

**Original Article**



# Social Isolation Status and Associated Factors in Elderly Patients with Ovarian Cancer: A Cross-Sectional Assessment

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## Abstract:

**Background:** Social isolation is an increasingly serious public health problem affecting the elderly population. Although extensive researches have been conducted on the current status and risk factors of the general elderly population, the social isolation status and related influencing factors of elderly patients with ovarian cancer, which are disease-specific, have not been sufficiently studied.

**Objective:** Assessing the status of social isolation and analyzing its influencing factors among elderly ovarian cancer patients.

**Method:** The study enrolled 229 elderly ovarian cancer patients who received treatment at a tertiary hospital in Hangzhou from May 1, 2022, to October 31, 2024, using convenience sampling. A cross-sectional survey was conducted utilizing the following instruments: a general information questionnaire, the Lubben Social Network Scale (LSNS-6), the Social Support Rating Scale (SSRS), the UCLA Loneliness Scale, and the Edmonton Symptom Assessment Scale (ESAS).

**Results:** Among 229 elderly ovarian cancer patients, the average scores for social isolation were  $(10.16 \pm 2.03)$ , family isolation  $(6.25 \pm 1.14)$ , and friend isolation  $(3.89 \pm 0.84)$ . The incidence rates of social isolation, family isolation, and friend isolation were 67.25%, 33.19%, and 72.93%, respectively. Multivariate linear regression analysis showed that the number of surviving children, bone marrow suppression, living alone, moderate to severe loneliness, social support, and cancer symptom burden were the main factors influencing social isolation in elderly ovarian cancer patients ( $P < 0.05$ ).

**Conclusion:** Elderly ovarian cancer patients exhibit significantly higher levels of social isolation, particularly manifesting more pronounced friend isolation than family isolation. Clinical practitioners should prioritize screening for social isolation in this population, with special attention to those demonstrating the following risk factors: limited surviving offspring, solitary living arrangements, chemotherapy-induced bone marrow suppression, inadequate social support networks, moderate-to-severe loneliness, and high symptom burden. Implementing targeted psychosocial interventions is crucial to mitigate the onset and progression of social isolation, thereby enhancing both psychological well-being and quality of life in this vulnerable patient group.

**Key words:** elderly ; ovarian cancer; social isolation; nursing

## 1. Introduction

Ovarian cancer represents one of the most serious gynecological malignancies, posing a growing threat to women's health worldwide with its annually increasing incidence[1]. Characterized by its insidious onset, the disease is frequently

diagnosed at advanced stages. Current statistics indicate that Chinese ovarian cancer patients face a five-year survival rate of merely 46%, with the mortality rate ranking highest among gynecological cancers, particularly affecting

elderly patients[2]. The primary treatment modalities for ovarian cancer include surgery, chemotherapy, and palliative care. However, elderly patients often experience social isolation and withdrawal due to multiple factors such as surgical complications, chemotherapy side effects, cancer burden, and physical frailty[3-4]. Social isolation[5], defined as the active or passive disengagement from social interactions and activities, manifests in both objective and subjective forms. Objective isolation involves measurable reductions in social network size and contact frequency, while subjective isolation reflects perceived declines in social support[6]. Social relationships play a vital role in human health. Positive interactions foster care, responsibility, and healthy behaviors that promote recovery[7]. Conversely, social isolation carries significant adverse effects, particularly for the elderly, including psychological distress (e.g., loneliness, depression)[8], increased risks of malnutrition, dementia[9], frailty[10], cardiovascular disease[11], accelerated cancer progression, and higher readmission and mortality rates[12]. Global demographic trends underscore the urgency of addressing this issue. The World Health Organization (WHO) projects that the population aged 60 will grow from 1 billion (2020) to 2.1 billion by 2050[13]. China's aging crisis is particularly acute: according to the 2022 Civil Affairs Development Statistical Bulletin[15], individuals aged 60+ account for 19.8% of the population ( $\approx 280$  million), with projections suggesting this will rise to 334 million by 2050. This demographic shift, highlighted in China's national aging strategy[14], positions the country among those most severely affected by population aging[16]. Elderly individuals face elevated risks of social isolation due to bereavement and shifting social roles[17]. Prevalence studies reveal rates of 25% in global elderly populations[18], 47.8% in Japanese communities[19], and 24-54% among Chinese seniors[20-21]. While research on social isolation in community-dwelling and institutionalized elders is extensive, studies focusing on elderly ovarian cancer patients—a population with unique disease-specific challenges—remain notably scarce.

Social support [22] refers to the maintenance of social identity and the acquisition of emotional support, material assistance, services, and

information through interaction with the outside world. Currently, social support can be divided into three aspects: subjective support (emotional experience), objective support (resources that meet various needs), and utilization of support (the degree to which support is utilized in times of difficulty). Social support is a significant factor influencing the subjective well-being of the elderly, acting as an intermediary between personality traits and subjective well-being [23]. A stable social support system can provide necessary psychological comfort and practical help to older adults, thereby enhancing their self-efficacy and promoting physical and mental health development. Conversely, low levels of social support can diminish the elderly's initiative, narrow their social circles, and reduce social interactions, leading to social isolation. Therefore, it is hypothesized that the level of social support may be a risk factor for social isolation among elderly ovarian cancer patients.

Loneliness [24] refers to the subjective dissatisfaction with social relationships, which can lead to a painful experience. Studies show that loneliness can result in depression [25], malnutrition [26], increased risk of sarcopenia [27], cognitive impairment [28], and other adverse effects. Research also indicates that loneliness acts as a mediator between social isolation and mental health [29]. Elderly individuals with intense loneliness tend to isolate themselves, reducing proactive contact with family and friends, decreasing social interaction, and leading to social isolation. However, it is currently unclear whether loneliness affects the mechanism of social isolation in elderly ovarian cancer patients.

Surgery, chemotherapy, and palliative care have improved the treatment outcomes for ovarian cancer patients, but they also exacerbate a range of cancer symptoms such as nausea, vomiting, diarrhea, fatigue, and pain. These symptoms often occur together in clusters and influence each other, leading to malnutrition and decreased self-care abilities[30]. The increased burden of cancer symptoms may significantly reduce the social mobility of elderly ovarian cancer patients, causing them to stay at home and isolate themselves from social activities.

Social Ecosystem Theory [31] posits that individuals are nested within mutually influential environmental systems, and their development

depends on the environment. The social ecosystem is divided into microsystems, mesosystems, and macrosystems. Microsystems refer to individual systems, which directly impact individuals, such as physiological and psychological aspects; mesosystems refer to small groups that influence individuals, such as families, friends, and workplaces; macrosystems refer to larger social systems, including culture, organizations, and communities. Therefore, this study is guided by this theory and explores the current status of social isolation among elderly ovarian cancer patients from three levels: microsystems (general patient conditions, disease factors, psychological state), mesosystems (monthly household income, family support), and macrosystems (social support). It also examines the correlation between social support levels, loneliness, and the burden of cancer symptoms and social isolation in elderly ovarian cancer patients, aiming to enhance the attention and importance placed on social isolation by healthcare providers and elderly ovarian cancer patients, and to provide reference and guidance for healthcare providers in formulating targeted intervention measures.

## 2 Method

### 2.1 Study Population

Using the convenience sampling method, elderly patients with ovarian cancer treated at our hospital from May 1, 2022, to October 31, 2024, were selected as the subjects of this study. Inclusion criteria: ① Pathologically confirmed as malignant ovarian tumors; ② Completed debulking surgery for ovarian cancer and completed standard chemotherapy (paclitaxel + carboplatin); ③ Age  $\geq 60$  years; ④ Aware of their condition and willing to participate in the study; ⑤ No language communication barriers. Exclusion criteria: ① Co-morbid with other malignant tumors; ② Patients with severe underlying diseases; ③ Patients with cognitive impairment or mental disorders; ④ End-stage patients. This study employed multiple linear regression analysis. The sample size [32] was calculated based on the number of independent variables, using 5 (10 times the number of independent variables, combined with literature review, the number of independent variables in this study is 17, and the required sample size is greater than 95 cases).

## 2.2 Measures

### 2.2.1 Descriptive Characteristics form

According to the literature analysis, a general information questionnaire was designed. Demographic data include: age, marital status, education level, place of residence, living status, health insurance, income, BMI, and number of surviving children. Disease-related data include: surgical pathological stage, disease course, comorbidities, multiple medications, and bone marrow suppression.

### 2.2.2 Lubben Social Network Scale6

Lubben Social Network Scale6 (LSNS-6): used to assess the state of the social isolation of the patients. The scale was developed by Lubben *et al.* [33] and translated into Chinese by Chang *et al.* [34], including 2 items Dimensions (family network, friend network) and 6 items are composed. No  $\sim 9$  and above are counted as 0 $\sim 5$  respectively. The total score is 0 $\sim 30$  points, and the total score  $< 12$  points indicates social isolation, and the higher the score, the higher the water of social isolation. The lower the score, the less likely it is that there is a family or friend isolation. The Cronbach's  $\alpha$  coefficient of the scale is 0.832.

### 2.2.3 Social Support Revalued Scale

Social Support Rating Scale (SSRS): Used to assess the level of social support for patients. The scale is divided into three dimensions—objective support, subjective support, and utilization of support—comprising 10 items. Items 1-4 and 8-10 each have only one option; selecting 1, 2, 3, or 4 earns scores of 1, 2, 3, and 4, respectively. Item 5 has five sub-items: A, B, C, D, and E, with each item representing support from "none" to "full support," scoring 1-4 points. Items 6 and 7, which are "no source," score 0 points, while other items score based on the number of sources. A total score  $\leq 22$  indicates low levels, 23-44 indicates moderate levels, and 45-66 indicates high levels. The Cronbach's  $\alpha$  coefficient of this scale is 0.896.

### 2.2.4 Loneliness Scale from UCLA

University of California at Los Angeles Loneliness Scale (UCLA Loneliness Scale) is used to assess an individual's sense of loneliness. Developed by Russell [36] and translated into Chinese by Wang Dengfeng [37], this scale has a single dimension

with 20 items (11 positive items and 9 negative items). The 11 positive items are scored from 1 to 4, indicating never, rarely, sometimes, and always; the 9 negative items are scored in reverse. The total score ranges from 20 to 80, with scores of 20,21-40,41-60, and 61-80 indicating no loneliness, mild loneliness, moderate loneliness, and severe loneliness, respectively. Higher scores indicate a stronger sense of loneliness. The Cronbach's  $\alpha$  coefficient of the scale is 0.920.

### 2.2.5 Edmonton Symptom Assessment Scale

The Edmonton Symptom Assessment Scale (edmonton symptom assessment scale, ESAS): This scale evaluates the level of cancer symptom burden in patients. It assesses nine established symptoms and one other severe symptom, which are pain, fatigue, drowsiness, nausea, loss of appetite, shortness of breath, depression, anxiety, and decreased well-being, primarily reflecting the patient's physical, psychological, and well-being status [38]. Each item uses a numerical scoring system from 0 to 10, where 0 indicates no symptoms and 10 represents the most severe level imaginable, with higher numbers indicating more severe symptoms. The Cronbach's  $\alpha$  coefficient of the scale is 0.720.

### 2.3 Data Collection

This study adopted a questionnaire survey method, with on-site investigations during outpatient follow-ups and telephone follow-ups completing the questionnaire. Before the survey began, all members of the research group received unified training to provide clear, simple, and understandable instructions for patients regarding the survey and questionnaire guidance. After obtaining patient consent, the survey officially commenced. All collected data were jointly

verified and entered into the system by two members of the research group. A total of 240 questionnaires were returned in this study, with 11 invalid questionnaires excluded, leaving 229 valid questionnaires, resulting in a response rate of 95.42%.

### 2.4 Data Analysis

The data were statistically analyzed using SPSS30.0 software. Categorical data were described with frequency and percentage. For normally distributed quantitative data,  $\bar{x} \pm s$  was used; for non-normally distributed quantitative data,  $M (Q1, Q3)$  was used. For groups of quantitative data that meet the assumptions of normal distribution and homogeneity of variance, independent samples t-tests were used for comparisons; for groups that do not meet these assumptions, independent samples Wilcoxon-ranks tests were used. For categorical data comparisons,  $\chi^2$  tests were used. The correlation between social isolation, loneliness, social support, and cancer symptom burden was analyzed using Spearman correlation analysis; the factors influencing social isolation were analyzed using multiple linear regression.  $P < 0.05$  was considered statistically significant.

### Ethical Considerations

This study has been approved by the Ethics Committee of our hospital, with the ethical approval number: Lunshen 2024 Research No.1439-fast.

### 3 Results

3.1 General Information A total of 229 elderly ovarian cancer patients were included in this study, and the general information is shown in Table 1.

Table 1 Univariate analysis of general data and influencing factors of exercise behavior perception in stroke patients(n=229)

datum		n(%)	social segregation	statistic	P price
Age (years)	< 70	164 (71.62)	11.02±2.06	3.01b	0.032
	≥70	65 (28.38)	9.42±1.98		
marriage	bereft of one's spouse	28 (12.23)	8.74±1.66	3.87b	0.015
	married	201 (87.77)	10.56±2.31		
degree of education	Primary school and below	55 (24.02)	10.36±2.08	1.36b	0.679

	Secondary school and technical secondary school	157 (68.56)	10.58±2.16		
	College degree or above	17 (7.42)	9.56±1.92		
Average monthly income (yuan)	< 5000	30 (13.10)	10.09±2.01	2.34a	0.655
	≥5000	199 (86.90)	10.26±2.06		
domicile	town	69 (30.13)	9.59±1.76	1.65a	0.598
	rural area	160 (69.87)	10.67±2.14		
dwelling state	living alone	27 (11.79)	7.46±1.48	5.18a	0.009
	Cohabitation	202 (88.21)	11.03±2.12		
Number of living children (children)	1	66 (28.82)	9.02±1.67	1.56b	0.039
	2	138 (60.26)	12.02±2.08		
	≥3	25 (10.92)	11.85±1.89		
Surgical pathological staging	early stage (I,II)	68 (29.69)	10.56±2.16	1.32a	0.697
	Late stage (III, IV)	161 (70.31)	10.08±1.92		
Multiple medications	have	102 (44.54)	9.97±1.94	1.98a	0.864
	not have	127 (55.46)	10.45±2.11		
arrest of bone marrow	have	117 (51.09)	8.72±1.87	4.77a	0.016
	not have	112 (48.91)	11.47±2.14		
hospitalization insurance	have	196 (85.59)	10.47±2.11	1.34a	0.087
	not have	33 (14.41)	9.84±1.99		
Comorbidities (per individual)	< 3	145 (63.32)	10.67±2.21	1.01a	0.094
	≥3	84 (36.68)	9.42±1.70		
Disease duration (months)	< 12	79 (34.50)	10.64±2.13	4.95a	0.0445
	≥12	150 (65.50)	9.59±1.89		
BMI(kg/m <sup>2</sup> )	< 18.5	83 (36.24)	10.44±2.07	1.37a	0.088
	≥18.5	146 (63.76)	9.78±1.79		

Note: a is t value, b is F value

## 2.2 Correlation analysis between social isolation and social support, loneliness and cancer symptom burden level of elderly ovarian cancer patients

The results showed that social isolation was negatively correlated with social support ( $r=-0.903$ ,  $P<0.01$ ) and positively correlated with loneliness and cancer patient symptom burden

( $r=0.912$ ,  $P<0.01$ ;  $r=0.881$ ,  $P<0.01$ ) in elderly ovarian cancer patients, as shown in Table 2.

The average social isolation score of the subjects in this study was (10.16±2.03) points, with 154 individuals (67.25%) scoring less than 12 points, including a family network dimension score of (6.25±1.14) points and a friend network dimension score of (3.89±0.84) points, see Table 3. The social support score for patients was

(32.22±5.54) points, see Table 4. The average loneliness score was (45.77±6.11) points, with a moderate loneliness rate of (72.05%) and a severe

loneliness rate of (9.61%), see Table 5. The average Edmonton Symptom Scale score was (35.26±4.06) points, see Table 6.

**Table 2 Correlation analysis between social isolation and social support, loneliness, and cancer symptom burden level in patients (r value)**

metric	aloneness	social support	Level of cancer symptom burden
social segregation	0.912	-0.903	0.881

Note: P <0.01

**Table 3 Total score of social isolation and score of  $\bar{x}$  each dimension (score, ±s)**

	Less than 12 points	Less than 6 points	Average score
social segregation	67.25%	-	10.16±2.03
home-area network	-	33.19%	6.25±1.14
Friends network	-	72.93%	3.89±0.84

**Table 4 Social support Rating Scale score (points, ±s  $\bar{x}$ )**

	score
total points	32.22±5.54
Objective support	10.42±2.16
Subjective support	9.90±1.89
Utilization of support	11.90±2.19

**Table 5 UCLA Loneliness Scale scores (points, ±s  $\bar{x}$ )**

level	not have	mild	moderate	severe	divide equally
number of people n(%)	8 (3.49)	34 (14.85)	165 (72.05)	22 (9.61)	45.77±6.11

**Table 6 Edmonton Symptom Assessment Scale score (score, ±s)**

level	not have	mild	moderate	severe	divide equally
number of people n(%)	21 (9.17)	86 (37.55)	106 (46.29)	16 (6.99)	35.26±4.06

2.3 Multivariate Linear Regression Analysis of Social Isolation in Elderly Ovarian Cancer Patients Define the social isolation score of elderly ovarian cancer patients as the dependent variable, and assign statistically significant variables as independent variables. First, verify if

it is normally distributed. See Table 7. The results show that cancer symptom burden, social support, number of surviving children, moderate to severe loneliness, and bone marrow suppression are the main factors influencing social isolation in elderly ovarian cancer patients, see Table 8.

**Table 7 Variable assignment table**

datum	assignment
Age (years)	< 70=1; ≥ 70=2
marriage	Married = 1; widowed =2
Number of surviving children	1=1; 2=2; ≥3=3

dwelling state	Cohabitation = 1; living alone =2
arrest of bone marrow	No = 1; Yes =2
Duration of illness (months)	< 12=1; ≥ 12=2

**Table 8 Multiple linear regression analysis of influencing factors of social isolation**

influencing factor	regression coefficient	standard error	standardized regression coefficient	t price	P price
constant	42.113	3.673	-	5.995	< 0.01
Cancer burden of symptoms	6.826	1.056	0.819	4.870	0.017
social support	-3.724	0.645	-0.873	-5.289	< 0.01
Number of surviving children	-3.748	0.527	-0.757	-4.285	0.019
living alone	5.772	0.994	0.812	-4.242	0.032
arrest of bone marrow	6.659	0.453	0.766	3.657	0.025
Moderate to severe loneliness	1.368	0.245	0.832	2.813	0.017

#### 4 Discussin

The incidence of social isolation is higher in elderly ovarian cancer patients

This study's survey shows that the incidence of social isolation among elderly ovarian cancer patients is 67.25%, higher than that of community elders (44.33%) [39] and elderly in nursing homes (51.6%) [40]. It may be that all respondents were female, and women tend to be more sensitive and delicate compared to men, making them more prone to anxiety, increased psychological burden, reduced social interaction, and thus more likely to experience social isolation [41]; it could also be that patients avoid going out to prevent cross-infection during the management of ovarian cancer; additionally, the physical functional impairments and adverse psychological changes caused by surgery and chemotherapy [42] lead to a narrowing of social circles, reduced frequency of social interactions, and decreased quality of social life. Therefore, compared to community and nursing home elders, elderly ovarian cancer patients are more likely to experience social isolation. This suggests that healthcare providers should pay attention to the social isolation of elderly ovarian cancer patients, actively assess and intervene to reduce their level of social isolation, thereby promoting their physical and mental health.

The findings of this study also indicate that the incidence of friend isolation is higher than family isolation. This may be due to the influence of traditional filial piety culture in our country, where most elderly people live with their children and reduce contact with friends [43]; at the same time, friends are often in their elderly and frail stages, making it difficult for them to go out, so friend isolation is more severe than family isolation. Therefore, the current situation of friend isolation among elderly ovarian cancer patients is worth paying attention to.

Social isolation of elderly ovarian cancer patients is influenced by many factors

Elderly ovarian cancer patients with fewer surviving children are more likely to experience social isolation. In our society, family is at the core of social relationships. Due to pressures from family and work, the fewer surviving children a person has, the less they can adequately shoulder the responsibility of supporting their elderly parents, failing to meet the physical and mental needs of elderly ovarian cancer patients[44], leading to increased social isolation. Therefore, adjustments to China's family planning policy should take into account family characteristics and the nature of elderly social networks[45], to prevent the intensification of aging-related conflicts caused by low birth rates, stabilize the social living conditions of the elderly, and

effectively promote the healthy social development of elderly ovarian cancer patients.

Aging ovarian cancer patients with bone marrow suppression are more prone to social isolation. Bone marrow suppression is the most common chemotherapy side effect in elderly populations [46]. Patients experiencing bone marrow suppression not only feel fatigued and lethargic but also have a higher risk of infection and bleeding, leading to reduced social activities and home confinement during this period. This can result in a disruption of their social networks. Healthcare providers should actively prevent and treat bone marrow suppression in elderly ovarian cancer patients to improve clinical outcomes; ensure proper care for complications such as infections and bleeding during the suppression phase; and pay attention to changes in the needs of elderly ovarian cancer patients, especially their psychological and emotional needs, providing them with dignity and a sense of well-being during the complex course of their illness. During this special phase of bone marrow suppression, internet platforms can be leveraged to develop home-based disease management and social software suitable for older adults, which can help patients better manage their conditions and connect with fellow patients, sharing experiences and insights [47]. This can effectively increase social engagement among elderly ovarian cancer patients and reduce social isolation.

Elderly ovarian cancer patients with moderate to severe loneliness are more likely to experience social isolation. Loneliness in the elderly is a subjective experience and also a public health issue in today's aging society [48]. The loss of female bodily structure, disordered self-image caused by chemotherapy, and the economic pressure brought by ovarian cancer can easily lead to a sense of stigma among elderly ovarian cancer patients [49], exacerbating their inner loneliness and reducing contact with family and friends, thus intensifying social isolation. This suggests that healthcare providers should enhance the understanding of ovarian cancer among elderly patients through brochures, videos, and other means, improving their self-management capabilities [50]; they can collaborate with mental health departments to regularly follow up on patients, actively provide psychological interventions for elderly ovarian cancer patients,

create a positive psychological environment, encourage active participation in social activities, reduce feelings of loneliness, thereby decreasing social isolation among elderly ovarian cancer patients.

Low levels of social support and living alone make elderly ovarian cancer patients more prone to social isolation. Influenced by traditional Chinese cultural ideas, elderly patients are reluctant to communicate with their children about their physical and mental health issues, fearing it will burden their children; with modernization, urbanization, and economic changes, many young people move to economically more developed large cities to obtain better education and job opportunities, leading to "empty-nest elders" [51]; losing family members, weakened social functions and roles [52], and reduced mobility due to aging; at the same time, physical discomfort (pain, fatigue, nausea, vomiting), social psychological issues (fear of recurrence, depression, anxiety) and other factors result in insufficient social support for elderly ovarian cancer patients, hindering their enthusiasm for social participation. Therefore, low levels of social support and living alone make elderly ovarian cancer patients more susceptible to social isolation. Encouraging family members to communicate more with elderly patients through WeChat video calls, phone calls, and other forms, and to participate in disease management together, can boost patient confidence; through a "trinity" model involving the government, community, and hospitals [53], establishing patient disease management records, setting up long-term follow-up mechanisms, screening for at-risk populations of social isolation, and early intervention; regular offline events can also be organized for elderly ovarian cancer patients to promote social interaction. This provides more external material and emotional support for elderly ovarian cancer patients with low levels of social support and living alone [54], increasing positive emotional expression, thereby promoting the expansion of social networks and reducing social isolation.

The heavy burden of cancer symptoms is a high-risk factor for social isolation among elderly ovarian cancer patients. This may be due to fatigue, nausea, and vomiting caused by chemotherapy, which lead to a decline in physical function and make it difficult for patients to go

out; peripheral neuropathy [55] such as motor and autonomic nervous system dysfunction can also impair the use of communication devices like mobile phones. Therefore, elderly ovarian cancer patients with heavier cancer symptom burdens are more likely to experience social isolation. It suggests that healthcare providers can tailor home-based exercise programs based on the patient's physical and mental health status, enhance physical activity, improve symptoms such as fatigue, sleep disorders, anxiety, and depression, and manage symptoms dynamically to reduce the burden of cancer symptoms, increase social interaction, and thereby decrease social isolation among elderly ovarian cancer patients.

### Place Restrictions On

The generalizability of the current research findings has several limitations: First, the sample size of this study is relatively small, being a single-center study. Future research could involve multicenter studies to increase the sample size; Second, the tools used in this study for data collection are all self-reported, which may introduce some information bias. Therefore, qualitative research could be combined to explore the factors influencing social isolation in elderly ovarian cancer patients at a deeper level; Third, social isolation is a dynamic process. Future research could investigate its trajectory to provide more reference points for reducing the level of social isolation among elderly ovarian cancer patients.

### 5 Conclusion

Elderly ovarian cancer patients have a higher level of social isolation, with social support serving as a protective factor and feelings of loneliness and the burden of cancer symptoms being risk factors. Healthcare providers should pay attention to and prioritize the social isolation status of elderly ovarian cancer patients, comprehensively assess their physical and mental states, manage symptoms such as bone marrow suppression effectively, reduce symptom burdens, and actively leverage family and social support through information technology to meet patients' spiritual needs, alleviate feelings of loneliness, promote social interaction, thereby reducing the level of social isolation among elderly ovarian cancer patients, improving their physical and mental conditions, and achieving health promotion goals.

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