Data-driven shared decision-making on cancer treatment

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1. PROJECT AIM

- To facilitate shared decision-making, patients can make use of decision aids
- However, such tools are generic and lack personalized explanations about treatments

To develop a data-driven personalized patient decision aid

2. APPROACH

1. DATA

- We use data from two large and dynamic datasets with information about prior cancer patients
- Both survival and quality of life data
- The datasets can be linked at the patient level

2. PERSONALIZED OPTION PROFILES

- By combining these datasets, we will build new personalized statistical models
- Each treatment option yields a possible outcome profile with a certain probability, which in turn depends on person & tumor characteristics

3. PERSONALIZED DECISION AID

- A data-to-text system will automatically generate personalized explanations of the outcome profiles
- The explanations will be patient-friendly and multimodal, combining textual and visual information

When patients and doctors can rely on personalized data, the shared decision-making process will be more effective and efficient

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