

**Supplementary Table 2: Facilitators and barriers impacting the quality of oncological multidisciplinary team meetings**

| <b>Theme: organisational aspects</b>   |
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| <p><b>Category: conditions for ICT*, logistics and administrative support</b></p> <p><i>Facilitators</i></p> <ul style="list-style-type: none"> <li>• There is an U-shaped set-up where all participants can see each other</li> <li>• All participants can view all the screens</li> <li>• Possibility of videoconferencing increases willingness to participate in the MDTM** of another hospital</li> <li>• Availability of adequate equipment for video conferencing</li> <li>• Ability to zoom in on the face of the speaker during video conferencing</li> <li>• Availability of administrative support</li> </ul> <p><i>Barriers</i></p> <ul style="list-style-type: none"> <li>• Participants sitting in the back row cannot see the faces of participants in the front row</li> <li>• Travelling to be physically present in another hospital is too time consuming</li> <li>• Imaging / electronic health record not visible during the meeting</li> <li>• Poor connection and prolonged transmission time with video conferencing</li> <li>• Talking over each other due to the inability to see who is speaking on the other end of the video conference</li> <li>• Scheduling multiple video conferencing connections to different hospitals sequentially slows down the meeting due to transmission time</li> <li>• Information exchange between different participating hospitals is hampered by different ICT systems</li> </ul> <p><b>Category: planning and preparation conditions</b></p> <p><i>Facilitators</i></p> <ul style="list-style-type: none"> <li>• Meeting is scheduled within working hours</li> <li>• Preparation time is reserved in the schedule of participants</li> <li>• All necessary information (e.g. radiology and pathology results, patient medical history and preferences) is available in time</li> <li>• Application with clear question to be answered in the MDTM and summary of medical history</li> <li>• Having a deadline for adding patients to the list to ensure proper preparation</li> <li>• Case-specific preparation only by required participants to reduce the workload of other participants</li> <li>• Preparing difficult cases with colleagues of the same specialty</li> </ul> <p><i>Barriers</i></p> <ul style="list-style-type: none"> <li>• Lack of attention or energy due to meetings scheduled at lunchtime, at the end of the day or outside regular working hours</li> <li>• Participants are not prepared due to lack of time</li> <li>• Absence of radiology or pathology results during MDTM</li> <li>• Application form is incomplete</li> <li>• Participants of diagnostic specialties prepare all cases, because it is not indicated in which case their input is desired</li> <li>• If the MDTM is cancelled and not rescheduled (e.g. due to a national holiday), the patient list will be far too long the following week</li> </ul> <p><b>Category: conditions for structure</b></p> <p><i>Facilitators</i></p> <ul style="list-style-type: none"> <li>• A fixed order in which participants speak to ensure that everyone's view is acknowledged</li> <li>• There is a fixed order for patients to be discussed</li> <li>• Patient case is presented in an efficient and structured manner</li> <li>• MDTM starts on time and does not run over the scheduled time</li> <li>• Last patients on the list also receive all the necessary attention, even if the MDTM runs out of time as a result</li> </ul> <p><i>Barriers</i></p> <ul style="list-style-type: none"> <li>• Meeting is held up due to disturbances during the meeting (e.g. participants calling or walking in and out of the room)</li> <li>• Long meeting duration or running out of time diminishes attentiveness</li> <li>• Last patients on the list receive less attention due to time pressure because of there are too many patients on the list</li> <li>• Last patients on the list receive less attention due to time pressure caused by disproportionate time distribution among the patients</li> </ul> <p><b>Category: prerequisites for minutes</b></p> <p><i>Facilitators</i></p> <ul style="list-style-type: none"> <li>• The minutes are typed by an administrative assistant during the case discussions</li> <li>• The structured minutes contain at minimum a conclusion and treatment proposal and, if present, alternative options</li> <li>• The minutes are visible on the screens and if necessary immediately corrected</li> </ul> <p><i>Barriers</i></p> <ul style="list-style-type: none"> <li>• The administrative assistant taking the minutes is inexperienced</li> </ul> |

- Highly profession-specific minutes are not comprehensible to health care providers other than the core team members
- The treatment advice stated in the minutes does not answer the question on the application form

**Category: evaluation needs**

*Facilitators*

- Structurally evaluate MDTM functioning by discussing with all participants what is going well, what can be improved and what improvements can be made

*Barriers*

- Evaluation of the MDTM takes time and it is not worth it, because it does not result in sufficient improvements / the MDTM is already functioning well

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**Theme: participants responsibilities and requirements**

**Category: chairperson's responsibilities and requirements**

*Facilitators*

- Designated chairperson dedicates themself to this task
- Chairperson decides not to discuss a case when the preparation is insufficient
- Chairperson structures the meeting by giving speaking turns to participants, summarising and drawing up the final conclusion
- Chairperson checks and corrects the minutes
- Chairperson intervenes in conflicts

*Barriers*

- Chairperson struggles to intervene (e.g. when unnecessary information is presented, when participants are insufficiently prepared, when there are conflicts)
- (Young) chairperson lacks authority

**Category: team member requirements**

*Facilitators*

- There is a fixed team composition to promote familiarity between team members
- At least one participant of each core specialty is present
- All core members have adequate tumour-specific experience and up-to-date knowledge
- If a participant is unable to attend, he will provide a replacement from the same subspecialty with expertise

*Barriers*

- Absence of participants knowing the patient in person
- Insufficient preparations by core team members

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**Theme: competences, behaviour and team dynamics**

**Category: required competences and behaviour of participants**

*Facilitators*

- Participants are confident about their own knowledge
- Participants are aware of and open about a lack of knowledge
- Participants pay full attention to the MDTM during the entire meeting
- Participants do not interrupt each other / allow each other to speak
- Participants listen carefully to each other
- Participants are open to feedback

*Barriers*

- Participants are too dominant, exploit their authority or express very strong opinions, which hinders the input in discussions of other participants
- Participants are too introvert, hindering participation in the discussion
- Participants' insecurity prevents them from speaking
- Participants are not objective because they are emotionally involved with the patient
- Participants are distracted by other activities (e.g. checking their mobile phones or answering emails)

**Category: team dynamics and hierarchy**

*Facilitators*

- There is an open and friendly atmosphere
- Discussions remain professional and not personal
- Consensus is reached democratically
- The communication between participants offers space for a participant to show vulnerability
- There is loyalty and helpfulness between participants
- Participants hold each other accountable for undesirable behaviour
- Participants trust each other

*Barriers*

- The hierarchical position of less experienced / younger participants hinders their MDTM participation
- Consensus is negatively influenced by power relations (e.g. experienced physician from peripheral hospital versus less experienced expert from academic centre).
- Collaboration is jeopardised by conflicts between participants
- Irritation on the part of participants leads to unfriendly excesses, negatively affecting the atmosphere

- Formation of subgroups of participants who collude hinders an open atmosphere
- There is a lack of respect among participants
- The atmosphere is too informal, which hinders efficiency

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**Theme: meeting content**

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**Category: discussion needs***Facilitators*

- Taking disease-specific characteristics into account
- Taking patient preferences into account
- Presence of a patient advocate who represents patient preferences and views
- Formulating an alternative treatment option when there is a considerable chance that the proposed option is not suitable
- Discussing the arguments when deviation from current guidelines is proposed
- Discussing all equivalent treatment options
- Discussing the options for clinical trial participation
- Active contribution of all participants promotes good discussion

*Barriers*

- Attention wanes when no active contribution is needed
- In-depth discussion is hindered if participants only read their report aloud instead of adding value to it
- Only one tumour-specific expert (e.g. consultant) is present, which inhibits discussion due to one-sided input
- Discussions go beyond the subject or contain irrelevant input, making it more difficult to reach consensus
- Repeating discussion arguments wastes time

**Category: acknowledge educational aspects of MDTMs***Facilitators*

- Acknowledging education for residents as MDTM learning moment for both medical and non-medical competences\*\*\*
- Attention should be paid to non-medical competence training (e.g. collaboration, communication) between participants
- For learning purposes a case should be reintroduced if the treatment received differs from the MDTM advice

*Barriers*

- Active contribution by too many residents slows down the progress of the meeting
- There is no time or space for asking questions
- Spending time on medical education is useful for the residents, but does not provide the medical specialists with any new information, making it a waste of time for them

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\* ICT: Information communication technology

\*\* MDTM: multidisciplinary team meeting

\*\*\* Given that the MDTM takes place in a teaching hospital.