

Logistic and documentary factors influencing reasonable tumorboard decisions



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Abstract #2081

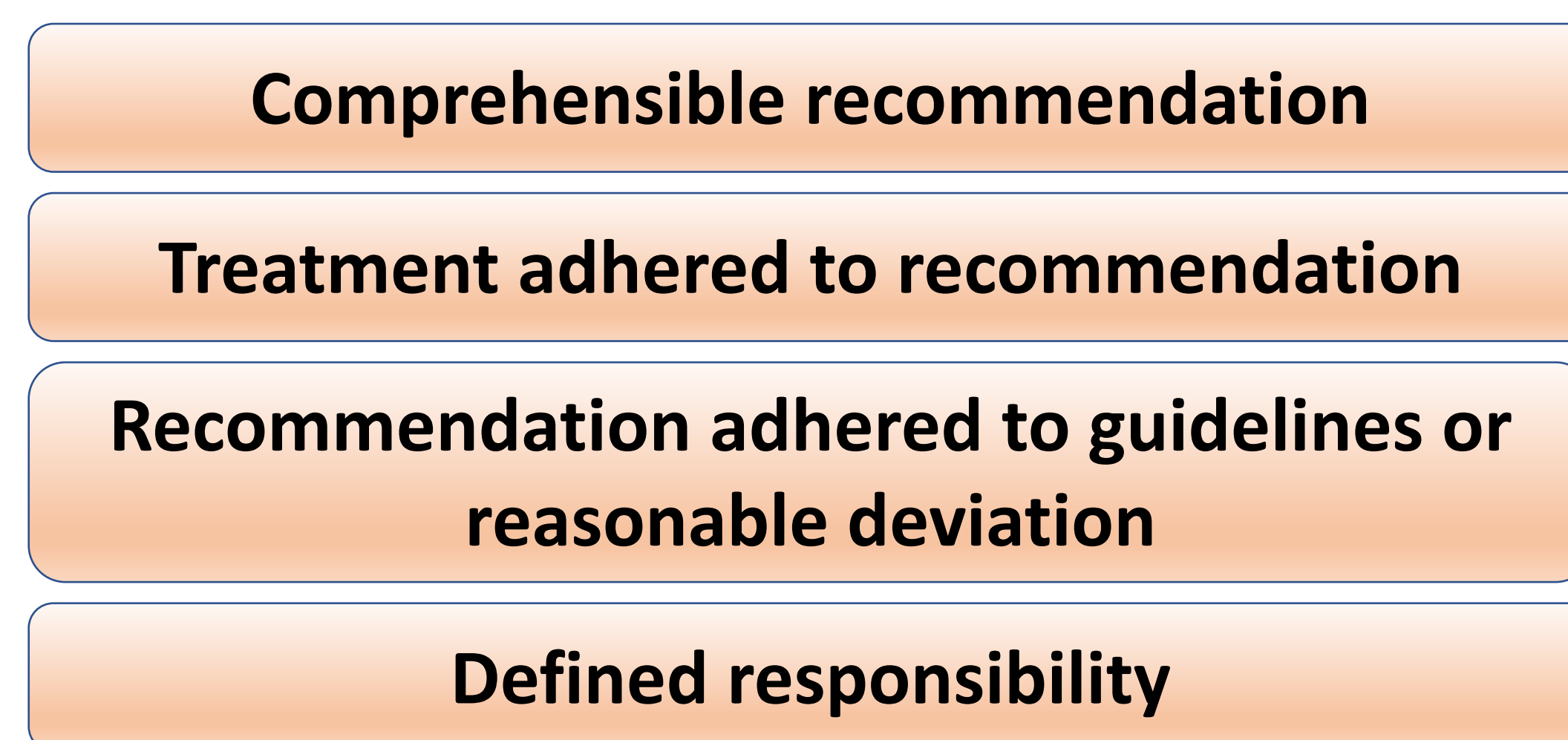
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Background

Multidisciplinary team meetings (MDT) are a central institution in oncological decision-making and considered standard of care. Yet, apart from expert opinion, there is little evidence of factors that contribute to good recommendations, or even criteria that define their quality. Here we examine which factors contribute most to comprehensible decisions that are close to guidelines or provide plausible explanations for diverging, an enable recommendations that are actually followed by members of the MDT.

Fig. 1: Criteria for good recommendations



Methods

In this retrospective single institution analysis, we looked at 494 decisions of visceral oncology MDT meetings in 2020. For every case discussed, we checked 26 predefined factors deemed necessary for effective MDTs in oncology (Fig 2). They were divided into factors related to informational, or logistical input into MDT, factors related to the recommendation itself and output-factors. Due to appearance 13 were considered as Input-factors for statistical analysis and 6 as output-factors. We performed logistical regression analysis to find correlations between input and output factors. Furthermore, we analysed which of the input factors contributed significantly to a “good recommendation”.

Fig 2: Factors deemed necessary for effective MDTs

Logistical factors	Informational factors	Factors in Recommendation
Core members present*	Cancer Stage known*	Study recommendation provided*
Additional team members present	Case report available*	Missing information in submission**
Treating physician present*	Comorbidities reported*	Missing information documented in report**
Patient known to MDT members*	Performance score reported*	Evidence of thorough discussion in MDT meeting*
Specialist needed	Nutritional risk score reported	Re-Submission necessary***
Specialist recommended	Radiology report available*	Re-Submission performed***
	Pathology report available*	
	Psychosocial evaluation available	
	Palliative needs documented	
	Patient's wishes reported*	

*considered in statistical analysis as Input-factor **Transformed into one variable ***considered as output-factor

Results

We found that 65% of recommendations made by our MDT met all the predefined criteria of “good recommendations” (Fig 3). We also found a strong and consistent correlation between logistical and informational input factors and the quality of MDT output (Fig. 4+5). Most influential in our setting was the presence of all core members ($p < 0.00001$), a clear indication of patient wishes ($p < 0.01$), and the written documentation of important information not submitted at the time of case registration but communicated during the meetings ($p < 0.00000001$).

Looking separately for this factors, prediction of “good recommendations” is possible with a sensitivity of 72,6% and a specificity of 64,7% (Fig. 6).

Fig. 3: Criteria for good recommendation fulfilled

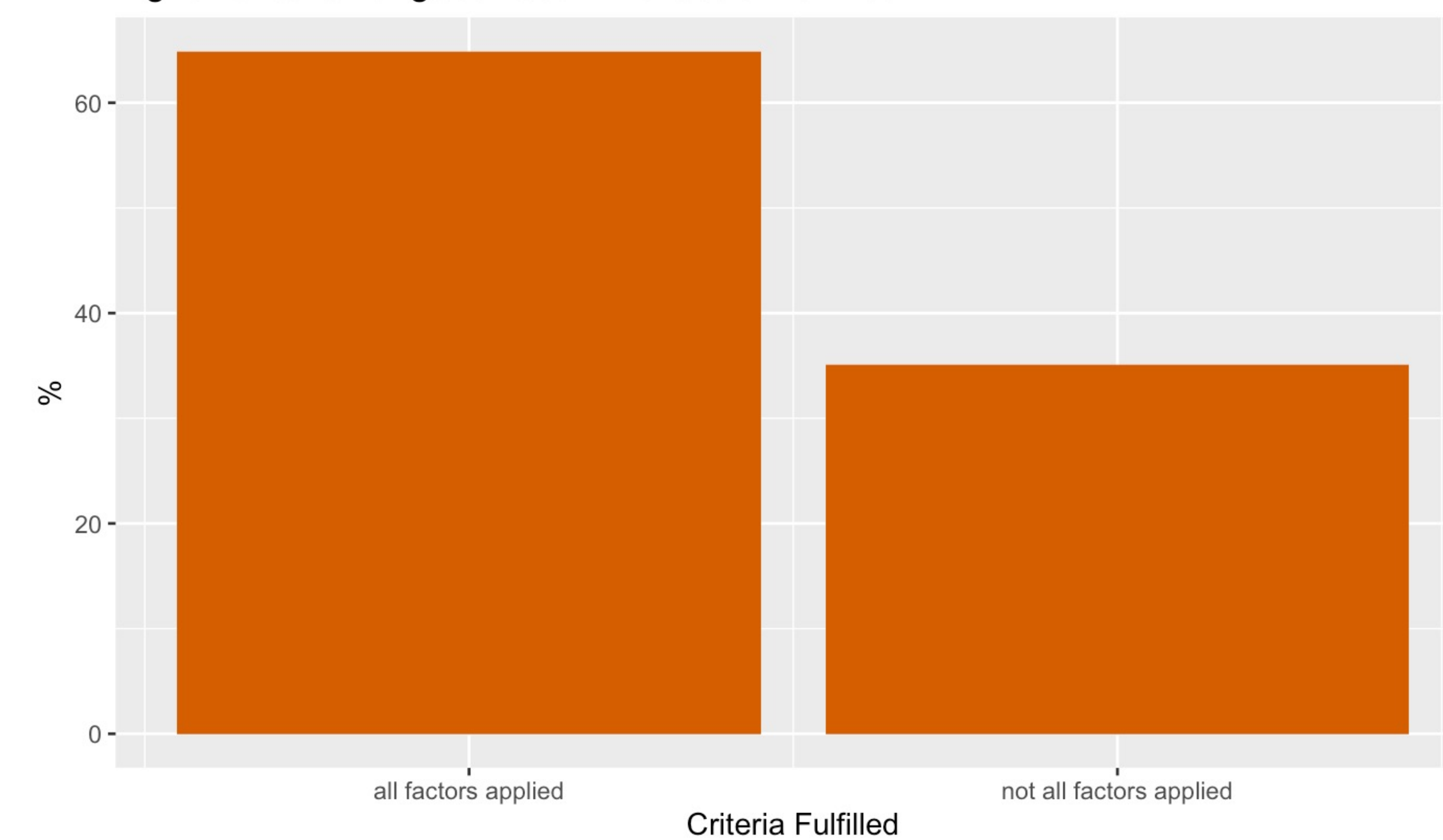
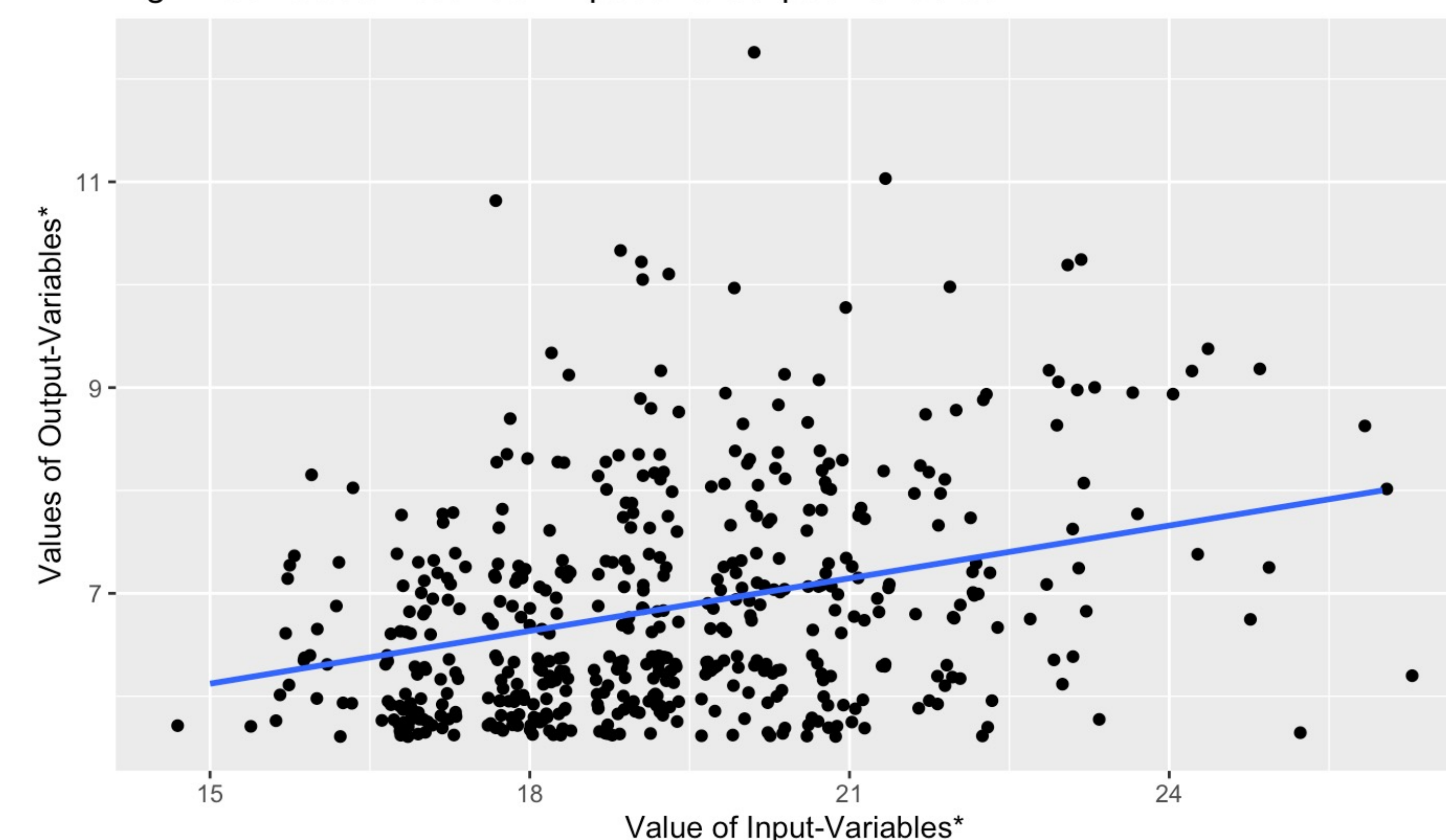


Fig 4: Correlation between Input and Output-Variables



*Lower Values show higher fulfilment of individual factors

Fig 5: Values of Input-Variables and Good Recommendations

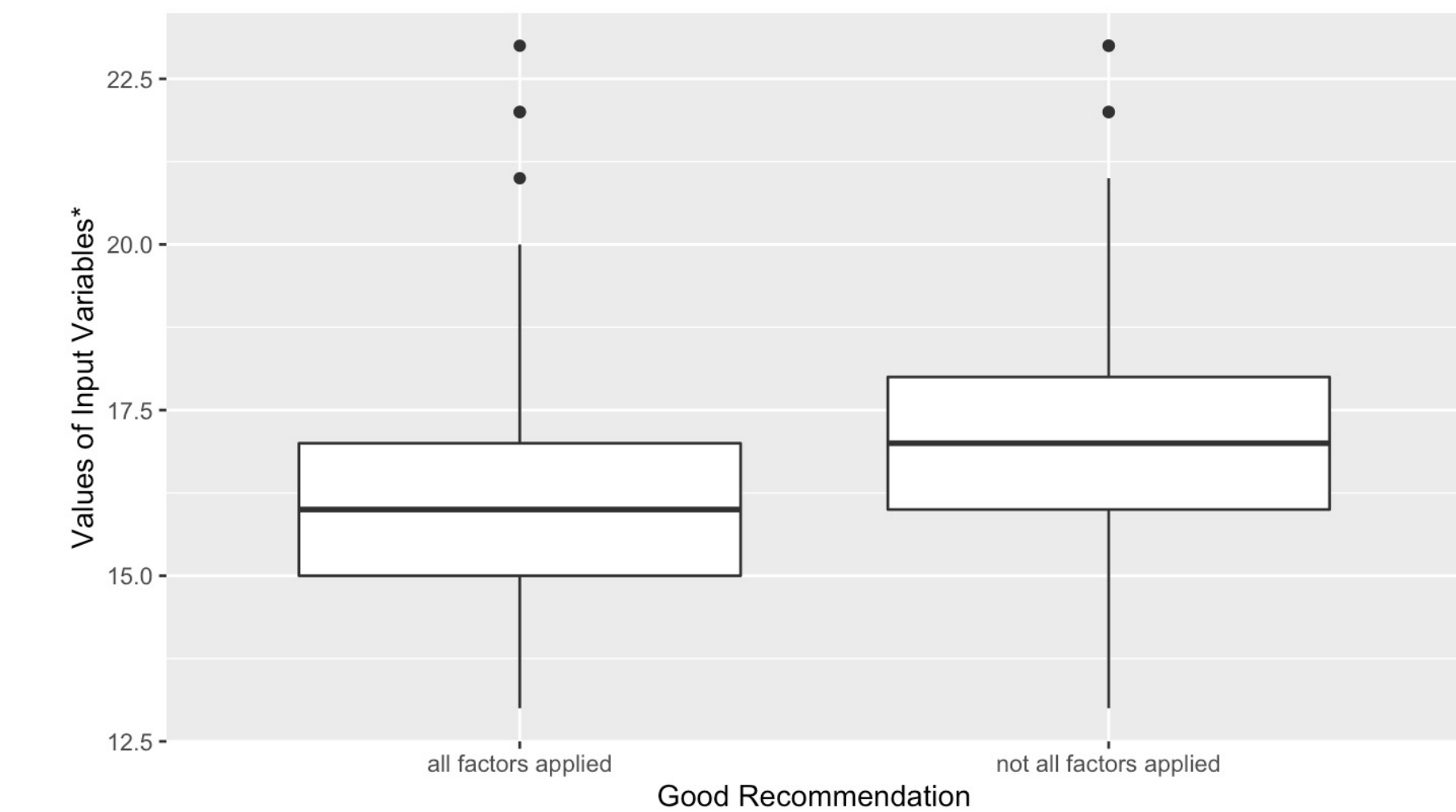


Fig 6: Prediction Modell of Input- and Output-Variables

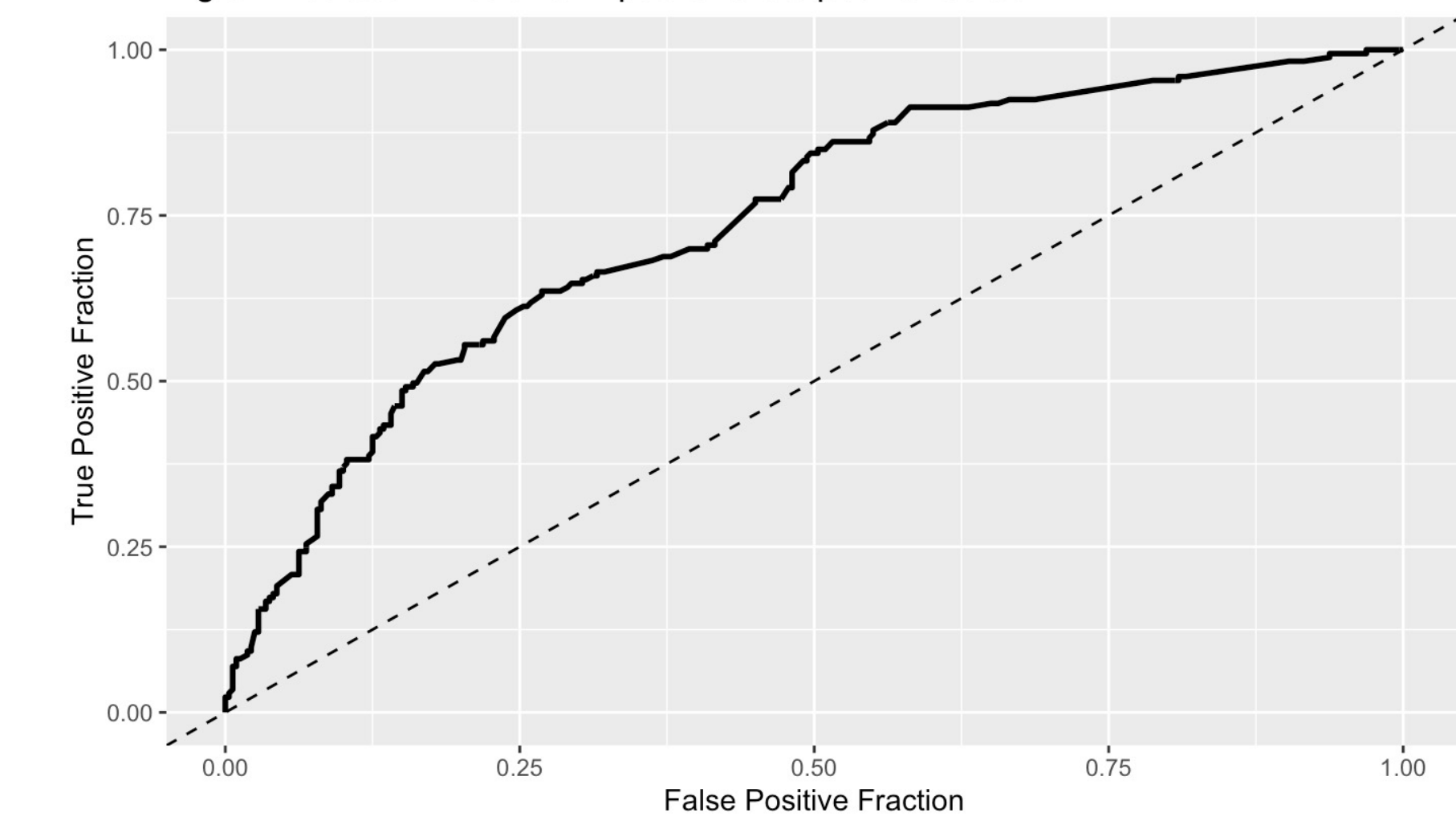
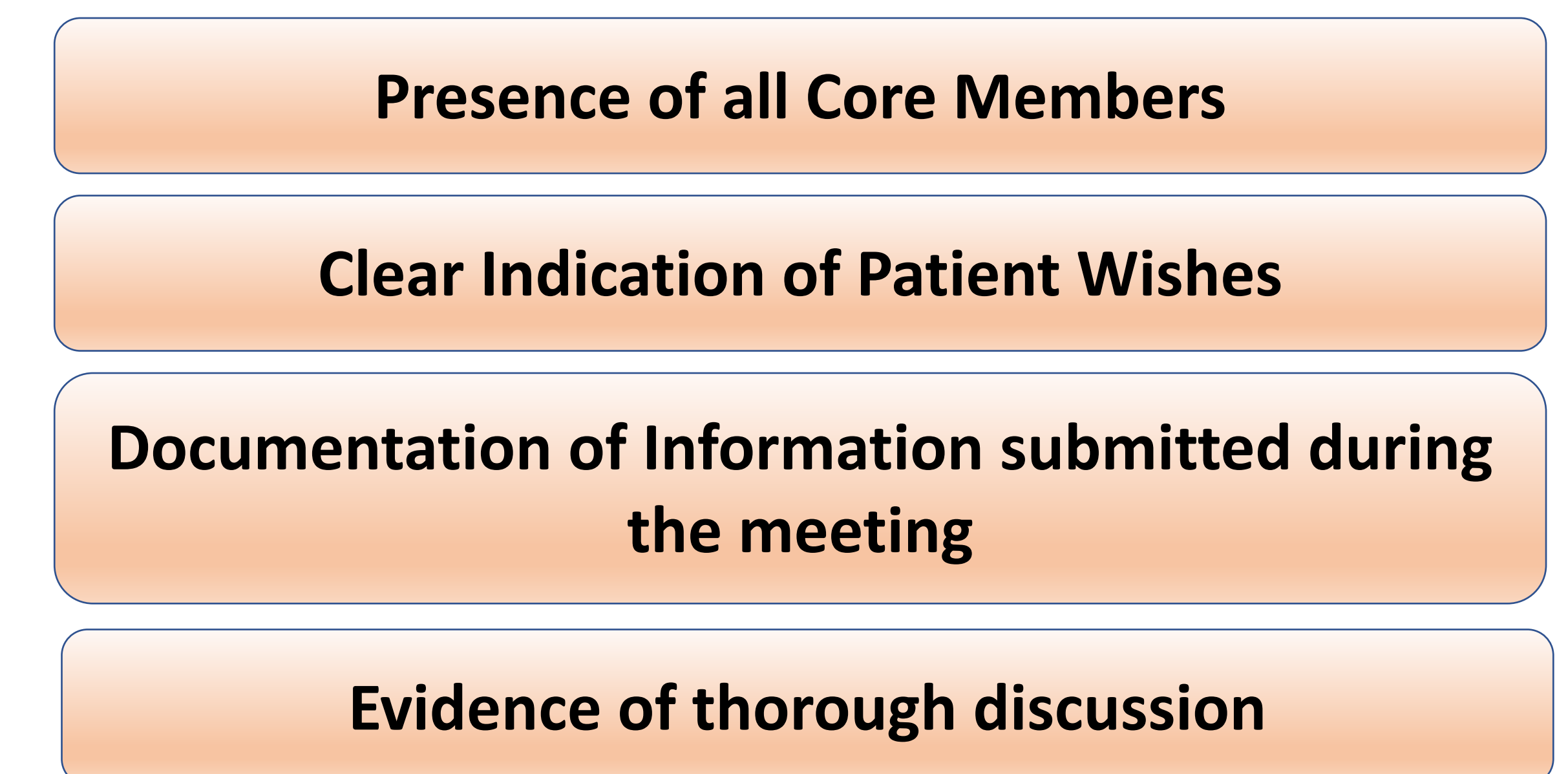


Fig. 7: Most influential factors for Good Recommendations



Predictive Value considering these factors for “Good Recommendations”
Sensitivity: 72,6%
Specificity: 64,7%

Conclusion

Oncological treatment is strongly based on MDT decisions. Here we demonstrate that analysis of input factors of MDTs provides some insight into which factors mainly influence the quality of recommendations. Future studies will examine if changes in the structure and conduct of our MDT based on this analysis will lead to improved MDT recommendations.