

# CureCancer Digital Platform in Clinical Oncology Practice Facilitates Patients' Self-data Recording, Communicating, Treatment Adherence, "Distancing Interventions" During Covid-19 and Reduces Costs. A Feasibility and Satisfaction Study.

**Dimitra Galiti** (✉ [dimigalitis@hotmail.com](mailto:dimigalitis@hotmail.com))

CureCancer - Athens - Greece <https://orcid.org/0000-0002-2916-3773>

**Helena Linardou**

HeSMO: Hellenic Society of Medical Oncology

**Sofia Agelaki**

HeSMO: Hellenic Society of Medical Oncology

**Athanasios Karampeazis**

HeSMO: Hellenic Society of Medical Oncology

**Nikolaos Tsoukalas**

HeSMO: Hellenic Society of Medical Oncology

**Amanda Psyri**

HeSMO: Hellenic Society of Medical Oncology

**Michalis Karamouzis**

HeSMO: Hellenic Society of Medical Oncology

**Konstantinos Syrigos**

HeSMO: Hellenic Society of Medical Oncology

**Alexandros Ardavanis**

HeSMO: Hellenic Society of Medical Oncology

**Ilias Athanasiadis**

HeSMO: Hellenic Society of Medical Oncology

**Eleni Arvanitou**

HeSMO: Hellenic Society of Medical Oncology

**Stavroula Sgourou**

HeSMO: Hellenic Society of Medical Oncology

**Vasileios Kouloulis**

HeSMO: Hellenic Society of Medical Oncology

**Anastasia Mala**

HeSMO: Hellenic Society of Medical Oncology

**Christos Vallilas**

HeSMO: Hellenic Society of Medical Oncology

**Ioannis Boukovinas**

HeSMO: Hellenic Society of Medical Oncology

---

## Research Article

**Keywords:** cancer, COVID-19 pandemic, digital tool, patient driven, patient-reported outcomes, telemedicine, teleoncology

**Posted Date:** February 21st, 2022

**DOI:** <https://doi.org/10.21203/rs.3.rs-1015730/v1>

**License:**  This work is licensed under a Creative Commons Attribution 4.0 International License.

[Read Full License](#)

---

# Abstract

**Background:** Globally 43.8 million people live with cancer. A 60% increase of cancer cases is estimated by 2040, with 29.4 million patients per year requiring therapy. Optimization of cancer management, using digital innovation, is urgently needed. CureCancer is a patient-centric/driven platform, which enables patients to self-create their profile, report symptoms, and communicate with physicians. We assessed CureCancer's feasibility and patients' and HCPs' satisfaction. Methods: Patients from 9 Centers were asked to register at CureCancer, upload their data and complete a questionnaire on demographics, disease and treatment characteristics, and their satisfaction.

**Results:** 159 patients were enrolled and 144 (90.6%) registered. 114 of 144 (79.1%), 63 males and 51 females, median age 54.5 years, completed the questionnaire. 64 patients were University and 35 were high School graduates. 46 patients had metastatic disease, 87 were on active treatment and 51 received supportive care. All patients also visited non-oncology HCPs. Nineteen patients changed work status and 49 had children below 24 years. Registration was "very/very much" easy for 98 (86.0 %) patients. File uploading was "very/very much" easy for 47 (41.2%) patients. Over 80% of patients and physicians preferred the digital way. 99 patients and all HCPs will recommend CureCancer to others. Easy data access, improved communication, feeling safe, treatment adherence, interventions from distance, particularly during covid-19 pandemic and saving time and money, were highly commented by patients and HCPs.

**Conclusion:** CureCancer was feasible, and patients and HCPs were satisfied. Patients were successful to report information on their demographics, disease and treatment characteristics. They also disclosed the need to visit non-oncology HCPs during their cancer treatment and other socioeconomic issues. Integration of CureCancer in the routine practice is expected to improve cancer care and reduce cancer costs. Patients' self-reporting, with CureCancer, can increase the accuracy of clinical trial results and map social/work/economic issues following cancer diagnosis to assist health care policy.

## Background

Globally 43.8 million people live with cancer. A 60% increase of cancer cases is estimated by 2040, with 29.4 million patients per year requiring therapy [1,2]. The increasing burden of new cancer cases and cancer survivors and the development of novel therapies have made cancer clinical practice more complex, and with increased care costs. Cancer care cost in the European Union, in 2017, was €141.8 billion, reaching the 1.07% of gross domestic product (GDP). In the USA (2017), cancer economic burden was \$342.2 billion, (1.8% of GDP). Optimization of cancer management, using digital innovation, is urgently needed[3, 4]. A digital health care solution for effective supportive care and communication should have the following features:

(1) A well-informed patient, having a direct access to his medical files, sharing them with cancer care team. (2) An accurate symptoms' record, in real world and real-time, to share with the caring physicians

and facilitate early management. Early initiation of supportive care during disease has been shown to reduce cancer costs by up to 33% [2, 5, 6]. Furthermore, embedding the patient perspective, using PROs is considered a hallmark of quality clinical care and research [7-9]. (3) The potential to provide a live communication between patients and HCPs and facilitate patient's assessment, monitoring and management from "Tele" (meaning of or across a distance in Greek). Telemedicine is particularly useful during pandemics and when patients live outside the Cancer Center and travelling is not easy due to individuals' being unwell, work or family/children care and other problems [10, 11]. (4) The availability of the accurate patient file to (a) complement clinical trials and assist treatment decision making and (b) to advise the health care policy and economic modelers.

During the routine dental-oral oncology clinical practice, Dimitra Galiti faced the difficulties in having access to patients' medical history, which limited our ability to provide adequate supportive patient care. CureCancer was, then, inspired. CureCancer, <https://curecancer.eu//>, is a patient-centered and patient-driven, which enables patients to self-create their medical profile, record their symptoms, and share files and symptoms with their physicians. It is in the unique property of each patient. Patients can communicate with their HCPs with a video call to receive early, safe, and effective supportive care, at low cost. CureCancer has been assessed by the Ministry of Research and Technology and is included in the "Elevate Greece" list of Innovative Start Ups of the Ministry of Research and Technology.

## Methods

In the present study, we aimed to assess the feasibility of CureCancer and the satisfaction of patients', oncologists', members of the Hellenic Society of Medical Oncology, <https://www.hesmo.gr/en/>. HeSMO is the National Society of Certified and Qualified Medical Oncologists of Greece.

A multicenter, non-randomized prospective cohort study was performed. Collaboration between the Hellenic Society of Medical Oncology-Hesmo, [www.hesmo.gr](http://www.hesmo.gr) and the CureCancer, [www.curecancer.eu](http://www.curecancer.eu), was signed in September 2019. HeSMO invited their members to the study. Oncologists from 9 Cancer Centers responded and accepted to participate. Eligible consecutive patients were invited by their oncologist and signed the information letter and the consent form. Patients were educated about their benefits when using CureCancer and were given written instructions for accessing the platform. According to the signed agreement, after the completion of the study, the data were sent to both HeSMO and Dimitra Galiti, anonymously and in aggregates.

### Participating patients

#### *Eligibility criteria*

Patients were included in the study if they were: (1) 18 years of age or older, (2) diagnosed with cancer at least one month earlier, when they were well-embarked on a treatment plan, (3) were on active cancer treatment and thereafter, (4) had over one year prognosis, (5) self-reported internet knowledgeable, (6) could understand the Greek language to read and understand the forms and questionnaire and (7) agreed

to sign the information and consent forms. Patients were excluded if they lacked the capacity to give informed consent due to psychopathology, cognitive dysfunction, learning difficulties and other problems.

### *Ethical approval*

The study was approved by the Committee of Research and Ethics of all participating Cancer Centers. Eligible patients were invited to participate in the study and signed an information letter and a consent form. An electronic consent was also available online.

### *Questionnaires*

The questionnaires used were exclusively developed for the present study and have been included in the supplement.

Registered patients completed 3 questionnaires. Questionnaire 1 included questions on demographics. Questionnaire 2 included questions on cancer type and cancer therapy, supportive care, need to visit other non-oncology HCP, social, work and family status. Questionnaire 3 included closed questions related to the platform's feasibility and their satisfaction. It also included open questions for patients to describe why they preferred the digital innovation and suggest improvements for the platform (Questionnaires 1-3, supplement).

Physicians and HCPs completed questionnaire 4, which included questions related to their communication with their patients and other colleagues, and their clinical practice. It also included open questions for physicians to describe why they preferred the digital innovation and suggest improvements for the platform (Questionnaire 4, supplement).

## **Primary endpoints**

### *Feasibility assessment*

A priori criteria for the feasibility of patients were (a) a rate of  $\geq 70\%$  of patients, who registered of those who signed to participate, and (b) a rate of  $\geq 70\%$  of the registered patients, who completed the questionnaire.

### *Satisfaction assessment*

Satisfaction and preferences were extracted from patients' and physicians' responses.

## **Secondary endpoints**

Cancer patients' profile and potential socioeconomic problems, following cancer diagnosis, were important to further assess the usefulness of the platform.

### *Data analysis*

Patients' demographics, disease characteristics, therapies, social profile, the feasibility, and satisfaction outcomes were primarily analyzed using descriptive statistics. For categorical variables absolute and relative frequencies were provided, while continuous variables were described by N, mean and standard deviation or median and range. Any possible association was investigated using Chi-square and T test. Open-ended patient and HCPs feedback and satisfaction questions were examined qualitatively. Statistical Analysis was conducted in Stata 15.1 [12].

## Results

### *Patients*

*Patient, disease, and therapy characteristics:* 159 patients, between January to December 2020, were enrolled and 144 of those (90.56%) registered at the platform. One hundred and fourteen of all 144 registered patients (79.16%) completed the questionnaire (Table 1). Sixty-four patients were University graduates, followed by High School ones. Breast and lung cancers were most common. Eighty-seven (76.3%) patients were on active cancer therapy, 46 (40.4%) had metastatic disease, and 51 (59.6%) reported receiving supportive cancer care, including antiemetic medications, medications for pain relief, and other.

*Previous Cancer therapies:* Eighty-one of the 114 patients (71.05%) reported having received previous cancer therapies, surgery (n=62), chemotherapy (n=44), radiotherapy (n=5), hormonal therapy (n=5) and targeted therapy (n=1) (Table 1). Furthermore, 27 patients also recalled receiving supportive care including anti-depressants, pain medications, feeding support and medications for bone metastases. Fifty patients had received more than one types of therapy.

During the study period, all patients reported visiting at least one non-oncology specialist as well. Forty-seven patients visited 2-9 different non-oncology specialists (Table 1). The total number of HCPs from different specialties was 208, (mean number per patient=1.82). The mean number of HCPs was higher, though not significantly, among patients under active treatment compared to no current therapy group, 1.92 versus 1.51 (P=0.18). The total number of visits of each patient to each HCP was not recorded.

*Social profile and working status:* Nineteen (26.39%) of 72 patients changed their work status following cancer, 16 (14%) lived alone and 49 (43%) had children younger than 24 years of age. Nine (7.9%) patients were members of Patients' Associations (Table 2).

*Patients' responses:* Of the 114 patients, 98 (86.0%) reported their registration and use of the platform being "very to very much" easy. Forty-eight (41.2%) patients reported file uploading as "very to very much easy". Ninety (78.9%) patients preferred the digital way and 99 (86.8%) will introduce it to others (Table 3).

*Patients' comments:* 54 patients completed this part of the questionnaire. They highlighted the easy data access, well organized data, increased communication with HCPs, feeling safe, treatment adherence and interventions from distance, particularly during the covid-19 pandemic, reduced visits to physicians,

saving time and money (Table 4). Twelve patients asked for a user-friendlier environment, 6 had nothing to change, 2 asked to receive newsletters, one requested for a mobile application, and another complained of the many questions. One patient “believes” that the platform should be particularly useful for the people, who live in areas remote from the Cancer Centers, and that all HCPs should collaborate. He also suggested the platform to be widely publicized to HCPs, because they are most responsible for the proper promotion and effective use and function of the platform.

### ***Physicians and other HCPs***

Eighteen HCPs responded. Most HCPs reported that CureCancer improved their communication with patients and colleagues and minimized their patients’ risk of infection, reducing unnecessary visits to hospital. All HCPs will continue inviting their patients to use CureCancer (Table 5).

Most HCPs preferred the digital innovation for having fast, easy and safe access to well organized data, reducing paperwork, and space for files/hard copies. Direct, communication, anytime, from anywhere, easy information access, early reporting of symptoms and timely management, and reduced patient burden were the most important benefits reported. HCPs suggested a user-friendlier digital environment/access of the platform, the potential/possibility to collect their patients’ data in aggregates and receiving a message when a patient uploaded a new file or symptom, or an alert sign (Table 6).

## **Discussion**

### ***Platform’s Feasibility and patients’ satisfaction***

CureCancer was feasible, as it was highlighted from the increased participation of patients (> 80%) who offered us a wealth of patient-driven information. Importantly, patients highlighted the sense of safety, treatment adherence, reduced hospital visits and infection risk, saving time and money and their good communication with HCPs. Treatment adherence to oral anticancer agents and supportive care services can highly benefit with telemedicine particularly during the COVID-19 pandemic, while patient – doctor communication is an important factor in cancer care [10, 11, 13, 14]. Receiving newsletters and request for a mobile application were considered positive comments. Importantly, one patient highlighted that Medical Oncologists are responsible for the promotion and effective use of CureCancer.

### ***Physicians’ satisfaction***

Physicians were satisfied and commented on the improved communication with patients and colleagues, enhancing their clinical practice. Cross-sectoral video consultations to enhance continuity of cancer care received positive comments by oncologists, general practitioners, and patients in another study [15].

### ***Discussing the patient-reported profile, cancer status and socioeconomic details***

As cancer diagnosis and therapy affect different physical, socioeconomic, and occupational domains of life, the above information was thought necessary to assess the overall profile of cancer patients - users,

in this preliminary phase of CureCancer function.

*Age and level of education:* Our patients were about one decade younger than the global median age of 66 years of cancer patients. A younger median age was also reported by other digital health solutions [16-19]. A median age of 63 years, aligned with the global median cancer age, was reported in a web-based study, when, however, patients completed the survey, at the hospital, receiving assistance, when needed [6, 14]. Most participants, in the present study, were University and High School graduates, indicating an association between younger age and digital solutions. A higher education level was also related to higher acceptability of the digital solutions by other investigators [16-19]. Furthermore, in our study, the percentage of the University graduates was reduced at the completion of the study, compared to the one assessed 5 months after the initiation of the study (56% versus 61%), while the High School graduates were increased (30.75 % vs 23%) indicating a push to internet literacy due to the urgent need for digital solutions because of social distancing, related to the COVID-19 pandemic [20].

*Cancer types, status and treatments, supportive care, and care by non-oncology HCPs:* Breast and lung cancers were most common cancer types, while the lack of prostate cancer reporting was interesting and could be related to the younger age of our cohort [1]. CureCancer was feasible for patients under active treatment and/or advanced cancer. Almost half of our patients (44.7%) received supportive care. With appropriate supportive care, patients under active treatment successfully participated in another digital health solution [15]. Although patients' disease and treatment characteristics, reported in the present study, were relatively aligned with those in the literature, the level of agreement between disease and treatment characteristics, recorded in the Hospital files and those self-reported by our patients is not known and this could be the goal of a next study.

Importantly all patients visited non-oncology HCPs, while about half of them visited 2-9 HCPs, pointing to a multimorbidity status in our cohort. Multimorbidity and associated polypharmacy, with drug-drug interactions and other adverse events can increase cancer patient's toxicity and healthcare burden and highlights the need for good communication between HCPs [21]. This need for enhanced communication can be met with the use of CureCancer, according to the users' experience and responses.

*Working status, social profile, and financial toxicity:* Cancer diagnosis was related to changes at work, such as retirement, not contract renewal, or job change due to cancer therapy. The negative consequences of cancer therapy on employment, associated with financial problems and increased financial toxicity and reduced Health-Related Quality of Life were also reported by others [22, 23]. The living alone status and children at School can also add to patients' burden and financial toxicity [1, 2, 24].

*Patient communities:* Although patient communities were reported as the main environment to connect with others and obtain trusted information, few patients, in the present study, participated in patients' communities, possibly due to cultural differences [16].

*Strengths and weaknesses*

CureCancer had a positive impact on cancer supportive care fulfilling most of the qualities for a digital platform to re-form oncology care, particularly during periods of pandemics[3, 10]. The study is limited by its feasibility and satisfaction assessment nature.

## Conclusion

CureCancer was feasible and users were satisfied. Integration of CureCancer in the routine practice is expected to increase therapeutic success and reduce the costs of care. CureCancer can also map social/work/economic issues following cancer diagnosis, as patients disclosed, to advise health care policy. The efficiency of self-reporting of symptoms, in real-time, can also increase the accuracy of clinical trial results and assist treatment decision making.

Patients were successful to report accurate information on their demographics. The level of agreement between the patient-reported disease and treatment characteristics and the hospital files, remains to be assessed, particularly when patients are asked to describe prior cancer therapies, possibly associated with a recall bias. This investigation could be an interesting purpose of the next project.

## Abbreviations

HCP: Health Care Professional, GDP: Gross Domestic Product, HeSMO: Hellenic Society of Medical Oncology

## Declarations

### Ethics approval and consent to participate

The study was approved by the Committee of Research and Ethics of all participating Cancer Centers:

1. Agios Savvas Anticancer Hospital, Athens, Greece. The protocol was approved by the Scientific Committee and the Ethics Committee, number 576/12-2-2020.
2. ATTIKON University Hospital, Athens, Greece. The protocol was approved by the Ethics Scientific Committee, 3<sup>rd</sup> Regular Meeting, 18-12-2020.
3. Metropolitan General Hospital, Athens, Greece. The protocol was approved by Ethics Committee Meeting, 16-01-2020.
4. Laiko General Hospital, Athens, Greece. The protocol was approved by Ethics Scientific Council, number 1339/27-1-2020.
5. University Hospital, Crete, Greece. The protocol was approved by Committee of Ethics for Research, number 8/31-01-2020.
6. Sotiria University Hospital, Athens, Greece. The protocol was approved by Committee of Ethics, number 3640/12-2-2020.

7. 417 NIMTS Army Nursing Institution Athens, Athens, Greece. The protocol was approved by Committee of Ethics, 23/10.02.2020.
8. Bioclinic of Thessaloniki, Thessaloniki, Greece. The protocol was approved by Committee of Ethics, number 152/14-01-2020.
9. 401 General Military Hospital, Athens, Greece. The protocol was approved by Committee of Ethics, 2/3/2020.

All patients signed an information letter and a consent form to participate.

### **Consent for publication**

All patients were informed that their data would be included collectively and anonymously and by no means their name would be disclosed in the publication and agreed and signed the invitation and consent form.

### **Availability of data and materials**

All data generated or analyzed during this study are available to the Journal and the reviewers, they can be found in a link in the supplement.

### **Competing interests**

Dimitra Galiti is CEO at CureCancer. Contributing co-authors-Medical Oncologists and Health Care Professionals, named: Helena Linardou, Sofia Agelaki, Athanasios Karampeazis, Nikolaos Tsoukalas, Amanda Psyrris, Michalis Karamouzis, Konstantinos Syrigos, Alexandros Ardavanis, Ilias Athanasiadis, Eleni Arvanitou, Stavroula Sgourou, Vasilis Kouloulis, Anastasia Mala, Christos Vallilas, Ioannis Boukovinas declare no conflict of interest.

### **Funding**

No funding was provided to assist the writing of the manuscript or for any other reason related to the present project.

### **Authors' contributions**

DG, HL, SA, AK, NT, IB were involved in the design and coordination of the study. DG, HL, SA, AK, NT, IB, IA, supervised the study and drafted the manuscript. HL, SA, AK, NT, AP, MK, KS, AA, EA, SS, VK, AM, CV, IB invited their patients to participate in the study. All authors read and approved the final manuscript.

### **Acknowledgements**

Not applicable

## **References**

1. The Cancer Atlas, <https://canceratlas.cancer.org/the-burden/>, 2020.
2. American Cancer Society Cancer Action Network. The Costs of Cancer. <https://www.fightcancer.org/policy-resources/costs-cancer>, 2020.
3. Aapro M, Bossi P, Dasari A, Falowfield L, et al. Digital health for optimal supportive care in oncology: benefits, limits, and future perspectives. *Support Care Cancer* 2020;28:4589-4612, doi.org/10.007/s00529-020-05539-1.
4. Olver I, Keefe D, Herrstedt J, Warr D, Roila F, Ripamonti CI. Supportive care in cancer - a MASCC perspective. *Support Care in Cancer* 2020;28:3476-3475, doi:10.1007/s00520-020-05447-4.
5. Yadav S, Heller IW, Schaefer N, Salloum RG, et al. The health care cost of palliative care for cancer patients. *Support Care Cancer* 2020;28:4561-4573, doi.org/10.1007/s00520-020-05512-y.
6. Sanson-Fisher RW, Hobden BT, Carey ML, et al. The System for Patient Assessment of Cancer Experiences (SPACE): a cross-sectional study examining feasibility and acceptability. *Support Care Cancer* 2020;28:1737-1745, doi: 10.1007/s00520-019-04943-6.
7. Basch E, Deal AM, Kris MG, Scher HI, et al. Symptom monitoring with patient-reported outcomes during routine cancer treatment: A randomized controlled trial. *J Clin Oncol* 2016;34:557-565, doi:10.1200/JCO.2015.63.0830.
8. Brandt J, Scotté F, Jordan K. Patient-reported outcomes (PROs) as a routine measure for cancer inpatients: the final missing piece of the puzzle? *Ann Oncol* 2019;30:167-169, doi: 10.1093/annonc/mdy524.
9. Mierzynska J, Piccinin C, Pe M, Martinelli F, et al. Prognostic value of patient-reported outcomes from international randomised clinical trials on cancer: a systematic review. *Lancet Oncol* 2019;20:e685-e698, doi: 10.1016/S1470-2045(19)30656-4.
10. Bakouny Z, Hawley JE, Choueiri TK, Peters S, et al. COVID-19 and Cancer: Current challenges and perspectives. *Cancer Cell* 2020;38:1-18, doi.org/10.1016/j.ccell.2020.09.018.
11. Young AM, Ashbury FD, Schapira L, Scotte F, Ripamonti CI, Olver IN. Uncertainty upon the uncertainty: supportive care for cancer and COVID-19. *Support Care Cancer* 2020;28:4001-4004, doi.org/10.1007/s00520-020-05604-9.
12. Stata Statistical Software: Release 15. College Station, TX: StataCorp LLC, 2017.
13. Graupner C, Kimman ML, Mul S, Slok AHM, et al. Patient outcomes, patient experiences and process indicators associated with the routine use of patient-reported outcome measures (PROMS) in cancer care: a systematic review. *Support Care Cancer* 2021;29(2):573-593, doi.org/10.1007/s00520-020-05695-4.
14. Rasschaert M, Vulsteke C, Keersmaecker SD, Vandenborne K, Dias S, Verschaeve V, et al. AMTRA: a multicentered experience of a web-based monitoring and tailored toxicity management system for cancer patients. *Support Care Cancer* 2021;29:859-867, doi.org/10.1007/s00520-020-05550-6.
15. Trabjerg TB, Jensen LH, Sondergaard J, Sisler JJ, Hansen DG. Cross-sectoral video consultations in cancer care: perspectives of cancer patients, oncologists and general practitioners. *Support Care Cancer* 2021;29:107-116, doi.org/10.1007/s00520-020-05467-0.

16. Tran C, Dicker A, Leiby B, Gressen E, Williams N, Jim H. Utilizing Digital Health to Collect Electronic Patient-Reported Outcomes in Prostate Cancer: Single-Arm Pilot Trial. *J Med Internet Res* 2020;22:e12689, doi: 10.2196/12689.
17. Nipp RD, El-Jawahri A, Ruddy M, Fuh C, Temel B, D'Arpino SM, et al. Pilot randomized trial of an electronic symptom monitoring intervention for hospitalized patients with cancer. *Annals of Oncology* 2019;30:274-280, doi:10.1093/aaonc/mdy488.
18. Potdar R, Thomas A, DiMeglio M, Mohiuddin K, et al. Access to internet, smartphone usage, and acceptability of mobile health technology among cancer patients. *Support Care Cancer* 2020;28:5455-5461, doi.org/10.1007/s00520-020-05393-1.
19. van Eenbergen MC, van den Hurk C, Mols F, van de Poll-Franse LV. Usability of an online application for reporting the burden of side effects in cancer patients. *Support Care Cancer* 2019;27:3411-3419. doi: 10.1007/s00520-019-4639-1.
20. Galiti D, Agelaki S, Karampeazis A, Saridaki-Zoras Z, et al. 1707P CureCancer digital tool in the routine clinical oncology practice facilitates PROs, communicating with HCPs, treatment adherence and "distancing interventions" during COVID-19 and reduces costs: A feasibility and satisfaction study. *Annals Oncol* 2020;31:supplement14, doi: https://doi.org/10.1016/j.annonc.2020.08.1771.
21. Keats MR, Cui Y, DeClercq V, Grandy SA, Sweeney E, Dummer TJB. Burden of multimorbidity and polypharmacy among cancer survivors: a population-based nested case-control study. *Support Cancer* 2021;29:713-723, doi.org/10.1007/s00520-020-05529-3.
22. Mols F, Tomalin B, Pearce A, Kaambwa B, Koczwara B. Financial toxicity and employment status in cancer survivors. A systematic literature review. *Support Care Cancer* 2020;28:5693-5708, doi.org/10.1007/s00520-020-05719-z.
23. Ver Hoeve ES, Ali-Akbarian L, price SN, Lothfi NM, Hamann HA. Patient-reported financial toxicity, quality of life, and health behaviors in insured US cancer survivors. *Support Care Cancer* 2021;29:349-358, doi.org/10.1007/s00520-020-05468-z.
24. Lorgelly PK, Neri M. Survivorship burden for individuals, households and society: Estimates and methodology. *J Cancer Policy* 2018;15:113-117, doi.org/10.1016/j.jcpo.2018.02.005.

## Tables

Tables are available in the supplemental file section

## Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [Table1.CureCancer.pdf](#)
- [Table2.CureCancer.pdf](#)
- [Table3.CureCancer.pdf](#)

- [Table4.CureCancer.pdf](#)
- [Table5.CureCancer.pdf](#)
- [Table6.CureCancer.pdf](#)
- [Questionnaire1.pdf](#)
- [Questionnaire2.pdf](#)
- [Questionnaire3.pdf](#)
- [Questionnaire4.pdf](#)