



Hull University Teaching Hospitals and North Lincolnshire NHS Trusts
Haematology Multidisciplinary Team Guideline and Pathway

Acute Myeloid Leukaemia

1 BACKGROUND

The Hull and North Lincolnshire Haematology Multidisciplinary team manages patients with haematological malignancies on three sites, Diana Princess of Wales Hospital Grimsby, the Queens Centre for Haematology and Oncology at Castle Hill Hospital Hull University Teaching Hospitals NHS Trust and Scunthorpe Hospital.

Levels of service provided in these organisations are as defined in the NICE guidance “Haematological Cancers: improving outcomes NG47” 25th May 2016.

Low-to-intermediate intensity chemotherapy is delivered in Grimsby, the Queens Centre Castle Hill Hospital and Scunthorpe Hospital.

High-intensity chemotherapy and autologous stem cell transplantation is delivered at the Queens Centre, Castle Hill Hospital.

Allogeneic stem cell transplantation is delivered in the regional transplant centres in Leeds, Nottingham and Sheffield.

Azacytidine, low-dose Ara-C and hydroxycarbimide can be delivered in sites offering low-to intermediate intensity chemotherapy.

High intensity chemotherapy including, but not limited to, DA, FLAG, FLAG-Ida, intermediate and high dose cytarabine will only be delivered in the high intensity chemotherapy unit in Queens Centre, Castle Hill Hospital.

All cases of Acute Promyelocytic Leukaemia will be managed in the high intensity unit in Queens Centre, Castle Hill Hospital.

2 POLICY / PROCEDURE / GUIDELINE DETAIL

The Hull and North Lincolnshire MDT has decided that patients with Acute Myeloid Leukaemia (AML) will be managed in line with the BCSH AML guidelines 2006 (Milligan et al. 2006) and the European LeukemiaNet (ELN) Guidelines on the diagnosis and management of AML, 2017 (Dohner et al. 2017).

The local management of AML will also take account of the following NICE pathways and guidance.

NICE [Myeloid Leukaemia](https://pathways.nice.org.uk/). <https://pathways.nice.org.uk/>

BCSH Guidelines for the diagnosis and management of acute myeloid leukaemia in pregnancy (Ali et al. 2015).

[Azacitidine for the treatment of myelodysplastic syndromes, chronic myelomonocytic leukaemia and acute myeloid leukaemia](#). Technology appraisal guidance [TA218] Published date: 23 March 2011.

[Azacitidine for treating acute myeloid leukaemia with more than 30% bone marrow blasts](#). Technology appraisal guidance [TA399] Published date: July 2016.

1. Diagnosis

All patients under investigation for possible AML should have their diagnosis confirmed by sending peripheral blood, bone marrow and cytogenetics to HMDS, St James Hospital Leeds. This may be done in either low-intensity or high units. Alternatively patients with possible AML who may be fit for intensive chemotherapy can be referred directly to the high intensity unit, Queens Centre, Castle Hill for further investigation.

2. Investigations

Other investigations which may be helpful at time of diagnosis or during course of disease:-

Coagulation screen with fibrinogen.

Biochemical profile.

Hepatitis B, C and HIV.

3. Treatment

First-line

Treatment should be offered within a clinical trial wherever possible.

Outside of clinical trials patients who are assessed as fit should be offered an intensive chemotherapy regimen such as DA, FLAG, FLAG-Ida or others as recommended by the MDT.

All patients with suspected Acute Promyelocytic Leukaemia (APML) should be commenced on ATRA prior to confirmation of diagnosis by HMDS. Further therapy for APML should include ATRA in combination with an anthracycline or arsenic trioxide as advised by the MDT.

Patients identified as having high-risk disease at presentation should be referred for consideration of allogeneic transplantation at the earliest opportunity.

Acute Myeloid Leukaemia Pathway

Maximum timeline in days

-1

0

7-14

Quality Criteria

Secondary Care Low intensity refer to High intensity
Abnormal blood count and suspicion

Direct admission to Ward
Trust phones GP directly with abnormal blood result & suggests that patient is admitted to ward

Primary Care Assessment
Abnormal blood count/ suspicion of acute leukaemia

Referral
Urgent referral from GP with a suspicion of leukaemia faxed. Received by the Trust and contacted with 24 hours and given appointment within 7 days

First seen in clinic/ or day case unit. Or ward review/ admission
(Referred from low intensity unit within 24-48 hours to high intensity unit)

Bone marrow undertaken

Non Malignant Diagnosis- Further management as appropriate

Confirmation of Diagnosis
Management decision at **Specialist MDT** or Specialist MDT approved method for urgent treatment

Consultation and Management Plan

OPD- Pre-chemotherapy Patient information given

First Treatment
Remission induction in high intensity unit as defined by the MDT
Elderly patients with AML consider non intensive low dose/ supportive care.

MDT to monitor bone marrow response

Further treatment
AML- -monitor in OPD by blood count
-consideration of transplant
APML- bone marrow residual disease monitoring for 3 years (consider also for core-binding factor AML t(8;21) and inv (16))

Follow-up
-Annual follow up
-Following up according to patient / consultant discretion

Survivorship/ end of life
-Late effect review
-End of life pathway if appropriate
-Survivorship

Relapse
Refer back to MDT

Within 31 days

Haematology Specialist Nurse support and patient assessment offered at all appropriate stages of the pathway and Palliative Care Pathways followed

Cancer waiting times monitored throughout the pathway

Criteria 1
Patient & carer experience of the pathway

Criteria 2
100% patients discussed at an MDT with a treatment plan decision

Criteria 3
Audit number of days taken to refer from Level 1 to Level 2/3 care units

AML guideline Hull

ER

3 PROCESS FOR MONITORING COMPLIANCE

Compliance will be audited within the MDT audit programme.

4 REFERENCES

- Hull and North Lincolnshire Haematology MDT operational policy September 2017.
- Haematological cancers: improving outcomes. NICE guideline [NG47]
Published date: May 2016
- Guidelines on the management of acute myeloid leukaemia in adults. British Committee for Standards in Haematology: D. W. Milligan, D. Grimwade, J. O. Cullis, L. Bond, D. Swirsky, C. Craddock, J. Kell, J. Homewood, K. Campbell, S. McGinley, K. Wheatley and G. Jackson
British Society for Haematology, London. British Journal of Haematology
Volume 135, Issue 4, Version of Record online: 10 OCT 2006
- Döhner, H., Estey, E., Grimwade, D., Amadori, S., Appelbaum, F. R., Büchner, T., Dombret, H., Ebert, B. L., Fenaux, P., Larson, R. A., Levine, R. L., Lo-Coco, F., Naoe, T., Niederwieser, D., Ossenkoppele, G. J., Sanz, M., Sierra, J., Tallman, M. S., Tien, H., Wei, A. H., Löwenberg, B., & Bloomfield, C. D. (2017). Diagnosis and management of AML in adults: 2017 ELN recommendations from an international expert panel. Blood, 129(4), 424-447.
- S Ali, GL Jones, DJ Culligan, PJ Marsden, N Russell, ND Embleton, British journal of haematology 170 (4), 487-495 16 2015. Guidelines for the diagnosis and management of acute myeloid leukaemia in pregnancy.

Document Control			
Reference No:		First published:	27/04/2018
Version:	1.0	Current Version Published:	27/04/2018
Lead Director:	Dr R Patmore	Review Date:	26/04/2021
Document Managed by Name:	Haematology MDT lead	Ratification Committee:	Hull and North Lincs Haematology MDT
Document Managed by Title:	Dr S Ali	Date EIA Completed:	
Version Control			
Date	Version	Author	Revision description
27/04/2018	1.0	Ali	New draft.

18/11/2019	2	Green	Change in document controller.
------------	---	-------	--------------------------------