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The Royal College of Radiologists

Acute oncology: Increasing engagement and visibility in acute care settings

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Contents

Foreword	3
Executive summary	5
1. An introduction to acute oncology	7
2. Benefits of acute oncology	11
3. Future of training in acute oncology	19
Recommendations and commitments	21
Appendix: Acute oncology lead clinician roles and responsibilities	23
Acknowledgements	25
References	26

Foreword

Acute oncology services are an impressive invention of the National Health Service. They represent the best patient-centred response to the challenges of modern cancer care: the varied ways in which cancer can present; how cancer treatments can affect multiple organ systems; and how people need someone with expertise in the range of specialist therapies available to help them take decisions when they are at their most vulnerable.

Despite the rising incidence and prevalence of cancer, oncology remains a largely postgraduate subject of study. Many treatments in widespread use today were not even licensed when physicians and surgeons who are now becoming consultants were leaving medical school, and such are the demands of curricula that many doctors go through their training with minimal exposure to the rapidly evolving fields of radiation and systemic anti-cancer therapy.

Modern cancer care is mainly delivered on an outpatient basis, meaning that there are many people in the community at risk of the side effects of treatment or manifestations of progressive disease that can present as emergencies, requiring urgent assessment of complicated problems and rapid decisions about the most appropriate interventions. This is where acute oncology services are most valuable, providing outreach to acutely unwell people and bringing specialist knowledge to their management. Well-organised acute oncology can lower the number of people needing admission, reduce their length of stay when they are in hospital, improve the quality of their treatment and help to train the next generation of clinicians.

This paper helpfully sets out how acute oncology services can be established and supported in a variety of settings to ensure that, wherever people are treated for their cancer, this is being done as safely and effectively as possible.

Peter Johnson

National clinical director for cancer, NHS England



Executive summary

The core principles underpinning acute oncology services (AOS) have been defined as to 'promote education, awareness and early access to specialist oncology input, as well as a more integrated way of working between oncology and acute specialties within hospital trusts'.¹ It can take the form of an in-reach advisory service that underpins cancer care provided by the team covering acute medical and surgical admissions or, in larger centres, supporting the delivery of specific expertise in acute cancer care.

The development of AOS was first proposed in the 2009 National Chemotherapy Advisory Group (NCAG) report *Chemotherapy Services in England: Ensuring quality and safety*.² Published in response to patient safety and quality issues that spanned emergency new cancer presentation and complications from both the disease and treatment, a core aim was to increase consultant oncology engagement and visibility in the acute care setting.

Wherever established across the four nations, AOS are frequently viewed as the glue in the system – supporting patient-centred care and acting as the face of oncology in acute care services. In this respect, acute oncology (AO) has brought myriad benefits to patients, clinicians and the wider system.

These benefits can be found through improved communication, timely access to expert advice, improved patient experience and cost savings

through more appropriate use of investigations, early discharge and admission avoidance.

A decade on from the NCAG report and there is clear progress and many examples of AOS excellence. However, the service is still to be fully established to the levels needed for optimum patient care across the UK. Variable funding has led to the development of organic service models with different structures, governance, activities and impact, often without any clear strategic direction. As a result, provision is inconsistent across the country, and sometimes even differs within individual provider organisations.

Planning for the next decade, AO is more relevant than ever. The pressure on urgent care services is unrelenting in the face of a rising cancer incidence in an older and multimorbid population, and in the context of a greater therapeutic armamentarium with novel and unpredictable toxicity.

AO will continue to be a critical liaison service in traditional district general hospitals (DGHs), where the majority of cancer patients will remain under the care of general medicine, coupled with a greater focus on admission avoidance and community care. In cancer centres, AO will also play a greater role in the development and delivery of cancer-specific assessment and admission pathways,³ requiring more developed acute care skills and evidence-based toxicity management and research.

Indeed, AOS have played a pivotal role during the COVID 19 pandemic, with a focus on the

most vulnerable patients who may require emergency care. The provision of cancer help lines, timely expert advice and alternative same-day emergency care pathways will increasingly become essential components of future NHS strategy in reducing non-essential face-to-face visits and emergency department presentation for cancer patients.

To face this emerging challenge of meeting the needs of acutely presenting cancer patients, this paper makes the case that delivery of an AOS requires strong and effective oncology leadership. The role of the consultant oncologist as the face of cancer medicine is seen as vital, and we assert that those delivering AOS should be formally recognised for their subspecialist expertise. This could overcome the misperception of AO as an add-on to existing job plans that may already be dominated by site-specific cancer responsibilities.

Indeed, clearly defined consultant AO roles and responsibilities alongside resources, training and supported structures are essential to delivering excellent patient care and service improvement for cancer care. Underpinning all of this, a refreshed 2020 curriculum that incorporates a greater focus on AO competencies will arm the future consultant workforce with the formal training required.

Who is this document for?

- Oncologists
- AO teams
- Trainers
- Policy makers
- Trusts and health boards
- Patients

Key messages

- AOS are vital for providing consistent and high-quality care for patients, for optimising clinician time and expertise, and for ensuring the best use of NHS resources.
- Meeting the complex needs of acutely presenting oncology patients across a wide variety of clinical contexts is challenging and deserves to benefit from the same strategic and operational clinical leadership that is already available to site-specific cancer teams.
- A clearly defined role for consultant oncologists within AO is essential for ensuring effective clinical leadership and oversight.
- The rising incidence of cancer in an aging population with multimorbidity will require a multiprofessional approach to care, with AOS providing the critical cancer oversight for the majority of emergency cancer admissions.

1. An introduction to acute oncology

One in two people will develop cancer at some point in their lives⁴ and it is estimated that the incidence of cancer will continue to rise over the next 20 years. Frailty, multimorbidity and an aging population mean decisions about optimal treatment options are increasingly complex. In the past decade, cancer treatments have also advanced and increased. New developments such as immunotherapy and genomics, which are more personalised and accessible, are becoming embedded into standard care pathways. As a result, **expectations of care among patients and populations have grown exponentially.**

Many of the challenges faced by acute hospitals were articulated in The Royal College of Physicians (RCP) 2012 report, *Hospitals on the edge*⁵. The report outlines concerns that pressure on hospital services was adversely affecting the quality of care afforded to inpatients. Subsequently, the RCP established the Future Hospital Commission (FHC)⁶ to address growing concerns about the standards of care currently seen in hospitals, making recommendations for providing patients with the safe, high-quality, sustainable care that they deserve. The FHC report in 2013 described how the future hospital might deliver coordinated specialist care for all, including working to ensure that patients receive rapid expert advice and access to specialist services, aspirations that are central to the aim of AO services.

More recently, the GMC 'Shape of Training' recommendations⁷ are designed to build greater flexibility in training, enhancing generalism to equip the future medical workforce with the skills and experience needed to manage an aging population with multiple co-morbidities. Acute oncology training has an important role in equipping oncology trainees to manage cancer patients in this population context. Medical and clinical oncologists will contribute to reducing the burden on acute care via the delivery and expansion of AOS across the UK. **While there is not a 'one-size-fits-all' model of AOS care, we need to ensure that our patients receive the highest quality of care irrespective of location.**

The majority of cancer patients admitted to hospital will continue to require general medical care for acute care episodes, but **many will also require cancer-specific input and expertise. Acute oncology services (AOS) are well positioned to meet these demands,** offering timely expert opinion and patient-centred high-quality care. Patients may present with urgent complications arising from their cancer or side effects of anticancer treatments, and patients with a new cancer diagnosis may present as an emergency; all of these greatly benefit from specialist AO advice and input.

AOS are provided by multiprofessional teams. Teams can be loosely defined and their exact structure varies, but the majority of services are currently delivered by consultant oncologists (clinical or medical) and nurses, or by nurses with oncologist oversight.⁸ The recommended structure and

service model for AOS was updated with the publication of *Clinical Advice to Cancer Alliances for the Commissioning of Acute Oncology Services* in 2017.⁹ Importantly, this model included provision for a national AOS minimum dataset, incorporated into the Cancer Outcomes and Services Dataset (v9) from 1 April 2020 onwards.¹⁰

AO can mean different things in different contexts.¹¹ In the case of DGHs, it may refer to an advisory service that underpins the care that is provided by general medicine. By contrast, in larger cancer centres, **AOS have developed into an enabler of specific expertise in acute cancer care.** Funding for services has historically been piecemeal, leading to the development of organic service models with different structures, governance, activities

and impact, often without any clear strategic direction. As a result, **provision is inconsistent across the country**, and sometimes even within individual provider organisations.¹²

Despite the variation, AO has become well established across the UK: the majority of trusts in England have a formalised AO service,¹³ and services are provided in all the devolved nations. Almost all centres and departments providing non-surgical cancer care now offer patients (and carers) 24/7 telephone access to specialist oncology advice.¹⁴ **However, only one in five centres and departments providing non-surgical cancer care is currently able to provide a 24-hour specialist assessment and admissions unit**¹⁵ and more needs to be done to support and develop these services.

Case studies

Northern Ireland

- Over the past year we have introduced an alert for our regional electronic care record that flags if a patient is on systemic therapy or within six weeks of finishing when they present to any emergency department or primary care facility in Northern Ireland.
- We have developed AO regional guidelines, which are available via the microguide app, and are due to launch a compact version to our colleagues in general practice over the summer.

Christie STRIPE:

Streamlining Treatment and Responses for Incidental Pulmonary Embolism (IPE)

- The new eform has launched, combining nursing and medical documentation with a multidisciplinary team (MDT) approach, which ensures minimum datasets for future audit and generates prompts for required investigations and consideration for additional referrals or required inpatient observations.
- Patient education facilitates safe discharge and empowers patient involvement in treatment decisions, providing a robust safety net for patients with low-risk emboli, thus reducing the pressure on inpatient beds.

There are **myriad pockets of excellence and innovation in the delivery of AOS**, with practitioners finding creative solutions that work well for them and their provider culture. However, universal access to these crucial services must be enabled to ensure that patients with cancer can expect optimum care regardless of where they live.

Where there are robust AOS within an oncology department, quality of care is known to be optimised, and other affiliated specialists, such as palliative care or tumour-specific teams, can maximise time resources and expertise. In addition, **AO outreach/in-reach services promote stronger relationships between acute oncologists and other non-oncology clinicians**. This is valuable from a teamworking perspective and for facilitating improved agile access to information on complex oncology questions. This provides continuity of care and a well-defined pathway for the patient.

In addition to bed savings, **AOS can also lead to a reduction in length of stay and unnecessary tests and interventions, particularly at the end of life**, resulting in further savings to the health service. Because of these improvements in patient care, satisfaction is higher with fewer complaints.

The immediate presenting AO patient and their management may be straightforward, irrespective of local arrangements, sitting well within the competency of non-oncology teams to deliver. However, **the responsibility for supporting this independence and building confidence among and between specialties**

Case studies

West Suffolk

- Pre-AOS, the median time to see patients and length of stay were 3 and 9.5 days, which has now improved to 1 and 5.5 days.
- Around half of the patients are managed in the oncology unit rather than going through the emergency department.
- Two-thirds of patients are same-day discharges.
- We have now successfully managed a wide range of toxicities without the need for admission.

must lie within oncology. It is unrealistic to expect non-oncologists to fully appreciate the nuances of an individual presentation within a treatment journey that may have been, or still is, ongoing for several years.

Fear of under- or overtreatment can be challenging for non-oncology teams and may be resolved rapidly through the early involvement of an experienced oncologist at the bedside. Only oncologists have the expertise to know what has been possible, what is presently possible from an oncology standpoint and what may be possible beyond the acute event.

Senior oncologists provide an AOS backbone in terms of education and training and the necessary support to communicate with patients, their families and carers, ultimately guiding the decision-making. This is the oncologists' expertise, and it is vital that they are readily accessible to non-oncology teams.

However, for **many practitioners and providers of AOS, there remains an ill-defined and varied service specification** and method of delivery across the country. Currently, AO spans both local and specialist commissioning. While *Acute Oncology Advice to Cancer Alliances* provides a framework for AO structure, there is no current formal national AO specification, resulting in variable local capacity, resource and cultures.

Considering these inconsistencies, and drawing on the expertise of seasoned AO practitioners from across the UK, we fully assert that AOS are vital for:

- Providing consistent and high-quality care for patients
 - Optimising clinician time and expertise
 - Ensuring the most efficient use of NHS resources
 - Supporting emergency and general medicine services.
-

This document serves to clarify and demonstrate how beneficial AO services are in all aspects of cancer care. Cognisant that it is not 'one size fits all', we also intend **to highlight innovative practice and departmental benefits** to encourage and enable effective AO services across the country that can be tailored to local needs.

The role of the consultant oncologist will also be considered within the AO structure. The complexity of the clinical scenarios within AOS requires highly expert skills and knowledge, which is best provided by leadership from consultant oncologists.

Ultimately, **by recognising AO as a substantive subspecialty within oncology, the goal is for AO to receive recognition and investment**, both in terms of resources and from practitioners themselves as an integral part of both cancer and emergency services. **Continued leadership and oversight from oncologists is integral** to sustained success in all the benefits brought about by AOS.

2. Benefits of acute oncology

Coordinated, well integrated, fully resourced AOS that are recognised as a substantive subspecialty bring about significant benefits for patients, clinicians and wider healthcare across primary, secondary and tertiary care.



Oncology patients are identified immediately on admission and our visibility in acute medicine departments ensures we can help cancer patients admitted from other networks as well as the newly diagnosed cancer patient.

– Lancashire Teaching Hospital Trust,
Acute Oncology Teams (AOT)

For patients

Timely access to expert cancer care wherever needed

AOS are crucial for cancer patients who present with oncological emergencies, such as neutropenic sepsis or metastatic spinal cord compression (MSCC). Delays result in serious detriment to the patient that has potential to be fatal.¹⁶

Similarly, patients diagnosed with cancer of unknown primary (CUP) – a significant proportion (57%¹⁷) of whom present as an emergency – often face problems relating to coordination, accountability and timeliness of care, and can end up being ‘bounced’ between MDTs.¹⁸ Senior oncology decision-makers are critical to providing treatment decisions and highlighting less common presentations of cancer and complications of cancer treatment.

Case studies

Preston AO Hot Clinic (AOHC)

- In 2019 640 patients were assessed in the AOHC with only 10% requiring admission.
- 85% of patients felt they avoided being seen by the GP or being admitted to hospital due to the availability of the AOHC.



The impact upon the patient journey and quality of life is notable; particularly where progressive symptomatic needs are able to be met rapidly whilst keeping the patient in their preferred place of care beside their families.

– Isle of Man AOS

Case studies

Velindre

- The unit's unique multidisciplinary approach leads to a reduction in length of stay, with the unit having an average four-hour stay.
- 61% of patients seen on the unit are discharged on the same day.
- The assessment unit and the service provide an opportunity for clinicians with an interest in AO to undertake leadership and development within AO.

Cancer helpline in Taunton

- From a patient about the helpline: *"Really excellent, the nurses are great on the phone ... it is a brilliant service. I can't fault it in any way."*
- Compared with the baseline audit pre-helpline, referrals to secondary care have reduced consistently from 26% to 12% and referrals to primary care from 33% to 8%. Additionally, via the helpline the nursing team has developed and/or supported pathways of care that reduce or avoid admission in the following instances: incidental finding of pulmonary embolism, ascitic drains, Multinational Association of Supportive Care in Cancer (MASCC)-scored febrile neutropenia, immunotherapy toxicity monitoring with steroid dosing adjustments.
- Telephone triage is an essential clinical tool to ensure that patients' symptoms are picked up early and intervention is tailored accordingly with follow-up.

Improved experience

AOS have been shown to reduce the length of hospital stays, freeing up valuable bed space,¹⁹ benefiting patients overall. AOS can also reduce admissions altogether by providing timely expert advice and patient safety netting, facilitating same-day discharge. It is a core component of ambulatory medicine services, allowing patients to receive essential care and advice without being admitted. Of additional benefit is agile accessibility through ongoing telephone or videoconferencing contact that relieves pressure from primary care and acute hospital settings.

Advancing technologies that automate triage, accommodate virtual consultations and allow for patient self-monitoring will further enhance the service offered to patients.

Joined-up care pathways

AOS ensure continuity and consistency of care, and improve pathway efficiency for patients. Without AOS, patients experience unnecessary delays in their diagnosis and treatment.²⁰ Evidence suggests that this lack of continuity and accountability has a negative impact on care for some of the most vulnerable groups of cancer patients.²¹ The collaborative atmosphere generated enables rapid access to specialised care and advice, with patient needs at the heart.

Case studies

Western Sussex

We had a number of patients with bone metastasis attend with an impending fracture (new diagnosis) and developed a pathway with the orthopaedic team (impending # pathway) to ensure the right imaging and prognosis were given to the orthopaedic team early so they could make better timely decisions on type of surgery and reduce the time that patients wait for investigations and hospital admission.

Local provision of care

Through AOS, cancer expertise can be offered outside the confines of specialist centres and oncology departments, enabling patients to access treatment at a location more convenient for them. Visiting oncology consultants through outreach AOS can enhance local provision of care for patients, help define appropriate local pathways within non-elective care and provide education to healthcare practitioners outside of cancer centres.



The toughest parts on the pathway can be those slips that require acute medicines intervention, whose staff are the frontline facing higher demands every day.

– Lancashire AOT

Reducing inequalities

We know that people in deprived areas generally present later and more often via emergency departments with complications arising from cancer.²² They have reduced access to clinical trials and often need more targeted support and expertise.²³ The increased integration of care into the community and primary care and the timely clinical care that AOS provide will benefit the more deprived patients.

Better supportive and end-of-life care

AOS support more clearly defined links with palliative care teams, allowing for earlier introduction of end-of-life care and supporting transition points. This optimises supportive therapies with less focus on giving intense systemic anti-cancer therapy (SACT) for negligible benefit and has been shown to improve both survival rates and quality of life.²⁴ An active dialogue between palliative care and AOS, particularly for inpatients, can enhance the clarity of treatment aims, gauge appropriateness of escalation plans and ensure patients and their medical teams receive the correct information on prognosis. In situations where time is limited, clear documentation and conversations with patients and relatives can reduce unnecessary investigations and facilitate discharge to the most appropriate settings.

Malignancy of unknown origin and cancer of unknown primary

Patients who present as an emergency with a new diagnosis of cancer may not have a clear identifiable primary tumour site; this is

referred to as malignancy of unknown origin (MUO) and termed cancer of unknown primary (CUP) if histological diagnosis is unhelpful. A majority of patients with MUO or CUP present via emergency pathways. A large proportion will have advanced disease and many have a poor prognosis. As there is no primary tumour identified, these patients often have no specialist team responsible for their care. As a consequence, AOS will often be involved with the episode of acute inpatient care.

AOS are skilled in advanced communication skills and ideally placed to advise on ceiling of care decisions, appropriateness of further investigations and support for the patient

and caregivers. In some cases the AO team may be fully responsible for the MUO/CUP service, and where this is not the case AOS can retain close links with MUO/CUP services and continue to liaise with other cancer MDTs and diagnostic pathways, smoothing the pathway for this group of patients.

For clinicians and oncology services



The AOHC takes a lot of stress away from the nurses on the chemotherapy unit.

– Preston AO Hot Clinic

Case studies

Southampton

Working within AOS provides junior doctors with opportunities to learn about a range of cancer types, scope to lead quality improvement projects and a strong foundation in management of AO presentations.

Northern Devon

Education and training have been a key feature of our service, and we provide weekly teaching sessions to emergency department and medical assessment unit (MAU) staff around oncological emergencies, including immuno-oncology (IO) toxicities. We have also implemented cancer link professionals in every area across the trust to increase knowledge of the disease process and potential oncological complications.

Shared learning and education

The growing prevalence of frailty and multimorbidity means that multiprofessional working is more important than ever. AOS are uniquely placed to bridge the gap between oncology and other medical specialties – sharing education and resources about cancer and associated treatments for those working across primary and secondary care.

Maximising oncology specialist expertise

Dedicated AOS led by a consultant with a special interest in AO work collaboratively with elective oncology care services to maximise collective expertise. This enables high-quality care provision for all patients.

Effective leadership

For AOS to be fully sustainable, innovative and agile, consultant oncology oversight and leadership is key. This will maximise efficiency of the MDT, embracing innovation and change, supporting their wellbeing and direction.

Safeguarding oncology training

With the advent of the new joint medical oncology and clinical oncology (MOCO) curriculum in August 2021, stipulated AO exposure and experience²⁵ will mean that trainees will be a core part of well-defined and integrated AOS, regardless of setting. This training requirement will provide structure to their programme, hopefully reducing ad hoc demands that may arise on other site-specific rotations.

Protected time for oncologists with an interest in AO

Clearly defined AOS and recognition of AO in job plans should empower clinicians with a particular interest in AO to focus their time and energy in this area. This would allow specific areas of expertise to develop and support research, and would enable data collection that will allow the service to develop, locally and nationally.

Enabling vital oncology research

While there is wealth of research opportunities out there, there is a paucity of acute cancer research, in part due to lack of oncology leadership. A national AO database would

help underpin essential research and a clinical trials portfolio, which will improve clinical services. This could also provide data that will influence policies on patient experiences, outcomes and resource efficiencies and increase understanding of the spectrum of oncology in acute settings.

Improved visibility, integration and communication

Serving to greatly improve general awareness of the complications of cancer and its treatments, AO services support a more integrated style of working, strengthening professional relationships, improving the visibility of oncology and enhancing communication with clinical areas such as palliative care, acute medicine, general medicine and primary care.

For wider healthcare

Influencing healthcare policy at a national level

AOS practitioners provide a unique insight into patient needs when they present as an emergency, either as a new presentation of cancer or with complications of disease/treatment. Specialists can help influence local, regional and national strategies²⁶ to improve cancer care and optimise associated pathways. Teams specifically dedicated to AO can provide audit data and patient experience surveys to feed into these discussions and influence tariff costs for the future.

This holds great potential for supporting community-based care, reducing the need for hospitalisation and allowing oncologists to develop new relationships within primary and community care structures.

Cost savings and improved efficiencies

AOS have been shown to reduce hospital stays and free up valuable bed space,²⁷ benefiting patients and enabling significant cost savings; one study reported that the implementation of AOS reduced length of stay to 3.1 days per AO episode, equating to cost savings of up to £2 million over a year.²⁸ Robust AOS also demonstrate evidence of a reduction in unnecessary tests and interventions (particularly at the end of life), fewer outpatient visits and streamlined pathways, all resulting in savings and efficiencies to the health service.



AOS are a well-established and integral team in the hospital; we complete a daily ward round to review cancer patients, helping to facilitate their discharges and reduce their length of stay in hospital.

– Northern Devon AOS

Case studies

St Helen's and Knowsley

The service model effectively links the cancer centre specialist teams to local acute services and acts as a single point of access for acute cancer care underpinned by local education and web-based AO protocols and policy. This ensures excellent two-way communication and timely expert care and facilitates early discharge and safety netting to the emergency department and acute medical service.

Clatterbridge

Prior to the introduction of the service, there had been an eightfold increase in IO admissions from 2016 to 2018. IO admission rates have fallen by 40% over the seven-month period the service has been in place compared with the preceding seven-month period (72 vs 120 admissions). Triage calls have fallen by 16.6% and face-to-face reviews have reduced by 9.6%. This is despite a 20% (290 vs 240 patients) increase in the number of patients commencing on immune checkpoint inhibitors (ICIs) in the same periods.

Case studies

Medway Trust

The following is an example of combining three pathways set up by the AOS team, facilitating rapid diagnosis and urgent treatment for a patient with a new cancer presentation.

Pathways

- Radiology alert to AOS on aggressive spinal lesions
- MSCC pathway
- MUO pathway.

Patient journey

- A 76-year-old patient was referred by her GP to the two-week wait upper gastrointestinal pathway because of persistent back pain radiating to the abdomen, fatigue and weight loss.
- She was seen on 7 February 2020 by the gastroenterology team.
- They arranged computed tomography (CT) scans that were performed on 29th February and were reported on 2 March.
- An alert was sent from the reporting radiologist to the AOS consultant as there was a T9-T10 aggressive spinal lytic lesion and no visceral disease differential diagnosis of multiple myeloma (MM) was set but case was managed by AOs on the MUO pathway.
- AOS arranged for the patient to be informed and to present at the hospital the same day.
- On arrival she had an MRI whole spine organised by AOS, confirming early cord compression, and she was started on steroids and pain relief. She had blood and urine tests including calcium, myeloma screen and clotting.
- She had severe back pain but neurologically she remained intact.
- The case was referred to the neurosurgical team at King's College Hospital with imaging linked; advice received was not for neurosurgical intervention at that point but to monitor neurological symptoms closely, and to gauge reaction to radiotherapy.
- A biopsy was organised by the AOS on 3 March (prior to RT treatment) and the case was discussed with the haematology team (for information on possible MM).
- The case was discussed with the radiotherapy department at Maidstone Hospital (referring to the clinical oncologist on the MUO pathway).
- Radiotherapy commenced on 4 March 2020.
- The case was discussed at the first available MUO/CUP MDT meeting on 5 March 2020.
- Biopsy results confirmed MM the following week and the case was referred to haematology, which commenced systemic treatment.

Meeting rising demand

AOS are in a position to provide fast and effective care for patients suffering from complications of their cancer or cancer treatment. If adequately resourced, AOS will: ease pressures on overstretched emergency care; through the outreach model, provide support for primary care and prevent admissions; and through the in-reach model, reduce demand on length of stay and minimise unnecessary tests. This ensures more effective use of NHS resources.

Data and research

The recommended structure and service model for AOS was updated with the publication of *Clinical Advice to Cancer Alliances for the Commissioning of Acute Oncology Services* in 2017.²⁹ This model included provision for a

national AOS minimum dataset, incorporated into the Cancer Outcomes and Services Dataset (v9) from 1 April 2020 onwards.³⁰

Greater oncology visibility

Improved visibility of oncology and cancer services through AOS would enable shared learning and potentially lead to opportunities for service development. Tertiary oncology is often viewed as isolated and out of touch – AOS could help to shift this perception by enabling interface work with both primary and secondary care. The interface with emergency presentation of cancer and the evolving rapid diagnostic services provides an important opportunity for oncology services to support early diagnosis initiatives. This will also increase the visibility of oncology and its influence, placing it at the forefront of the cancer pathway.

3. Future of training in acute oncology

As described, **AO is an evolving area of specialist practice that has developed in different ways and at different paces in different regions over the past decade.**

Training in AO has also been variably implemented, though it is being delivered in a more formal manner in many centres. **The current curriculum revisions in both clinical and medical oncology place AO competence as a high-level outcome.** It has been recognised that AO requires a repertoire of skills for effective delivery, and **trainees merely spending time ‘on call’ is not considered adequate to equip the workforce.**

Development of AOS requires a coherent approach to defining the purpose and breadth of the services, formal training of the workforce to lead and deliver them and investment to ensure comprehensive UK coverage.

Annually, there are between 100 and 150 new trainees across clinical and medical oncology, all of whom will need to develop the required skills to both participate in and lead AOS. The new medical and clinical oncology curriculum (2020) includes a shared capability in practice 8 (CiP 8) that requires trainees to develop the ability to deliver the AO take, manage oncological emergencies and work within and manage the AOS team as appropriate to their stage of training.

These requirements are further elaborated on in a table of specific presentations and conditions within the curriculum, but also pertain to leadership, management and education skills that trainees will develop during their time in AO. As with all of the CiPs, the capabilities expected are appropriately prescriptive but can be delivered in a range of contexts, and the structure of the AO service in which this training is delivered is flexible.

Training in AO is already being delivered in many centres. **A recent survey by the ACP trainees subcommittee of medical oncology trainees found that respondents were spending an average of four hours a week training in AO,** with the majority of them rating their training in AO as either good or excellent. However, this is not uniform across the country and some areas will need to develop their AO provision further.

From a practical point of view, to provide training in AO that meets the competencies outlined in the latest curriculum (2020), trainees need to be exposed to the following:

- Designated inclusion in an AO team within a cancer centre
- Designated inclusion in an AO team in a hospital that has unselected emergency medical admissions
- Evidence of trainees in-reaching into acute admissions units and medical wards
- Evidence of trainees having ongoing exposure to patients experiencing complications of cancer and anticancer treatment

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- Experience in common AO scenarios including MSCC and neutropenic sepsis
 - Review, management and treatment of patients with new diagnosis of cancer admitted as an emergency
 - Satisfactory completion of miniCEX/ CBDs (alongside a new ACAT, Acute Care Assessment Tool) to demonstrate learning
 - Regular involvement in activities to improve service quality such as clinical audits, mortality and morbidity reviews, serious incident reviews and relevant research activity.
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Recommendations and commitments

It is our vision that, regardless of the exact model or configuration of the specific service, effective AOS in the future will have the following characteristics:

- **Patient-focused** regardless of their location or point of access to the service
- **Strong clinical leadership** of multiprofessional teams, with distinct roles and responsibilities for all members
- Oncologists trained and **working within a recognised subspecialty** with the time and resources for this area of practice
- **Strong working relationships** between professionals in AO, emergency medicine, acute medicine, palliative care and community medicine
- **Clearly defined clinical pathways** for common AO presentations crossing traditional care boundaries
- Systems to enable **comprehensive data collection** in place
- An active **clinical trials portfolio**
- Ongoing **service evaluation and development** utilising patient feedback/patient-reported outcomes.

Several measures, as follows, are required to establish effective and clearly defined AOS throughout the four nations and to bring about the benefits outlined above.

For policy makers

1. Those delivering AOS should be recognised as working in a substantive specialist area and be supported as such.
2. There should be defined national accountability frameworks for AOS, to enable, for example, consistent quality assurance.
3. Oncologists with a special interest in AO should have formalised roles and responsibilities (as defined in appendix), with dedicated time to lead on service development included in their job plans. This should accommodate training and support for oncology trainees and the wider healthcare community.
4. Consultants with a special interest in AO should be offered leadership and management training to support service development.
5. Non-AO oncologists have an obligation to support delivery of AOS (even if they do not deliver it themselves). AOS should be part of departmental governance processes, facilitating regular reviews of outcomes and critical events.

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6. AO leaders need access to organisational structures that can influence and oversee change across all primary, secondary and tertiary organisations linked to unscheduled cancer care.
 7. National and departmental collection of AOS data via MDTs and similar should be equivalent to other established site-specific specialties.
 8. To be fully effective, accountable and innovative, AO leaders need to be supported in national-level collaboration with education, research and data collection.
- For practitioners trying to optimise their AOS**
- AO leaders need to engage with local operational managers and governance as a means of driving investment and improvement of AOS.
 - AO leaders need to increase visibility of themselves and their service, both within oncology and with wider healthcare colleagues, to establish the importance and impact of the patient benefits provided by AOS.
 - On behalf of their non-AO colleagues, AO leaders are responsible as the outward face of acute clinical cancer care and should integrate the service into regular routine feedback at departmental level and to site-specific MDTs.
 - The future delivery of training and clinical exposure of AO in all contexts is dependent upon AO clinicians and therefore AO leaders should cooperate with oncology training programme directors (TPDs) and local oncology clinical leads to ensure relevant training is delivered and assessed by expert AO clinicians, at both cancer centre and cancer unit/DGH levels.
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Appendix

Acute oncology lead clinician roles and responsibilities

There should be a dedicated named lead for AO for each hospital trust with an emergency department (and for stand-alone cancer centres). The named lead oncologist for AO should provide one supporting professional activity (SPA) per week (minimum) to support the lead role, separate to direct clinical care (DCC) activity.

Roles and responsibilities of the AO clinical lead include the following.

- Provide regular routine feedback at departmental level and to site-specific MDTs. AO leaders, on behalf of their non-AO oncology colleagues, are responsible for the outward face of acute clinical cancer care.
- Ensure timely and equitable access to specialist oncology review and advice for all cancer patients who present with a cancer-related emergency, through the development of evidence-based management protocols and pathways to ensure safe, high-quality and effective treatment for emergency cancer care.
- Act as the key link between the hospital AO group and the organisation's operational/performance committees and relevant key operational departments to ensure that the AO strategy is progressed and any areas of risk are identified through the correct governance structure.
- Develop the AOS considering the patient demographics, the geography and the transport availability of the region and the configuration of local service provision by working closely with key stakeholders in their locality.
- Work closely with regional cancer networks/alliances (in England) and the wider healthcare partnerships (for example, integrated care systems) to ensure consistency of management, protocols and service design across the region and adherence to national policies and guidance. This may be via attendance at regional AO clinical groups.
- Ensure robust data collection for the AOS and submission to Cancer Outcomes and Service Dataset (COSD), and monitor progress regarding compliance against cancer measures, including Quality Standard for Imaging QSI measures (if applicable), ensuring any remedial action plans are implemented.
- Lead on (or nominate) local MSCC services.
- Have clearly defined links to the local MUO/CUP service if this is not provided by the AOS team.
- Act as clinical research lead on (or nominate) AO research.
- Support training and education of the AO team and support local teaching programmes in emergency cancer care to staff in the wider clinical team involved in the care of AO patients.
- Support the training and clinical exposure of future AO clinicians at both cancer centre and cancer unit/DGH levels.

Recommendations for consultants involved in the delivery of AOS

1. Consultants should have time in their job plans allocated for AO sessions. The exact length of time and number of programmed activities (PAs) will be dictated by the number of admissions at that hospital but should be a minimum of two PAs in AO DCC per acute trust (with cross cover), delivered by a minimum of two named oncologists over five days. AO DCCs should be dedicated sessions without other commitments and 24/7 remote advice should be provided.
 2. Early specialist input for oncology patients should be provided to enable safe and high-quality care, including prompt management, early discharge and onward referrals to other specialist teams.
 3. The acute oncology service consultant should be available for face-to-face and remote inpatient reviews for AO (and MUO/CUP if applicable) within 24 hours of request from a member of the AO nursing team.
 4. For those patients admitted directly via oncology (such as via ambulatory care units or dedicated oncology assessment areas), it is recommended that this complies with the Society of Acute Medicine clinical quality indicators for acute medicine units (AMUs) and the NICE quality standard QS174.
- a. All patients should be seen by a competent clinical decision-maker, within four hours of arrival at the AMU, who should perform a full assessment and instigate an appropriate management plan.
 - b. All patients should be reviewed by the admitting consultant physician or an appropriate specialty consultant physician within 14 hours of arrival at the AMU.
- Furthermore, QS174 states that during daytime working hours a review should normally occur within a maximum of six hours after the time of admission.
5. Consultants should play a key role in developing the service and monitoring its impact, using agreed key metrics and outcome measures, by supporting the clinical lead and participating in local clinical and operational meetings.
 6. Consultants should support AO education and training within the service and across the wider healthcare system.
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