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# Complexity scale of palliative care needs in people with advanced cancer (PALCOM): preliminary Polish pilot testing

## Abstract

Transferring patients to specialist palliative care entities requires systematic and reliable assessment of the presence of complex problems that go beyond basic care. In this study, the authors translated the complexity scale of palliative care needs in people with advanced cancer (PALCOM). In the preliminary pilot study, the feasibility of the practical use of this scale and its clinical usefulness were assessed. It is proposed to use the PALCOM scale in the assessment of advanced cancer patients both in the initial triage (before admission) and as part of periodic assessment before planning discharge from specialist palliative care.

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**Keywords:** specialist palliative care, triage, assessment, patient admission

## Introduction

The improvement in human life expectancy and the extension of survival time in many diseases mean that the number of people requiring symptom relief, improved functioning, and quality of life is systematically growing. Unfortunately, in Europe and Poland, access to palliative care (PC) facilities is not sufficient: some patients referred to palliative care, most often in ter-

минаl stages of disease, do not survive the waiting time. The situation of people living in rural areas and areas without actively operating PC units is particularly difficult.

The ability to take the right approach, following the principles of PC, focused not only on diseases but also on the multidimensional needs of the patient as a person, is essential in all clinical specialties. Primary PC, which encompasses the alleviation of basic symptoms

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and problems (e.g. pain, shortness of breath, or constipation), may reduce the risk of medical futility and unnecessary hospitalizations at the end of a patient's life, measurably improving the comfort of patients and reducing health care costs at the same time. In many situations, however, it is necessary to supplement primary care with more specialized care, provided by PC units, with the participation of multidisciplinary teams and targeted toward patients with much more complex issues [1]. These include, for example: treatment of difficult pain syndromes, existential crises of complex etiology, resolving conflicts arising in the patient's environment, management in situations at risk of medical futility, or the appropriate response to the expectation of a shortened life [2]. Specialized PC is indispensable, and particularly beneficial and effective in this group of patients.

Unfortunately, the lack of clearly defined national medical indications for specialist PC (apart from specifying the type of advanced disease) means that some admitted patients require only basic support or only social safety for a long time. The currently effective Regulation No. 54/2024/DSOZ of the President of the National Health Fund (NFZ) obliges PC providers to document the justification for continuing care every three months, but it still does not specify which elements this assessment should include. It should be emphasized that the inclusion of a patient in a specialist PC at the right time is dictated by the presence of at least three components: systematic screening within each medical specialty, agreed-upon criteria for referring patients to PC, systemic facilities enabling smooth transfer between units and the actual availability of such units in a given area [3].

Medical criteria for qualification for specialist PC usually include indicators of a life-limiting disease, the presence of significant and severe symptoms and problems, and the patient's expectation of such care [4]. The short prognosis criterion can be found in several available screening tools, such as the Weissman "surprise" question, the Gold Standard Framework Prognostic Indicator Guidance (GSF-PIG) score, Eastern Cooperative Oncology Group (ECOG) performance status scales, the Palliative Performance Scale (PPS), and several complex tools, such as the RADboud indicators for Palliative Care needs (RADPAC), Necesidades Paliativas (NECPAL), or the most frequently cited Supportive and Palliative Care Indication Tool (SPICT). The symptom intensity criterion is the domain of quality of life scales [e.g. EORTC QLQ-C15 PAL, Edmonton Symptom Assessment System (ESAS), or Integrated Palliative Outcome Scale (IPOS)] [5].

Decisions on admission to a specialist care unit may also be made based on the presence or anticipation

of complex problems of the patient [6]. The degree of complexity of problems may be a fundamental factor differentiating patients in primary and specialist care units. Complexity does not only mean a high number of individual problems or their intensity, but above all their unpredictability resulting from dynamically changing interdependencies between them. Effective solutions to such problems require a thorough analysis that takes into account many aspects from various fields: medicine, nursing, psychology, physiotherapy, ethics, and sociology [7]. Therefore, available tools for assessing the degree of complexity of problems take into account various components, including intensity, duration and expected difficulties in relieving symptoms, functional capacity, emotional disorders, caregiver burden, use of professional care resources, uncertainty of possible effects, and costs of care [7].

A practical tool dedicated to assessing the probability of complex PC needs in patients with advanced cancers is the Complexity Scale of Palliative Care Needs in People with Advanced Cancer (PALCOM) [8]. It takes into account the subjective assessment of a predicted survival (the "surprise" question) and five additional domains: intensity of symptom burden, indicators of difficult pain control, functional limitations, and social, ethical, and existential problems (Table 1). This scale has been validated in a group of patients with advanced cancers in comparison with an empirical assessment of the complexity of needs defined as the state of individual interactions of emerging multidimensional features predisposing to instability, dynamic variability, and uncertainty about the outcome of care, which is associated with the need for intensification of specialist care [9, 10]. A relationship was also observed between the degree of complexity of needs measured with this tool and the risk of short-term survival and death in the hospital.

## Methods

A Polish version of the PALCOM scale was developed for this study. After obtaining written consent from the authors of the original version to translate and adapt the scale, in the first stage of this project, two people (a clinician experienced in PC and a professional translator of English) independently translated the English version of the scale. The obtained Polish version was then analyzed by a multidisciplinary PC team and translated back again into English. Both English versions were compared in terms of linguistic equivalence. In the second stage of adapting the scale to Polish conditions, a preliminary pilot study was conducted on a group of people from a hospice team (doctors, nurses, psychologists, and social workers)

**Table 1. Palliative Care Needs Complexity Scale (PALCOM) — original version [10]**

<b>First, surprise question:</b> Would I be surprised if this patient died in the next 12 months? If the answer is no, the PALCOM scale can help you determine the level of complexity of palliative care needs and manage the intensity of specialist palliative care team intervention in a model of early shared care.	
<b>Second, explore PALCOM domains:</b> The level of palliative complexity can be categorized by assessing the following five domains.	
<b>Domain 1:</b> Symptom burden	<b>Is a high symptom burden detected?</b> Assess at least the following chronic symptoms: pain; anorexia; weakness; nausea-vomiting; constipation; dyspnea or cough; insomnia; drowsiness; anxiety; sadness; and others. A high symptom burden is considered to exist if the patient experiences $\geq 5$ of these or other chronic symptoms with an intensity of at least moderate on a categorical scale, or $\geq 4$ on a numerical or visual analog scale of 10 points
<b>Domain 2:</b> Markers of difficult pain	<b>Are there any markers of difficult pain control?</b> Any of the following conditions can cause potentially difficult pain: neuropathic pain; mixed pain (nociceptive and neuropathic); breakthrough cancer pain; pain associated with a history of alcohol or other substance abuse, or cognitive impairment or severe emotional distress
<b>Domain 3:</b> Functional status	<b>Is there functional impairment?</b> Patients who require significant assistance with activities of daily living. (e.g., Barthel Index $\leq 60$ or Karnofsky Index $\leq 50$ –60%)
<b>Domain 4:</b> Socio-familial risk	<b>Any socio-familial risk factors?</b> Any of the following conditions may be considered a socio-family risk factor: absence of identified caregiver; caregiver limitations due to advanced age, health problems, or socio-family or economic burdens; minors or more than one member of the nuclear family who needs support; risk of severe family burnout; other complexity situations (social vulnerability, poverty, domestic violence, addiction or abuse substances, etc.)
<b>Domain 5:</b> Spiritual/existential/ /ethic problems	<b>Any ethical or existential conflict?</b> Any of the following conditions may be considered: conflicts related to information (denial, conspiracy silence, ...); healthcare team disagreement; disagreement between patient/family and healthcare team; loss of meaning in life or existential distress; spiritual distress; desire to advance death, demand for euthanasia or assisted suicide; others
<b>Third, scoring:</b> Each of these five domains is scored dichotomously (0 for the absence and 1 for the presence of any variable in each domain). The sum of the scores between 0 and 5 is the total score of the PALCOM scale.	
<b>Fourth, determine the level of palliative complexity according to the observed score:</b> <b>0–1 low complexity:</b> Basic palliative care is recommended. The referring team to get back in contact if a patient becomes more complex. In some cases, timely consultation with specialist palliative care may be needed for a comprehensive assessment or management of difficult isolated symptoms. <b>2–3 medium complexity:</b> Specialized palliative care is systematically recommended (hospital teams, home support teams, or palliative care services). <b>4–5 high complexity:</b> Intensive specialized palliative care is systematically recommended (teams in the hospital, support teams in the home, or palliative care services).	

with experience in PC. The task of the respondents was to attempt to determine the presence of complex PC needs in a selected patient with advanced cancer who had been provided with care in the last week using the analyzed scale. The pilot study also used an original questionnaire containing questions (with answers on a five-point Likert scale, from 1 point meaning very difficult, to 5 points meaning very easy) regarding difficulties in understanding individual PALCOM domains, perceived problems in practical use of the scale, and its clinical usefulness. The respondents were encouraged to submit suggestions for language corrections that would improve the readability and comprehension of the tool under study. The suggestions received were

taken into account in adopting the final version of the scale (Supplementary Table 1).

## Results

The pilot study involved 17 out of 22 invited professionals (Table 2). All respondents easily determined the level of complexity of problems concerning the selected patient under hospice care (16 patients had a high complexity score, and 1 had an average score). Most people pointed out the need to learn the multidimensional situation of the patient and their caregivers in order to make a reliable assessment of complex needs requiring specialist PC. The respondents

**Table 2. Characteristics of the pilot study respondents (members of a multidisciplinary PC team)**

Profession	No. of people	Years worked in PC*
Nurses	7	19.0 (6.5)
Doctors	5	12.6 (3.8)
Psychologists	4	7.0 (8.2)
Social worker	1	33
<b>Total</b>	<b>17</b>	<b>15.1 (8.9)</b>

\*mean (standard deviation); PC — palliative care

gave a high score for the ease of using the scale in practice (14 people rated the scale at 4–5 points, and 3 people at 3 points) and its accuracy (13 people indicated 4–5 points, 4 people 2–3 points). Three people suggested individual language corrections. It was suggested to replace the word “anorexia” with the term “lack of appetite”, and instead of “pain with cognitive impairment”, it was suggested to use “discomfort associated with cognitive impairment” or “impaired cognitive functions as a factor hindering pain control”. Instead of the term “abuse substances”, the term “psychoactive drugs” was proposed.

The term “social vulnerability” also required additional explanation for two respondents. Not all respondents were familiar with the concept of basic (primary) and specialist PC. Two respondents (doctors) questioned the practical usefulness of the PALCOM scale. One person (a nurse) expressed concerns about the equivalence of the recorded existential suffering with somatic symptoms, which could have contributed to the increased number of patients requiring specialist PC. Another (a psychologist) pointed out that even a patient who scores only one point, resulting from a single symptom (e.g. pain) of very high intensity, may require specialist care. On the other hand, as one person (doctor) noted, a patient who scores even several points could sometimes be effectively treated within primary health care. One person (doctor) also drew attention to the excessively long time required for the assessment. The authors have planned further prospective studies (the results of which will be published) using the Polish version of the PALCOM scale for patients receiving inpatient palliative care.

## Conclusions

The Polish version of the PALCOM scale, based on an initial pilot study, seems to be a simple, practical tool, helpful in assessing complex problems occurring in oncological patients who may require specialist PC. The authors propose to introduce the assessment of

these patients using the above-mentioned tool in everyday clinical practice, both by clinicians considering referring a patient to PC, as well as in initial and periodic assessments performed by multidisciplinary palliative teams. There is also a need for analogous studies focused on patients with advanced diseases other than cancers.

## Article information and declaration

### Data availability statement

All data sources may be sent on request.

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The authors would like to thank you the participants of this pilot survey.

### Author contributions

Both authors were engaged in all steps of preparing the manuscript and also accepted the final version of the paper.

### Conflict of interest

The author declares no conflict of interest.

### Ethics statement

The institutional ethics committee permission was obtained before the enrollment.

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### Supplementary material

The Supplementary Material for this article — The Polish version of the Palliative Care Needs Complexity Scale for Patients with Advanced Cancer (PALCOM) — can be found online at: [https://journals.viamedica.pl/palliative\\_medicine\\_in\\_practice/article/view/101214](https://journals.viamedica.pl/palliative_medicine_in_practice/article/view/101214).

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