Referrals of Cancer versus Non-cancer Patients to a Palliative Care Consult Team: Do they differ?

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Abstract / This retrospective study compared 100 consecutive non-cancer (NC) patients referred to a palliative care consult team (PCT) in a Swiss university hospital to 506 cancer (C) patients referred during the same period. The frequencies of reported symptoms were similar in both groups. The main reasons for referral in the NC group were symptom control, global evaluation, and assistance with discharge. Requests for symptom control predominated in the C group. Prior to the first visit, 50% of NC patients were on opioids, compared to 58% of C patients. After the first visit, the proportion of NC patients on opioids increased to 64% and the proportion of C patients to 73%. The median daily oral morphine equivalent dose for NC patients taking opioids prior to the first PCT visit was higher than that for C patients (60 mg versus 45 mg). At the time of death or discharge, the percentage of NC patients on opioids was 64%, while that of C patients was 76%. Moreover, NC patients were on significantly lower median doses of opioids than C patients (31 mg versus 60 mg). Over half the NC patients died during hospitalization, as compared to 33% of C patients. Only 6% of NC patients were discharged to palliative care units, as compared to 22% of C patients.

[Key words: Palliative care, non-cancer, cancer, consult service, consult team]

Résumé / Dans une étude rétrospective nous avons comparé les dossiers de 100 patients non-cancéreux, admis consécutivement en consultation après d'une équipe de soins palliatifs dans un hôpital universitaire suisse, avec les dossiers de 506 patients attteints du cancer et admis également au cours de la même période. La fréquence des symptômes dont les malades faisaient état étaient la même pour les deux groupes. Les principales raisons pour lesquelles le premier groupe avait été dirigé en consultation étaient le contrôle des symptômes, l'évaluation globale du malade et l'assistance pour le congé de l'hôpital. Les demandes pour le contrôle de la douleur étaient prédominantes dans le deuxième groupe. Avant leur première visite, 50 % des patients du premier groupe étaient sous opioïdes comparativement à 58 % dans le deuxième groupe de patients. Après leur première visite la proportion des patients du premier groupe sous opioïdes a grimpé à 64 % et celle du deuxième groupe à 73 %. La dose moyenne quotidienne de morphine par voie orale pour les patients du premier groupe avant la première consultation était plus élevée que pour les patients du deuxième groupe (6 mg c. 45 mg). Au moment du décès ou du congé de l'hôpital le pourcentage des patients du premier groupe sous opioïdes était de 64 % alors que pour le deuxième groupe il était de 76 %. La moitié des patients du premier groupe, soit 50 %, sont décédés au cours de leur hospitalisation alors que dans le cas du deuxième groupe le pourcentage était de 33 %. Seulement 6 % des patients du premier groupe ont été traité dans l'unité de soins palliatifs comparativement à 20 % dans le deuxième groupe.

INTRODUCTION

Over the last decades, palliative care in most regions of the world has largely focused on the needs of terminally ill cancer patients (1). More recently, the focus has justifiably broadened to include non-cancer patients and patients much earlier in their illness trajectories (2). To highlight the need to implement a palliative care approach earlier in the illness trajectory, the World Health Organization (WHO) enlarged its original definition of palliative care in 2002 to include patients with life-threatening illnesses, not just those with a progressive incurable illness (3). A growing number of studies are reporting that patients with progressive incurable non-cancer illnesses also experience a variety of comparable problems — including physical, psychosocial, and spiritual distress — that have a negative impact on their quality of life (4-12). Several authors have stressed the ethical imperative of addressing the needs of these patients and the necessity for specialist palliative care services to include such patients in their mandates (4, 13).

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Unfortunately, with some notable exceptions, it appears that only a minority of non-cancer patients with palliative-care-related needs receive palliative care or are referred to specialist palliative care (14, 15). The reasons for this are probably varied; they may include a lack of understanding of these patients' needs and of how specialized palliative care units can contribute (16). Moreover, illness development and prognosis for these patients are generally less predictable than they are for oncology patients (17).

This article reports the results of a retrospective study that was conducted to better understand differences between non-cancer patients and cancer patients referred to a palliative care consult team in a university hospital in Switzerland — specifically, in terms of referral patterns, symptom profiles, medications used, and recommendations made.

METHODS

The University Hospital of the Canton of Vaud (CHUV) is a 900-bed university hospital that serves the city of Lausanne and the Canton of Vaud in Switzerland. Since October 1996, the CHUV has had an interdisciplinary palliative consult team (PCT), which receives referrals from units or wards for cancer and non-cancer terminally ill patients (18).

We reviewed the hospital charts of 100 consecutive non-cancer patients referred to the PCT between April 2000 and November 2001. Information was extracted using a predetermined data-extraction form. Information on the 506 cancer patients referred to the PCT during the same period was also analyzed to allow for comparison between the non-cancer and cancer subpopulations. Demographic data were collected, along with information on length of hospitalization, reasons for referral to the PCT, time period from admission to the first referral to the PCT, and time period between the PCT's first intervention and the patient's discharge or death.

Some patients were unable to communicate for such reasons as cognitive impairment or coma. In this study, patients were categorized as either "able to communicate" or "unable to communicate" based on the PCT's and the attending teams' chart notes. Symptoms of patients able to communicate were evaluated at the PCT's first visit. A symptom was identified as present if it exceeded 2 on a numerical scale (0 to 10), or if it was defined as more than "mild pain" on the verbal scale ("no pain," "mild pain," "moderate pain," and "severe pain"), which is used by the PCT as part of the Edmonton Symptom Assessment Scale (19). Information on each patient's analgesic and adjuvant medications was extracted — specifically, the types and doses of medications taken just prior to the first PCT visit, those recommended by the PCT, and those taken on the patient's day of discharge or death. When a medication had the potential to treat several problems, it was categorized as an analgesic or adjuvant analgesic only if chart notes specified that the purpose for which it was prescribed was pain. The daily opioid doses were standardized by calculating the equivalent oral morphine daily dose (20). Only analgesics given regularly (around the clock) were analyzed. Changes in the type of opioid (opioids rotation) were also recorded.

All the data for non-cancer and cancer patients referred to the PCT were compared. Distributions were expressed as means with standard deviation, medians with interquartile ranges, and nominal and ordinal data described as frequencies and percentages. Comparisons between cancer and non-cancer patients were done using the non-parametric Wilcoxon rank-sum test or the Wilcoxon signed-rank test to assess changes in opioid doses within a group. Ability to communicate, referring wards, places to which the patients were discharged, and sex prevalence were compared using the chi-square (χ^2) test. Statistical significance was set at $p<0.05$. Statistical analysis was carried out using the analytical software Statistix 7.

The study protocol was reviewed and approved by the research ethics committee of the University of Lausanne's Faculty of Biology and Medicine.

RESULTS

Patient demographic information and hospital-stay information is listed in Table 1. Non-cancer patients were significantly older than cancer patients, and there was a predominance of women in the former group. The main diagnoses in the non-cancer group were cardiovascular (stroke in 18 patients, 12 cases of cardiac failure, and 12 cases of arterial occlusive disease) and neurological diseases (notably, head injuries in 6 patients, 5 cases of multiple sclerosis or amyotrophic lateral sclerosis, and 4 cases of dementia). Collectively, these conditions accounted for 62 percent of all the diagnoses in this group. In the infectious disease subgroup, 4 patients had acquired immune deficiency syndrome (AIDS), and 2 patients in the gastrointestinal subgroup presented with end-stage cirrhosis of the liver. The 5 patients with pulmonary disease had chronic obstructive pulmonary disease (COPD). In the cancer group, primary cancer types were gastrointestinal in 141 patients (28 percent), lung in 101 (20 percent), genitourinary in 81 (16 percent), head and neck in 56

(11 percent), hematological in 35 (7 percent), breast in 31 (6 percent), and other in 61 (12 percent). The median length of hospital stay was longer for non-cancer patients than for cancer patients (24 versus 20 days; p=0.015). A significantly higher proportion of non-cancer patients died during hospitalization than cancer patients (56 percent versus 33 percent; p ≤0.01). Discharge locations differed significantly between the two groups. Non-cancer patients were more often transferred to long-term-care facilities (nursing homes for the elderly); cancer patients more often returned to their homes or were transferred to palliative care units.

The referral patterns to the PCT are listed in Table 2. The distribution of the referring units was similar for the non-cancer and the cancer patients. In both cases, the main referring ward was the general internal medicine unit, which is the CHUV unit that usually cares for patients with advanced cancer. The oncology unit focuses on patients with potentially curable illnesses who are undergoing aggressive chemotherapy and require specialized monitoring. The reasons for referring differed significantly between the two groups. Requests for specific symptom control were lower for the non-cancer group than for the cancer group. Requests for a global evaluation (meaning that the attending physician did not specify a reason) and for assistance in discharge planning were significantly higher for the non-cancer group than for the cancer group. The median delay from admission to first referral to the PCT was more than twice as long for non-cancer patients (12 days for cancer patients versus 5 days for non-cancer patients; p<0.01). Conversely, the median number of days from the first PCT visit to discharge or death was shorter for the non-cancer patients (11 days versus 8 days; p=0.03).

At the first visit from the PCT, only 42 non-cancer patients (42 percent) were able to communicate adequately compared to 405 in the cancer group (80 percent) (p<0.01). Inability to communicate was caused by a variety of factors, including aphasia, cognitive dysfunction, and altered level of consciousness.

The symptoms and problems identified in patients who could communicate adequately are listed in Table 3. In these patients, in both groups,

Table 1 / Demographic Information and Diagnoses of Patients Referred to the PCT

	Non-cancer patients (*N* = 100)	Cancer patients (*N* = 506)	*p*-value
Age (years)			<0.01
Mean ± SD	75 ± 16	66 ± 13	
Median (range)	81 (25-99)	67 (20-94)	
Gender, women	68 (68%)	219 (43%)	<0.01
Diagnosis of non-cancer patients			
Cardiovascular disease	42 (42%)		
Neurological disease	20 (20%)		
Infectious disease	14 (14%)		
Gastrointestinal disease	9 (9%)		
Pulmonary disease	5 (5%)		
Kidney disease	4 (4%)		
Others	6 (6%)		
Primary sites of cancer of cancer patients			
Gastrointestinal		141 (28%)	
Lung		101 (20%)	
Genitourinary		81 (16%)	
Head and neck		56 (11%)	
Haematological		35 (7%)	
Breast		31 (6%)	
Other		61 (12%)	
Length of stay in hospital (days), median (range)	24 (1-423)	20 (1-237)	0.015
Number of patients who died during hospitalization	56 (56%)	169 (33%)	<0.01
Discharge sites for patients discharged from hospital	44	337	<0.01
Palliative care unit[a]	6 (14%)	109 (32%)	
Home	10 (25%)	147 (43%)	
Other hospital	20 (45%)	70 (20%)	
Long-term care facility	8 (18%)	11 (3%)	

[a] Four hospice units for more "stable" patients in the canton (a free standing hospice unit and three others attached to small community rehabilitation centres).

Table 2 / **Referral Patterns to the PCT**

	Non-cancer patients (*N* = 100)	Cancer patients (*N* = 506)	*p*-value
Referring service			0.16
Emergency	2 (2%)	13 (3%)	
General Internal Medicine	51 (51%)	265 (52%)	
Others specialties[a]	18 (18%)	60 (12%)	
General Surgery	9 (9%)	85 (17%)	
Surgical subspecialties[b]	20 (20%)	83 (16%)	
Reasons for the initial referral[c]			<0.01
Symptom control	40 (40%)	311 (61%)	
Pain	30 (30%)	249 (49%)	
Dyspnea	4 (4%)	22 (4%)	
Gastrointestinal symptoms	–	33 (7%)	
Other	6 (6%)	7 (1%)	
Global evaluation	36 (36%)	105 (21%)	
Assistance with discharge	22 (22%)	63 (11%)	
Other reasons	2 (2%)	27 (5%)	
Length of time from admission until the first PCT visit (days), median (range)	12 (0-351)	5 (0-217)	<0.01
Length of time from the first PCT visit to discharge (days), median (range)	8 (0-145)	11 (10-183)	0.03
Length of time from the first PCT visit until death for patients who died in hospital (days), median (range)	5 (0-125)	8 (0-67)	0.05

[a] Neurology, oncology, radiation oncology, rheumatology, dermatology, cardiology
[b] Neurosurgery, gynaecology, orthopaedic, cardiovascular surgery, urology, ear-nose-throat (ENT)
[c] These reflect what the referring team indicated on their referral notes. Note that a higher proportion of non-cancer patients than cancer patients were unable to communicate and the reasons for referral may therefore not accurately reflect the real needs of patients.

Table 3 / **Prevalence of Symptoms in Patients Able to Communicate**

Symptoms	Non-cancer patients (*N* = 42)	Cancer patients (*N* = 404)	*p*-value
Fatigue	32 (76%)	279 (69%)	0.34
Pain	28 (67%)	268 (66%)	0.96
Anxiety, depression	24 (57%)	174 (43%)	0.08
No appetite	23 (55%)	218 (54%)	0.92
Dyspnoea	15 (36%)	95 (24%)	0.08
Constipation or diarrhoea	13 (31%)	100 (25%)	0.38
Sleep problems	7 (17%)	43 (11%)	0.24
Nausea or vomiting	6 (14%)	74 (18%)	0.52
Mouth dryness	3 (7%)	45 (11%)	0.43
Other symptoms	9 (21%)	59 (15%)	0.24

the prevalence of physical and psychological symptoms was high. Pain and fatigue were both identified in approximately two-thirds of non-cancer and cancer patients. Depressed and anxious moods were also common in the two groups. A majority of both non-cancer and cancer patients were experiencing three or more symptoms (79 percent and 71 percent, respectively).

Table 4 summarizes opioid use in the two groups prior to the intervention of the PCT, after the first visit by the PCT, and at the time of death or discharge. Prior to the first PCT visit, 50 non-cancer patients (50 percent) were on opioids (weak and strong) compared to 294 cancer patients (58 percent) (p=0.05). After the first visit, the number of non-cancer patients on (weak and strong) opioids increased to 64 (64 percent). This did not represent a significant increase (p=0.14). The number of cancer patients on (weak and strong) opioids also increased to 367 (73 percent). This was statistically significant (p<0.001).

The median daily oral morphine equivalent dose for non-cancer patients taking opioids prior to the first PCT visit was higher than that for cancer patients (60 mg versus 45 mg), but this difference was not statistically significant (p=0.28). At the time of death or discharge, the percentage of non-cancer patients on opioids was lower than that of cancer patients (64 percent versus 76 percent; p=0.01). Moreover, non-cancer patients were on significantly lower median doses of opioids than cancer patients (31 mg

Table 4 / Opioid Use in Non-Cancer Versus Cancer Patients

	Non-cancer patients (*N* = 100)	Cancer patients (*N* = 506)	*p*-value[a]
Opioids prior to PCT visit			0.16
Number of patients on opioids* (%)	50 (50%)	294 (58%)	0.05
Median daily dose equivalent of oral morphine in mg (range)	60 mg (10-360)	45 mg (5-540)	0.28
Opioids following first visit by the PCT			<0.01
Number of patients on opioids*(%)	64 (64%)	367 (73%)	0.09
Median daily dose equivalent of oral morphine in mg (range)	30 mg (10-240)	45mg (5-864)	0.05
Opioids the day of the discharge or death			
Number of patients on opioids* (%)	64 (64%)	386 (76%)	0.01
Median daily dose equivalent of oral morphine in mg (range)	31 mg (8 – 240)	60mg (5-1320)	<0.01

[a] Between cancer and non-cancer population
* Weak and strong opioids combined

versus 60 mg; p ≤0.01). Table 5 explores in more depth the use of analgesics and adjuvant analgesics in the non-cancer and cancer groups. Similar percentages of non-cancer and cancer patients were on analgesics prior to the first visit: 71 (71 percent) versus 379 (75 percent), respectively (p=0.42). Many patients were on more than one analgesic at the same time; 17 of the 71 non-cancer patients were on two different analgesics (24 percent), and 4 patients (6 percent) were taking three different analgesics simultaneously. Of the cancer patients, 141 of the 379 on analgesics (37 percent) were initially on two different analgesics, and 42 (11 percent) were on three different ones.

Prior to the first PCT visit, 9 of the 71 non-cancer patients on analgesics (13 percent) were taking non-steroidal anti-inflammatory drugs, compared to 93 (25 percent) in the cancer group; 9 non-cancer patients (13 percent) were on weak opioids versus 72 cancer patients (19 percent) (p=0.16), and 41 non-cancer patients (58 percent) were on strong opioids versus 222 cancer patients (59 percent) (p=0.55). These differences were not statistically significant. However, significantly more cancer patients were on adjuvant analgesics than non-cancer patients: 131 (26 percent) versus 8 (8 percent) (p<0.01). Surprisingly, none of the non-cancer patients were on tricyclic antidepressants as adjuvant analgesics prior to the first PCT

Table 5 / Analgesics and Adjuvant Medications Taken by Non-Cancer and Cancer Patients

	Non-cancer patients			Cancer patients		
	Prior to first visit of PCT (*N* = 100)	Following first visit of PCT (*N* = 100)	*p*-value	Prior to first visit of PCT (*N* = 506)	Following first visit of PCT (*N* = 506)	*p*-value
Analgesics (total number of patients on one or more analgesics)	71 (71%)	85 (85%)	0.058	379 (75%)	422 (83%)	0.0039
Acetaminophen	37 (52%)	52 (61%)		220 (58%)	202 (48%)	
Non-steroidal anti-inflammatory agents	9 (13%)	13 (15%)		93 (25%)	86 (20%)	
Weak opioids	9 (13%)	5 (6%)	[a]	72 (19%)	50 (12%)	[a]
Strong opioids	41 (58%)	59 (69%)	0.039	222 (59%)	317 (75%)	<0.001
Adjuvant analgesics[a]	8 (8%)	20 (20%)		131 (26%)	183 (36%)	
Gabapentin	1 (13%)	14 (70%)		24 (18%)	53 (29%)	
Other anticonvulsants	1 (13%)	0 (0%)		1 (1%)	9 (5%)	
Tricyclic antidepressants	–	–		7 (5%)	5 (3%)	
Corticosteroids	–	–		91 (69%)	135 (74%)	
Hyoscine butylbromide	1 (13%)	1 (5%)		10 (8%)	11 (6%)	
Baclofen	4 (50%)	3 (15%)		7 (5%)	–	
Biphosphonates	1 (13%)	2 (10%)		7 (5%)	21 (12%)	
Epidural block	1 (13%)	1 (5%)	[a]	1 (1%)	1 (0.5%)	[a]

[a] Small numbers exclude inferential statistics.

visit. Gabapentin and other anticonvulsant medications were being used in almost identical amounts in both groups.

After the first visit by the PCT team, there was an increase in the number of patients on strong opioids and on adjuvant analgesics in the non-cancer group. Much of the increase in adjuvant analgesics was attributable to increased use of gabapentin (from 13 percent of patients prior to the first PCT visit to 70 percent after the visit). The proportion of patients on weak opioids decreased (from 13 to 6 percent). In the cancer group, there was also an increase in the number and proportion of patients on strong opioids initially versus after the first visit (59 to 75 percent), accompanied by a reduction in the number and proportion of patients on weak opioids (19 to 12 percent). The use of gabapentin was also increased in the cancer group.

Following the first visit, the PCT recommended that opioids be introduced for 18 non-cancer patients (18 percent) and 81 cancer patients (16 percent) (p=0.62) who had not previously been on opioids. With patients already taking opioids, the PCT recommended dose increases for 12 of the 50 non-cancer patients already on opioids (24 percent) and 138 of the 294 cancer patients (47 percent), whereas a dose decrease was recommended in 18 (36 percent) and 47 (16 percent) non-cancer and cancer patients, respectively (p=0.01). In the non-cancer group, the main reason for a decrease appeared to be clinical signs of opioid overdosing. In all these patients, the signs abated after the dose was decreased. In cancer patients, opioid doses were decreased either in the context of reducing doses to manage opioid neurotoxicity or in the context of switching opioids and reducing the doses of the new opioids (in accordance with clinical guidelines, equianalgesic doses of the new opioids are routinely reduced by another 20 to 50 percent). The PCT ordered that opioids be withheld altogether for one non-cancer patient and five cancer patients. Changes in the type of opioid were recommended equally in the non-cancer and the cancer groups already on opioids (26 percent of non-cancer patients versus 27 percent of cancer patients).

DISCUSSION

This study found several significant similarities and differences between the clinical profiles and referral patterns of terminally ill non-cancer patients and terminally ill cancer patients referred to a PCT in a Swiss university hospital.

Pain and fatigue were documented in more than two-thirds of both non-cancer and cancer patients. Psychological symptoms were also highly prevalent in both groups, with approximately half of the patients reporting depressed and anxious moods. These findings are consistent with those of other studies that investigated the prevalence of symptoms in non-cancer terminally ill patients (5, 21, 22). These studies have reported prevalence rates of pain varying from 49 to 77 percent, and of fatigue varying from 38 to 84 percent. Depression also appears common, occurring in about 50 percent of patients. Solano, Gomes, and Higginson, in a review of 64 studies involving end-stage patients suffering from cancer, AIDS, COPD, and heart and renal diseases, reported that some symptoms — such as pain, depression, fatigue, anorexia, and dyspnea — are often as prevalent in advanced non-cancer as in advanced cancer (23). They hypothesized a common pathway toward death for malignant and non-malignant diseases. In our study population, 79 percent of non-cancer patients and 71 percent of cancer patients were experiencing three symptoms or more. Tranmer et al., using a systematic evaluation with the Memorial Symptom Assessment Scale in a prospective study involving cancer and non-cancer patients, reported an average of 10 symptoms per patient in both groups (22).

In this study, non-cancer patients were referred to the PCT later than cancer patients. Consequently, the median time between PCT referral and discharge or death was very short: only five days for non-cancer patients who died in hospital. Follow-up was therefore often impossible. The need to improve the quality of life of patients with progressive incurable diseases by initiating palliative care earlier in the course of their illness is recognized internationally. The most recent definition provided by the WHO stresses this point (3). Late referral to palliative care services appears to be a problem common to non-cancer and cancer patients (24-26). The barriers to early referral have previously been identified (27, 28). These include: the unwillingness of patients and their families to receive palliative care, and their misconceptions about palliative care; the unwillingness of physicians to discuss end-of-life care with patients and their families; a lack of information and training on palliative care intervention among health and social care professionals; and a lack of awareness about the availability of palliative care units. However, this study suggests that late referral may be more common for non-cancer patients than for cancer patients.

Additional factors may account for this. In non-cancer patients, illness trajectories and life expectancy are generally more unpredictable than they are in cancer patients (29). This may be a significant barrier to switching, in a timelier manner,

to a palliative care approach or referring to palliative care services. Various prognostic tools have been developed to assist in estimating survival in this population, but they have proven inaccurate (30). For Field and Addington-Hall, this difficulty in evaluating a prognosis is "the key blockage" to extending palliative care to these patients (4). Moreover, the role of palliative care services may not be fully appreciated or well understood by attending health teams. A focus on specific symptoms related to the diagnosis rather than a recognition of the whole picture, as well as difficulties in identifying non-cancer patients as candidates for palliative care, are additional barriers (16).

The factors that explain the delay in referral may also explain the patterns of referral to the PCT. The higher number of requests for global evaluations of non-cancer patients may reflect uncertainty as to the needs of these patients and the difficulty of evaluating these needs, particularly in the case of non-communicating patients. The higher rate of requests for assistance in discharge planning may reflect not only these difficulties, but also the problem of identifying the optimal place of care and the limited availability of resources in the community for these patients.

The percentage of patients on analgesics was similar in the two groups prior to the first PCT visit. Among these, a slightly smaller percentage of non-cancer patients was receiving weak or strong opioids. An increase in the number of patients on opioids following the PCT intervention was seen in both groups. However, interestingly, the median opioid dose being used decreased in the non-cancer group and increased in the cancer group. In several non-cancer cases, this was due to clinical signs of relative opioid overdosing. While opioids have been shown to be safe and useful in managing pain and dyspnea in this population (31, 32), the recommendations for dose decreases recorded in this study may reflect a lack of experience or accuracy in evaluating pain and the appropriate use of opioids. There may be an overreliance on opioids as a standard treatment toward the end of life, whether or not patients actually have pain. The advanced age of our non-cancer patients (a median of 81 years; 67 years among cancer patients) may have also played a role. Controlled studies have demonstrated that older patients are more sensitive to the effects of opioids (33-35), and they are more susceptible to adverse effects because of the age-related physiological changes that affect the pharmacokinetics and pharmacodynamics of the drugs (36, 37).

The major limitation of this study is its retrospective design. While all efforts were made to retrieve data accurately, the results may not exactly reflect the needs of patients. The inability of many patients to communicate and the lack of a systematic use of clinical instruments to evaluate needs and cognition posed challenges. In addition, the level of compliance of the attending teams to the recommendations provided by the PCT could not be evaluated. The study may not truly reflect the situation of all patients with palliative-care-related needs in our hospital, as not all patients with incurable progressive illnesses are referred to the PCT.

CONCLUSION

Despite its limitations, this study demonstrates both relevant similarities and noticeable differences between non-cancer patients and cancer patients referred to a PCT in a Swiss university hospital. The finding that non-cancer patients are being referred to palliative care services very late in the course of their illness warrants further exploration. We must determine why this is happening and develop strategies to eliminate the barriers to providing these patients with earlier care. Establishing institutional guidelines to better identify patients who require palliative care and to refer them in a timely manner to palliative care specialist services may be of these strategies. Barriers — including lack of resources — to discharging non-cancer patients whose goals of care are palliative also need to be addressed. Recommendations by the PCT to increase opioid use in both cancer and non-cancer patients speak to the usefulness of these treatments for pain control. However, the need to recommend decreases in opioid doses in several non-cancer and cancer patients should be explored further, as it may indicate a lack of expertise in, and understanding of, the role of opioids in this patient population on the part of non-palliative specialists. Clearly, further research is warranted to clarify the needs of non-cancer patients and identify and evaluate strategies to address them.

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