Medical Oncology and Shape of Training

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Chair of the Association of Cancer Physicians, Macmillan Consultant in Medical Oncology, Calderdale and Huddersfield

Professor David Cunningham
Chair of the Specialty Advisory Committee for Medical Oncology, Royal Marsden Hospital

Professor Peter Selby
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Professor Helena Earl
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We recognise that we must help to relieve the pressures within GIM and care of the elderly.

We are already doing so through the Acute Oncology Service (AOS) and our Cancer of the Elderly (CE) initiatives will do more. AO is an agreed commissioned service. It is evidenced-based, patient-centred and has sound economics.

AOS can relieve unselected takes of 5-10% of patients and takes them into a better, safer, more specialised system which yields better outcomes and cost savings as it reduces admissions and length of stay. We deliver in this system what we are good at and believe in--excellent specialised cancer care.

NHS trusts and commissioners are validating our approach by purchasing AO.

AO and GIM Unselected take are mutually exclusive--the skill sets are different and the capacity to do both does not and cannot exist in the UK.

We are making good progress in these initiatives and need support and endorsement to make AO and CE work everywhere --and we need to take back to our colleagues a sense that the Colleges and NHS appreciate their very hard work being done in the interests of our patients and the whole NHS.
Why Medical Oncologists should not undertake acute GIM:

- Patient Safety
- Health economics
- Demographics
- Specialisation and research
- Complexity of cancer therapies
NCEPOD Report 2008: Deaths within 30 days of chemotherapy

- Only 35% of cases were considered to have received good care

- National Chemotherapy Advisory Group (NCAG) established by Department of Health and National Cancer Director

- NCAG report in response to NCEPOD:
  - Chemotherapy Services in England, Ensuring Quality and Safety 09

Established concept of the Acute Oncology Service
Acute Oncology Service:

- Complications of cancer therapy
- Complications of disease
- Assessment and investigation of new presentations of cancer

These patients comprise 5% - 10% of acute presentations in typical acute hospitals (Audit Data)
National Cancer Peer Review Programme

Manual for Cancer Services:
Acute Oncology - Including Metastatic Spinal Cord Compression Measures
Version 1.0
There should be DCC PAs, worked in the hospital, in the job plans of consultant oncologists, which fulfil the following specifications:

- the oncologists may be medical, clinical or haemato-oncologists
- there should be a minimum of two oncologists involved
- there should be a minimum of one DCC PA for each of the 5 weekdays
- during the specified PAs, the oncologist should be available for consultations with and/or ward visits to patients presenting with acute oncology problems, admitted during the previous 24 hrs, (or over the weekend, for a Monday PA)
Acute Oncology is valued and being commissioned in medical oncology

<table>
<thead>
<tr>
<th></th>
<th>No of posts advertised</th>
<th>Mean number of AOS PAs</th>
<th>Range</th>
<th>Mean number Radiotherapy PAs</th>
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<tbody>
<tr>
<td><strong>Medical Oncology</strong></td>
<td>19</td>
<td>1.32</td>
<td>0-3.26</td>
<td>0</td>
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<tr>
<td><strong>Clinical Oncology</strong></td>
<td>20</td>
<td>0.25</td>
<td>0-1</td>
<td>1.56</td>
</tr>
</tbody>
</table>

PAs for AOS
Audit of Posts advertised in November/December 2016
Workload in non-surgical oncology (NAO)

Mean Number of Finished Consultant Episodes (FCE) per consultant in the UK 2015-16

<table>
<thead>
<tr>
<th>Speciality</th>
<th>FCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Oncology</td>
<td>603</td>
</tr>
<tr>
<td>Clinical Oncology</td>
<td>457</td>
</tr>
<tr>
<td>General Medicine</td>
<td>500</td>
</tr>
</tbody>
</table>

1. Hospital Episode Statistics Dataset, 2015-16
Acute presenting cancer patients with cancer or treatment complications (including those with a possible cancer diagnosis) are funneled directly to the AO service without engaging with unselected “take” or consuming GIM capacity.

They are seen promptly (eg twice daily consultant rounds) by cancer specialists (medical and nursing), commonly but not only medical oncologists, and directed to the appropriate in or out patient investigation or care.

The inclusion of early specialist expertise (and confidence) ensures prompt and appropriate interventions and has been shown to reduce admissions and length of stay.

It also ensures high degrees of patient safety for the high risk cases such as severe neutropaenic sepsis.

Patients who do not require long admissions are managed appropriately including referrals (such as the a specific “cancer of unknown primary” service) or outpatient care such as low risk neutropaenia.
Challenges in Acute Oncology Services

Model of delivery is variable

In most large centres delivery is consultant oncologist-led over 7 days

There is inequity
  - Especially in smaller hospitals
  - Particularly those with relatively little peripatetic oncology input
  - Often nurse-led
Whittington Hospital set up a fully comprehensive AOS in July 2009 after completing a 6 month pilot.

With just one full-time Consultant Medical Oncologist on-site Mon- Fri supported by a staff grade in Oncology the model of AOS adopted was one of supporting the Acute medical & surgical take with an electronic referral system triaged by AOT three times daily Mon-Fri, access to updated protocols on managing
Oncology Pilot - Whittington Hospital

Effects of change
A: length of stay

B: blood tests

C: investigations

D: cost of admission

P<0.05

P<0.05

P<0.01

P<0.01

P=0.051

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LoS in all new cancers
n=74

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Pre-pilot</th>
<th>Post -pilot</th>
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</thead>
<tbody>
<tr>
<td>Care of the elderly</td>
<td>22.8</td>
<td>20.6</td>
</tr>
<tr>
<td>General medicine</td>
<td>13.9</td>
<td>10.2</td>
</tr>
<tr>
<td>Respiratory medicine</td>
<td>21.0</td>
<td>15.0</td>
</tr>
<tr>
<td>Oncology</td>
<td>23.4</td>
<td>13.2</td>
</tr>
<tr>
<td>Total</td>
<td>17.1</td>
<td>12.1</td>
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</table>
Clatterbridge Oncology Business case 2009 establishing AOS in local Secondary Care

- Based on 2005 / 2006 activity Data
- Established 5 new Oncology posts between Cancer Centre and DGHs

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Eligible Acute admissions</th>
<th>Bed days saved</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Countess Of Chester</td>
<td>231</td>
<td>693</td>
<td>£173,250</td>
</tr>
<tr>
<td>Royal Liverpool and Broad Green</td>
<td>390</td>
<td>1,170</td>
<td>£292,500</td>
</tr>
<tr>
<td>Southport and Ormskirk</td>
<td>218</td>
<td>654</td>
<td>£163,500</td>
</tr>
<tr>
<td>St Helen’s and Knowsley</td>
<td>359</td>
<td>1,077</td>
<td>£269,250</td>
</tr>
<tr>
<td>University Hospitals Aintree</td>
<td>414</td>
<td>1,242</td>
<td>£310,500</td>
</tr>
<tr>
<td>Warrington &amp; Halton</td>
<td>304</td>
<td>912</td>
<td>£228,000</td>
</tr>
<tr>
<td>Wirral University Teaching Hospital</td>
<td>336</td>
<td>1,008</td>
<td>£252,000</td>
</tr>
<tr>
<td>TOTALS</td>
<td>2,252</td>
<td>6,756</td>
<td>£1,689,000</td>
</tr>
</tbody>
</table>

Total staff costs 5 oncologists, 7 CNS, 7 0.6WTE Secretaries

Saving

£915,497

£773,503
Population and Cancer Demographics

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The projected increase in the UK population 2008-2033 is concentrated in older groups by five-year age bands.
Average Number of New Cases of Cancer per Year and Age-Specific Incidence Rates, UK, 2009-2011 (CRUK 2014)
Population Predictions

Lifetime Risk of Being Diagnosed with Cancer, UK, 1975-2030 (CRUK 2014)

- 33%
- 40-45%
- 45-50%
European Age-Standardised Mortality Rates (all cancers), UK, 1971-2030 (CRUK 2014)
Effect of Demographics

10 Million over 65 today will be 15.5 Million in 20 Years

Cancers are most frequent in older people

Common cancers are becoming long-term conditions, managed with complex disease-modifying therapies

People increasingly live with and beyond cancer

Cancer survivorship is bringing new acute and long-term problems

The Oncological workload is increasing in volume and complexity
Consultant Medical Oncologists:

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Consultant Medical Oncologists:

41% of appointments were unsuccessful (2015) - 67% because there was no suitable applicant.
Increasing complexity of science and therapeutic options and rate of evolution of knowledge

Consultants can specialise in no more than 2 (exceptionally 3) cancer sites

Our general practice is in acute oncology

Acute oncology skills are specific to cancer and are not the same as acute GIM

All consultants work / lead in 2 - 3 MDTs

All consultants undertake clinical trials and many (including NHS appointees) lead clinical trials
Consultant Job Plans

Outpatients
Inpatient supervision
Systemic Anticancer Therapies
Acute Oncology Services
7-day working and On call commitments
Multi-disciplinary Team Meetings
Clinical trials
(Academic sessions)
Supporting Professional Activities
Leadership of cancer clinical trials by specialty

National Cancer Trials by Specialty of Chief Investigator

- Medical Oncology
- International
- Clinical Oncology
- Surgery
- Urology
- Radiology
- Public health / Health...
- Obstetrics / Gynaecology
- Immunologist
- Respiratory
- Pathology
- Pharma
- Pall Care
- Nursing
- Paediatrics

Audit of Chief Investigators in cancer trials of systemic treatments, 2016, Clinicaltrials.gov
Number of oncologists and cases of cancer

Number of Consultant and Trainee Oncologists compared to new cases of cancer per year

Number of new cancer diagnoses in England (ONS) - Consultants - Trainee Oncologists

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What are our trainees doing?

Less than 150 (WTE) trainees are in clinical positions

- Fulltime Clinical training 42%
- Out of Program (Research) 38%
- Flexible / Part-time training 10%
- Clinical lecturer 7%
- Academic Clinical fellow 2%
- Maternity leave 2%
All trainees undertake a compulsory taught course in 1st / 2nd year of training

Many lead to an MSc

Typically half a day per week

Covers

- Basic sciences
- Translational science
- Pharmacology and drug development
- Clinical Skills
Strategic Development of the Specialty

‘Improving services and outcomes for cancer patients’ - ACP 2016:

Onco-geriatrics
Onco-genetics
Onco-immunology
Onco-psychology
Survivorship
New integrative ways of working

All additional pressures on our training curriculum

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The skills of AO have to be learned and sustained in AO and are not the same as those of a GIM consultant. AO now has a central place in our curriculum.

We welcome the third “medical registrar” year of training which exactly and adequately sets up our trainees for their AO and specialist oncology training and practice.

AO and unselected take are mutually exclusive. There is inadequate capacity at all levels, the skill sets are different and having both skill sets is an unnecessary and undeliverable expectation.
Conclusions

Medical oncologists provide an increasing proportion of systemic anticancer therapies and cancer drug development

We cannot meet the current demand and must expand to provide for the future

There is no capacity in the workforce for Acute GIM and no rationale for us to provide this

We do not have the training numbers to meet the current and foreseeable workforce needs
Going back to being a generalist with ‘an interest in oncology’?

- Increase avoidable cancer deaths by:
  - Reducing the quality of specialised cancer care
  - Reducing the availability of Acute Oncology
- Cost more for acute cancer and GIM services
- Unacceptable to cancer patients and the public
- Be unattractive to NHS trusts and commissioners who place cancer patient outcomes as a priority
- Reduce the attractiveness of medical oncology as a discipline
- Reduce research and innovation in oncology
- Threaten cancer research in the UK
Acute Oncology

Allow medical oncologists to concentrate acute activity on the Acute Oncology Service

Allow medical Oncology to expand to meet the demands on our service

Allow us to work to develop Acute Oncology Services in all hospitals to the same standard that exists in current services with comprehensive oncology support

Allow us to ensure safety for cancer patients and do our “10%” for the Acute GI/M take
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Supported by members of the association of cancer physicians and specialty advisory committee for Medical Oncology. Including Dr Ernie Marshall (National lead for acute oncology services), Dr Pauline Leonard (Acute Oncology Lead, Whittington Hospital) with support of medical oncology trainees.
Additional Slides

Models of Care
Trainee numbers and survey
Rotation Gaps
What is Medical Oncology?
Increasing demand

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Models of Acute Oncology Care - Urgent and Emergency Care

The Keogh Urgent Care Review, 2013

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Models of Acute Oncology Care - Urgent and Emergency Care

Oncology Patients are triaged directly to oncology teams for assessment and management.

The Keogh Urgent Care Review, 2013
Models of Acute Oncology Care – Future Hospital Programme

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Acute Oncology allows early access to specialist advice and review.
Medical Oncology Training - What are our 255 trainees doing?

<table>
<thead>
<tr>
<th>Region</th>
<th>Female</th>
<th>Male</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metabolic medicine</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Allergy</td>
<td>7</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Medical ophthalmology</td>
<td>4</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>Nuclear medicine</td>
<td>7</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Audiovestibular medicine</td>
<td>12</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>Stroke medicine</td>
<td>11</td>
<td>15</td>
<td>26</td>
</tr>
<tr>
<td>General internal medicine</td>
<td>10</td>
<td>16</td>
<td>26</td>
</tr>
<tr>
<td>Clinical neurophysiology</td>
<td>10</td>
<td>18</td>
<td>28</td>
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<tr>
<td>Immunology</td>
<td>13</td>
<td>16</td>
<td>29</td>
</tr>
<tr>
<td>Sport and exercise medicine</td>
<td>11</td>
<td>26</td>
<td>37</td>
</tr>
<tr>
<td>Clinical pharmacology and therapeutics</td>
<td>14</td>
<td>25</td>
<td>39</td>
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<tr>
<td>Paediatric cardiology</td>
<td>23</td>
<td>26</td>
<td>49</td>
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<tr>
<td>Rehabilitation medicine</td>
<td>35</td>
<td>37</td>
<td>72</td>
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<tr>
<td>Clinical genetics</td>
<td>66</td>
<td>9</td>
<td>75</td>
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<tr>
<td>Genitourinary medicine and HIV/AIDS</td>
<td>105</td>
<td>12</td>
<td>117</td>
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<tr>
<td>Pharmaceutical medicine</td>
<td>58</td>
<td>69</td>
<td>127</td>
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<tr>
<td>Dermatology</td>
<td>163</td>
<td>52</td>
<td>215</td>
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<tr>
<td>Palliative medicine</td>
<td>177</td>
<td>41</td>
<td>218</td>
</tr>
<tr>
<td>Medical oncology</td>
<td>176</td>
<td>79</td>
<td>255</td>
</tr>
<tr>
<td>Rheumatology</td>
<td>172</td>
<td>88</td>
<td>260</td>
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<tr>
<td>Infectious disease and tropical medicine</td>
<td>159</td>
<td>115</td>
<td>274</td>
</tr>
<tr>
<td>Neurology</td>
<td>146</td>
<td>167</td>
<td>313</td>
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<tr>
<td>Acute internal medicine</td>
<td>141</td>
<td>195</td>
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<td>Renal medicine</td>
<td>185</td>
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<td>Endocrinology and diabetes mellitus</td>
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<td>220</td>
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<tr>
<td>Haematology</td>
<td>322</td>
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<td>494</td>
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<tr>
<td>Gastroenterology and hepatology</td>
<td>261</td>
<td>381</td>
<td>642</td>
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<tr>
<td>Respiratory medicine</td>
<td>350</td>
<td>321</td>
<td>671</td>
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<tr>
<td>Geriatric medicine</td>
<td>467</td>
<td>253</td>
<td>720</td>
</tr>
<tr>
<td>Cardiology</td>
<td>195</td>
<td>551</td>
<td>746</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>3,518</strong></td>
<td><strong>3,104</strong></td>
<td><strong>6,622</strong></td>
</tr>
</tbody>
</table>

With 135 WTE trainees in clinical positions, medical oncology constitutes 2% of physician trainees.

Less than 150 (WTE) trainees are in clinical positions.

89% of trainees have or intend to take an OOPE.
42% of trainees would not have chosen medical oncology had it included general internal medicine.

31% of trainees would consider leaving the specialty if they had to contribute to general unselected take.

71% of trainees think that dual accreditation would be detrimental to their training.

81% support acute oncology as medical oncologists contribution to general internal medicine.

88% of trainees do not support acute unselected take ST4+ in medical oncology.

* Survey of Medical Oncology Trainees through the Association of Cancer Physicians, 2015/6.
Trainee Survey 2016

How many positions on your training rotation are unfilled?

- 0: 50%
- 1: 19%
- 2: 19%
- 3 or more: 12%

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Academic-based medical specialty specialising in development, testing and administration of systemic anti-cancer therapies (SACT)

One of the *fastest growing specialties* in the UK

The *major contributors* in the UK to planning, *leading* and undertaking cancer clinical and translational trials

Lead specialty in the development of the National (England) Acute Oncology Service (AOS)

Non-surgical Oncology currently subject to HEE / Cancer transformation Board / CRUK studies on manpower requirements. Expected to demonstrate strategic need for growth.
Medical Oncology - Increasing Demand & Activity

Medical Oncologists care for **4.7% of all admissions**¹

Medical Oncologists saw an **11.8% increase in activity** in the last year (2015 - 2016) compared with 5.4% in General Medicine ¹

Over 130 000 patients received chemotherapy in 2013/14 and there has been a 166% increase in use of the cancer drugs fund²

Cancer accounts for **11.8% of total admissions** to hospital¹

Medical Oncologists account for **3.3% of Physicianly consultants**

<table>
<thead>
<tr>
<th>Mean Number of Finished Consultant Episodes per consultant in the UK 2015-16¹</th>
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</thead>
<tbody>
<tr>
<td>Medical Oncology</td>
</tr>
<tr>
<td>Clinical Oncology</td>
</tr>
<tr>
<td>General Medicine</td>
</tr>
</tbody>
</table>

¹. Hospital Episode Statistics Dataset, 2015-16
². National Audit Office Report 2015