Teasing Poster

Predicting Fear of Cancer Recurrence using Artificial Intelligence and VICAN Survey

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──── **Abstract** ────

Life expectancy has significantly increased in recent decades, thanks to therapeutic advances and increasingly early screenings. However, life after cancer is not a return to the previous state, and individuals face many difficulties in their daily lives, including the fear of cancer recurrence (FCR). FCR is characterized by high levels of anxiety and concern, among other things. While targeted psychosocial interventions have shown their interest in helping to reduce FCR, there is currently no effective care or measure in France to identify individuals likely to suffer from clinical FCR early on. The objective of this thesis is to use data from the VICAN survey, a nationwide study of French cancer survivors conducted 2 and 5 years after their cancer diagnosis, to propose an interpretable artificial intelligence (AI) model to identify patients at risk of developing clinical FCR in three sites: breast, colorectal, and prostate. We are investigating whether FCR is linked to an overconsumption of healthcare and, if so, identifying the healthcare consumptions associated with it. Ultimately, we plan to implement an AI-based application that allows oncologists and other healthcare professionals to screen patients at risk of developing FCR and direct them towards more appropriate care, while reducing possible consumption costs. This will also facilitate the expansion of the application to other types of cancers and the prediction of other post-cancer quality of life factors.

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