

Financial Hardship in Cancer Survivors



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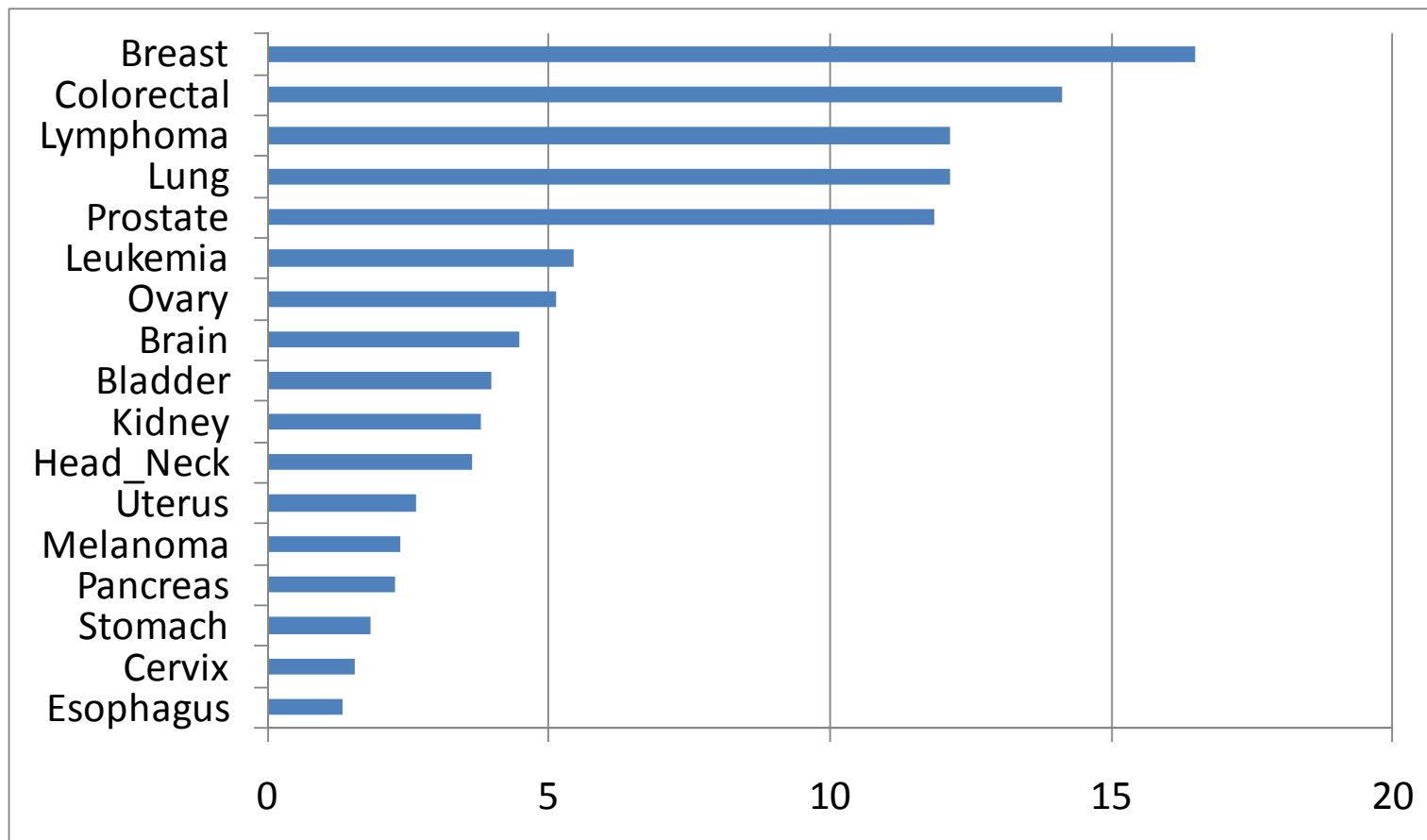
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Cancer Survivorship

- Currently about 15.5 million cancer survivors alive in the United States
- For the majority of cancers, incidence increases with age and prevalence of cancer survivorship highest in elderly
- Recent trends
 - Incidence rates mostly declining
 - Survival following diagnosis mostly improving
- Because of aging and growing population, expect about 18 million cancer survivors by 2020

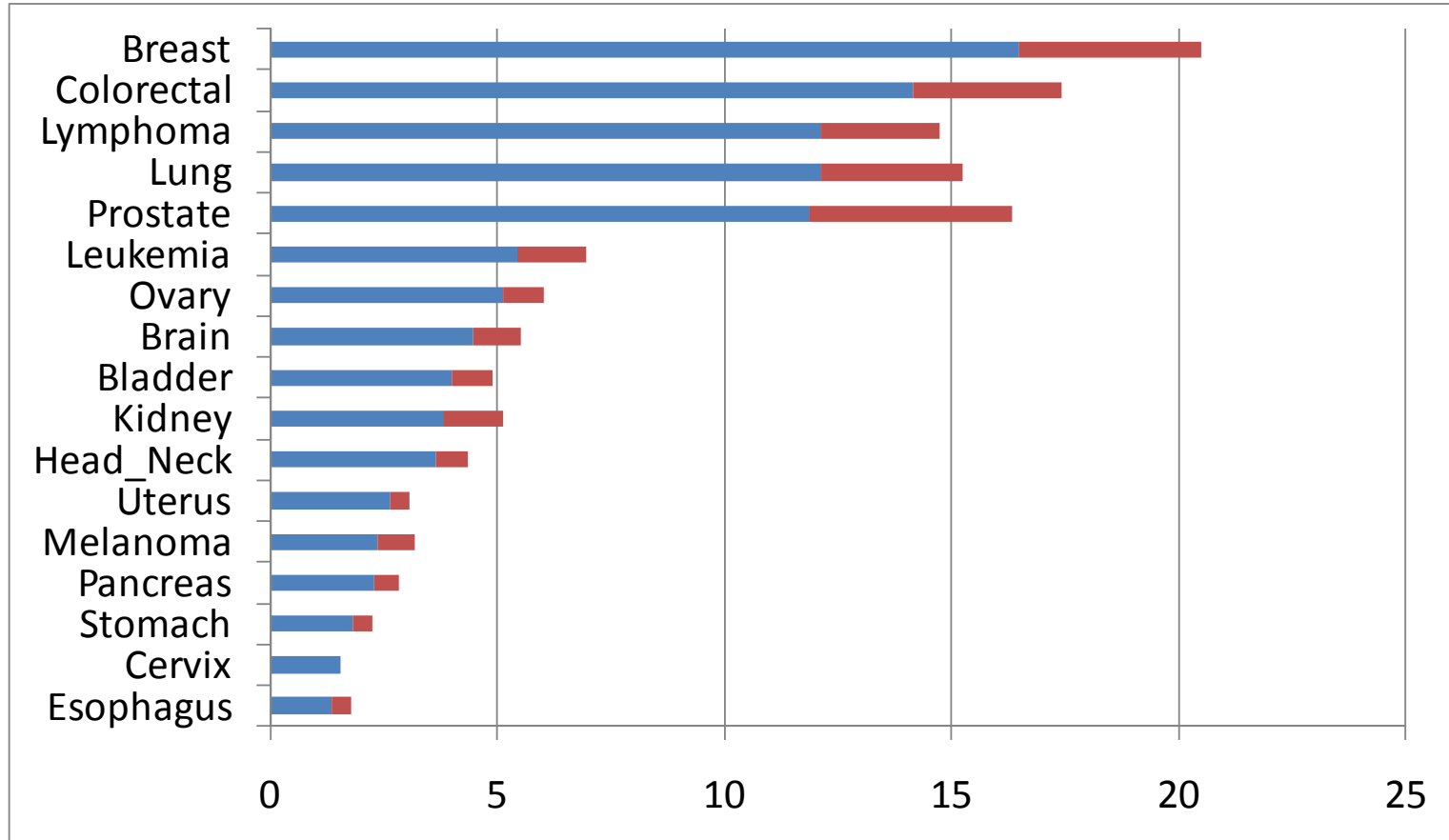
Estimated National Expenditures for Cancer Care in 2010 by Site (in billion \$)



Total Cancer Expenditure in 2010: \$124.57 Billion in 2010 dollars

Source: Mariotto AB, Yabroff KR, Shao Y, Feuer EJ, Brown ML. Projections of the costs of cancer care in the United States: 2010-2020. *J Natl Cancer Inst* 2011;103:117-128.

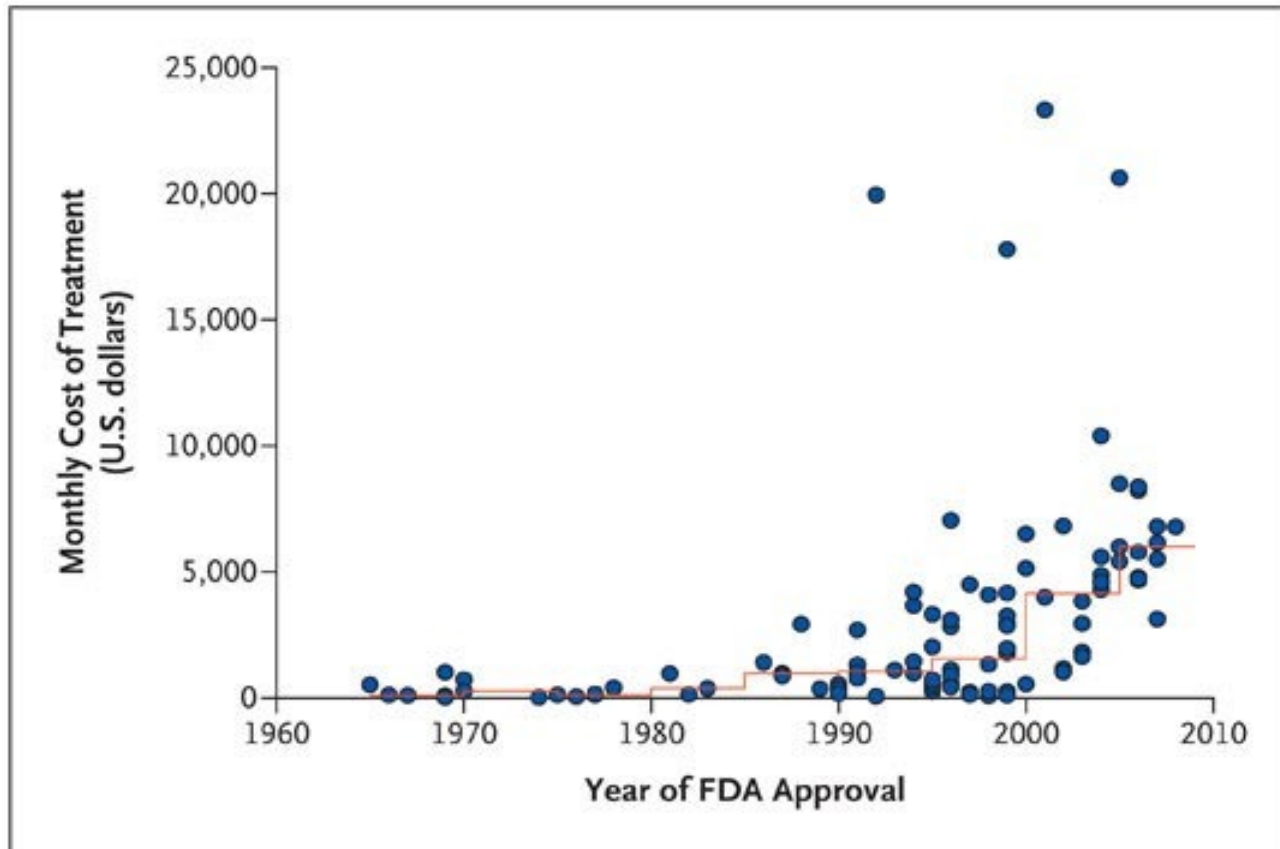
Projected Increase in National Expenditures in 2020 by Cancer Site (in billion \$): Population Changes Only



Total Cancer Expenditure in 2020, Base Scenario: \$157.77 Billion in 2010 dollars

Source: Mariotto AB, Yabroff KR, Shao Y, Feuer EJ, Brown ML. Projections of the costs of cancer care in the United States: 2010-2020. J Natl Cancer Inst 2011;103:117-128.

Dramatic Increases in Monthly Price of Cancer Drugs



Shown are costs for 1 month of cancer treatment for a person who weighs 70 kg or has a body-surface area of 1.7 m². Prices have been adjusted to 2007 dollars and reflect the total price for the drug at the time of approval, including both the amount of Medicare reimbursement and the amount paid by the patient or by a secondary payer.

Source: Bach PB. Limits on Medicare's ability to control rising spending on cancer drugs. *N Engl J Med* 2009; 360:626-633.

Trends Affecting Financial Hardship

- Increasing cost of treatment for cancer and other conditions
- Changes in treatment patterns
- Broader trends in the United States
 - Prevalence of high deductible health insurance plans
 - Patient cost-sharing (among the insured)
 - Underinsured/uninsured

Cancer Survivorship

- Cancer survivors can experience lasting effects of disease and its treatment
- Compared to individuals without a cancer history, cancer survivors have greater
 - Risk for additional cancers and chronic conditions
 - Healthcare expenditures, including out-of-pocket spending
 - Limitations in amount or kind of work

Patient Experiences with Financial Hardship due to Illness

“I am still paying for debts accrued from co-payments or hospital bills not covered by my insurance.. and paying credit card debt that was accrued during my time out of work.”

“We had to let our home go back to the bank...after 20 years of home ownership we had to file bankruptcy.”

Patient Experiences with Financial Hardship

“I paid most of my costs out-of-pocket. My savings were wiped out...now I struggle and am ashamed by my lack of funds. I don't know that I will ever recover financially. It is a considerable stress...”

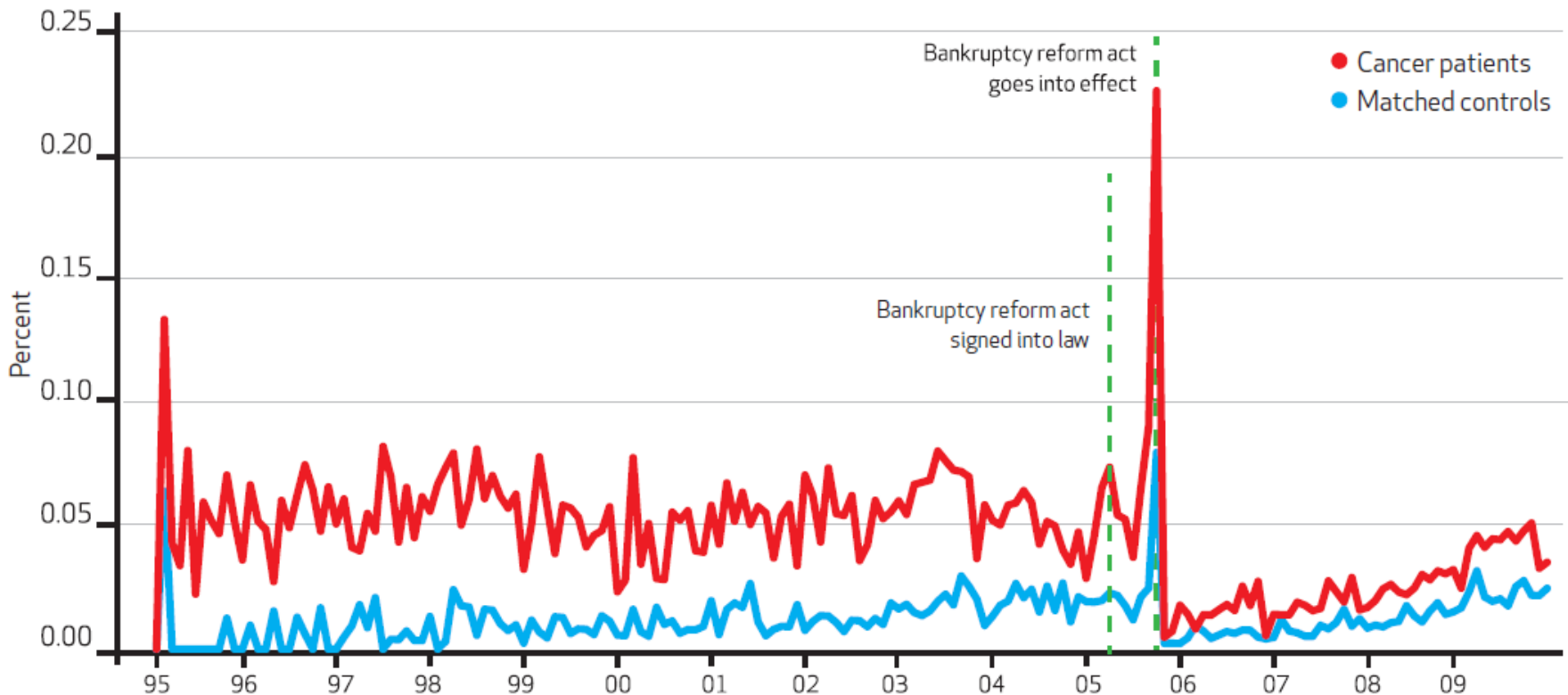
“I stayed with a company that provides excellent health benefits rather than seek higher paying jobs where the benefits might not be as good.”

By Scott Ramsey, David Blough, Anne Kirchhoff, Karma Kreizenbeck, Catherine Fedorenko, Kyle Snell, Polly Newcomb, William Hollingworth, and Karen Overstreet

DOI: 10.1377/hlthaff.2012.1263
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Foundation, Inc.

Washington State Cancer Patients Found To Be At Greater Risk For Bankruptcy Than People Without A Cancer Diagnosis

Monthly Rate Of Bankruptcies For Cancer Patients And Matched Group Without Cancer, Western Washington State, 1995-2009



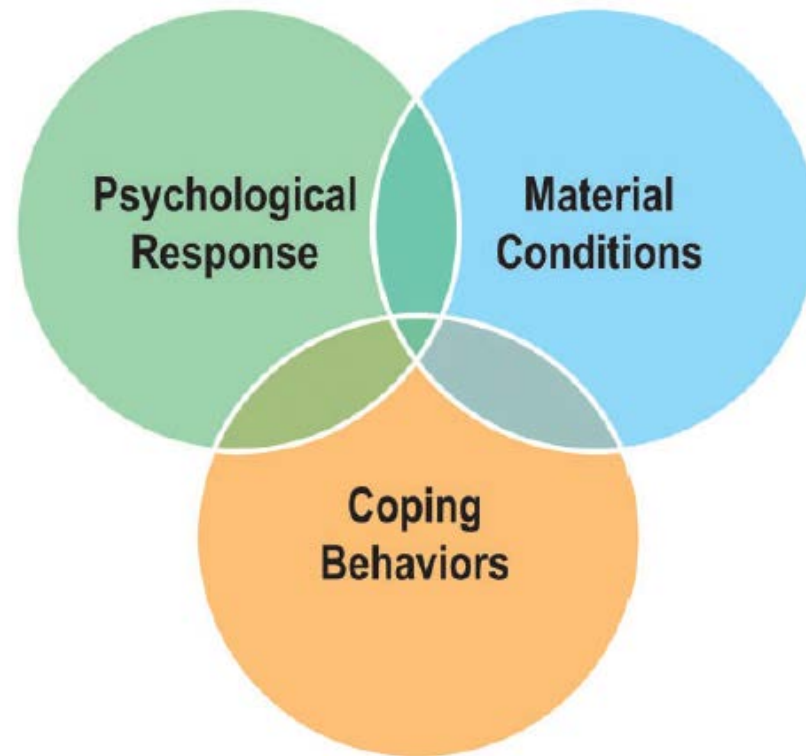
Bankruptcy Associated with Increased Mortality Risk

- Among cancer survivors in Western Washington State
 - Bankruptcy associated with increased mortality risk (HR= 1.79 (95% CI:1.64 to 1.96)) in adjusted analyses
 - Findings robust in sensitivity analyses
- Hypothesized mechanism(s)
 - Lower quality of life/overall wellbeing
 - Increased stress
 - Decreased treatment adherence or access to care

Source: Ramsey SD, Bansal A, Fedorenko CR, Blough DK, Overstreet KA, Shankaran V, Newcomb P. Financial insolvency as a risk factor for early mortality among patients with cancer. *J Clin Oncol* 2016;34(9):980-6.

Zafar SY. Financial toxicity of cancer care: it's time to intervene. *J Natl Cancer Inst* 2015;108(5).

Financial Hardship Framework



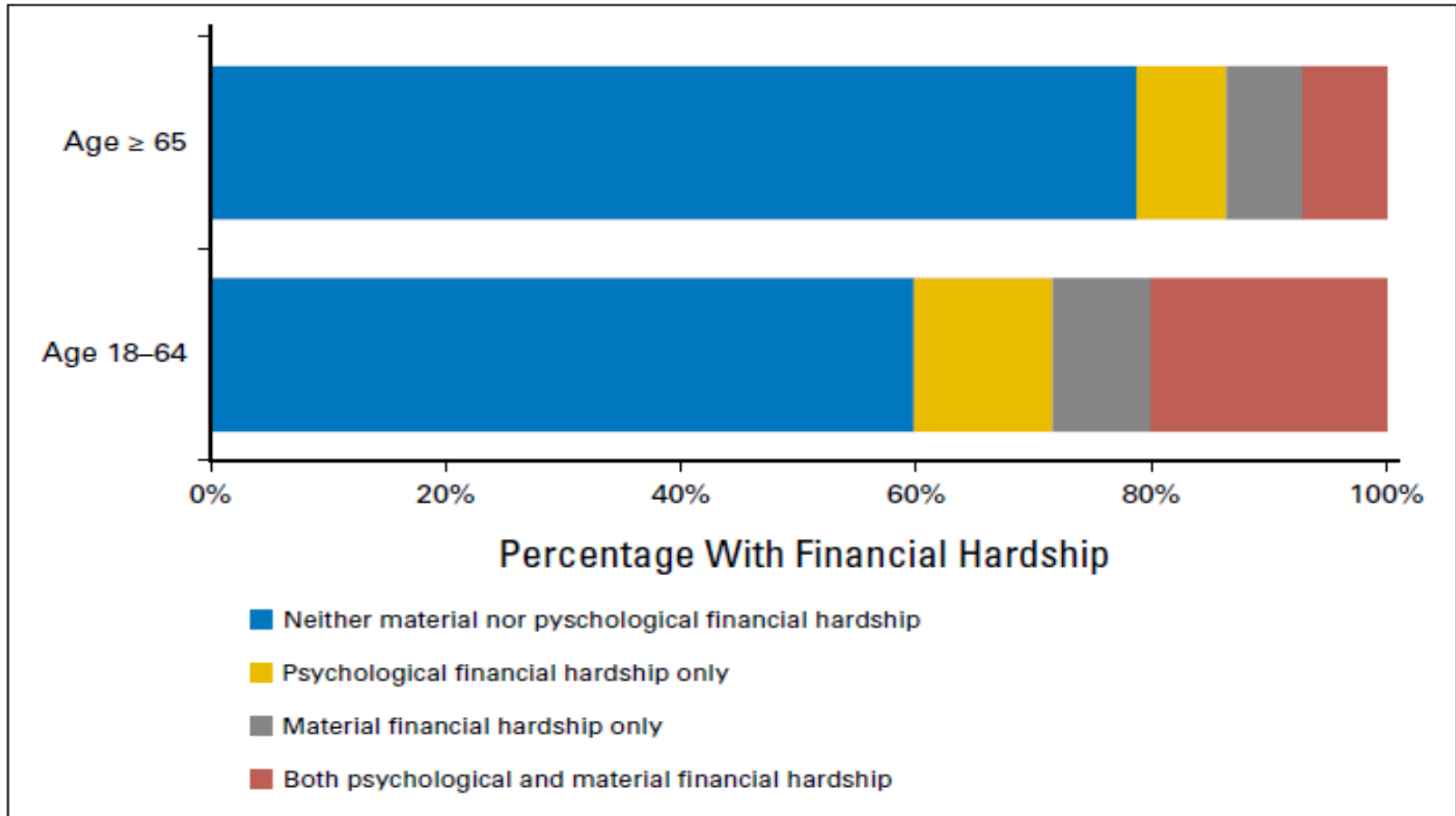
Source: Tucker-Seeley R, Yabroff KR. Minimizing the “financial toxicity” associated with cancer care: advancing the research agenda. *J Natl Cancer Inst* 2015; 108(5). Altice CK, Banegas MP, Tucker-Seeley RD, Yabroff KR. Financial hardships experienced by cancer survivors: a systematic review. *J Natl Cancer Inst* 2017; 109(2).

Financial Hardship in Adult Cancer Survivors

	Weighted % (95% CI)
Had to borrow money or go into debt	7.1 (5.7 - 8.9)
Filed for bankruptcy	1.7 (1.0 - 2.8)
Unable to cover share of the costs of medical care	11.9 (9.8 - 14.3)
Other financial sacrifices	9.4 (7.6 - 11.5)
Any material financial hardship	20.4 (17.7-23.4)
Any psychological financial hardship	22.5 (19.6 - 25.7)

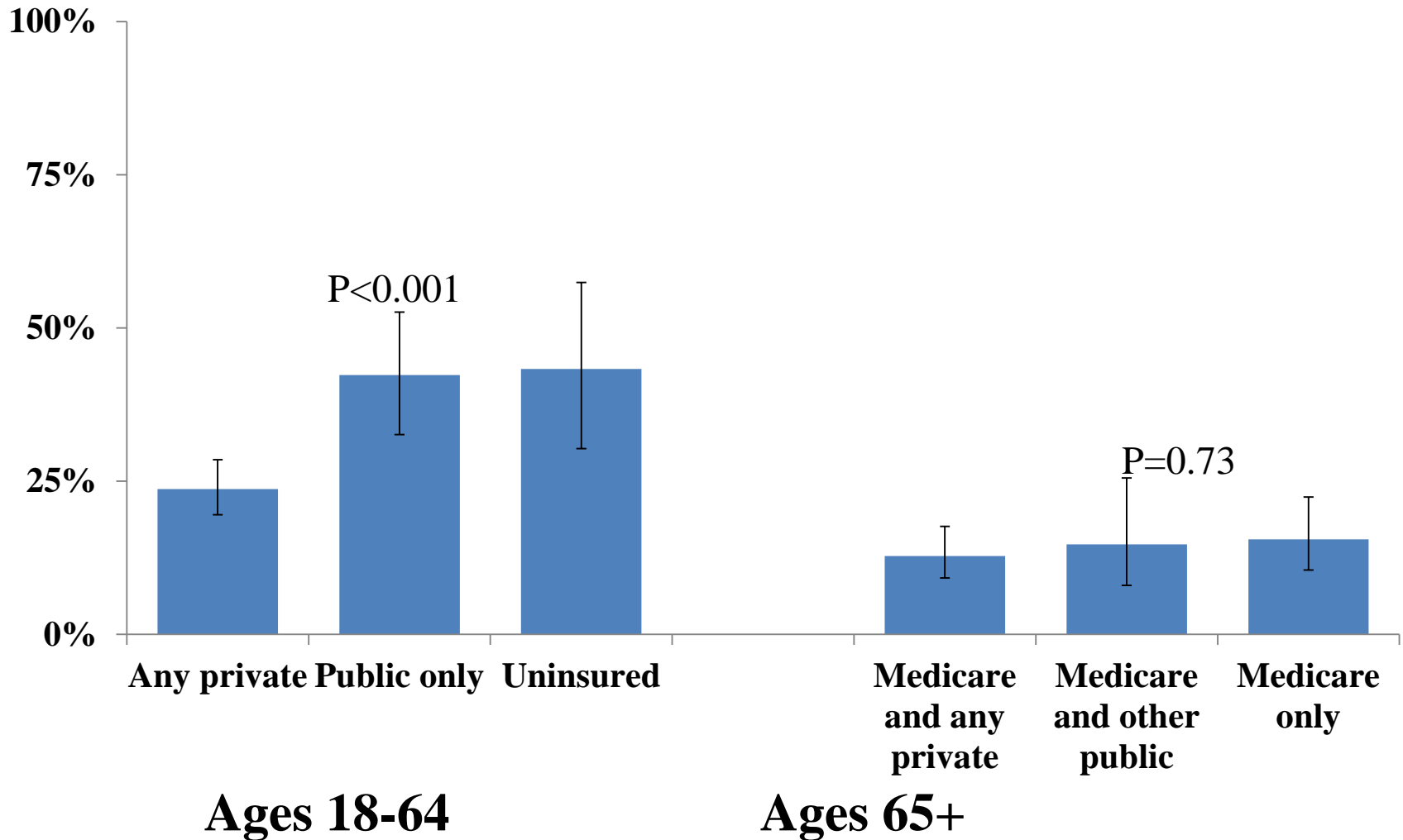
Source: Yabroff KR, Dowling EC, Guy Jr GP, Banegas M, Davidoff A, Han X, Virgo KS, McNeel T, Chawla N, Blanch-Hartigan D, Kent EE, Li C, Rodriguez J, de Moor JS, Zheng Z, Jemal A, Ekwueme DU. Financial hardship associated with cancer in the United States: findings from a population-based sample of adult cancer survivors. *J Clin Oncol* 2016; 34(3):259-67.

Material and Psychological Financial Hardship



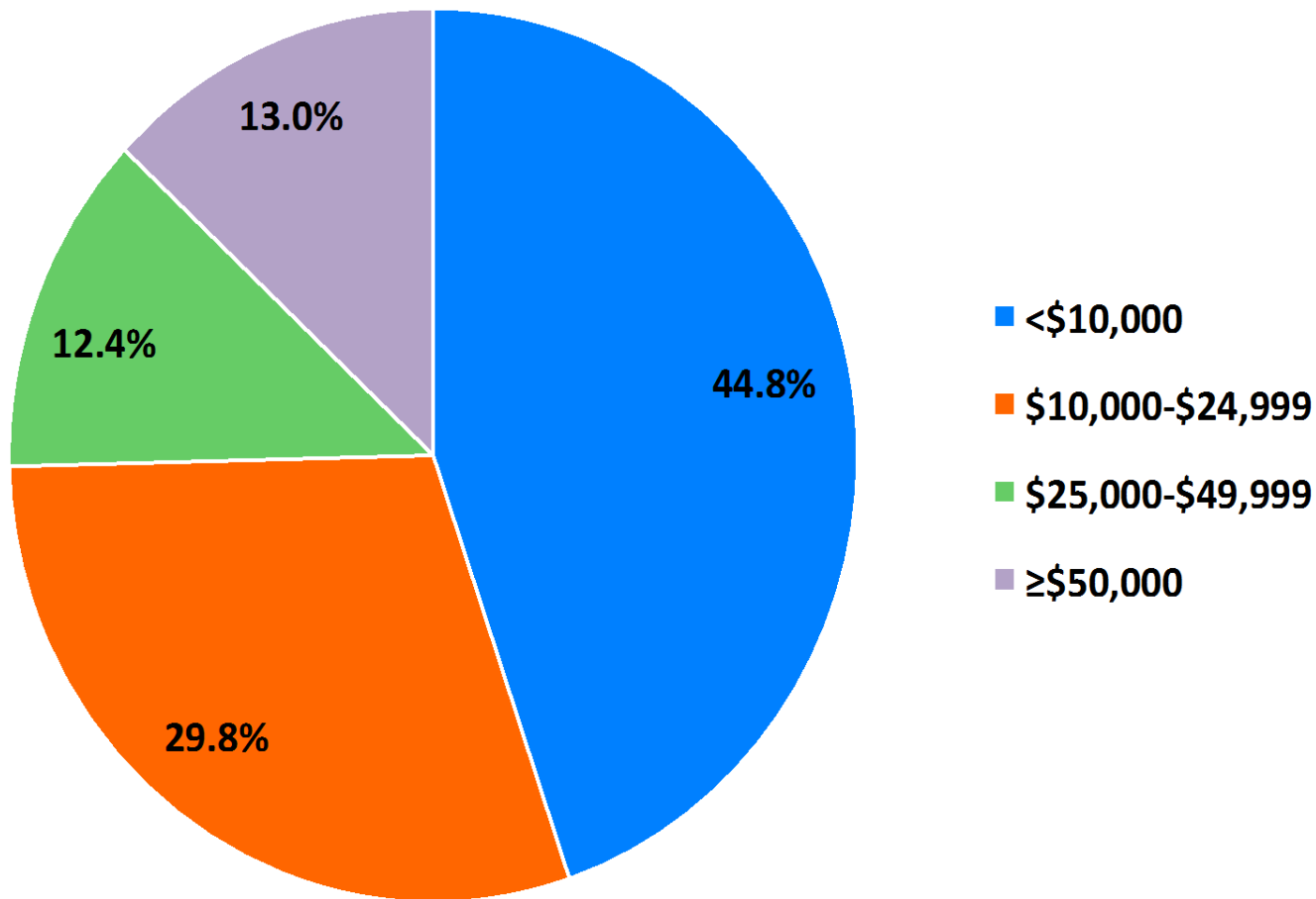
Source: Yabroff KR, Dowling EC, Guy Jr GP, Banegas M, Davidoff A, Han X, Virgo KS, McNeel T, Chawla N, Blanch-Hartigan D, Kent EE, Li C, Rodriguez J, de Moor JS, Zheng Z, Jemal A, Ekwueme DU. Financial hardship associated with cancer in the United States: findings from a population-based sample of adult cancer survivors. *J Clin Oncol* 2016; 34(3):259-67.

Material Financial Hardship



Source: Yabroff KR, Dowling EC, Guy Jr GP, Banegas M, Davidoff A, Han X, Virgo KS, McNeel T, Chawla N, Blanch-Hartigan D, Kent EE, Li C, Rodriguez J, de Moor JS, Zheng Z, Jemal A, Ekwueme DU. Financial hardship associated with cancer in the United States: findings from a population-based sample of adult cancer survivors. *J Clin Oncol* 2016; 34(3):259-67.

Amount of Debt Incurred

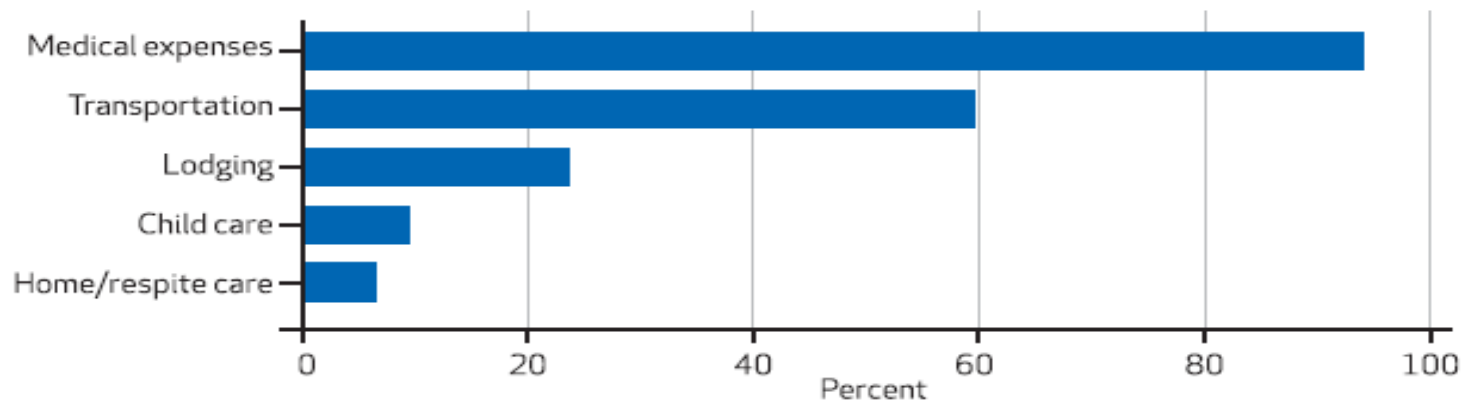


Source: Banegas M, Guy Jr GP, de Moor JS, Ekwueme DU, Virgo KS, Kent EE, Nutt S, Rechis R, Zheng Z, Yabroff KR. For working-age cancer survivors, medical debt and bankruptcy create financial hardships. *Health Aff* 2016 35(1):54-61.

Out-of-Pocket Spending

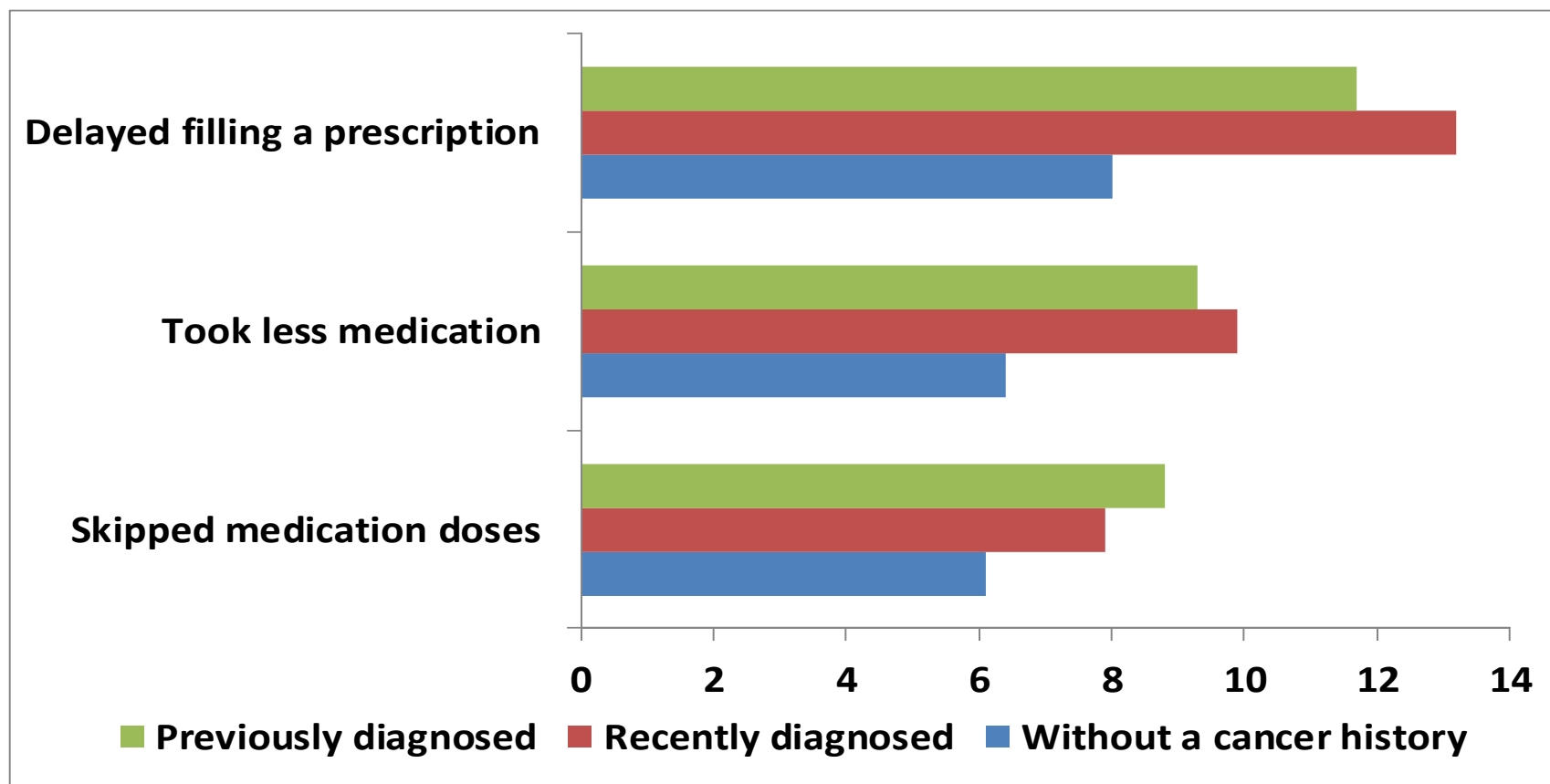
EXHIBIT 3

Types Of Out-Of-Pocket Spending Among Working-Age Cancer Survivors Who Reported Borrowing Money Or Going Into Debt Because Of Cancer, 2012



SOURCE Authors' analysis of data from the LIVESTRONG 2012 survey. **NOTES** The percentages presented are those of the 1,583 participants who responded yes to the question, "Have you or has anyone in your family had to borrow money or go into debt because of your cancer, its treatment, or the lasting effects of that treatment?" and who had valid responses to the question, "Because of your cancer, its treatment, or the lasting effects of that treatment, did you have any out-of-pocket costs in the following categories?" Categories are not mutually exclusive. "Medical expenses" include physician copayments, medications, and durable medical equipment.

Cancer History and Behavioral Financial Hardship in Adults Ages 18-64 Years



Predicted marginals from multivariable logistic regressions controlling for the effects of age, race/ethnicity, sex, educational attainment, marital status, number of comorbidity conditions, health insurance coverage, and geographic region

Source: Zheng Z, Han X, Guy GP Jr, Davidoff AJ, Li C, Banegas MP, Ekwueme DU, Yabroff KR, Jemal A. Do cancer survivors change their prescription drug use for financial reasons? Findings from a nationally representative sample in the United States. *Cancer* 2017; 123(8):1453-1463.

Patient Characteristics Associated with Risk of Financial Hardship

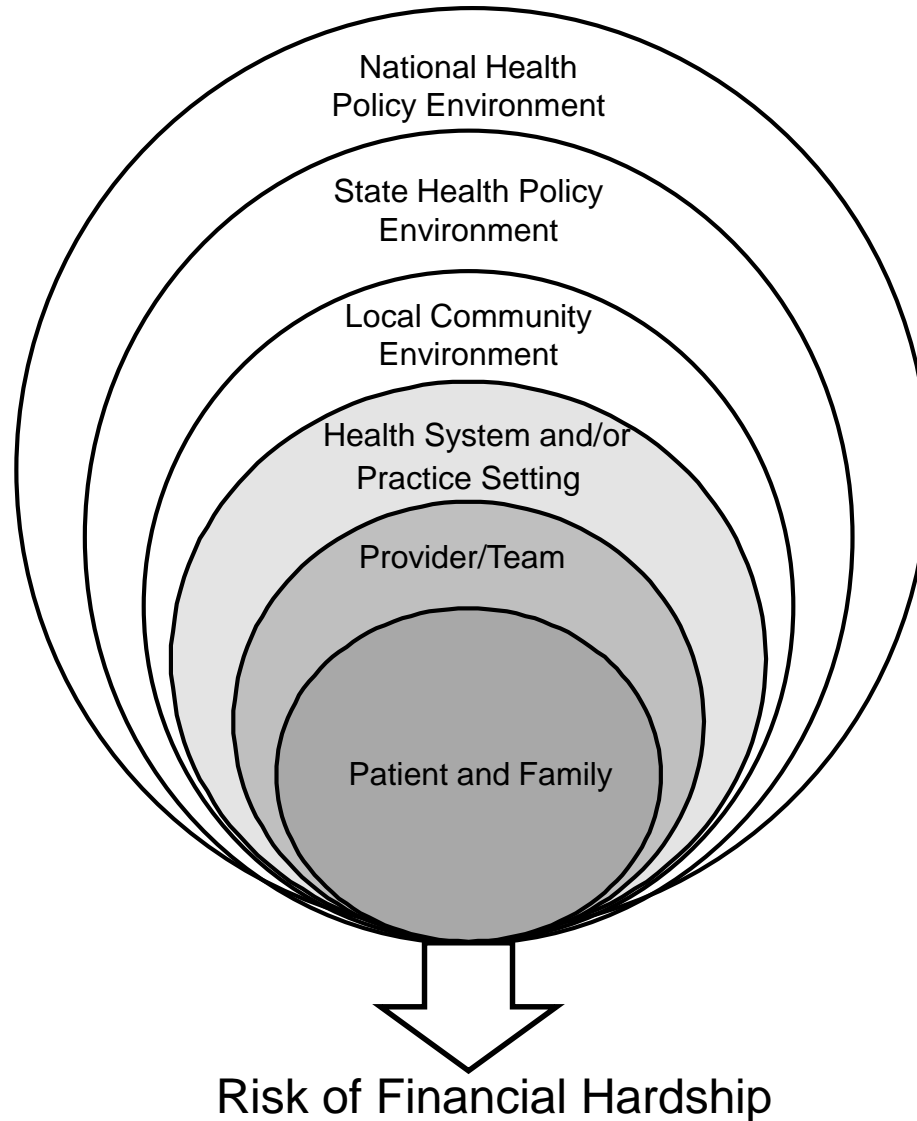
- Younger age
- Female
- Minority race and/or ethnicity
- Lower household income
- Unemployed/Changed employment because of cancer
- Uninsured/underinsured
- Cancer type
- More recent diagnosis and/or treatment

Summary

- Different aspects of financial hardship: material, psychological, behavioral
- Financial hardship relatively common, even many years following cancer diagnosis and treatment
- Out-of-pocket spending for more than medical care
- Consistent evidence about patient risk factors

- Potential for widening disparities in outcomes for cancer survivors

Factors at Multiple Levels Associated with Financial Hardship



Factors at Multiple Levels Associated with Financial Hardship

- **Patient and family:** What is financial health literacy?
- **Provider/Team:** Who is the best member of the team to discuss financial hardship? What is effective financial navigation?
- **Practice/Health System:** How can documenting and addressing financial hardship play a role in quality improvement? Can electronic health records include prompts and reminders?
- **Policy:** Can health insurance coverage and benefit design be structured to minimize risk of hardship?



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