by October 2018 [checkbox]

3.11.2 Left since October 2016 [checkbox]

If ticked 'Reason for leaving' [drop-down list with following options]

- Moved to another NHS post
- Resigned from the NHS
- Retired from the NHS
- Other

Section 4. Unfilled posts – clinical oncology

Please enter details below of all funded unfilled substantive clinical oncology posts at your cancer centre, including satellite centres, as of 1 October 2017. Please include vacant substantive posts covered by locum appointments.

Please enter ALL posts vacant on 1 October that is, even if subsequently filled, suspended or lost.

4.1 Unfilled post status*

- Funded but not yet advertised
- Funded but not thought worth advertising
- Advertised but not yet interviewed
- Appointed but not yet taken up
- Advertised but failed to appoint AND planning to re-advertise in the next three months
- Advertised but failed to appoint AND not contemplating further re-advertising in next three months

4.2 Grade*

- Consultant
- Associate specialist
- Clinical assistant
- Speciality doctor
- Trust grade
- Other

4.3 Employment type* [drop-down list with following options]

- Part time
- Full time

4.4 Site specialties [This question is for consultants only – same drop-down list as 3.8]

4.5 Unfilled period (to nearest month) [drop-down list with following options]

- 1 month
- 2 months
- 3 months
- 4 months
- 5 months
- 6 months
- 7 months
- 8 months
- 9 months
- 10 months
- 11 months
- 12 months
- 12+ months
- Don't know

4.6 Locum filled? [tick box]

4.7 Period filled by locum (to nearest month) [drop-down list with the same options as 4.5]

If there were unfilled posts that failed to appoint to and the plan is not to re-advertise (the same post), please indicate what the plan is [drop-down box with following options]

- Restructure teams to absorb workload
- Recruit from overseas
- Appoint locum to provide cover
- Significantly amend the job description and re-advertise
- Other

4.8 Additional comments relating to recruitment in the 12-month period to 1 October 2017: [free text box]

Section 5. Staff details – medical oncology

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 2017. The below fields are pre-populated with the data you entered in the 2016 census. Please update accordingly.

- 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

6.2 For the month of September 2017, 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 Are the routine opening hours you have entered for radiotherapy for September 2017 typical for 2017?

- Yes
- No

If you have any additional comments on routine radiotherapy working hours please note them below [free text box]

6.4 For the month of September 2017, 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 Are the routine opening hours you have entered for chemotherapy for September 2017 typical for 2017?

- Yes
- No

If you have any additional comments on routine chemotherapy working hours please note them below [free text box]

6.6 Comments

Please use the space below to enter any further comments regarding routine and extended-hours working at your centre; for example if there have been significant changes in the opening hours, please outline the key reasons for the changes, or if there are significant barriers to required changes in opening hours, please outline the barriers [free text box]

Section 7. Comments

Finally, please use the space provided below to enter any further details you feel are relevant to your census submission and/or to provide feedback to the College regarding the census (including suggested improvements for next years census) [free text box]

Appendix C. Census completions 2017

Thank you to Heads of Service and their colleagues at the following cancer centres for completing the 2017 census on behalf of their cancer centres.

Cancer centre	Trust/health board
Aberdeen Royal Infirmary	NHS Grampian
Addenbrookes Hospital	Cambridge University Hospitals NHS Foundation Trust
Basingstoke and North Hampshire Hospital, Royal Hampshire County Hospital	Hampshire Hospitals NHS Foundation Trust
Beatson West of Scotland Cancer Centre	NHS Greater Glasgow and Clyde
Belfast City Hospital	Belfast Health and Social Care Trust
Bristol Haematology & Oncology Centre	University Hospital Bristol NHS Trust
Castle Hill Hospital	Hull and East Yorkshire Hospitals NHS Trust
Cheltenham General Hospital	Gloucestershire Hospitals NHS Foundation Trust
Colchester General Hospital	Colchester Hospital NHS Foundation Trust
Cumberland Infirmary	North Cumbria University Hospitals NHS Trust
Derriford Hospital	Plymouth Hospitals NHS Trust
Dorset Cancer Centre, Poole Hospital	Poole Hospital NHS Foundation Trust
Edinburgh Cancer Centre, Western General Hospital	NHS Lothian
Glan Clwyd Hospital	Betsi Cadwaladr University Health Board
Guy's & St Thomas' Cancer Centre	Guy's and St Thomas' NHS Foundation Trust
Imperial College Cancer Centre	Imperial College Healthcare NHS Trust
Ipswich Hospital	Ipswich Hospital NHS Trust
Kent Oncology Centre	Maidstone and Tunbridge Wells NHS Trust and East Kent NHS Foundation Trust
Leeds Cancer Centre, St James' University Hospital	Leeds Teaching Hospitals NHS Trust
Leicester Royal Infirmary	University Hospitals of Leicester NHS Trust
Lincoln County Hospital	United Lincolnshire Hospitals NHS Trust
Mount Vernon Cancer Centre	East and North Hertfordshire NHS Trust
Musgrove Park Hospital	Taunton and Somerset NHS Foundation Trust

Cancer centre	Trust/health board
NCCC, Freeman Hospital	Newcastle upon Tyne Hospitals NHS Foundation Trust
New Cross Hospital	The Royal Wolverhampton Hospitals NHS Trust
Ninewells Hospital & Medical School	NHS Tayside
Norfolk and Norwich University Hospital	Norfolk and Norwich University Hospitals NHS Foundation Trust
North Middlesex University Hospital	North Middlesex University NHS Trust
North West Cancer Centre at Altnagelvin	Western Health and Social Care Trust
Northampton General Hospital	Northampton General Hospital NHS Trust
Nottingham University Hospital, City Hospital Campus	Nottingham University Hospitals NHS Trust
Oxford Cancer Centre, Churchill Hospital, Oxford	Oxford University Hospitals NHS Trust
Peterborough City Hospital	Peterborough and Stamford NHS Trust
Portsmouth Oncology Centre, Queen Alexandra Hospital	Portsmouth Hospitals NHS Trust
Queen Elizabeth Hospital	University Hospital Birmingham NHS Foundation Trust
Queens Hospital, Romford	Barking, Havering and Redbridge University Hospitals NHS Trust
Raigmore Hospital	NHS Highland
Royal Berkshire Hospital	Royal Berkshire NHS Foundation Trust
Royal Cornwall Hospital	Royal Cornwall Hospitals NHS Trust
Royal Derby Hospital	Derby Hospitals NHS Foundation Trust
Royal Devon & Exeter Hospital (Wonford)	Royal Devon & Exeter NHS Foundation Trust
Royal Free Hospital	Royal Free London NHS Foundation Trust
Royal Marsden Hospital	The Royal Marsden Hospital NHS Foundation Trust
Royal Preston Hospital	Lancashire Teaching Hospitals NHS Foundation Trust
Royal Shrewsbury Hospital	Shrewsbury and Telford Hospitals NHS Trust
Royal Surrey County Hospital	Royal Surrey County Hospital NHS Trust

Cancer centre	Trust/health board
Royal Sussex County Hospital	Brighton and Sussex University Hospitals NHS Trust
Royal United Hospital Bath	Royal United Hospital Bath NHS Trust
South West Wales Cancer Centre	Abertawe Bro Morgannwg University Health Board
Southend Hospital	Southend University Hospital NHS Foundation Trust
St Bartholomew's Hospital	Barts and The London NHS Trust
The Christie Hospital	The Christie Hospital NHS Foundation Trust
The Clatterbridge Cancer Centre	The Clatterbridge Cancer Centre NHS Foundation Trust
The James Cook University Foundation Hospital	South Tees Hospital NHS Foundation Trust
Torbay Hospital	Torbay and South Devon Healthcare NHS Foundation Trust
University College Hospital	University College London Hospitals NHS Foundation Trust
University Hospital of North Midlands NHS Trust (Royal Stoke & County Hospital)	University Hospital of North Midlands NHS Trust
University Hospital Southampton	University Hospital Southampton NHS Foundation Trust
University Hospitals, Coventry and Warwickshire	University Hospitals, Coventry and Warwickshire NHS Trust
Velindre Hospital	Velindre NHS Trust
Weston Park Hospital	Sheffield Teaching Hospitals NHS Foundation Trust
Worcester Oncology Centre	Worcestershire Acute Hospitals Trust



The Royal College of Radiologists
63 Lincoln's Inn Fields
London WC2A 3JW

+44 (0)20 7405 1282
enquiries@rcr.ac.uk
www.rcr.ac.uk
 @RCRadiologists

Clinical Oncology UK workforce census 2017 report.
London: The Royal College of Radiologists, 2018.

Ref No. BFCO(18)1

© The Royal College of Radiologists, June 2018.

The RCR is a Charity registered with the Charity Commission No. 211540

For permission to reproduce any of the content contained
herein, please email: permissions@rcr.ac.uk

This material has been produced by The Royal College of Radiologists (RCR) for use internally within the specialties of clinical oncology and clinical radiology in the United Kingdom. It is provided for use by appropriately qualified professionals, and the making of any decision regarding the applicability and suitability of the material in any particular circumstance is subject to the user's professional judgement.

While every reasonable care has been taken to ensure the accuracy of the material, RCR cannot accept any responsibility for any action taken, or not taken, on the basis of it. As publisher, RCR shall not be liable to any person for any loss or damage, which may arise from the use of any of the material. The RCR does not exclude or limit liability for death or personal injury to the extent only that the same arises as a result of the negligence of RCR, its employees, Officers, members and Fellows, or any other person contributing to the formulation of the material.