

## Supportive care for cancer patients

BSMO (Belgian Society of Medical Oncology) Supportive Care Working Group

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# Supportive care for cancer patients: a survey of available settings and current practices in Belgium

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## Abstract

**Introduction** The increasing number of cancer diagnoses and deaths underlines the importance of supportive and palliative care. It is defined as “all the care and the support necessary for patients throughout their illness.”

**Aim** To evaluate the current status of the supportive and palliative care organization in Belgium.

**Methods** The Belgian Society of Medical Oncology (BSMO) supportive care task force conducted an observational study by sending a 31-point questionnaire to medical doctors responsible for the supportive care units of university, public, or private hospitals in Belgium.

**Results** Thirty centers completed the questionnaire, of which 12 were university hospitals. Inpatient supportive care units are available in more than 50% of the centers, whereas outpatient supportive care is less available in Brussels than in Flanders and Wallonia. Multidisciplinary teams or specific units dedicated exclusively to supportive care are represented less frequently in all 3 areas of Belgium. Intensive care units for cancer patients are even scarcer. In terms of research and teaching, active research is present in 10 (33%) centers. Of complementary and alternative medicine modalities available to cancer patients, mindfulness and massage are offered most frequently. Reference guidelines for various symptoms are widely used in Flanders and Brussels but less so in Wallonia.

**Conclusion** This is the first in-depth survey in Belgium that shows the limited availability of dedicated supportive care services throughout the country. This represents an unmet need for Belgian cancer patients. Within the BSMO supportive care task force, there is a great opportunity to expand services and develop active research in the area of supportive and palliative care.

**Keywords** Supportive care · Belgium · Supportive care units

## Introduction

The incidence of cancer is increasing worldwide. Many cancer patients are living longer because of more effective cancer treatments. Namely, due to the implementation of targeted therapies and immunotherapy in different cancer subtypes, a significant gain in overall survival has been reported recently [1]. Despite these significant progresses, a large proportion of

patients with cancer will continue to experience serious morbidity as a result of their disease and/or its treatment [2].

Supportive care (SC) in cancer was introduced and conceptualized in the early 1980s as a global approach to the adverse effects of cancer therapy to help oncologists better manage treatment side effects and palliate cancer-related symptoms [3].

The Multinational Association of Supportive Care in Cancer (MASCC) concept of supportive care, i.e., “supportive care in cancer encompasses both the management of the symptoms of cancer and the side effects of treatment throughout all stages of cancer. It covers the physical, psychosocial and spiritual needs of those with cancer and recognizes that the relatives and caregivers often need similar support” [4], was used as the working definition of supportive care in our survey. The separation between some aspects of supportive care and palliative care, i.e., the end of life care, is sometimes

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unclear. We are well aware that palliative care specialists and scientific societies often operate on their own.

Supportive care is becoming more complex as cancer oncology is evolving. Management of side effects of new targeted and immune therapies as well as comorbidities of elderly cancer patients demand a multidisciplinary approach. An integral component of supportive care, preventing and treating long-term sequelae of cancer therapy, has become a priority for improving patients' quality of life and increasing survival.

From the psychological point of view, patient's awareness about prognosis, preservation of patient autonomy, and discussion of end-of-life perspectives have also become pivotal aspects of supportive care in cancer patients.

It is recognized that the definition of supportive care may vary worldwide and, more importantly, several questions remain and require further research including resource allocation, appropriate patient eligibility, start times, and which caregivers should provide supportive care [5]. MASCC is actively engaged in these areas of research [6].

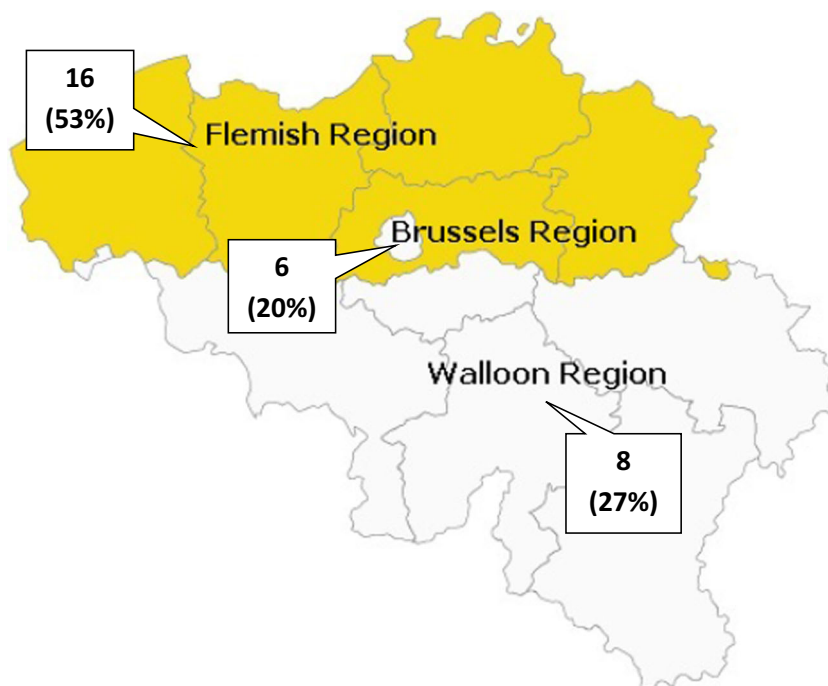
To date, the ideal model for supportive care in cancer medicine does not exist, but it should be designed from several independent experiences that consider locally available resources for the practice of oncology. Therefore, we decided to survey the practice of supportive care in Belgian cancer units. The purpose of this survey is to provide an overview of the availability and functions of supportive care in this country and to suggest areas for potential improvement.

## Material and methods

A 31-point questionnaire (see Electronic Supplementary Material 1) was sent to all hospitals (public and private) known to provide cancer care in Belgium. Our questionnaire was influenced by the MASCC questionnaire sent to MASCC-Designated Centers of Excellence in Supportive Care in Cancer [7] and was modified for Belgian cancer centers. A total of 44 centers received the questionnaire. Within 3 months, we received 30 replies (68% of the questionnaires sent) that form the basis for the present report. The responding centers provide the majority of cancer care in Belgium. The list of participating centers is indicated in Electronic Supplementary Material 2, as well as the principal participants of our survey from each center. In total, 16 centers from Flanders, 6 from Brussels, and 8 from Wallonia replied (Fig. 1).

To evaluate our observations in a more global perspective, it should be noted that medical care in Belgium is easily available and widely covered financially through a national system of health and disability social insurance. In 2018, health care expenses represented 10.4% of the gross domestic product (GDP) (EU average: 9.8%) or 4944 US\$ per capita, of which 77% was covered by the public health system. Expenses generated by hospital medicine (1/3) and ambulatory care (1/4) represent the largest portion of health expenses, although the cost of pharmaceutical products (drugs and others) is increasing rapidly [8].

**Fig. 1** Participation rate to the survey per region



## Results

The overall information about available services, specific structures, and activities is summarized in Table 1. Most services needed to care for cancer patients including supportive care are available in more than 50% of the centers. It should be stressed that SC services of great importance such as psychological support and physical medicine/rehabilitation were available in all centers.

Most centers use published SC guidelines and incorporate teaching activities in SC. Table 2 shows results regarding the mechanism/individual responsible for evaluating the patient's SC needs and who actually provides SC. Mild adverse effects are usually resolved by the oncologists or oncology nurses; more severe complications are mainly referred to the emergency room and/or admission unit.

Severe pain (visual analogue scale (VAS) >5/10) is treated by a pain management team in more than 50% of cases, while cognitive and psychiatric symptoms are not immediately addressed to an expert team.

Geriatric evaluation was performed initially using the G8 health status screening tool in 60% of centers and the patient-reported outcome measures (PROMs) in 40% of centers.

**Table 1** Available services, dedicated structures, and activities

	N (%)
Specifically designated for cancer patients	
Psychosocial support	30 (100)
Psycho-oncology specialists	27 (90)
Specific inpatient SC unit	22 (74)
Pain management specialists	21 (70)
Specific outpatient SC facilities	21 (70)
Daycare facilities for SC	20 (67)
Multidisciplinary SC team	12 (40)
Home care team	10 (33)
ER/ICU specific for cancer patients	7 (24)
Services readily available for SC cancer patients	
Physical medicine and rehabilitation	30 (100)
Nutrition expertise	26 (87)
Geriatric expertise	25 (83)
Laser therapy for mucositis	22 (73)
Infectious diseases consultation	17 (57)
Integrative medicine	8* (27)
Academic aspects	
Teaching activity	24 (80)
Availability of guidelines for SC	20* (67)
Active research programs	9 (30)

ER emergency room, ICU intensive care unit

\*Estimates

Table 3 indicates which specific SC services were available in the various centers participating in this survey.

A specific medical team exclusively responsible for SC (different from those providing palliative/end-of-life care services) was present in 12/30 centers (40%), and some dedicated structures were available in 14/30 (46%).

More specifically, 16 centers (53%) had specific inpatients facilities dedicated to SC and 12 (40%) had specific outpatient facilities. However, home care teams dedicated to supportive care were available in only 9 centers (30%).

In terms of research and teaching, active research was ongoing in 9 (30%) of the centers. Structured SC teaching programs were available in 83% and in 86%, and there are well-organized opportunities for medical and nursing personnel to participate in external teaching programs.

Integrative medicine interventions are not widely accessible in centers that participated in the current survey, with the exception of massage (80%) and mindfulness techniques (63%). As indicated in Table 4, all other techniques are offered in a limited number of sites with the exception of beauty care (36%), hypnotherapy (23%), and yoga (20%).

As shown in Table 5, recommended guidelines (ESMO, MASCC, ASCO, and others) are relatively well implemented in the surveyed centers. Actually, with the exception of fatigue (43%), all major SC modalities—such as chemotherapy-induced nausea and vomiting (70%), febrile neutropenia (67%), pain (63%), prophylaxis of thromboembolism (60%), and oral mucositis (60%)—are based on international guidelines in more than 50% of centers.

There are some striking differences in the reports from the 3 surveyed regions (Flanders, Brussels, and Wallonia), although the availability of facilities and the initial management of patients is very similar in all 3 regions. The same conclusion can be drawn regarding the availability of integrative medicine and research or teaching activities. The only area in which we observed a clear difference between Flanders and Brussels, on the one hand, and Wallonia, on the other hand, is in the use of international guidelines, which are less stringently implemented in Wallonia in comparison with the 2 other regions (Table 5).

## Discussion

Although Belgium is a country with 3 regions (Flanders, Brussels, and Wallonia) in terms of health care delivery, the bulk of health care is nevertheless administered by central authorities (federal state). In that respect, it is reassuring that, in our survey, no major differences were found among the 3 regions. Although some differences were noted among the three Belgian regions (which are relatively politically independent and have their own areas of legislative competences including health care), we did not perform a comparative

**Table 2** Patient's initial management: who takes care of the patient?

	Oncologist	Oncology nurse	Emergency/admission	GP	Pain management team
Adverse effects (G1–2)	23	12	–	4	–
Adverse effects (G3–4)	11	2	27	1	–
Pain VAS >5/10	15	–	5	3	23
Confusion, delirium, psychiatric symptoms	13	–	15	5	–

evaluation, given the relatively low numbers of observations for each region. However, the main detected differences are briefly analyzed in a special section of the paper. As shown in Fig. 1, the participation of Wallonia in our survey was lower (compared with the 2 other regions) as a few important institutions linked to academic centers did not participate. This may explain why international guidelines were less often used in Wallonia compared with the 2 other regions. Otherwise, we did not detect significant differences among the 3 regions.

This study was an observational survey that gives a partial picture of SC services in Belgium. These results are particularly relevant for public (18) and/or academic (12) institutions, as most of them participated in the survey. It should also be stressed that these observations pertain only to Belgium which is a relatively “wealthy” country from the health care perspective.

We do not propose a specific model, but since the system appears to work for Belgium, we think that our experience might provide some indications regarding “basic” requirements for SC in other countries, realizing that health care financing might differ.

A positive feature of these results is that SC is clearly an accepted component in cancer medicine in Belgium, as more than 50% of the institutions surveyed have adequate structures and activities to meet the SC needs of their patients, with a broad range of available expertise and services (Table 1).

**Table 3** Services and actions specifically dedicated to supportive care

Opportunity for the medical and nursing staff to participate to external teaching programs	26 (86%)
Dedicated supportive care unit for inpatients	16 (53%)
Structured teaching programs in supportive care	25 (83%)
Dedicated structures for supportive care	14 (46%)
Dedicated supportive care facilities for outpatients	12 (40%)
Medical team for supportive care different from palliative care	12 (40%)
Active research in the field of supportive care	9 (30%)
Home care team dedicated to supportive care	9 (30%)

Two possible weaknesses are the relative scarcity (30%) of home care teams dedicated to SC and the relative lack (only 27%) of integrative medicine (this point will be discussed further). Of particular interest is that pain—a major issue in SC—is provided by a specific team in 60% of the centers; however, it is concerning that no specific team was available at the time of the initial evaluation for patients with cognitive disorders and/or psychiatric symptoms (Table 2).

Focusing on services and activities specifically dedicated to SC (Table 3), it should be noted that 53% of the surveyed institutions have a dedicated SC unit for inpatients and that specific teams for SC in outpatient facilities are reported in 40%. On the other hand, home care teams are available in only 30% of the centers, although this might be explained in part by the availability of home care organizations that are separated from the hospitals.

The presence of SC teaching programs (83%) and the possibility for the medical/nursing staff to attend external SC teaching programs (86%) are encouraging findings.

Integrative medicine is becoming an important aspect of SC [9]. We asked a series of questions in our survey regarding the nature and use of these techniques. As shown in Table 4,

**Table 4** Comfort therapy and integrative medicine

Massages	24 (80%)
Mindfulness	19 (63%)
Beauty care	11 (36%)
Hypnotherapy	7 (23%)
Aromatherapy	6 (20%)
Yoga	6 (20%)
Ergotherapy/physiotherapy	5 (16%)
Creative programs	3 (10%)
Martial arts	3 (9%)
Music	2 (6%)
Sports	2 (6%)
Emotional freedom techniques	1 (3%)
Fascia therapy	1 (3%)
Relaxing with peers	1 (3%)
Sophrology	1 (3%)



**Table 5** Use of guidelines

	Flanders 16 (53%)	Brussels 6 (20%)	Wallonia 8 (27%)
Chemotherapy-induced N/V	13 (43.5%)	4 (13.5%)	4 (13.5%)
Febrile neutropenia	13 (43.5%)	4 (13.5%)	3 (10%)
Pain	13 (43.5%)	4 (13.5%)	2 (6.5%)
Oral mucositis	12 (40%)	4 (13.5%)	2 (6.5%)
Prophylaxis of thromboembolism	12 (40%)	4 (13.5%)	2 (6.5%)
Immunotherapy toxicity	11 (37%)	4 (13.5%)	2 (6.5%)
Management of bone metastases	11 (37%)	4 (13.5%)	1 (3%)
Cachexia	10 (33%)	4 (13.5%)	1 (3%)
Fatigue	8 (27%)	4 (13.5%)	1 (3%)

with the exception of mindfulness and massage, other forms of comfort therapy are available in only a few centers (36%). Interestingly, some integrative medicine techniques such as diet, dietary supplements, acupuncture, and others were not specifically offered by the centers that responded to our survey. Although Belgian patients do request comfort therapy, it is possible that these approaches are mainly delivered outside the cancer centers by self-made “specialists,” as there are no regulations or reimbursements for such services in Belgium.

Regarding the use of international guidelines, we found a high rate of compliance in this survey (Table 5). Notably, guidelines for febrile neutropenia and chemotherapy-induced nausea and vomiting, two time-honored areas of SC, are followed in 70% of the centers. Among the centers surveyed, cachexia and fatigue management are less often provided according to guidelines, although these are important and quite common aspects of SC [10, 11]; this will probably require more attention in the future.

In contrast to the relatively high level of observance of international guidelines, we found that only 30% of the participating centers are actively involved in clinical research in the field of SC. This is of major concern, given the participation of many academic or academically related centers.

## Conclusion

To conclude, we conducted a survey on the status of SC in Belgium to which 30 of the 44 cancer-treating centers (68%) participated, including many public and/or academic institutions.

Specific teams and hospital structures devoted to SC patients are available in a considerable proportion of the centers, and pain is managed by a specific team in a majority of centers.

Also, the wide observance of international guidelines and the availability of international and external teaching programs for medical and nursing staff are encouraging findings.

Among the weaker responses in our survey, we observed the relative scarcity of home SC (although this might be related to the way home care is organized in Belgium). Moreover, we found a low use of comfort/integrative medicine and a limited involvement in clinical research.

We hope that the results of our survey will strengthen the provision of well-established SC services and might stimulate improvement of identified insufficiencies. Based on this experience, the BSMO Supportive Care Working Group will focus on the development of new models for supportive care of cancer patients in Belgium.

**Supplementary Information** The online version contains supplementary material available at <https://doi.org/10.1007/s00520-021-06076-1>.

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**Author contribution** All authors contributed to the study conception and design. Material preparation, data collection, and analysis were performed by JA Klastersky, C. Fontaine, and MA Echterbille. The first draft of the manuscript was written by JA Klastersky, and all authors commented on early versions of the manuscript. All authors read and approved the final manuscript.

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**Code availability** N/A

## Declarations

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