

End-of-life communication and decisional conflict among surrogate decision- makers considering invasive respiratory support for patients with cancer and respiratory failure: a cross-sectional study

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Research Article

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Abstract

Background: Surrogate decision-makers often make time-sensitive decisions about invasive respiratory support for patients with cancer and respiratory failure while facing uncertainty about prognosis, treatment burden, and the patient's preferences. This study aimed to assess decisional conflict in this setting and identify clinical and communication-related factors associated with it, with particular attention to prior end-of-life discussions.

Methods: A cross-sectional questionnaire study was conducted among 307 surrogate decision-makers of patients with cancer and respiratory failure admitted to the intensive care unit (ICU) of a specialized oncology hospital in Sichuan Province, China, between January and November 2024. Decisional conflict was assessed using the Chinese version of the 16-item Decisional Conflict Scale (DCS). Univariate analyses and multiple linear regression were used to identify factors associated with DCS scores.

Results: The mean DCS score was 50.30 ± 8.73 , and 97.4% of participants had high-level decisional conflict. In multivariable analysis, higher decisional conflict was associated with no surgery during the current admission ($B = 10.20$, $P < 0.001$), fewer hospitalizations ($B = -3.87$, $P < 0.001$), having no relatives or friends working in healthcare ($B = 2.20$, $P = 0.043$), insufficient knowledge of the patient's disease ($B = 6.21$, $P < 0.001$), and no prior discussion of end-of-life issues with the patient ($B = 7.01$, $P < 0.001$). The model explained 48.3% of the variance in DCS scores.

Conclusions: Decisional conflict was highly prevalent among surrogate decision-makers facing decisions about invasive respiratory support for patients with cancer and respiratory failure. Limited treatment experience, insufficient disease-related knowledge, lack of access to medical information, and absence of prior end-of-life communication were associated with greater conflict. Earlier goals-of-care communication, values clarification, and tailored decision support may help clinicians identify and support surrogate decision-makers with greater decisional needs.

Background

Current cancer treatment integrates surgery, radiotherapy, chemotherapy, endocrine therapy, targeted therapies, and immunotherapy^[1, 2]. Advances in early detection and treatment have increased the number of cancer survivors, but many patients with advanced disease still face recurrence, progression, and treatment-related toxicities that can adversely affect quality of life and impose substantial physical and psychological burdens on patients and their families^[1, 2].

Acute respiratory failure is an important cause of hospitalization and intensive care among patients with cancer. A recent national analysis from the United States estimated that approximately 319,907 patients with cancer are admitted annually with acute respiratory failure, with 27.3% requiring invasive mechanical ventilation; in-hospital mortality was substantially higher in patients with cancer than in those without cancer^[3]. Recent expert consensus also emphasizes that acute respiratory failure in critically ill patients with cancer requires rapid etiological assessment, careful selection of oxygen and

ventilatory strategies, and multidisciplinary decision-making because prognosis is strongly influenced by the underlying malignancy, acute illness severity, and the need for life-sustaining treatment ^[4].

Decisional conflict is a state of uncertainty about a course of action when choices involve competing risks, benefits, values, or preferences ^[5, 6]. In oncology and critical-care settings, decisional conflict has been associated with decision regret, poorer quality of life, emotional distress, and substantial difficulty for family members acting as surrogate decision-makers ^[7, 8]. In clinical practice, treatment decisions for patients with cancer can be especially complex when prognosis is uncertain and families must weigh potential life prolongation against treatment burden and the patient's values.

Surrogate decision-making about invasive respiratory support sits at the intersection of critical care, oncology, and palliative care because families must often weigh the possibility of life prolongation against treatment burden, prognostic uncertainty, and the patient's values and preferences. Although decisional conflict among ICU surrogates and the importance of end-of-life communication have been increasingly recognized ^[8–10], evidence remains limited for surrogate decision-makers of patients with cancer who develop respiratory failure and face decisions about invasive respiratory support. This study therefore aimed to describe the level of decisional conflict in this population and identify patient- and surrogate-related factors associated with it. Particular attention was given to disease-related knowledge and prior end-of-life discussions because these factors may be relevant to timely goals-of-care communication and individualized decision support in serious illness.

Methods

Participants

Between January and November 2024, a cross-sectional questionnaire study was conducted in the ICU of a specialized oncology hospital in Sichuan Province, China. A total of 307 surrogate decision-makers of patients with cancer and respiratory failure were enrolled using convenience sampling. Eligible patients had a malignant tumor confirmed by histopathology or cytology and a diagnosis of respiratory failure. Eligible surrogate decision-makers were the individuals who signed the clinical legal authorization, were aged ≥ 18 years, were aware of the patient's condition, could read and communicate effectively, and voluntarily provided informed consent. Surrogates were excluded if they had a mental, psychological, or cognitive disorder, substance dependence, or had experienced a major stressful life event within the previous 3 months (e.g., bereavement, divorce, or serious illness). The study was conducted in accordance with the Declaration of Helsinki and was approved by the Ethics Committee of Sichuan Cancer Hospital (SCCHEC-02-2024-003; January 16, 2024).

Survey instruments

Patient characteristics collected included sex, age, length of hospital stay, primary diagnosis, type of medical insurance, surgery during the current admission, tumor metastasis, use of invasive respiratory support, and number of hospitalizations.

Surrogate decision-maker characteristics included sex, age, ethnicity, educational background, marital status, religious belief, monthly household income, relationship to the patient, whether the surrogate had relatives or friends working in healthcare, knowledge of the patient's disease, previous experience of a family member or friend undergoing resuscitation, prior involvement in decisions about invasive respiratory support, knowledge of respiratory support techniques, and previous discussion of end-of-life issues with the patient.

The DCS was originally developed by O'Connor to assess uncertainty in health-related decision-making, factors contributing to uncertainty, and perceived effective decision-making ^[5]. A Chinese version of the 16-item DCS has been psychometrically evaluated in Chinese populations ^[6]. Each item is scored on a 5-point Likert scale from 0 (strongly agree) to 4 (strongly disagree). The total score is calculated by dividing the sum of all 16 items by 16 and multiplying by 25, yielding a score from 0 to 100; higher scores indicate greater decisional conflict. A total score < 25.0 indicates low or no decisional conflict, 25.0-37.5 indicates moderate decisional conflict, and > 37.5 indicates high decisional conflict that may be associated with decision delay.

Sample size

The sample size was estimated using the commonly applied rule of 5–10 participants per study variable. The study included 26 variables: 9 patient characteristics, 14 surrogate decision-maker characteristics, and 3 dimensions of the decisional conflict measure. Using a multiplier of 9 and allowing for 15% attrition or non-response yielded an estimated minimum sample size of 269 ($26 \times 9 \times 1.15 = 269.1$). A total of 307 surrogate decision-makers were ultimately included.

Quality control

Quality control was implemented throughout participant screening, data collection, and data entry. Eligibility criteria were applied consistently. Questionnaires were administered using standardized instructions in a quiet environment, and responses were checked onsite for completeness. Two researchers independently entered the data, and 5% of records were randomly selected for verification to assess data-entry accuracy.

Statistical analysis

Data were entered by two researchers and analyzed using IBM SPSS Statistics version 26.0. Continuous variables were summarized as mean $\pm$ standard deviation, and categorical variables were presented as frequencies and percentages. Independent-samples t tests were used for comparisons between two

groups, and one-way analysis of variance was used for comparisons among three or more groups; non-parametric tests were used when appropriate. Variables with clinical relevance or $P < 0.05$ in univariate analyses were entered into a multiple linear regression model. Model fit was summarized using R^2 and adjusted R^2 . All tests were two-sided, and $P < 0.05$ was considered statistically significant. The manuscript was prepared with reference to the STROBE reporting guideline for cross-sectional studies.

Use of generative artificial intelligence

ChatGPT (OpenAI) was used during manuscript preparation to assist with English-language editing, manuscript formatting, and statistical consistency checks. All numerical results, interpretations, references, and final text were reviewed and approved by the authors, who take full responsibility for the content of the manuscript.

Results

Decisional conflict levels

Among the 307 surrogate decision-makers of patients with cancer and respiratory failure, the mean DCS score was 50.30 ± 8.73 . All participants experienced at least moderate decisional conflict: 299 (97.4%) had high-level decisional conflict and 8 (2.6%) had moderate decisional conflict (Table 1).

Univariate comparisons

Decisional conflict scores were compared across patient and surrogate decision-maker characteristics.

Among patient-related factors, surrogate decision-makers of patients who underwent surgery had lower DCS scores than those of patients who did not undergo surgery (45.39 ± 3.97 vs. 51.01 ± 9.00 ; $t = -3.84$, $P < 0.001$). DCS scores also differed by number of hospitalizations ($F = 21.05$, $P < 0.001$), with the highest scores among patients hospitalized fewer than five times. Length of hospital stay and primary diagnosis were also associated with decisional conflict ($P = 0.003$ and $P = 0.042$, respectively).

Among surrogate-related factors, those with relatives or friends working in healthcare had lower DCS scores than those without such contacts (45.64 ± 3.90 vs. 52.42 ± 9.47 ; $t = -6.76$, $P < 0.001$). Surrogates who had previously discussed end-of-life issues with the patient also had lower scores (43.75 ± 4.00 vs. 51.23 ± 8.82 ; $t = -5.15$, $P < 0.001$). Knowledge of the patient's disease, previous experience of resuscitation involving a family member or friend, prior involvement in invasive respiratory-support decision-making, and knowledge of respiratory support techniques were each associated with lower decisional conflict (all $P < 0.001$). Educational background was also associated with DCS scores ($P = 0.003$).

Sex, age, medical insurance type, metastasis, use of mechanical ventilatory support, marital status, religious belief, monthly household income, and relationship to the patient were not significantly associated with DCS scores. Full univariate results are presented in Table 2.

Multivariable analysis

In the multiple linear regression model, higher decisional conflict was independently associated with no surgery during the current admission ($B = 10.20, P < 0.001$), fewer hospitalizations ($B = -3.87, P < 0.001$), no relatives or friends working in healthcare ($B = 2.20, P = 0.043$), insufficient knowledge of the patient's disease ($B = 6.21, P < 0.001$), and no prior discussion of end-of-life issues with the patient ($B = 7.01, P < 0.001$).

These factors were independently associated with higher decisional conflict among surrogate decision-makers (Table 3).

Table 1
Decisional conflict scores among surrogate decision-makers (N = 307)

Measure	Value	Item mean
DCS raw total score	32.19 ± 5.58	2.01 ± 0.35
Moderate decisional conflict, n (%)	8 (2.60)	
High decisional conflict, n (%)	299 (97.40)	
Converted total score	50.30 ± 8.73	

Table 2
Univariate comparisons of decisional conflict scores (N = 307)

Variables	n (%)	DCS, mean $\pm$ SD	Statistic	P
Total	307 (100)	50.30 $\pm$ 8.73		
Patient Information				
Sex				
Men	216 (70.36)	50.53 $\pm$ 9.07	t = 0.70	0.482
Women	91 (29.64)	49.76 $\pm$ 7.88		
Age (years)				
≤ 40	17 (5.54)	49.63 $\pm$ 9.59	F = 0.22	0.800
41 ~ 59	103 (33.55)	50.74 $\pm$ 8.83		
≥ 60	187 (60.91)	50.12 $\pm$ 8.62		
Principal diagnosis of admission				
Lung cancer	111 (36.16)	50.59 $\pm$ 9.18	F = 1.93	0.042
Esophageal cancer	38 (12.38)	50.16 $\pm$ 9.55		
Gynecological tumors	18 (5.86)	45.83 $\pm$ 3.83		
Gastrointestinal tumors	31 (10.10)	49.50 $\pm$ 8.27		
Head and neck tumors	25 (8.14)	50.50 $\pm$ 7.70		
Brain tumors	15 (4.89)	45.73 $\pm$ 6.67		
Lymphoma	16 (5.21)	49.22 $\pm$ 8.40		
Urological tumors	2 (0.65)	46.09 $\pm$ 3.31		

Variables	n (%)	DCS, mean ± SD	Statistic	P
Hepatobiliary tumors	41 (13.36)	54.31 ± 9.20		
Bone tumors	4 (1.30)	51.56 ± 8.56		
Breast cancer	6 (1.95)	50.00 ± 6.48		
Length of Hospital Stay(day)				
< 7	139 (45.28)	50.84 ± 9.06	F = 5.87	0.003
7–14	89 (28.99)	51.90 ± 9.38		
> 14	79 (25.73)	47.55 ± 6.55		
Medical Insurance Type				
Employee Medical Insurance	122 (39.74)	49.77 ± 8.36	F = 0.81	0.447
Urban Resident Medical Insurance	112 (36.48)	50.17 ± 8.96		
Out-of-Pocket Payment	73 (23.78)	51.39 ± 8.99		
Receipt of surgery				
yes	39 (12.70)	45.39 ± 3.97	t = -3.84	< .001
No	268 (87.30)	51.01 ± 9.00		
With or without metastasis				
yes	258 (84.04)	50.41 ± 8.78	t = 0.49	0.628
No	49 (15.96)	49.74 ± 8.49		
Mechanical ventilatory support				
yes	161 (52.44)	50.52 ± 9.07	t = 0.47	0.638
No	146 (47.56)	50.05 ± 8.35		

Variables	n (%)	DCS, mean $\pm$ SD	Statistic	P
Number of hospitalizations				
< 5	194 (63.19)	52.59 $\pm$ 9.69	F = 21.05	< .001
5–10	67 (21.82)	47.08 $\pm$ 5.36		
> 10	46 (14.98)	45.35 $\pm$ 3.15		
Healthcare proxy decision maker Information				
Sex				
Men	192 (62.54)	49.67 $\pm$ 7.70	t = -1.63	0.105
Women	115 (37.46)	51.35 $\pm$ 10.16		
Age				
≤ 40	105 (34.20)	49.24 $\pm$ 7.69	F = 1.37	0.256
41 ~ 59	190 (61.89)	50.95 $\pm$ 9.20		
≥ 60	12 (3.91)	49.35 $\pm$ 9.19		
Nation				
Ethnic Han	295 (96.09)	50.31 $\pm$ 8.74	t = 0.12	0.903
Other Ethnicities	12 (3.91)	50.00 $\pm$ 8.76		
Educational background				
Primary school	5 (1.63)	45.94 $\pm$ 2.37	F = 4.74	0.003
Junior high school	73 (23.78)	52.91 $\pm$ 10.04		
senior high school and technical secondary school	120 (39.09)	50.70 $\pm$ 8.92		
college and above	109 (35.50)	48.31 $\pm$ 7.14		

Variables	n (%)	DCS, mean $\pm$ SD	Statistic	P
Marital Status				
Unmarried	6 (1.95)	47.14 $\pm$ 9.29	F = 1.83	0.142
Married	276 (89.90)	50.66 $\pm$ 8.77		
Divorced	22 (7.17)	47.73 $\pm$ 7.64		
Widowed	3 (0.98)	42.71 $\pm$ 5.92		
Religious Belief				
yes	11 (3.58)	50.14 $\pm$ 9.18	t = -0.06	0.951
No	296 (96.42)	50.31 $\pm$ 8.73		
Monthly household income (yuan)				
< 5000	8 (2.61)	56.25 $\pm$ 12.78	F = 2.05	0.131
5000 ~ 10000	180 (58.63)	50.35 $\pm$ 8.94		
> 10000	119 (38.76)	49.83 $\pm$ 7.99		
Relationship with the patient				
Spouse	117 (38.11)	50.84 $\pm$ 8.97	F = 0.52	0.593
Children	180 (58.63)	50.05 $\pm$ 8.65		
Others	10 (3.26)	48.44 $\pm$ 7.29		
Do you have any relatives or friends working in healthcare/medical field?				
yes	96 (31.27)	45.64 $\pm$ 3.90	t = -6.76	< .001
No	211 (68.73)	52.42 $\pm$ 9.47		

Variables	n (%)	DCS, mean $\pm$ SD	Statistic	P
Do you have knowledge about the patient's disease/illness?				
yes	157 (51.14)	46.12 $\pm$ 3.43	t = -9.85	< .001
No	150 (48.86)	54.68 $\pm$ 10.31		
Have you ever experienced a family member or friend undergoing emergency treatment/resuscitation?				
yes	45 (14.66)	45.83 $\pm$ 4.54	t = -3.80	< .001
No	262 (85.34)	51.07 $\pm$ 9.04		
Have you ever been involved in the decision-making process for invasive respiratory support for a family member or friend?				
yes	39 (12.70)	45.95 $\pm$ 4.66	t = -3.39	< .001
No	268 (87.30)	50.93 $\pm$ 9.00		
Do you have any knowledge or understanding of respiratory support techniques?				
yes	47 (15.31)	45.64 $\pm$ 4.62	t = -4.07	< .001
No	260 (84.69)	51.14 $\pm$ 9.03		
Whether to discuss end-of-life issues with patients				
yes	38 (12.38)	43.75 $\pm$ 4.00	t = -5.15	< .001
No	269 (87.62)	51.23 $\pm$ 8.82		

Table 3
Multiple linear regression of decisional conflict scores

Independent variable	Regression coefficient	SE	t	P
(Constant)	13.81	4.19	3.30	0.001
No surgery during current admission	10.20	1.14	8.98	< .001
Number of hospitalizations	-3.87	0.53	-7.38	< .001
Surrogate decision-maker educational background	-0.07	0.49	-0.14	0.890
No relatives or friends working in healthcare/medical field	2.20	1.08	2.03	0.043
Lack of knowledge about the patient's disease/illness	6.21	0.98	6.36	< .001
Have you ever experienced a family member or friend undergoing emergency treatment/resuscitation?	-0.24	2.32	-0.10	0.918
Have you ever been involved in the decision-making process for invasive respiratory support for a family member or friend?	-3.23	3.19	-1.01	0.313
Do you have any knowledge or understanding of respiratory support techniques?	2.10	2.40	0.87	0.383
No prior discussion of end-of-life issues with the patient	7.01	1.22	5.73	< .001
Note: R ² = 0.483; adjusted R ² = 0.467; F = 30.778; P < 0.001.				

Discussion

High decisional conflict and the need for earlier goals-of-care communication

In this study, surrogate decision-makers (SDMs) for patients with cancer and respiratory failure experienced a substantial burden of decisional conflict when considering invasive respiratory support. The mean DCS score was 50.30 ± 8.73 , and 97.4% of participants were classified as having high-level decisional conflict. Recent studies have similarly documented clinically important decisional conflict among surrogates of ICU patients with cancer and among surrogates facing respiratory-support decisions [9, 10]. More broadly, ICU surrogates commonly encounter uncertainty, emotional distress, information asymmetry, and difficulty interpreting prognosis and treatment options [8, 11, 12]. These challenges are particularly relevant when cancer and respiratory failure coexist, because decisions about invasive respiratory support may require families to consider not only immediate survival but also likely treatment burden, future quality of life, and whether the intervention is consistent with the patient's goals.

The multivariable model showed that decisional conflict was independently associated with the patient's surgical status and number of hospitalizations, as well as the SDM's access to medical contacts, knowledge of the patient's disease, and previous discussion of end-of-life issues. Together, these findings suggest that decisional conflict reflects both clinical unfamiliarity and unmet informational or communication needs. From a palliative-care perspective, this does not imply that patients should receive less disease-directed or intensive treatment. Rather, palliative-care principles such as clear prognostic communication, clarification of goals, exploration of values, and support for family decision-making can be integrated alongside active cancer and critical care. Early recognition of SDMs with limited prior treatment experience or inadequate information may therefore create opportunities for more timely and individualized decision support.

Surgical status and decisional conflict

Surrogate decision-makers of patients who had not undergone surgery had higher DCS scores, and this association remained significant after adjustment for other variables. Because this was a cross-sectional study, the finding should not be interpreted as evidence that surgery itself reduces decisional conflict. A more plausible explanation is that previous surgical treatment may reflect greater exposure to the cancer-care trajectory, more opportunities for communication with clinicians, and a clearer understanding of treatment goals, possible complications, and prognosis. Research on ICU surrogate decision-making and cancer caregiving consistently identifies prior experience, access to understandable information, and effective clinician-family communication as important components of decision support ^[8, 13, 14]. In clinical practice, SDMs of non-surgical patients may therefore benefit from earlier and more explicit explanations of disease status, expected outcomes of invasive respiratory support, treatment limitations, and alternative care options.

Hospitalization experience and decisional conflict

A greater number of hospitalizations was independently associated with lower decisional conflict. Repeated hospitalization may allow SDMs to accumulate experience with the patient's disease course, treatment procedures, complications, and communication with healthcare professionals. Although the present study cannot establish that repeated hospitalization directly reduces conflict, previous syntheses of ICU surrogate experiences and research on cancer caregivers show that familiarity with clinical information, decision roles, and healthcare communication can shape how families process subsequent treatment choices ^[8, 13]. Recurrent contact with the healthcare system may therefore contribute to more stable expectations about illness and treatment. Clinicians should recognize that SDMs facing earlier hospitalizations may have less experiential knowledge and may require more detailed explanation, repeated communication, and additional support for value clarification.

Access to healthcare-related information

Having relatives or friends working in the healthcare or medical field was associated with lower decisional conflict, although its independent effect was smaller than those of several other factors in the

final model. Medical contacts may improve access to understandable health information, help SDMs interpret clinical terminology, and provide emotional or experiential support during stressful decisions. Recent research on cancer caregivers and ICU surrogates identifies inadequate information, difficulty understanding treatment effects, and uncertainty about decision roles as common barriers to confident decision-making ^[13, 15]. Nevertheless, informal advice cannot substitute for communication with the treating team because outside contacts may not have complete knowledge of the patient's current condition, prognosis, or treatment goals. The clinical implication is therefore to identify SDMs without such informational resources and provide them with structured, accessible, and repeated explanations.

Disease-related knowledge and decisional conflict

Insufficient knowledge of the patient's disease was independently associated with higher decisional conflict and represented one of the more prominent surrogate-related factors in the multivariable analysis. Disease knowledge provides the cognitive basis for understanding prognosis, interpreting the expected benefits and burdens of invasive respiratory support, and comparing alternative treatment strategies. Large-scale cancer caregiver research shows that inadequate information and difficulty understanding how treatment will affect patients' physical condition and quality of life are frequent challenges during treatment decision-making ^[13]. Qualitative work in critically ill patients likewise highlights the importance of understandable clinical information and communication in enabling surrogate decisions ^[15], while contemporary oncology guidance emphasizes clear discussion of prognosis, risks, benefits, values, and preferences ^[14]. Therefore, decision support should move beyond simply providing more information: clinicians should assess baseline understanding, correct misconceptions, use plain language, and verify comprehension through repeated discussion.

Prior end-of-life communication and decisional conflict

Previous discussion of end-of-life issues with the patient was independently associated with lower decisional conflict. This finding is particularly relevant to palliative and supportive care because surrogate decision-making becomes more difficult when families are uncertain about the patient's values, acceptable treatment burden, or preferences for life-sustaining interventions. Studies of cancer caregivers and patient-caregiver dyads show that prognostic and end-of-life communication is both highly consequential and frequently challenging, and that concordance regarding life-sustaining treatment preferences is often incomplete when these issues have not been discussed ^[16–19]. Advance care planning research likewise emphasizes communication about values and goals, while recognizing that effects on caregiver outcomes vary across interventions ^[17, 20]. The present association should not be interpreted as evidence that end-of-life discussions directly reduce decisional conflict; families who are more prepared for serious-illness communication may differ in other important ways. Nevertheless, the findings support offering timely, culturally sensitive opportunities to discuss goals, values, and preferences before acute deterioration, rather than relying on surrogate decision-makers to infer the patient's wishes during a crisis ^[14, 17, 20, 21].

Limitations

This study has several limitations. First, participants were recruited by convenience sampling from the ICU of a single specialized cancer hospital, which may limit the generalizability of the findings to other institutions, regions, and patient populations. Second, the cross-sectional design permits identification of associations but cannot establish temporal sequence or causality between the identified factors and decisional conflict. Third, decisional conflict and several explanatory variables were based on self-report and may therefore have been affected by recall bias, emotional state, or social desirability. Fourth, some potentially important clinical and communication variables, including cancer stage, acute illness severity, prognostic estimates, urgency of respiratory support, and the quality and content of clinician-family communication, were not fully captured; residual confounding is therefore possible. Finally, several candidate variables were screened in univariate analyses, and the findings should be validated in independent samples. Future multicenter prospective studies should confirm these associations and evaluate whether structured information provision, values clarification, and decision-support interventions can reduce decisional conflict among surrogate decision-makers.

Conclusions

Surrogate decision-makers faced substantial decisional conflict when considering invasive respiratory support for patients with cancer and respiratory failure. Higher conflict was associated with no surgery during the current admission, fewer previous hospitalizations, absence of relatives or friends working in healthcare, insufficient knowledge of the patient’s disease, and no prior discussion of end-of-life issues. These findings highlight the importance of identifying informational and communication needs early in the course of serious illness. Integrating timely goals-of-care communication, values clarification, and tailored decision support alongside oncology and critical-care treatment may help surrogate decision-makers make decisions that are better informed by the patient’s preferences and clinical context.

Abbreviations

DCS: Decisional Conflict Scale; ICU: intensive care unit; SDM: surrogate decision-maker.

Declarations

Ethics approval and consent to participate

The study was conducted in accordance with the Declaration of Helsinki and was approved by the Ethics Committee of Sichuan Cancer Hospital (SCCHEC-02-2024-003; January 16, 2024). All participants provided informed consent before participation.

Consent for publication

Not applicable.

Availability of data and materials

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

CL contributed to study conception, data collection, statistical analysis, and drafting of the manuscript. YP supervised the study, interpreted the results, and critically revised the manuscript. Both authors read and approved the final manuscript.

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