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Use of integrative services is associated with maintenance of work schedule during and after cancer treatment

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ABSTRACT

Introduction: Cancer diagnosis affects employment status. Our health network offers supportive services to cancer patients. We hypothesized patients who used these services were more likely to continue to work during and after treatment.
Methods: A mailed survey was used to assess employment before, during, and after treatment, and support services used. Chi-square analysis was performed.
Results: The response rate was 34% (273/782). 87% of patients worked full or part time before cancer diagnosis, 68.8% continued to work during treatment, and 73.9% returned to work after treatment. 61% of patients used at least one type of support service. Patients who had no change in work status during treatment and who returned to work less than one month after treatment were more likely to use services.
Conclusions: Most patients used support services, continued to work during treatment, and returned to pre-cancer employment status. Physicians should encourage patients to pursue supportive therapies.

1. Introduction

An estimated 1.6 million new cases of cancer were diagnosed in the United States in 2016, and survival rate of most types of cancer continues to improve due to earlier diagnosis strategies and advances in treatment efficacy. A report by the Institute of Medicine in 2005[1] focused attention on issues affecting patients once treatment is completed. Change in employment status was recognized as a significant issue. Breast (249,000), lung (224,000), prostate (181,000), and colorectal (134,000) are the most common new cancer diagnoses nationwide.[2] Approximately 15.5 million people were living beyond a cancer diagnosis at the beginning of 2016, and this population is expected to increase to 20.3 million by 2026. This includes a significant percentage of people of employment-age or younger: 26% of cancer survivors are under 60 years old, and an additional 27% are between the ages of 60 and 69 years old. The overall five-year relative survival from all cancer types is 67%.[3]

Psychosocial research on cancer diagnosis and survivorship has traditionally focused on distress, coping, and effects on health-related quality of life, and has recently begun to address demographic, treatment, and job-specific variables pertaining to work ability.[4–6] Most people diagnosed with cancer are employed at the time of diagnosis and many continue to work during and after treatment[7]; however compared to healthy individuals cancer survivors are 1.4 times more likely to be unemployed.[8] The importance of employment in cancer patient independence, identity, and recovery, and potential benefits of opportunities for supplemental services to improve quality of life during and after cancer treatment have been recognized,[9] and research has focused on objective job-related factors when determining best ways to support cancer patients continuing to work during treatment or returning to work during recovery.[10,11]

Concurrently, patients have become empowered to take a more active role in their care, and many have turned to complementary and alternative medicine (CAM) treatments. Large cancer centers in the United States[12,13] and Europe[14] have incorporated the evidence-based CAM therapies into patient treatment, and the concept of integrated oncology treatment emerged. Recognizing the patient interest and evidence basis of these treatments, our community cancer institute has made support services including nutrition, stress, and social work counseling, acupuncture, massage, yoga,

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meditation, mind/body medicine, art therapy, and survivorship clinics available to cancer patients.

The ways in which supportive services could facilitate employment in cancer patients and survivors have not been well-established. Elucidating these benefits would allow for the development of methods to assist the growing number of cancer survivors in the United States in dealing with employment concerns during and after treatment. The aim of this study was to determine if patients who took advantage of one or more of these available support services at in our health system or elsewhere in the community were more likely to work during treatment, or to return to work after completing cancer treatment.

2. Material and methods

Institutional review board approval was obtained. Our community cancer institute includes six different hospitals within the region, and patients diagnosed with cancer in this institute between 1/1/2013 and 12/31/2014 were identified in a cancer-specific database. At the time of diagnosis, patients were referred to nurse navigators who discussed available services and helped interested patients access these resources in addition to guiding the patient through his or her cancer treatment plan and follow-up. All support services except acupuncture were available to patients at no cost. Acupuncture was available only on an inpatient basis at no cost, and assistance was given for access to outpatient providers who offered income-based sliding scale payment options or discounted group acupuncture. Age, gender, and cancer type were noted. Disease-specific information including type of cancer, year of diagnosis and treatment completion, type of treatment (chemotherapy, hormonal therapy, surgery, radiation, targeted therapies, and immunomodulatory therapy) were recorded.

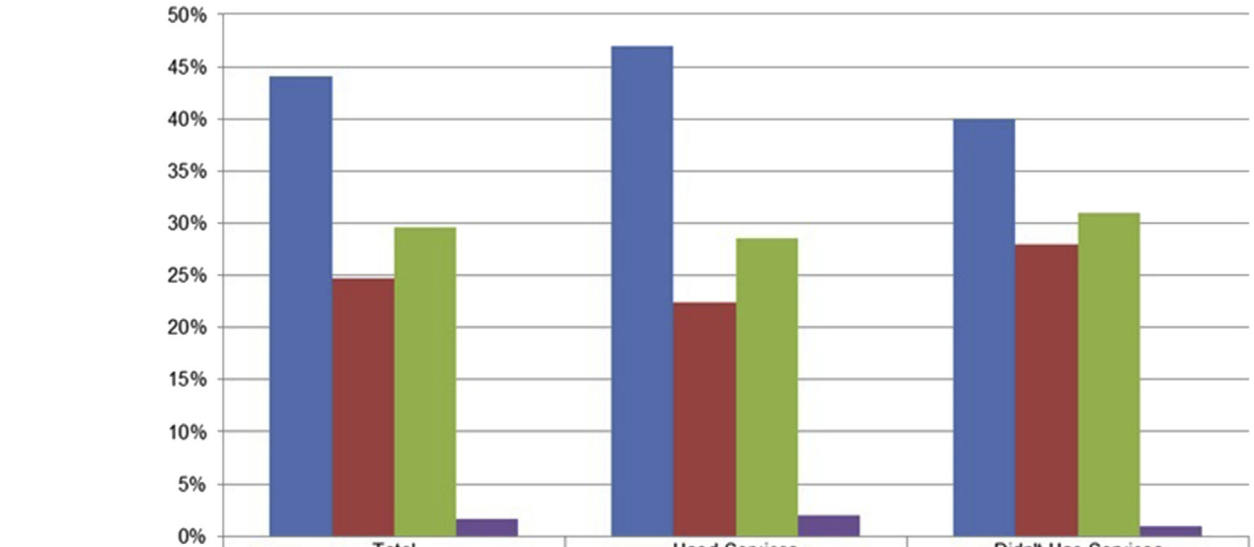
A survey was created based on similar published assessments and prior institutional research to assess pre-cancer work status, and captured changes and the timing of changes in work status during and after treatment. Questions addressed amount of work (full time, part time, on call), work location (workplace, home, or flexible), and job classification (executive, management, trained professional/technical, office/trades/services, skilled labor, unskilled labor) as well as marital status, number of children, and level of education. Use of support services provided by the community health network or in the community (listed in introduction) was captured. All materials were in English. Patient surveys were mailed to 782 patients in September 2015 without any financial incentive.

Statistical analysis was performed with Chi-square testing. Statistical significance was defined as $p < 0.05$. Data were analyzed by treatment type as listed previously, additional therapy services as listed in the introduction, and by age (categorized as under age 40, ages 41–50, ages 51–60, and ages 51–60).

3. Results

Surveys were mailed to 782 patients with 273 returned for a 34% response rate. This included 6/30 surveys (20.0%) in patients under 40 years old at the time of the study, 39/119 (32.8%) in patients ages 41–40, 111/325 (34.2%) in patients ages 51–60, and 117/308 (38.0%) in patients ages 61–70. Age category did not have an effect on work status or work status changes with treatment. Patients were more likely to have been married or partnered during treatment (75.4%) than single, widowed, or divorced (21.4%) without differences across the age categories. Overall most patients did not have children at home during treatment (69.0%), although the majority of patients under age 50 did have children at home during treatment (84.4% of patients under age 40 and 64.1% of patients ages 41–50). The highest grade completed was 8th grade or part of high school for 1.1% of patients, high school or part of college for 38.8%, all of college or graduate school for 57.7%.

The majority of patients who returned surveys had breast cancer (59%) followed by prostate cancer (31%), colorectal (6.8%), and lung cancer (3.2%). All patients under age 40 had breast cancer. Surgery was the most common cancer treatment (74.7%), followed by



	Total	Used Services	Didn't Use Services
No change	44.13%	46.94%	40.00%
Change in work status	24.70%	22.45%	28.00%
Did not work	29.55%	28.57%	31.00%
Not Answered	1.62%	2.04%	1.00%

Fig. 1. Work status during treatment.

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