Exploring Supportive Care and Information needs of Melanoma Patients Receiving Immune-Checkpoint Inhibition through a Proposed eHealth Application: A Qualitative Study

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Background

Aim: to identify **supportive care and information needs** of high risk and advanced melanoma patients, and how these specific needs can be met using **eHealth applications**.

Study population

- High-risk (resectable stage III) melanoma and advanced (stage IV and unresectable stage III) melanoma

- During or after treatment with **immune checkpoint-inhibitors**
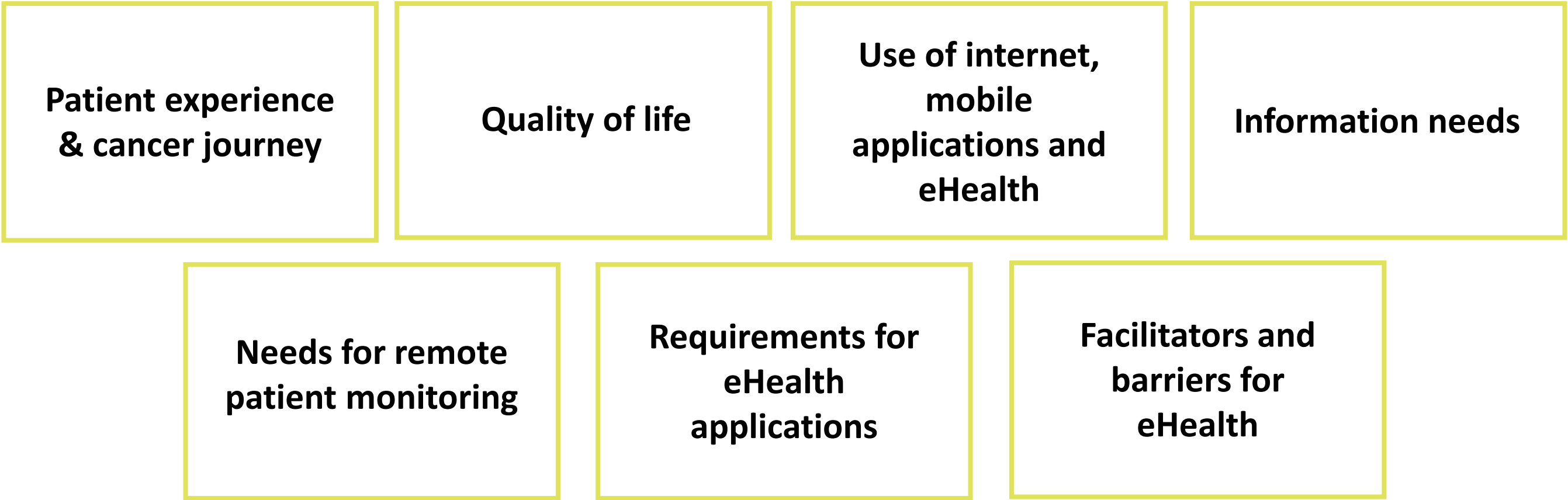
Methods

- **Semi-structured interviews** to understand patient needs and requirements as possible end-users of a to-be-developed mobile eHealth application

- Interview transcripts were independently coded and **thematically analyzed**

Results

- Thirteen (advanced) melanoma patients consented to be interviewed (6 men and 7 women), aged 31 to 71 years.

- Nearly all patients experienced **unmet information and supportive care needs** during and after active treatment.

- Patients would value eHealth applications providing **information**, remote patient **monitoring** and **symptom management**.

Themes

| Patient experience & cancer journey | Quality of life | Use of internet, mobile applications and eHealth | Information needs |

| Needs for remote patient monitoring | Requirements for eHealth applications | Facilitators and barriers for eHealth |

"That fact, yes, for me, it is essential for an app, that you as a person can actually just do something yourself. That you are separate from being that patient all the time."

"I catch myself forgetting everything [symptoms] that I experienced. So it might be nice to have an overview for yourself …. it might also be that the physician finds something useful."

"Everything is in the forms, you read them in five minutes, you sign them. I think there could be more attention towards that [information provision]."

"Well, I guess keep staying active, um, looking back, that would have definitely helped me I think. A module that contains some good tips or even more extensive kind of help with exercises."

"Maybe that is also nice, a tab with experiences, that you can also read anonymous interviews of, how do you do it, how do you deal with it, and what are your tips and tricks."

Information- and supportive care needs

Needs	Suggestions for content (evidence-based) *
Information and education (text-based)	Side effects, nutrition, treatment(s), additional care options, physical activity, managing work and cancer, diagnosis, tips on managing anxiety and cancer-related rumination, medication, general health and lifestyle tips, and prevention
Well-being interventions	Mindfulness, relaxation, physical activity (walking, yoga, etc.)
Peer support	Experiences of fellow patients, contact with fellow patients (social forum/buddy system)
Remote patient monitoring	Symptom monitoring, use of wearables (to track sleep, steps, temperature, blood pressure etc.)

*in order of importance

Conclusion

Advanced melanoma patients treated with immune-checkpoint inhibitors have **extensive needs for supportive care, information provision and symptom management**, regardless of information and services already provided by the hospital.

Expected benefits of the use of an eHealth application: increased **autonomy**, better **quality of life**, and improved disease **self-management**.