



The Royal College of Pathologists

Pathology: the science behind the cure

The role of the lead pathologist and attending pathologists in the multidisciplinary team

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1 Introduction

1.1 Definitions

MDT meeting – multidisciplinary team meeting. A clinically focussed meeting of health professionals that is involved in management of patient treatment. This most commonly links to management of patients being considered with a diagnosis of malignancy (cancer MDT meeting) but equally applies to non-cancer management meetings.

CPC – clinicopathological conference (or meeting). A clinically focussed meeting of health professionals that is involved in patient management or professional development.

Diagnostic case review – a documented process in which the written laboratory report and the histological slides are reviewed by a pathologist. This would not normally generate any additional or supplementary report being produced, except where a different diagnostic opinion was generated from the review. It is a matter for local clinical judgment as to what material is physically reviewed depending on the context of a case. Additional investigations may be generated as part of diagnostic case review.

Double reporting – a process in which two (or sometimes more) pathologists report a case, having access to all relevant information. This would normally occur before a final report was issued, approved by all the pathologists contributing to the case. Additional investigations may be generated as part of double reporting.

Consensus meeting – a process in which a case is discussed between pathologists in order to reach a consensus over a diagnostic opinion. This would normally occur before a final report was issued, approved by all the pathologists contributing to the case. It is a matter for local clinical judgment as to what material is physically reviewed depending on the context of a case. Additional investigations may be generated as part of a consensus meeting.

Specialist review – the review of histological slides by a person designated as a specialist reporting pathologist. This process results in an additional or supplementary report being generated for the case. Additional investigations may be generated as part of specialist review.

1.2 Background

The Calman-Hine report on the commissioning of cancer service placed multidisciplinary team (MDT) working at the centre of the delivery of cancer services.¹ This document has a major focus on cancer pathology services. The general principles should also be applied to pathologists who contribute to multidisciplinary teams in non-cancer pathology areas of practice.

The document applies particularly to histopathologists and cytopathologists, but it may also be relevant to haematologists in haematological oncology MDTs.

The National Cancer Action Team (NCAT) has issued a document describing the characteristics of an effective MDT based on the views of over 2000 MDT members who responded to a survey in early 2009, including those of histopathologists and cytopathologists.²

The NCAT document specified a set of criteria for membership of the MDT that applies to pathologists as well as the other team members.² Of note, this includes the following.

- Members have the level of expertise and specialisation required by the MDT in question; where there are no relevant peer review measures or accreditation for these roles, the

issue of clinical competence is for the relevant professional body or the Trust to determine.

- Cross cover/deputies with authority to support recommendations are in place to cover planned (and where possible unplanned) absences; advanced notice is given of core member absence so that this cover (or alternative management) can be organised if possible.
- MDT members (core and extended) have dedicated time included in their job plans to prepare for, travel to (if necessary) and attend MDT meetings; the amount of time is negotiated locally to reflect their workload and varies according to discipline and cancer type.
- Each MDT member has clearly defined roles and responsibilities within the team, which they have signed up to and which are included in their job plans.
- The team has agreed what is acceptable team behaviour/etiquette, including:
 - mutual respect and trust between team members
 - an equal voice for all members
 - different opinions valued
 - resolution of conflict between team members
 - encouragement of constructive discussion/debate
 - absence of personal agendas
 - ability to request and provide clarification if anything is unclear.
- There is access to training opportunities as required to support an individual's role in the MDT in areas such as use of IT equipment, e.g. video-conferencing.
- There are specifications in relation to organisation of the meeting of relevance to pathologists, as follows.
 - There is a locally agreed cut-off time for inclusion of a case on the MDT list/agenda and team members abide by these deadlines. There is flexibility for cases that may need to be added at the last minute due to clinical urgency.
 - Cases are organised on the agenda in a way that is logical for the area being considered and sufficient time is given to more complex cases. The structure of the agenda allows, for example, the pathologist to leave if all cases requiring their input have been discussed.
 - A locally agreed minimum dataset of information about patients to be discussed should be collated and summarised prior to MDT meetings wherever possible. This should include diagnostic information (pathology and radiology), clinical information (including co-morbidities) and patient history, views and preferences where known. It is important that any data items collected locally that are in existing national datasets or are within the NHS Data Dictionary are in line with these data definitions and codes when collected.
 - Members know what information from the locally agreed minimum dataset of information they will be expected to present on each patient so that they can prepare and be ready to share this information (or have delegated this to another member if they cannot attend) prior to and/or at the meeting.
 - A locally agreed minimum dataset of information is presented on each patient including diagnostic information (pathology and radiology), clinical information (including co-morbidities, psychosocial and specialist palliative care needs) and patient history, views and preferences. The focus is on what the team needs to hear

to make appropriate recommendations on the patient in question. It may not, for example, be necessary to show/discuss the pathological or radiological findings in all cases.

- There is access to all relevant information at the meeting including patient notes, test results/images/samples (past and present) and appointment dates (or a proforma/summary record with the necessary information) along with access to PAS, radiology and pathology systems, etc. Relevant past material should be reviewed prior to the meeting if it is not accessible during the meeting.

Pathology results are expected to contribute to clinical decision making, as follows.

- Locally agreed minimum dataset of information is provided at the meeting, i.e. the information the MDT needs to make informed recommendations including diagnostic information (pathology and radiology), clinical information (including co-morbidities, psychosocial and specialist palliative care needs) and patient history, views and preferences. It is important that any data items collected locally that are in existing national datasets or are within the NHS Data Dictionary are in line with these data definitions and codes when collected.
- MDT recommendations are only as good as the information upon which they are based. If there are concerns that key data is missing, this should be documented.
- Where a recommendation cannot be made because of incomplete data or where new data becomes available at a later stage, it should be possible to bring the patient case back to the MDT for further discussion.
- In relation to governance of the MDT, it is specified that significant discrepancies in pathology, radiology or clinical findings between local and specialist MDTs should be recorded and be subject to audit.

With the increasing development of 'hub-and-spoke' models for delivery of cancer care, video-conference arrangements are common at MDT meetings. All members of the MDT should be able to review information being presented on patients. An important component of patient safety is in the identification of discrepancies in any of the information being presented such that this can be drawn to attention and resolved. This includes pathologists being able to participate in a full discussion of relevant cases. If key information cannot be reviewed by the attending pathologist and it is felt that this is an important part of a case review (which will depend on clinical judgment and the context of the case), this should be documented as part of the MDT process and a decision made on deferring management pending availability of the information.

The Cancer Quality Improvement Network System (CQuINS) guidance documents³ specified that each cancer MDT (local or specialist) has a named pathologist as one of the core members, but gives little further guidance about what this role entails. The identification and appointment of a lead pathologist for each MDT is now common practice, suggesting that the role adds genuine value to the provision of cancer services and is likely to be a permanent feature of cancer MDT working. Additionally, in some situations pathologists other than the person identified as the MDT lead pathologist attend MDT meetings and present cases that they have reported (attending pathologists).

In non-cancer clinical services, pathologists may attend clinicopathological meetings where pathological findings are discussed or presented alongside a review of patient management.

This document seeks to define the expected roles of the lead MDT pathologist and attending pathologists. These roles may differ in detail between local and specialist MDTs according to site-specific national guidance and local circumstances, but the principles outlined here should be generally applicable.

While this document refers in places to examples of national guidance (e.g. NICE and PELICAN), these should be seen as examples and in devolved government other standards may apply.

2 Essential features of the role

2.1 Cancer Peer Review standards

The Cancer Peer Review (CPR) standards define the duties of an MDT as follows:

- to ensure that designated specialists work effectively together in teams, such that decisions regarding all aspects of diagnosis, treatment and care of individual patients and decisions regarding the team's operational policies are multidisciplinary decisions
- to ensure that care is given according to recognised guidelines (including guidelines for onward referrals), with appropriate information being collected to inform clinical decision making and to support clinical governance/audit
- to ensure that mechanisms are in place to support entry of eligible patients into clinical trials, subject to patients giving fully informed consent.

Relatively few of the CPR standards specifically relate to pathology, so the details of the role outlined below represent the application of these general principles to the roles of the lead and attending pathologists within the MDT.

CPR standards require that each MDT must have at least one pathologist as a core member and this pathologist or their deputy must attend at least 66% of all MDT meetings in person or by video link. The number of pathologists for each MDT who are core or extended members varies and is not overtly limited. In practice, the 66% standard, as strictly defined, is not particularly helpful in defining the role of the lead pathologist, as most MDTs have a level of pathology cover approaching 100%.

CPR requires that each MDT should agree standards for pathology reporting, without specifying how this should be achieved. The lead pathologist is clearly best placed to agree these standards with their clinical colleagues. The setting of pathology standards, beyond the generic requirements of reporting according to The Royal College of Pathologists' cancer datasets and having at least conditional laboratory accreditation (usually through Clinical Pathology Accreditation [UK] Ltd), is described by CPR standards as being the responsibility of Network Site-Specific Groups (NSSGs) and cross-cutting Pathology Cancer Network Groups. It is essential that the lead pathologist for the MDT communicates effectively with both the relevant NSSG and the relevant Cancer Network Pathology Group and establishes agreed written standards for reporting that apply to the MDT.

CPR standards require that all core members of each MDT should attend the MDT's annual business meeting. This should be part of the role of the lead pathologist, while not excluding other pathologists who are core members from also attending these meetings.

2.2 Appointment, experience and competencies

As defined in the Cancer Peer Review Standards Manual, the lead clinician for an MDT is responsible for ensuring that there is a designated pathologist. The lead clinician would be expected to take advice from the Chair of the Pathology Cancer Network Group in the case of network (specialist) MDTs, and the relevant Clinical Director or Head of Department for local MDTs. Although no specific tenure is defined for the role of lead MDT pathologist and there is no obvious need to limit tenure provided that the roles are fulfilled, it is expected that the role of lead MDT pathologist would be considered during the annual job plan review and would be more formally reviewed by the lead MDT clinician at least every five years.

The lead pathologist for any MDT should regularly report specimens from patients under the care of that MDT. Where the work of an MDT involves more than one specialist area, e.g. haematopathology and histopathology or histopathology and cytopathology, the lead pathologist should determine the need for MDT attendance by another specialist pathologist. Defining minimum levels of activity is fraught with difficulty and probably not worthwhile. Just as defining competency in terms of workload would be difficult, defining competency in terms of clinical accuracy is also elusive. Competency is therefore probably best defined in terms of training and quality assurance. For some cancers, there are established national standards set either by the National Institute for Health and Care Excellence (NICE) or by other relevant professional bodies. For example, a pathologist who is a core member of a colorectal MDT would be expected to be PELICAN-trained. The NICE 'Improving Outcomes Guidance' (IOG) documents for sarcoma, skin and neuro-oncology give competency definitions in terms of participation in appropriate histopathology specialist external quality assessment (EQA) schemes.^{4,5} Where such explicit guidance does not exist, it is appropriate that an MDT lead pathologist should participate in an EQA scheme relevant to that MDT, where one exists. For some MDTs, participation in a general histopathology EQA scheme could be regarded as sufficient and this is the standard recommended for local skin MDTs in the NICE skin cancer IOG. Aspects of the recognition of specialist pathology expertise and quality assurance in histopathology are discussed in more detail in other College documents.^{6,7}

In some circumstances, the lead pathologist is likely to develop an external referral practice for difficult cases in a Cancer Network or nationally. This work should be appropriately funded and recognised in job planning for the contribution it makes to personal development in the role.^{7,8}

The more generic abilities that would be required by this role are essentially identical to the generic abilities required to be a consultant pathologist and include effective team working and communication skills. The CPR measures indicate that: "The role of lead clinician of the MDT should not of itself imply chronological seniority, superior experience or superior clinical ability". It is reasonable to apply the same principle to the role of lead pathologist, and the Clinical Director for Pathology (or deputy) should regularly review who should most appropriately fulfil the role of lead pathologist in each MDT. The MDT lead clinician should be consulted about any changes in who fulfils the role.

3 Extended features of the role

3.1 Defining and maintaining clinical quality standards

An accredited laboratory will have standard operating procedures (SOPs) covering the dissection and reporting of cancer and other specimens. These will generally be based on the College's cancer datasets, tissue pathways guidance and guidelines from other relevant professional bodies. The responsibility for updating such SOPs will vary from department to department, but is best held by individuals who are in close touch with the literature and national or international developments in any given area of practice. For the work of a cancer MDT, the lead pathologist should fit this description (see also below) and therefore be the individual best equipped to keep reporting protocols up to date.

Where pathology reporting standards are agreed across a Cancer Network, usually through the relevant NSSG, the lead pathologist should take responsibility for implementing these standards. In order to facilitate this, the lead pathologist should either attend NSSG meetings or have direct communication with the pathologist(s) who does attend the meetings.

A major part of the work of lead and attending pathologists working within MDTs is diagnostic case review.

All histological written reports and in defined cases the original slides used in diagnosis should be reviewed prior to discussion at MDT or CPC meetings in a pre-MDT review process. This review process should apply to material produced both internally and externally to the organisation hosting the meeting.

This review should be a documented procedure applied systematically in all cases in the MDT or CPC.

This review process should be complimentary to the original work of making the primary diagnosis.

The review should be made by the lead pathologist and involve attending pathologists who make a significant contribution to case reporting, where applicable

Self-review by the lead pathologist of cases they have reported themselves serves a purpose in contributing to detecting errors or inconsistencies.

Review of cases reported by others other than the lead pathologist should be performed by the lead pathologist or designated deputy. The lead pathologist and any designated deputy should meet criteria as specified in guidance for characteristics of a specialty pathologist.

The specification of which cases should be subject to review of the histological slides prior to the MDT should be agreed as part of specifying a systematic approach to diagnostic review. This specification should be proportionate to risk and agreed with the clinical lead for the MDT.

It is advised that slide review should occur:

- where there has been a significant discrepancy between histological findings and clinical or imaging features
- in areas where published audits have indicated an area of acknowledged diagnostic difficulty leading to frequent revision of diagnosis. A lower threshold should be considered where primary reporting has been done by a pathologist who does not meet criteria and characteristics specified for definition of a specialist pathologist in the area being reported
- for uncommon conditions seen within the spectrum of practice of the MDT, as a means of maintaining skills amongst the group of pathologists supporting the diagnostic area.

A procedure should be in place and agreed with the clinical lead for the MDT as well as the clinical lead for the pathology service for when diagnostic review of slides cannot be resolved by achieving diagnostic agreement between colleagues. Expected components of such a procedure include, but are not limited to, the following.

- If a colleague will not permit review of slides by the MDT lead or designated deputy the scheme should ensure that this is regarded as a performance issue and discussed with a relevant medical director. It is recognised that diagnostic isolation and failure to share case material for review is a characteristic of medical practitioners who perform poorly.
- If the primary pathologist and the review pathologist cannot agree on a single diagnostic opinion. The procedure should specify how this should promptly be made known to the clinical lead for the MDT pending resolution. The procedure should specify that the opinion of an independent specialty pathologist working in a laboratory to whom material is regularly referred (as agreed in local CPA referral documentation) would normally be used and that the opinion of this specialist given weight in any further consideration. The opinion of all reporting pathologists should be made known to the MDT responsible for making management decisions, together with a consensus view where this can be achieved.

In order to minimise operating difficulty in smaller units that might cause delay in diagnosis if the lead is away on leave with no local deputy, prospective planning for cross cover should involve local networks.

The purposes of pre-MDT review include:

- checking wording in the written reports to ensure that there are no internal inconsistencies and that a conclusion is clearly specified
- checking wording in the written report to ensure that recommended datasets, where specified, have been completed
- where slides are reviewed, confirming the primary diagnosis or identifying areas where further refinement is necessary before patient treatment
- a training and education function for participating pathologists, which can contribute to reflective practice and where documented used in evidence in appraisal
- as a quality assurance role within the department.

Case review practice will need to be adapted to local circumstances, taking into consideration the risk of misdiagnosis in a specific context and the available workforce.⁶ For some MDTs, a large proportion of the caseload will have been reported by the lead pathologist, so this is largely self-review. In other situations, some cases will have been double reported prior to the meeting; local guidelines (incorporating any relevant national guidance) should determine the extent to which further review is necessary. This issue was reviewed by the College in February 2013 and a statement related to double reporting has concluded that there are only limited areas of work that mandate formal double reporting. Some IOGs, for example those on skin cancer and sarcoma, have specific guidelines about case review by a specialist pathologist.^{3,4} If, as is usual, case review is a normal part of the working of the MDT, the lead pathologist should have at least one nominated deputy to provide cover during periods of leave. Case review should only be the sole responsibility of the lead pathologist in exceptional circumstances. The lead pathologist may have specific roles in resolving differences in diagnostic opinion that arise within the team of pathologists serving the MDT and as the primary link with external experts to whom difficult cases can be referred.

The lead pathologist, or their deputy, should also ensure that:

- statements about pathology are correctly recorded in the formal minutes of the MDT meeting; this is important to avoid misinterpretation, with a consequence for patient management
- there is appropriate feedback to other pathologists on clinicopathological correlations and discrepancies
- formal supplementary reports are issued if relevant to patient management.

The monitoring of quality and outcome data, although recommended as an MDT function in the Calman-Hine report, is still in development. The provision of pathology data for local audit or national reporting should be overseen by the lead pathologist, although information technology systems may allow this work to be carried out without the lead pathologist's active participation.

3.2 Lead role in continuing professional development

Although all pathologists are obliged to demonstrate continuing professional development (CPD) in all areas in which they work, in practice it is usual to focus CPD time and effort on areas of special interest. It is appropriate that MDT leads should do this in the specialty that their MDT serves. This puts the lead pathologist in an ideal position to 'horizon scan' and to inform colleagues working in the same specialty of new developments.

3.3 Developing the service

Cancer service developments usually affect pathology. Examples include changes in the volume or complexity of the workload or the introduction of new clinical standards or practices, in particular the implementation of NICE Improving Outcomes Guidance. For any such development to occur smoothly, input from the pathology service is required in the planning process. Operational or budgetary changes that may be necessary generally require input from laboratory managers (clinical or scientific); the lead pathologist is the ideal individual to liaise with the MDT lead and laboratory management in order to bring about any service changes that may be necessary. In the case of Network-wide developments, the lead pathologist should also liaise with relevant colleagues in other pathology departments, Network managerial staff, service users and commissioners.

3.4 Consulting with service users

An essential element of an effective, high-quality diagnostic service is successful interaction with the users of the service, to ensure that the pathology service understands the requirements of its users and the users understand the requirements (and sometimes limitations) of the pathology service. The regular interface between the lead pathologist and other MDT members greatly facilitates this, although specific problems with service provision may require the input of laboratory and clinical managerial staff. The lead pathologist should facilitate this when necessary.

3.5 Taking the lead in training

A pathologist with specialist experience in any subspecialty⁶ is probably the best qualified individual to lead the training of pathologists, other medical trainees and allied health professionals in that area. Local circumstances will determine the extent to which other colleagues are involved in training.

3.6 Taking the lead in research

Most MDTs will not have their own in-house research portfolio, but will enter patients into clinical trials. Some of these trials will require central histopathology review or request tissue for translational research associated with the trial. Active pathology input into these processes should be coordinated by the MDT lead pathologist.

3.7 Ensuring a reasonable balance of work with colleagues

Taking the lead in the above areas does not necessarily imply doing all the work. Some MDTs may be supported by a number of pathologists who could reasonably share this work, particularly at times of active development such as IOG implementation or if a particular MDT is very active in clinical trials. However, under such circumstances, there would be a need for coordination of these activities and liaison with the MDT lead clinician, to define roles that should remain with the MDT lead pathologist.

4 Resources required to facilitate effective pathological input to MDT meetings

The lead pathologist should ensure that the need for adequate support for the MDT process⁹ in terms of staffing and facilities is brought to the attention of local service managers.

4.1 Staffing

Time for the preparation of cases (including diagnostic case review) and attendance at the MDT meetings should be incorporated as an element of direct patient care in consultants' job plans. Attendance at business meetings and meetings of Cancer Network Groups should be included in supporting professional activities.

Where the lead pathologist has developed a referral practice for difficult cases from other hospitals, the time commitment and laboratory resourcing implications should be recognised.^{6,7}

Trainee pathologists should have attendance and presentation of cases at MDT meetings built into their training programmes.

Administrative and clerical staffing levels should allow for the (often substantial) time required to retrieve and collate reports and slides in preparation for MDT meetings. Where cases have to be obtained from (or sent to) other hospitals, the time and resources required should be recognised and drawn to the attention of laboratory managers.

4.2 Facilities

The facilities required for the effective participation of pathologists in MDT meetings will vary according to the requirements of each MDT. An important function of the MDT meeting is the education of undergraduate students and other healthcare professionals on the value of histopathology and cytopathology in the diagnostic process, both in making a diagnosis of and in recognising key features of importance for further management and prognosis. The opportunity to project images at the MDT meeting is valuable, but not essential, in meeting this objective. If digitised images are used, then appropriate image capture, storage and presentation facilities are required. If images are projected from glass slides, then a good quality microscope and camera need to be provided. The ambience of the room should support the viewing of these images.

According to their interests and experience, the pathologist may also be able to advise on the recording of key clinical and pathological data derived from the MDT process.

The facilities that should be in place are specified in the NCAT document² and include:

- facilities for projecting and viewing specimen biopsies/resections and accessing retrospective pathology reports
- facilities (when needed) to see and speak to members who are off site (eg. video-conferencing) and share all information that will be viewed (eg. images and reports) with them.

There should be a commitment/buy-in from all sites to provide technology and equipment (including video-conferencing) that is good quality and reliable, up to at least a minimum Network-wide specification, which takes into account issues such as:

- standards of data transfer
- image quality
- bandwidth – speed for loading images, time delay for discussions
- inter-hospital compatibility, cross-site co-ordination, etc.

This specification is kept under review and updated in light of technological advances.

There should be technical support for MDT meetings so that assistance can be provided in a timely fashion (i.e. during the meetings) if there are problems with any IT systems or video-conferencing links during the meeting. The quality of MDT decision-making can be seriously affected when equipment fails.

5 References

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Appendix Summary of the potential roles and attributes of a lead MDT pathologist

Essential roles

- Attendance at MDT meetings (to a defined standard).
- Agree pathology standards with MDT lead clinician (in conjunction with the Pathology Cancer Network Group).
- Nominate a deputy who is available to cover for periods of leave.
- Ensure effective communication with both the Network Site-Specific Group and the Pathology Cancer Network Group.

Extended roles (which may or may not be fulfilled by the lead pathologist according to local circumstances)

- Formal review of cases.
- Ensure that disease-specific standard operating procedures in the laboratory are fit for purpose.
- Attendance at Network Group meetings.
- Working with laboratory managers to ensure that service developments include consideration of the implications for pathology services.
- Lead for continuing professional development in the specialist area.
- Lead for training.
- Lead for research.

Personal attributes

- Appropriate training and experience.
- Participation in appropriate external quality assurance scheme(s).
- Good team-working and communication skills.