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Clinical Oncology
The Royal College of Radiologists

Clinical oncology
Scotland workforce 2019 summary report

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Foreword

Advances in cancer treatment have had a positive impact on survival of cancer patients and the number of patients receiving cancer treatment has increased over recent years. Scottish Government data show that 41% of patients underwent surgery and either radiotherapy or chemotherapy was delivered to 45% patients between 2013 and 2017.[1]

Consultant clinical oncologists are critical for the non-surgical oncology workforce. They provide radiotherapy and a substantial volume of chemotherapy treatment. Each year, more people are diagnosed with cancer. Cancer incidence has increased from 494 per 100,000 population in 1993 to 594 per 100,000 population in2017.[1] Cancer treatments have become more complex; therefore, investment in the workforce in Scotland requires constant review.

New radiotherapy techniques have increased in complexity and effective delivery requires substantial investment in equipment and workforce. New systemic therapies such as immunotherapy have revolutionised the outcome of poor-prognosis high volume cancers with the resulting impact on resources and workforce.

The 2019 census report provides vital information to Scottish healthcare policy makers in planning future cancer services. This report demonstrates concerning workforce shortages and the need for improved long-term workforce planning. Scotland has a current shortfall of 13 whole-time equivalent (WTE) clinical oncology consultants at a time when there are widespread staff shortages. The predicted shortfall will worsen over the next five years to an estimated shortage of at least 25 WTE consultants, unless there is a change in approach, such as increasing recruitment to training schemes and improving consultant retention. Particular attention is required to improve consultant numbers in the cancer centres outwith the central belt in order to deliver state-of-the art cancer treatment to the local populations.

The COVID-19 pandemic has been a catalyst for better networking and remote working. The planned changes in information technology require further and urgent investment to ensure good practice is maintained. Cancer services will find ways to be more efficient and effective. Nevertheless, we still need an urgent increase in our clinical oncology workforce to lead these service developments and to provide effective patient-centred cancer care for the population of Scotland.

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Objectives

This report provides details of the oncology workforce situation in Scotland in 2019, with a focus on the estimated shortfall of consultant clinical oncologists and workforce forecasts over the next five years.

This report for Scotland supplements the *Clinical oncology UK workforce census 2019 report*.[2] Please refer to the UK report for UK-wide oncology trends and information on census timings and methodology.

1. The oncology workforce in Scotland in 2019

There were 131 consultant-grade oncologists employed by the five cancer centres in Scotland in October 2019, as shown in Table 1. This number includes NHS, academic and mixed NHS/academic posts.

Table 1. Clinical and medical oncology workforce (headcount) – Scotland, 2019

	Clinical oncology	Medical oncology*	Oncology total
Consultant-grade	87	44	131
Higher-specialty trainee	43	20	63
SAS-grade	1	Not known	Not known

**2018 data (2019 RCP data not available at the time of publication). Medical oncologists are physicians who specialise in the administration of systemic therapies but not radiotherapy.*[3]
[SAS-grade comprises associate specialists, specialty doctors and trust-grade staff.]

The ratio of consultant clinical oncologists to consultant medical oncologists in Scotland is very similar to the UK as a whole, with approximately two consultant clinical oncologists employed for every consultant medical oncologist.

Higher-specialty trainees in Scotland comprise one-third of the oncology workforce, on a par with the trainee ratio across the UK as a whole.

Regional variation

Census data highlight variation in the clinical oncology workforce distribution across Scotland. While Scotland overall has 15.2 consultant clinical oncologists per million population (PMP), slightly higher than UK figure of 13.1 consultants PMP, in the North of Scotland there are fewer consultants relative to population size with 12.1 whole-time equivalent (WTE)* consultants PMP. This is shown in Table 2.

Table 2. Cancer centre (WTE) consultant clinical oncologists per million population (PMP) – Scotland, 2019

Cancer centre	Consultant clinical oncologists (WTE) 2019	Comparison to five years ago – WTE consultants	Population estimate 2018+	WTE consultants PMP
Aberdeen Royal (North of Scotland)	10.6	+4.8	616,000	17.2
Beatson (West of Scotland)	40.8	+14.8	2,564,000	15.9
Dundee (East of Scotland)	6.6	- 0.3	508,000	13.0
Edinburgh (South East Scotland)	20.3	+3.1	1,392,000	14.6
Raigmore Hospital (North of Scotland)	4.4	+1.9	359,000	12.1
Scotland total	82.6	+24.2	5,438,000	15.2
UK overall	867.8	+168.5	66,436,000	13.1

+2018 estimated population uses 2015 population data adjusted by 2015–2017 population growth of 1%.[4]
[Due to rounding, numbers in this table may not add up precisely to the totals provided.]

Consultant workforce: five-year trend

Over the past five years, the consultant oncology workforce (clinical and medical) in Scotland has grown by an average of 6% per year, in comparison to the 4% per year growth seen across the UK as a whole. The consultant clinical oncology workforce in Scotland has grown by an average of 7% per year (an average increase of five WTEs per year); in comparison, consultant medical oncology workforce growth (from 2014 to 2018) has averaged 3% per year (an average increase of one WTE per year).

Taking into account population size, there are 23 WTE consultant oncologists per million population (PMP) in Scotland; this compares to 21 WTEs PMP seen across the UK as a whole.

**A WTE is a whole-time (or full-time) doctor contracted for ten programmed activities (PAs) per week, equivalent to a 40-hour week in Scotland.*

2. Working patterns

Less than full-time working

Taking into account less than full-time (LTFT) doctors, the Scotland total of 87 consultant clinical oncologists equates to 83 WTEs.*

Just over a quarter (28%) of the 87 consultants in Scotland worked less-than-full-time (LTFT) in 2019, in comparison to a third of consultants (34%) across the UK as a whole. LTFT workers in Scotland were contracted for an average of 8.6 PAs, equivalent to 34 hours per week. The relatively low level of LTFT working in Scotland means that the workforce capacity reduction due to LTFT working is 5% (equivalent to four WTEs**) in comparison to 7% workforce capacity reduction seen across the UK as a whole. The potential increase in demand for LTFT working in Scotland should be factored in to oncology workforce planning.

Travel requirements

Consultant clinical oncologists often work at more than one site and spend time travelling between sites. This flexibility supports ambitions for patient-centred treatment provided close to home, but reduces the time available for core clinical work. Census data show that almost half of consultant clinical oncologists (47%) in Scotland delivered care at more than one site on a regular basis. Job plans for affected consultants should incorporate adequate time for travel between sites.[5]

3. Vacancies and recruitment in 2019

Three funded consultant clinical oncologist vacancies were reported in Scotland in October 2019. This equates to a vacancy rate of 4%, which is lower than the UK vacancy rate of 10%. However, as highlighted in the UK report, vacancies reported through the annual census significantly understate the true extent of clinical oncology workforce shortages. Vacancies are not being advertised due to funding restrictions or a lack of suitable candidates, or may be postponed to allow internal candidates time to complete their specialist training. In Scotland, two of the three vacancies had been unfilled for a year or more, indicating a lack of suitable candidates.

Overseas recruitment

Only one of the five cancer centres in Scotland attempted to recruit consultant oncologists from overseas in 2019; they were not successful. Overseas specialist training in oncology tends to be split into radiation oncology and systemic therapy, unlike UK clinical oncology specialist training which covers both aspects of non-surgical oncology. This difference makes it particularly challenging to fill UK consultant clinical oncologist posts with candidates trained overseas.

Cancer centre heads of service in Scotland reflected feedback from across the UK, that overseas recruitment is often an expensive and slow process, with difficulties including the visa processes, English language requirements, budget constraints, human resources employment processes, cultural differences and political uncertainty.

**[LTFT is defined as working fewer than ten PAs (equivalent to a contract of 40 hours) per week.]*

***This is the additional number of WTE consultant clinical oncologists who would be in the workforce if all LTFT consultants switched to full-time working.*

4. Estimated shortfall of consultant clinical oncologists in Scotland in 2019

The increase in patient numbers (and complexity), treatment options (and complexity) and patient expectations mean that a significantly greater workforce is required to provide safe and effective cancer care for patients.

Census data indicate that the consultant clinical oncology workforce in Scotland is currently understaffed by a minimum of 13 WTE consultant clinical oncologists. This equates to a workforce shortfall of 14%. This estimate is based on the following:

- Three WTE vacancies reported in 2019
- Ten additional WTE consultants calculated as required to cover the reported excess workload in 2019.*

Advancing age is the biggest risk factor for cancer and three-quarters (77%) of all cancers occur in those age 55 plus.[6] Scotland has a higher proportion of over 55s than the rest of the UK; in Scotland, one-in-three of the population (34%) is aged 55 or older, compared to 30% across the UK as a whole.[4] When age is taken into account, the indications are that oncology workforce shortages in Scotland are comparable to the UK average. In Scotland, there are 68 WTE consultant oncologists per million 'older' population (aged 55+), compared to 69 WTE consultant oncologists per million 'older' population across the UK as a whole.

5. Workforce forecast illustrated – next five years

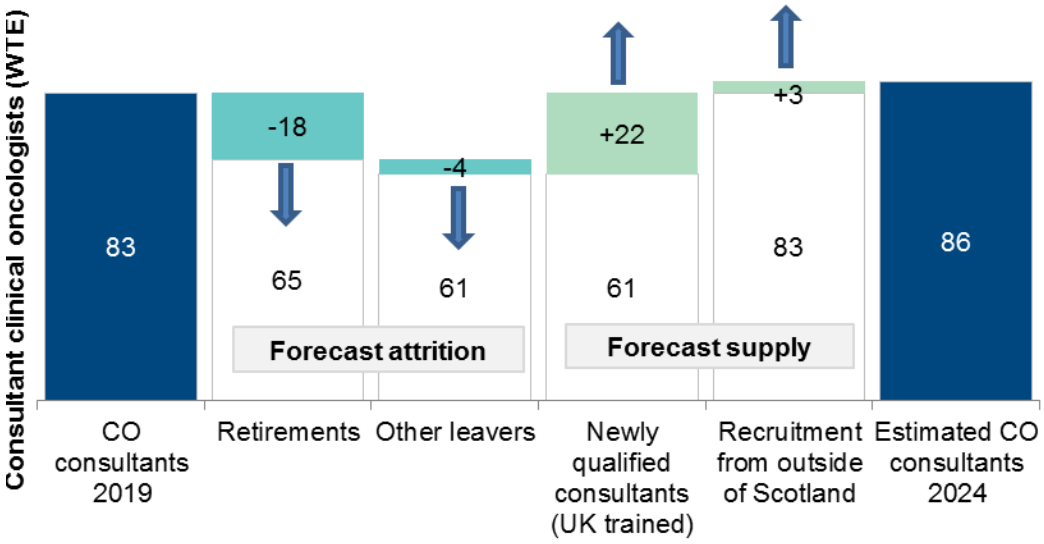
The size of the consultant clinical oncology workforce in Scotland is impacted by entrants from UK specialist training and recruitment from overseas, set against attrition from retirements and other leavers.

- **UK specialist training:** based on RCR training and census data, the total number of UK-trained consultant clinical oncologists who will join the workforce in Scotland in the next five years is estimated to be 22 WTE consultants.
- **Recruitment from outside of Scotland:** numbers recruited from across the rest of the UK and overseas are small and vary from year to year. If trends from recent years continue, approximately three WTE consultant clinical oncologists will be recruited to the workforce in Scotland in the next five years.
- **Retirement:** based on the median retirement age of 59 years, an estimated 18 WTE consultant clinical oncologists in Scotland – equivalent to 22% of the workforce – are expected to retire in the next five years.** This level of attrition is on a par with the UK retirement forecast of 22% of the workforce and will put considerable additional strain on the workforce in Scotland.
- **Other leavers:** assuming the annual attrition rate of 1% for other leavers (that is, all leavers excluding retirements) observed over the past five years remains unchanged, attrition in the next five years for this cohort is estimated to total approximately four consultants (WTEs).

** Calculation is based upon full-time job plans being restricted to 10 PAs, with a minimum of 1.5 supporting professional activities (SPAs).*
*** The UK median retirement age has been used for this forecast, as the dataset is larger and therefore more consistent from year to year.*

Figure 1 shows that, should trends from the past five years continue over the next five years, there will be approximately 86 WTE consultant clinical oncologists in post in Scotland in 2024. This corresponds to workforce growth of less than 1% per year over the next five years, significantly lower than the 7% clinical oncology workforce growth seen in Scotland over the past five years. Set against the increasing demands for cancer services, this indicates that, unless urgent action is taken, clinical oncology workforce shortages in Scotland will increase.

Figure 1. Consultant clinical oncologist WTE workforce in Scotland – five-year forecast (2019–2024)



6. Recommendations

Without prompt action to address the shortage of consultant clinical oncologists in Scotland, the shortfall is likely to increase.

To address the workforce shortage in Scotland we need:

- **Training numbers to increase** by 50% from eight doctors to 12 doctors joining clinical oncology specialist training each year for the next five years. Upon completion of training, this is forecast to increase the workforce by approximately 15 WTE consultant clinical oncologists.*
- **Trainers with adequate time** in their job plans to undertake training responsibilities.
- **To prevent avoidable loss of trainees** through providing flexible and attractive training posts that also accommodate the complicated geographical drivers in Scotland.
- **Employers to create supportive environments** and ensure job plans are attractive, with adequate time for travel and supporting professional activities. Work–life balance, earnings, NHS Scotland staffing levels and job flexibility are strong influences on career choices for doctors in training.[7]
- **Employers to implement effective retention strategies** to manage, motivate and value employees to prevent avoidable loss of vital staff. In addition to creating supportive environments with opportunities for flexible working, health boards should provide adequate infrastructure and equipment and ensure fair contractual terms and conditions.
- **Networks** to be developed so that oncologists are better enabled to: reduce variation in patient care across centres; share expertise; gather essential data for quality improvement; and offer support through collaboration. However, for networks to succeed, they need adequate investment in staff, technology and information technology (IT) connectivity.
- **Local and national strategies for overseas recruitment** should seek to overcome barriers to overseas recruitment and streamline recruitment processes to make consultant careers in Scotland attractive to potential candidates.
- **Long-term national workforce planning is required** since medical training places need to be planned and funded more than ten years in advance of when NHS Scotland requires consultant expertise.

**Based on RCR training and census data which indicate a 25% attrition rate. This includes:*
- *Attrition from specialty training*
- *Post-training attrition (trainees with a Certificate of Completion of Training (CCT), who do not take up a consultant post*
- *The prevalence of LTFT working.*

References

1. www.isdscotland.org/Health-Topics/Cancer/Cancer-Statistics/All-Types-of-Cancer/ (last accessed 8/6/20)
2. The Royal College of Radiologists. *Clinical oncology UK workforce census 2019 report*. London: The Royal College of Radiologists, 2020.
3. Royal College of Physicians. *2017–18 census (UK consultants and higher specialty trainees).* London: Royal College of Physicians, 2019.
4. www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/annualmidyearpopulationestimates/mid2019#population-change-for-the-uk-england-wales-scotland-and-northern-ireland (last accessed 26/5/20)
5. The Royal College of Radiologists. *Guide to job planning in clinical oncology, third edition.* London: The Royal College of Radiologists, 2015.
6. www.cancer.gov/about-cancer/causes-prevention/risk/age (last accessed 26/5/20)
7. British Medical Association. *Understanding trends among current doctors in training*. London: British Medical Association, 2018.

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