Training of Medical and Radiation Oncologists: The Views of Australian and New Zealand Trainees

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Abstract

Objectives: To document the views of trainees in medical and radiation oncology regarding the content of their training, and its assessment.

Design and setting: Postal questionnaire survey of medical oncology trainees in Australia, and radiation oncology trainees in Australia and New Zealand.

Main outcome measures: Experiences of and views about training.

Results: Currently, 40% of medical and 59% of radiation oncology trainees rotate to the other specialty during training. All medical oncology trainees thought it important to train in radiation oncology (36% very important) and 97% of radiation oncology trainees thought it important to train in medical oncology (54% very important). In addition, training in palliative care for three or more months was regarded as important by all medical and 96% of radiation oncologists (48% and 24% respectively rating it as very important). Overall 72% of trainees considered that a common modular basic science curriculum would be useful, and 48% were in favour of joint training during the first year in a common experience for both groups of trainees. Medical oncologist trainees were not supportive of formal assessment of training, and radiation oncology trainees were supportive of the FRANZCR examinations.

Conclusions: Trainees in medical and radiation oncology favour experience in the other discipline, although the minority of medical oncology trainees have formal radiation oncology training experience. The majority of both groups also favour training in palliative medicine, for between three to six months.

They support a modular core curriculum with some form of assessment. The views of trainees should be considered in postgraduate oncology training.

Introduction

Excluding non-melanocytic skin cancer, there were almost 80,000 new cancer cases diagnosed and 34,000 deaths due to cancer in Australia in 1997. Cancer is the commonest cause of death in Australia, comprising a quarter of all deaths. A large and increasing proportion of people with cancer will be assessed and treated by oncologists. The revolution in molecular biology of the past 30 years has vastly increased our understanding of the basic science and mechanisms of oncogenesis, and new biological treatments are now becoming a reality. Likewise, advances in cancer genetics have resulted in a new subspecialty. Combined treatment programs comprising both radiotherapy and chemotherapy are increasingly used, based on evidence of enhanced effectiveness. An increased diversity amongst cancer specialists seems likely to become necessary as our knowledge base increases. The quality and appropriateness of oncology training is therefore of major importance both to the medical profession and to the wider community.

The traditional division of cancer specialists into medical and radiation oncologists is a source of professional identity and pride. In Australia and New Zealand, medical oncology trainees enter the training program with part I FRACP, and have to complete a minimum of two years clinical training in oncology and a further elective year, often spent in research. Many undertake a formal research degree. Radiation oncology trainees, after completing resident training (commonly two years), enter a four years training scheme in which they take parts I and II of the FRANZCR examination. After obtaining the FRANZCR they are eligible for consultant appointment, although many undertake a year’s further training as a research fellow.

Rather than divide into modality specialists in line with the model practiced in the United States and, to a large extent, in Australia and New Zealand, opinion in the UK has generally been in favour of closer integration of the specialties, particularly during training, as much of cancer medicine is common to both specialties. Against this background, a

TABLE 1

<table>
<thead>
<tr>
<th>How would you rate the importance of training in the following departments on a scale of 1 to 5?</th>
<th>Not important (Score 1)</th>
<th>Between (Score 2-4)</th>
<th>Important (Score 5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Oncology (for ROTs)</td>
<td>MOT</td>
<td>3</td>
<td>43</td>
</tr>
<tr>
<td>Radiation Oncology (for MOTs)</td>
<td>0</td>
<td>64</td>
<td>36</td>
</tr>
<tr>
<td>Palliative Care</td>
<td>0</td>
<td>52</td>
<td>70</td>
</tr>
<tr>
<td>Haematology</td>
<td>0</td>
<td>14</td>
<td>72</td>
</tr>
<tr>
<td>General surgery eg to observe an axillary dissection</td>
<td>32</td>
<td>14</td>
<td>68</td>
</tr>
<tr>
<td>Gynaecological oncology</td>
<td>32</td>
<td>12</td>
<td>68</td>
</tr>
<tr>
<td>Radiology</td>
<td>20</td>
<td>19</td>
<td>76</td>
</tr>
<tr>
<td>Pain management</td>
<td>4</td>
<td>12</td>
<td>64</td>
</tr>
<tr>
<td>Multidisciplinary clinics</td>
<td>0</td>
<td>0</td>
<td>36</td>
</tr>
</tbody>
</table>

MOT: Medical Oncology Trainee  ROT: Radiation Oncology Trainee
questionnaire was conducted in 1997 by the junior radiologists forum in the UK, which sought the opinions of registrar grade medical and clinical (radiation) oncologists about training. As the contexts are very different, we felt it would be interesting to survey medical and radiation oncology trainees in Australia and New Zealand using the same questionnaire and to compare responses to those of UK trainees.

Methods

Permission to use the original questionnaire was given by Dr T Illidge. In order to make valid comparisons, the questionnaire was identical to that sent to UK trainees, apart from some very minor changes relevant to the different contexts. These changes are noted below. The questionnaire was mailed to all trainees from lists obtained from the Royal Australasian College of Physicians and the Royal Australian and New Zealand College of Radiologists, and a stamped addressed envelope was enclosed to encourage replies. A covering letter was included to explain the background to the questionnaire, and that it was a comparative study. The envelopes were coded to ensure a representative sample of replies from different regions was obtained, and to enable repeat mailing of the questionnaires to non-respondents in the event of a low number of replies. Fortunately the response rate was high and repeat mailings were not thought necessary. The envelopes were then discarded before reading the replies so that complete anonymity was maintained. The replies were analysed by one author (KF) using the same methods as the UK survey, and the results were compared.

The questionnaire

The questionnaire was divided into two sections: on rotation to other specialties and units, and on a common core curriculum and assessment of training. General comments were also invited. Questionnaires sent to MOTs and ROTs were almost identical apart from specific items on rotation to other specialties.

Amendments to the questionnaire

There were three minor differences from the British questionnaire. Multidisciplinary clinics were included in the question on training in other departments (table 1), because of increasing recognition of their importance in patient management. A question on medical oncology training after completing the FRACP Part I was added because of its relevance to trainees in Australia. In the final question (figure 4), an option of ‘no planned period of research’ was included in the Australian questionnaire.

Results

Responses were received from 66% of trainees overall, including 68% of 56 radiation oncology trainees (ROT) and 64% of 39 medical oncology trainees (MOT). Replies were received from all Australian states with trainees. Medical oncology trainees in New Zealand were not surveyed.

Rotation to other oncological specialties and units

Forty percent of MOTs and 59% of ROTs said that they had rotated to the other discipline, and virtually all had found the rotation useful. For MOTs, the length of rotation was three months for 70% and four to six months for the remainder. All had attended general radiation oncology clinics, 89% had attended radiotherapy planning sessions and 78% had observed brachytherapy. Amongst ROTs, 27% had rotated to medical oncology for two to three months, 50% for four to six months and 23% for more than six months. General medical oncology clinics were attended by the majority and over half observed patients having high dose chemotherapy.

All MOTs and 95% of ROTs felt it was important to spend some time in other departments and they were asked to score the importance of training in a variety of specialties (table 1).

Most MOTs and ROTs rated supervised training as fairly or very important. Similarly, most trainees felt it was unimportant or not very important for their optimal learning to be an observer without clinical responsibility.

All trainees were asked what was the optimal time for a medical oncology trainee to rotate to radiation oncology, and vice versa. The results are shown in figures 1 and 2. They were also asked about training in palliative care and most felt this was important (figure 3). Assuming trainees spend several years in the same cancer centre, rotation to other centres was thought to be necessary by all MOTs and by the majority of ROTs. The later training years was the preferred time for this rotation by 60% of MOTs and 80% of ROTs. More than two-thirds of MOTs and more than half the ROTs felt they should rotate to work for oncology consultants based at district hospitals. Most of the ROTs felt that three months was the optimal length of time for a district hospital rotation, but for MOTs, three months was favoured by 35%, three to six months by 30%, six months by 30% and 12 months by 5%.
Common core curriculum and assessment

Trainees were asked whether they felt all oncology trainees should attend a course with a common core curriculum (during which medical and radiation oncology trainees would have lectures together on, for example, basic radiotherapy, cancer epidemiology, etc). More than two-thirds of both MOTs and ROTs favoured this proposal. If the common course led to a Masters degree, trainee preferences for assessment were sought. Some gave more than one preference. Eight per cent of MOTs and 18% of ROTs preferred a single examination at the end of the course but more than half the MOTs and 66% of ROTs preferred short examinations at the end of each course module. No formal assessment was the preference of 32% of MOTs and 26% of ROTs.

With more structured training, assessments and closer integration between radiation and medical oncology (perhaps with a Masters degree), trainees were asked what should be done with Part II FRANZCR (this examination may make the integration of radiation and medical oncology training difficult). Again, many respondents gave more than one preference. Ninety per cent of MOTs and 80% of ROTs felt that it should be kept as an examination for those wishing to give radiotherapy, but 5% of MOTs and 11% of ROTs thought it should be abolished. A replacement modular examination for medical and radiation oncology trainees was preferred by only 14% of MOTs but by 48% of ROTs. MOTs only were asked what assessment of medical oncology training after FRACP part I was preferred, and 96% thought that an exit exam should not be introduced.

Forty per cent of MOTs and 54% of ROTs thought it appropriate that new trainees should start as general oncology trainees and spend some time working in both radiation and medical oncology departments for the first year before deciding whether to train as a medical or radiation oncologist. Trainees were asked how the current training influenced their decision to do some research. Two-thirds of the MOTs, were encouraged, none was discouraged and 20% felt it had no influence. Corresponding figures for ROTs were 45% encouraged, 24% discouraged and 30% no influence. Trainees were then asked if they wanted to do one year of research leading to a Masters degree, lengthen the training period to allow two years for an MD or three years for an PhD, or to undertake no planned period of research. The results are shown in Figure 4.

Discussion

Rotation to other oncological specialties and units

Forty and 59% of medical and radiation oncology trainees respectively rotated to the other specialty during training. The great majority of these trainees found the experience valuable. However all medical oncologists and 97% of radiation oncologists thought training in the other discipline was of importance though only 36% of MOTs and 54% of ROTs rated training in the other specialty as ‘very important’. Half of the MOTs felt that three months training in radiation oncology would be adequate, whereas more than two-thirds of ROTs thought MOTs should spend at least four months in radiation oncology. More than three-quarters of ROTs wished to spend four months or more training in medical oncology.

Training in palliative care was regarded as very important by half of the MOTs and one-quarter of the ROTs. The most popular length of palliative care training amongst all trainees was three months, although a third of MOTs felt that six months was more appropriate. Approximately half of the workload of medical oncology is palliative treatment and 30-40% of radiotherapy courses are for palliation. Experience in other specialties was generally rated as less important, although the value of multidisciplinary clinics was recognised. Rotation to other cancer centres during training was thought to be necessary by both MOTs and ROTs. Rotation to district hospitals was considered to be less important, particularly by ROTs.

Common core curriculum and assessment

A course with a common core curriculum was popular with most MOTs (76%) and ROTs (69%), with some respondents commenting that they already attend joint lectures. If a Masters degree was the outcome of such a course, a modular examination was preferred by 52% of MOTs and 66% of ROTs. In contrast 96% of MOTs were opposed to an exit FRACP exam. The FRANZCR examination was strongly supported, with 80% of ROTs in favour of keeping its current form, although 48% felt it could be extended, as a modular exam and include MOTs. Only 14% of MOTs were interested in this possibility however. Combined training during the first year was supported by 54% of ROTs and 40% of MOTs. A research year was the most popular option for both MOTs and ROTs, although 36% of ROTs and 11% of MOTs favoured no planned period of research.

Comparison with UK trainees

In the United Kingdom, the division between non-surgical cancer specialties has traditionally been more blurred, and clinical (radiation) oncologists are trained in the use of both radiotherapy and chemotherapy with an emphasis on cancer site specialisation. Medical oncologists, whilst originally mainly academically based, are increasingly involved in chemotherapy administration at a community level, as the indications for chemotherapy widen. Medical oncologists undergo four years of clinical training following general physician’s training during which MRCP Parts I and II are obtained. There are no oncology examinations, although recently more thorough assessment of training has been introduced and most trainees attend lecture courses, and undertake a formal research degree. Clinical oncology trainees also enter the training scheme after a postgraduate diploma, most commonly the MRCP. There are five years of clinical training and during the first three years the FRCR examination is taken. The final two years are advanced professional training with cancer site specialisation. Up to a
year of this may be spent in research, and many trainees undertake a formal research degree.

Forty per cent of MOTs in Australia and 30% in the UK had experience in a radiation oncology department. Although the rotations were shorter (mostly three months in Australia rather than six months or more in the UK), the quality of training was better in Australia with most trainees observing radiotherapy planning and brachytherapy. All MOTs who rotated to radiation oncology found it useful but overall, only 36% of Australian MOTs rated radiotherapy training as ‘very important’ as opposed to 76% of UK MOTs. The ideal length of rotation to radiation oncology was stated as three months by 48% and four to six months by 45% of Australian MOTs; 70% of UK MOTs wished to train in clinical oncology for at least six months.

Rotation of radiation (or clinical) oncology trainees to medical oncology was also more common in Australia/NZ with 59% rotating as opposed to 43% in the UK. The experience obtained appeared to be equivalent and 50% rotated for at least six months. The vast majority of UK clinical oncology trainees and 54% of Australian/NZ MOTs rated training in medical oncology as very important. Two-thirds of UK clinical oncology trainees wanted to rotate to medical oncology for at least six months.

Training in palliative care was rated as ‘very important’ by 72% and 62% by MOTs and clinical oncology trainees in the UK. Both these figures are considerably higher than in the Australian/NZ counterparts. This difference may reflect different exposure to palliative medicine between the cancer training institutions in the two countries.

A course with a common core curriculum was a popular proposal amongst both Australian/NZ and UK trainees. If a Masters course was to be introduced, the majority of trainees on both sides of the world favoured assessments or short exams after each module, with no examination being preferred by 35% of Australian and 20% of UK MOTs. An introductory year as a general oncology trainee before specialisation was considered appropriate by 48% of Australian/NZ and 63% of UK trainees.

Most MOTs and 45% of ROTs felt that the current system encouraged extending their training time to do research whereas 40-50% of UK trainees were discouraged by the training system. In spite of this, more UK trainees were interested in undertaking a research degree.

In conclusion, training in the other oncology specialty and in palliative care was given more importance in the UK, and there was more interest in joint training initiatives than in Australia.

Summary

Most Australian/NZ medical and radiation oncology trainees appear to be satisfied with their training, whilst criticism of the other specialty’s training was common. Medical oncology trainees felt that the general medical knowledge of ROTs was inadequate, and ROTs felt that MOTs had too little understanding of radiotherapy. There was some enthusiasm for combined courses and training programs, which could improve understanding and cooperation between the specialties. Joint training committees between the Royal College of Physicians and Radiologists could promote such cooperative training.

These findings are largely in accordance with the more rigid divisions between the specialties found in Australia/NZ and the USA as compared to the UK. There is a large area of common ground between the two specialties, and a basic knowledge of radiotherapy by medical oncologists and of cancer therapeutics by radiation oncologists, and of palliative care by both, is surely essential for comprehensive cancer care. Some of the comments in the questionnaire reflected an adversarial rather than complementary attitude between trainees. However, it could be questioned whether such a rigid division is of benefit to the patient, particularly in light of the increasing complexity of cancer treatments.

References