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Haematological cancers: improving outcomes (update)

NICE guideline: short version

Draft for consultation November 2015

This guideline covers:

- Integrated diagnostic reporting for the diagnosis of haematological cancer in adults (over 24 years), young people (16 to 24 years) and children (under 16 years).
- The staffing and facilities (levels of care) needed to treat adults (over 24 years) and young people (16 to 24 years) with haematological cancer.

Who is it for?

- All healthcare professionals that provide diagnostic and treatment services to adults, young people and children with suspected or diagnosed haematological cancer, including clinical and scientific staff in secondary care.
- Commissioners of diagnostic and treatment services for haematological cancer.
- People with suspected or diagnosed haematological cancers, their families and carers.

This version of the guideline contains the recommendations and context. The Guideline Committee's discussion and the evidence reviews are in the [full guideline](#). The supporting information and evidence for the 2016 recommendations is contained in the 2016 addendum. Evidence for the 2003 recommendations is in the full version of the 2003 guideline.

Other information about how the guideline was developed is on the [project page](#). This includes the scope, and details of the Committee and any declarations of interest.

We have updated or added new recommendations on the diagnosis and evaluation and the organisation of specialist services of people with haematological cancers

You are invited to comment on the new and updated recommendations in this guideline. These are marked as:

- **[new 2016]** if the evidence has been reviewed and the recommendation has been added or updated, or
- **[2016]** if the evidence has been reviewed but no change has been made to the recommended action.

You are also invited to comment on recommendations that NICE proposes to delete from the 2003 guideline. These can be found in '[Recommendations to be deleted](#)'.

The NICE cancer service guidance on improving outcomes in haematological cancers (2003) was developed using very different methods to the current NICE guideline development process. The 2003 guidance presented recommendations in a paragraph format. The Guideline Committee highlighted some sections of the original guidance as still relevant to clinical practice, and other sections as out of date. Recommendations that are no longer relevant have been deleted, and the reasons for this are given in '[Recommendations to be deleted](#)'. Recommendations that are still relevant to clinical practice have been transferred as individual recommendations labelled **[2003]**, and the evidence for these has not been reviewed. Any amendments made to recommendations labelled **[2003, amended 2016]** are explained in '[Amended recommendation wording \(change to meaning\)](#)' and '[Changes to recommendation wording for clarification only \(no change to meaning\)](#)'. This is an exception to NICE's standard guideline development process and has been done so that relevant recommendations in the chapter not being

updated could be carried across into the addendum.

We have not updated recommendations shaded in grey so can only accept comments on these where stakeholders feel that the meaning has changed. In some cases, we have made minor wording changes for clarification, and these changes are highlighted in yellow. These recommendations are marked as:

- **[2003, amended 2016]** if the evidence has not been updated and reviewed since 2003 but the wording of the recommendation has been updated to reflect current practice and terminology.
- **[2003]** if the evidence has not been reviewed.

See [Update information](#) for a full explanation of what is being updated.

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1 Recommendations

People have the right to be involved in discussions and make informed decisions about their care, as described in [Your care](#).

[Making decisions using NICE guidelines](#) explains how we use words to show the strength of our recommendations, and has information about safeguarding, consent and prescribing medicines (including 'off-label' use).

2 **1.1 Integrated diagnostic reporting**

3 The recommendations in this section apply to services for adults (over 24
4 years), young people (16 to 24 years) and children (under 16 years).

5 1.1.1 All specialist integrated haematological malignancy diagnostic
6 services (SIHMDS) should meet the following criteria, which are
7 most likely to be met if the component parts of the service are
8 located at a single site:

- 9 • have clearly defined organisational structures
- 10 • have a formally appointed SIHMDS director who is responsible
11 for the operation of the service, including the design of the
12 diagnostic pathway, resource use and reporting standards
- 13 • have a single quality management system
- 14 • be formally accredited as a SIHMDS by a recognised
15 independent organisation
- 16 • managed by a single trust/organisation
- 17 • have a business plan in place to coordinate the introduction of
18 new diagnostic and therapeutic technologies
- 19 • have a central reception point for all specimens
- 20 • have a full range of protocols covering specimen handling,
21 diagnostic pathways, compilation of integrated reports and
22 relationships with users

- 1 • ensure that their location, organisation, infrastructure and culture
- 2 allow effective day to day and ad-hoc communication for rapid
- 3 resolution of diagnostic uncertainty and accurate diagnosis
- 4 • have clear and reliable systems for communicating with relevant
- 5 healthcare professionals outside the service.
- 6 • have a predefined diagnostic pathway that is followed for each
- 7 specimen type or clinical problem. The pathway should ensure
- 8 that:
- 9 – the most appropriate diagnostic platforms are selected for a
- 10 particular clinical situation to avoid unnecessary duplication.
- 11 – tests for each specimen are used to provide maximum levels
- 12 of internal cross-validation, using the current World Health
- 13 Organization (WHO) principle of multi-parameter disease
- 14 definitions.
- 15 • produce integrated reports that include all information needed for
- 16 initial management, and share these with the multi-disciplinary
- 17 team.
- 18 • report diagnoses sub-typed by the current WHO classification
- 19 • have an IT system that can compile integrated reports and
- 20 communicate with users. **[new 2016]**

21 1.1.2 The SIHMDS director should be responsible for the overall quality
22 management system, including:

- 23 • laboratory processes and the quality of diagnostic reporting
- 24 • ongoing assessment of staff competencies
- 25 • training provision
- 26 • communication within the SIHMDS and with relevant healthcare
- 27 professionals
- 28 • audit and quality assurance
- 29 • research and development **[new 2016]**

30 1.1.3 Unless blood film and/or bone marrow aspirate assessment is
31 needed so that urgent treatment can begin, local diagnostic

1 laboratories should send all specimens directly to a SIHMDS
2 without any local diagnostic workup:

- 3 • as soon as a haematological malignancy is suspected
- 4 • during active investigation of a suspected haematological
5 malignancy.
- 6 • If patients with an established or previous malignancy have
7 suspected relapse or disease progression **[new 2016]**

8 1.1.4 SIHMDS should be able to release individual reports before the
9 integrated report is produced, if there is an urgent clinical need.
10 **[new 2016]**

11 1.1.5 SIHMDS should be responsible for specimens that are sent to
12 external labs and should integrate the results into the relevant
13 report (unless there are exceptional arrangements in place for
14 clinical trials). **[new 2016]**

15 **Disease monitoring**

16 1.1.6 When flow cytometry, molecular diagnostics or cytogenetics are
17 needed for disease monitoring, local diagnostic laboratories should
18 send all relevant specimens directly to a SIHMDS without any local
19 diagnostic workup. **[new 2016]**

20 **1.2 *Staffing and facilities (levels of care) for adults and*** 21 ***young people who are having intensive non-*** 22 ***transplant chemotherapy***

23 In this guideline, ambulatory care is a planned care system in which patients
24 at risk of prolonged neutropenia are based at home or other specified
25 accommodation. There should be specific safeguards to minimise the risk
26 from potentially life-threatening complications of chemotherapy.

27 The recommendations in this section apply to young people (16–24 years)
28 and adults (over 24 years) with haematological malignancies who are:

- 1 • receiving intensive (non-transplant) chemotherapy for induction or re-
2 induction of remission, or consolidation, and
3 • at risk of more than 7 days of neutropenia of 0.5×10^9 /litre or lower (see
4 [table 1](#)).

5 This includes young people and adults having treatment for:

- 6 • acute myeloid leukaemia (including acute promyelocytic leukaemia)
7 • acute lymphoblastic leukaemia/lymphoblastic lymphoma
8 • high-risk/hypoplastic myelodysplastic syndrome
9 • Burkitt lymphoma
10 • bone marrow failure caused by other haematological malignancy, such as
11 plasma cell leukaemia.

12 These recommendations do not apply to people with relapsed or refractory
13 lymphoma who are having salvage chemotherapy regimens likely to result in
14 fewer than 7 days of neutropenia of 0.5×10^9 /litre or lower.

15 For guidance on staffing and facilities for children with cancer see the NICE
16 cancer service guidance on [improving outcomes in children and young people
17 with cancer](#).

18 **Centre size**

19 1.2.1 Specialist haematology centres should provide intensive (non-
20 transplant) chemotherapy for induction or re-induction of remission
21 to a minimum of 10 patients per year who have new or relapsed
22 haematological malignancies and are at risk of more than 7 days of
23 neutropenia of 0.5×10^9 /litre or lower. **[new 2016]**

24 **Facilities**

25 ***Isolation facilities***

26 1.2.2 Inpatient isolation facilities for patients who have haematological
27 malignancies and are at risk of more than 7 days of neutropenia of
28 0.5×10^9 /litre or lower should consist of a single-occupancy room
29 with its own bathroom. **[new 2016]**

- 1 1.2.3 Consider installing clean-air systems into isolation facilities for
2 patients who have haematological malignancies and are at risk of
3 more than 7 days of neutropenia of 0.5×10^9 /litre or lower. **[new**
4 **2016]**

5 ***Other facilities***

- 6 1.2.4 Ensure that there is provision for direct admission to the ward or
7 unit. **[2016]**

- 8 1.2.5 Ensure that there are specific beds available in a single dedicated
9 ward within the hospital with the capacity to treat the planned
10 volumes of patients. **[2016]**

- 11 1.2.6 Ensure that there is a designated area for out-patient care that
12 reasonably protects the patient from transmission of infectious
13 agents, and provides, as necessary, for patient isolation, long
14 duration intravenous infusions, multiple medications, and/or blood
15 component transfusions. **[2016]**

- 16 1.2.7 Ensure that there are full haematology and blood transfusion
17 laboratories on site. Ensure that there is rapid availability of blood
18 counts and blood products including products such as CMV
19 seronegative and gamma-irradiated blood components. **[2016]**

- 20 1.2.8 Ensure that there are on-site facilities for emergency cross-
21 sectional imaging. **[2016]**

- 22 1.2.9 Ensure that cytotoxic drug reconstitution is centralised or organised
23 at the pharmacy. **[2016]**

- 24 1.2.10 Central venous catheter insertion should be performed by an
25 experienced specialist. **[2016]**

- 26 1.2.11 Ensure that there is on-site access to bronchoscopy, intensive care
27 and support for patients with renal failure. **[2016]**

28 ***Ambulatory care***

- 1 1.2.12 Consider ambulatory care for patients who have haematological
2 malignancies that are in remission and who are at risk of more than
3 7 days of neutropenia of 0.5×10^9 /litre or lower. **[new 2016]**
- 4 1.2.13 Standard operating procedures for all aspects of an ambulatory
5 care programme should be clearly defined and include the
6 following:
- 7 • local protocols for patient eligibility, selection and consent
 - 8 • procedures for patient monitoring
 - 9 • access to a dedicated 24-hour advice line staffed by specifically
10 trained haematology practitioners
 - 11 • clear pathways for rapid hospital assessment in the event of
12 neutropenic sepsis or other chemotherapy-related complications
13 or toxicities
 - 14 • clear pathways for re-admission to specialist haematology
15 centres
 - 16 • written and oral information for patients and their family
17 members or carers
 - 18 • audit and evaluation of outcomes. **[new 2016]**
- 19 1.2.14 Take into account the following when assessing patients to see if
20 ambulatory care is suitable:
- 21 • patient preference
 - 22 • comorbidities
 - 23 • distance and travel times to treatment in case of neutropenic
24 sepsis and other toxicities (see the NICE guideline on
25 [neutropenic sepsis](#))
 - 26 • the patient's or carer's understanding of the safety requirements
27 of ambulatory care and their individual treatment plan
 - 28 • access to and mode of transport
 - 29 • accommodation and communication facilities
 - 30 • carer support. **[new 2016]**

1 ***Clinical policies and audit***

2 1.2.15 Specialist haematology centres should ensure that there are written
3 policies for all clinical procedures. **[2016]**

4 1.2.16 Specialist haematology centres should ensure that there is
5 participation in audit of process and outcome. **[2016]**

6 ***Staffing***

7 1.2.17 Specialist haematology centres should have consultant-level
8 specialist medical staff available 24 hours a day. This level of
9 service demands at least three consultants, all full members of a
10 single haematology multidisciplinary team (MDT) and providing
11 inpatient care at a single site. **[2016]**

12 1.2.18 Cover in specialist haematology centres should be provided by
13 specialty trainees and specialty doctors who are:

- 14
- 15 • haematologists or oncologists
 - 16 • involved in providing care to the patients being looked after by
17 the centre
 - 18 • familiar with and formally instructed in the unit protocols. **[2016]**

19 1.2.19 There should be enough nurses in specialist haematology centres
20 to provide care for the patients, based on the severity of their
21 clinical status. **[2016]**

22 1.2.20 Specialist haematology centres for patients with neutropenic sepsis
23 should have the same level of nursing staff as that in a high-
24 dependency unit. **[2016]**

25 1.2.21 There should be at least 1 trained specialist nurse on the ward in
26 the specialist haematology centre at all times, and they should be
27 able to deal with indwelling venous catheters, recognise early
28 symptoms of infection, and respond to potential crisis situations.
[2016]

1 1.2.22 Specialist haematology centres should have access to consultant-
2 level microbiological advice at all times. There should be access to
3 specialist laboratory facilities for diagnosing fungal or other
4 opportunistic pathogens. **[2016]**

5 1.2.23 Specialist haematology centres should have access to a consultant
6 clinical oncologist for consultation, although radiotherapy facilities
7 do not need to be on site. **[2016]**

8 1.2.24 Specialist haematology centres should have access to on-site
9 advice from a specialist haematology pharmacist. **[2016]**

10 1.2.25 Specialist haematology centres should have dedicated clinical and
11 administrative staff to support patient entry into local and nationally
12 approved clinical trials and other prospective studies. **[2016]**

13 **1.3 Multidisciplinary teams**

14 The following recommendations were published in chapter 4 of the original
15 improving outcomes in haematological cancers guidance (2003). The
16 evidence for these recommendations has not been reviewed as part of this
17 update but have been included in this section as they are still relevant to
18 staffing and facilities (levels of care) for adults (over 24 years) and young
19 people (16–24 years) with haematological cancer.

20 1.3.1 Clinical services for patients with haematological cancers should be
21 delivered by multi-disciplinary haemato-oncology teams. **[2003]**

22 1.3.2 Haemato-oncology MDTs should serve a population of at least
23 500,000 people. **[2003]**

24 1.3.3 Every patient with any form of haematological cancer (as defined
25 by current World Health Organization [WHO] criteria) should be
26 cared for by a haemato-oncology MDT. **[2003, amended 2016]**

27 1.3.4 All patients should have their care discussed in formal MDT
28 meetings attended by members involved in the diagnosis,

1 treatment, or care of that particular patient, and all the clinicians in
2 the MDT should regularly treat patients with the particular forms of
3 haematological cancer with which that MDT deals. [2003,
4 amended 2016]

5 1.3.5 These MDTs should be responsible not only for initial
6 recommendations about what treatment should be offered, but also
7 for delivery of treatment and long-term support for patients. [2003,
8 amended 2016]

9 1.3.6 Individual clinicians should be responsible for discussing the MDT's
10 recommendations with their patients, who should have the
11 opportunity to be informed of the outcome of MDT meetings. [2003]

12 1.3.7 Clinicians who are not members of the MDTs should refer any
13 patient with suspected or previously diagnosed haematological
14 cancer to an appropriate haemato-oncology MDT. [2003, amended
15 2016]

16 1.3.8 Written referral policies should be disseminated both within
17 hospitals (particularly to departments such as gastroenterology,
18 dermatology, rheumatology and medicine for the elderly) and to
19 primary care teams, to promote prompt and appropriate referral.
20 [2003]

21 **Core members**

22 1.3.9 Each haemato-oncology MDT should include sufficient core
23 members for the following people to be present in person or
24 remotely (for example via video conferencing) at every meeting:

- 25 • Haemato-oncologists (either haematologists or some medical
26 oncologists): at least two who specialise in each tumour type
27 being discussed at that meeting (e.g. leukaemia or lymphoma).
28 At least one from each hospital site contributing to the MDT

- 1 • Haematopathologist: at least one haematopathologist from the
2 SIHMDS should be present; to provide the diagnostic
3 information
4 • Nurses: at least one clinical nurse specialist, also ward sisters
5 from hospitals which provide intensive chemotherapy
6 • Palliative care specialist: at least one palliative care specialist
7 (doctor or nurse) who liaises with specialists from other sites. If,
8 because of staff shortages, a palliative care specialist cannot
9 regularly attend MDT meetings, the MDT should be able to
10 demonstrate that it reviews patients regularly with such a
11 specialist
12 • Support staff: staff to organise team meetings and provide
13 secretarial support. **[2003, amended 2016]**

14 1.3.10 Teams established to manage patients with lymphoma should
15 include the following additional core members, who should be fully
16 and regularly involved in MDT discussions:

- 17 • Clinical oncologist: at least one;
18 • Radiologist: at least one, who liaises with radiologists at other
19 sites. **[2003]**

20 1.3.11 Teams responsible for managing patients with myeloma should
21 include at least one radiologist who liaises with radiologists at other
22 sites and is fully and regularly involved in MDT discussions. **Teams**
23 **that care for patients with myeloma should have rapid access to**
24 **oncologists for palliative radiotherapy, although it is not necessary**
25 **for clinical oncologists to regularly attend team meetings. [2003,**
26 **amended 2016]**

27 ***Extended MDT members***

28 1.3.12 **The MDT should include the following extended team members.**
29 They do not have to be present at every MDT meeting;

- 1 • Clinical member of the transplant team to which patients could
- 2 be referred
- 3 • Microbiologist (especially for patients with leukaemia)
- 4 • Pharmacist
- 5 • Vascular access specialist
- 6 • Registered dietitian
- 7 • Orthopaedic surgeon (myeloma MDT)
- 8 • Clinical oncologist (myeloma MDT and leukaemia MDT;
- 9 provision of cranial radiotherapy for patients with acute
- 10 lymphoblastic leukaemia (ALL) is an important role for a clinical
- 11 oncologist). **[2003, amended 2016]**

12 ***Other specialists***

13 1.3.13 MDTs should have access to the following specialists:

- 14 • Dermatologist
- 15 • Gastroenterologist
- 16 • Ear, Nose and Throat (ENT) surgeon
- 17 • Interventional radiologist
- 18 • Renal physician. **[2003, amended 2016]**

19 1.3.14 All haemato-oncology MDTs should have access to support staff,

20 including:

- 21 • Allied health professionals including rehabilitation specialists
- 22 • Liaison psychiatrist and/or clinical psychologist
- 23 • Social worker
- 24 • Bereavement counsellor
- 25 • Support for patients and carers. **[2003, amended 2016]**

26 1.3.15 A clinical nurse specialist should be the initial point of contact for

27 patients who feel they need help in coping with their disease, its

28 treatment or consequences. This nurse should be able to arrange

29 re-admission, clinical review, or meetings between patients and

30 support staff such as those listed above. Networking between

1 nurses with different types of expertise should be encouraged.

2 **[2003]**

3 ***Responsibilities of haemato-oncology MDTs***

4 1.3.16 Haemato-oncology MDTs should meet weekly, during normal
5 working hours. All core members **should** have a special interest in
6 haematological cancer and **attend** MDT meetings as part of their
7 **regular work**. They should attend at **least two thirds¹ of meetings**.

8 **[2003, amended 2016]**

9 1.3.17 At each meeting, the MDT **should**:

- 10 • ensure that all new diagnoses have had SIHMDS review **and**
11 **integrated reporting**
- 12 • establish, record and review diagnoses for all patients with the
13 forms of cancer that fit the team's definition criteria
- 14 • assess the extent of each patient's disease and discuss its
15 probable course
- 16 • work out treatment plans for all new patients and those with
17 newly-diagnosed relapses
- 18 • review decisions about treatment, particularly those made in the
19 interval between MDT meetings. This review should cover not
20 only the clinical appropriateness of the treatment but also the
21 way patients' views were elicited and incorporated in the
22 decision-making process
- 23 • discuss **the** response to treatment, both during therapy and
24 when the course of treatment is complete
- 25 • **think about the** appropriateness of radiotherapy in the light of the
26 response to chemotherapy
- 27 • **think about the** patients' other requirements such as palliative
28 care or referral to other services. MDTs **should** be able

¹ Cancer Quality Improvement Network System (2013) [Manual for Cancer Services: Haemato-oncology Cancer Measures](#) – Haemato-oncology MDT Measure 13-2H-104

- 1 demonstrate effective systems for collaboration with hospital and
2 community palliative care services
- 3 • discuss discontinuing treatment. Each MDT should develop a
4 specific process for considering discontinuation of treatment
5 when its effectiveness has become so limited that adverse
6 effects might outweigh potential benefits
 - 7 • agree dates for reviewing patients' progress
 - 8 • discuss clinical trials and audit results. **[2003, amended 2016]**

9 1.3.18 The MDT should:

- 10 • review all SIHMDS reports of borderline conditions such as
11 aplastic anaemia and other non-malignant bone marrow failure
12 syndromes (which overlap with hypoplastic myelodysplastic
13 syndrome), and lymphocyte and plasma cell proliferation of
14 uncertain significance (which overlap with lymphoma and
15 myeloma)
- 16 • identify requirements for staff and facilities for any form of
17 treatment it provides
- 18 • liaise with primary care teams, palliative care teams, services for
19 the elderly and voluntary organisations such as hospices
- 20 • ensure that adequate information, advice and support is
21 provided for patients and their carers throughout the course of
22 the illness
- 23 • ensure that GPs are given prompt and full information about the
24 nature of their patients' illness or treatment, any changes in
25 management, and the names of individual MDT members who
26 are primarily responsible for their patients' management
- 27 • record, in conjunction with the cancer registry, the required
28 minimum dataset for all cases of haematological cancer within
29 its specified catchment area, including those cared for by
30 clinicians who are not haemato-oncology MDT members
- 31 • identify the training needs of MDT members and make sure
32 these needs are met;

- 1 • **be involved** in clinical trials and other research studies
- 2 • collaborate in planning, and collecting data for audit. **[2003,**
- 3 **amended 2016]**
- 4 1.3.19 One member of each team, usually the lead clinician, should act as
- 5 the administrative head of the team, taking overall responsibility for
- 6 the service it delivers. **[2003]**
- 7 1.3.20 Lead clinicians from all haemato-oncology teams in each **MDT**
- 8 should collaborate to develop and document evidence-based
- 9 clinical and referral policies which should be consistently **applied**
- 10 **across** the **MDT** as a whole. They should agree process and
- 11 outcome measures for regular audit. All teams should be involved
- 12 in audit and clinical trials. **[2003, amended 2016]**
- 13 1.3.21 There should be an operational policy meeting at least once a year
- 14 at which each MDT discusses its policies and reviews the way it
- 15 functions. **[2003]**
- 16 ***Maximising the effectiveness of MDT meetings***
- 17 1.3.22 Suitable facilities should be provided to support effective and
- 18 efficient team working. In addition to basic physical facilities such
- 19 as adequate room and table space, there should be appropriate
- 20 equipment, for example to allow the group to review pathology
- 21 slides and imaging results. **[2003]**
- 22 1.3.23 Every MDT meeting should have a designated chairperson. Whilst
- 23 this may be the lead clinician, teams should consider rotating the
- 24 role of chairperson between members. Teams should aim for an
- 25 egalitarian mode of interaction, to facilitate open discussion to
- 26 which all members feel able to contribute. **[2003]**
- 27 1.3.24 Each MDT should have named support staff who take the roles of
- 28 team secretary and co-ordinator. Since these roles overlap, one
- 29 person may be able to cover both functions in smaller teams. If a
- 30 team decides that a clinical nurse specialist should be responsible

1 for co-ordinating meetings, secretarial and administrative support
2 **should** be provided for this nurse. **[2003, amended 2016]**

3 1.3.25 The team co-ordinator should arrange meetings, inform all those
4 who are expected to attend, and ensure that all information
5 necessary for effective team functioning and clinical decision-
6 making is available at each meeting. This will include a list of
7 patients to be discussed and copies of their case notes, along with
8 diagnostic, staging, and pathology information. **[2003]**

9 1.3.26 The secretary should take minutes at all meetings, and record and
10 circulate decisions made by the team within the case notes and
11 both to both MDT members and to those others identified as
12 appropriate for routine circulation by the MDT, such as GPs, who
13 may require this information. Confidentiality dictates that these
14 records go to relevant clinicians only. **[2003]**

15 1.3.27 A designated member of the team's support staff, working with the
16 administrative head of the team, should be responsible for
17 communication with primary care, palliative care, and other **site-**
18 **specific** MDTs. **[2003, amended 2016]**

19 **Local services**

20 1.3.28 Local services should be developed around MDTs which include at
21 least three haematologists whose sole or main specialist interest is
22 in haemato-oncology. **[2003]**

23 1.3.29 Teams should specify which patients they can treat locally and
24 make specific arrangements for the delivery of clinical services
25 which they do not provide. **[2003]**

26 1.3.30 All in-patients undergoing intensive forms of treatment such as
27 complex chemotherapy under the care of this team should be
28 treated either at one hospital, or, where there is a locally agreed
29 case for providing this service at more than one hospital, in

1 hospitals which then each must independently meet the full criteria
2 for the safe delivery of these treatments. [2003]

3 1.3.31 Each haemato-oncology MDT which provides intensive
4 chemotherapy should have facilities as specified in section 1.2, and
5 should be able to demonstrate adequate arrangements for 24-hour
6 cover by specialist medical and nursing staff. These arrangements
7 should be sufficiently robust to allow cover for holidays and other
8 absences of team members. [2003, amended 2016]

9 1.3.32 All hospitals which give intensive (non-transplant) chemotherapy for
10 induction or re-induction of remission, or consolidation, or which are
11 likely to admit patients undergoing chemotherapy as medical
12 emergencies, should have documented clinical policies, agreed
13 with haematology and oncology staff, which clearly specify
14 arrangements for the care of such patients. [2003, amended 2016]

15 ***Terms used in this guideline***

16 **Ambulatory care**

17 In this guideline, ambulatory care is a planned care system in which patients
18 at risk of prolonged neutropenia are based at home or in other specified
19 accommodation. There should be specific safeguards to minimise the risk
20 from potentially life-threatening complications of chemotherapy.

21 **Levels of care**

22 The Guideline Committee redefined levels 2b and 3 from the British
23 Committee for Standards in Haematology (BCSH) guidelines on [levels of](#)
24 [care](#), and level 2 care from the NICE guidance on [improving outcomes in](#)
25 [haematological cancers](#). The new definitions are based only on the depth and
26 duration of expected severe neutropenia.

Non-intensive chemotherapy	All other chemotherapy not included in the definitions below.
Intensive chemotherapy	Anticipated to result in severe neutropenia (0.5×10^9 /litre or lower) for 7 or more days. The relevant chemotherapy regimens are usually but not exclusively those used for curative treatment of acute myeloid leukaemia, high-risk myelodysplastic syndrome, acute lymphoblastic leukaemia, Burkitt lymphoma (and other rare aggressive lymphomas treated on Burkitt lymphoma like protocols) and lymphoblastic lymphoma. Salvage treatments for other types of lymphoma would not usually be included in this definition.
Autologous and allogeneic haematopoietic stem cell transplantation (HSCT)	Previously referred to as high-dose therapy in the original 2003 NICE guidance on improving outcomes in haematological cancers . Commissioned centrally through specialised commissioning and a centre should meet FACT-JACIE accreditation standards.

1

To find out what NICE has said on topics related to this guideline, see our web page on [blood and bone marrow cancers](#).

2

3 **Context**

4 Haematological malignancies are a diverse group of cancers that affect the
 5 blood, bone marrow, and lymphatic systems. Some forms are highly
 6 aggressive, and others are so benign that they are often only discovered by
 7 chance. Symptoms may include:

- 8 • lumps caused by enlarged lymph nodes, which are characteristic of
 9 lymphomas
- 10 • bone fractures and kidney problems, which are characteristic of myeloma
- 11 • fatigue and vulnerability to infection and bleeding, which can be caused by
 12 most types of haematological cancer but are particularly severe in acute
 13 leukaemia.

14 The main categories of haematological cancer are lymphoma, myeloma,
 15 leukaemia, myelodysplastic syndromes and myeloproliferative neoplasms.

16 These categories vary in prevalence, incidence and survival rates. In addition,

1 there are subtypes of lymphoma and leukaemia, as well as rarer
2 haematological cancers that have their own categories.

3 There are also borderline conditions such as aplastic anaemia and other non-
4 malignant bone marrow failure syndromes (which overlap with hypoplastic
5 myelodysplastic syndrome), and suspected cutaneous lymphomas that need
6 specialised facilities for diagnosis and treatment.

7 Different levels of service are needed to manage haematological cancers,
8 depending on the particular cancer in question. Because of the increased
9 complexity of care and changes in the levels of care from those specified in
10 the 2003 NICE cancer service guidance on [improving outcomes in](#)
11 [haematological cancers](#), an update was needed.

12 There has been progressive and variable adoption of specialist integrated
13 haematological malignancy diagnostic services (SIHMDS), aimed at improving
14 diagnostic accuracy and expertise. Integrated diagnostic reports are well
15 established in some centres but not everywhere. In addition, new diagnostic
16 techniques have been developed since 2003. Because of all this, an update to
17 the diagnostic and evaluation sections in the 2003 guidance was needed.

18 **Update information**

19 This guideline is an update of NICE cancer service guidance on improving
20 outcomes in haematological cancers (published October 2003) and will
21 replace it.

22 New recommendations have been added for the role of integrated diagnostic
23 reporting and the staffing and levels of care needed to treat haematological
24 cancer.

25 These are marked as:

- 26 • **[new 2016]** if the evidence has been reviewed and the recommendation
27 has been added or updated
- 28 • **[2016]** if the evidence has been reviewed but no change has been made to
29 the recommended action.

1 The NICE cancer service guidance on improving outcomes in haematological
2 cancers (2003) was developed using very different methods to the current
3 NICE guideline development process. The 2003 guidance presented
4 recommendations in a paragraph format. The Guideline Committee
5 highlighted some sections of the original guidance as still relevant to clinical
6 practice, and other sections as out of date. Recommendations that are no
7 longer relevant have been deleted, and the reasons for this are given in
8 [‘Recommendations to be deleted’](#). Recommendations that are still relevant to
9 clinical practice have been transferred as individual recommendations labelled
10 **[2003]**, and the evidence for these has not been reviewed. Any amendments
11 made to recommendations labelled **[2003, amended 2016]** are explained in
12 [‘Amended recommendation wording \(change to meaning\)’](#) and [‘Changes to
13 recommendation wording for clarification only \(no change to meaning\)’](#). This is
14 an exception to NICE’s standard guideline development process and has
15 been done so that relevant recommendations in the chapter not being
16 updated could be carried across into the addendum.

17 We have not updated recommendations shaded in grey so can only accept
18 comments on these where stakeholders feel that the meaning has changed.
19 In some cases, we have made minor wording changes for clarification, and
20 these changes are highlighted in yellow.

21 Where recommendations are shaded in grey and end **[2003]** the evidence has
22 not been reviewed since the original guideline.

23 Where recommendations are shaded in grey and end **[2003, amended 2016]**,
24 the evidence has not been reviewed but changes have been made to the
25 recommendation wording that change the meaning (for example, because of
26 equalities duties or a change in the availability of medicines, or incorporated
27 guidance has been updated). These changes are marked with yellow shading,
28 and explanations of the reasons for the changes are given in
29 [‘Recommendations that have been deleted or changed’](#) for information.

30 See also the [original guidance and supporting documents](#).

1 ***Recommendations that have been deleted or changed***2 **Recommendations to be deleted**

Recommendation in 2003 guideline	Comment
<p>Haemato-pathology services should be organised at network level. Smaller networks may collaborate to provide joint services and achieve economies of scale.</p> <p>Two levels of haemato-pathological service are required: a local service, as exists at present in most district general hospitals and cancer units, which provides initial assessment of specimens and appropriate referral to a specialist service, which is likely to serve one or more networks.</p>	<p>Replaced by:</p> <p>All specialist integrated haematological malignancy diagnostic services (SIHMDS) should meet the following criteria, which are most likely to be met if the component parts of the service are located at a single site:</p> <ul style="list-style-type: none"> • have clearly defined organisational structures • have a formally appointed SIHMDS director who is responsible for the operation of the service, including the design of the diagnostic pathway, resource use and reporting standards • have a single quality management system • be formally accredited as a SIHMDS by a recognised independent organisation • managed by a single trust/organisation • have a business plan in place to coordinate the introduction of new diagnostic and therapeutic technologies • have a central reception point for all specimens • have a full range of protocols covering specimen handling, diagnostic pathways, compilation of integrated reports and relationships with users • ensure that their location, organisation, infrastructure and culture allow effective day to day and ad-hoc communication for rapid resolution of diagnostic uncertainty and accurate diagnosis • have clear and reliable systems
<p>Each diagnostic laboratory should serve as large a population base as can be achieved without sacrificing personal involvement of specialist laboratory-based haemato-pathologists in the haemato-oncology MDTs with which they work². Trusts should identify clear pathways to ensure that all samples are sent to specified laboratories which have clearly defined arrangements for synthesis of laboratory and clinical information at MDT meetings.</p>	
<p>Tissue samples from all patients with possible or definite diagnoses of haematological malignancy should be assessed by specialist haematopathologists. A specified range of tests should be carried out on each sample in a systematic way, following protocols which define both the order and choice of tests.</p>	
<p>Haemato-pathologists should keep records of all samples where cancer is found and take responsibility for ensuring that each one of these patients is discussed in an appropriate MDT meeting. An accurate diagnosis should be established for every patient, according to an appropriate clinical protocol.</p>	

² Experience at Leeds demonstrates that this personal contact is possible even when the specialist haematology pathology service serves a population base of over three million, part urban and part rural.

	<p>for communicating with relevant healthcare professionals outside the service.</p> <ul style="list-style-type: none"> • have a predefined diagnostic pathway that is followed for each specimen type or clinical problem. The pathway should ensure that: <ul style="list-style-type: none"> ○ the most appropriate diagnostic platforms are selected for a particular clinical situation to avoid unnecessary duplication. ○ tests for each specimen are used to provide maximum levels of internal cross-validation, using the current World Health Organisation (WHO) principle of multi-parameter disease definitions. • produce integrated reports that include all information needed for initial management, and share these with the multi-disciplinary team. • report diagnoses sub-typed by the current WHO classification • have an IT system that can compile integrated reports and communicate with users. [new 2016] <p>SIHMDS should be able to release individual reports before the integrated report is produced, if there is an urgent clinical need. [new 2016]</p> <p>SIHMDS should be responsible for specimens that are sent to external labs and should integrate the results into the relevant report (unless there are exceptional arrangements in place for clinical trials). [new 2016]</p> <p>When flow cytometry, molecular diagnostics or cytogenetics are needed for disease monitoring, local diagnostic laboratories should send all relevant specimens directly to a SIHMDS without any local diagnostic workup.</p>
<p>Involvement in external quality assessment (EQA) is necessary at both levels. Haemato-pathologists should participate in EQA schemes, which</p>	<p>This recommendation has been deleted because involvement in EQA is a mandatory aspect of laboratory accreditation. Clinical Pathology</p>

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<p>should normally be co-ordinated at national level, although some may be best operated on a regional basis. All laboratories should be covered by Clinical Pathology Accreditation (UK) Ltd (CPA) accreditation.</p>	<p>Accreditation (UK) has been replaced by UKAS.</p>
<p>The initial diagnosis is likely to be made by examination of blood films by a local haematologist. A member of a leukaemia MDT should take immediate responsibility for managing any patient who appears to have leukaemia and a blood specimen should be sent to the specialist pathology laboratory for further assessment. Bone marrow samples are likely to be required for precise assessment of the disease.</p>	<p>This recommendation has been deleted because a revised pathway of definitive diagnosis through SIHMDS has been recommended. Although the diagnosis of leukaemia may be suspected from local examination of blood films, the subsequent transit of diagnostic material, (principally blood and bone marrow) to the SIHMDS should be rapid and unhindered.</p>
<p>Patients with acute leukaemia are likely to require treatment before a precise diagnosis is available, but their management should be discussed at the earliest possible meeting of the leukaemia MDT and reviewed when a complete pathological assessment, including molecular analysis, has been carried out.</p>	<p>This recommendation has been deleted because a revised pathway of definitive diagnosis through SIHMDS has been recommended. Although the diagnosis of leukaemia may be suspected from local examination of blood films, the subsequent transit of diagnostic material, (principally blood and bone marrow) to the SIHMDS should be rapid and unhindered.</p>
<p>Achieving a precise diagnosis of lymphoma and making decisions about appropriate treatment can be complex. It requires the same level of haematopathological expertise as leukaemia, plus additional input from other specialists. These are listed in the lymphoma MDT, described in the next chapter of this manual.</p>	<p>This recommendation has been deleted because the recommendations will be superseded by the NICE guideline on non-Hodgkin's lymphoma (publication expected July 2016).</p>
<p>Biopsy is required for pathological investigation of persistent lumps in lymph nodes or abnormalities in other tissues that may be caused by lymphoma. Specific ENT or head and neck surgeons should be nominated to do lymph node biopsies within an agreed time and send suitable specimens to be assessed by designated specialist pathologists who work with lymphoma MDTs.</p>	<p>This recommendation has been deleted because the recommendations will be superseded by the NICE guideline on non-Hodgkin's lymphoma (publication expected July 2016).</p>
<p>If clinical signs or the patient's history (particularly smoking) suggest that cancer originating outside the lymph node could be the cause of the lump, this possibility should be investigated first, using endoscopy of the upper aerodigestive tract and fine needle</p>	<p>This recommendation has been deleted because the recommendations will be superseded by the NICE guideline on non-Hodgkin's lymphoma (publication expected July 2016)</p>

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<p>aspiration or core biopsy of the lump. Only when this diagnosis has been excluded should the affected node be removed. It should then be delivered fresh to a specialised haemato-pathology laboratory.</p>	
<p>Pathologists who assess lymphoma specimens should discuss their findings with the MDT responsible for managing the patient, so that clinical, laboratory and imaging information can be integrated in the context of the MDT meeting. Treatment for lymphoma should ideally be deferred until a definitive diagnosis is available. If treatment has begun, it should be reviewed by the MDT in the light of detailed diagnostic information.</p>	<p>This recommendation has been deleted because MDTs are standard practice for lymphoma pathologists, and therefore it is out of date. In addition, this recommendation will be superseded by the NICE guideline on non-Hodgkin's lymphoma (publication expected July 2016).</p>
<p>Imaging is essential to staging lymphoma. Clinical policies for the co-ordinated use of appropriate imaging when required for patients with lymphoma should be agreed at network level by all the lymphoma MDTs in the network. Cross-sectional computed tomography (CT) should be available without delay for planning treatment, both initially to judge the extent of the disease, and after treatment to assess residual disease. Magnetic resonance imaging (MRI) is not routinely used in lymphoma, although it may be required in specific clinical situations such as cranial disease.</p>	<p>This recommendation has been deleted because the statements are out of date i.e. the use of CT is now standard practice, and MRI may also be used in certain circumstances. In addition, this recommendation will be superseded by the NICE guideline on non-Hodgkin's lymphoma (publication expected July 2016).</p>
<p>Positron emission tomography (PET) scanning may be considered, if available, for discriminating between residual lymphoma and fibrotic tissue after chemotherapy, but further research is necessary to determine its cost and utility in relation to other forms of imaging. When carried out in centres with a high level of expertise, gallium scanning can be a useful adjunct to CT.</p>	<p>This recommendation has been deleted because the use of PET is now standard practice and the statements are out of date. In addition, this recommendation will be superseded by the NICE guideline on non-Hodgkin's lymphoma (publication expected July 2016).</p>
<p>Myeloma produces characteristic proteins which can be detected in the serum and sometimes, the urine of patients. Staging and decisions about treatment require information derived from the clinical picture (including</p>	<p>This recommendation has been deleted because the recommendations will be superseded by the NICE guideline on myeloma (publication expected February 2016).</p>

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<p>assessment of renal function), bone marrow, and imaging³. Plain x-rays should be used for all patients; MRI should not be used routinely because its potential value for informing decisions about management is unclear, but may be appropriate in particular circumstances, for example to assess possible spinal cord compression.</p>	
<p>Networks which collaborate to provide specialist services or facilities should have specific agreements defining the terms of such collaboration.</p>	<p>This recommendation has been deleted because networks no longer exist, so it is not relevant to current clinical practice.</p>
<p>Networks should aim to develop these teams as rapidly as possible, along with protocols describing how they function, to which Trusts will be expected to adhere. The minimum population served by any team should be 500,000, but networks should seek to concentrate services so that teams deal with larger numbers of patients.</p>	<p>This recommendation has been deleted because networks no longer exist, so it is not relevant to current clinical practice.</p> <p>The minimum population a team should serve has been retained in recommendation 1.3.2 in this guideline.</p>
<p>Each network should ensure that an appropriate range of MDTs is established for this to be possible.</p>	<p>This recommendation has been deleted because networks no longer exist, so it is not relevant to current clinical practice.</p>
<p>Patterns of MDT membership should be agreed and co-ordinated at network level to achieve the best use of resources and to ensure that each MDT has reliable access to the level of facilities and expertise it needs to carry out its function effectively. When all the necessary specialists are not available within a Trust, experts may contribute to the MDT's discussion through "in-reach" or "out-reach" arrangements.</p>	<p>This recommendation has been deleted because networks no longer exist, so it is not relevant to current clinical practice. Modern conferencing facilities have meant that MDTs can routinely include members who cannot attend in person.</p>
<p>In-reach arrangements are those where clinicians who work in peripheral hospitals travel to the centre to attend MDT meetings, bringing information about their patients with them. Everyone at the meeting can then contribute to discussion about the management of patients at each of the participating hospitals. Such arrangements have to be set up and supported by specialists in the</p>	<p>This recommendation has been deleted because networks no longer exist, so it is not relevant to current clinical practice. Modern conferencing facilities have meant that MDTs can routinely include members who cannot attend in person.</p>

³ Guidelines developed by BCSH/UKMF on the diagnosis and management of multiple myeloma are available on the net at www.ukmf.org.uk/guidelines.shtml.

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<p>relevant disease group at the cancer centre (or haematological equivalent) for the network as a whole, and additional staff or facilities for teleconferencing may be required. In large networks, two specialist centres may work in this way.</p>	
<p>In the out-reach model, MDT meetings are held in peripheral hospitals, normally those that provide intensive in-patient treatment (BSCH Level 2). Specialists take peripatetic roles; for example, specialist haemato-pathologists, transplant specialists, oncologists and radiologists may travel to several hospitals to meetings of various MDTs. If this is not practicable, locally scarce specialists may contribute to MDT meetings by teleconferencing. Where such arrangements are established, they should be reviewed annually by the network clinical lead.</p>	<p>This recommendation has been deleted because networks no longer exist, so it is not relevant to current clinical practice. Modern conferencing facilities have meant that MDTs can routinely include members who cannot attend in person. In addition, the BCSH Levels of Care referred to are no longer applicable.</p>
<p>Specialist input is particularly important for diagnosis and assessment of lymphoma. If MDT members who do this work are not lymphoma specialists, arrangements should be made either for visiting specialists to join a substantial proportion of MDT meetings (out-reach), or for MDT members to visit centres where they can discuss individual cases with specialists (in-reach), using teleconferencing if necessary. The aim of such meetings should be both to improve the accuracy of assessment in these cases and to enhance the level of expertise of MDT members.</p>	<p>This recommendation has been deleted because it has been replaced by recommendations for SIHMDS, which includes specialist haemato-pathologists. Modern conferencing facilities have meant that MDTs can routinely include members who cannot attend in person. In addition, this recommendation will be superseded by the NICE guideline on non-Hodgkin's lymphoma (publication expected July 2016).</p>
<p>When facilities or expertise are based outside the cancer network, there should be arrangements to ensure smooth and efficient cooperation across network boundaries.</p>	<p>This recommendation has been deleted because networks no longer exist, so it is not relevant to current clinical practice.</p>
<p>Lymphoma MDTs should review each patient's progress after three cycles of chemotherapy and again at the end of the prescribed course</p>	<p>This recommendation has been deleted because lymphomas are heterogeneous and this recommendation is too proscriptive. Management, including follow up and review, should be individualised.</p>
<p>Networks should review the number of</p>	<p>This recommendation has been deleted</p>

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<p>new patients with acute leukaemia treated by each Trust over the past five years, using information from their local cancer registry and other databases. Remission induction is appropriate for about 50% of patients with acute leukaemia, so Networks may either use the figure of 50% of new patients or the actual number of new patients who have undergone this treatment.</p>	<p>because networks no longer exist, so it is not relevant to current clinical practice.</p>
<p>Networks should review their arrangements for managing patients at BCSH Level 2 (i.e. acute leukaemia, some intensive lymphoma regimens, and other bone marrow failure patients) in conjunction with their haematology MDTs, particularly those involved in acute leukaemia. The aim should be to consolidate this work within a stable system of service delivery, by ensuring that all hospitals providing these services remain committed to supporting this work, with the necessary staff, and facilities and reliable arrangements for specialist medical and nursing cover.</p>	<p>This recommendation has been deleted because networks no longer exist, so it is not relevant to current clinical practice.</p>
<p>Networks should give priority to transferring BCSH Level 2 workloads to those hospitals it identifies as most appropriate to undertake this work on a long term basis, giving particular consideration to the future roles of those hospitals performing relatively little such work, for example induction therapy to induce remission in acute leukaemia in five or fewer new patients each year</p>	<p>This recommendation has been deleted because networks no longer exist, so it is not relevant to current clinical practice.</p>
<p>Clinicians working in such hospitals, who wish to continue to be actively involved in this type of clinical responsibility, should consider the feasibility of playing an active role in a haemato-oncology MDT based in the hospital to which patients from their locality would be referred.</p>	<p>This recommendation has been deleted because all MDT core members should be able to contribute to discussion of patient management but delivery of chemotherapy is the responsibility of the clinicians and teams providing care.</p>
<p>Members of haemato-oncology MDTs will have other responsibilities within their hospitals, and requirements for the management of patients with haematological cancers should be considered in the context of the wider role of haematology services. Haemato-oncologists play essential roles in the care of patients with solid tumours</p>	<p>This recommendation has been deleted because other roles of haematologists are not covered by this guideline update. Placement of central venous catheters is covered by other NICE guidance.</p>

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undergoing chemotherapy, in particular monitoring and managing haematological adverse effects, and may provide services such as placing central venous catheters.	
All inpatients undergoing intensive forms of treatment such as complex chemotherapy under the care of this team should be treated on a single hospital site, but members of the team may provide palliative or outpatient care in other hospitals.	Duplicated recommendation

1

1 Amended recommendation wording (change to meaning)

Recommendation in 2003 guideline	Recommendation in current guideline	Reason for change
<p>Each haemato-oncology MDT must include sufficient core members for the following people to be present at every meeting:</p> <p><u>Haemato-oncologists (principally haematologists, some medical oncologists)</u></p> <p>At least two who specialise in each tumour type being discussed at that meeting(e.g. leukaemia or lymphoma). At least one from each hospital site contributing to the MDT;</p> <p><u>Haemato-pathologist</u></p> <p>At least one specialist in haematopathology who liaises with pathologists from other hospital sites;</p> <p><u>Nurses</u></p> <p>At least one clinical nurse specialist, also ward sisters from hospitals which provide services at BCSH Level 2 or above</p> <p><u>Palliative care specialist</u></p> <p>At least one palliative care specialist (doctor or nurse) who liaises with specialists from other sites. If, because of staff shortages, a palliative care specialist cannot regularly attend MDT meetings, the MDT must be able to demonstrate that it reviews patients regularly with such a specialist</p> <p><u>Support staff</u></p> <p>Staff to organise team meetings and provide secretarial support.</p>	<p>Each haemato-oncology MDT should include sufficient core members for the following people to be present in person or remotely (for example via video conferencing) at every meeting:</p> <ul style="list-style-type: none"> • Haemato-oncologists (either haematologists or some medical oncologists): at least two who specialise in each tumour type being discussed at that meeting (e.g. leukaemia or lymphoma). At least one from each hospital site contributing to the MDT • Haematopathologist: at least one haematopathologist from the SIHMDS should be present; to provide the diagnostic information • Nurses: at least one clinical nurse specialist, also ward sisters from hospitals which provide intensive chemotherapy • Palliative care specialist: at least one palliative care specialist (doctor or nurse) who liaises with specialists from other sites. If, because of staff shortages, a palliative care specialist cannot regularly attend MDT meetings, the MDT 	<p>This has been updated to reflect the recommendations made in section 1.1.</p> <p>The BCSH Levels of Care have been replaced in the third bullet, as they are no longer applicable.</p>

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	<p>should be able to demonstrate that it reviews patients regularly with such a specialist</p> <ul style="list-style-type: none"> • Support staff: staff to organise team meetings and provide secretarial support. 	
<p>The MDT is also responsible for:</p> <ul style="list-style-type: none"> • Identifying requirements for staff and facilities for any form of treatment it provides (see Topic 5, Treatment, excluding high dose therapy, and Topic 6, High dose therapy). • Liaison with primary care teams, palliative care teams, services for the elderly and voluntary organisations such as hospices; • Ensuring that adequate information, advice and support is provided for patients and their carers throughout the course of the illness; • Ensuring that GPs are given prompt and full information about the nature of their patients' illness or treatment, any changes in management, and the names of individual MDT members who are primarily responsible for their patients' management; • Recording, in conjunction with the cancer registry, the required minimum dataset for all cases of haematological cancer within its specified catchment area, including those cared for by clinicians who are not haematological cancer MDT members; • Identifying training needs of MDT members and making sure these needs are met; • Involvement in clinical trials 	<p>The MDT should:</p> <ul style="list-style-type: none"> • review all SIHMDS reports of borderline conditions such as aplastic anaemia and other non-malignant bone marrow failure syndromes (which overlap with hypoplastic myelodysplastic syndrome), and lymphocyte and plasma cell proliferation of uncertain significance (which overlap with lymphoma and myeloma) • identify requirements for staff and facilities for any form of treatment it provides • liaise with primary care teams, palliative care teams, services for the elderly and voluntary organisations such as hospices • ensure that adequate information, advice and support is provided for patients and their carers throughout the course of the illness • ensure that GPs are given prompt and full information about the nature of their patients' illness or treatment, any changes in management, and the names of individual MDT members who are primarily responsible for their 	<p>This has been updated to reflect the recommendations made in section 1.1. The reference to Topics 5 and 6 has been removed because these chapters have been deleted.</p>

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<p>and other research studies;</p> <ul style="list-style-type: none"> • Collaboration in planning, and collecting data for, network-wide audit. 	<p>patients' management</p> <ul style="list-style-type: none"> • record, in conjunction with the cancer registry, the required minimum dataset for all cases of haematological cancer within its specified catchment area, including those cared for by clinicians who are not haemato-oncology MDT members • identify the training needs of MDT members and make sure these needs are met; • be involved in clinical trials and other research studies • collaborate in planning, and collecting data for audit. 	
<p>Every patient with any form of haematological cancer (including myelodysplasias and chronic myeloproliferative disorders) should be managed by a haemato-oncology MDT.</p>	<p>Every patient with any form of haematological cancer (as defined by current World Health Organization [WHO] criteria) should be cared for by a haemato-oncology MDT.</p>	<p>This reference has been added to confirm how all haematological cancers are defined.</p>
<p>A designated member of the team's support staff, working with the administrative head of the team, should be responsible for communication with primary care, palliative care, and other MDTs in the network</p>	<p>A designated member of the team's support staff, working with the administrative head of the team, should be responsible for communication with primary care, palliative care, and other site-specific MDTs.</p>	<p>The reference to networks has been amended, as these no longer exist.</p>
<p>Each haemato-oncology MDT which provides treatment at BCSH Level 2 or above must have facilities as specified by BCSH and must be able to demonstrate adequate arrangements for 24-hour cover by specialist medical and nursing staff. These arrangements must be sufficiently robust to allow cover for holidays and other absences of team members.</p>	<p>Each haemato-oncology MDT which provides intensive chemotherapy should have facilities as specified in section 1.2, and should be able to demonstrate adequate arrangements for 24-hour cover by specialist medical and nursing staff. These arrangements should be sufficiently robust to allow cover for holidays and other absences of team members.</p>	<p>The BCSH Levels of Care have been replaced, as they are no longer applicable. In addition, 'must' has been changed to 'should' to match current NICE style for actions in recommendation</p>

<p>All hospitals which give chemotherapy, or which are likely to admit patients undergoing chemotherapy as medical emergencies, should have documented clinical policies, agreed with haematology and oncology staff, which clearly specify arrangements for the care of such patients.</p>	<p>All hospitals which give intensive (non-transplant) chemotherapy for induction or re-induction of remission, or consolidation, or which are likely to admit patients undergoing chemotherapy as medical emergencies, should have documented clinical policies, agreed with haematology and oncology staff, which clearly specify arrangements for the care of such patients.</p>	<p>S. The reference to chemotherapy has been amended to match the levels of care defined in this update.</p>
<p>Each haemato-oncology MDT must include sufficient core members for the following people to be present at every meeting:</p> <ul style="list-style-type: none"> • Haemato-oncologists (principally haematologists, some medical oncologists) <ul style="list-style-type: none"> – At least two who specialise in each tumour type being discussed at that meeting (e.g. leukaemia or lymphoma). At least one from each hospital site contributing to the MDT • Haemato-pathologist <ul style="list-style-type: none"> – At least one specialist in haematopathology who liaises with pathologists from other hospital sites; • Nurses <ul style="list-style-type: none"> – At least one clinical nurse specialist, also ward sisters from hospitals which provide services at 	<p>Each haemato-oncology MDT should include sufficient core members for the following people to be present in person or remotely (for example via video conferencing) at every meeting:</p> <ul style="list-style-type: none"> • Haemato-oncologists (either haematologists or some medical oncologists): at least two who specialise in each tumour type being discussed at that meeting (e.g. leukaemia or lymphoma). At least one from each hospital site contributing to the MDT • Haematopathologist: at least one haematopathologist from the SIHMDS should be present; to provide the diagnostic information • Nurses: at least one clinical nurse specialist, also ward sisters from hospitals which provide intensive chemotherapy • Palliative care specialist: at least one palliative care specialist (doctor or nurse) who liaises with specialists from other sites. If, because of staff shortages, a palliative 	<p>The opening paragraph has been amended to show that MDT members can be present at meetings remotely.</p> <p>The first bullet point has been amended to avoid showing a preference for haematologists as this was unnecessary. The second bullet has been amended to reference the SIHMDS recommended in this update. The third bullet has been amended to reference the levels of care defined in this update.</p>

<p>BCSH Level 2 or above.</p> <ul style="list-style-type: none"> • Palliative care specialist <ul style="list-style-type: none"> – At least one palliative care specialist (doctor or nurse) who liaises with specialists from other sites. If, because of staff shortages, a palliative care specialist cannot regularly attend MDT meetings, the MDT must be able to demonstrate that it reviews patients regularly with such a specialist • Support staff <ul style="list-style-type: none"> – Staff to organise team meetings and provide secretarial support. 	<p>care specialist cannot regularly attend MDT meetings, the MDT should be able to demonstrate that it reviews patients regularly with such a specialist</p> <ul style="list-style-type: none"> • Support staff: staff to organise team meetings and provide secretarial support. 	
<p>Teams responsible for managing patients with myeloma should include at least one radiologist who liaises with radiologists at other sites and is fully and regularly involved in MDT discussions. It is not necessary for clinical oncologists to regularly attend team meetings for discussion of myeloma patients, although teams which manage these patients need rapid access to oncologists for palliative radiotherapy.</p>	<p>Teams responsible for managing patients with myeloma should include at least one radiologist who liaises with radiologists at other sites and is fully and regularly involved in MDT discussions. Teams that care for patients with myeloma should have rapid access to oncologists for palliative radiotherapy, although it is not necessary for clinical oncologists to regularly attend team meetings.</p>	<p>The second sentence of this recommendation has been amended to give it a clear action.</p>
<p>MDT meetings have the following functions:</p> <ul style="list-style-type: none"> • To establish, record and review diagnoses for all patients with the forms of cancer that fit the team's definition criteria; 	<p>At each meeting, the MDT should:</p> <ul style="list-style-type: none"> • ensure that all new diagnoses have had SIHMDS review and integrated reporting • establish, record and 	<p>This recommendation has been changed to give it a clear action. In addition, a reference to SIHMDS review</p>

<ul style="list-style-type: none"> • To assess the extent of each patient’s disease and discuss its probable course; • To work out treatment plans for all new patients and those with newly-diagnosed relapses; • To review decisions about treatment, particularly those made in the interval between MDT meetings. This review should cover not only the clinical appropriateness of the treatment but also the way patients’ views were elicited and incorporated in the decision-making process; • To discuss patients’ responses to treatment, both during therapy and when the course of treatment is complete Lymphoma MDTs should review each patient’s progress after three cycles of chemotherapy and again at the end of the prescribed course. The appropriateness of radiotherapy should be considered in the light of the response to chemotherapy; • To consider patients’ other requirements such as palliative care or referral to other services. MDTs must be able demonstrate effective systems for collaboration with hospital and community palliative care services; • To discuss discontinuing treatment. Each MDT should develop a specific process for considering discontinuation of treatment when its effectiveness has become so limited that adverse effects might outweigh potential benefits; • To agree dates for reviewing patients’ progress; • To discuss clinical trials and audit results. 	<p>review diagnoses for all patients with the forms of cancer that fit the team’s definition criteria</p> <ul style="list-style-type: none"> • assess the extent of each patient’s disease and discuss its probable course • work out treatment plans for all new patients and those with newly-diagnosed relapses • review decisions about treatment, particularly those made in the interval between MDT meetings. This review should cover not only the clinical appropriateness of the treatment but also the way patients’ views were elicited and incorporated in the decision-making process • discuss the response to treatment, both during therapy and when the course of treatment is complete • think about the appropriateness of radiotherapy in the light of the response to chemotherapy • think about the patients’ other requirements such as palliative care or referral to other services. MDTs should be able demonstrate effective systems for collaboration with hospital and community palliative care services • discuss discontinuing treatment. Each MDT should develop a specific process for considering discontinuation of treatment when its effectiveness has 	<p>has been added to match the recommendation on diagnostic reporting in this update.</p> <p>Reference to lymphoma MDTs has been removed because the recommendations will be superseded by the NICE guideline on non-Hodgkin's lymphoma (publication expected July 2016).</p> <p>‘consider’ has been changed to ‘think about’ to avoid confusion with current NICE style for actions in recommendations.</p> <p>‘must’ has been changed to ‘should’ to match current NICE style for actions in recommendations.</p>
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	<p>become so limited that adverse effects might outweigh potential benefits</p> <ul style="list-style-type: none">• agree dates for reviewing patients' progress• discuss clinical trials and audit results.	
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2 **Changes to recommendation wording for clarification only (no change to**
3 **meaning)**

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Recommendation numbers in current guideline	Comment (Yellow shading in these recommendations indicates wording changes that have been made)
All patients should have their care discussed in formal MDT meetings attended by members involved in the diagnosis, treatment, or care of that particular patient, and all the clinicians in the MDT should regularly treat patients with the particular forms of haematological cancer with which that MDT deals.	This change has been made to avoid referring to patients as 'cases'.
These MDTs should be responsible not only for initial recommendations about what treatment should be offered, but also for delivery of treatment and long-term support for patients.	'must' has been changed to 'should' to match current NICE style for actions in recommendations.
Individual clinicians should be responsible for discussing the MDT's recommendations with their patients, who should have the opportunity to be informed of the outcome of MDT meetings. Clinicians who are not members of the MDTs should refer any patient with suspected or previously diagnosed haematological cancer to an appropriate haemato-oncology MDT.	'must' has been changed to 'should' to match current NICE style for actions in recommendations. This recommendation has been reworded as haemato-oncology MDTs have already been set up.
Written referral policies should be disseminated both within hospitals (particularly to departments such as gastroenterology, dermatology, rheumatology and medicine for the elderly) and to primary care teams, to promote prompt and appropriate referral.	'must' has been changed to 'should' to match current NICE style for actions in recommendations.
The MDT should include the following extended team members. They do not have to be present at every MDT meeting; <ul style="list-style-type: none"> • Clinical member of the transplant team to which patients could be referred • Microbiologist (especially for patients with leukaemia) • Pharmacist • Vascular access specialist 	This recommendation has been changed to give it a clear action, and to take out unnecessary explanatory text.

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<ul style="list-style-type: none"> • Registered dietitian • Orthopaedic surgeon (myeloma MDT) • Clinical oncologist (myeloma MDT and leukaemia MDT; provision of cranial radiotherapy for patients with acute lymphoblastic leukaemia (ALL) is an important role for a clinical oncologist). 	
<p>MDTs should have access to the following specialists:</p> <ul style="list-style-type: none"> • Dermatologist • Gastroenterologist • Ear, Nose and Throat (ENT) surgeon • Interventional radiologist • Renal physician. 	<p>This recommendation has been changed to give it a clear action.</p>
<p>All haemato-oncology MDTs should have access to support staff, including:</p> <ul style="list-style-type: none"> • Allied health professionals including rehabilitation specialists • Liaison psychiatrist and/or clinical psychologist • Social worker • Bereavement counsellor • Support for patients and carers. 	<p>This has been changed to simplify the opening sentence, and to remove a reference to a chapter from the original guideline that does not appear in this document.</p>
<p>Haemato-oncology MDTs should meet weekly, during normal working hours. All core members should have a special interest in haematological cancer and attend MDT meetings as part of their regular work. They should attend at least two thirds⁴ of meetings.</p>	<p>‘must’ has been changed to ‘should’ to match current NICE style for actions in recommendations. The wording has also been amended to reflect the latest peer review measures for haematological cancers.</p>
<p>Lead clinicians from all haemato-oncology teams in each MDT should collaborate to develop and document evidence-based clinical and referral policies which should be consistently applied across the MDT as a whole. They should agree process and outcome measures for regular audit. All teams should be involved in audit and clinical trials. [2003, amended 2016]</p>	<p>This has been amended because networks no longer exist, so it is not relevant to refer to them.</p>

⁴ Cancer Quality Improvement Network System (2013) [Manual for Cancer Services: Haemato-oncology Cancer Measures](#) – Haemato-oncology MDT Measure 13-2H-104

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<p>Each MDT should have named support staff who take the roles of team secretary and co-ordinator. Since these roles overlap, one person may be able to cover both functions in smaller teams. If a team decides that a clinical nurse specialist should be responsible for co-ordinating meetings, secretarial and administrative support should be provided for this nurse. [2003, amended 2016]</p>	<p>'must' has been changed to 'should' to match current NICE style for actions in recommendations.</p>
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