

# Taking control of cancer—from your mobile phone

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As cancer patients and their loved ones know, cancer is not a game. But games played on mobile phones could soon empower those affected by cancer, in a revolutionary new project developed by ecancer and collaborators.

Eight partners from five European countries have come together to create intelligent "games" to allow [cancer patients](#) to take control of their illness... by harnessing the power of their mobile phones.

iManageCancer is a consortium of healthcare professionals, game developers, and oncology educators like ecancer.

"iManageCancer, an EU funded project, is a fascinating research project, as it empowers patients to manage their cancer in a way that is not possible today," says collaborator Prof Dr Norbert Graf of the University of Homburg, Germany.

## Harnessing the power of reward

Popular games played on consoles, computers and mobile phones have many elements in common. Whether narrative-driven adventure game or simple, addictive puzzles, games are designed primarily to engage the player - resulting in pleasant feelings of control, empowerment and reward.

Could these properties be harnessed to help cancer patients navigate and manage their disease?

The iManageCancer group is developing prototypes of so-called "serious games" as a dynamic new platform for cancer management.

"From a game developer's perspective, iManageCancer gives us the chance to demonstrate how efficient and powerful digital games can be for mobile eHealth systems," says collaborator Ralph Stock of Promotion Software, Germany.

## **Bringing the community together**

"Digital games can not only change the way young patients cope with their disease - we think they will also have the power to encourage their family and friends," Stock adds.

Preliminary research suggests that serious games for young cancer patients could include an interactive multiplayer element, allowing children to gain emotional support from their friends.

"iManageCancer is not only a great support for patients, but also for patient groups, as they will be able to interact with them through the platform to help those who are coping with their cancer," says Prof Dr Graf.

Ideas being tested include a possible game in which children with cancer can encourage their friends to help them "shoot" cancer cells.

Games like these are expected to have many benefits, but chief among them are greater wellbeing, quality of life, and social support for young cancer patients.

## Control and empowerment of illness

For older cancer patients, harnessing [mobile phone](#) technology to manage their illness might not be as simple as shooting [cancer cells](#). The consortium is researching how mobile phone apps could help patients self-manage their own health data, recording their own symptoms, and taking part in rewarding activities.

But games for both children and adults are designed to incorporate systems of reflection and reward - key principles of cognitive behavioural therapy.

Psychological support is an often-overlooked aspect of cancer care. It's hoped that in addition to providing useful organisational and emotional support, the games will provide psychological benefits.

When prototypes of the games are completed, psycho-oncologists from the European Institute of Oncology will evaluate them to examine their psychological impact.

"By including psycho-cognitive aspects, a holistic view on patients is guaranteed," says Prof Dr Graf. "In addition, studying these games will also give us new insights in research."

## There will be an app for that

Games are only one aspect of what is hoped to be an integrated cancer management platform.

It's hoped that this suite of programs will provide patient access to personalised, context-sensitive, data driven information services in an appropriate language.

The platform will incorporate an app or management tool for patients to check potential drug interactions and predictable side effects.

In the later stages, optional wearable sensors connected to the platform will be developed to offer recommendations via the decision support system.

The goal is to help patients make informed choices on treatment options with healthcare providers.

## **A future of integrated cancer management**

If the pilot apps are successful, the iManageCancer project believes that the framework will be readily adaptable to the management of other chronic illnesses.

"In summary," says Prof Dr Graf, "The ability of patients to use an IT platform and these newly developed tools will put them in the driver's position in disease management."

Perhaps literally, as the case may be! But you'll have to watch this space to find out whether iManageCancer is developing a game where cancer patients will take a driver's seat in a virtual race for empowerment.

Provided by ecancermedicalsience

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