

Towards a Frictionless CAR-T Therapy Process: Identifying and Prioritizing Procedural Preconditions for Oncologic Institutions Using Group Concept Mapping

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INTRODUCTION

The CAR-T (chimeric antigen receptor T-cell) therapy process is complex in nature and a variety of stakeholders is involved along the different steps [1] (see Fig. 1). Thus, healthcare professionals are confronted with various types of hurdles. Since the first CAR-T approvals in Europe in 2018, German CAR-T experts have gained experience in the process knowing which preconditions are beneficial to reduce friction. However, a systematic survey and prioritization of those preconditions was lacking.

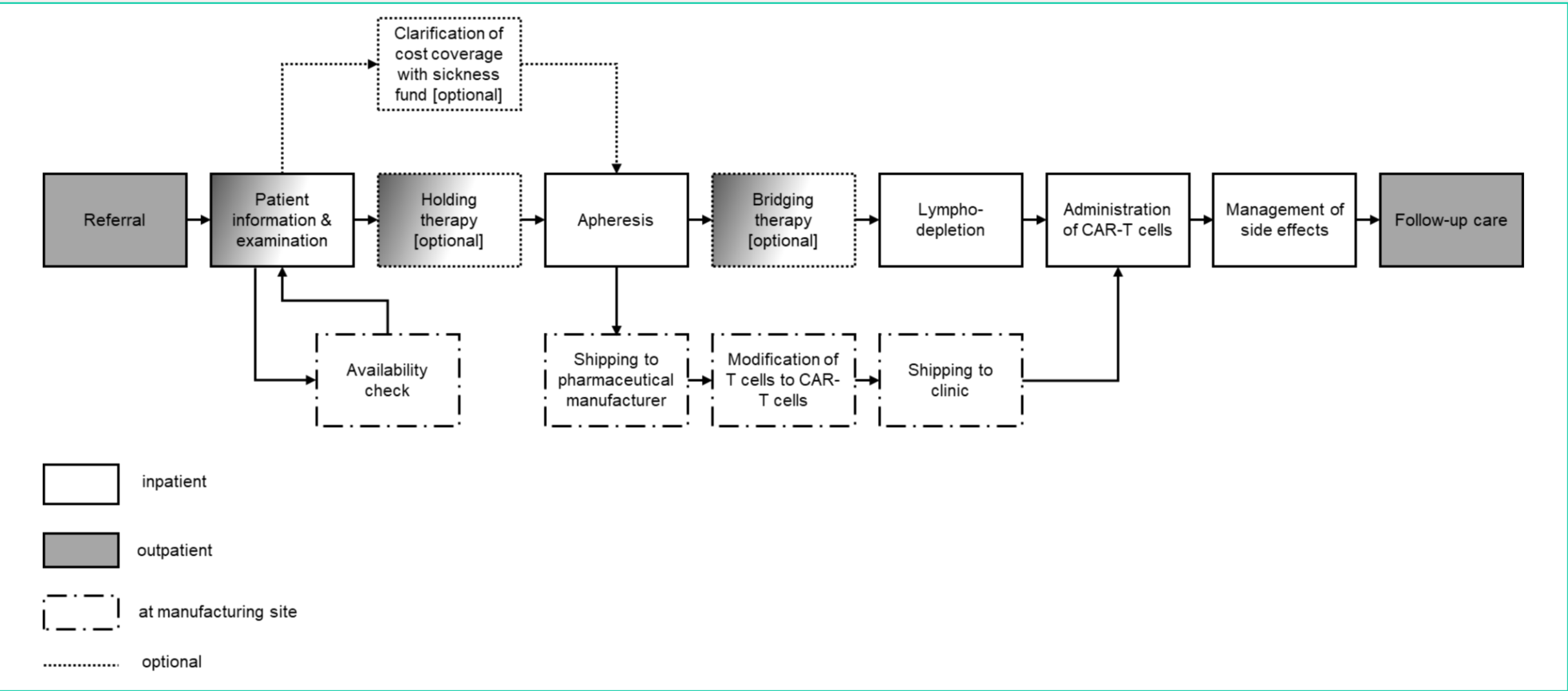


Fig 1: CAR-T therapy process [2]

OBJECTIVE

- The study objective was threefold:
- identify preconditions for a frictionless CAR-T process from a multi-stakeholder perspective,
 - Rate the importance and feasibility of identified preconditions, and
 - Prioritize them based on ii).

METHOD

A Group Concept Mapping (GCM) analysis (a mixed-methods participatory research) was performed in 2023. CAR-T experts from different backgrounds reflected their perspectives and perceptions regarding the following focus prompt: “To ensure that the CAR-T cell therapy process - from initial indication to follow-up – runs as frictionless as possible, it takes ...?”

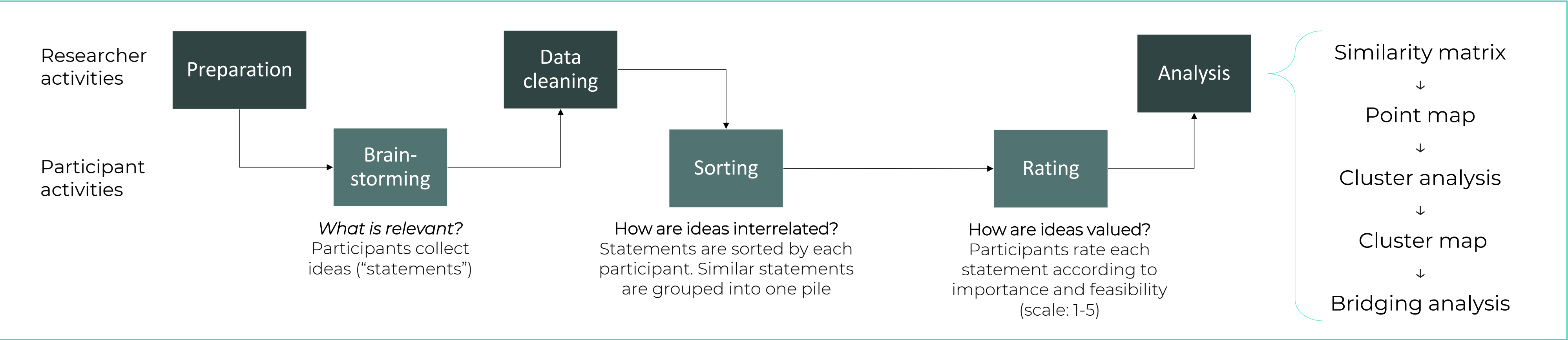


Fig 2: Research process - Group Concept Mapping analysis

RESULTS

“To ensure that the CAR-T cell therapy process - from initial indication to follow-up - runs as frictionless as possible, it takes ...?”

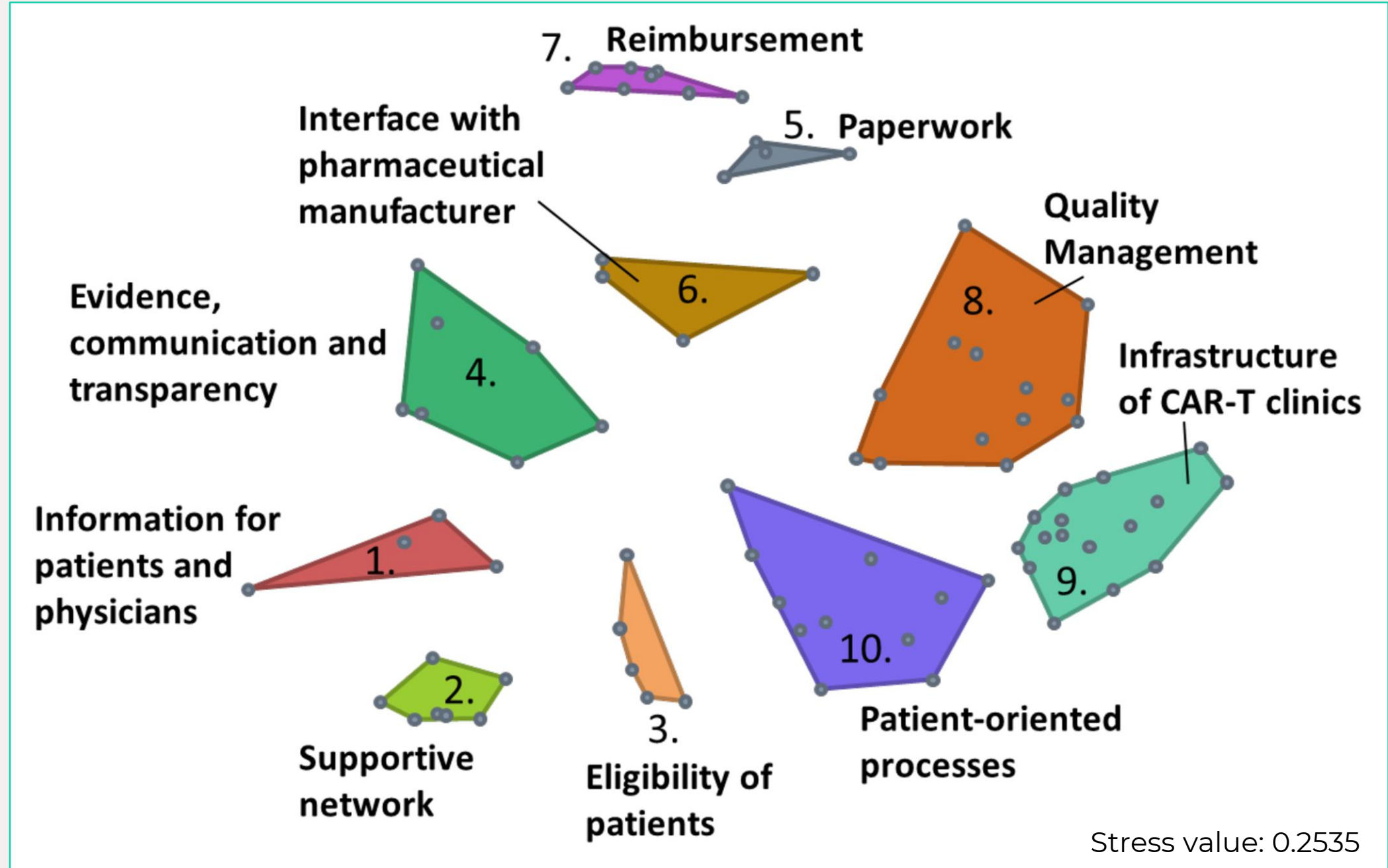


Fig 2: Cluster map [2]

Participants:
20 in total

- 50% medical
- 25% health economic
- 15% pharmaceutical
- 5% assistant professions

How to read the map:

- Each point reflects a statement
- Points close together = statements are perceived similar
- Combined statements = cluster representing a common topic

Tab. 1: Cluster details incl. average ratings per cluster

Cluster #	Cluster title	Exemplary statements	Avg. Importance rating	Avg. Feasibility Rating
Cluster 1	Information for patients and physicians	Target group and product-specific information, Shared decision making	4.16	3.77
Cluster 2	Supportive network	Cancer survivorship measures, Involvement of relatives	4.03	3.53
Cluster 3	Eligibility of patients	Rapid clarification of patient's suitability, Easily applicable risk scores	4.41	3.63
Cluster 4	Evidence, communication and transparency	A clear definition of second-line therapy, Outcome data collection	4.01	3.33
Cluster 5	Paperwork	Reduction of the bureaucratic burden, Managing issues with MD (Medizinischer Dienst)	4.1	2.52
Cluster 6	Interface with pharmaceutical manufacturer	User-friendly ordering portal, Cross-industry standards, Manufacturing capacities in Europe	4.03	2.85
Cluster 7	Reimbursement	Security of cost coverage in all sectors, Specific DRG(s)	4.29	2.31
Cluster 8	Quality Management	Exchange of experiences, Collaborative tumor boards, Training	4.17	3.18
Cluster 9	Infrastructure of CAR-T clinics	CAR-T cell coordinators, Personnel capacities, Apheresis capacities	4.1	2.93
Cluster 10	Patient-oriented processes	Clearly defined contact persons, Avoidance of infections, Timely diagnostics	4.46	3.32

Top 3 ratings per dimension in bold

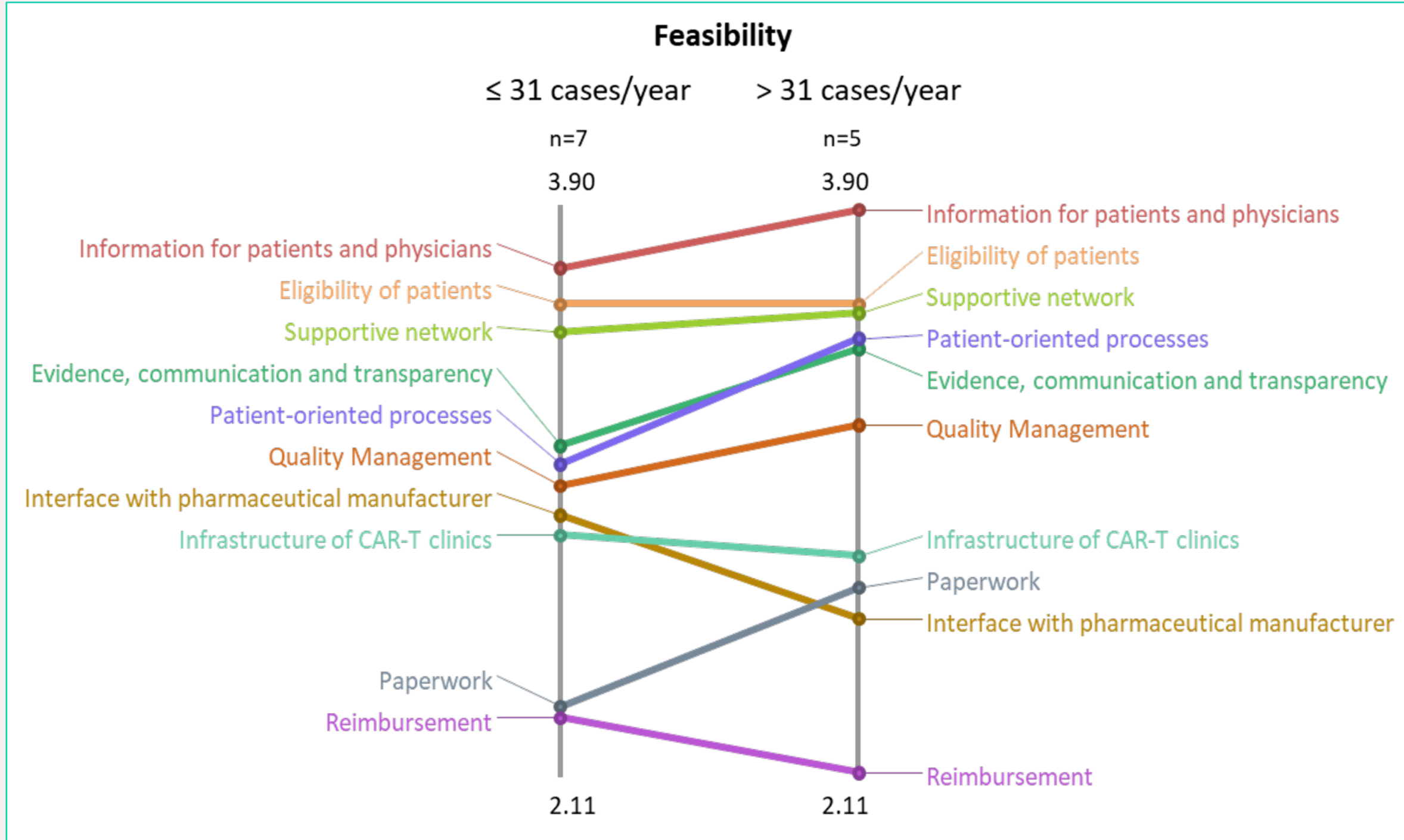


Fig 3: Pattern Match - Feasibility rating (above versus below average case numbers per year) [2]

Comparing importance ratings for the same two subgroups: Subgroup with > 31 cases/year valued:

- Interface with pharmaceutical manufacturer higher
- Reimbursement lower
- Evidence, communication and transparency lower

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CONCLUSIONS

The GCM analysis identified 10 clusters reflecting the common categories of preconditions for a frictionless process. They include provider-related, patient-related, and system-related factors.

Based on the perceived importance and feasibility, clusters and individual statements can be prioritized. Patient-oriented processes, eligibility of patients, and reimbursement are perceived as the most important topics.

System-related aspects (e.g., reimbursement) often demonstrate discrepancies between a high importance and poor feasibility. Additional efforts are thus required to promote these preconditions.

A higher case number may change priorities due to more experience, available infrastructure but also a higher need to coordinate with manufacturers.

REFERENCES

[1] Canales Albendea et al. Comparative analysis of CAR T-cell therapy access for DLBCL patients: associated challenges and solutions in the four largest EU countries. Front Med. (2023) 10:1128295. doi: 10.3389/fmed.2023.1128295

[2] Siefen, Ann-Cathrine et al. "How to Optimize the CAR-T Cell Therapy Process? A Group Concept Mapping Analysis of Preconditions for a Frictionless Process from a German Multistakeholder Perspective." Frontiers in Oncology 14 (September 23, 2024): 1466803. https://doi.org/10.3389/fonc.2024.1466803.