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Cancer Center

Work and Financial Hardship in Breast Cancer Survivors

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Financial hardship

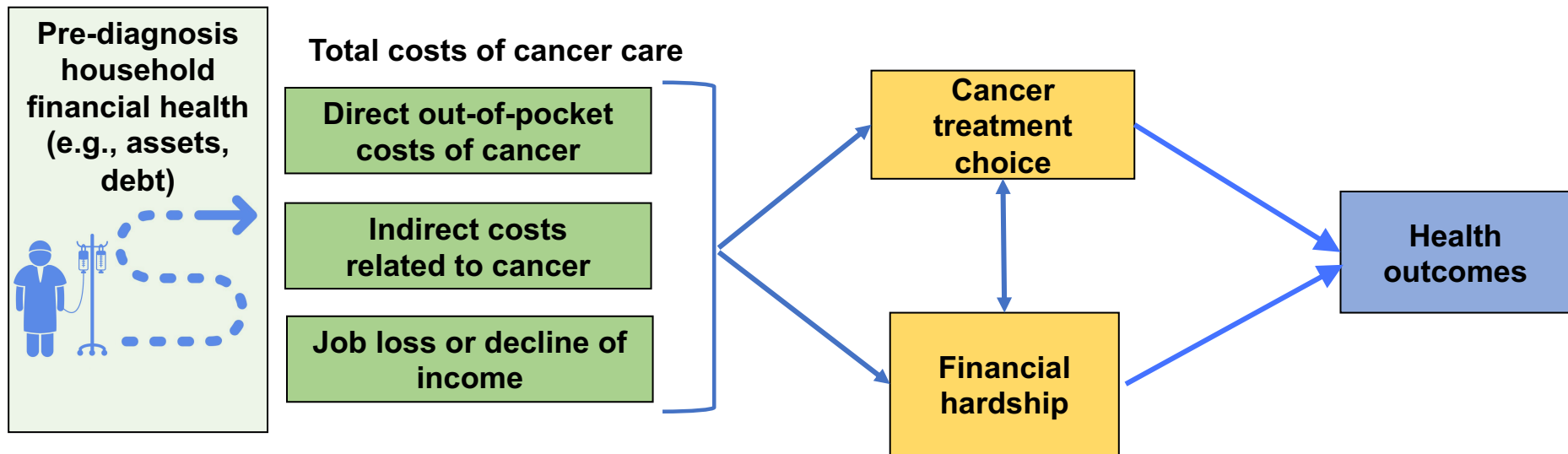
- Decreased earning +/- increased spending after a cancer diagnosis
 - Decreased earning
 - Job loss
 - Unpaid leave
 - Reduced pay while on leave
 - Increased spending
 - Direct costs
 - Medication, tests, copays
 - Indirect costs
 - Travel
 - Child and/or elder care



Financial hardship domains

- Framework to conceptualize and study financial toxicity
 - 1) Material
 - E.g., Problems paying medical bills
 - 2) Psychological
 - E.g., Worrying about paying medical bills
 - 3) Behavioral
 - E.g., Delaying and/or forgoing medical care for financial reasons

Conceptual framework for relationship between sources of financial hardship and health outcomes



Financial toxicity

- **Risk and prevalence**
- Consequences of financial toxicity
- Cancer and job loss
- US policy about cancer and work
- Disparities in breast cancer-associated job loss
- Development of patient-facing interventions





Prevalence of financial toxicity

- More than half of US cancer survivors experience financial hardship
- Young age and minority race/ethnicity increase risk
 - Groups less likely to have accumulated significant wealth to offset disruption in work/education

Financial toxicity and debt

- 2012 LIVESTRONG survey of n=4719 cancer survivors
- 64% worried about having to pay large bills related to cancer
- 34% said they or someone in the family had gone into **debt** because of cancer
- 3% said they or their families had filed for **bankruptcy** as a result of cancer



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Cancer outcomes

- Financial toxicity associated with
 - Decreased QoL
 - Lower satisfaction with care
 - Increased symptom burden
 - Higher mortality



Consequences of financial toxicity

- Survey of 1,536 breast cancer survivors in Los Angeles and Detroit, 4 years post-diagnosis
 - 12% reported ongoing medical debt
 - 25% reported financial decline due to diagnosis
- Blacks twice as likely as whites to report that within the last year, **due to cost**, they had
 - Taken less than prescribed amount of medication
 - Missed doctor's appointments

Bankruptcy and cancer outcomes

- Study of cancer survivors in Washington State
 - Odds of bankruptcy were 2.65 in patients vs. controls
- Factors associated with bankruptcy among patients
 - Young age
 - Female
 - Nonwhite
 - Localized/regional disease stage (vs. distant)
- **Hazard ratio for death was 1.79 among cancer patients who filed for bankruptcy vs. those who did not.**

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Cancer and job loss

- Overall, about 70-80% of cancer patients treated with curative intent return to work (or continue to work)
 - Colorectal, lung, breast, prostate
- Factors associated with lower likelihood of working
 - More advanced disease
 - Low-income earners
 - Immigrant and/or minority status

Cancer and job loss

- Postdiagnosis employment trajectories vary and may include
 - Early retirement (choice?)
 - Working fewer hours (for less pay)
 - Prolonged leave
 - Job loss
- For many survivors, the negative impact of cancer on work is unwanted and results in long-term financial hardship



Cancer and job loss

- 63% survivors report they had to make some change in employment due to cancer, such as
 - Extended paid time off (35%)
 - **Unpaid** time off (21%)
 - Change from full time to part time (13%)
 - Not pursue a promotion (13%)



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US policy about cancer and work

- Americans with Disabilities Act (ADA)
 - Employers must provide *reasonable accommodations* to employees with a disability (including cancer)
 - Modified schedule to allow for doctors' appointments
 - Special equipment such as a chair or cart
 - Accommodation request may be denied if granted it would cause the employer *undue hardship*
- Family and Medical Leave Act (FMLA)
 - Up to 12 weeks of *unpaid* leave over 12-month period without risk of job loss



US policy about cancer and work

- Small businesses are exempt from ADA and FMLA requirements
 - <15 workers for ADA, <50 workers for FMLA
- The small-business exemption disproportionately excludes low-wage earners
 - 40% of low-wage workers are employed by small businesses (vs. 20% of all workers)
 - 52% of low-wage workers have access to paid FMLA leave (vs. 80% of non-low-wage workers)



US policy about cancer and work

- Cancer patients who cannot work can apply for Social Security Disability Income (SSDI)
 - Applicant must be
 - Unable to work due to medical condition expected to last >1 year or result in death
 - Unable to work in previous job or change to another job
 - In 2019, the average monthly SSDI was \$1,234



US policy about cancer and work

- SSDI policy discourages workforce reengagement
 - Benefits stop if the person starts working and earns above threshold monthly income
 - 2019 threshold was \$1220
 - Ticket to Work program preserves SSDI status during workforce reentry
 - Barriers to utilization
 - Not well publicized
 - Need for application
 - If not enrolled, patients on SSDI who reenter workforce must be **certain** that they will be able to work



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Disparities in Return to Work Among Breast Cancer Survivors

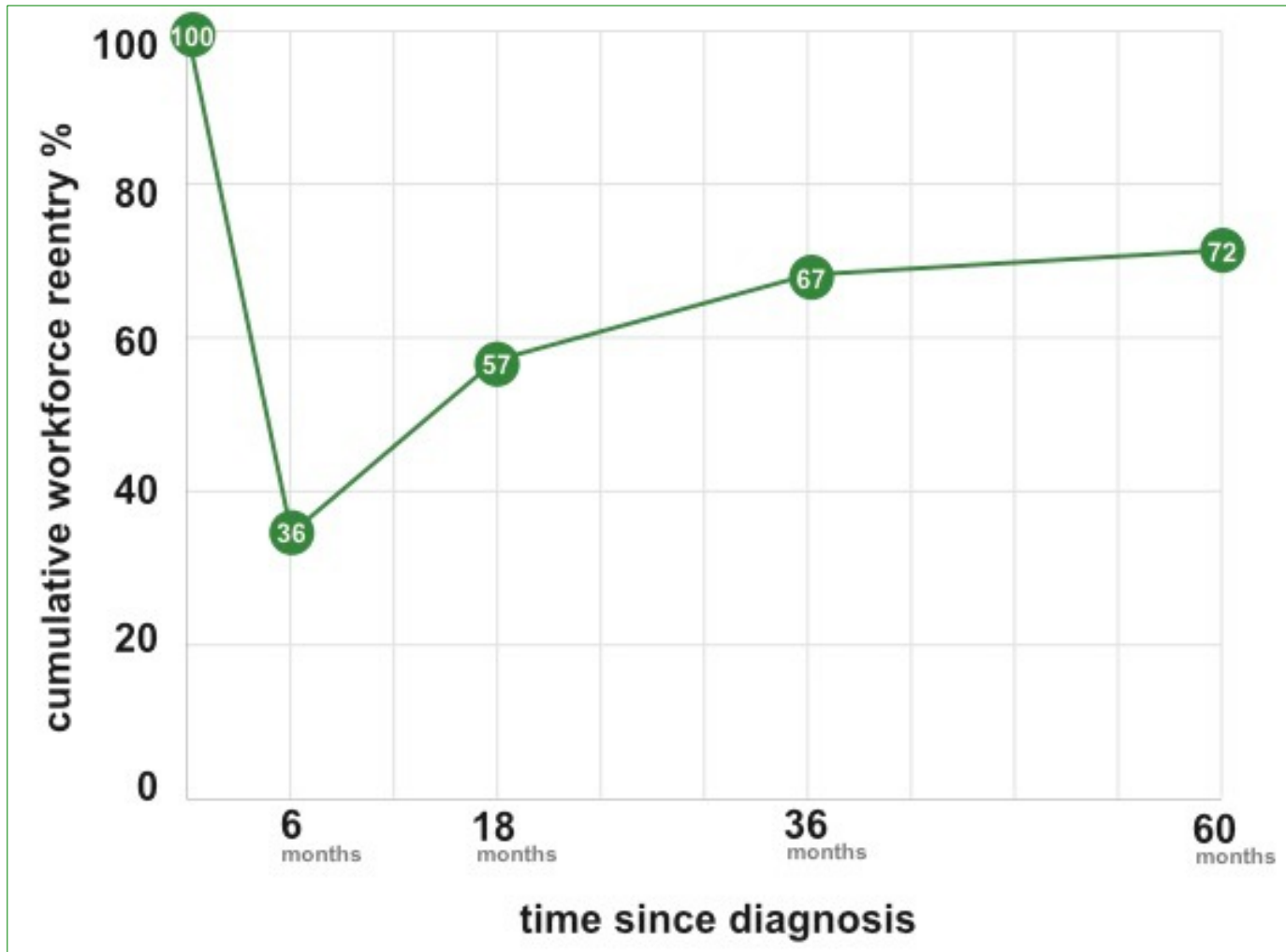


Study sample

- Survey of 274 English-/Spanish-speaking California women
 - Stage 0-III breast cancer
 - Employed before diagnosis
 - Low-income (<200% federal poverty level)
 - Medically underserved
- 36% returned to work by 6 months
 - Additional 21%, 10%, and 5% returned to work by 18, 36, and 60 months, respectively
 - 27% never went back to work



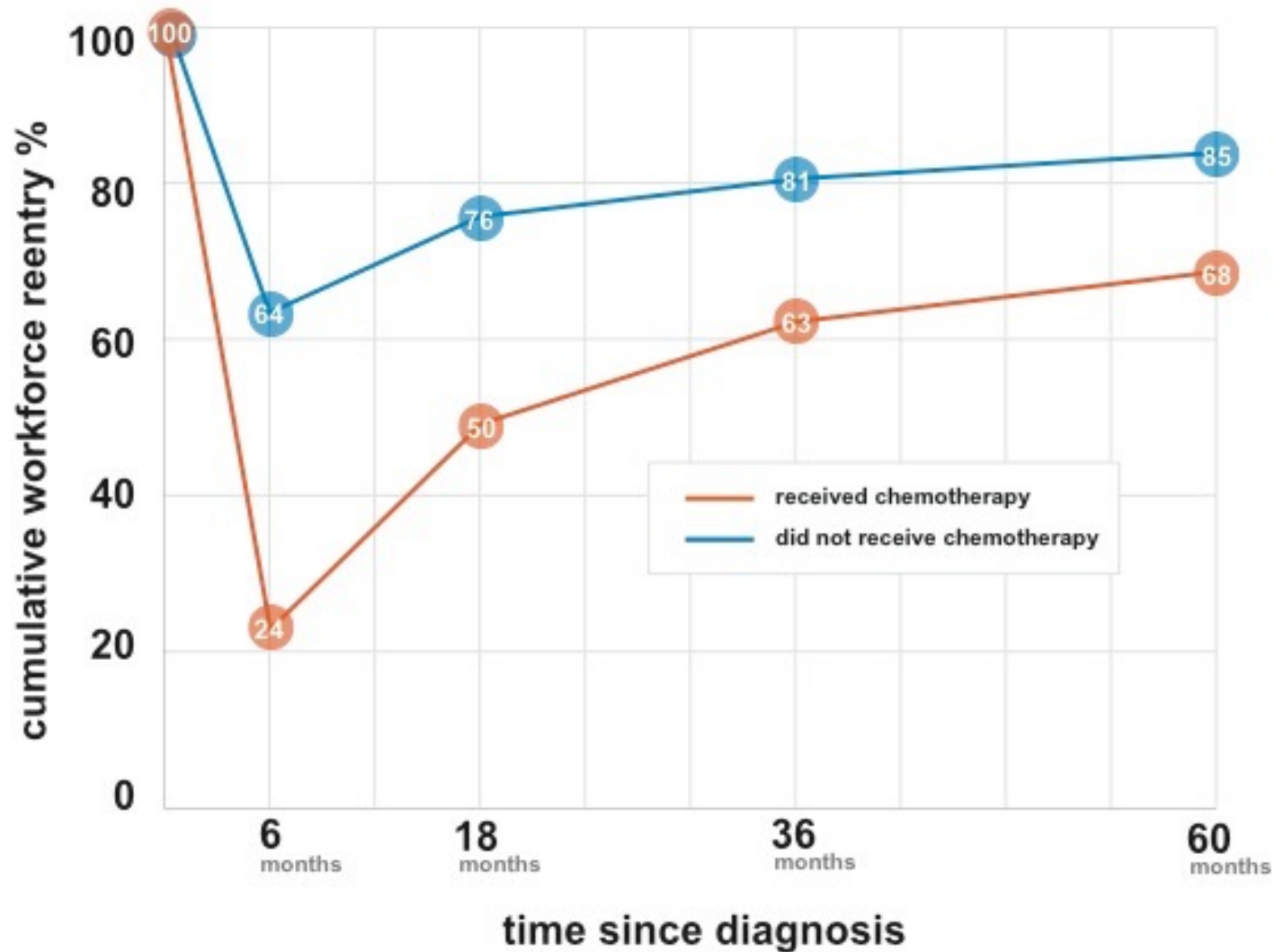
Cumulative workforce reentry



Independent predictors of not returning to work

- Lowest annual income group (<\$10,000)
- ≥ 1 comorbid condition
- Latina ethnicity
- Receipt of chemotherapy
 - Of 174 who were not working at 6 months, 43% never returned to work

Receipt of chemotherapy and cumulative workforce reentry



Conclusions

- Very poor women who take time off from work during chemotherapy may have a difficult time reentering the workforce
- Low income may be proxy for workplace characteristics, such as working in informal sector
 - Associated with decreased accommodation at work, lack of sick leave and disability
 - Chemotherapy may have pronounced effect
 - Women who intend to stop working temporarily may be at risk of exiting the workforce permanently





Breast Cancer and the Workforce



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Background and Methods

- We prospectively surveyed NYC women with a new diagnosis of breast cancer
 - Mode: online or via computer-assisted telephone interviews
 - Language: English, Spanish, Chinese, or Korean
- The primary outcome was post-treatment work status
 - Definition: working full time or part time vs. any other work status 4 months after completion of active treatment (except endocrine therapy and/or HER2-targeted therapy)

Participants and controls

- Participants
 - Women aged 18-64
 - Employed at diagnosis
 - Newly diagnosed stage I-III breast cancer
 - Undergoing chemo, radiation, or <60 days since surgery
 - Spoke Chinese, English, Korean, Spanish
- Controlled for disparities in secular trends
 - Participants reported on the work status of a friend or family member who was working at baseline and about the same age (+/-5 years), race/ethnicity, and language group as the participant.

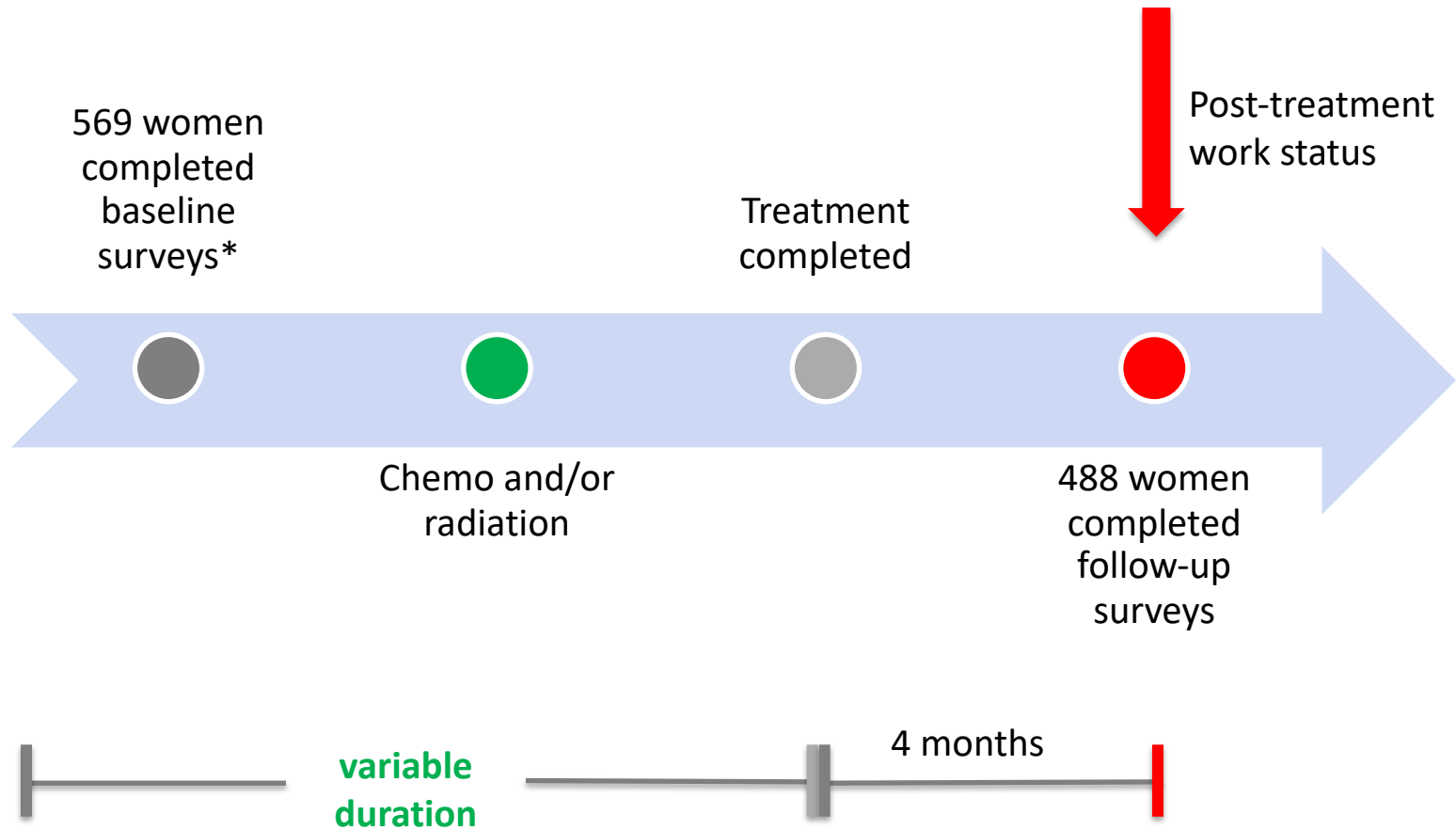
Methods

- Analysis

- Multivariable logistic regression analyses used to identify predictors of work status in patients
- Healthy *controls* used to evaluate whether observed findings were due to disparities in non-cancer unemployment

$$\text{Employment ratio} = \frac{\text{proportion of patients working}}{\text{proportion of controls working}}$$

Design



*Pilot study patients excluded from analytic sample
Blinder et al., AACR Disparities 2018

Sample characteristics

Characteristic	No. (%)
Age	Mean: 50 (SD 8.7)
Race/ethnicity	
Black	111 (23)
Chinese	92 (19)
Korean	36 (7.4)
Latina	137 (28)
Non-Latina White	101 (21)
Other	11 (2.3)
US-born	207 (42)
Household income <200% FPL	149 (31)
Job type	
Service/manufacturing	162 (33)
Sales/admin	94 (19)
Professional/manager	230 (47)
Health insurance	
Employer-sponsored	281 (58)
Other private	81 (17)
Public/pre-cancer uninsured	126 (26)
More acculturated (or native English-speaker)	287 (59)

Cancer and treatment variables

Characteristic	No. (%)
Stage	
I	189 (39)
II	220 (45)
III	73 (15)
Mastectomy	234 (48)
Axillary lymph node dissection	162 (33)
Chemotherapy	417 (85)
Radiation therapy	351 (72)

Results

- 4 months after treatment completion, 71% of participants were working (full time or part time).
- Work status differed across race/ethnicity groups
 - Black: 72%
 - Chinese: 65%
 - Korean: 68%
 - Latina: 62%
 - Non-Latina White: 90%

p<0.0001

Results

- Follow-up employment status was available for 420 passive controls
 - 90% were working
- Ratio of working patients vs. controls (95% CI)
 - Black: **0.78 (0.74-0.84)**
 - Chinese: **0.69 (0.59-0.80)**
 - Korean: 0.73 (0.57-0.94)
 - Latina: **0.75 (0.64-0.88)**
 - Non-Latina White: 0.98 (0.89-1.07)

Predictors of not working 4 months post-treatment

Characteristic	OR	95% CI	
Age	1.06	1.03	1.09
Race/ethnicity (vs. NL White)			
Black	2.37	1.01	5.56
Chinese	2.91	1.20	7.05
Korean	3.68	1.24	11.0
Latina	2.13	0.90	5.03
Job type (vs. professional)			
Service/manufacturing	2.40	1.30	4.44
Sales/admin	1.39	0.69	2.82
Household income <200% FPL	3.00	1.68	5.35
Employer not accommodating	3.05	1.88	4.95
Underwent chemotherapy	2.20	1.04	4.64

Conclusions

- Breast cancer exerts a disparate negative impact on work status for women who are
 - Low income
 - Minority race/ethnicity
 - This difference persists after controlling for disparities in non-cancer unemployment



Conclusions

- Job loss is a financial toxicity of chemotherapy that can have profound long-term consequences
 - Prior research indicates that failure to reenter the workforce early predicts prolonged job loss
- Improving access to employer accommodations may be a promising therapeutic target to abrogate job loss
 - May be especially important for minority and/or low-income women who undergo chemotherapy

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TEAMWork: Talking to Employers And Medical staff about Work





Improving access to accommodations: TEAMWork

- Spanish/English mobile health app
- Promotes job retention in women undergoing adjuvant chemotherapy for breast cancer by
 - Improving patients' ability to obtain the accommodations they need
 - Optimizing symptom control during chemotherapy

Developed with input from

- Breast cancer survivors
 - Focus groups and interviews
- Cancer and Careers: www.cancerandcareers.org
- Employment lawyers
 - Leonor Hidalgo Coyle, JD
 - Kara Miller, JD
- MSK clinicians
 - Rehabilitation Medicine Service
 - Nursing
 - Surgery
 - Radiation Oncology



What is included in TEAMWork?

Workplace information and advice

- Suggested accommodations tailored to job tasks and deficits (vocational rehab)
- Information about legal protections

Negotiation and communication coaching

- Sample videos
- Prompt lists

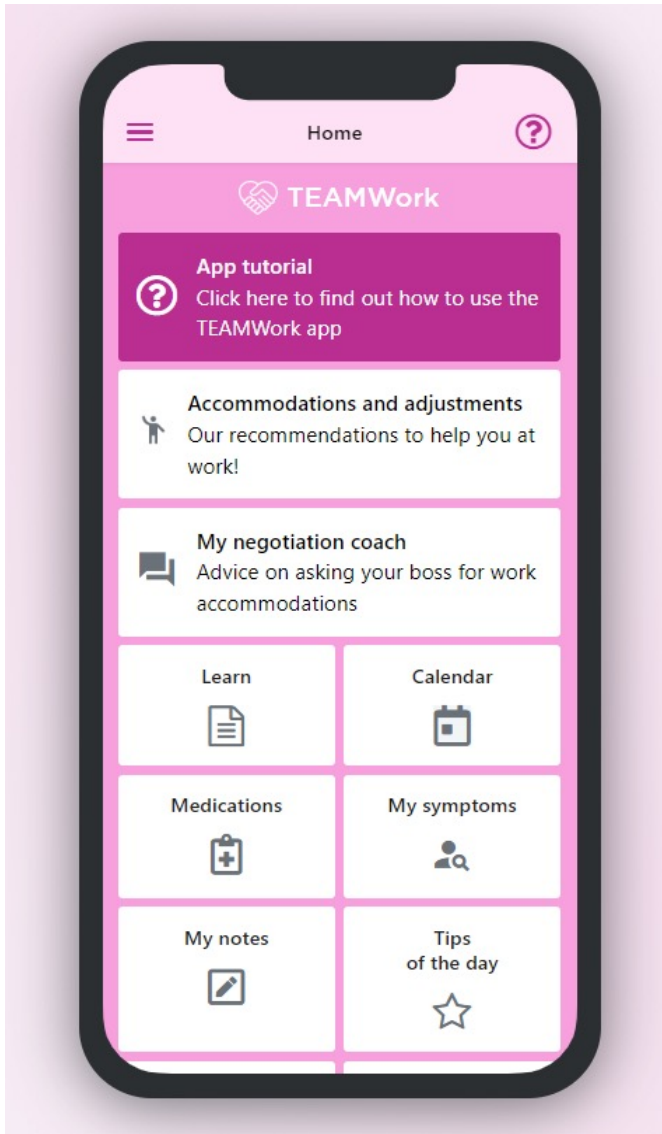
Symptom self-management strategies

- Symptom tracker
- Tips for communicating with clinic team

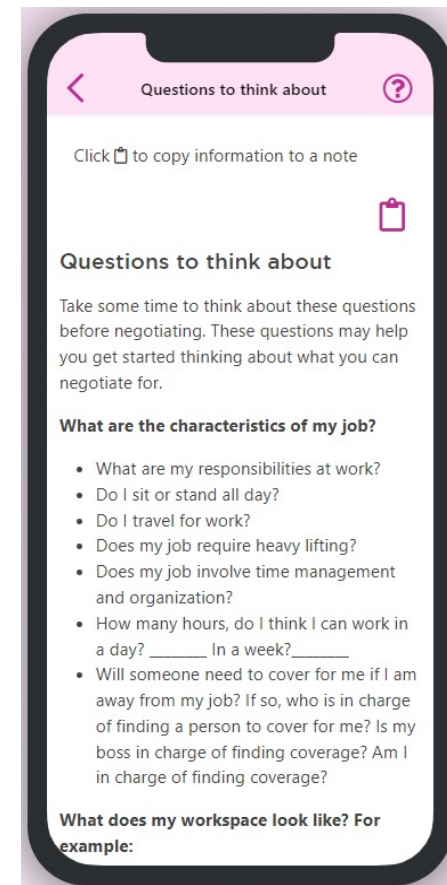
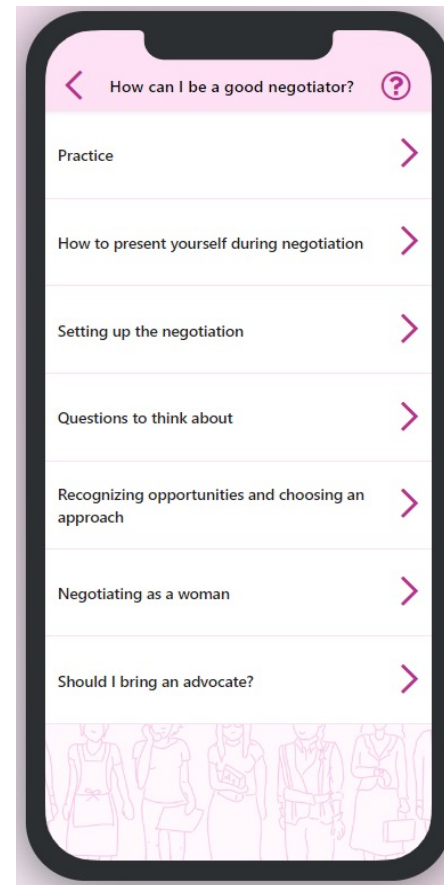
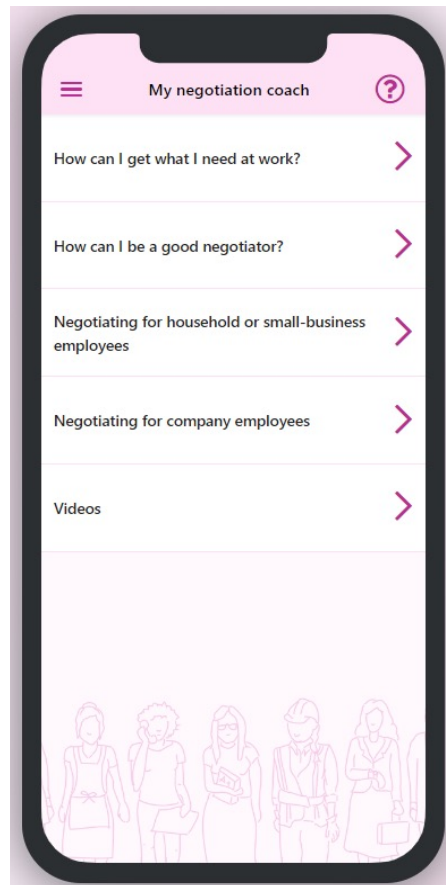
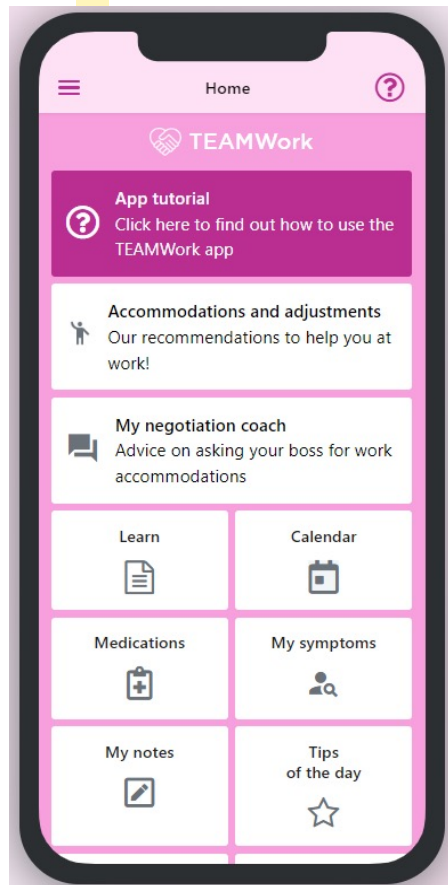
Additional features based on participant feedback

- Calendar
- Notes organizer

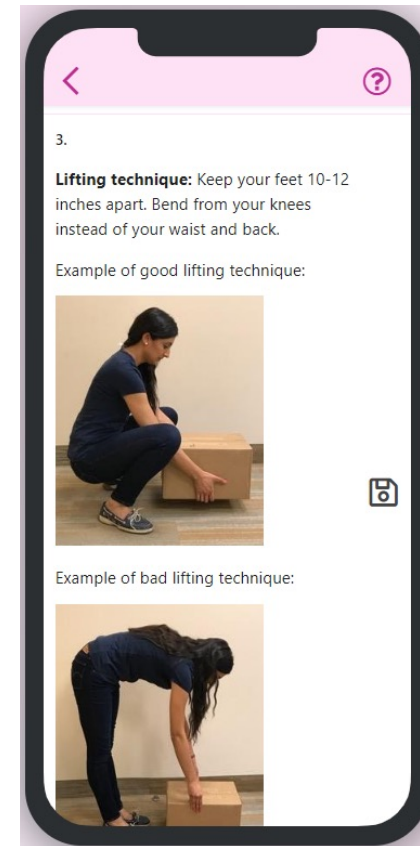
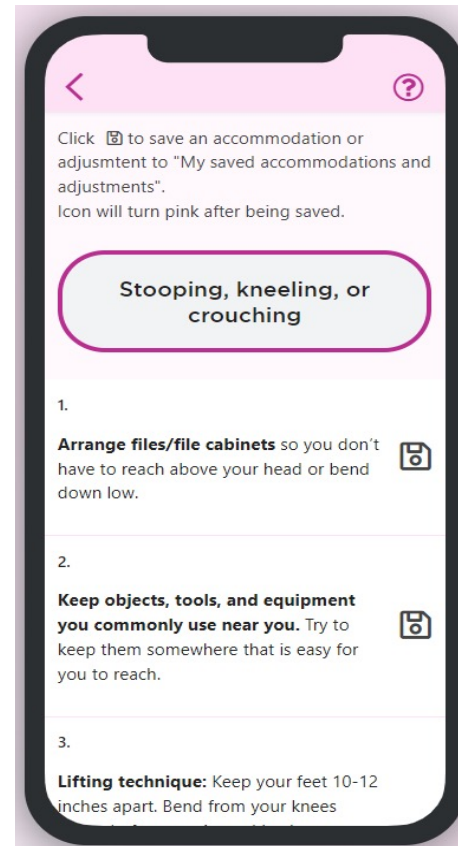
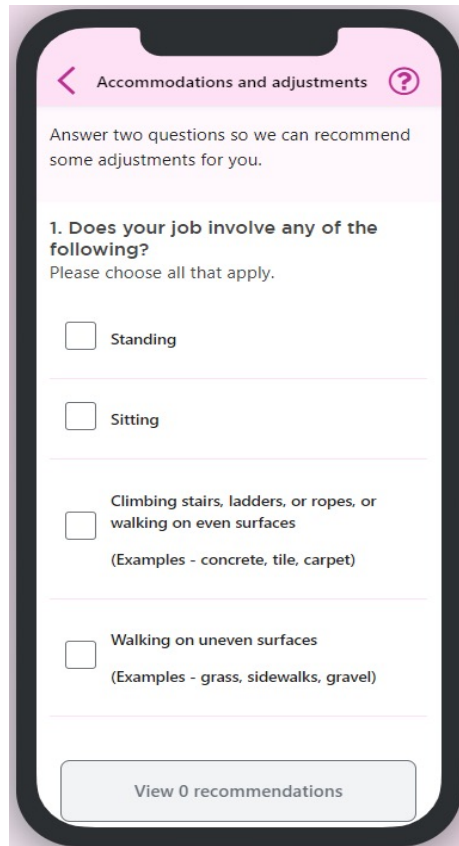
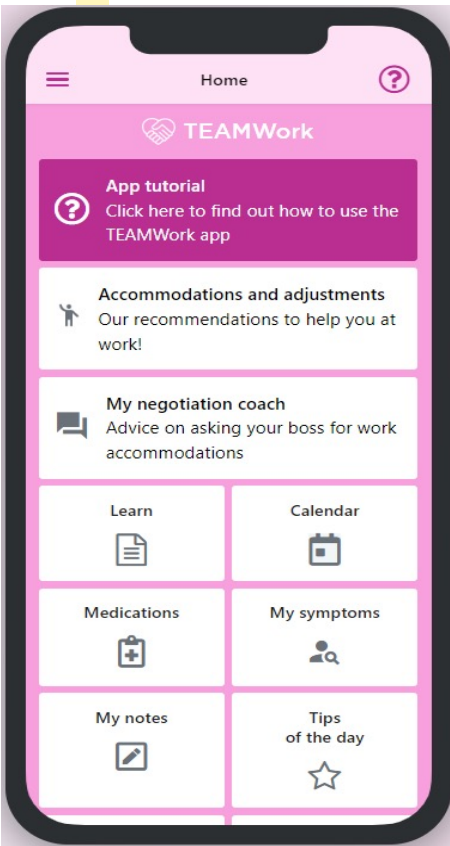




Negotiation coach




Accommodations and adjustments



Status of the TEAMWork trial

- RCT open at MSK, Montefiore, Lincoln Hospital
 - 233 of planned 420 participants enrolled
- Primary outcome is work status 4 months after completion of primary therapy
 - Will also evaluate long-term outcomes 1 and 2 years later
 - Impact of app on financial hardship

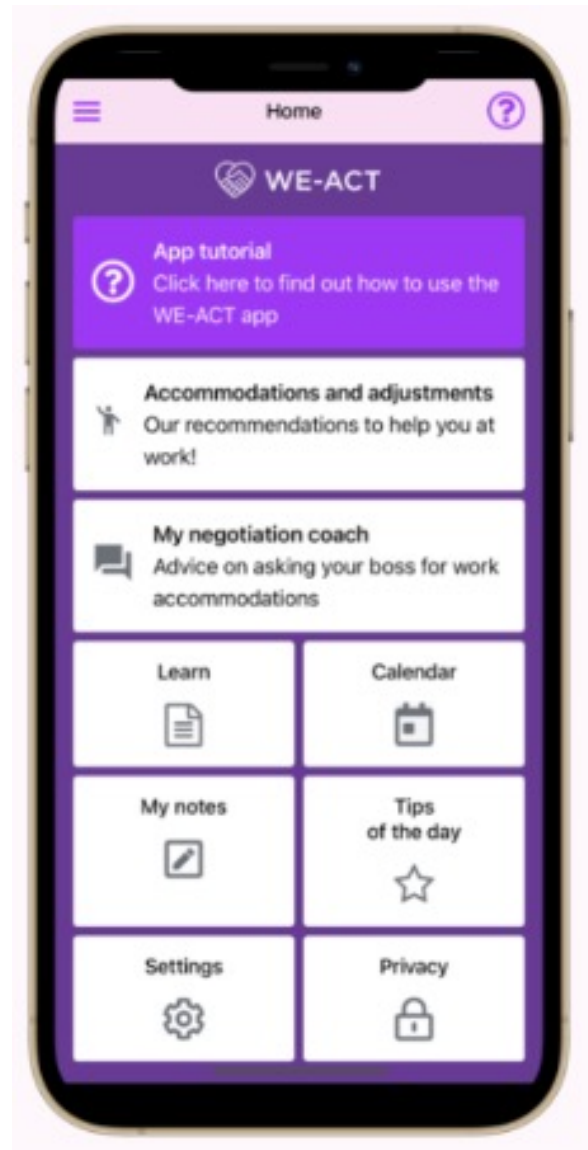


WE-ACT: Workplace/Employer Accommodations during Cancer Treatment

- App content adapted for use by broader cancer sample
 - Patients who have completed or are currently undergoing systemic therapy or radiation therapy for cancer
 - Includes patients treated with noncurative intent

WE-ACT: Workplace/Employer Accommodations during Cancer Treatment

- Pilot study open at MSK and Montefiore
- Evaluate acceptability and feasibility in broader cancer sample
- n=30 enrolled to date
 - n=60 planned
- Future nationwide RCT planned through Alliance





Financial hardship screening to improve cancer outcomes



Financial hardship screening: proof of concept

- Monthly financial hardship screening as part of a digital symptom monitoring (PRO) intervention in patients with advanced cancer
 - Automated alert sent to clinic team for concerning score
 - Specific response to alert not mandated
- Total sample: n=1191 (at 52 practices)
 - n=593 treated at practices randomized to receive the PRO intervention
 - n=598 treated at practices randomized to usual care
- Primary outcome:
 - Development of new or worsening financial difficulties

Funded by PCORI, sponsored by Alliance
Foundation Trials (AFT-39)

Results: Financial hardship screening

- 30.2% of patients randomized to PRO intervention developed new or worsening financial difficulties
 - Control arm: 39.0%
 - $P=.004$

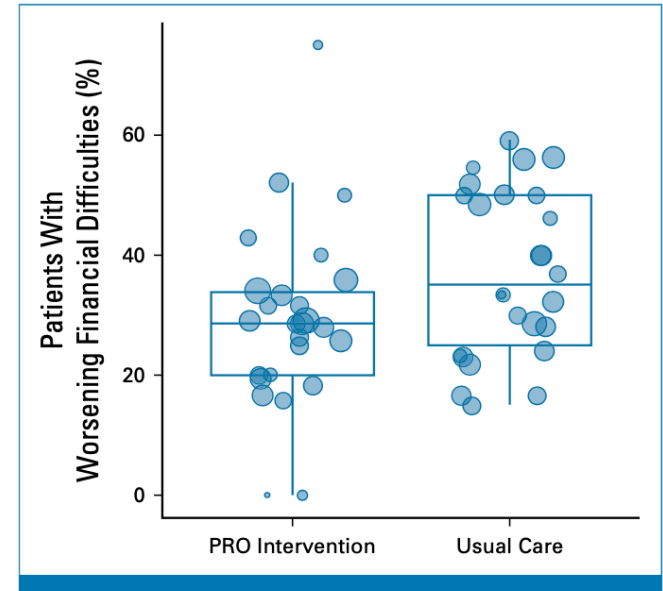


FIG 2. Percentage of patients reporting worsening financial difficulties at each site. The boxplots show the distribution of percent worsening by randomization arm (PRO intervention v usual care). For each site, the percentage of patients who experienced worsening financial difficulties was calculated. These values are plotted by study arm. The boxplot shows the spread and median of the data. The overlaid dots are the individual site-level data points, and the size of the dot is relative to the size of the site. Site enrollment ranged from $n = 2$ to $n = 50$. PRO, patient-reported outcome.

Financial hardship screening

- Generalizability of results is limited
 - Financial hardship screening was part of a larger intervention
- Future large-scale RCT is planned



Thank you!

Study participants



Breast Cancer and the Workforce

Funding sources

- National Cancer Institute
- American Cancer Society
- American Society of Clinical Oncology
- MSKCC Survivorship Initiative
- Alliance for Clinical Trials in Oncology



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