

1. Introduction and who Guideline applies to

1.1 This Standard Operating Procedure describes the patient pathway and associated processes for patients with Lymphoma who are to be treated using an ambulatory service delivery model, as opposed to the customary inpatient model. This is to be used in conjunction with the Overarching Policy for Ambulatory Care pathways and the Standard Operating Policies referenced in the Policy.

1.2 Patients receiving LEAM autologous transplants are overseen by the Bone Marrow Transplant team. The individuals transplant protocol should also be referred to alongside this guideline.

2. Recommendations, Standards and Procedural Statements

2.1 Referral mechanisms

Suitable patients will be identified at the Transplant Planning meeting held on Tuesday afternoons. The Transplant Consultants have a role in informing other members of the team of patients deemed suitable to follow the ambulatory route. The Ambulatory Care Specialist Nurses have a similar role in communicating decisions from the Transplant Planning meeting.

2.2 Patient screening

2.2.1 Patient selection criteria:

- a) ECOG performance status 0-1
- b) Patient must not be on IV antimicrobial therapy
- c) 24 hour carer support including availability to drive patient to hospital in the event of an emergency (In the event of no carer being available but the patient is still considered suitable and wishes to follow the ambulatory model, a risk assessment will be undertaken and considered by the Multi Disciplinary Team)
- d) Patient must be fluent in written and spoken English
- e) Patient must be living within 30 minutes' drive of the hospital

- f) Satisfactory completion of the Patient education tutorial (see appendix 1)
- g) Patient in CRI
- h) Ability to monitor own temperature and wellbeing
- i) Motivated to participate in the pathway

2.2.2 If the patient lives greater than 30 minutes from the hospital but it is agreed as appropriate by the consultant haematologist and MDT the patient can still use the ambulatory pathway- risk assessment is in place). An acute hospital (with an A&E and a Haematology department) within 30 minutes of the patient's home address will be identified and notified of the patient receiving Ambulatory treatment.

2.2.3 The following will be performed within 1 week prior to commencement of chemotherapy:

- a) FBC, U&E, Extended LFT, Bone, CRP, LDH and any other tests deemed appropriate for specific regimens
- b) Insertion of appropriate venous access or checking of current Hickman/PICC
- c) Consent for LEAM conditioning and autologous transplant

2.3 Patient education

2.3.1 Patient and their carer must undertake an education programme delivered by an ambulatory care specialist nurse or senior nurse in Hambleton suite prior to the treatment regime commencing

2.3.2 An agreement to confirm the patient and their carer understand their responsibility regarding risks and actions will be signed at the time of the education programme. See appendix 1.

2.4 Criteria for admission and emergency processes

2.4.1 Absolute criteria:

- a) Mucositis of sufficient severity to justify escalation of analgesia
- b) Hypotension unresponsive to fluid challenge
- c) Haemodynamic instability
- d) Marked tachycardia
- e) Hypoxia less than 93% on room air or raised respiratory rate
- f) Coagulopathy with associated bleeding
- g) Temperature $\leq 36.0^{\circ}\text{C}$ or $\geq 37.5^{\circ}\text{C}$ or rigors.

- h) Uncontrolled nausea and/or vomiting
- i) Patient failure to thrive
- j) Rising CRP
- k) Clinicians request

2.4.2 Ambulatory patients in whom sepsis/infection is suspected or in whom a temperature of $\leq 36.0^{\circ}\text{C}$ or $\geq 37.5^{\circ}\text{C}$ is recorded must be reviewed by the Haematology team within 1 hour on Hambleton Suite or OAU.

2.4.3 Exceptions to this can be made if it is deemed clinically appropriate for the patient to remain at home. **This must be a triumvirate decision** agreed between the Consultant, Senior Nurse and the patient.

2.4.4 If a patient has their treatment interrupted for any reason please contact the transplant consultant on call.

2.5 Timetable of Care

The following sequence of events will form the ambulatory service model:

Day and where to report	Interventions
Day -7: Thursday Attend Hambleton Suite	<ul style="list-style-type: none"> • Assessment using UKONS assessment form and EWS • PICC line inserted (if not already in place) • Medical review and routine bloods • Weight • Attachment of CADD pump- delay first dose to deliver D-6 8am • Lomustine – tablet chemotherapy dispensed to be taken in the evening. • Temperature am and pm • Regular medication as prescribed • Supply patient with a cytotoxic spillage kit and cytotoxic waste bin.
Day -6: Friday Attend Hambleton Suite	<ul style="list-style-type: none"> • Assessment using UKONS assessment form and EWS • Medical review and routine bloods

	<ul style="list-style-type: none"> • 2 hours iv infusion of Etoposide • AraC delivered via the CADD pump at 8am and 8pm over 30 mins • Temperature am and pm, regular medication as prescribed • PICC Line Care
Day -5: Saturday Attend Osborne Day Care	<ul style="list-style-type: none"> • Assessment using UKONS assessment form and EWS • 2 hours iv infusion of Etoposide • AraC delivered via the CADD pump at 8am and 8pm over 30 mins • Temperature am and pm, regular medication as prescribed • PICC line Care
Day -4: Sunday Attend Hambleton Suite	<ul style="list-style-type: none"> • Assessment using UKONS assessment form and EWS • 2 hours iv infusion of Etoposide • AraC delivered via the CADD pump at 8am and 8pm over 30 mins • Temperature am and pm, regular medication as prescribed • PICC Line Care
Day -3: Monday Attend Hambleton Suite	<ul style="list-style-type: none"> • Assessment using UKONS assessment form and EWS • Medical review and routine bloods • Weight • 2 hours iv infusion of Etoposide • AraC delivered via the CADD pump at 8am and 8pm over 30 mins • Temperature am and pm, regular medication as prescribed • PICC line care
Day -2: Tuesday Attend Hambleton Suite	<ul style="list-style-type: none"> • Assessment using UKONS assessment form and EWS • Removal of CADD pump • Ice lollies for 30 minutes prior to melphalan,

	<p>during infusion and 30 minutes afterwards.</p> <ul style="list-style-type: none"> • 1 hour pre hydration iv fluids • Infusion of melphalan over 30 minutes • 2 hours post hydration IV fluids • Temperature am and pm, regular medication as prescribed • PICC line care
<p>Day -1: Wednesday Rest at home day</p>	<ul style="list-style-type: none"> • Temperature am and pm, regular medication as prescribed.
<p>Day 0: Thursday Attend Hambleton Suite</p>	<ul style="list-style-type: none"> • Assessment using UKONS assessment form and EWS • Routine bloods and medical review, discussion about on-going management • Weight • Infusion of stem cells • Temperature am and pm, regular medication as prescribed • PICC line care
<p>Day +1 Onwards</p>	<ul style="list-style-type: none"> • Patient to remain an outpatient until neutropenic or other clinical decision made to admit. • Temperature am and pm, regular medication as prescribed

2.6 Routine Bloods

2.6.1 Unless clinically indicated otherwise patient should have the following blood tests taken:

- On each visit: Full blood count, Urea and Electrolytes, Bone, CRP
- Twice a week: Liver function Tests
- Twice a week if neutropenic: Galactomannan and Beta D glucan
- Any additional test which is requested by the medical team.

2.7 LEAM Specifics

- 2.7.1 LEAM protocol must start on a Thursday within working hours
- 2.7.2 Advise patient not to eat for 2 hours before and after Lomustine
- 2.7.3 Medications to be prescribed:

Medication	Dose	Day
Ondansetron	8mg BD	-7 to 0
Dexamethasone	4mg BD	-2 to +2
Allopurinol	300mg OD	-7 to +1
Metoclopramide	10mg TDS	-7 continue
Caphosol	One pair QDS	-7 continue
Fluconazole	200mg OD	-7 continue
Aciclovir	800mg BD	-7 continue
Septrin	960mg BD	-7 to -2
Aprepitant	125mg OD	-2 only
Aprepitant	80mg OD	-1 and 0
Levofloxacin	500mg OD	+1 continue
Prednisolone 0.5% eye drops	1 drop TDS	-6 to Day +2

- 2.7.4 Post-transplant medications:

Medication
Folic acid 5mg OD
Aciclovir 800mg BD
Co-trimoxazole 980mg BD Monday, Wednesday and Fridays
Fluconazole 200mg OD until neutrophils >1
Penicillin V if high risk (HD)

2.8 CADD Pump Specifics

- a) Chemotherapy alert card to be carried by patient
- b) Purple 'Chemotherapy Infusing' stickers to be applied to lumen of PICC that CADD pump attached to.
- c) Successful drug delivery should be routinely checked at each patient visit
- d) If pump has problems at any time – the patient will be advised to telephone the Haematology Helpline. Ambulatory Care nurses or Hambleton Suite staff will be available to manage issues Mon-Fri 9-5. Out of these hours BMTU staff will be available to assist with queries.

- e) Contact Consultant on call if pump has to be stopped for any reason
- f) Patient has pump troubleshooting guide at home to deal with minor problems
- g) Each clinical area has a CADD folder which contains a CADD troubleshooting guide for clinical staff.
- h) Spillage kit and cytotoxic waste bin to be supplied to patient.

3. Education and Training

3.1 All nursing staff working in connection with patients being treated on an ambulatory care pathway will require assessment and training to care for these patients. This will also include use of the CADD Solis pump.

3.2 All chemotherapy trained staff on Ward 41, Ward 40, Ward 39, BMTU, Hambleton Suite, Osborne Day Care and Osborne Assessment Unit will be trained in the use of CADD pumps. Awareness education will be also be given to non-chemotherapy trained staff including those who hold the haematology helpline phone so they have an understanding of the pump.

4. Monitoring and Audit Criteria

Key Performance Indicator	Method of Assessment	Frequency	Lead

5. Legal Liability Guideline Statement

The Trust will generally assume vicarious liability for the acts of its staff, including those on honorary contract. However, it is incumbent on staff to ensure that they:

- Have undergone any suitable training identified as necessary under the terms of this policy or otherwise.
- Have been fully authorised by their line manager and their CMG to undertake the activity.
- Fully comply with the terms of any relevant Trust policies and/or procedures at all times.

- Only depart from any relevant Trust guidelines providing always that such departure is confined to the specific needs of individual circumstances. In healthcare delivery such departure shall only be undertaken where, in the judgement of the responsible clinician it is fully appropriate and justifiable - such decision to be fully recorded in the patient's notes.

Key Words

Ambulatory Care

Pathway

Day Care

CADD Solis

LEAM


Autologous

Transplant

CONTACT AND REVIEW DETAILS	
Guideline Lead (Name and Title) Anika Sirel, Natasha Woolgar	Executive Lead
Details of Changes made during review:	

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Appendix 1- Patient Education

University Hospitals of Leicester 
NHS Trust

Caring at its best

Name:
Date of Birth:
Hospital No:
NHS No:
Consultant:

Education programme for patient and carer involved in Ambulatory care pathway for Haematological conditions

In order for you to be accepted onto the Ambulatory care pathway you and your carer will need to attend an educational session. At the end of the educational session both you and your carer will need to confirm your attendance so a record can be made in your notes.

Topics to be discussed at the educational session:

1. Patient diary
2. Alert card for Haematology patients
3. Mouth care with an emphasis on Mucositis
4. Skin-tunnelled catheter care
5. How to take a temperature and record the results
6. Signs to watch out for:
 - Persistent nausea and vomiting
 - Poor fluid and food intake
 - Diarrhoea and constipation
 - Shivering
 - Shortness of breath
 - Swollen arm, ankles and legs
8. Problems associated with low platelets and haemoglobin
9. Taking medication and recording
10. What to do if you (the patient) are feeling unwell or need advice
11. Neutropenic diet
12. How to avoid infection
13. Personal care and managing the pump
14. Sex
15. Regime specific side effects – Diarrhoea, mucositis (ice lollies), nausea and vomiting.
16. Emergency Phone information

Please sign below to say you have attended this educational session and that you are willing to take part in the ambulatory care programme.

Patient's name:

Patient signature: Date:

Carer's name:

Carer's signature:Date:

Healthcare Professional's name:

Healthcare Professional's signature: Date: