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Review

Male sexuality after cancer treatment—needs for information and support: testicular cancer compared to malignant lymphoma

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Abstract

Testicular cancer (TC) as well as malignant lymphoma (ML), both have nowadays an excellent prognosis. However, both types of cancer may be diagnosed at young adulthood and patients may experience sexual concerns. In this article the need for information and support concerning sexuality will be explored, and the traumatic impact of cancer diagnosis with respect to this will be considered. A total of 264 patients with testicular cancer, median age 36 (S.D. 9.7) years, and 50 patients with malignant lymphoma, median age 42 (S.D. 11.7) years returned a questionnaire concerning sexual functioning; four items assessed the need for information or support concerning sexuality, at diagnosis and at follow-up. It appeared that more than half of the patients with testicular cancer reported a lack of information and support concerning sexuality during treatment; 67% of them still had a need for information at follow-up. These rates were significantly lower for patients with malignant lymphoma. Especially patients with testicular cancer who suffered sexual dysfunction reported extremely high needs for information and support. According to these findings it can be concluded that more attention should be paid to the doctor–patient communication with respect to sexual concerns in general, and especially where it concerns patients with testicular cancer.

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1. Introduction

An increasing number of patients with cancer has a favourable long-term prognosis with the aid of well-defined treatment modalities. Since two decades almost 90% of the patients treated for testicular cancer can be cured [1]. However, patients may experience considerable psychosocial and existential burden, some of them until many years after the initial treatment (see for example [2–6]). There are several reasons why this type of cancer, although in many cases ‘curable’, may be experienced as an invasive emotional event. First, testicular cancer affects young men in their prime of life (diagnostic age 15–35 years) [7,8]; they are very unexpectedly confronted with a life-threatening

diagnosis. Second, patients have to face problems that one expects at old age, not at young age. Third, in case of metastases the polychemotherapy (and surgery) may be experienced as very invasive; the treatment itself may provoke death-anxiety [9,10]. Fourth, all patients will have to cope with the risk and fear of recurrence, so with a diffuse image of the future for many years [11]. Experiences of this intensity may cause symptoms of post-traumatic stress [12], including re-experiencing and/or avoiding disease-related situations and cues, and symptoms of hyper-vigilance [13]. Only recently investigators have paid attention to post-traumatic stress in cancer survivors and/or their relatives [14–16]. One may assume that the impact of testicular cancer, although the prognosis is positive, is comparable to other types of cancer. However, a special issue in testicular cancer is that it concerns the genitals. The affected testicle will always be removed and the diagnosis signifies a sudden and major threat *from and to* the male genital area.

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This may affect in especially the sexual-masculine integrity of the person [17–23]. As a result sexual functioning can assumed to be under pressure, and research indeed revealed sexual morbidity among patients treated for testicular cancer (see for example [24–26]).

In the current study we assessed the need for information or support concerning ‘sexual functioning after treatment’ of patients with testicular cancer, during treatment and at follow-up, by means of a questionnaire [26]. We expected that these needs would be higher for patients with testicular cancer than for male patients with a non-genital tumour. Therefore the questionnaire was also sent to a sample of male patients with a non-genital tumour, in case malignant lymphoma.

Outcomes were related to reported changes in sexual functioning, as well as to age and duration of follow-up. If it is true that testicular cancer, being a genital tumour, triggers a *sexual* uncertainty we hypothesise that:

- (a) *Informational* as well as *supportive* needs concerning sexuality will be prominent, in especially in patients with testicular cancer;
- (b) These needs will have a relatively low correlation with the actual sexual functioning as such, and;
- (c) Assuming the sexual-traumatic impact of testicular cancer, these needs will be relatively stable and not strongly related to duration of follow-up.

2. Methods

2.1. Patients and treatments

The medical records of (male) patients, treated since 1977 at the University Medical Center Groningen (UMCG) for a malignant testicular germ cell tumour (TC), or for malignant lymphoma (ML), were checked concerning their health status. Since 1977 the treatment of cancer improved dramatically due to the application of cisplatin-based chemotherapy [27]. Patients who were alive, without signs of recurrence, aged between 17–70 years, were sent a questionnaire. The age boundary of 70 years was chosen because it may prevent bias, due to the risk of including patients with physical or mental co-morbidity, or bereavement due to old age. Patients were informed by a covering letter about the aim of the study and the use of the data; it was emphasised that non-response would in no way affect treatment. Permission to conduct this study was obtained from the Medical Ethical Committee of the UMCG.

Testicular cancer (TC): all patients with TC are orchidectomized. TC consists of two subtypes: seminoma and non-seminoma germ cell tumours. Dependent on dissemination grade the tumours are classified in stages I (no dissemination outside the testicles) to IV (dissemination outside the lymph nodes, such as lung metastases). Seminoma tumours are always treated with RT. Non-seminoma

tumours are, dependent on stage, treated with a ‘wait & see policy’ (W&S, stage I) or polychemotherapy (PCT, stage II–IV). If there is any residual retro-peritoneal tumour mass, surgical resection follows subsequently (PCT + surgery [1,28]).

Malignant lymphoma also consists of two subtypes: Hodgkin’s disease (HD), treated with RT (stages I–IIA), or PCT (all other stages); and non-Hodgkin lymphoma (NHL), treated only with PCT (dependent on stage: three courses combined with involved field radiotherapy 30–40 Gy for stage I; six to eight courses for stages II–IV [29,30]). Generally, *age-effects* have to be considered, because the age at diagnosis in case of non-Hodgkin lymphoma generally is higher (between 50 and 75 years) than in Hodgkin’s disease (15–45 years). Age at diagnosis of a seminoma testicular germ cell tumour generally is also about 10 years higher (between 40 and 50 years) compared to the diagnostic age of patients with a non-seminoma tumour (20 and 35 years).

2.2. Questionnaire

To explore sexual functioning after treatment for testicular cancer, we adapted a questionnaire which had been formerly used in a explorative study among women with gynaecological tumours [31] (see also [32]). We added four items concerning information and support: two items were about information and support received from the medical staff during the treatment period (sufficient—not sufficient, 4-point scale), the two other questions assessed the *current* need for information or support (yes or no).

2.3. Design

First, we wanted to assess the patients’ retrospective need for information (in the tables abbreviated as IR: information need retrospective) and support (SR: supportive need retrospective), as well as their current needs (IF: information need at follow-up, and SF: supportive need at follow-up), and compare the results of patients with TC to those of patients with ML. Second, we wanted to investigate the relationship between reported needs for information or support and reported sexual functioning, and again compare both patient groups (TC versus ML). Third, we wanted to assess eventual associations between needs for information or support at the one hand, and duration of follow-up period and age at the other (detailed data concerning sexual functioning of the testicular cancer patients were described earlier [26]). To complete the results we checked eventual differences between treatment sub-groups of both patient groups.

2.4. Statistical analysis

Results concerning needs for information and support in retrospect and at follow-up will be presented as raw scores

Table 1

Need for information and support concerning sexuality, during treatment (retrospective) and at follow-up of patients with testicular cancer ($n = 264$) or malignant lymphoma ($n = 50$)

During treatment (retrospective)		Absolutely insufficient		Insufficient		Hardly sufficient		Sufficient		P-value (χ^2)
		n	(%)	n	(%)	n	(%)	n	(%)	
Information (IR)	TC ($n = 263$) ^a	77	(29.5)	62	(23.5)	38	(14.5)	86	(32.5)	NS
	ML ($n = 48$) ^a	8	(16.5)	9	(19)	7	(14.5)	24	(50)	
Support (SR)	TC ($n = 258$)	91	(35.5)	48	(18.5)	46	(18)	73	(28)	0.028
	ML ($n = 47$)	9	(19)	9	(19)	6	(13)	23	(50)	
At follow-up		Yes		No						
Need for information (IF)	TC ($n = 262$)	175	(67)	87	(33)					0.000
	ML ($n = 48$)	13	(27)	35	(73)					
Need for support (SF)	TC ($n = 262$)	56	(21.5)	206	(78.5)					0.031
	ML ($n = 49$)	4	(8)	45	(92)					

^a Lower numbers in the table are due to missing values (this applies also to the other tables).

Table 2

Sexual dysfunction of patients with testicular cancer ($n = 264$) and of patients with malignant lymphoma ($n = 50$)

Sexual dysfunction	Testicular cancer 100% ($n = 264$)	Malignant lymphoma 100% ($n = 50$)
Desire decreased % (n)	19 (51)	20.4 (10)
Arousal decreased % (n)	12 (32)	16.7 (8)
Erection decreased % (n)	12.5 (33)	16.3 (8)
Orgasm decreased % (n)	19 (50)	22.9 (11)
Sum (SDF = 1–4)	29 (77)	30 (14)

(Table 1), or as dichotomised scores (cut-off half way the 0–3-point scale, Tables 2–4). Sexual dysfunction scores were dichotomised and a sum-index (sum-SDF) was obtained by summing up the number of patients that reported strong/moderate decrease of *at least* one (or more than one) of the following sexual functions: libido, arousal, erection and orgasm. This resulted in two sub-groups: patients with no

sexual dysfunction (SDF = 0), patients who reported one or more than one sexual dysfunction (SDF = 1–4). To analyse the differences between groups, Kruskal–Wallis' or Mann–Whitney's *U*-test were used for categorical variables. Significance of correlation was established by using Spearman's rho. A $P < 0.05$ was considered to be significant.

3. Results

3.1. Response and patient characteristics

- **Testicular cancer:** a total of 287 patients returned the questionnaire (response rate 85% of a sample of 337 patients). Those who had incomplete medical data ($n = 9$), had no standard treatment ($n = 5$) and bilateral testicular cancer patients ($n = 9$) were excluded. A total of 264 patients (78% of the original sample) remained for analysis. For treatment characteristics, see Table 4a.

Table 3

Relation between sexual dysfunction and need for information and support: testicular cancer ($n = 264$) and malignant lymphoma ($n = 50$) (dichotomised scores)

No. of sexual dysfunctions		In retrospect		At follow-up	
		Absolutely not/sufficient information	not/sufficient information	Absolutely not/sufficient support	not/sufficient support
SDF = 0	TC: 182 (70.5%)	TC: 90 (50%)	TC: 87 (48.5%)	TC: 112 (61.5%)	TC: 27 (15%)
	ML: 33 (70%)	ML: 15 (47%)	ML: 19 (61.5%)	ML: 7 (22%)	ML: 1 (3%)
SDF = 1–4	TC: 77 (29.5%)	TC: 47 (61%)	TC: 51 (67%)	TC: 60 (78%)	TC: 28 (36.5%)
	ML: 14 (30%)	ML: 6 (43%)	ML: 9 (64.5%)	ML: 5 (35.5%)	ML: 3 (21.4%)
Total	TC: $n = 261$	TC: 137 (53%) ^a	TC: 138 (54%) ^b	TC: 172 (66.5%) ^c	TC: 55 (21%) ^d
	ML: $n = 47$	ML: 21 (46%)	ML: 28 (62%)	ML: 12 (26%)	ML: 4 (8.5%) ^e

In ML the remaining variables reveal no significant differences between SDF = 0 and SDF = 1–4.

^a Pearson's χ^2 ; $P = 0.053$.

^b Pearson's χ^2 ; $P < 0.004$.

^c Pearson's χ^2 ; $P < 0.007$.

^d Pearson's χ^2 ; $P < 0.000$.

^e Pearson's χ^2 ; $P < 0.039$.

Table 4
Comparing treatment groups: need for information and support

	Total <i>n</i> (%)	Treatment-groups				<i>P</i> -value ^b
		W&S; <i>n</i> = 59 (22%)	RT; <i>n</i> = 41 (15%)	PCT; <i>n</i> = 42 (15%)	PCT + surgery; <i>n</i> = 122 (45%)	
(a) Testicular cancer (<i>n</i> = 264)						
During treatment						
Insufficient information ^a	139 (53%)	30 (52%)	17 (41.5%)	22 (52.5%)	70 (57.5%)	0.370
Insufficient support ^a	139 (54%)	32 (57%)	14 (34%)	25 (59.5%)	68 (57%)	0.052*
At follow-up						
Need for information: 'yes'	175 (67%)	41 (71%)	25 (61%)	28 (67%)	81 (67%)	0.800
Need for support: 'yes'	56 (21.5%)	6 (10.5%)	7 (17%)	9 (21.5%)	34 (28%)	0.048*
	Total <i>n</i> (%)	Treatment-groups				(<i>P</i> -value ^c)
		HD-RT; <i>n</i> = 8 (16%)	HD-PCT; <i>n</i> = 18 (36%)	NHL-PCT; <i>n</i> = 24 (48%)		
(b) Malignant lymphoma (<i>n</i> = 50)						
During treatment						
Insufficient information ^a	17 (35.5%)	3 (37.5%)	5 (29.5%)	9 (39%)		(NS)
Insufficient support ^a	18 (38%)	3 (43%)	4 (23.5%)	11 (48%)		(NS)
At follow-up						
Need for information: 'yes'	13 (27%)	1 (12.5%)	7 (41%)	5 (22%)		(NS)
Need for support: 'yes'	4 (8%)	1 (12.5%)	3 (17%)	0		(NS)

Abbreviations: TC: testicular cancer, ML: malignant lymphoma, HD: Hodgkin's disease, NHL: non-Hodgkin's lymphoma, W&S: wait & see policy, RT: radiation therapy, PCT: polychemotherapy.

^a Dichotomised scores: absolute or moderate insufficient information or support.

^b Pearson's χ^2 ; **P* < 0.05; NS: not-significant.

^c In ML statistical differences between sub-groups are hard to establish, due to low numbers per sub-group.

At the time of diagnosis, the median age of this patient group was 29 (S.D. 9.4) years, at follow-up 36 (9.7) years. The median follow-up period for TC was 5.9 (S.D. 4.4) years. There were no significant differences concerning demographic variables between the four treatment groups.

- **Malignant lymphoma:** 58 patients (response rate 72.5% of a sample of 80 patients) returned the questionnaire. Eight patients were excluded: six were treated before 1977, one patient suffered from a brain tumour, and one patient received a non-standard combination of treatments. A total of 50 patients (62.5% of the original sample) remained for analysis. For treatment characteristics, see Table 4b. The median age at diagnosis was 34.4 (S.D. 11.6) years, median age at follow-up was 42 (S.D. 11.7) years. There were no significant differences between both sub-groups of ML.

3.2. Need for information or support concerning sexuality

3.2.1. Comparing testicular cancer and malignant lymphoma

Table 1 presents the raw scores of needs for information and support of both patient groups (TC and ML), during treatment (retrospective) as well as at follow-up.

As can be seen patients from the table, patients with TC generally were much more dissatisfied about information

and support concerning sexuality compared to patients with ML. Over half of the patients with TC valued information and support offered during treatment as absolutely not/not sufficient, and at follow-up two-thirds of these patient group reported a current need for information concerning sexuality.

3.2.2. Relation between sexual dysfunction and informational or supportive needs

Although in general the reported needs for information and support were high, we wanted to check whether there were differences between patients with, versus without sexual dysfunction. First we present the outcomes of reported sexual dysfunctions in detail (Table 2) and thereafter we present the relation between informational and supportive needs and the total number of reported sexual dysfunctions (SDF 1–4, Table 3).

A total of 29.5% of patients with TC and 30% of patients with ML reported one or more sexual dysfunctions (for more details, see [33]). Although analysis at treatment level revealed that patients with TC, treated with PCT, reported the highest rate of sexual dysfunction, the differences between TC and ML concerning sexual functioning reached no statistical significance. It is remarkable that in both patient groups, about half of the patients *without* sexual dysfunction reported a lack of information and support in retrospect; at follow-up the need for information was still

very high for patients with TC. However, patients with TC with sexual dysfunction reported significantly higher needs for information and support compared to patients without sexual dysfunction; for patients with ML this was only de case concerning ‘need for support’ at follow-up. So, patients with TC showed a stronger increase of needs for information and support (in retrospect and at follow-up) when sexual dysfunction was the matter than patients with ML.

3.2.3. Interrelations

Relations between informational and supportive needs: the correlation between reported lack of information and lack of support *in retrospect* was very high in TC (ρ 0.78), as well in ML (ρ 0.83). This means that responses on these two retrospective items were very similar. However, in both patient groups there was no relationship of interest between these two variables and duration of follow-up period, as well as age. As the need for information and support *at follow-up* concerned a dichotomous question, we compared means of patients answering ‘yes’ versus ‘no’. Patients that did want information at follow-up (about 30% in both patient groups), also wanted more frequently support; while of the patients that wanted no information at follow-up almost all also wanted no support.

Relations of informational and supportive needs with follow-up period and age:

- *Testicular cancer:* there were no differences in age between TC patients that currently wanted *information* yes versus no, or *support* yes versus no. But TC patients that wanted support at follow-up had a some longer follow-up period (mean 6.5 versus 8 years, $P < 0.22$).
- *Malignant lymphoma:* there were no differences in follow-up period between ML patients that currently wanted *information* yes versus no, or *support* yes versus no. But ML patients that wanted information at follow-up were relatively younger (mean 35 versus 45 years, $P < 0.005$).

3.2.4. Treatment-specific effects?

As mentioned in the Section 2, TC as well as ML consisted of diverse histological and/or treatment sub-groups. To identify treatment groups that may need special attention, we would like to check whether there were differences between treatment sub-groups concerning informational or supportive needs (Table 4a and b).

- *Testicular cancer:* patients treated with RT were significantly *less dissatisfied* with support in retrospect (SR 34% in RT, versus respectively 57% in ‘wait & see’, 59.5% in PCT, and 57% in PCT+RRRTM, Chi $P < 0.052$). Patients treated with PCT + surgery reported the highest need for support at follow-up (SF 28% versus respectively 10.5% in W&S, 17% in RT and 21.5% in PCT, Chi $P < 0.048$); those are also the patients with the most threatening stage, treated with the most intensive treatment regimen, and reporting the highest level of sexual dysfunction.

- *Malignant lymphoma:* in ML (statistical) differences between sub-groups were hard to establish, due to low numbers per sub-group. At face value, HD-PCT treated patients had the lowest dissatisfaction with information and support in retrospect, but not at follow-up.

4. Conclusion and discussion

Generally, cancer diagnosis implies loss of control in many aspects of life. Especially carcinoma of the testicles may result in sexual dysfunctioning. In this article we explored the subjective need for information and support concerning sexuality of testicular cancer patients, and compared these to a group of male patients with a non-genital tumour (malignant lymphoma). We assumed that:

- Informational as well as supportive needs concerning sexuality will be prominent in both patient groups, but higher in patients with testicular cancer.
- There is a relatively low association with actual sexual functioning.
- Needs for information and support may remain a long time after treatment, due to the psychological impact of the cancer diagnosis.

In general the results underscored these three assumptions where it concerned needs for *information*, but offered important nuances concerning the patients’ *current* needs for *support* concerning sexuality.

Generally, patients with testicular cancer reported no more sexual dysfunction than patients treated for malignant lymphoma. However, concerning needs for information and support we established some interesting differences. Looking back at the period of their treatment, so in retrospect, the majority of patients with TC, and half of the patients with ML, considered the information and support concerning sexuality as ‘*insufficient*’. Patients with TC reported a significantly higher lack of support concerning sexual matters during their treatment, compared to patients with ML. Although these subjective self-reports (presenting the cognition of the patients) may differ from the degree of information and support as it was actually given during treatment, the results offer a valid indication of the *patient’s perception* of this matter. At follow-up the need for information concerning sexuality was extremely high for patients with TC (67%). The need for support at follow-up was lower for both patient groups, but still significantly higher in patients treated for TC compared to those with ML. Our first hypothesis could be confirmed, which may be an indication of a higher sexual vulnerability for patients with a genital tumour.

In accordance with expectations, the relationship between reported sexual dysfunction and informational and supportive needs was low. Not only the majority of patients reporting decreased sexual functions expressed a lack of information and support during treatment, but also about

half of the patients *without* any sexual morbidity in both patient groups (TC as well as ML). However, there appeared to be some relation of interest between reported presence of sexual dysfunctions and the need for support *at follow-up*, in both patient groups. It appeared that TC patients with one or more sexual dysfunctions reported extremely high needs for information and support (up to 78%), significantly more than TC patients without sexual dysfunction; for patients with ML this trend was also present but could not statistically be established. So, although in general there is a high need for information and support, especially patients who report sexual dysfunction may *actually* need support.

Generally, there appeared to be no relation between informational or supportive needs at the one hand, and duration of follow-up period at the other, but patients with TC with a longer follow-up period reported *more* need for support after a longer follow-up period. The very high need for information *at follow-up* especially in TC (67%), also in many of the patients without any sexual morbidity (61.5%), underscores our hypothesis that the experienced need for information or support does not decrease in the course of time. This adds to the idea that the impact of (testicular) cancer, here specifically pointed at sexuality, remains long time after diagnosis. Although older patients are assumed to have lower needs for information [34,35] a relationship with age could not be established for patients with TC. This again underscores our idea that sexuality has become a vulnerable area particularly for patients with testicular cancer, irrespective of age.

4.1. Discussion

Comparing different treatment sub-groups with TC revealed an interesting point: patients treated by surveillance, who have—from a medical point of view—an ‘optimal prognosis’ and received minimal surgical treatment, reported a need for information and support comparable to those treated by PCT (\pm surgery). This finding is in line with two other studies. Arai [36] found that testicular cancer patients under surveillance reported equal levels of morbidity, but higher needs for prosthesis and the most decreased sense of attractiveness compared to other treatment groups. Derdiarian found that patients with a local tumour sought more information compared to those with metastases [37].

Irradiation may be assumed to be a less intrusive treatment than polychemotherapy. Although in our study testicular cancer patients treated with RT reported the lowest needs for information and support, the differences with other treatment groups were not significant. A recent study among TC-RT treated patients reported that most of these patients considered information and counselling given by their physician about the sexual consequences of therapy to be insufficient [32]. This evokes the idea that there seems to exist a paradoxical relationship between objective medical status (such as stage of disease or treatment intensity) and subjective informational needs. Therefore, when counselling

cancer patients, it may be useful to consider the impact of cancer on sexuality, also where it concerns a good prognosis and/or a seemingly non-intrusive treatment.

If we should have aimed to recall the information or support *actually* offered during the period of treatment, of course memory-disturbances would be a matter of concern, as the range of follow-up periods was rather wide (0.25–17 years). However, as it concerned a retrospective study we were not asking for the actually offered information and support during treatment, but how the patients themselves, *perceived* information and support concerning sexuality, as an indication of the importance of the subject. Patients may feel dissatisfied with the information offered during treatment, *not* because no information was offered, but may be because it was not tailored, not adequate, could not be processed mentally and/or did not fit their emotional needs and this also might have hampered their memory.

4.2. Conclusions

The results from this study show much dissatisfaction about information and support concerning sexuality among male cancer patients with testicular cancer as well as in patients with malignant lymphoma. Interestingly, in both patient groups the reported need for information was much higher than the reported sexual morbidity. The *actual* need for *support* showed some relation to reported sexual dysfunction. Generally, patients with testicular cancer reported a much higher need for information and support as compared to patients with malignant lymphoma. At this point some specific conclusions can be drawn:

- (a) in general (male) cancer patients appreciate it to be asked whether they need information or support concerning sexuality, during treatment and during subsequent surveillance;
- (b) this seems especially relevant for patients who indeed do suffer from sexual dysfunction;
- (c) and even more specifically relevant for patients with testicular cancer.

Therefore it can be concluded that male cancer patients in follow-up should be professionally invited by their physician to report about their sexual functioning, and patients with testicular cancer in particular.

Still, we do not yet know *what kind* of information concerning sexuality patients would like to receive from their physicians. From some other studies we know that patients consider post-treatment sexuality and fertility very important subjects and are very appeased when the oncologist initiates the subject of sexuality [38,39]. But patients are different in their tendency to welcome or keep off information associated with the threat of illness [40,41], and may become non-discriminatory in gathering information [42]. By its very nature the experience of cancer may intensify a general need for information and emotional support. At the one hand information is ‘never enough’,

but at the other hand the capacity to take-in information may be reduced [42–45]. Although patients may formulate all kinds of informative questions, it is not always immediately clear what the patient is searching for: medical information about the disease, or emotional support [46,47]. When asked, patients most of the time cannot *specify* what kind of information or support they would to receive. First of all patients seem to have a need to express a general feeling of uncertainty and embarrassment, not pointed to sexuality anyway: “You just don’t understand what happens to you, you know nothing, you cannot image that it is true”. Furthermore, even years after treatment, patients may show clinical signs of having experienced the impact of a psycho-trauma: they tend to tell about their illness in bright, detailed and fragmented memories, sometimes interrupted by a break through of emotions [13]. So when, for example, a patient with testicular cancer asks: “Doctor, do you think the disease may cause sexual difficulties?”, such a question may not refer to a ‘cognitive’ request for a short lecture about sexuality after cancer in the first place. It may be an expression of a need for interpersonal support. This ambiguity should be taken into account when assessing or interpreting the needs of (testicular) cancer-patients.

4.3. Practice implications

At this point we would like to offer some more general reflections. It can be concluded from this study that male cancer patients, and patients with testicular cancer in particular, should be professionally invited by their physician to report about their eventual sexual concerns. Still, we do not assume that the high rate of reported insufficient information and support concerning sexuality per se reflects the absence of actually given information. The adequacy and efficacy of information or support may depend more on the quality of the doctor–patient *relationship* than on the content of the information as such, in especially where it concerns the sexual aspects of a genital, life-threatening tumour [18,20,48]. This relationship implies not only the vulnerability of the *patient* but, as a consequence, also of the *doctor*, in who’s hands the patient feels his fate has been laid down. Also in our civilised era, for many patients in despair ‘... all the time the doctor’s knowledge, like a flickering lamp, is the one dim light in the darkness’ [49]. Here emerges an challenge for doctors: to explore their own capacity to face the emotions of their (male) patients, in especially where it concerns sexuality in relation to the threat of death [47,50–52]. However, this is also a serious point of concern, because helpers who are emotionally empathic with patients tend to experience ‘traumatic countertransference’, which may lead to some kind of vicarious traumatization in the helper, when he is not supported himself by an adequate supportive system [53]. To conclude these reflections, from this point of view the question is not only: how to offer *enough* information and support, but especially: how to do this *in the right way*. May be the

most important question is: what do *doctors need*, to be able to give information and support in the right way.

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