

# **Analysis of multidisciplinary tumor boards (MDTs) in Austria: Are there differences in the quality of presented patient information within the same organizational setting?**

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## Introduction

- In Austria, **40,000 people** are diagnosed with **cancer** each year (expected to **double by 2040**) (Statistik Austria, 2024; Wild et al., 2020).
  - Cancer is increasingly becoming a chronic disease, resulting in more **cancer survivors**.
  
- The Austrian health system is **among the world leaders in treatment costs**, but **the outcome of oncological care is average for most entities** (Allemani et al., 2018; OECD, 2023).
  
- As demand in oncology grows, it becomes increasingly important **to use limited resources as effectively as possible** (Lamb et al., 2014; Soukup et al., 2020a; Soukup et al., 2020b).
  - Consideration of the **quality of multidisciplinary teamwork** in cancer care.
  - Although much information is available on multidisciplinary teamwork in health care, **evidence of its quality in cancer care is still missing**.

## Introduction

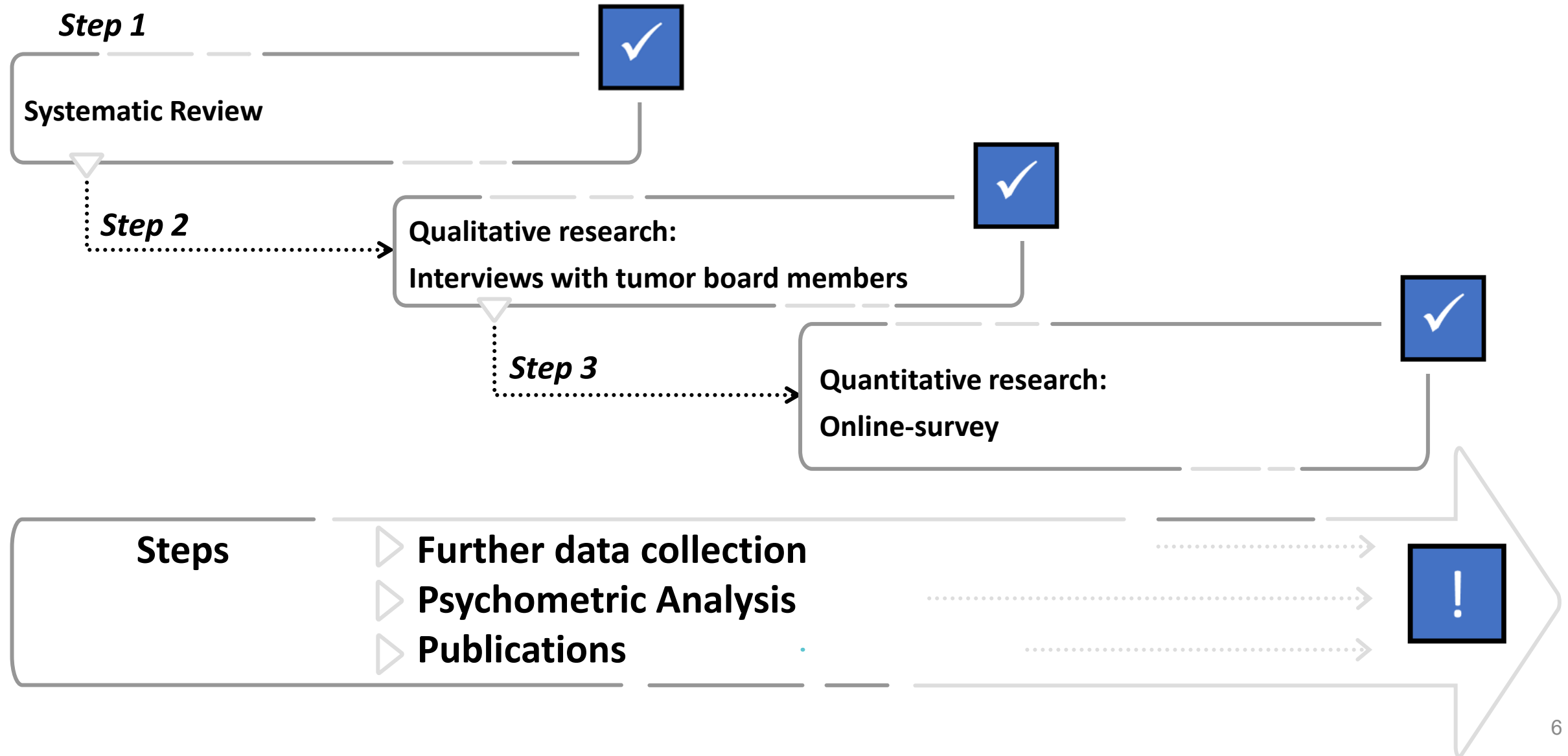
- The multidisciplinary approach **suggests...**
  - ... **improved communication and decision-making** between health professionals.
  - ... **benefits** for patients.
  - ... high-**quality** cancer care and **improved survival**.
  
- **Tumor boards (MDTs)**, are **considered the gold standard** in oncology (Kočo et al., 2022).
  - **Treatment recommendations in weekly meetings**
  - Discussion of **every initial cancer** diagnosis
  - **Mandatory disciplines:** surgery, radiology, radiation, oncology and histology

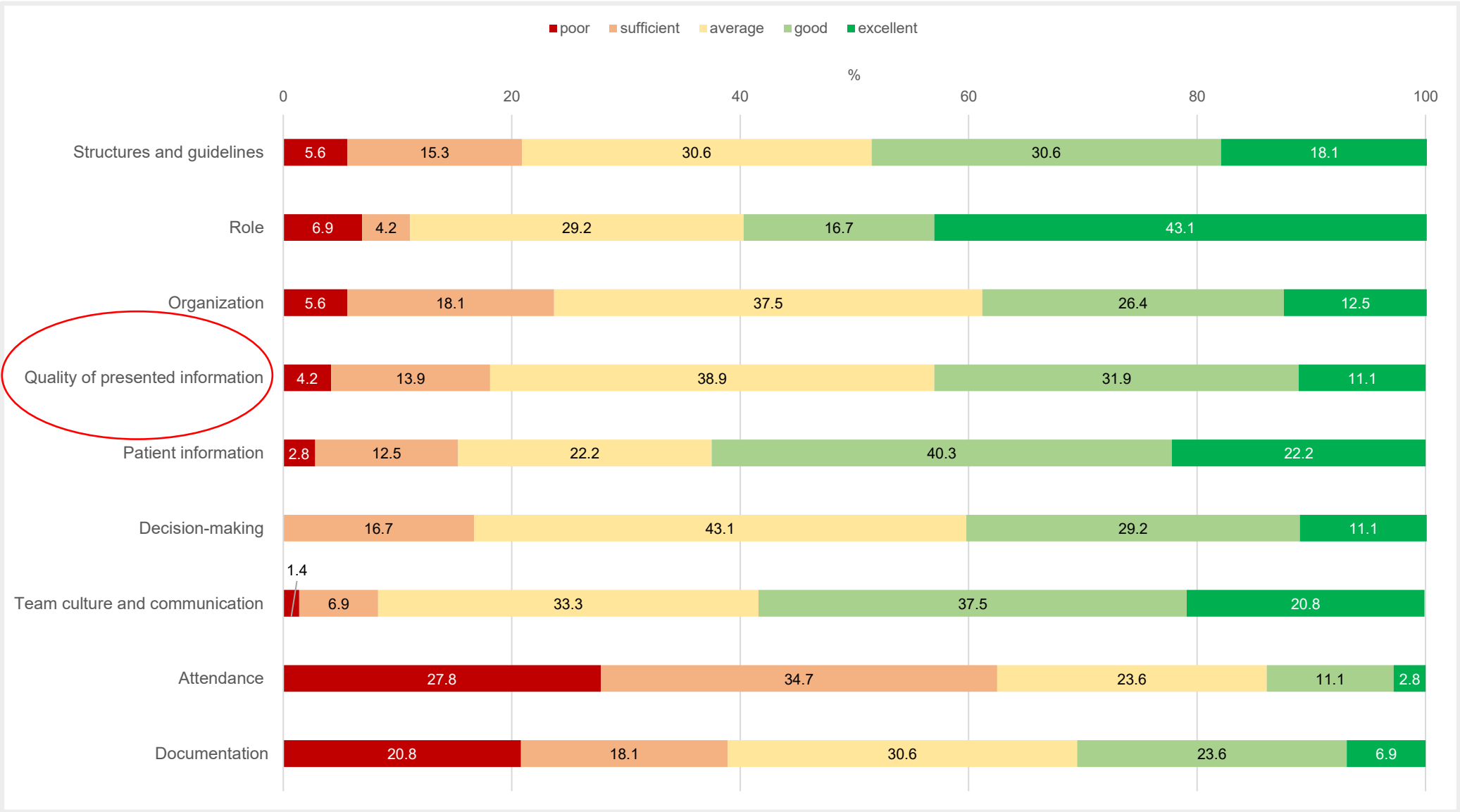
## Introduction

- The **regular implementation** of tumor boards requires a high commitment of **human, financial, and time resources**, which are then not available for routine operations (Winters et al., 2021).
  - The benefits **are sometimes controversial from a business and management perspective**, particularly regarding effectiveness and efficiency (Engelhardt et al., 2021; Freytag et al., 2020).
- **No clear link has been found** between tumor board discussions and improved outcomes (Ali et al., 2023; Askelin et al., 2021; Kočo et al., 2021; Soukup et al., 2021).
  - **Evidence suggests that tumor boards do not always work optimally** (Jalil et al., 2013; Lamb et al., 2013; Walraven et al., 2023).
- **To evaluate the performance of MDTs, it is methodologically and ethically difficult to find a suitable comparison group, even within the same organizational setting.**

## Methods

- **To assess differences in MDTs, the Austrian Tumor Board Survey (ATS) was used:**
- (1) structures and guidelines, (2) role at the MDT, (3) organization, (4) **quality of presented information**, (5) patient information, (6) decision-making, (7) teamwork and culture, (8) attendance, (9) documentation
  - (1) Tumor boards result in better patient care (Outcome-Variable 1)
  - (2) Perceived value of the tumor board for patient management (Outcome-Variable 2)
- **Online-Survey with LimeSurvey (January-August 2023)**
  - **177 members of seven MDTs of an Austrian academic hospital.**
  - **72 participants** answered the questions completely (response rate 45.7%).
- **Kruskal-Wallis test and pairwise post-hoc tests with Bonferroni correction were used.**
- **Semi-structured interviews were conducted with tumor board members to analyze the differences in the quality of presented patient information.**





n = 72

<b>Analysis</b>	<b>Comparison</b>	<b>Test statistic</b>	<b><i>p</i> - value</b>	<b>Effect Size (<i>r</i>)</b>
Kruskal-Wallis Test	All MDTs ( <i>N</i> = 7)	$H(6) = 20.38$	< .01	—
Pairwise Comparison (Bonferroni-corrected)	Colorectal (CRC) vs. Oncological Rehabilitation	$z = - 3.58$	< .01	.84
Pairwise Comparison (Bonferroni-corrected)	Gastrointestinal Cancer vs. Oncological Rehabilitation	$z = 3.09$	< .05	.67

*Note.* The following tumor boards were included in the sample: Colorectal cancers (CRC), Gynecological malignancies, Musculoskeletal tumors, Oncological rehabilitation, Pediatric neurooncology, Urology and esophagus, Stomach, Gastrointestinal tumors (GIST).

## Conclusion

- **Significant variation in the quality of patient information presented across MDTs, despite similar organizational structures.**
- **Qualitative analysis revealed internal process differences as a key cause.**
- **Lower information quality may lead to:**
  - Delays in treatment initiation
  - Repeated patient presentations
- **Implications**
  - Not all MDTs meet the same standard for information quality.
  - Structured processes can improve consistency and decision-making

## Recommendations

- **Standardization**
  - **Checklists and structured templates** for consistent case presentations
  - **Digital tools** to organize and present clinical information
- **Team Roles & Participation**
  - **Key personnel** (e.g., case managers, radiologists) present for all cases
  - **Role definitions** and rotation to ensure accountability
- **Training & Feedback**
  - **Training programs** on communication and clinical documentation
  - **Peer reviews** and case audits for quality monitoring
- **Process Monitoring**
  - **Quality indicators** for measuring information completeness and timeliness
  - **Improvement cycles** (PDCA) to optimize MDT performance

## Outlook

- **Further research is needed (limited sample size)**
  - To gain a **deeper understanding of the quality of presented information** in tumor boards.
  - To confirm the assumptions made and to provide implications for practice.
  - A pilot study is recommended to determine which best practice procedures are appropriate in which MDT.
  
- **Validation of the developed questionnaire to drive a continuous improvement process** in cancer care in Austria:
  - **Internal evaluation** of structures, processes, and outcomes to identify areas for improvement per board
  - **Independent implementation of improvement** potential by tumor board members
  - Use of **checklists and facilitated documentation** to increase patient safety

# Thank you for your attention!

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