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Essential Digital Health

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The digital solutions offered to healthcare providers are rapidly expanding and a number of scientific journals have reported the results of studies in favour of the adoption of telemedicine. The Sars-Cov-2 pandemic has required professionals, as well as patients, to adapt in order to limit travel and hospital visits. The interest in using digital technology has a particular benefit for patients undergoing cancer treatment, such as the STAR (Symptom Tracking and Reporting) study developed by Ethan Basch's team ([REF Basch](#)). In addition to an improvement in the quality of life, and a reduction in unscheduled visits, the latter has shown an improvement in overall survival of 5.2 months for a cohort of patients in remote monitoring with a nurse navigators arm ([REF Basch](#)). The challenges in this context are essentially to enable the assessment and orientation of patients and to manage, as well as sometimes anticipate, the adverse effects of cancer treatment.

Technological progress is now providing tools to better understand and support patients, particularly via the Patient Reported Outcomes (PROs) programmes. The devices, integrated into digital platforms, allow real-time assessment of vital signs, as well as various examinations (such as ECG recordings ([REF](#))), in order to make the most accurate remote diagnosis possible. This continuous, real-life data thus makes it possible to adapt to each individual situation as

best as possible and to concretely achieve personalised medicine in order to respond to the often underestimated needs of patients (REF Basch NEJM 2010).

Furthermore, progress in cancer treatment now makes it possible to envisage long-term survival as well as patient recovery. However, despite essential progress the need arises to take into account the sequelae of cancer and its treatment, as well as, the needs of patient survivors. The Multinational Association of Supportive Care in Cancer (MASCC) survivorship study group considers survivorship to span from the time between diagnosis and the end of life and encompasses the realisation of the fullest potential for cancer survivors in all spheres of life. Therefore, its areas include the prevention of new recurrent cancer, surveillance for new or recurring cancer, interventions for prevention and management of cancer symptoms and the treatment side-effects (including pre-habilitation and re-habilitation), and co-ordination between specialists and primary care providers to ensure that all survivor needs are met (REF MASCC Survivorship study group). Different categories of patients can emerge from the survivorship approach i.e. acute, chronic, long-term as well as cured survivors (Surbone tralongo JCO 2016:34: 3372-3374). The challenges for telemedicine in the survivorship phase are therefore different from those in the therapeutic stage, because rather than having to rapidly react to a symptom, it means following-up a patient over a potentially long period of time, either to monitor the sequelae of treatment, to provide follow-up rehabilitation or to detect a recurrence or new cancer. It is therefore necessary to integrate the specificities of patients whether they are in a curative situation or in a chronic phase.

Chan et al. have addressed the question of the impact of telemedicine programmes in the context of survivorship after cancer disease through the analysis of 21 systematic reviews (REF Chan et al.). Their comprehensive and methodologically robust work has highlighted the importance of developing research programmes, including medico-economic issues, as well as the need to

develop recommendations for the implementation and use of telemedicine based on rigorous studies.

Thinking ahead, beyond the encouraging results of digital solutions, as regards the improvement of physical and psycho-social conditions generated by cancer, it is important to consider the issues now emerging with the implementation of telemedicine tools.

The first issue involves the heterogeneity of the organisations that have been developed according to their institutions, countries, cultures, and resources. Inequality is an initial challenge of digital development. At the local level alone, it is necessary to consider both intra- and extra-hospital organisations, to respect and strengthen the home-hospital network, and to rely on the co-ordination of participants and care, often over time.

The term, which may define a chronic condition, is another hazard that encompasses different aspects, i.e. survivors in a curative setting, with comorbidities and/or sequelae of either disease or therapies necessitating long-term support and survivors with advanced or recurrent cancer requiring chronic therapies and support. Chronic care management demands the most effective strategy in order to better manage patient pain and subsequent needs.

Finally, the consideration of patients' relatives, who are also affected by the disease experience, must be given support in order to assume the role of caregiver rather than hinder the patient-centred care approach made possible by current digital technology.

The prospective multicentre CANTO study was carried out in a large cohort of 12,012 patients treated for breast cancer (REF 1-2). The results obtained from these survivors have made it possible to define situations at risk of non-adherence to hormone therapy (REF 4) but also risk factors for complications of cancer and its treatment such as cognitive disorders (REF 6), fatigue (REF 5) or difficulties in returning to work (REF CANTO 3). These studies provide us with lessons in order to propose personalised patient pathways after cancer treatment. The use

of telemedicine for this type of cohort will essentially require not only an interactive approach combining information and a continual relationship with the patient, but also a collection of data which will permit a better understanding of real life situations and the impact of the interventions performed to meet their real needs. To fully reap the benefits, in terms of improving patients' living conditions and the quality of the research, an approach based on the guidelines now proposed by the team of Chan et al. is required, pending the publication of official guidelines.

It is also essential to integrate the needs and expectations of each party involved (professional caregivers, patients, and relatives) during and after cancer, and to consider the approaches of other disciplines such as cardiology (and their respective digital follow-up guidelines), in order to reach a holistic approach to the issues. This is the most effective way to strengthen multi-disciplinarity in order to reach global management for the latter stages of these patients.

The patient experience is also certainly the key to patient centred care interventions and a digital procedure must be developed into an intelligent tool, in order to permit better co-ordination of all the teams for the right patient, at the right time, in order to permit these patients to have access to a "new normal life" ([Ana Casas, MASCC meeting 2021](#)).

References