Optimal cancer care pathway for people with acute myeloid leukaemia

Quick reference guide

Please note that not all patients will follow every step of this pathway. The pathway covers acute myeloid leukaemia (AML) in adults including acute promyelocytic leukaemia (APML).

Support: Assess supportive care needs at every step of the pathway and refer to appropriate health professionals or organisations.

Step 1

Prevention and early detection

Risk factors: Most people have no identifiable risk factors. It is rare for AML to run in families. Known risk factors include:

- prior chemotherapy or radiation therapy
- known previous haematological disorder with a risk of leukaemic transformation
- known predisposing genetic disorders with a risk of leukaemic presentation
- tobacco smoking
- obesity
- environmental exposure to industrial chemicals such as benzene.

Early detection: There are no formal screening programs for AML.

Step 2

Presentation, initial investigations and referral

Signs and symptoms: Symptoms at presentation are usually non-specific and may include fatigue, anaemia, severe sepsis, unresolving infection/fever, abnormal bleeding/bruising, persistent sore gums, unexplained bone pain and unintentional weight loss. The following signs and symptoms require consultation as a medical emergency:

- patients with signs of severe sepsis
- patients with severe anaemia
- patients with major laboratory abnormalities
- patients with a very high white cell count displaying signs of hyperviscosity
- patients with uncontrolled bleeding or severe coagulation abnormalities.

General/primary practitioner investigations:

Full blood count and film should be done immediately.

Referral: A new diagnosis of AML (confirmed or suspected) requires immediate discussion with a clinical haematologist or haematology registrar. The patient should be referred to a clinical haematology unit with adequate experience in managing acute leukaemia and with links to a multidisciplinary team.

Patients with clinical features of severe sepsis or severe bleeding should be referred to an appropriate facility without necessarily waiting for results of laboratory tests.

Communication – lead clinician to[1]:

- explain to the patient/carer who they are being referred to and why
- support the patient and carer while waiting for specialist appointments.

Step 3

Diagnosis, staging and treatment planning

Diagnosis: Confirmed through bone marrow aspirate (BMA) and trephine biopsy.

Classification and prognosis (staging): Every patient being considered for AML therapy should have samples taken for cytogenetics, flow cytometry and molecular diagnostics.

Input from an experienced infectious diseases clinician is beneficial to evaluate patients for the presence of occult infections.

Key results should be available within 72 hours of presentation.

In high-risk disease, early allogeneic stem cell transplant (allo-SCT) must be considered, and therefore, a donor search should be carried out as early as possible.

Treatment planning: Because of the urgency of treatment, every clinical haematology unit should have predefined peer-reviewed treatment models of care that have been endorsed by the multidisciplinary team. Assessment of the premorbid state is essential.

Immediate treatment is often required before a full multidisciplinary meeting ratifies details of the ongoing management plan (which should include full details of the response assessment).

Research and clinical trials: Participation in clinical trials, registries and tissue banking is considered a standard of care for patients with AML.

Communication – lead clinician to:

- review fertility issues with the patient, where appropriate
- discuss a timeframe for diagnosis and treatment with the patient/carer
- explain the role of the multidisciplinary team in treatment planning and ongoing care
- provide appropriate information or refer to support services as required.

1 Lead clinician – the clinician who is responsible for managing patient care.
The lead clinician may change over time depending on the stage of the care pathway and where care is being provided.

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Support: Assess supportive care needs at every step of the pathway and refer to appropriate health professionals or organisations.

Step 4

Treatment:

Establish intent of treatment:

- intensive
- non-intensive
- symptom palliation including active supportive care.

Treatment options to induce remission

Patients fit for intensive chemotherapy: Induction chemotherapy should only be started when all material needed for diagnostic testing has been satisfactorily sampled (except where emergency therapy may be required). Consolidation therapy is always indicated in therapy that is planned with curative intent once patients have reached complete remission.

Patients not fit for intensive chemotherapy: Low-dose chemotherapy or palliative/supportive care without chemotherapy to control symptoms.

Allo-SCT: Should be considered for selected patients (refer to the AML optimal care pathway).

Radiation therapy: May be used for symptom control and occasionally for treatment of the disease. Total body irradiation may be indicated as part of conditioning for allo-SCT.

Acute promyelotic leukaemia

Rapid initiation of APL-specific therapy is essential. Treating units must have protocols for intensive supportive care. Molecular monitoring after treatment to guide further therapy is required.

Refractory disease

- Carefully selected patients may be offered allo-SCT.
- Palliative systemic treatment is often a reasonable option.
- Clinical trials and experimental therapy should be considered.

Palliative care: Early referral can improve quality of life and in some cases survival. Referral should be based on need, not prognosis.

Communication – lead clinician to:

- discuss treatment options with the patient/carer including the intent of treatment as well as risks and benefits
- discuss advance care planning with the patient/carer where appropriate
- discuss the treatment plan with the patient's general practitioner.

More information at the European LeukaemiaNET webpage at <http://www.ncbi.nlm.nih.gov/pubmed/19880497>.

Step 5

Care after initial treatment and recovery

Cancer survivors should be provided with the following to guide care after initial treatment.

Treatment summary (provide a copy to the patient/carer and general practitioner) outlining:

- diagnostic tests performed and results
- disease characteristics
- type and date of treatment(s)
- interventions and treatment plans from other health professionals
- supportive care services provided
- contact information for key care providers.

Follow-up care plan (provide a copy to the patient/carer and general practitioner) outlining:

- medical follow-up required (tests, ongoing surveillance)
- care plans for managing late effects of treatment
- a process for rapid re-entry to medical services for suspected recurrence.

Communication – lead clinician to:

- explain the treatment summary and follow-up care plan to the patient/carer
- inform the patient/carer about secondary prevention and healthy living
- discuss the follow-up care plan with the patient's general practitioner.

Step 6

Managing residual or recurrent disease

Detection: Relapse occurs in more than 50 per cent of patients. Most cases are identified through routine follow-up or by the patient presenting with symptoms.

Treatment: Where possible, refer the patient to the original multidisciplinary team. Treatment will depend on the extent of disease, previous management and patient preferences.

Palliative care: Early referral can improve quality of life and in some cases survival. Referral should be based on need, not prognosis.

Communication – lead clinician to:

- explain the treatment intent, likely outcomes and side effects to the patient/carer.

Step 7

End-of-life care

Palliative care: Ensure that an advance care plan is in place.

Communication – lead clinician to:

- be open about the prognosis and discuss palliative care options with the patient/carer
- establish transition plans to ensure the patient's needs and goals are addressed in the appropriate environment.

Visit www.cancerpathways.org.au for consumer friendly guides. Visit www.cancer.org.au/OCP for the full clinical version and instructions on how to import these guides into your GP software.