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## Employment and Labor Force Participation Among Prostate Cancer Survivors

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### Abstract

**Introduction:** Diagnosis and treatment of cancer may impair patients' ability to continue to work. We assessed the impact of a prior prostate cancer diagnosis on employment and labor force participation.

**Methods:** Using the National Health Interview Surveys for 2010 to 2018, we identified sample adults previously diagnosed with prostate cancer aged <65 years (prostate cancer survivors) who were currently or previously employed. We matched each prostate survivor to comparison sample adults based on age, race/ethnicity, education level, and survey year. We compared employment-related outcomes between prostate cancer survivors and comparison males, overall and as a function of time since diagnosis, and other respondent characteristics.

**Results:** The final sample had 571 prostate cancer survivors and 2,849 matched comparison males. The proportions of survivors and comparison males who were employed (ie, worked for pay in the week prior to the survey) were similar (60.4% and 60.6%; adjusted difference 0.6 [95% CI: -5.2 to 6.3]), as were labor force participation rates (67.3% vs 67.3%; adjusted difference 0.7 [95% CI: -4.7 to 6.1]). Survivors were slightly more likely to be not working due to disability (16.7% vs 13.3%; adjusted difference 2.7 [95% CI: -1.2 to 6.5]), though the difference was not significant. Survivors had more bed days than comparison males (8.0 vs 5.7; adjusted difference 2.8 [95% CI: 2.0 to 3.6]) and missed more workdays (7.4 vs 3.3; adjusted difference 4.5 [95% CI: 3.6 to 5.3]).

**Conclusions:** Employment rates were similar between prostate cancer survivors and matched comparison males, though survivors missed work more often.

### Keywords

prostatic neoplasms; employment; survivorship; absenteeism

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Labor force participation rates among men aged 25 to 54 years are at their lowest levels since 1967 and were declining even before the pandemic.<sup>1,2</sup> Illness and disability are the most frequently listed reasons why men do not work,<sup>1</sup> though the contribution of changes in disability rates to decreases in labor force participation is unclear. Prior studies have found that receipt of a cancer diagnosis is associated with lower employment rates.<sup>3–5</sup> Patients who drop out of the labor force as a result of a cancer diagnosis and treatment are more likely to rely on public benefit programs, like Social Security Disability Income, for support.<sup>6,7</sup> Correlational and quasi-experimental studies show that employment can help patients maintain and improve physical and mental health.<sup>8–13</sup>

Cancer-related unemployment is particularly concerning in the case of tumors like prostate, which are mostly detected at an early stage through PSA testing. Short-term loss of employment following the diagnosis of an asymptomatic tumor detected via PSA testing is attributable to treatment and its side effects, not the disease itself. Changes to treatment, such as the use of less time-consuming therapies, use of therapies associated with fewer side effects, or the integration of rehabilitative care, can blunt the impact of diagnosis on employment.<sup>14</sup> Accommodations by employers can also promote return to work following a cancer diagnosis.<sup>4</sup>

Research on changes in employment following a cancer diagnosis may identify opportunities to improve cancer care and employer and government policies related to disability and employment. Prior studies on the employment effects of a prostate cancer diagnosis have found mixed results. Some have found that prostate cancer has a minimal effect on employment and missed workdays,<sup>15</sup> while others find moderate but economically significant effects.<sup>16–22</sup> For example, using Medical Expenditure Panel Survey data, Rizzo et al found that employment rates were 6 percentage points lower among prostate cancer survivors vs comparison males, and employed prostate cancer survivors had 9.3 more missed workdays than employed comparison counterparts.<sup>16</sup> Results may be sensitive to the length of the post-diagnosis follow-up period. Bradley et al found that prostate cancer survivors were 10 percentage points less likely to be employed than controls 6 months after diagnosis.<sup>22</sup> But the difference disappeared by 12 and 18 months post-diagnosis, even though more than one-fifth of men reported at 12 months that cancer interfered with physical tasks, and 5% to 12% reported difficulty with cognitive tasks.<sup>23</sup>

Changes in treatment patterns may affect the relationship between a prostate cancer diagnosis and employment. The use of active surveillance has increased, from 3.1% in 2010 to 32.5% in 2015 overall,<sup>23</sup> and from 22% in 2004–2005 to 50% in 2014–2015 among Medicare beneficiaries with a Gleason score of 6 or below.<sup>24</sup> In light of changes in treatment patterns and differences in the results of prior studies, we sought to evaluate the impact of a prior prostate cancer diagnosis on employment. Compared to Rizzo et al,<sup>16</sup> our study uses data from a more recent time period, when we might expect the effect of prostate cancer on employment to be smaller. Also, we limit our sample to nonelderly males. Three-quarters of the prostate cancer patients included in their analysis were ages 65 and older and, consequently, only 41% were employed. We examine the sensitivity of results to alternative approaches to characterizing employment, such as labor force participation and

inability to work due to illness or disability. Our data allow us to examine the impact of prostate cancer on employment as a function of time since diagnosis. We hypothesize that the effect of prostate cancer on employment-related outcomes will be modest, though we expect that effects will be larger for individuals with less education and shorter job tenure, for whom the opportunity cost of leaving the labor force is smaller.

## Methods

### Sample Construction

The National Health Interview Survey (NHIS) is an annual household survey that collects health information about the civilian, noninstitutionalized population of the United States ([www.cdc.gov/nchs/nhis](http://www.cdc.gov/nchs/nhis)). The household response rate ranged from 53.0% to 76.8% between 2010 and 2018.<sup>25</sup> Using the combined data from the survey years 2010 to 2018, we identified men who indicated that they had ever been told they had prostate cancer (prostate cancer survivors) and were less than 65 years old (N=584).

A prostate cancer diagnosis is unlikely to change the employment status of men who never worked before, and so we restricted the sample to respondents who were “Working for pay at a job or business,” “With a job or business but not at work,” or “Working, but not for pay, at a family-owned job or business” in the last week prior to the survey (the DOINGLWA variable) or who responded that they were previously employed (the EVERWRK variable; N=573).

We recorded the age when each prostate cancer survivor was first told he had prostate cancer. We excluded 1 survivor whose listed current age was less than the age when the prostate cancer was first diagnosed and 1 who did not match to any comparison males (see below).

### Outcomes

Our primary outcome was employment. We counted a prostate cancer survivor as employed if his “Current employment status in the last week” was “Working for pay at a job or business” (the DOINGLWA variable). For non-employed respondents, we classified the reason for not working as retired, disabled (“Unable to work for health reasons/disabled”), or other (which includes individuals looking for work) based on the “Main reason for not working last week” variable (WHYNOWKA). The reason for not working was self-selected from a list of 7 prefilled answers.

Labor force participation is a secondary outcome. We counted a respondent as participating in the labor force if he reported that he was “Working for pay at a job or business,” “With a job or business but not at work,” “Looking for work,” or “Working, but not for pay, at a family-owned job or business” (DOINGLWP), consistent with the Bureau of Labor Statistics definition.<sup>26</sup> The main difference between employment and labor force participation is that men who are unemployed but looking for work are counted as participating in the labor force.

We also measured bed days for respondents and missed workdays (for sample adults who were employed the prior week). Bed days were reported by respondents in response to the question, “During the PAST 12 MONTHS, ie, since {12-month ref. date}, ABOUT how many days did illness or injury keep you in bed more than half of the day?” Missed workdays were reported by respondents in response to the question, “Days missed work in past 12 months due to illness/injury/disability.”

## Matching

We matched each prostate cancer survivor with up to 5 currently or previously employed male respondents who had never been told they had prostate cancer and were less than 65 years old on the basis of age (in 3-year bands), race/ethnicity, education level, and survey year (Table 1). We selected these characteristics because they are related to employment but determined before the diagnosis of prostate cancer.

We excluded 1 prostate cancer survivor who did not match to any comparison males. We chose 5 matches based on the size of the pool of potential controls in the data and because, after 5 matches, adding more controls holding the size of the survivor population fixed does little to improve power. We assessed the comparability of survivors and matched males by describing differences in the proportion with common comorbidities and the attributes of their current or more recent job. Job attributes reflect respondents’ current (for respondents who were currently employed) or most recent job (for respondents who were not currently working).

## Statistical Analysis

We assessed the significance of differences between survivors and matched comparison males using logistic regression for binary outcomes. We controlled for comorbidities but not other respondent characteristics that, based on our judgment, were either used in the matching process or are endogenous (eg, income). Results from models that did not control for comorbidities were similar. For the bed day and missed workday variables, we assessed significance based on marginal effects from zero-inflated Poisson models. We also examined differences across various subgroups. We were particularly interested in how employment outcomes varied by time since diagnosis. All results are weighted to reflect the civilian, noninstitutionalized population, and statistical tests reflect the complex survey design. We assessed significance using an alpha level of 5%. Employment is our primary outcome. Other outcomes are secondary, so we did not adjust significance levels for multiple comparisons. All analyses were performed in Stata version 17. Our analysis used secondary data without identifiable information and, therefore, did not require Human Subjects Review.

## Results

The final sample had 571 prostate cancer survivors and 2,849 matched comparison males. Table 1 displays characteristics of the sample. Among prostate cancer survivors, 58 (10.1%) were diagnosed in the year before they took the survey, 83 (14.5%) were diagnosed between 1 and 2 years before the survey, 59 (10.3%) were diagnosed between 2 and 3 years before the survey, and 371 (65%) were diagnosed 3 or more years before the survey. The

distributions of characteristics used for matching differ slightly between prostate cancer survivors and comparison males due to post-match sample weighting.

The comorbidity burden was similar between survivors and matched males, with the exception of cancer. Almost 13% of prostate cancer survivors had been diagnosed with another cancer (other than prostate) compared to 9.5% of matched males. Survivors more often than comparison males reported having jobs (or prior jobs if not working currently) that offered sick leave (65.1% vs 59.5%), but other job characteristics were similar.

Table 2 displays employment-related outcomes and adjusted differences in outcomes from the regression models. The proportions of survivors and matched males who were employed (ie, worked for pay in the past week) were similar (60.4% vs 60.6%; adjusted difference of 0.6 [95% CI: -5.2 to 6.3] percentage points). Survivors were slightly less likely to be retired but were more likely to be not working due to disability (16.7% vs 13.3%; adjusted difference: 2.7 [95% CI: -1.2 to 6.5] percentage points), though the difference was not significant. Labor force participation rates were the same (67.3%). Survivors had more bed days than comparison males (8.0 vs 5.7 days, adjusted difference 2.8 [95% CI: 2.0 to 3.6] days) and missed workdays (7.4 vs 3.3 days, adjusted difference 4.5 [95% CI: 3.6 to 5.3] days).

The Figure shows the adjusted differences in employment and disability (unable to work due to disability) as a function of time since diagnosis. Employment rates were similar. Disability rates were 7.4 (95% CI: -1.8 to 16.7) percentage points higher among prostate cancer survivors 0–1 years out from diagnosis.

Table 3 presents differences in employment and disability by subgroup. Differences were similar between non-Hispanic Whites and Black men, but prostate cancer survivors in the Hispanic and other races group suffered more adverse employment outcomes (though differences are not significant). The difference in disability rates was especially large among men who did not attend college (7.6 percentage points [95% CI: -2.1 to 17.3]).

## Discussion

Employment contributes to happiness and well-being.<sup>8–13</sup> Evaluating the impact of cancer diagnosis and treatment on the long-term employment prospects of cancer survivors is important for identifying opportunities to improve survivors' quality of life. We observed that employment status was similar between prostate cancer patients and matched males. Differences in disability rates (as measured based on respondents' self-report that they were unable to work due to illness or disability) were nonsignificant, but we could not rule out economically meaningful effects. Though disability rates were higher in the prostate cancer sample, employment rates were not. It is difficult to reconcile these findings because we would expect that an increase in disability would translate to a decrease in employment. One explanation is that prostate cancer survivors may be more likely to attribute their lack of employment to disability, but they are really not working for other reasons (eg, early retirement). The proportion of men who were retired was larger in the comparison group (17.9%) than among prostate cancer survivors (15.4%).

We did not detect large differences in employment status between survivors and matched males within subgroups defined by race/ethnicity, education, or job type. However, there were several subgroups where a prostate cancer diagnosis appeared to have a larger impact on disability prevalence, particularly Black men and men who had not attended college. The impact of a prostate cancer diagnosis on disability rates may be influenced by whether survivors work in physically demanding occupations and earnings levels,<sup>17,21</sup> which determine the relative attractiveness of employment.

We matched survivors to comparison males based on age, race/ethnicity, education level, and survey year. Differences in outcomes may be biased by confounding due to differences in other characteristics. The data capture the employment outcomes of the sample at a single point in time, and we were not able to adjust estimates for pre-diagnosis employment or describe individuals' trajectory of employment outcomes relative to the date of diagnosis. We also acknowledge that this analysis excluded men 65 and older who continue to work. Employment and disability rates among this older group of survivors may not be the same as those observed among younger counterparts.

Most prostate cancers are detected via PSA testing.<sup>27,28</sup> Our results should be interpreted in light of the fact that screenees tend to be healthier and be more compliant with health recommendations.<sup>29</sup> They may have characteristics, like health, that are positively related to employment. Of course when employment is connected to health insurance, men with preexisting conditions have an added incentive to maintain employment.

The effect of prostate cancer obviously varies by cancer stage. The NHIS does not record any information about cancer stage. Fewer than 1 in 10 prostate cancer patients are diagnosed with distant disease,<sup>30</sup> and we would expect that the share of survivors with distant disease among respondents to the NHIS is even lower. Therefore, it is likely that our results primarily represent the experience of men with localized disease.

Respondents may have incorrectly reported that they were diagnosed with prostate cancer, and questions asking respondents to remember the number of missed workdays and bed days in the past year are subject to recall bias. The NHIS does not describe patients' treatment, and so we were unable to assess differences between men treated with active surveillance and surgery or radiotherapy.

## Conclusion

We found that men with prostate cancer did not have lower employment rates or labor force participation. Our findings confirmed that prostate cancer survivors used more bed days and, as reported by Rizzo et al,<sup>16</sup> missed more workdays. However, in other respects our results suggest that the impact of prostate cancer on employment outcomes are milder and that the downstream effects of prostate cancer and cancer-directed treatment do not substantially impair men's ability to continue to work.

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The findings and conclusions in this report are those of the Authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

## Data Availability:

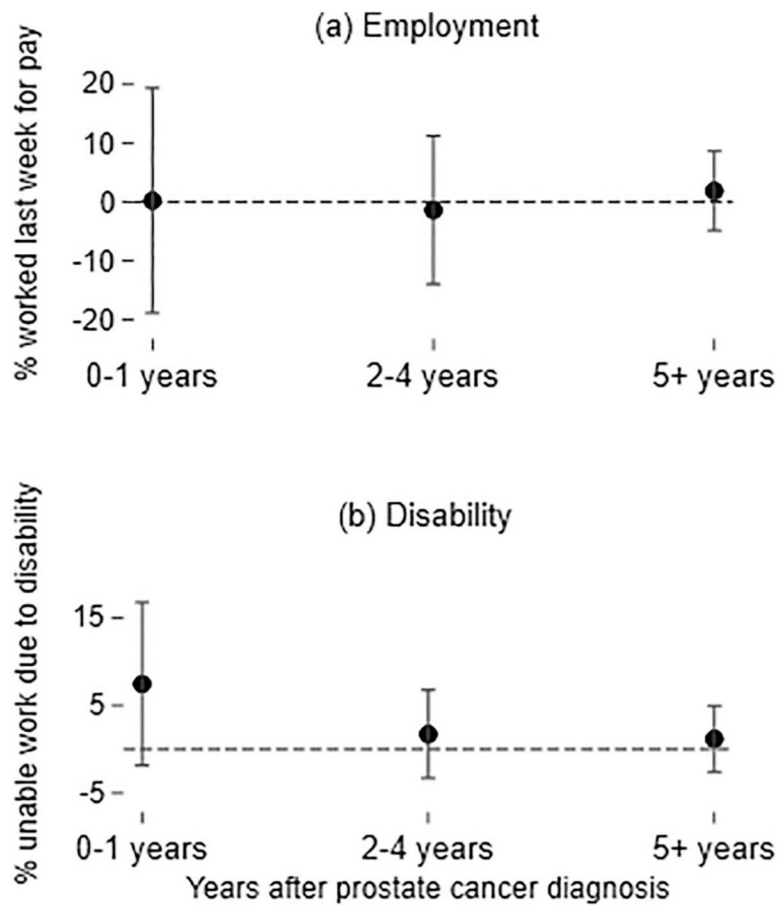
The data are available from the Centers for Disease Control and Prevention's National Center for Health Statistics (<https://www.cdc.gov/nchs/nhis/data-questionnaires-documentation.htm>).

## References

1. Congressional Budget Office. Factors Affecting the Labor Force Participation of People Ages 25 to 54. 2018. <https://www.cbo.gov/publication/53452>.
2. U.S. Bureau of Labor Statistics. Civilian Labor Force Participation Rate. Accessed August 13, 2021. <https://www.bls.gov/charts/employment-situation/civilian-labor-force-participation-rate.htm>.
3. de Moor JS, Kent EE, McNeel TS, et al. Employment outcomes among cancer survivors in the United States: implications for cancer care delivery. *J Natl Cancer Inst.* 2021;113(5):641–644. [PubMed: 32533839]
4. National Academies of Sciences, Engineering, and Medicine. Long-term Survivorship Care After Cancer Treatment: Proceedings of a Workshop. The National Academies Press; 2018.
5. Yabroff KR, Lawrence WF, Clauser S, Davis WW, Brown ML. Burden of illness in cancer survivors: findings from a population based national sample. *J Natl Cancer Inst.* 2004;96(17):1322–1330. [PubMed: 15339970]
6. Besen E, Jetha A, Gaines B. Examining the likelihood of experiencing productivity loss and receiving Social Security Disability Income following the onset of chronic disease. *J Occup Environ Med.* 2018;60(1):48–54. [PubMed: 29189470]
7. Van Hoey N When You Can't Go Back to Work After Treatment Ends. 2016. Accessed June 8, 2022. <https://www.cancer.net/blog/2016-06/when-you-cant-go-back-work-after-treatment-ends>.
8. Sun W, Chen K, Terhaar A, et al. Work-related barriers, facilitators, and strategies of breast cancer survivors working during curative treatment. *Work.* 2016;55(4):783–795. [PubMed: 28059814]
9. Farré L, Fasani F, Mueller H. Feeling useless: the effect of unemployment on mental health in the Great Recession. *J Labor Econ.* 2018;7(1):8.
10. Voss MW, Wadsworth LL, Birmingham W, et al. Health effects of late-career unemployment. *J Aging Health.* 2020;32(1–2):106–116. [PubMed: 30338714]
11. Sameem S, Buryi P. Impact of unemployment on happiness in the United States. *Appl Econ Lett.* 2019;26(12):1049–1052.
12. Rothert J, VanDerwerken D, White E. Socioeconomic factors and happiness: evidence from self-reported mental health data. *Empirical Econ.* 2020;58(6):3101–3123.
13. Easterlin RA. Happiness, growth, and public policy. *Econ Inq.* 2013;51(1):1–15.
14. Lepore SJ, Helgeson VS, Eton DT, Schulz R. Improving quality of life in men with prostate cancer: a randomized controlled trial of group education interventions. *Health Psychol.* 2003;22(5):443–452. [PubMed: 14570527]
15. Zheng Z, Yabroff KR, Guy GP Jr, et al. Annual medical expenditure and productivity loss among colorectal, female breast, and prostate cancer survivors in the United States. *J Natl Cancer Inst.* 2016;108(5):djv382. [PubMed: 26705361]
16. Rizzo JA, Zyczynski TM, Chen J, Mallow PJ, Trudel GC, Penrod JR. Lost labor productivity costs of prostate cancer to patients and their spouses: evidence from US national survey data. *J Occup Environ Med.* 2016;58(4):351–358. [PubMed: 27058474]
17. McLennan V, Ludvik D, Chambers S, Frydenberg M. Work after prostate cancer: a systematic review. *J Cancer Surviv.* 2019;13(2):282–291. [PubMed: 30900159]
18. Bennett D, Kearney T, Donnelly DW, et al. Factors influencing job loss and early retirement in working men with prostate cancer—findings from the population-based life after Prostate Cancer Diagnosis (LAPCD) study. *J Cancer Surviv.* 2018;12(5):669–678. [PubMed: 30058009]

19. Dahl S, Loge JH, Berge V, Dahl AA, Cvancarova M, Fossa SD. Influence of radical prostatectomy for prostate cancer on work status and working life 3 years after surgery. *J Cancer Surviv.* 2015;9(2):172–179. [PubMed: 25216609]
20. Bennett JA, Brown P, Cameron L, Whitehead LC, Porter D, McPherson KM. Changes in employment and household income during the 24 months following a cancer diagnosis. *Support Care Cancer.* 2009;17(8):1057–1064. [PubMed: 19037665]
21. Bradley CJ, Neumark D, Luo Z, Schenk M. Employment and cancer: findings from a longitudinal study of breast and prostate cancer survivors. *Cancer Invest.* 2007;25(1):47–54. [PubMed: 17364557]
22. Bradley CJ, Neumark D, Luo Z, Bednarek H, Schenk M. Employment outcomes of men treated for prostate cancer. *J Natl Cancer Inst.* 2005;97(13):958–965. [PubMed: 15998948]
23. Washington SL, Jeong CW, Lonergan PE, et al. Regional variation in active surveillance for low-risk prostate cancer in the US. *JAMA Netw.* 2020;3(12):e2031349.
24. Liu Y, Hall IJ, Filson C, Howard DH. Trends in the use of active surveillance and treatments in Medicare beneficiaries diagnosed with localized prostate cancer. *Urol Oncol Semin Original Invest.* 2021;39(7):432.e1–432.e1.
25. National Center for Health Statistics. Public-Use Data File and Documentation, National Health Interview Survey. 2018. Accessed June 8, 2022. <https://www.cdc.gov/nchs/nhis/data-questionnaires-documentation.htm>.
26. U.S. Bureau of Labor Statistics. Labor Force Statistics From the Current Population. Concepts and Definitions. Survey. Accessed June 8, 2022. <https://www.bls.gov/cps/definitions.htm#lfpr>.
27. Drummond FJ, O’Leary E, Gavin A, Kinnear H, Sharp L. Mode of prostate cancer detection is associated with the psychological wellbeing of survivors: results from the PiCTure study. *Support Care Cancer.* 2016;24(5):2297–2307. [PubMed: 26594035]
28. Hoffman RM, Stone SN, Espey D, Potosky AL. Differences between men with screening-detected versus clinically diagnosed prostate cancers in the USA. *BMC Cancer.* 2005;5(1):27. [PubMed: 15755329]
29. Weiss NS, Rossing MA. Healthy screened bias in epidemiologic studies of cancer incidence. *Epidemiology.* 1996;7(3):319–322. [PubMed: 8728451]
30. Siegel DA, O’Neil ME, Richards TB, Dowling NF, Weir HK. Prostate cancer incidence and survival, by stage and race/ethnicity—United States, 2001–2017. *MMWR Morb Mortal Wkly Rep.* 2020;69(41):1473–1480. [PubMed: 33056955]





The bars represent 95% confidence intervals  
 All differences were adjusted for comorbidities.  
 The sample sizes are: 843 for 0-1 years, 1,044 for 2-4 years  
 and 1,533 for 5+ years.

**Figure.**  
 Differences in employment outcomes, prostate cancer survivors vs matched comparison sample, by time since diagnosis.

**Table 1.**

Comparison of Demographics, Comorbidities, and Job Attributes Between Prostate Cancer Survivors and Comparison Males

	Prostate cancer survivors (N = 571)	Comparison adults (N = 2,849)
Age, mean, y <sup>a</sup>	59.2	59.2
Race/ethnicity, % <sup>a</sup>		
Non-Hispanic White	71.7	73.3
Black	17.8	16.8
Hispanic and all other races <sup>a</sup>	10.5	9.9
Some college or college graduate, % <sup>a</sup>	66.6	70.2
Comorbidities, %		
CHD	9.2	9.3
Angina	3.8	3.7
Heart attack	7.2	5.8
Stroke	3.7	3.5
COPD	4.4	5.1
Diabetes	12.8	11.3
Cancer <sup>b</sup>	12.9	9.5
Job characteristics, % <sup>c</sup>		
Employer offers sick leave	65.1	59.5
Years on job		
<5	22.6	23.1
5 to 10	18.9	14.3
10+	58.5	62.7
Employee type, %		
Private company	67.6	67.8
Government	20.0	19.4
Self/other	12.4	12.8

Abbreviations: CHD, congestive heart disease; COPD, chronic obstructive pulmonary disease.

Results are weighted to be representative of the civilian, noninstitutionalized population.

<sup>a</sup>We used these characteristics to match prostate cancer survivors with comparison males. The percentages may differ between prostate cancer survivors and comparison males because we used National Health Interview Survey sample weights when calculating them.

<sup>b</sup>Not counting prostate cancer.

<sup>c</sup>Characteristics reflect conditions at the respondent's current job or, for nonworking respondents, their most recent job.

**Table 2.**

Differences in Employment-related Outcomes Between Prostate Cancer Survivors and Comparison Males

	Prostate cancer survivors	Comparison males	Adjusted difference <sup>a</sup> (95% CI)
Employed, % <sup>b</sup>	60.4	60.6	0.6 (−5.2, 6.3)
Not employed, %			
Retired	15.4	17.9	−2.8 (−6.9, 1.3)
Disabled	16.7	13.3	2.7 (−1.2, 6.5)
Others <sup>b</sup>	7.5	8.2	−0.6 (−3.5, 2.3)
Labor force participation, %	67.3	67.3	0.7 (−4.7, 6.1)
Bed days, mean, No. <sup>c</sup>	8.0	5.7	2.8 (2.0, 3.6)
Missed workdays, mean, No. <sup>d</sup>	7.4	3.3	4.5 (3.6, 5.3)

Abbreviation: CI, confidence interval.

Results are weighted to be representative of the civilian, noninstitutionalized population.

<sup>a</sup>Adjusted for comorbidities.

<sup>b</sup>Worked for pay in the week prior to the survey. The “Other” category includes men who are looking for work and on family leave.

<sup>c</sup>Respondents were asked, “How many days did illness or injury keep you in bed more than half of the day?” in the prior year.

<sup>d</sup>Only includes respondents who worked last week.

**Table 3.** Differences in Employment-related Outcomes Between Prostate Cancer Survivors and Comparison Males, by Subgroup

	Employed			Unable to work due to disability		
	Prostate cancer survivors	Comparison males	Adjusted difference <sup>d</sup> (95% CI)	Prostate cancer survivors	Comparison males	Adjusted difference <sup>d</sup> (95% CI)
All, %	60.4	60.6	0.6 (-5.2, 6.3)	16.7	13.3	2.7 (-1.2, 6.5)
Race/ethnicity, %						
Non-Hispanic White	62.3	62.8	-0.1 (-5.2, 5.1)	14.0	11.6	1.9 (-2.6, 6.4)
Black	50.7	51.1	1.8 (-9.8, 13.4)	30.3	20.8	7.3 (1.7, 12.9)
Hispanic, other races	63.3	60.2	8.4 (-8.5, 25.3)	12.0	13.0	-5.5 (-12.9, 1.9)
Educational attainment, %						
12 y or less	50.3	51.2	1.9 (-12.0, 15.7)	33.4	23.3	7.6 (-2.1, 17.3)
Some college/graduate	65.4	64.6	1.2 (-4.0, 6.5)	8.4	9.0	-1.5 (-4.6, 1.6)
Sick leave, % <sup>a</sup>						
No	58.6	59.8	0.4 (-6.9, 7.6)	21.6	18.3	1.4 (-3.7, 6.6)
Yes	61.3	61.1	0.7 (-5.6, 7.1)	14.1	10.1	3.1 (-1.1, 7.4)
Years on job, % <sup>a</sup>						
<5	69.9	66.6	2.8 (-4.9, 10.5)	18.7	18.0	1.7 (-3.7, 7.2)
5 to 10	62.6	66.8	-0.9 (-11.6, 9.9)	24.2	17.6	3.7 (-2.3, 9.7)
10+	56.0	57.1	-0.1 (-6.5, 6.3)	13.5	10.7	1.6 (-2.2, 5.5)
Employer type, % <sup>a</sup>						
Private company	62.0	59.2	3.5 (-2.5, 9.4)	19.9	15.2	3.7 (-0.2, 7.6)
Government	55.9	57.6	-0.6 (-11.5, 10.3)	8.6	9.7	-1.0 (-9.7, 7.6)
Self/other	58.3	71.6	-10.7 (-28.5, 7.2)	12.7	9.0	0.5 (-8.8, 9.8)

Abbreviation: CI, confidence interval.

Results are weighted to be representative of the civilian, noninstitutionalized population.

<sup>a</sup> Adjusted for comorbidities.