

# Friendship and Cancer

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## Abstract

Friendships are a powerful healing force for physical and mental illness. The study of the role of friendship for cancer patients has been relatively neglected and academic evidence-based studies are lacking. A literature review of research was performed linking cancer with friendships and social support (other than that provided by family members or members of medical staff). Some studies report the importance of friendships formed amongst young children and often in a school context; fewer studies have focused on friendships amongst adults with cancer. Direct links between friendships formed and/or maintained amongst cancer patients and their precise effects on an individual's battle with cancer have yet to be explored.

## Keywords

*Friendship; Cancer; Social support*

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## Introduction

In recent years, significant advances in cancer prevention, diagnosis and treatment have been achieved. There have been advances in surgical oncology, radiotherapy, chemotherapy and the molecular sciences, as well as reductions in mortality achieved through early detection and screening programs. However, reductions in incidence and mortality of certain cancers are counterbalanced by increases in cancer incidence largely attributable to the adoption of the demographic changes and unhealthy lifestyles currently occurring in Western society [1]. As such, the diagnosis of cancer continues to have a profound psychological and social impact, with considerable consequences for the patient, family and social network. As the population ages, cancer incidence rises and the cancer mortality rate falls (estimated 14.1 million cancer cases worldwide in 2012, expected to increase to 24 million by 2035 [2]), there is increasing concern that there has not been adequate development and coordination of the services required to meet the physical and emotional needs of such a growing population of people living with and beyond cancer. Indeed, a «central challenge in cancer care is to maintain an acceptable quality of life for patients and to provide the necessary psychosocial support» [1].

In a recent scoping review [3] focusing on adult cancer survivors' problems and the effectiveness of interventions proposed, the research evidence was found to be surprisingly limited. Problems involving depression, pain and fatigue were found to be relatively well-studied, yet those involving cognitive and physical impairment, employment, financial well-being and social support and relationships were found to be far less studied, and interventions remained only in the early stages of evaluation. In a further literature review [4] concerning the physical and practical problems experienced by cancer survivors, four major gaps in current knowledge were identified. These were employment issues, key symptoms (including sexual function, bladder and gastro-intestinal problems), older cancer survivors, and unmet supportive care needs.

In France, one of the four principle goals cited in the recently published 2014 Cancer Plan is to preserve the continuity and quality of life of cancer patients, involving plans to ensure both global and personalized cancer management, to reduce negative after-effects and secondary cancers, and to decrease the impact of cancer on an individual's personal life. This goal reflects a general shift toward acknowledging the need for varied support systems for cancer patients and survivors, departing from a purely medical, administrative framework and towards a more holistic, individualized approach focusing on recovery, health and emotional well-being. Research can play an essential role in supporting such a shift. From a broad perspective, we know that 'coping' in a general sense is the process of responding to a perceived threat to the self, including life-threatening illnesses such as cancer. This process involves using both emotion-focused strategies (such as acceptance and seeking emotional support) that work by targeting the emotional distress associated with the situation, as well as problem-focused strategies (such as planning ahead and seeking instrumental, practical support) that work by intervening on the stressful situation itself. Importantly, both of these coping responses are associated with positive outcomes in cancer patients, contributing to a higher quality of life and bettered well-being, less psychological distress, and greater growth [5].

We also know that strong, lasting, true friendships can be one of the most obvious sources of such emotional and practical support.

*"A friend is someone who knows all about you and still loves you."*

Elbert Hubbard

*"I would rather walk with a friend in the dark, than alone in the light."*

Helen Keller

Friendships are a powerful healing force for physical and mental illness, indeed, strong, healthy relationships and a supportive environment are important resources to draw upon when dealing with any of life's difficult, stressful, traumatic or life-threatening situations. In addition to mental health benefits, having friends can in fact lead to differences in an individual's physical and biochemical reactions to environmental stressors [6]. It has been shown that individuals who experience support from close friends tend to live longer and remain healthier, as well as having a more 'positive outlook' when faced with adversity [6].

Yet the academic study of the role of friendship for cancer patients has been relatively neglected. When an initial search was performed using PubMed (search performed 14.04.2014) for either reviews or academic, evidence-based studies with both search words 'cancer' and 'friendship' in the title, only one – irrelevant to our investigation – result was found (referring to the friendships formed between researchers of a cancer and ageing project in Japan). A second search using PsycINFO with both search words 'cancer' and 'friendship' in the title similarly returned only four articles: an article concerning friendships between doctor and patient (irrelevant [7]), a relevant Portuguese article but not published in English [8], a book review of *Terminal Care: Friendship Contracts With Dying Cancer Patients* by Loma Feigenberg and Patrick Hort [9], and one relevant article on friendship issues and children with cancer [10].

Despite a lack of academic reports of the role and effects of friendships as such, there is a large database of reports investigating related themes, including the role of social support, social networks, peer group influences and marital status for individuals with cancer. For example, in a study of over 25,000 cancer patients, unmarried individuals had an increased risk of dying (a relative risk – RR of 1.23) [11]. When social needs and support as specific categories were addressed in the review mentioned previously [3], very little research was found concerning levels of social functioning in cancer survivors, yet some evidence was found showing that perceived social support was positively associated with well-being and quality of life [12,13]. No other reviews or randomized controlled experiments were found concerning evidence of the effectiveness of solutions proposed to managing social support [3].

The objective of this research was therefore to further delve into the question of the role of friendship for an individual who has cancer, by investigating related themes of social support and social situational outcomes of cancer survivors. We aimed to outline what is known from existing research about cancer patients and their friendships or social support networks not including family members or medical staff, and to consider research opportunities that would provide new information. This discussion concerns at once existing friendships, newly-forged friendships during the cancer process and friendships that may form between patients. Reviews and empirical studies were searched for using current electronic databases, including PubMed and PsycINFO, as well as publications from support groups. We also included a search of documentation widely available to the public provided by support groups online.

In the first section we address the state of the literature pertaining to links between social support and cancer. In the second section we consider the ways in which friendship might contribute to the fight against cancer, including the friendships formed amongst children and adults, and the precise mechanisms by which such effects might operate. Following this we raise several questions for further research.

## The state of the literature

### Children

One of the most complete studies of the role of social support for young patients with cancer was a literature review performed by Suzuki and Kato [14]. These researchers illustrated that in addition to the support provided by nurses and health care professionals, the coping and adjustment of young patients

with cancer can be significantly affected by parents, schools, and peers, and their report addresses each of these groups separately. Most relevant to our investigation of the role of friendships, here we will address the main points discussed in the two sections on school and peer relationships.

As one might imagine, social relationships between cancer patients and their school classmates can have a significant influence on the patient's psychosocial adjustment at school, and ultimately their physical and emotional struggle with the illness itself. It has been shown for example that a swift return to school can be useful and important for a child's social adjustment precisely because it provides opportunities for social support as well as "socialization processes typically experienced by school-aged children" [15]. However, returning to a school environment after a child has been diagnosed with cancer can be very challenging for the child, their family and peers alike. From an educational view point, readjustment back into the schooling system can be difficult if the child has missed a significant portion of the curriculum. Such absences can be due to treatments, hospital appointments and feeling ill, but from an emotional view point also, children often miss school because of fears of being rejected by fellow classmates as well as fears of their overprotective parents [16]. Despite children's worries about teasing, bullying, about how to talk to classmates about their illness, and how to reintegrate themselves into their old friendship networks, supportive relationships with classmates have been shown to clearly mitigate those negative experiences and positively correlate with a child's adjustment. Specifically, patients with greater perceived support from classmates – not necessarily friends – were less depressed, less anxious and had higher self-esteem, and this effect was slightly stronger than the association observed between these positive outcomes and perceived support from parents, teachers, and friends [17]. However, understandably, close friends as well as peers with cancer also contribute significantly to a child's struggle with cancer. Indeed, friends are consistently identified by young cancer patients as one of their greatest sources of support [18]. Yet it can sometimes be difficult for children to obtain their friends' support when they need it most: directly following diagnosis and treatment [14]. Both young children with cancer [19], and adolescents with cancer [20] reportedly have fewer friends following their diagnosis compared to healthy peers, and this effect can be enduring, with patients experiencing continued greater social isolation after two years [21].

Young patients also receive helpful support from other peers that have been diagnosed with cancer, and in one report [22], adolescents with cancer preferred to gain support from peers with cancer just as much as from parents and family members. There are numerous organizations available today for young patients with cancer to meet one another in support groups both online and in person. These connections aid adolescents in particular with developmental tasks and by enabling them to exchange information about the illness itself and associated procedures and treatments [20]. A study of a specially-organized camp for children with cancer showed that youths appreciated the understanding and empathy that they received from other camp members and enjoyed the ability to interact without feeling self-conscious about the side effects of their own cancer [23]. As a result, camp friends often became close friends following their time together at camp, and after a 6-month period approximately half stayed in touch through letters and phone calls [23].

Given that the mortality rate for childhood cancer patients has declined drastically over the past years (e.g. the 5-year survival rate for all childhood cancers combined in the U.S. increased from 58.1% in 1975–77 to 79.6% in 1996–2003, National Cancer Institute) it is not surprising that researchers have also begun to focus on the social situational outcomes of childhood cancer *survivors* including their psychosocial well-being. According to one literature review [24], the most recent of these studies have shown that generally, the majority of childhood cancer survivors do not experience any more psychosocial problems than comparative controls. Indeed, survivors often mention an increased appreciation for life and stronger bonds with other individuals. Upon closer inspection, the study led by Mattsson, Lindgren and Von Essen [24] investigated whether survivors of childhood cancer differ from comparison groups with regard to three themes: life values, relations to others, and relation to self. Only a small

minority of findings from comparative studies indicated any 'positive consequences' of childhood cancer (their main research question) with respect to each of the themes studied, and most of the studies indicated no differences between the survivor group and controls. However, the researchers did find that friendships (and marital status) were significant areas of concern.

With respect to the theme 'relations to others', in some studies with a descriptive design, childhood cancer survivors reported an increased empathy and desire to help others [25], stronger bonds with the family [25,26] and stronger relationships with friends [25]. Certainly when treatment has ended, in an attempt to achieve a 'normal life', childhood cancer sufferers may experience a profound desire to socialize with others, explaining in part why survivors describe both a preference for and more positive emotions when interacting with others than comparison groups [26]. However, in studies employing a comparative, experimental design, most results indicated that childhood cancer survivors experience poorer-functioning friendships [27] and lower satisfaction regarding their friendships [26]. Additionally, parents reported that their children used friends as their confidants less often [28] and generally had fewer close friends [28]. Teachers' reports concur: cancer survivors are less popular than their peers [29], and are less often chosen as best friends [30,31].

Researchers Mattsson, Lindgren and Von Essen [24] conclude their review by recommending the follow-up of childhood cancer survivors by a multi-professional team, focusing on both the survivors' health status and on their relationships with family, friends, and partners. Their work has shown that for those young children who survive their cancer, social relationships with others are significantly affected, and despite descriptive evidence suggesting that they feel stronger relations with friends and family, more often than not, the comparative evidence suggests the opposite. Although these studies do not directly show that having strong, supportive friendships would contribute to the betterment of the lives of those children living with cancer, a clear link has been highlighted between cancer and friendships after treatment has ended for children.

## Adults

On a broad scale, several studies can be cited illustrating how supportive or well-functioning social networks (including family, friends and significant others) can influence an individual's mortality during the struggle against differing diseases – contributing both to an individual's speedy recovery and prolonging their survival [32-34]. For cancer patients, it has been shown that social isolation is associated with decreased survival rates amongst women and men [35]. Additionally, amongst women diagnosed with localized or regional stage breast cancer, it has been shown that the presence of one or more confidants or close friendships in the patient's social network appears to have a protective effect on survival [36]. Interestingly, in this study, the presence of one close confidant showed the most significant increase in survival rate, whereas two or more close confidants showed an increase but to a lesser extent [36]. One of the most important people in an individual's social network is their partner, and as one might expect, cancer patients who are married or in dedicated long-term relationships appear to have significantly increased survival rates [37-39]. Generally speaking, a strong social presence clearly affects an individual's direct physical struggle with the cancer disease.

After cancer, there is also evidence to suggest an association between patients' survival and their social networks. One study in 2006 has investigated the idea that sustained friendships, as part of a wider grouping of social networks, might alter or predict the cancer survival rates of colorectal cancer patients [40]. Specifically, they asked whether changes in the frequency of patients' contact with their social network, including partner, children, grandchildren, other relatives, colleagues and friends, were associated with their survival. Researchers found that the association between a cancer patient's contact with friends and colleagues and mortality was insignificant. However, interestingly, they found a significantly higher mortality rate amongst patients who had lost their partner before their operation, either through divorce or the partner's death, compared to the survival rates of patients living with the

same partner [40]. In the case of colorectal cancer patients, it seems that the continued presence of a close partner, but neither general friendships nor colleagues, contributes to a patient's struggle against cancer in the long term. Again, as some would say that a life partner is one's closest friend of all; might this result then suggest that it is the closeness and/or consistency of a friendship, and not the quantity of friends, that contributes most significantly to a patient's struggle with cancer over the years? Whether there is a true effect of marital status on the long-term survival rates of cancer patients however remains unclear at best: a literature review by De Boer and colleagues [41] showed that in two studies overall survival was positively related to being married, yet there was a negative relation in three studies and no relation in two further studies cited.

Still at a broad scale, in a study of Chinese colorectal cancer patients, researchers performed qualitative interviews to investigate the role of social activity on facilitating patients' adjustment and optimizing their coping resources [42]. The researchers found that each of three primary factors – family intimacy, family commitment and friendships – contributed to a decrease in anxiety and depression, and correlated positively with physical and psychological well-being. Furthermore, they found stronger associations between friendships and reported mood than family subscales, indicating that friendships other than those with members of one's family are significantly linked to depression [42]. Although primarily a study of the statistical validity of their Social Relational Quality Scale (SRQS), this work remains a recent contribution to the study of the role of general social support and its experienced effects on the cancer struggle.

As social support and social activities are generally considered beneficial to the cancer patient, psychosocial interventions have been in place for quite some time in the therapeutic environment. However, a literature search performed in 2002 [43] concluded that the effectiveness of such interventions remains unclear. Four of the eight studies showed a significant positive effect of psychosocial interventions on the length of survival of cancer patients, yet the other four studies failed to show this association. Furthermore, in an associated review of 30 studies on the effect of psychosocial intervention on general well-being, results were similarly inconclusive. However, differing intervention strategies were used, including group therapy, individual counseling, psycho-educational group therapy, cognitive-behavioral group therapy, and each of differing frequency (weekly, twice-weekly etc), so it might be that only some of these strategies affect prognosis and/or well-being, and only for specific groups of individuals [43]. Clearly, further research is needed to clarify and develop the evaluation of psychosocial programs in the clinical treatment of cancer patients.

## In what ways can friendships contribute to the fight against cancer?

Certainly it seems intuitive that the presence and support of close friendships can only be of considerable benefit to any individual with cancer. But what are the precise mechanisms through which such friendships might operate? How might we describe and explore methodologically those positive effects experienced when a significant friend is present to help with the cancer struggle? There are three ways in which close friendships might be considered to mediate or contribute towards the effects of cancer: by providing social support, psychosocial or emotional support, and practical support. Additionally, it is important to consider the following questions: does the person want help? What sort of help have they requested? Would the help be appropriate to an individual's relationship with the person? Who else is available to help? How will other friends, family members and health professionals react to any involvement?

The first axe – social support – could include the positive experience of being part of a community (feelings of belonging) and networking – finding others and getting to know those in the same or si-

milar situations with respect to their cancer. The provision of social support and its networks can be considered as an access to both emotional and practical support (axes two and three), but it should also be considered as a form of support in itself, as the effects of the experience of being part of a group and knowing that you are not alone are both powerful and tangible.

The second axe – the idea that friendships provide psychosocial or emotional support – might include the experiences related to sharing knowledge about an individual's situation through listening/talking; contributing to an individual's wellbeing through distraction, entertainment, and humor; celebrating an individual's achievements and milestones and providing support for positive changes; envisaging and planning for the future; providing strength and support when an individual is dealing with sadness and depression; and importantly, providing unconditional love. Additionally, the emotional benefits provided by a close friendship might also come from assisting with the needs of the friends themselves. Indeed, much of an individual's sense of self comes from the roles we fulfill – as parent, spouse, sibling, worker or friend. As such, because the cancer struggle can interfere with these valuable roles, a friend can also provide help by calling on the cancer patient's own skills and experiences and to reassure them that they are still valued for the friendship they provide.

The third axe – practical support – would include the ways in which friends are able to provide help with all those tasks and activities with which a cancer patient is faced, such as cleaning, preparing meals, shopping, tidying, helping with administrative tasks, helping with transport to and from medical visits, helping with children etc. As well as helping with tasks that would otherwise be difficult for an individual with cancer to accomplish in terms of time spent and physical and emotional effort involved, a close friendship that provides practical support also enables an individual with cancer to have more time for themselves, and perhaps to a certain extent maintain a sense of control or mastery over their situation.

### The case of children

Academic discussions of the mechanisms by which friends are able to aid in the cancer struggle are few and far between. In the case of children, Fromer [44] discusses those positive influences experienced when children with cancer have firm, supportive friendships, the first of which concerns a child's psychological and emotional well-being. According to Fromer [44], having a friend aides a child's re-entry to school after treatment and contributes to their sense of inclusion, and psychological well-being is considerably enhanced when children with cancer receive support and encouragement from friends as well as family. It is clear that the attitudes and behaviors of peers significantly contribute to forming a child's self-image; and when a child is faced with cancer his self-image is threatened, thus the support of peers would appear to be more crucial than ever for a child's well-being. A further positive influence of supportive friendships refers to an experience of social inclusion and measures of achievement. In addition to the sense of emotional well-being that friends provide, there is increasing evidence to suggest that friendships and general social inclusion with a group can enhance school achievement itself [45]. Other studies concur that both well-being and learning are improved when cancer patients have positive peer-relationships (e.g., Meyer et al. [46]).

Sparked in part by earlier conclusions [44,47] that friendships are typically sustained throughout a child's illness, Fraser [10] looked into friendship issues for children with cancer in an educational situation. A qualitative study was performed upon 12 families of childhood cancer sufferers from 4 to 15 years of age, using both surveys and interviews with parents, children with cancer and their siblings, and focusing on the child's educational and psychosocial needs. Her work illustrates that friendships and peer relationships are often dramatically altered when a child has cancer and that, more often than not, negative responses and attitudes from a child's peers are relatively common, causing considerable distress.

Fraser [10] found that childhood cancer sufferers were often both stigmatized and rejected by their school-age peers. While some children with cancer appeared to have good friends at school, most of the parents reported that rather than friends, their children had acquaintances. For Fraser [10], there

was a clear distinction between real friends and ‘pseudo friends’ (those who claimed friendship until the child returned to school after a period of treatment and then rejected him or her), ‘fickle friends’ (those who quickly changed allegiances when the child altered in appearance), ‘patronising friends’ (those who ‘mothered’ the child without listening to his/her ideas) and general acquaintances. This explains in part why previous research may have overlooked the issue of friendships in the case of childhood cancer sufferers at school, as, quite understandably, the true nature of friendship can be difficult to ascertain, and children may be reticent about disclosing their real experiences with friends in this difficult and socially fragile period.

Importantly, much of the teasing and rejection in Fraser’s [10] study seemed to be related to the physical changes experienced by the child with cancer, and therefore, most of the rejection occurred at least for the duration of the treatment period when changes to appearance were most obvious. Furthermore, the disabilities associated with cancer and its treatments (which can include a puffy face, weight gain, hair loss, cognitive impairment, visual impairment, coordination difficulties, mood swings and stunting of growth) appeared to be more problematic for children’s peer relationships, than the cancer itself [10]. «While some teasing, bullying and social rejection are common experiences for some children, and while children can learn resilience from these negative experiences, the level of distress that seemed to be experienced by the children in this study seems far beyond that caused by common childhood peer conflicts» [10].

To illustrate this concept, Fraser [10] compares the situation to one in which school or neighborhood peers might grow up in the company of a child who has spina bifida, cerebral palsy or Down syndrome. In this context, the child with a disability has for some time been included in neighborhood games and has been present regularly in the classroom, meaning that familiarity with that child is constant and relatively unchanged, hence they can be regarded as ‘just another kid’ [46,48]. In contrast, childhood cancer sufferers can have significant and often sudden physical changes, no longer appearing to be the person their peers once knew and admired [10]. Their peers may struggle to accept those physical changes – in some sense perhaps finding it difficult to see beyond the changes in appearance and appreciate the core identity of the child – and often respond with either disgust and ridicule or ‘patronising’ sympathy [10]. These negative reactions clearly significantly impact peer relationships, creating loneliness and isolation for the child with cancer.

### Adult cancer sufferers

In the case of adult cancer sufferers, in a study of cancer patients aged 19-30 years, patients consistently reported that established, caring relationships aided them to confront the possibility of death and loss, encouraged their feelings of normalcy, provided them with practical support, and made them feel valued [49]. For hospitalized cancer patients, other fellow patients in the ward can also be a significant source of support and friendship. Fellow patients can provide information about the illness itself, along with its treatments and anticipated reactions, and as such, hold a unique position as somebody who fully understands the cancer patient’s situation and struggle [50]. However, this form of social support does come at a cost, as fellow patients also have their own treatment difficulties and are not always going to be present in the long term.

Very little is known about how young adults cope with cancer at various stages of its evolution (diagnosis, treatment, follow-up) and with a range of cancer diagnoses [51]. The research that is available indicates that social support is an important, often fundamental coping strategy for this group of cancer sufferers [52]. Indeed, in a study involving cancer patients ranging from 21 to 88 years of age, it was found that younger age was associated with significantly greater use of social support in order to cope [53].

Finally, Ream and colleagues [54] have focused rather than on the friendship needs of patients, on the needs of friends or ‘informal caregivers’ (including family members) themselves. However, interestingly, it was mentioned that informal caregivers adopted one of four roles in support of patients, naming these roles advocate, protector, symptom monitor and assertive companion [55].



## Concluding remarks and suggestions

The research evidence collected in this literature review has been surprisingly limited. Despite much anecdotal and qualitative evidence acknowledging the importance of friendships, academic evidence-based studies are lacking. Yet friends are in a unique position with respect to the emotional support they provide because of their intimacy with an individual, and any direct, empathetic and compassionate behaviors are more realistic because of shared experiences, trust and sincerity. We believe there is currently a need to both understand the psychological underpinnings of cancer patients' friendships and to further develop evidence-based services and protocols in accordance with this understanding. Borrowing from Fraser's [10] important work on the friendship issues of childhood sufferers of cancer, there are several ways in which the educational system and its programs might aid in supporting strong, positive peer relationships at school. The first of these is information: information provided to peers about a child's illness can be crucial for children struggling to understand and therefore accept physical and cognitive changes apparent in the child with cancer. Certainly, family and the individual must be consulted with beforehand, but information and explanations provided about effects as varied as port-a-catheters, hair loss and facial changes could significantly affect the way a child is welcomed and included by classmates when they return to school after treatment, suggests Fraser [10]. The New Zealand Child Cancer Foundation [1993] agrees, that peers should be well-prepared in advance for the child with cancer's re-entry to school, including both the changes they might expect to see and how they might react appropriately – not only for the comfort of the child with cancer but in order to alleviate peers' own discomfort and possible fears about the cancer itself. According to Fraser [10]), information can be used to alleviate fears (you can't catch it), address misconceptions (the child is not being punished for doing something wrong) and more generally to build empathy (teaching children to think about how they feel and look when they're unwell).

Other ways in which positive friendships at school might be encouraged, relate to an educator's style of teaching, creating opportunities for friendship, and encouraging contact with a childhood cancer sufferer while they are not at school. If a truly inclusive teaching style is practiced, encouraging a mutually enhancing, respectful and engaging environment, this will contribute to making sure that children with cancer feel both included and valued. Additionally, while friendships cannot be created or coerced between two individuals, certainly opportunities in the classroom can be created to encourage peer relationships, including ensuring physical proximity (e.g. chairs and tables placed together), cooperative group tasks (shared activities), a purpose for interacting (e.g. a problem-solving pair), and an inclusive atmosphere that embraces diversity. In this context, and to address the issue raised by Fraser [10] regarding patronizing friends, it could be beneficial to encourage different power dynamics between individuals, such that the child with cancer is not only receiving help, but also giving help and being the dominant partner or leader, thereby avoiding charity and encouraging mutual respect. Furthermore, Fraser [10] suggests that positive, constant friendships could be enhanced by encouraging teachers and classmates to maintain contact with the child with cancer while away for treatments or otherwise, and by encouraging visits whenever possible and appropriate, and wanted.

Finally, in any investigation of the effects of friendship and social support on the cancer patient's struggle, there must be consideration for the cultural context in which those friendships and support networks are placed, as the value of friendship can be subtly different from one culture to the next. Consider for example the Asian societies, who traditionally prioritize relationships over the individual: Asian value systems traditionally involve greater fatalism and favor interdependence among close social partners, thereby placing less emphasis on Western cultural imperatives of personal agency and accomplishment [42,55]. In these societies, the role of friendship must be paramount to an individual's means of coping with cancer. Clearly, direct links between friendships formed and/or maintained amongst cancer patients and their precise effects on an individual's battle with cancer have yet to be fully explored. We believe there is

currently a need to 1) perform exploratory studies to identify forms of social support that might prove effective (qualitative analyses); 2) perform secondary analysis of existing data on long-term outcomes and moderating factors (quantitative analyses); and 3) identify factors that dictate whether individuals do or do not seek social support, and when, and under what circumstances.

**Questions for further research**

- Research has often referred to typical means by which friends help others with cancer and have not looked at exactly how this help is carried out – does a friend use humour more than a professional carer for example? Do they help by providing emotional support rather than informational or practical support, indeed are any possible differences related to the type of support given (i.e. the supportive content) or the means by which it is delivered (i.e. with humour, with solemnity)?
- Furthermore, it might be that the effectiveness of such friendships be dependent upon a sort of compatibility between patient and friend's general coping strategies, including strategies for coping with his own stress and others' stress. For example, if a cancer patient prefers to deal with his situation with humour – and as much of it as possible – then the most effective friendship for this patient might be someone who also sees humour as a crucial healing method (either being a humorous person or someone who uses humour to deal with a traumatic situation), rather than a friend who seeks to help by relativizing for example or someone who provides practical support.
- How might the natural evolution of friendship contribute to the support process? For example, how do new friendships compare with those which have existed for some time, and is it important that a friend is present from the beginning until the end of a patient's cancer story or is her presence required most importantly at a certain point in time? Additionally, in which stages of the illness might such friendships be more or less important (during diagnostic, treatment, or follow-up)?
- What role do social networks play in the supportive process, and at what point can any interpersonal connections made be deemed as strong, supportive friendships? The internet is clearly a means for patients to gather valuable information and social support through websites and online communication platforms, including national and international cancer organizations, volunteer associations and personal sites or blogs. As well as gathering information about the disease and others' experiences with it, people with cancer use bulletin boards, newsgroups, forums and chat rooms to seek out other individuals with cancer, to communicate with them, and to offer their advice and peer support. According to Suzuki and Kato [14] however, no studies of online support groups for adolescents with cancer had been performed prior to their review.

**The review in brief**

Clinical question	Delve into the question of the role of friendship for an individual who has cancer, by investigating related themes of social support and social situational outcomes of cancer survivors.
Type of review	Narrative
Conclusions	The research evidence collected in this literature review has been surprisingly limited. Despite much anecdotal and qualitative evidence acknowledging the importance of friendships, academic evidence-based studies are lacking. Yet friends are in a unique position with respect to the emotional support they provide because of their intimacy with an individual, and any direct, empathetic and compassionate behaviors are more realistic because of shared experiences, trust and sincerity.
Limitation	Direct links between friendships formed and/or maintained amongst cancer patients and their precise effects on an individual's battle with cancer have yet to be explored.

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