Acute Oncology and Case Presentations

Ali Hodge, Advanced Nurse Practitioner
Dr David Watkins, Consultant Medical Oncologist,
The Royal Marsden
Acute Oncology

- A relatively new entity
  - Developed as a service since ~2010
  - On the basis of a number of reports/measures
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For better, for worse?

A review of the care of patients who died within 30 days of receiving systemic anti-cancer therapy
Room for improvement

- Decisions to treat (poor PS, futile treatment)
- Process of care
  - Errors in prescribing, dispensing and administration of chemotherapy
- Communication
  - Patient information, medical records
- Chemotherapy toxicity
  - Assessment and treatment of complications
  - Management of neutropenic sepsis
- End of life decisions
Time to review by oncologist

- 85% of patients were admitted to hospital within last 30 days of life
- Cancer patients were often managed independently by acute specialities without oncology input
The Role of Acute Oncology

Improving the care experience and outcomes of cancer patients through:

• **Improved support systems for patients receiving cancer treatment**
• **Greater oncology presence in secondary care**
  - to support the provision of acute care for patients with complications from their cancer or its treatment
  - working with; A&E, medicine, surgery, haematology, palliative care etc
  - assisting in the care of patients with suspected cancer
  - facilitating; training, education and service development
Acute Oncology at The Royal Marsden Hospital NHS Foundation Trust (RMH)

- TRM is categorised within Group 2 of the ‘Hospital Groupings for Acute Oncology Measures’ as defined within the NCATs published measures for Acute Oncology (2011):
  - ‘Hospitals with specialist oncology beds and OP chemotherapy but without either an A&E department or acute medical beds used as in group 1’
- TRM has two sites; Chelsea and Sutton. Both have inpatient beds and accept non-elective admissions → provision of acute oncology across both sites is essential.
- The Acute Oncology Service (AOS) is coordinated on both sites by the Clinical Site Practitioner teams, who are responsible for triage and assessment of all emergency admissions.
- Specific clinical protocols are in use for a range of Acute Oncology presentations.
Clinical Assessment Unit (CAU)

- The Clinical Assessment Unit based at the Chelsea site provides a facility for urgent assessment and treatment.

- A similar model of care on the Sutton site will be rolled out this summer as part of hospital’s forthcoming redevelopment.
The Royal Marsden Acute Oncology Service

**Chelsea:** Dr Alicia Okines, Dr Nadia Yousaf, CAU SHO, Ali Hodge & Melissa Balcorta ANP AOS  
**Sutton:** Site-specific teams, Ali Hodge (ANP AOS)  
**ESH:** Dr J Bhosle & Dr D Watkins, Julia Lowes & Dawn Brewer  
**CUH:** Dr J Noble & Dr S Stannway, Dr Nicola Beech (ANP)  
**Kingston:** Dr K Aitken

Administrator (Graham Miller) informed of all acute admissions to ESH, CUH and Kingston and RMH Chelsea and alerts relevant Consultant/CNS

AOS administrator (in-hours)

CSP

Clinical Site Practitioner Chelsea: 022 (Ext 1914) Sutton: 017 (Ext 1318)
Telephone call from patient to own team

Phone advice

- Early OPD review
- Urgent CAU attendance for assessment +/- admission
- In uncertainty cases escalated to AOS consultant

Patient triaged by CAU nurse, cannulated, bloods taken, iv fluids and Neutropenic sepsis Abx commenced if indicated

24-hour consultant plan documented (by SHO) on EPR on proforma
The Royal Marsden

Acute Admissions Flowchart: Sutton (+ Chelsea out of hours)

- Telephone call from patient to 022 (FR) or 017 (Sutton)
- For patients not known to RMH, CSP facilitates new EPR number to allow recording of the advice given

- Telephone advice

  - Dial 999 or directly to A&E
  - Early OPD review
  - Urgent hospital attendance for assessment/admission
  - In uncertainty cases escalated to on-call SpR

  Call will be escalated to the relevant Consultant on call as needed
Urgent admissions pathway in Sutton (and Chelsea out of hours):

1. Patient admitted and assessed by SHO
2. Admitting Dr informs SpR on-call of new admissions and confirms initial management plan
   - SpR Discusses management with Consultant* within 24 hours of admission
   - Complex issues (e.g., ITU, PPs, trial patients): Attempt to contact treating consultant, otherwise speak to consultant on-call

*At present, call treating consultant 1st, call on-call if unable to reach

24-hour plan documented (by SpR/SHO) on EPR
Documenting on EPR out-of-hours telephone triage

Triage log sheet
(+/– verbal handover)
completed by the 022/017

Relevant consultant team notified by email next working day

Review and appropriate follow-up by relevant Team
Patients potentially suitable for admission to The Royal Marsden

- All known TRM patients under a TRM Consultant with an acute presentations as a complication of their disease or treatment
- Priority given to patients with
  - complications of immunotherapy
  - patients on clinical trial treatments
  - those requiring chemotherapy/specialist surgery
- New patients with MSCC for urgent RT within the LCA who are not already within a hospital bed but require admission
Patients NOT suitable for admission to RMH

- Trauma
- AKI requiring dialysis
- Acute cardiovascular conditions e.g. acute MI/CHF/CVA
- Emergency presentations: status epilepticus, life-threatening haemorrhage
- Children and young patients where there is an agreed shared care pathway with local paediatric unit or designated TYA hospitals
- Significant distance (>1hr drive) to the Royal Marsden and require urgent medical attention

- NB Sutton (no ITU on site/acute surgery)- patients requiring Level 3 monitoring therefore not suitable either
### Patient Transfer Proforma

**The Royal Marsden**

**Acute Oncology Service**
- Switchboard: 0208 642 6011
- Email: rmb-tr.northmthrurope@nhs.net
- Fax: 0207 811 8435
- Admin Tel: 0208 642 6011 Ext 4702

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**FAX COVER SHEET**

**To:** Select or enter relevant team...

**Destination Fax No:** Select or enter destination fax details...

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**From:**

**Number of Pages:** including this cover sheet

**Date:**

**Information:**
- THIS FAX CONTAINS CLINICAL INFORMATION RELATING TO A PATIENT RECEIVING CARE UNDER THE ROYAL MARSDEN HOSPITAL.
- THIS PATIENT HAS BEEN ADVISED TO ATTEND THE RECEIVING HOSPITAL FOR URGENT ASSESSMENT.
- FOR ADVICE ON MANAGEMENT PLEASE CONTACT THE ROYAL MARSDEN HOSPITAL OR YOUR LOCAL ACUTE ONCOLOGY SERVICE.

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<table>
<thead>
<tr>
<th>Patient Details</th>
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<tbody>
<tr>
<td>Name:</td>
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<td>DOB:</td>
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<tr>
<td>RMH consultant:</td>
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<td>RMH No:</td>
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<tr>
<th>Current treatment summary</th>
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<tr>
<td>Oncology diagnosis:</td>
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<tr>
<td>Recent chemotherapy regimen &amp; dates:</td>
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<tr>
<td>Other significant co-morbidity:</td>
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| Current presentation & recommendations |

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**For further advice on management please contact:**
- Out of hours: via RMH switchboard – 0208 642 6011
- Working hours contact for the RMH team: RMH ext no ___

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**THIS FAX CONTAINS CONFIDENTIAL PATIENT INFORMATION FOR THE URGENT ATTENTION OF THE CLINICAL TEAM**
Case 1: 74 year old female

- Mar 16: Advanced endometrial carcinoma
  Peritoneal disease involvement
  PMH: NIDDM, BP

- 5 Apr 16: Commenced #1 carboplatin & paclitaxel
Case 1: 74 year old female

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  Peritoneal disease involvement
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- 5 Apr 16: Commenced #1 carboplatin & paclitaxel

- 14 Apr 16: 6.30pm – phoned TRM triage Reporting; 24 hrs reduced energy & sore mouth
Case 1: 74 year old female - What would you advise?

A. Bed rest and suck ice cubes
B. To dial 999 and ask for an ambulance
C. To check their temperature
D. To obtain some mouthwash and call back tomorrow if no better
Case 1: 74 year old female

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Case 1: 74 year old female

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  Peritoneal disease involvement
  PMH: NIDDM, BP

- 5 Apr 16: Commenced #1 carboplatin & paclitaxel

- 14 Apr 16: 6.30pm – phoned TRM triage
  Reporting; 24 hrs reduced energy & sore mouth
  Temperature 38.5

  > Advised to attended Epsom A&E

  - 7.15 - Identified as septic cancer pt by front desk
    Triaged – temp 38.6, pulse 124, Sats 93%

  - 8.00 Seen by Dr / IV antibiotics given

  - 9.15 Confirmed neutropenic sepsis WCC 1.7, Nt 0.4
Neutropenic Sepsis

Most frequently occurring life threatening treatment related side effect that occurs in cancer patients
The Size of the Problem

- 60% increase in chemotherapy delivered over past 4 years (NCAG 2009)
- Emergency admissions among people with cancer have increased - 50% in the last 8 years (Richards 2009)
Neutropenic Sepsis - Who’s at risk?

- Patients who have received chemotherapy within the last 6 weeks
- Patients with a haematological malignancy

All Chemotherapy?

- Cetuximab: anti-EGFR antibody
- Rituximab: anti-CD20 antibody
- FOLFOX (5-FU + oxaliplatin)
- Irinotecan
- Capecitabine
- Docetaxel
- FEC (5-FU + epirubicin + cyclophosphamide)
- Erlotinib
- CHOP

Assume all patients are at risk unless informed otherwise

GI oncology

Breast

Lung

High grade lymphoma
How to manage neutropenic sepsis

Prevent it...

Appropriate chemotherapy regimen/dose for patient
- Prophylactic GCSF use if high risk
- Patient education (appropriate precautions)

Early action

Patient education – alert card
- Robust telephone triage system

Robust immediate management / antibiotics <1hr
Any Questions?

The ROYAL MARSDEN
NHS Foundation Trust

CHEMOTHERAPY ALERT CARD

Contact your hospital team URGENTLY if you feel unwell or develop:

- temperature greater than 38°C (100°F)
- shivering or chills
- shortness of breath or breathing difficulties
- new onset diarrhoea
- gum/nose bleeds or unusual bruising
- mouth ulcers that stop you eating or drinking
- persistent vomiting

Show this card if you attend A&E.
Contact details for your team are on the reverse.

Immediate A&E/hospital attendance may be required.
Common Acute Oncology Presentations

Complications from treatment of cancer
• Neutropenic sepsis
• Uncontrolled diarrhoea
• Uncontrolled nausea and vomiting

Complications from malignant disease
• Spinal cord compression (MSCC)
• Jaundice – secondary to biliary obstruction
• Bowel obstruction
• Seizures – brain metastasis & primary brain tumours
• Hypercalcaemia
• Pleural effusion
• Lymphangitis carcinomatosa

• Superior vena caval obstruction
Case 2: 76 year old female

**Jan 14:** Advanced breast cancer with bone metastasis
Rx - hormone therapy and bisphosphonates
PMH: Nil

**1 Apr 16:** Attended A&E with lower back pain.
Discharged with naproxen.

**6 Apr 16:** Attends GP with ongoing back pain now struggling to manage stairs.
Case 2: 76 year old female - what would you advise?

A. Request lumbar X-ray & review in 48 hours

B. Urgent referral to MSK service

C. Contact TRM for advice on management

D. Refer to hospital for admission and MRI spine

- Request lumbar X-ray & review in 48 hours: 68%
- Urgent referral to MSK service: 26%
- Contact TRM for advice: 5%
- Refer to hospital for admission and MRI spine: 0%
Case 2: 76 year old female

What would you advise?

1. Request lumbar X-ray & review in 48 hours
2. Urgent referral to MSK service
3. Contact TRM for advice on management (correct)
4. Refer to hospital for admission and MRI spine (correct)
Case 2: 76 year old female

- Jan 14: Advanced breast cancer with bone metastasis
- Rx - hormone therapy and bisphosphonates
- PMH: Nil

- 1 Apr 16: Attended A&E with low back pain. Discharged with naproxen.

- 6 Apr 16: Attends GP with ongoing back pain now struggling to manage stairs.

- GP contacts Royal Marsden to urgently refer pt for MRI with signs of MSCC. Cord compression identified on MRI at L1.
- Spinal surgery at St Georges with some neurological recovery
Cord compression

A devastating diagnosis if missed.....
Malignant Metastatic Spinal Cord Compression

Who’s at risk:
- Patients with known bone metastases or with a cancer which spread to the bone.
- Myeloma
- All tumours can eventually spread to the bone
- Primary cord tumours are rare
Presenting Symptoms

- Back pain – often the first symptom (but not always present), may be radicular or referred.
  - Progressive or severe lumbar spinal pain
  - Spinal pain aggravated by straining
  - Spinal pain preventing sleep

- Reduced mobility – lower limb weakness
  - Tingling and /or numbness in extremities
  - Difficulty in passing urine – Are they in retention?
  - Bowel disturbance/incontinence – is this new!!
Investigation

- If neurological signs - admission, analgesia, **Urgent MRI < 24 hours.**

- CT Thorax, abdomen and pelvis in those with no known malignancy to identify the primary site.

- PSA and myeloma screen if suspected in patients not known to have cancer.

- If pain is the only symptom with no neurology - analgesia and MRI within 1 week. Provide alert symptoms
Treatment & Prognosis:

- Better outcomes with surgery than RT:
  - 84% of pts walking post surgery + RT v 57% with RT alone in a randomised trial (p=0.001)
- Candidates for neurosurgery:
  • ideally a single area of compression, prognosis >3/12 and paraplegic <48 hours
- If ambulatory prior to RT, mobility maintained in 80-90%
- Re-discuss with neurosurgeons if neurological deterioration during RT
- Few pts unable to walk at start of RT will regain ambulatory status (2-6%)
- Paraplegic life expectancy poor
MSCC pathway for known TRM patients:

Symptoms suggestive of spinal metastases (with neurological symptoms) or signs/primary imaging suggestive of MSCC

Chelsea: Contact AOS team, Sutton: Arrange urgent assessment/admission

Comprehensive neurology assessment and detailed medical history. Note previous RT

Symptoms **suggestive** of spinal metastases (with neurological symptoms) or signs/primary imaging suggestive of MSCC

Urgent MRI <24 hours and sooner if clinical suspicion of imminent paralysis or proposed surgery

Start dexamethasone 16mg (2 x 8mg doses IV/O daily) with PPI cover

Discuss with consultant whether referral for surgery is appropriate

Contact MSCC Co-ordinator at St George’s on Bleep 6027 via switchboard (020 8672 1255) for advice*

Complete the MSCC referral form and email to St George’s

Transfer MRI/CT images to MSCC Centre via IEP urgently for review if patient not at St George’s

Contact the Site-specific Clinical Oncology Registrar

Complete the MSCC referral form and email to St George’s for audit purposes

Email MSCC Referral Form to MSCC Centre to stgh-tr.MSCC@nhs.net

ALSO E-mail or fax a copy of the form to the patient’s Cancer Centre (Royal Marsden Hospital) rmh-tr.MSCC@nhs.net (Fax0207 811 8436)

*Out of hours, contact neurosurgical SpR on call
How to manage metastatic cord compression

Prevent it...
- Identification of patients with bone metastasis
- Patient education
- Bisphosphonates / denosumab – delay progression

Prompt assessment – Time is Critical
- Patient education – alert card
- Urgent clinical assessment and MRI spine

Multidisciplinary management
- Review of case with neurosurgical and radiotherapy teams – aim to treat within 24 hours of diagnosis
Consider Spinal Cord Compression

Early intervention can prevent disability and paralysis

**RED FLAGS**
- Known or suspected cancer
- Progressive back pain
  - Band like chest pain
  - Shooting nerve pain
  - Nocturnal pain
- Sensory impairment
- Bladder or bowel dysfunction
- Reduced mobility

**IMMEDIATE MANAGEMENT**
- Clinical assessment
  - Neurology – inc power, sensation, anal tone
  - Functional status (PS), co-morbidities
  - Malignant disease status
- Clinical suspicion of cord compression
  - Dexamethasone 16mg stat +PPI cover
  - Urgent MRI – whole spine
  - Follow MSCC pathway – see intranet

*If suspected lymphoma hold dexamethasone and obtain immediate oncology/hematology advice*

Please ensure at risk patients are provided with an MSCC alert card
Any Questions?

Metastatic Spinal Cord Compression Alert Card

Secondary cancer in the spine can be painful and if not treated, can lead to spinal cord compression and damage.

You must URGENTLY telephone the contact numbers below if you experience any symptoms of spinal cord compression (see reverse of this card).

Mon - Fri (9am – 5pm):

At all other times:
3. Malignant Bowel Obstruction

- Mechanical or functional obstruction of the progress of food and fluids through the gastrointestinal tract
- Compression of the bowel lumen develops slowly and often remains partial/sub-acute.
- Symptoms: nausea, vomiting, and abdominal pain.
- Symptoms occur in different combinations and intensity depending on the site of obstruction, and tend to progressively worsen
- Benign causes e.g. hernia/adhesions also possible in cancer patients
Prevalence & prognosis

- A common complication of abdominal or pelvic cancers (e.g., colon, ovary, cervix, gastric):
  - 4-25% in ovarian and colorectal cancer
  - <42% of patients with advanced ovarian cancer → major cause of death.
- small bowel > large bowel (61% vs. 33%); both obstructed in >20% due to ovarian cancer.
- mean time from diagnosis of cancer to onset of inoperable malignant bowel obstruction was 13.1 ± 6.4 months (range 6-24 months) in one study.
- prognosis in pre-treated patients is poor; survival weeks-months.
- parenteral nutrition does not affect this prognosis.
Case 3: 59 year old Female

Dec 13: presented with Rectal Carcinoma – commenced neo-adjuvant chemoradiation

PMH: anal polyp removal as teenager

Apr 14: Anterior resection – showed tumour progression commenced on further chemotherapy

Mar 15: Confirmed metastatic (Lung) – Left thoracotomy

July 15: Admitted with SBO = surgical intervention

Jan 16: relapsed (Hepatic, skeletal & nodes) - commenced FOLFIRI chemotherapy with bisphosphonate

Apr 16: SBO – treated conservatively – Cetuximab added

Jun 16: subacute SBO – treated conservatively and low residue diet added

Jul 16: SBO & ?MSCC – MRI showed no compression. SBO being managed conservatively.
Investigations and Management

- Patients with very advanced disease/short prognosis should usually be treated medically:
  - NBM, NG tube & iv fluids
  - Anti-emetics (avoiding prokinetics e.g. metoclopramide)
  - Analgesia
  - Antisecretory - Octreotide
- Patients with good performance status and localized tumour may benefit from surgery:
  - Intraoperative mortality 30-40%
  - Complication rates 27-90%.
  - Improved surgical techniques/peri-operative care have not influenced patient outcome
- Stents/chemo used in specific cases
4. Immunotherapy toxicity

- AI toxicities specific to immune-activating drugs e.g. Ipilimumab, nivolumab, pembrolizumab
  - Colitis (diarrhoea, abdo pain, bloody stool)
  - Hepatitis
  - Pneumonitis
  - Hypophysitis
  - Rash
  - Neuromuscular syndromes eg Myaesthenia Gravis, Guillain Barre syndrome
- High index of suspicion and low threshold for admission
- Discuss any symptoms in a patient on immunotherapy with a consultant (AOS at Chelsea)
- Need prompt treatment; usually high dose iv steroids
Key thoughts when assessing a cancer patient:

• Has this patient received chemotherapy within the last 6 weeks or do they have a haematological malignancy?
  • Consider the risk of neutropenic sepsis.

• Could they have spinal cord compression?

• Could hypercalcaemia explain their symptoms?

• Should you refer to A&E & / or their oncology service?
Any Questions?

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CHEMOTHERAPY ALERT CARD

- temperature greater than 38°C (100°F)
- shivering or chills
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