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Return to work after sick leave for cancer : A study among health care staff in Tunisia.

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Abstract:
Background: *Return to work after cancer is a milestone in the process of reconstruction and reintegration of patients. It is of particular importance both for the victim and his family circle.*
Aim: *To study the return to work and the professional outcome of healthcare personal suffering from cancer.*
Materials and Methods: *This was a retrospective descriptive study among healthcare staff affiliated to the public sector in the governorates of Sousse and Monastir-Tunisia, who have had long-term sick leave for cancer diagnosed between January 2008 and December 2013. Data were collected through a questionnaire on socio-demographic, medical and professional characteristics of the concerned staff.*
Results: *Sixty-two personnel were collected, with a female predominance (74.2%) and a mean age at the diagnosis of cancer of 44.7 ± 5.8 years. Two years after the diagnosis, the global rate of return to work was 83.8%. This rate was higher in women than in men with no statistically significant difference. Furthermore, return to work was significantly associated with age (p = 0.036), and varied with the tumor site. Among staff who have returned to work, 13.4% benefited from a professional redeployment while 82.7% kept their anterior workstations.*
Conclusion: *Return to work after long-term sick leave for cancer is subject to many constraints essentially due to functional and psychological limitations caused by the disease. Facilitate the professional reintegration of cancer patients is an integral part of the management of the disease.*
Key Word: *Return to work, cancer, health care staff.*

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I. Introduction

Cancers are malignant diseases whose incidence is rapidly growing worldwide and represent the second leading cause of death globally. Indeed, these affections were responsible for an estimated 9.6 million deaths in 2018[1]. Socio-economic and professional consequences of cancer are disastrous both on individual and social dimensions. In Tunisia, cancers mainly affect working people at the middle age of their life [2]. Therefore, it is essential to focus on the impact of these diseases on professionally active persons. Indeed, the return to work is an important milestone in the process of reconstruction and reintegration of patients. This is of particular importance both for the victim and his family circle [3]. Hence, resumption of work after long sick leave must be well prepared in any worker victim of cancer. To the current state of ourknowledge, no data on the professional future of workers with cancer, particularly those affiliated to the health sector, are available in Tunisia. In this context, we conducted this research which aims to study the return to work and the professional future of healthcare personnel suffering from cancer.

II. Material And Methods

This was a retrospective descriptive study among healthcare workers affiliated to the public sector in the governorates of Sousse and Monastir-Tunisia, who had a long-term sick leave for cancer diagnosed between January 2008 and December 2013. Cases were collected from the regional public health directorates of Sousse and Monastir, referring to the medical records of employees who had been granted long-term sick leave. Data collection was based on hospital medical records of the concerned personnel. The questionnaire used focused on socio-professional and medical characteristics of patients. Direct and/or telephone contact

with staff has been performed in case of missing data. The anonymity and the confidentiality of informations were respected for all the staff.

Statistical analysis

Data were analyzed using Statistical Package for Social Science (SPSS) programme version 21. We studied frequencies and percentages for qualitative variables, means and standard deviations for quantitative variables. Pearson's Chi-square test was performed to compare categorical variables. The t-student test was used to compare mean values of two continuous variables. The level $p < 0.05$ was considered statistically significant.

III. Results

During the study period, 62 healthcare personnel were granted long-term sick leave for cancer. A clear feminine predominance was noted (74.2%) with a sex ratio of 0.34. The mean age at diagnosis of cancer was 44.7 ± 5.8 years. Breast cancer was the most frequent localization (46.8%) followed by digestive cancers (16.2%), lung cancers (9.7%) and hematologic malignancies (8%) (Table n° 1).

Table n°1: Distribution of cases according to cancer site.

Cancer site	Number	Percentage
Breast	29	46.8%
Lung	6	9.8%
Digestive tract	10	16.2%
Hematologic malignancies	5	8%
Skin and soft tissues	5	8%
Thyroid	2	3.2%
Nasopharynx	2	3.2%
Others :		
Cervix	1	
Bladder	1	4.8%
Bones	1	
Total	62	100%

The average job seniority of patients in healthcare sector was 22.4±7.1 years. Most of personnel were nurses (54.7%) and medical technicians (22.5%). Physicians represented 13% of the population study and 9.8% were unskilled workers.

The average length of prescribed sick leaves for cancer was 290±102 days [180-840 days]. Two years after diagnosis, the global rate of return to work was 83.8% (52 personal). This rate was higher in women (89.0%) than in men (68.75%) without statistically significant difference (p=0.056), and it decreased significantly with age (p=0.036) (Table n° 2).

Table n°2: Demographic factors associated with the global rate of return to work among the population study.

Variable	Return to work		p
	No	Yes	
Gender :			
Male	5	11	0.056
Female	5	41	
Age (years) :			
Mean±Standard deviation	48.7 ±3.8	45.3 ± 5.8	0.036

As shown in table n°3, work resumption vary depending on cancer location; the lowest rate was recorded in personnel suffering from lung cancer.

Table n°3: Rate of resumption of work depending on cancer location.

Cancer location	Number of deaths within 2 years from diagnosis	Rate of return to work within 2 years from diagnosis
Breast (n=29)	2	93,1 %
Lung (n=6)	3	33,3%
Digestive tract (n=10)	1	90%
Hematological malignancies (n=5)	1	80%
Thyroid and nasopharynx (n=4)	0	100%
Others (n=8)	2	75%
Total (n=62)	9	83,8%

Only 27% of the staff have carried out a medical check-up nearby the occupational physician before returning to their professional activity, to evaluate their aptitude to work. Seven personal (11.3%) benefited from professional reclassification, two were proposed to early retirement for medical reasons and 69.3% kept their anterior workstation (Table n° 4). The arrangements undertaken mainly consisted on reducing workloads and eviction of night work.

Table n°4: Occupational outcome of personal 2 years after cancer diagnosis.

	Number (%)
Return to work :	
With professional reclassification	7 (11.3%)
With layout of the prior workstation	9 (14.5%)
Without layout of the workstation	34 (54.8%)
Proposed to early retirement :	2 (3.2%)
No resumption of work :	
Still in long sick-leave	1 (1.6%)
Died	9 (14.5%)
Total	62 (100%)

After resumption, 13 personal had stopped work again for medical reasons, including 3 cases of depression.

IV. Discussion :

Two years after cancer diagnosis, the global rate of return to work in the current study was 83.8%. The variability of this rate has been reported in the international literature with values ranging from 39 to 82% [3,4,5]. However, it should be noted that main studies have focused on people working in different sectors not only healthcare staff. Return to work after sick-leave for cancer depends on individual, socio-professional and medicalfactors[3]. In line with data from literature[6,7,8,9], we found that the rate of resumption of work decreased significantly with age. Although the difference was not statistically significant, we noted that resumption rate was higher in women than in men. Endo M et al. found no gender differences in return-to-work rate [9]. In contrast, other studies have reported that 2 years after diagnosis, the resumption rate was much higher in men[10,11]. Authors suggested that since men are generally the providers of the major part of financial resources within family and society, they are subject to more social pressure than women. Therefore, men tend to resume work earlier and more frequently[10]. The difference between these data and those of the current study could be explained by the female predominance of the study population, the relative youth of female staff compared to male staff as well as the specificities of the Tunisian socio-economic context. Indeed, the affiliation to the public sector in Tunisia, guarantee for employees long-term sick-leave while benefiting from their daily allowances[12]. This would probably not encourage male patients to resume their occupational activity as soon as possible. Consistent with data from literature[9,13,14,15], we found that resumption rate vary depending on the site of cancer. Indeed, it was higher in personnel with breast and thyroid cancer than in those with lung cancer. Previous studies have reported that lung cancer and hematological malignancies are responsible of a lower resumption rate when compared with other cancer locations [3,4,9,13,16,17]. This can be related on the one hand to the relatively better prognosis of breast and thyroid cancers, thanks to screening and early detection[6], and to the relative youth of patients affected by these cancers on the other hand. Regarding lung cancer, it's often discovered at an advanced stage which implies altered general state and heavy treatment, making it difficult to return to work[3,13]. Some authors attribuated the low resumption rate of patients suffering from hematological malignancies to chemotherapy[9]. They suggested that the side effects of these treatments are more pronounced in patients with hematopoietic cancers [9]. It should be noted that independently of cancer location, chemotherapy has been strongly associated with a delayed resumption[3,4,6,18] through the deterioration of the quality of life of patients and the induction of some mental disorders[9,19].

In the present study, the mean duration of initial sick leave was 290±102 days [180-840 days]. Worldwide, large disparities in duration of sick leave for cancer have been recorded [3] ranging from 44.5 days in the United States [20] to 349 days in the Netherlands[21]. This difference could be attributed in part to the specificities of the health insurance and social coverage systems of each country. In Tunisia, cancer is one of the long-term illnesses that gives the victim the right to sick leave of up to three years while keeping his full salary[12]. In addition, cultural differences between societies and the values attributed to work contribute to the variability in the length of sick leave from one country to another [3]. It was reported that longer sick-leave was associated with permanent employment in contrast with unstable job status[11].

Most of healthcare staff resumed their professional activity while keeping their prior workstation. Only nine personal have benefited from workplace adjustments so to adapt their activity to their health conditions. These findings were in line with those reported by Belin et al, who found that 84% of

employees who resumed work after cancer kept their anterior jobs with some arrangements mainly by reducing working hours and workload[4].

Even after resumption, working life remain disrupted for a long time because of the side effects of treatment and the psychological impact of cancer[9,22]. Among staff who resumed work in the present study, three personnel developped depressive disorders which required a long-term sick-leave. Thus, return to work after a period of interruption requires to be prepared. Hence, the medical check-up before resumption of work by the occupational physicianis of great importance. The main objective of this medical examination is to facilitate the professional reintegration of employee suffering from cancer through the evaluation of their aptitude to work and the analysis of factors influencing their return to work. However, this medical check-up is often neglected. Bélin et al. reported that this medical visit occurred in only 22% of employees who resumed their work after sick leave for cancer [4]. In the present study, this visit occured in 27% of cases.

The current study is original in Tunisia and has certainly provided relevant results in terms of return to work after cancer among healthcare personnel. However, it has certain limitations that should be mentioned. Indeed, the retrospective nature of the survey was at the origin of selection, recall and survival biases. In addition, due to the relatively small sample size, analytical study was difficult to perform.

V. Conclusion

The announcement of cancer causes significant disruption in the life of patients. This change has certainly a great impact on the occupational future of patients. Hence, it's necessary to further clarify the predictors of absenteeism among workers suffering from cancer in order to plan a successful return-to-work approach. Medical check-up before resumption of work is necessary to facilitate reintegration of patients after sick leave. Further studies with a larger sample size will be of great interest.

Conflict of interest: The authors declare that they have no conflict of interest in connection with this study.

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