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Supplemental online content for:

Financial Burdens of Cancer Treatment: A Systematic Review of Risk Factors and Outcomes

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1	exp *Health Expenditures/
2	exp *Health Care Costs/
3	exp *"Cost of Illness"/
4	exp Financing, Personal/
5	*Fees/ and Charges/sn [Statistics & Numerical Data]
6	(Economic adj (bankruptcy or Insolvency or hardship or burden or stress or distress or difficult*)).ti,ab,kf.
7	(("out of pocket" or cost or cost* or expenditure* or expense or expenses or spending*) adj15 cancer).tw,kf.
8	treatment costs.ti,ab.
9	Financial.ti,ab,kf.
10	or/1-9
11	exp *Neoplasms/ or Neoplasms/ec [Economics]
12	(cancer* or neoplas* or tumo?r* or leuk?emia* or lymphoma* or malignan* or oncolog* or "Cell Transplantation").ti,kf.
13	11 or 12
14	limit 13 to english language
15	10 and 14
16	(cancer and treatment and decision*).ti. and 15
17	exp Health Care Costs/sn [Statistics & Numerical Data]
18	exp *"Cost Sharing"/
19	exp *Financing, Personal/ec, sn [Economics, Statistics & Numerical Data]
20	exp *Health Expenditures/ec, sn [Economics, Statistics & Numerical Data]
21	6 or 9 or 17 or 18 or 19 or 20
22	15 and 21
23	22 and 12
24	((medical or health) adj expenditure*).ti.
25	Financial.ti.
26	out-of-pocket.ti.
27	(Economic adj (bankruptcy or Insolvency or hardship or burden or stress or distress or difficult*)).ti.
28	or/24-27
29	13 and 28
30	limit 29 to english language
31	*Health Behavior/
32	exp patient compliance/ or patient dropouts/ or exp treatment refusal/
33	*Stress, Psychological/
34	exp *Adaptation, Psychological/
35	exp self efficacy/ or "self efficacy".tw,kf.
36	exp *Anxiety/
37	(coping or adaptive or adaptation).tw,kf.
38	(distress or distresses or stress or stresses).tw,kf.
39	(patient* adj3 ("non compliance" or "non-adherence" or noncompliance or nonadherence)).tw,kf.
40	exp "Patient Acceptance of Health Care"/
41	exp Withholding Treatment/
42	*Medication Adherence/sn [Statistics & Numerical Data]
43	(cancer and treatment and decision*).ti.
44	*Decision Making/
45	((delay* or forgo*) adj3 (care or treatment)).tw,kf.

(continued on next page)

eFigure 1. Search strategy for MEDLINE (Ovid).

46	or/31-45
47	23 and 46
48	remove duplicates from 47
49	exp Survival Rate/
50	exp *Survival Analysis/
51	survival.ti.
52	exp *Mortality/sn, td [Statistics & Numerical Data, Trends]
53	exp *"Quality of Life"/
54	"Quality of Life".ti,kf.
55	or/49-54
56	23 and 55
57	remove duplicates from 56
58	57 not 48
59	exp *insurance, health/
60	*Insurance Coverage/
61	exp *Income/
62	Insurance Carriers/
63	exp *Socioeconomic Factors/
64	exp *Demography/
65	exp "Social Determinants of Health"/
66	exp *Neoplasms/ec [Economics]
67	exp *Drug Therapy/ec [Economics]
68	exp *Antineoplastic Agents/ec [Economics]
69	exp *Specialties, Surgical/ec [Economics]
70	Therapeutics/ec [Economics]
71	exp *Comorbidity/
72	exp *Radiotherapy/ec [Economics]
73	exp *Neoplasm Recurrence, Local/ec [Economics]
74	Recurrence/ and Neoplasms/ and 12
75	ec.fs.
76	74 and 75
77	or/59-73,76
78	23 and 77
79	48 or 57 or 78
80	16 or 79 or 30
81	remove duplicates from 80
82	or/1-7,28
83	"financial relationships to disclose".ab.
84	Financial Disclosures.ab.
85	financial conflicts of interest.ab.
86	financial conflicts of interests.ab.
87	financial interests.ab.
88	financial interest.ab.
89	83 or 84 or 85 or 86 or 87 or 88
90	81 and 89
91	81 not 90
92	82 and 90
93	91 or 92

eFigure 1. Search strategy for MEDLINE (Ovid). (cont.)

eTable 1. Quality Assessment: Assessing Risk of Bias of Individual Studies

	Criteria														
Reference	1. Was the research question or objective in this article clearly stated?	2. Was the study population clearly specified and defined?	3. Was the participation rate of eligible persons at least 50%?	4. Were all the subjects selected or recruited from the same or similar populations (including the same time period)? Were inclusion and exclusion criteria for being in the study prespecified and applied uniformly to all participants?	5. Were a sample size justification, power description, or variance and effect estimates provided?	6. For the analyses in this article, was the exposures of interest measured prior to the outcomes being measured?	7. Was the time frame sufficient so that one could reasonably expect to see an association between exposure and outcome if it existed?	8. For exposures that can vary in amount or level, did the study examine different levels of the exposure as related to the outcome (eg, categories of exposure or exposure measured as a continuous variable)?	9. Were the exposure measures (independent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?	10. Was the exposures assessed more than once over time?	11. Were the outcome measures (dependent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?	12. Were the outcome assessors blinded to the exposure status of participants?	13. Was loss to follow-up after baseline ≤20%?	14. Were key potential confounding variables measured and adjusted statistically for their impact on the relationship between exposures and outcomes?	Global rating
1	Yes	Yes	NR	Yes	No	Yes	NA	NA	Yes	No	Yes	NR	NA	No	Fair
2	Yes	Yes	Yes	Yes	Yes	Yes	NA	NA	Yes	No	Yes	Yes	NA	Yes	Good
3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	Yes	No	Yes	NR	Yes	Yes	Good
4	Yes	Yes	Yes	Yes	Yes	NA	NA	Yes	Yes	No	Yes	NR	NA	Yes	Good
5	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
6	Yes	Yes	NR	Yes	Yes	NA	NA	NA	Yes	No	Yes	NR	NA	Yes	Fair
7	Yes	Yes	NR	Yes	Yes	CD	Yes	Yes	Yes	No	Yes	NR	Yes	Yes	Good
8	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
9	Yes	Yes	NR	Yes	No	CD	Yes	NA	Yes	No	Yes	NR	NA	Yes	Fair
10	Yes	Yes	NR	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
11	Yes	Yes	CD	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
12	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	No	No	Yes	NR	NA	Yes	Fair
13	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
14	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	No	No	Yes	NR	NA	Yes	Fair
15	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	No	Yes	Yes	NR	NR	Yes	Fair
16	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	NR	No	Yes	Fair
17	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
18	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
19	Yes	Yes	NR	Yes	No	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Fair
20	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
21	Yes	Yes	No	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Fair
22	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NA	Yes	No	Yes	NR	NA	Yes	Good
23	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good

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Abbreviations: CD, cannot determine; NA, not applicable; NR, not reported.

eTable 1. Quality Assessment: Assessing Risk of Bias of Individual Studies (cont.)

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Reference	1. Was the research question or objective in this article clearly stated?	2. Was the study population clearly specified and defined?	3. Was the participation rate of eligible persons at least 50%?	4. Were all the subjects selected or recruited from the same or similar populations (including the same time period)? Were inclusion and exclusion criteria for being in the study prespecified and applied uniformly to all participants?	5. Were a sample size justification, power description, or variance and effect estimates provided?	6. For the analyses in this article, was the exposures of interest measured prior to the outcomes being measured?	7. Was the time frame sufficient so that one could reasonably expect to see an association between exposure and outcome if it existed?	8. For exposures that can vary in amount or level, did the study examine different levels of the exposure as related to the outcome (eg, categories of exposure or exposure measured as a continuous variable)?	9. Were the exposure measures (independent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?	10. Was the exposures assessed more than once over time?	11. Were the outcome measures (dependent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?	12. Were the outcome assessors blinded to the exposure status of participants?	13. Was loss to follow-up after baseline ≤20%?	14. Were key potential confounding variables measured and adjusted statistically for their impact on the relationship between exposures and outcomes?	Global rating
24	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
25	Yes	Yes	No	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Fair
26	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
27	Yes	Yes	CD	Yes	No	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
28	Yes	Yes	NR	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Fair
29	Yes	Yes	Yes	Yes	Yes	NA	Yes	CD	Yes	No	Yes	NR	NA	Yes	Good
30	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
31	No	Yes	No	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Fair
32	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
33	Yes	Yes	CD	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
34	Yes	Yes	NR	Yes	Yes	NA	Yes	NA	Yes	No	Yes	No	NR	Yes	Good
35	Yes	Yes	CD	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
36	Yes	Yes	NR	Yes	Yes	NA	Yes	Yes	Yes	Yes	Yes	NR	NR	Yes	Good
37	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	No	CD	NA	Yes	Fair
38	Yes	No	NR	NR	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Fair
39	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
40	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
41	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
42	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	NR	No	Yes	Good
43	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	NR	No	Yes	Good
44	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
45	Yes	Yes	NA	No	No	No	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Fair
46	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good

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47	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
48	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	No	Good
49	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NR	No	No	Fair
50	Yes	Yes	CD	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
51	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
52	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	No	NR	NA	No	Fair
53	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
54	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
55	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Fair
56	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
57	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NR	No	Yes	Good
58	Yes	Yes	No	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
59	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	NR	Yes	Yes	Good
60	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
61	Yes	Yes	Yes	Yes	No	NA	Yes	Yes	Yes	No	Yes	NR	NA	No	Fair
62	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
63	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
64	Yes	Yes	Yes	Yes	NR	Yes	Yes	Yes	Yes	Yes	Yes	NR	Yes	Yes	Good
65	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
66	Yes	Yes	No	No	NR	No	Yes	Yes	Yes	No	Yes	NR	NA	No	Fair
67	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
68	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
69	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good

(continued on next page)

Abbreviations: CD, cannot determine; NA, not applicable; NR, not reported.

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Reference	1. Was the research question or objective in this article clearly stated?	2. Was the study population clearly specified and defined?	3. Was the participation rate of eligible persons at least 50%?	4. Were all the subjects selected or recruited from the same or similar populations (including the same time period)? Were inclusion and exclusion criteria for being in the study prespecified and applied uniformly to all participants?	5. Were a sample size justification, power description, or variance and effect estimates provided?	6. For the analyses in this article, was the exposures of interest measured prior to the outcomes being measured?	7. Was the time frame sufficient so that one could reasonably expect to see an association between exposure and outcome if it existed?	8. For exposures that can vary in amount or level, did the study examine different levels of the exposure as related to the outcome (eg, categories of exposure or exposure measured as a continuous variable)?	9. Were the exposure measures (independent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?	10. Was the exposures assessed more than once over time?	11. Were the outcome measures (dependent variables) clearly defined, valid, reliable, and implemented consistently across all study participants?	12. Were the outcome assessors blinded to the exposure status of participants?	13. Was loss to follow-up after baseline ≤20%?	14. Were key potential confounding variables measured and adjusted statistically for their impact on the relationship between exposures and outcomes?	Global rating
70	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
71	Yes	Yes	No	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good
72	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	No	NA	Yes	Good
73	Yes	Yes	Yes	Yes	No	NA	Yes	Yes	Yes	No	Yes	NR	NA	No	Fair
74	Yes	Yes	Yes	Yes	Yes	NA	Yes	Yes	Yes	No	Yes	NR	NA	Yes	Good

Abbreviations: CD, cannot determine; NA, not applicable; NR, not reported.

(references on next page)

eTable 1. Quality Assessment: Assessing Risk of Bias of Individual Studies (cont.)

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eTable 1. Quality Assessment: Assessing Risk of Bias of Individual Studies (cont.)

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eTable 2. Study and Patient Characteristics and Measures of Financial Toxicity Burdens

Reference	Study Design	Setting/Data Source (Subjects, n)	Study Inclusion	Participant Demographic	Financial Toxicity Burden: Definition, Tool/Measure, Prevalence
Shankaran et al, 2018[1]	Cohort-P	Seattle Cancer Care Alliance (n=23)	• Age ≥18 y • English-speaking • Diagnosis of nonmetastatic cancer • ≤3 y since treatment • All sites	• Mean age, 60 y (range, 32–77 y) • 40% female • 85% white, 5% black, 5% Asian • 50% commercial insurance, 25% Medicare, 25% Medicaid	• Financial hardship and burden • Hardship: debt during treatment (55%), decreased income during treatment (55%), loans during treatment (30%) • Burden: "I feel that my cancer diagnosis and treatment has been a financial burden to my household"; "I feel anxious or worried about how I will manage the costs related to my cancer care"; 48% high anxiety, 42% high burden
Wheeler et al, 2018[2]	Cohort-P	Carolina Breast Cancer Study survey (n=2,494)	• Diagnosis of incident breast cancer	• Mean age, 52 y • 51% white, 49% black • 74% private insurance, 6% Medicare, 14% Medicaid, 55% uninsured	• Financial impact • Modified framework of financial impact, based on self-reported survey data at 5 mo (baseline) and 25 mo (follow-up) postdiagnosis, negative impact on OOP and indirect costs (lost insurance, lost job, financial barrier to healthcare, transportation barrier; 48%)
de Souza et al, 2017[3]	Cohort-L	University of Chicago Medicine Multidisciplinary Clinic (n=73)	• Diagnosis of stage III–IVb head and neck cancer • Receiving chemoradiation • ECOG 0–1	• Median age, 60 y (range, 26–79 y) • 22% female • 74% white • 55% private insurance, 26% Medicare, 19% Medicaid	• OOP costs • Financial burden: OOP costs relative to household income • Cost-coping: selling possessions/property, using personal savings, borrowing money and taking credit card loans, having family members work more hours to pay for cancer care; 69% used at least one cost-coping strategy
de Souza et al, 2017[4]	CS	University of Chicago Medicine, North Shore University (n=233)	• Age ≥18 y • Diagnosis of stage IV cancer • All sites	• Median age, 59 y (range, 27–88 y) • 58% female • 66% white, 23% black, 6% Hispanic, 4% Asian/Native American • 62% private/employer-based insurance, 31% Medicare, 6% Medicaid	• Financial toxicity • COST tool • Median COST score, 23 (range, 0–44; mean±SD, 22.23±11.89); higher score = lower financial toxicity
Farias & Du, 2017[5]	CS	SEER-Medicare database (2007–2009) with Medicare Part D claims (n=8,688)	• Women aged ≥65 y • Diagnosis of stage I–III hormone receptor–positive breast cancer • Indicated for aromatase inhibitor therapy • ≥12 mo in Part A+B Medicare	• Mean age, 75±7 y (range, 65–103 y) • 83% non-Hispanic white, 6% black, 6% Hispanic, 5% Asian • 56% stage I, 34% stage II, 10% stage III • 60% BCS, 38% mastectomy, 21% chemotherapy, 60% radiation	• Mean OOP costs • 30-d supply of medication amount paid at the time prescription was filled

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Abbreviations: AI, aromatase inhibitor; ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; BCCTP, Breast and Cervical Cancer Treatment Program; BCEI, Breast Cancer Education Intervention; BCS, breast-conserving surgery; CanCORS, (NCI) Cancer Care Outcomes Research and Surveillance; CCC, comprehensive cancer center; CCCWFU, Comprehensive Cancer Care—Wake Forest University; CLL, chronic lymphocytic leukemia; CML, chronic myeloid leukemia; Cohort-L, cohort-longitudinal; Cohort-P, cohort-prospective; Cohort-R, cohort-retrospective; COIN, Collection of Indirect and Nonmedical Direct Costs, modified for monthly OOP costs; COST, COmprehensive Score for financial Toxicity; CRC, colorectal cancer; CRN, cost-related medication nonadherence; CS, cross-sectional; CSS, Cancer Surveillance System; DCIS, ductal carcinoma in situ; EBC, early-stage breast cancer; ECSS, Experiences With Cancer Survivorship Supplement; GPH, general public hospital; HCT, hematopoietic cell transplantation; HMO, health maintenance organization; MBC, metastatic breast cancer; MCBS, Medicare Current Beneficiary Survey; MDS/MPN, myelodysplastic syndromes/myeloproliferative neoplasm; MEPS, Medical Expenditure Panel Survey; NHIS, National Health Interview Survey; NHL, non-Hodgkin's lymphoma; OOP, out-of-pocket; POS, point of service (insurance); PPO, preferred provider organization; VA, Veterans Administration.

eTable 2. Study and Patient Characteristics and Measures of Financial Toxicity Burdens (cont.)

Reference	Study Design	Setting/Data Source (Subjects, n)	Study Inclusion	Participant Demographic	Financial Toxicity Burden: Definition, Tool/Measure, Prevalence
Meeker et al, 2017[6]	CS	Convenience sample from NCI-designated CCC outpatient clinics (n=119)	• Age ≥18 y • Diagnosis of cancer, at any point in treatment • All sites	• Median age, 62 y (range, 22–87 y) • 52% female • 84% white, 11% black • 100% insured	• InCharge Financial Distress/Financial Well-Being Scale • 8-item scale from 1 (overwhelming financial distress) to 10 (highest level of financial well-being); 22% with any financial distress
Pisu et al, 2017[7]	Cohort-L	Rural Breast Cancer Survivor trial (n=432)	• Age ≥21 y • Diagnosis of stage 0–III breast cancer • ≤3 y since primary treatment • Resident of rural Florida	• 4% aged 35–45 y, 49% aged 46–64 y, 48% aged 65–90 y • 6% minority race/ethnicity • 94% insured • 66% hormonal therapy, 42% surgery, chemotherapy, and radiation	• OOP costs • Work and finances inventory questionnaire • Costs for medical care, counseling and health maintenance, side-effect management, home maintenance, and other • Measured at baseline and 3, 6, 9, and 12 mo • Mean OOP monthly costs were higher at baseline compared with 12 mo (mean ratio, 1.37; 95% CI, 1.13–1.66; *P*=.007); no difference between 3, 6, 9, and 12 mo
Abel et al, 2016[8]	CS	Dana-Farber Cancer Institute, Mayo Clinic Arizona, Roswell Park Cancer Institute (n=325)	• Age ≥18 y • English-speaking • ≥150 d post-HCT	• 49% aged ≤60 y, 51% aged >60 y • 40% female • 92% white, 8% nonwhite • 62% employer-based insurance, 30% government insurance, 8% self-insured • 53% received autologous, 47% received allogenic HCT • 32% multiple myeloma, 24% NHL, 17% AML	• Financial distress at 6 mo from transplant • Hardship: "How satisfied are you with your family's present financial situation?" (49% unsatisfied); "How difficult is it to meet monthly payments?" (42% faced difficulties); "How do your family's finances work out at the end of the month?" (19% did not have enough money); any hardship, 56%; all 3 hardships, 15% • Difficulty: with temporary relocation, 19%; transit, gas, parking, 41%; changes at home, such as cleaning and special foods, 36%; any difficulty, 51%
Banegas et al, 2016[9]	Cohort-R	2012 LIVESTRONG Survey (n=4,719)	• Age 18–64 y • Diagnosis of cancer, at any point in treatment • All sites	• 32% aged 18–44 y, 34% aged 45–54 y, 34% aged 55–64 y • 67% female • 88% non-Hispanic white, 2% black, 6% Hispanic • 85% private insurance, 8% public insurance, 3% uninsured	• Financial hardship • Borrowed money or went into debt (34%), went into bankruptcy (3%), worried about paying bills (64%), made financial sacrifices (40%)

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eTable 2. Study and Patient Characteristics and Measures of Financial Toxicity Burdens (cont.)

Reference	Study Design	Setting/Data Source (Subjects, n)	Study Inclusion	Participant Demographic	Financial Toxicity Burden: Definition, Tool/Measure, Prevalence
Chongpison et al, 2016[10]	Cohort-P	Kaiser Permanente, North California or Oregon/Southwest Washington, 2010–2011 (n=576)	• ≥5 y from diagnosis of rectal cancer as of 2010 • Received a permanent ostomy or an anastomosis ± a temporary stoma	• 41% female • 83% white, 4% black, 8% Asian, 6% other races; 94% non-Hispanic ethnicity, 6% Hispanic	• Perceived financial burden • The City of Hope Quality of Life Colorectal Cancer scale: "How much financial burden currently resulted from your illness and treatment?" • Mean financial burden score, 2±2.8 on a scale of 0–10; 22% perceived current financial burden as moderate to high (≥4 points)
Delgado-Guay et al, 2016[11]	CS	MD Anderson Cancer Center, October 2012–January 2013 (n=292)	• Diagnosis of advanced cancer • All sites	• Median age, 61 y (range, 22–92 y) • 47% female • 65% white, 16% black, 12% Hispanic, 5% Asian • 53% metastasis, 41% local/recurrent disease, 6% no evidence of active disease	• Financial distress • Edmonton Symptom Assessment Scale • Distress/Suffering secondary to financial issues
DiMartino et al, 2017[12]	CS	2011 MEPS, ECSS (n=1,320)	• Age ≥18 y • All sites	• 23% aged <55 y, 24% aged 55–64 y, 27% aged 65–74 y, 26% aged ≥75 y • 56% female • 90% non-Hispanic white, 10% minority • 72% private insurance, 24% public insurance, 4% uninsured	• Financial hardship • Ever unable to cover share of costs of medical visits due to cancer (12%)
Farias et al, 2018[13]	CS	Truven Health Analytics MarketScan commercial claims and encounters database, January 2008–December 2010 (n=6,863)	• Age ≤64 y • Diagnosis of EBC • Breast cancer surgery ≤12 mo • ≥1 prescription for AI or tamoxifen	• 8% aged 18–39 y, 33% aged 40–49 y, 41% aged 50–59 y, 17% aged 60–64 y • 18% HMO, 60% PPO, 22% other insurance • 33% mastectomy, 67% BCS	• OOP costs • 30-d supply of medications including copayments (accounted for 89% toward OOP), deductibles (6%), and coinsurance (5%); mean, $17.10 • Other OOP costs included inpatient/outpatient services and other pharmacy medications (mean, $176.50)
Kale & Carroll, 2016[14]	CS	2011 MEPS (n=380)	• Diagnosis of cancer • All sites	• 72% aged <65 y • 56% female • 88% non-Hispanic white, 5% Hispanic, 5% black • 71% private insurance, 25% public insurance, 92% any insurance	• Cancer-related financial burden • Problem: loans, debt, bankruptcy; financial sacrifices; worry about paying large medical bills; inability to cover cost of medical care visits • 29% had ≥1 problem, 2% had all 4 problems
Keim-Malpass et al, 2016[15]	CS	Memorial Sloan Kettering Cancer Center and University of Texas–Southwestern Center for Breast Care, April 2003–February 2006 (n=258)	• Age ≥18 y • Diagnosis of stage I–III breast cancer within ≤8 mo • Fluent in English	• Mean age, 49.9±9.62 y • 95% white/Caucasian, 5% nonwhite • 50% stage I, 41% stage II, 9% stage III • 74% chemotherapy	• Workplace perception • Scale from 1 (not at all) to 5 (very much) • Supportive work environment (mean, 3.92±1.21); ability to keep up work responsibilities (mean, 4.51±0.81) • Financial problems: financial worries (mean, 2.10±1.22); difficulty paying for basics (16%)

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eTable 2. Study and Patient Characteristics and Measures of Financial Toxicity Burdens (cont.)

Reference	Study Design	Setting/Data Source (Subjects, n)	Study Inclusion	Participant Demographic	Financial Toxicity Burden: Definition, Tool/Measure, Prevalence
Lathan et al, 2016[16]	Cohort-P	CanCORS Consortium, 2003–2005 (2,434 patients with lung cancer, 2,909 with CRC)	• Patients or surrogates of patients from CanCORS study • 4–12 mo from diagnosis	• Age <59 y at diagnosis: 27% (lung cancer) and 38% (CRC) • 44% female (both lung cancer and CRC) • Patients who were white: 74% (lung cancer) and 65% (CRC)	• Patient-reported financial reserves • "If you lost all of your current sources of income and had to live off savings, how long could you continue to live at your current address and standard of living?" (<1 mo, 1–2 mo, 3–6 mo, 7–12 mo, >1 y, do not know) • 40% patients lung cancer and 33% with CRC had financial reserves (<2 mo)
Lee & Khan, 2016[17]	CS	NHIS, 2006–2013 (n=15,159)	• Age ≥20 y • All sites	• 8% aged <40 y, 39% aged 40–64 y, 35% aged 65–79 y, 18% aged ≥80 y • 62% female • 77% non-Hispanic white, 12% black, 8% Hispanic, 3% Asian • 28% private insurance, 52% Medicare, 4% Medicaid, 9% government insurance, 7% uninsured	• CRN • "During the past 12 mo, was there a time when you did not take your prescribed medication because of cost? Do not include OTC medications"; 11% reported CRN
Lee & Salloum, 2016[18]	CS	NHIS, 2006–2013 (n=10,998)	• Age ≥18 y • All sites • At least 1 y from diagnosis	• 10% aged <40 y, 47% aged 40–64 y, 35% aged 65–79 y, 8% aged ≥80 y • 58% female • 79% non-Hispanic white, 12% black, 9% Hispanic • 34% private insurance, 5% Medicaid, 43% Medicare, 10% government insurance, 8% uninsured	• CRN • "During the past 12 mo, was there a time when you did not take your prescribed medication because of cost? Do not include OTC medications"; 13% reported CRN
Meeker et al, 2016[19]	CS	Fox Chase Cancer Center, September 2013–April 2014 (n=120)	• Age >18 y • Received anticancer medications • All sites • Insured	• Median age, 62 y (range, 22–87 y) • 52% female • 84% white, 11% black, 3% Asian, 1% Hispanic, 1% other • 68% surgery, 67% chemotherapy, 39% radiation, 16% targeted therapy, 15% hormone therapy	• Financial concerns • InCharge Financial Distress/Financial Well-Being Scale • Concerns: need to continue to work to pay for treatment (40%), paying for treatment (43%), paying other bills (41%) Most frequent assistant needs: knowing whom to ask for help (29%), identifying sources of financial assistance (26%), understanding the insurance policy (24%), and accessing community resources (21%) • Financial distress: InCharge scale; 29% had high to overwhelming financial distress • Overall distress: score of ≥4 (65%), ≥8 (28%) • Emotional distress: ≥1 emotional symptom (66%)

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eTable 2. Study and Patient Characteristics and Measures of Financial Toxicity Burdens (cont.)

Reference	Study Design	Setting/Data Source (Subjects, n)	Study Inclusion	Participant Demographic	Financial Toxicity Burden: Definition, Tool/Measure, Prevalence
Narang & Nicholas, 2017[20]	CS	Health and Retirement Study, July 2002–December 2012 (n=1,409)	• Age >65 y • New cancer diagnosis • All sites	• Median age, 73 y (interquartile range, 69–79 y) • 46% female • 91% white, 8% black • 8% Medicaid, 8% VA, 18% Medicare HMO, 28% employer-sponsored, 25% Medigap, 13% uninsured	• Financial burden • Calculated as OOP expenses divided by total household income
Nipp et al, 2016[21]	CS	Health Well Foundation (financial assistance program), June 2010–May 2011 (n=174)	• Age ≥21 y • On active chemotherapy or hormonal therapy for solid tumor malignancy • All sites	• Median age, 67 y • 96% female • 83% Caucasian • 69% Medicare, 3% Medicaid, 16% employer-provided, 20% personal insurance, 35% personal supplemental, 20% other • 85% breast cancer, 4% CRC • 69% metastasis	• Financial burden • Care altering coping: did not fill prescription (28%), took less medication (22%), missed a test (10%), missed a procedure (8%), missed an appointment (6%) • Lifestyle altering coping: reduced spending on leisure (78%), reduced spending on basics (57%), borrowed money to pay for medications (54%), used savings (50%), sold possessions (18%), family worked more (15%)
Ramsey et al, 2016[22]	Cohort-R	CSS of Western Washington linked with federal bankruptcy records, 1995–2009 (n=231,596 [original], n=4,728 [propensity-matched])	• Age ≥21 y • Diagnosis of primary cancer • All sites	• Mean age, 53 y • 46% female • 86% white, 14% nonwhite	• Financial insolvency • Filed for bankruptcy after cancer diagnosis (2%)
Whitney et al, 2016[23]	CS	2011 MEPS (n=1,209)	• Age ≥18 y • Completed ECSS survey • All sites	• 46% aged <65 y, 54% aged ≥65 y • 58% female • 84% non-Hispanic white, 16% minority • 4% uninsured, 27% public insurance, 68% private insurance	• Self-reported financial concerns: financial difficulty: Debt, bankruptcy, inability to cover medical costs (18%); financial worry: Financial sacrifices or worry about bills (28%) • 33% ≥1 of above concerns • Self-reported work concerns: long-term work modification: Changing to a less demanding job, delaying, or taking early retirement (15%); short-term work modification: extended/unpaid leave from work (39%) • 44% ≥1 of above concerns

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eTable 2. Study and Patient Characteristics and Measures of Financial Toxicity Burdens (cont.)

Reference	Study Design	Setting/Data Source (Subjects, n)	Study Inclusion	Participant Demographic	Financial Toxicity Burden: Definition, Tool/Measure, Prevalence
Wong et al, 2016[24]	CS	NCI cancer centers in Ohio, Pennsylvania, Illinois, and Michigan, April 2010–September 2012 (n=1,233)	• Diagnosis of cancer • All sites	• 73% aged ≤65 y, 27% aged >65 y • 58% female • 88% white, 12% nonwhite • 42% metastasis	• Financial concerns • a = cost-related burden; b + c = uncertainty; a + b + c = total score (range, 0–15); higher score indicates greater concerns • (a) How much of a burden on you is the cost of your medical care? (22% major or extreme burden); (b) I am afraid that my health insurance will not pay for a clinical trial (40% agreed); (c) I am worried that I would not be able to afford the cost of treatment for a clinical trial (30% agreed)
Yabroff et al, 2016[25]	CS	2011 MEPS, ECSS (n=1,202)	• Age ≥18 y • All sites	• 53% aged ≥65 y • 61% female • 76% non-Hispanic white, 24% all other	• Financial hardship • 20% material hardship (loans, debt, bankruptcy, inability to cover medical costs, financial sacrifices) (20%); 23% psychological hardship (worry about paying large medical bills)
Zheng et al, 2015[26]	CS	MEPS household component, 2008–2012 (n=3,278)	• Age ≥18 y • CRC, female breast cancer, and male prostate cancer survivors vs adults without cancer	• 55% CRC, 57% female • 72%–87% non-Hispanic white • 16% CRC, 48% breast cancer, 36% prostate cancer among all cancer survivors	• Economic burden • Medical expenses: for inpatient/outpatient, home healthcare, dental care, vision care, prescriptions; examined by source of payment (OOP, insurance) and by type of service (ambulatory, inpatient) • Productivity losses: employment disability, missed days at work, days spent in bed, reason for not working
Callahan & Brintzenhofeszoc, 2015[27]	CS	University of Maryland, Baltimore, and The Catholic University of America, May 2010–October 2011 (n=90)	• Diagnosis of cancer • All sites	• 60% female • 35% African American, 53% Caucasian, 6% multiracial, 7% other race • 83% insured	• Financial quality of life • Ability to manage all current and future financial obligations related to cancer care, within the context of sound healthcare decision-making • Socioeconomic Well-Being Scale
Delgado-Guay et al, 2015[28]	CS	CCC, GPH in Texas (n=149)	• Age >18 y • Normal cognition • Diagnosis of advanced breast, colon, lung, or prostate cancer	• Mean age, 60 y • 50% female • 41% white, 36% black, 23% Hispanic • 81% metastasis	• Objective financial burden: % of family income spent on OOP expenses on healthcare during the last month, without considering health insurance • Subjective financial distress: distress due to financial burden within the past month (concerns, difficulties, worries)

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eTable 2. Study and Patient Characteristics and Measures of Financial Toxicity Burdens (cont.)

Reference	Study Design	Setting/Data Source (Subjects, n)	Study Inclusion	Participant Demographic	Financial Toxicity Burden: Definition, Tool/Measure, Prevalence
Guy et al, 2015[29]	CS	2008–2012 MEPS (n=4,271)	• Age 18–64 y • Cancer survivors (all sites) vs adults without cancer	• 65% aged 50–64 y • 65% female • 81% non-Hispanic white, 8% black, 7% Hispanic • 74% private insurance, 15% public insurance, 11% uninsured	• OOP expense burden • % OOP costs relative to family income • High OOP = expenses ≥20% of family income (4%)
Huntington et al, 2015[30]	CS	Tertiary academic medical center in Philadelphia, PA, August 2014–January 2015 (n=100)	• Diagnosis of multiple myeloma • ≥3 mo ongoing treatment	• Mean age, 64 y • 53% female • 71% white, 26% black • 43% commercial insurance, 39% Medicare fee-for-service with supplement, 10% Medicare HMO	• Financial toxicity • COST tool and patient self-report • Mean COST score, 23±11.1; score ≤23 = higher financial burden • Self-reported significant financial burden (19%) • Self-reported higher than expected treatment costs (59%)
Jones et al, 2015[31]	CS	Colorado Central Cancer Registry, May 2002–August 2006 (n=477)	• Age 18–85 y, resident of Colorado • Diagnoses of leukemia or lymphoma • Completed treatment within past 3–48 mo	• 15% aged 18–39 y, 53% aged 40–64 y, 31% aged 65–85 y • 46% female • 91% white, 5% Hispanic, 2% black • 60% NHL, 19% Hodgkin lymphoma, 5% AML, 2% ALL, 6% CML, 8% CLL • 94% chemotherapy, 5% bone marrow transplant	• Perceived financial burden • "How much financial burden have you incurred because of illness and treatment?" (0 [none]–10 [a great deal]) • Mean perceived financial burden, 4.2±3.6
Palmer et al, 2015[32]	CS	NCI-CCCWFU, January 2009–November 2011 (n=191)	• Diagnosis of first primary breast cancer, nonmetastasis • Completed treatment within past 6–24 mo	• 22% aged <50 y, 35% aged 50–59 y, 27% aged 60–69 y, 16% aged >70 y • 84% white, 16% black • 61% private insurance, 8% public insurance, 25% both private and public insurance, 6% uninsured	• Cost-related barriers to follow-up care • OOP medical costs are too high (32%); insurance does not cover it (22%); cannot afford other costs to receive care (eg, gas/travel or lost wages) (25%)
Pisu et al, 2015[33]	CS	CanCORS Consortium after 2003 (n=3,342 [1,364 with lung cancer, 2,068 with CRC])	• Diagnosis of lung cancer or CRC in past 4–12 mo	• For lung and CRC patients, respectively: • Age <54 y at diagnosis: 13%, 24% • Female: 49%, 46% • White: 83%, 76%; black: 12%, 15%; Hispanic: 5%, 8% • Uninsured: 1%, 3%; no prescription coverage: 14%, 10% • Stage I: 42%, 26%	• Self-reported economic hardship • Any economic hardship (53% lung cancer, 46% CRC) • Difficulty living on current income (extremely difficult: 4% lung cancer, 2% CRC); anticipating hardship (a great deal: 4% lung cancer, 4% CRC); anticipating reductions in living (a great deal: 6% lung cancer, 5% CRC)
Tucker-Seeley et al, 2015[34]	CS	Multisite, September 2002–February 2008 (n=281)	• Age ≥20 y • Advanced cancer with metastasis • All sites	• Mean age, 59 y • 46% female • 66% white, 34% black • 63% insured, 37% uninsured	• Financial hardship • Household had to use all or most of savings because of family member's illness (29%)

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Abbreviations: AI, aromatase inhibitor; ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; BCCTP, Breast and Cervical Cancer Treatment Program; BCEI, Breast Cancer Education Intervention; BCS, breast-conserving surgery; CanCORS, (NCI) Cancer Care Outcomes Research and Surveillance; CCC, comprehensive cancer center; CCCWFU, Comprehensive Cancer Care—Wake Forest University; CLL, chronic lymphocytic leukemia; CML, chronic myeloid leukemia; Cohort-L, cohort-longitudinal; Cohort-P, cohort-prospective; Cohort-R, cohort-retrospective; COIN, Collection of Indirect and Nonmedical Direct Costs, modified for monthly OOP costs; COST, COmprehensive Score for financial Toxicity; CRC, colorectal cancer; CRN, cost-related medication nonadherence; CS, cross-sectional; CSS, Cancer Surveillance System; DCIS, ductal carcinoma in situ; EBC, early-stage breast cancer; ECSS, Experiences With Cancer Survivorship Supplement; GPH, general public hospital; HCT, hematopoietic cell transplantation; HMO, health maintenance organization; MBC, metastatic breast cancer; MCBS, Medicare Current Beneficiary Survey; MDS/MPN, myelodysplastic syndromes/myeloproliferative neoplasm; MEPS, Medical Expenditure Panel Survey; NHIS, National Health Interview Survey; NHL, non-Hodgkin's lymphoma; OOP, out-of-pocket; POS, point of service (insurance); PPO, preferred provider organization; VA, Veterans Administration.

eTable 2. Study and Patient Characteristics and Measures of Financial Toxicity Burdens (cont.)

Reference	Study Design	Setting/Data Source (Subjects, n)	Study Inclusion	Participant Demographic	Financial Toxicity Burden: Definition, Tool/Measure, Prevalence
Zafar et al, 2015[35]	CS	CanCORS Consortium (n=1,000)	• Diagnosis of lung cancer or CRC • Survivors/Disease-free or presence of recurrent/advanced disease	• Median age, 64 y (range, 52–82 y) • 47% female • 76% white, 24% nonwhite • 81% private insurance, 50% Medicare, 4% Medicaid, 12% VA/military, 2% other • 27% lung cancer, 73% CRC • 89% cancer-free, 11% recurrent	• Financial burden • Difficulty living on household income (48%) • Quality of insurance coverage
Bender et al, 2014[36]	Cohort-L	Comprehensive Breast Program, University of Pittsburgh Cancer Institute, December 2008–March 2010 (n=91)	• Age 18–75 y • Hormone-positive EBC (stage I, II, or IIIa) • Received endocrine therapy • Completed ≥8 y education, fluent in English	• Mean age, 56.7±9.7 y • 97% Caucasian • 59% stage I, 41% stage II/III • 23% chemotherapy	• Financial hardship • OOP costs (COIN instrument) ($\bar{x}$ = 307.5±734.2) • Measure of economic hardship across 4 domains: financial strain ($\bar{x}$ = 2.3±0.99), inability to make ends meet ($\bar{x}$ = 6.9±0.98), not enough money for necessities ($\bar{x}$ = 12.8±5.5), cutbacks and adjustments ($\bar{x}$ = 17.4±0.95)
Bestvina et al, 2014[37]	CS	Duke Cancer Institute and affiliated clinics, November 2012–June 2013 (n=300)	• Diagnosis of solid tumor malignancy • All sites • Had insurance • ≥1 mo anticancer therapy	• Median age, 60 y • 48% female • 76% white, 24% nonwhite • 56% private insurance, 44% nonprivate insurance	• Financial burden • Objective financial burden: if patients discussed OOP costs with their oncologist • Subjective financial distress: InCharge financial distress/well-being scale • 16% had high/overwhelming financial distress, 39% had higher than expected financial burden
de Souza et al, 2014[38]	Item and exploratory factor analysis (COST tool)	University of Chicago, January 2012–August 2013 (n=155)	• Diagnosis of advanced cancer • Receiving treatment ≥3 mo • All sites	• Median age, 59.5 y (range, 24–84 y) • 45% female • 74% non-Hispanic white, 18% black, 6% Hispanic, 2% other • 62% private or employer insurance, 32% Medicare, 4% Medicaid	• Financial toxicity • COST tool • Themes: resources, personal affect, financial coping, family support • Median COST score, 21 (range, 3–44; mean, 22.5±11.3); • Higher score=lower financial toxicity
Dusetzina et al, 2014[39]	Cohort-R	Truven Health MarketScan database, 2002–2011 (n=1,541)	• Age 18–64 y • Diagnosis of CML • Have insurance from 3 mo before and 6 mo after initiation of imatinib	• Mean age, 48.8 y (SD, 11.0) • 44% female • 60% PPO insurance	• Prescription copayment • Required for a 30-d supply of imatinib • 88.5% paid any copayment (excluding deductible) for this supply

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eTable 2. Study and Patient Characteristics and Measures of Financial Toxicity Burdens (cont.)

Reference	Study Design	Setting/Data Source (Subjects, n)	Study Inclusion	Participant Demographic	Financial Toxicity Burden: Definition, Tool/Measure, Prevalence
Ekwueme et al, 2014[40]	CS	2008–2011 MEPS and 2011 MEPS Cancer Survivorship Survey (n=6,722 and n=1,202, respectively)	• Cancer survivors (all sites) vs adults without cancer	• 18% aged ≥80 y • 58% female • 85% white, 7% black, 5% Hispanic, 3% other • 75% private insurance (age <65 y), 55%–63% Medicare and private insurance (age ≥65 y)	• Lost work productivity • Employment disability (unable to work because of illness/injury); missed worked days, days spent in bed
Fenn et al, 2014[41]	CS	NHIS 2010 data (n=2,108)	• Diagnosis of cancer • All sites	• 53% aged 18–64 y, 47% aged ≥65 y • 56% female • 90% white, 7% black, 2% Asian • 51% Medicare, 37% private insurance	• Financial problems • "To what degree has cancer caused financial problems for you and your family?": 9% reported "a lot," 12% reported "some," 10% reported "a little," 70% reported "not at all"
Jagsi et al, 2014[42]	Cohort-R	SEER data for Los Angeles, CA, and Detroit, MI, survey, June 2005–February 2007 (n=746)	• Age 20–64 y • Diagnosis of stage 0–III nonrecurrent breast cancer	• 26% aged <46 y, 42% aged 46–55 y, 33% aged ≥56 y • 42% white, 18% black, 38% Latina • 19% stage 0, 33% stage I, 37% stage II, 12% stage III • 61% chemotherapy, 61% BCS, 69% radiation	• Long-term work loss among those working at the time of diagnosis: 34% with 4-year unemployment; of those, 50% reported that it was important for them to work and 31% were actively seeking work
Jagsi et al, 2014[43]	Cohort-R	SEER data for Los Angeles, CA, and Detroit, MI, survey, June 2005–February 2007 (n=1,502)	• Age 20–79 y • Diagnosis of stage 0–III breast cancer	• 21% aged <46 y, 27% aged >65 y • 43% white, 17% black, 20% English-speaking Latina, 20% Spanish-speaking • 18% stage 0, 34% stage I, 33% stage II, 12% stage III • 52% chemotherapy, 62% BCS, 67% radiation	• Financial impact • Financial decline: worse off financially since diagnosis (33% any decline) • OOP (17% >$5,000) • Medical debt 4 y after diagnosis (12%) • Decline in employment status (15%)
Khera et al, 2014[44]	CS	Mayo Clinic in Arizona, Rochester, or Jacksonville, January 2006–June 2012 (n=268)	• Received allogenic HCT	• Median age, 55 y (range, 20–71 y) • 49% female • 92% non-Hispanic white, 5% nonwhite, 3% Hispanic • 59% private insurance, 26% Medicare + supplement, 7% Medicare only • 35% AML, 21% MDS/MPN, 17% NHL/CLL, 14% ALL	• Subjective financial burden: overall 80%; being sick has hurt me financially (73% agreed); have to pay more than I can afford (33% agreed); medicines are too expensive (30% agreed); I have enough money to take care of my health (32% disagreed); I can pay my medical bills (22% disagreed); I can make enough money to pay for my healthcare (35% disagreed) • Objective financial burden: overall 47%; household income decreased by more than 50% (26% reported yes); had to refinance/second mortgage home (8%); had to sell home (1%); declared bankruptcy (3%); withdrew money from retirement (25%)

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eTable 2. Study and Patient Characteristics and Measures of Financial Toxicity Burdens (cont.)

Reference	Study Design	Setting/Data Source (Subjects, n)	Study Inclusion	Participant Demographic	Financial Toxicity Burden: Definition, Tool/Measure, Prevalence
Kircher et al, 2014[45]	CS	MEPS data, 2002–2005 and 2007–2010 (n=6,607 [1,878 near-elderly, 4,729 with Medicare])	• Age ≥55 y • Diagnosis of cancer • All sites	• In Medicare group: mean age, 75.3 y; 46% female; 94% white, 4% black; 62% private insurance, 38% public insurance • In near-elderly group: mean age, 59.1 y; 53% female; 92% white, 5% black; 91% private insurance, 1% public insurance	• OOP cost burden • Direct payment for all prescription drugs
Martin et al, 2014[46]	CS	CanCORS Consortium, 2003 (n=5,044)	• Diagnosis of lung cancer or CRC • ≈4 mo from diagnosis	• 79% aged >55 y • 47% female • 74% white • 97% insured	• Worry • Treatment side effects (75%); cost of treatment (40%); time away from family (50%); time away from work (52%); transportation to treatment (22%)
Regenbogen et al, 2014[47]	CS	SEER registry of metropolitan Detroit, MI, and of the state of Georgia, August 2011–March 2013 (n=937)	• Age ≥21 y • Pathologic stage III colon or rectal cancer • 3–12 mo postsurgery	• 16% aged <50 y, 37% aged 50–64 y, 23% aged 65–74 y, 24% aged ≥75 y • 46% female • 72% white, 22% black • 42% private insurance, 45% Medicare, 4% Medicaid • 85% had chemotherapy	• Personal financial burden: global financial burden (illness impacted my finances) (62%); financial worry measured using a Likert scale dichotomized later into "low" vs "high" • Composite financial burden score range, 0–7; higher scores = increased financial burden; 62% endorsed no measures of financial burden
Veenstra et al, 2014[48]	CS	SEER registry of metropolitan Detroit, MI, and of the state of Georgia, August 2011–March 2013 (n=956)	• Age ≥21 y • Pathologic stage III colon or rectal cancer • 3–12 mo postsurgery	• 17% aged <50 y, 37% aged 50–64 y, 23% aged 65–74 y, 24% aged >75 y • 46% female • 71% white, 23% black • 38% Medicare, 33% employer insurance, 3% Medicaid	• Personal financial burden: global financial burden (illness impacted my finances) (61%); financial worry measured using a Likert scale dichotomized later into "low" vs "high" • Mean financial burden score was 1.72±1.83 (range, 0–6; higher scores denoted increased financial burden)
Blinder et al, 2013[49]	Cohort-L	California's BCCTP (n=274)	• >6 mo from diagnosis of stage 0–III breast cancer • Curative treatment • Not undergoing treatment • Enrolled in BCCTP (family income ≤200% poverty level) • English-/Spanish-speaking	• Median age, 49 y (range, 26–85 y) • 53% Latina, 33% non-Latina, 14% other • 10% DCIS, 31% stage I, 44% stage II, 14% stage III • 39% mastectomy, 61% BCS, 16% reconstruction, 70% chemotherapy, 69% endocrine therapy, 73% radiation	• Financial status • Perceived adequacy of financial resources • 62% reported inadequacy of financial resources to meet needs

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eTable 2. Study and Patient Characteristics and Measures of Financial Toxicity Burdens (cont.)

Reference	Study Design	Setting/Data Source (Subjects, n)	Study Inclusion	Participant Demographic	Financial Toxicity Burden: Definition, Tool/Measure, Prevalence
Davidoff et al, 2013[50]	CS	MCBS, 1997–2007 (n=1,868)	• Diagnosis of cancer • All sites	• 6% aged <65 y • 49% female • 82% white, 9% black, 6% Hispanic • 37% private/employer insurance • 36% surgery, 22% radiation, 31% antineoplastic	• Total OOP spending • High spending was >20% of income • Total OOP/income: mean, 23.9 (median, 10) for patients with cancer • OOP/income of >10% among 50% of patients and >20% among 28% of patients
Dowling et al, 2013[51]	CS	MEPS survey, 2008–2010 (n=4,960)	• Age ≥18 y • Patients with cancer compared with adults without cancer • All sites	• 7% aged 18–39 y, 27% aged 40–59 y, 47% aged 60–79 y, 18% aged ≥80 y • 59% female • 85% non-Hispanic white, 7% black, 5% Hispanic, 3% other/multiple	• Lost productivity • Lacked employment in past 12 mo (for age <65 y) (25%); limitation at work, housework, or school (12%); inability to do any activities (7%); experienced cognitive limitations (6%)
Goodwin et al, 2013[52]	CS	Myeloma Institute for Research and Therapy (n=1,015)	• Diagnosis of multiple myeloma	• Mean age, 61 y (SD, 9.26) • 39% female • 90% white, 6% black, 1% Asian, 1% American Indian/Alaskan Native • 3% Hispanic/Latino	• Financial effects of multiple myeloma: unemployment, disability, health/medical/life insurance, retirement or OOP expenses • Burden of treatment costs/financial hardship: abrupt stoppage of insurance, inability to obtain other insurance, income spent on deductibles, copayments, prescriptions, healthcare, temporary travel, lodging (42% somewhat to very much of a burden) • OOP expenses: 36% of income spent in first 12 mo of treatment and 28% during past 12 mo prior to survey
Hamilton et al, 2013[53]	CS	Mount Sinai Medical Center and Hackensack University Medical Center (n=181)	• Age ≥18 y • HCT within past 9–36 mo • English-speaking • With telephone access • Not currently relapsed • ≥ moderately distressed	• 55% female • 87% white/non-Hispanic • 99.4% had insurance during transplant with 59% receiving full coverage and 36% >half coverage of transplant costs	• Economic survivorship stressors • Financial (reducing vacations, leisure activities, spending on food/clothing, delaying purchases); possible range of score: 0–8.1; mean, 1.81±1.85 • Employment (pay cut, loss of income, disability, leave of absence); possible range of score: 0–38; mean, 6.28±6.87; • Insurance (time spent dealing with insurance company and insurance denying a payment); possible range of score: 0–20; mean, 3.43±4.68

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eTable 2. Study and Patient Characteristics and Measures of Financial Toxicity Burdens (cont.)

Reference	Study Design	Setting/Data Source (Subjects, n)	Study Inclusion	Participant Demographic	Financial Toxicity Burden: Definition, Tool/Measure, Prevalence
Kent et al, 2013[54]	CS	2010 NHIS data with multistage sampling (n=1,556)	• Diagnosis of cancer at age >21 y • All sites	• 51% aged 40–64 y, 30% aged ≥65 y • 58% female • 83% non-Hispanic white, 8% black, 6% Hispanic	• Cancer-related financial problems • "To what degree has cancer caused financial problems for you and your family?" • 32% reported some cancer-related financial problems
Ramsey et al, 2013[55]	Cohort-R	SEER data, western Washington State linked with U.S. Bankruptcy Court, January 1995–December 2009 (n=197,840)	• Age ≥21 y and <90 y • Diagnosis of cancer • Not an in-situ stage • All sites	• 7% aged <40 y, 49% aged 40–64 y, 44% aged ≥65 y • 50% female • 88% white, 12% nonwhite • 50% localized cancer, 22% regional cancer, 24% distant cancer, 4% unstaged cancer	• Filing for bankruptcy (overall 2.2%) • US Bankruptcy Code Chapter 7: debtors liquidate assets (bank accounts, investments, cars, homes) to pay creditors to get discharged from debts excluding child or spousal support and income tax (of those overall, 83% under this code). • U.S. Bankruptcy Code Chapter 13: Debtors file for repayment plan to pay back debts and retain ownership of assets (of those overall, 17% under this code).
Wan et al, 2013[56]	Cohort-R	Marketscan commercial claims and encounters and health and productivity management databases (n=571)	• Age 18–64 y • Diagnosis of breast cancer compared with adults without cancer	• Mean age, 49±7 y • 47%–51% POS insurance, 8%–14% HMO, 36%–38% PPO • 76% EBC, 24% MBC	• Indirect costs • Paid time off including absenteeism (or sick leave) • Short-term disability associated costs
Zafar et al, 2013[57]	Cohort-L	Health Well Foundation and Duke University Medical Center, June 2010–May 2011 (n=254)	• Diagnosis of solid tumor • Receiving chemotherapy or endocrine therapy • All sites	• Mean age, 64 y • 86% female • 80% white, 13% black, 1% Asian • 59% Medicare, 81% drug coverage • 71% breast cancer diagnosis • 67% ≥12 mo chemotherapy	• Financial burden • Objective financial burden (OOP expenses) • Subjective financial burden (patient self-report): 93% reported any burden, 33% reported significant burden, 9% reported catastrophic cancer-related financial burden from OOP expenses
Zullig et al, 2013[58]	CS	Health Well Foundation and Duke University Medical Center, June 2010–May 2011 (n=164)	• Age ≥21 y • Diagnosis of solid tumor • Receiving chemotherapy or endocrine therapy • All sites	• Mean age, 63–70 y • 97% female • 83% white, 10% black, 4% other • 78% prescription drug coverage, 73% Medicare/Medicaid, 16% employer insurance, 20% purchased insurance personally • 85% breast cancer, 4% CRC, 10% other • 72% ≥12 mo chemotherapy	• Subjective financial distress • 5-point Likert scale: "not a financial burden at all" to "catastrophic financial burden" • 47% reported significant or catastrophic financial distress

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eTable 2. Study and Patient Characteristics and Measures of Financial Toxicity Burdens (cont.)

Reference	Study Design	Setting/Data Source (Subjects, n)	Study Inclusion	Participant Demographic	Financial Toxicity Burden: Definition, Tool/Measure, Prevalence
Meneses et al, 2012[59]	Cohort-L	BCEI study (n=132)	• Age ≥21 y • Stage 0–II breast cancer • <2 y from diagnosis • >1 mo since initial treatment • No recurrence or metastasis	• 58% aged 46–65 y, 22% aged 66–83 y • 81% Caucasian • 57% stage I	• Economic burden • BCEI survey (at 3 mo, 6 mo) • Work (changes in motivation, productivity, quality, quantity): 17%–38% • Financial hardship (changes in income, applying for unemployment benefits, finding second jobs, selling property, borrowing money, using savings, declaring bankruptcy, changing economic lifestyle, missing bill payments, increase in insurance premiums, or reaching coverage limits): 2%–46%, most common change in income • Increased OOP expenses
Shankaran et al, 2012[60]	CS	CSS subset of SEER, January 2008–March 2010 (n=284)	• Age ≥18 y • Stage III colon cancer	• Mean age, 60 y (range, 22–86 y) • 49% female • 84% white	• Perceived financial burden • Associated with employment, income, insurance, copayments, deductibles, monthly expenses. Self-report history of selling, refinancing, second mortgage, debt, borrowing, or ≥20% income decline. • 38% reported ≥1 treatment-related financial burden; 23% reported debt
Bernard et al, 2011[61]	CS	MEPS—household component data, 2001–2008 (n=4,110)	• Diagnosis of cancer • Receiving treatment • All sites	• 49% aged 55–64 y • 62% female	• OOP healthcare expenditure burden • High burden = health-related spending ≥20% of income (13%)
Streeter et al, 2011[62]	CS	Wolters Kluwer Dynamic Lifecycle Database, 2007–2009 (n=10,508)	• Initiated with oral oncolytic therapy • All sites	• 49% aged 41–65 y, 37% aged 65–80 y, 12% aged >81 y • 53% female • 84% commercial insurance, 17% Medicare	• Cost burden • Associated with insurance plan, cost-sharing requirements, income, concurrent prescription activity • 73% had cost sharing $0–$100; 16% had cost sharing >$500
Neugut et al, 2011[63]	Cohort-R	Claims data from Medco Health Solutions, January 2007–December 2008 (n=22,160)	• Age ≥50 y • EBC • Lumpectomy or mastectomy within 12 mo of AI initiation	• 24% aged 50–59 y, 35% aged 60–69 y, 28% aged 70–79 y, 13% aged ≥80 y • 90% white/other, 5% black, 3% Hispanic	• Financial factors • Copayments (the amount paid by a subscriber for a 90-d mail-order prescription) ≥$90 (30%)

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Abbreviations: AI, aromatase inhibitor; ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; BCCTP, Breast and Cervical Cancer Treatment Program; BCEI, Breast Cancer Education Intervention; BCS, breast-conserving surgery; CanCORS, (NCI) Cancer Care Outcomes Research and Surveillance; CCC, comprehensive cancer center; CCCWFU, Comprehensive Cancer Care—Wake Forest University; CLL, chronic lymphocytic leukemia; CML, chronic myeloid leukemia; Cohort-L, cohort-longitudinal; Cohort-P, cohort-prospective; Cohort-R, cohort-retrospective; COIN, Collection of Indirect and Nonmedical Direct Costs, modified for monthly OOP costs; COST, COmprehensive Score for financial Toxicity; CRC, colorectal cancer; CRN, cost-related medication nonadherence; CS, cross-sectional; CSS, Cancer Surveillance System; DCIS, ductal carcinoma in situ; EBC, early-stage breast cancer; ECSS, Experiences With Cancer Survivorship Supplement; GPH, general public hospital; HCT, hematopoietic cell transplantation; HMO, health maintenance organization; MBC, metastatic breast cancer; MCBS, Medicare Current Beneficiary Survey; MDS/MPN, myelodysplastic syndromes/myeloproliferative neoplasm; MEPS, Medical Expenditure Panel Survey; NHIS, National Health Interview Survey; NHL, non-Hodgkin's lymphoma; OOP, out-of-pocket; POS, point of service (insurance); PPO, preferred provider organization; VA, Veterans Administration.

eTable 2. Study and Patient Characteristics and Measures of Financial Toxicity Burdens (cont.)

Reference	Study Design	Setting/Data Source (Subjects, n)	Study Inclusion	Participant Demographic	Financial Toxicity Burden: Definition, Tool/Measure, Prevalence
de Moor et al, 2010[64]	CS	Dana-Farber Cancer Institute/Harvard Cancer Center Rapid Case Registry (n=487)	• Newly diagnosed DCIS • ≤3 mo from surgery • Fluent in English/Spanish	• Mean age, 54.4±11.02 y • 94% white • 30% mastectomy, 50% radiation	• Financial status • "How would you describe your household's financial situation right now?" measured in level of difficulty experienced with paying bills • 70% high financial status (have money for special things), 18% medium status (little spare money to buy extra or special things), 12% low status (able to pay bills but need to cut back on other things or difficulty paying bills no matter what)
Khera et al, 2011[65]	CS	Fred Hutchinson Cancer Research Center (n=1,549)	• Age >18 y • Survived ≥2 y after HCT • All sites	• Median age, 54.9 y (range, 18.2–81.8 y) • 49% female • 95% white, 2% Hispanic/Latino • 28% chronic leukemia, 23% acute leukemia, 18% lymphoma	• Concerns about medical costs • Coverage, lifetime cap, bankruptcy • 25% worried that expenses will reach the limit and insurance will not pay, 1% reached the limit, 3% filed for bankruptcy
Markman & Luce, 2010[66]	CS	NexCura cancer decision-support program by American Cancer Society (n=1,767)	• Diagnosis of cancer of breast, colon, lung, or prostate	• 2% aged >60 y • 58% female • 22% Medicare, 25% HMO insurance, 4% Medicaid	• Financial impact of cancer treatment • Self-reported financial (income, OOP) and subjective (distress-associated) impact • 64% of all patients had "any distress"; 19% of all patients and 39% of those with <$40,000/y income reported "large amount of distress" with financial costs (none, small amount, large amount)
Weaver et al, 2010[67]	CS	NHIS, 2003–2006 (n=6,602)	• Age ≥18 y • History of cancer • All sites	• 48% aged 18–64 y, 52% aged ≥65 y • 64% female • 82% white, 10% black, 8% Hispanic • 63% private insurance, 30% public insurance, 7% uninsured	• Cost-driven healthcare access • Ever had to forgo, delay, or not adhere to recommended treatment due to cost
Pezzin et al, 2009[68]	CS	Population-based cohort of elderly patients with breast cancer (n=1,890)	• Age ≥65 y • Received adjuvant hormone therapy in first 12 mo post–breast surgery in 2003	• 34% aged 65–69 y, 33% aged 70–74 y, 23% aged 75–79 y, 11% aged ≥80 y • 90% white, 3% black, 4% Hispanic • 45% had full prescription drug coverage	• Health-related financial problems • Self-reported difficulty in paying medical bills, including breast cancer–specific prescriptions in past 12 mo ("somewhat" and "very difficult"=financial problems) • Any financial difficulty (31%–37%)

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Abbreviations: AI, aromatase inhibitor; ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; BCCTP, Breast and Cervical Cancer Treatment Program; BCEI, Breast Cancer Education Intervention; BCS, breast-conserving surgery; CanCORS, (NCI) Cancer Care Outcomes Research and Surveillance; CCC, comprehensive cancer center; CCCWFU, Comprehensive Cancer Care—Wake Forest University; CLL, chronic lymphocytic leukemia; CML, chronic myeloid leukemia; Cohort-L, cohort-longitudinal; Cohort-P, cohort-prospective; Cohort-R, cohort-retrospective; COIN, Collection of Indirect and Nonmedical Direct Costs, modified for monthly OOP costs; COST, COmprehensive Score for financial Toxicity; CRC, colorectal cancer; CRN, cost-related medication nonadherence; CS, cross-sectional; CSS, Cancer Surveillance System; DCIS, ductal carcinoma in situ; EBC, early-stage breast cancer; ECSS, Experiences With Cancer Survivorship Supplement; GPH, general public hospital; HCT, hematopoietic cell transplantation; HMO, health maintenance organization; MBC, metastatic breast cancer; MCBS, Medicare Current Beneficiary Survey; MDS/MPN, myelodysplastic syndromes/myeloproliferative neoplasm; MEPS, Medical Expenditure Panel Survey; NHIS, National Health Interview Survey; NHL, non-Hodgkin's lymphoma; OOP, out-of-pocket; POS, point of service (insurance); PPO, preferred provider organization; VA, Veterans Administration.

eTable 2. Study and Patient Characteristics and Measures of Financial Toxicity Burdens (cont.)

Reference	Study Design	Setting/Data Source (Subjects, n)	Study Inclusion	Participant Demographic	Financial Toxicity Burden: Definition, Tool/Measure, Prevalence
Ell et al, 2008[69]	Cohort-L	Outpatient oncology clinic associated with University of Southern California (n=487)	• Breast or gynecologic cancer • Oversampled Hispanic women with low income • Participants in IMPAACT trial • In active treatment/follow-up	• 53% aged >50 y • 76% Latina, 12% Asian, 7% non-Hispanic white, 6% black • 40% Medi-Cal/Medicare, 32% government care program, 24% uninsured • 49% breast cancer, 51% gynecologic cancer; 30% stage III/IV/recurrent	• Economic stress: at baseline, 6 mo, and 12 mo • Unemployment (baseline 70%); cost concern about hospitalization, chemotherapy, radiation, medicines, or inability to pay for prescriptions (68%); wages lost for sick time or attending a medical appointment (47%) • Financial stress: at 12 mo (overall 49%) • Yes if economic situation worsened over past year, not satisfied with current economic situation, or not hopeful for better economic situation in future
Gupta et al, 2007[70]	CS	Cancer Treatment Centers of America patient case series, April 2001–November 2004 (n=954)	• Diagnosis of cancer • All sites	• Median age, 56 y (range, 20–90 y) • 61% female • 26% breast cancer, 19% CRC, 16% lung cancer, 6% pancreatic cancer, 5% prostate cancer, 29% other cancer • 9% stage I, 19% stage II, 20% stage III, 31% stage IV, 21% stage unknown	• Perceived financial difficulty • QLQ-C30 tool: "Has your physical condition or medical treatment caused you financial difficulties?" • 31% "not at all"; 38% "a little"; 16% "quite a bit"; 15% "very much"
Francoeur, 2005[71]	CS	Northeastern United States, 1992–1993 (n=268)	• Age ≥30 y • Diagnosis of recurrent cancer • Not receiving treatment • Not terminally ill, expected to live ≥1 y • All sites	• Mean age, 62 y (range, 30–90 y) • 50% female • 88% Caucasian • 22% breast cancer, 20% lung cancer, 14% head and neck cancer, 10% gynecologic cancer, 9% prostate cancer • 61% surgery, 31% radiation, 8% surgery + radiation, 34% chemotherapy	• Objective Family Financial Stress Index • OOP expenses adjusted for family size and income; objective financial stress due to medical bills; extent of wages lost; diversity of resources tapped due to illness; change in employment; overall financial trend • Subjective patient perceptions of financial strain • Difficulty paying bills, inadequacy of insurance, worry about expenses
Langa et al, 2004[72]	CS	National Health and Retirement study, 1995 (n=988)	• Patient with active or prior cancer compared with adults without cancer • All sites	• Mean age, 80 y • 43%–56% female • 94% white, 5% black • 99% Medicare	• OOP expenditures • Hospital and nursing home stay; outpatient services such as doctor visits, dental visits, or surgery; home care, community special services; prescriptions • Adjusted mean total OOP expenditures for: cancer, no active treatment: $1,560; and cancer, active treatment: $2,100

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Abbreviations: AI, aromatase inhibitor; ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; BCCTP, Breast and Cervical Cancer Treatment Program; BCEI, Breast Cancer Education Intervention; BCS, breast-conserving surgery; CanCORS, (NCI) Cancer Care Outcomes Research and Surveillance; CCC, comprehensive cancer center; CCCWFU, Comprehensive Cancer Care—Wake Forest University; CLL, chronic lymphocytic leukemia; CML, chronic myeloid leukemia; Cohort-L, cohort-longitudinal; Cohort-P, cohort-prospective; Cohort-R, cohort-retrospective; COIN, Collection of Indirect and Nonmedical Direct Costs, modified for monthly OOP costs; COST, COmprehensive Score for financial Toxicity; CRC, colorectal cancer; CRN, cost-related medication nonadherence; CS, cross-sectional; CSS, Cancer Surveillance System; DCIS, ductal carcinoma in situ; EBC, early-stage breast cancer; ECSS, Experiences With Cancer Survivorship Supplement; GPH, general public hospital; HCT, hematopoietic cell transplantation; HMO, health maintenance organization; MBC, metastatic breast cancer; MCBS, Medicare Current Beneficiary Survey; MDS/MPN, myelodysplastic syndromes/myeloproliferative neoplasm; MEPS, Medical Expenditure Panel Survey; NHIS, National Health Interview Survey; NHL, non-Hodgkin's lymphoma; OOP, out-of-pocket; POS, point of service (insurance); PPO, preferred provider organization; VA, Veterans Administration.

eTable 2. Study and Patient Characteristics and Measures of Financial Toxicity Burdens (cont.)

Reference	Study Design	Setting/Data Source (Subjects, n)	Study Inclusion	Participant Demographic	Financial Toxicity Burden: Definition, Tool/Measure, Prevalence
Smith et al, 2003[73]	Cohort-R	Academic tertiary referral center (n=101)	• Diagnosis of glottis cancer • Lesion ranging from Tis to invasive T1	• 73% surgery, 27% radiation • 22% Tis, 78% T1 lesion	• Nontangible costs of treatment • Hidden-cost questionnaire • Travel time, travel distance, treatment time, amount of work missed by patient and friends of family members
Houts et al, 1985[74]	CS	9 medical practices affiliated with Central Pennsylvania Oncology Group (n=185)	• Diagnosis of cancer • >6 mo from diagnosis • All sites	• Median age, 57 y (range, 16–76 y) • 70% female • 40% breast cancer, 37% other cancer • 36% curative treatment, 64% palliation	• Financial burden • medical costs; OOP expenses (transportation, lodging, food, nonmedical healing, nonprescription drugs, clothing, telephone calls, miscellaneous); wages lost; total costs; % income lost • Of total financial burden incurred, 50% from wages lost, 25% OOP expenses, and 25% included medical expenses from being uninsured • Mean % of family income lost: 16%; median, 7% (range, 0%–134%)

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Abbreviations: AI, aromatase inhibitor; ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; BCCTP, Breast and Cervical Cancer Treatment Program; BCEI, Breast Cancer Education Intervention; BCS, breast-conserving surgery; CanCORS, (NCI) Cancer Care Outcomes Research and Surveillance; CCC, comprehensive cancer center; CCCWFU, Comprehensive Cancer Care—Wake Forest University; CLL, chronic lymphocytic leukemia; CML, chronic myeloid leukemia; Cohort-L, cohort-longitudinal; Cohort-P, cohort-prospective; Cohort-R, cohort-retrospective; COIN, Collection of Indirect and Nonmedical Direct Costs, modified for monthly OOP costs; COST, COmprehensive Score for financial Toxicity; CRC, colorectal cancer; CRN, cost-related medication nonadherence; CS, cross-sectional; CSS, Cancer Surveillance System; DCIS, ductal carcinoma in situ; EBC, early-stage breast cancer; ECSS, Experiences With Cancer Survivorship Supplement; GPH, general public hospital; HCT, hematopoietic cell transplantation; HMO, health maintenance organization; MBC, metastatic breast cancer; MCBS, Medicare Current Beneficiary Survey; MDS/MPN, myelodysplastic syndromes/myeloproliferative neoplasm; MEPS, Medical Expenditure Panel Survey; NHIS, National Health Interview Survey; NHL, non-Hodgkin's lymphoma; OOP, out-of-pocket; POS, point of service (insurance); PPO, preferred provider organization; VA, Veterans Administration.

eTable 2. Study and Patient Characteristics and Measures of Financial Toxicity Burdens (cont.)

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eTable 2. Study and Patient Characteristics and Measures of Financial Toxicity Burdens (cont.)

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eTable 3. Strength of Evidence Assessment Using GRADE Criteria

Analysis	Assessment	Other Details
Sample-weighted prevalence of financial burden		
Limitations in study design	Downgraded	8 studies judged "fair" in risk of bias
Inconsistency of result	Downgraded	Because of substantial heterogeneity
Indirectness of evidence	Downgraded	Because of substantial heterogeneity
Imprecision	Not downgraded	
Publications of bias	Not downgraded	Not present
General assessment	Very low	
Association between insurance status and financial burdens		
Limitations in study design	Not downgraded	
Inconsistency of result	Downgraded	Because of substantial heterogeneity
Indirectness of evidence	Downgraded	Because of substantial heterogeneity
Imprecision	Not downgraded	
Publications of bias	Not downgraded	Cannot be assessed
General assessment	Low	
Association between financial burdens and cancer medication adherence		
Limitations in study design	Not downgraded	
Inconsistency of result	Downgraded	Because of substantial heterogeneity
Indirectness of evidence	Downgraded	Differences in populations and outcomes
Imprecision	Downgraded	Large confidence intervals
Publications of bias	Not downgraded	Cannot be assessed
General assessment	Very low	

Abbreviation: GRADE, Grading of Recommendations Assessment, Development, and Evaluation criteria.

eTable 4. Risk Factors of Financial Toxicity Burdens

Reference • Burden Type	Model • Outcome	Socioeconomic	Demographic	Clinical
Wheeler et al, 2018[1] • P, I	Adjusted logistic regression • Financial impact score	• Income: adjusted risk differences for adverse financial impact; compared with income >$50,000/y, patients with income $15,000–$29,999/y had ↑ financial impact score (worse impact) (ASD, 13.93 [SE, 3.33]) and those with income $30,000–$49,999 had ↑ financial impact score (ASD, 9.279 [SE, 2.86]; *P*<.05) • Insurance: compared with privately insured patients, those with no insurance and Medicaid had ↑ financial impact score (worse impact) (ASD, 28.45 [SE, 4.74] and 21.11 [SE, 3.75]; *P*<.001)	• Age: older age had ↓ financial impact score (less impact) (ASD, –0.70 [SE, 0.10] per y); *P*<.001 • Race/Ethnicity: black patients had ↑ financial impact score (worse impact) (ASD, 5.42 [SE, 2.16]) compared with white patients; *P*<.05 • Marital status: separated/divorced patients had ↑ financial impact score (worse impact) (ASD, 6.35 [SE, 2.67]) compared with married patients; *P*<.05	• Chemotherapy: ↑ financial impact score (worse impact) (ASD, 9.59 [SE, 2.53]) compared with no chemotherapy; *P*<.05 • Cancer stage: stage IV had ↑ financial impact score (worse impact) (ASD, 14.09 [SE, 6.22]) compared with stage I; *P*<.05
de Souza et al, 2017[2] • P	Adjusted logistic regression • COST score (↑ COST score = lower financial toxicity)	• Household income: high-income patients had ↑ COST score; patients with >800% of FPL had 12-point ↑ mean COST score vs those with ≤200% of FPL (*P*=.003) • Employment: unemployed patients had ↓ COST score (β=11.68; 95% CI, 4.43–18.44; *P*<.001)	• Race/Ethnicity: white patients had ↑ COST scores vs Hispanic (β= –2.41; 95% CI, –8.66–3.83), black (β= –5.41; 95% CI, –9.60 to –0.67), and Asian and Native American patients (β= –9.85; 95% CI, –19.82 to 0.12; *P*=.04)	• Number of in-patient admissions: patients with ≥3 vs ≤2 hospital admissions had ↓ COST scores (β= –5.52; 95% CI, –9.87 to –1.16; *P*=.01 • Psychological distress: Patients with high distress had ↓ COST scores (β= –0.34; 95% CI, –0.56 to –0.12; *P*=.003)
Meeker et al, 2017[3] • P	Adjusted linear regression • Financial distress score	• Income: income ≥$75,000/y had ↑ financial score (less distress) vs income <$25,000/y (β=1.88; 95% CI, 0.27–3.49; *P*=.02)	• Age: increasing age ≥65 y had ↑ financial score (less distress) compared with age <50 y (β=1.52; 95% CI, 0.03–3.01; *P*=.05)	
Pisu et al, 2017[4] • D	Repeated-measures model with generalized linear mixed method • ↑ OOP cost	• Employment: part-time, unemployed, retired, or on disability had ↑ OOP burden vs full-time employed, *P*=.036 • Income decrease since end of treatment: patients with income decrease since treatment had ↑ OOP costs (mean ratio, 1.42; 95% CI, 1.11–1.81; *P*=.005) and ↑ OOP cost burden (mean ratio, 1.66; 95% CI, 1.21–2.29; *P*=.002)	• Age: age ≥65 y had ↓ OOP cost burden (mean ratio, 0.68; 95% CI, 0.50–0.92; *P*=.01)	• Time since treatment: patients within 12 mo of treatment (mean ratio, 1.55; 95% CI, 1.10–2.19; *P*=.04) had ↑ OOP cost compared with those within ≥24 mo of treatment • Use of supportive services: patients using support services had ↑ OOP costs (mean ratio ,1.35; 95% CI, 1.03–1.76; *P*=.03) and ↑ OOP burden (mean ratio, 1.46; 95% CI, 1.05–2.03; *P*=.03)
Abel et al, 2016[5] • P, I	Adjusted logistic regression • Financial hardship	• Monthly income: low-income (OR, 10.43; 95% CI, 4.28–25.4; *P*<.001) and middle-income patients (OR, 2.92; 95% CI, 1.47–5.78; *P*=.002) experienced any of the 3 hardships; low-income patients (OR, 5.45; 95% CI, 1.43–20.7; *P*=.01) more likely to experience all 3 hardships than middle- or high-income patients.	• Marital status: married patients less likely to experience all hardships (OR, 0.39; 95% CI, 0.18–0.88; *P*=.02)	• Treatment type: patients with transplant-related costs more likely to experience any hardship (OR, 6.86; 95% CI, 3.82–12.3; *P*<.001) and all 3 hardships (OR, 3.84; 95% CI, 1.57–9.36; *P*=.003)

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Abbreviations: ASD, adjusted score difference; CCC, comprehensive cancer center; COST, COmprehensive Score for financial Toxicity; CRC, colorectal cancer; CRN, cost-related nonadherence; D, direct material burdens; EE, effect estimate; FPL, federal poverty level; GPH, general public hospital; HMO, health maintenance organization; I, indirect burdens; MCS, Mental Component Score; OFFS, objective family financial stress; OOP, out of pocket; OR, odds ratio; P, psychological burdens; PCS, Physical Component Score; QoL, quality of life.

eTable 4. Risk Factors of Financial Toxicity Burdens (cont.)

Reference • Burden Type	Model • Outcome	Socioeconomic	Demographic	Clinical
Banegas et al, 2016[6] • I	Adjusted logistic regression • Borrow, go into debt, bankruptcy	• Income: lower-income patients more likely to borrow/go into debt ($40,000–$80,000/y: OR, 2.46; $P<.001$; <$40,000/y: OR, 3.52; $P<.001$) and file for bankruptcy ($40,000–$80,000/y: OR, 2.80; $P<.001$; <$40,000/y: OR, 4.50; $P<.001$) compared with >$80,000/y • Employment status: unemployed (OR, 1.28, $P<.05$) more likely and retired (OR, 0.51; $P<.001$) less likely to borrow/go into debt; unemployed patients (OR, 1.74; $P<.05$) more likely to file for bankruptcy • Insurance: publicly insured (OR, 1.95; $P<.001$) and uninsured patients (OR, 2.46; $P<.001$) more likely to borrow/go into debt; publicly insured patients (OR, 1.82; $P<.05$) more likely to file for bankruptcy	• Age: younger patients more likely to borrow money/go into debt (aged 45–54 y: OR, 1.66; aged 18–44 y: OR, 2.07; $P<.001$) and file for bankruptcy (aged 45–54 y: OR, 1.86; aged 18–44 y: OR, 1.81; $P<.05$) compared with those aged 55–64 y • Sex and marital status: unmarried males (OR, 1.37; $P<.05$) and unmarried females (OR, 1.56; $P<.001$) more likely to borrow money/go into debt • Race/Ethnicity: Hispanic patients (OR, 1.41; $P<.05$) more likely to borrow/go into debt than non-Hispanic patients	• Number of cancer diagnoses: patients with ≥2 more likely to borrow/go into debt (OR, 1.49; $P<.001$) and file for bankruptcy (OR, 2.00; $P<.001$) • Time since last treatment: ≥6 y (OR, 0.82; $P<.05$) and 3–5 y (OR, 1.71; $P<.05$) less likely to borrow/go into debt compared with <1 y; ≥6 y (OR, 1.65; $P<.05$) more likely to file for bankruptcy
Chongpison et al, 2016[7] • P	Mean and SD • Financial burden	• Education: patients with lower education (high school or less) (mean, 2.41±3.06) had ↑ financial burden score • Household income: patients with lower income (≤$30,000/y) (mean, 3.11±3.34) had ↑ burden • Employment: full-time or part-time (mean, 2.09±2.83), unemployed (mean, 5.27±3.77), and patients on disability (mean, 5.33±3.06) had ↑ burden compared with retired and nonworking patients (mean, 1.69±2.55)		• Type of surgery: patients with permanent (mean, 2.56±3.01) and temporary ostomy (mean, 2.28±2.74) had ↑ burden score than those with anastomosis (mean,1.63±2.62) • Recall of depression after surgery: patients with depression (mean, 3.22±3.34) had ↑ burden than those with no depression (mean, 1.35±2.18)
Kale & Carroll, 2016[8] • P, I	Adjusted logistic regression • Financial burden	• Insurance: patients with no insurance during treatment (OR, 1.99; CI, 1.33–2.98) had ↑ burden compared with insured patients	• Age: younger patients (OR, 1.87; 95% CI, 1.23–2.83) had ↑ burden • Sex: female patients (OR, 1.43; 95% CI, 1.00–2.04) had ↑ burden • Race/Ethnicity: Hispanic (OR, 1.68; 95% CI,1.02–2.76) and black patients (OR, 1.09; 95% CI, 0.51–2.18) had ↑ burden than non-Hispanic white patients	• Cancer type: patients with short-survival type cancer (OR, 3.28; 95% CI, 1.43–7.51) had ↑ burden than patients with breast cancer • Time since last treatment: > 1 y (OR, 2.55; 95% CI, 1.68–3.86) had ↑ burden than ≥5 y • Time since diagnosis: 1–<3 previous y (OR, 1.69; 95% CI, 1.14–2.50) had ↑ burden than ≥5 y

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Abbreviations: ASD, adjusted score difference; CCC, comprehensive cancer center; COST, COmprehensive Score for financial Toxicity; CRC, colorectal cancer; CRN, cost-related nonadherence; D, direct material burdens; EE, effect estimate; FPL, federal poverty level; GPH, general public hospital; HMO, health maintenance organization; I, indirect burdens; MCS, Mental Component Score; OFFS, objective family financial stress; OOP, out of pocket; OR, odds ratio; P, psychological burdens; PCS, Physical Component Score; QoL, quality of life.

eTable 4. Risk Factors of Financial Toxicity Burdens (cont.)

Reference • Burden Type	Model • Outcome	Socioeconomic	Demographic	Clinical
Lathan et al, 2016[9] • I	Unadjusted • Financial reserves	• Insurance: patients reporting <2 mo financial reserves more likely to be insured by Medicaid or have no insurance than patients reporting >2 mo financial reserves		
Narang & Nicholas, 2017[10] • D	Adjusted logistic regression • OOP expenses	• Supplemental insurance: patients without had ↑ mean OOP expenses and financial burden, with a spending mean of 23.7% of household income on OOP expenses		
Ramsey et al, 2016[11] • I	Adjusted logistic regression • Bankruptcy in original cohort		• Age: younger patients (mean, aged 52.6 vs 63.9 y) had ↑ odds of bankruptcy vs no bankruptcy • Sex: females (55%) had ↑ odds bankruptcy • Race: nonwhite patients (14% vs 11%) had ↑ odds bankruptcy	
Whitney et al, 2016[12] • P, I	Adjusted logistic regression • Financial difficulty • Work modification	• Income: patients in active treatment with income <200% of FPL (OR, 15.7; 95% CI, 2.6–95.2) or 200 to <400% of FPL (OR, 8.2; 95% CI, 1.3–52.4) had ↑ financial difficulty compared with income >400% FPL • Residence: patients in nonmetropolitan area (OR, 6.4; 95% CI, 1.6–25.0) had ↑ financial difficulty compared with those in metropolitan area • Education: patients aged <65 y with 12–16 y education (OR, 1.9; 95% CI, 1.1–3.6) had ↑ financial difficulty compared with ≥16 y education • Insurance: patients aged <65 y and uninsured (OR, 3.5; 95% CI, 1.3–9.3] or publicly insured (OR, 9.0; 95% CI, 3.3–24.4] had ↑ work modification	• Race/Ethnicity: nonwhite patients (OR, 8.0; 95% CI, 2.2–28.4) had ↑ financial difficulty compared with white patients • Marital status: patients aged <65 y and married (OR, 2.2; 95% CI, 1.0–4.7] had ↑ work modification compared with unmarried patients	• Health status: patients in active treatment with good/fair/poor health status had ↑ financial difficulty (OR, 3.8; 95% CI, 1.0–14.2) and ↑ work modification (OR, 10.4; 95% CI, 2.0–54.8) compared with patients with excellent/very good health status; among patients age <65 y, those with good/fair/poor health status had ↑ financial difficulty (OR, 2.4; 95% CI, 1.4–4.1) and ↑ work modification (OR, 4.1; 95% CI, 1.6–10.2) compared with those with excellent/very good health
Wong et al, 2016[13] • P	One-way ANOVA or Kruskal-Wallis test • Cost concern	• Education: patients with <high school (mean, 9.66±2.44; P=.01) had ↑ mean of total cost concerns • Employment: unemployed (mean, 9.33±2.62; P<.001) had ↑ mean of total cost concerns	• Age: patients aged ≤65 y (mean, 8.86±2.67; P<.001) had ↑ mean of total cost concerns • Sex: females (mean, 8.77±2.68; P=.04) had ↑ mean of total cost concerns Marital status: unmarried patients (mean, 8.97±2.62; P=.01) had ↑ mean of total cost concerns	

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eTable 4. Risk Factors of Financial Toxicity Burdens (cont.)

Reference • Burden Type	Model • Outcome	Socioeconomic	Demographic	Clinical
Yabroff et al, 2016[14] • P, I	Adjusted logistic regression • 1. Material financial hardship • 2. Psychologic financial hardship	Patients aged 18–64: • Employment: employed but took extended leave or switched to part time had ↑ material hardship ($P<.001$) • Income and time since treatment: lower family income meant ↑ psychological hardship ($P=.019$) • Insurance: uninsured had ↑ psychological hardship ($P=.043$)	• Age: younger patients (aged 18–54 y vs aged 55–64 y vs aged 65–74 y vs aged ≥75 y) had ↑ material hardship ($P=.009$) • Age: in ≥65 y age group, those aged 65–74 had ↑ psychological hardship ($P=.012$) • Race/Ethnicity: nonwhite had ↑ material hardship ($P=.008$) • Sex: females had ↑ material hardship ($P=.034$)	• Time since treatment: shorter time interval since treatment had ↑ material ($P=.014$) and psychological ($P=.024$) hardship
Zheng et al, 2015[15] • I, D	Frequencies • Employment disability and productivity loss		• Age: nonelderly CRC and breast cancer survivors had ↑ employment disability (13.6%, $P<0.001$; 4.8%, $P=.001$) and productivity loss at work (7.2 d, $P<.001$; 3.3 d, $P=.002$) and at home (4.5 d, $P<.001$; 3.3 d, $P=.003$)	
Callahan & Brintzenhofeszoc, 2015[16] • P	Adjusted regression • Financial QoL	• Health insurance adequacy: patients with health insurance adequacy had ↑ financial QoL ($\beta=.259$; $P=.002$) • Financial stress: patients with lower financial stress had ↑ financial QoL ($\beta=.370$; $P<.001$) • Barriers to care: patients with lower barriers to care had ↑ financial QoL ($\beta=-.329$; $P=.003$)		
Delgado-Guay et al, 2015[17] • P, I	Frequencies • Financial distress			• Cancer care facility: financial distress ↑ in GPH vs CCC • Financial distress present in 86% (95% CI, 76%–93%) served at CCC vs 90% (95% CI, 81%–96%) served at GPH ($P=.45$) • Median intensity score of financial distress, CCC=4 vs GPH=8, $P=.0003$.
Guy et al, 2015[18] • D	Adjusted logistic regression • OOP burden	• Income: patients who were ear-poor/low-income (100%–200% FPL) had ↑ OOP burden compared with noncancer individuals; $P=.002$ • Employment: full-time employed had ↑ OOP burden compared with noncancer individuals; $P<.05$	• Age: patients aged 50–64 y had ↑ OOP burden compared with noncancer individuals; $P=.02$	
Huntington et al, 2015[19] • P	Adjusted regression analyses • Financial burden (COST score)	• Income: patients with lower income, $40,000–$79,999/y ($\beta=7.8$; 95% CI, 2.7–12.9; $P=.0031$) vs ≥$80,000 ($\beta=11.8$; 95% CI, 7.1–16.4; $P<.0001$) had ↑ financial burden	• Marital status: nonmarried patients ($\beta=5.6$; 95% CI, 1.5–9.6; $P=.007$) had ↑ financial burden • Age: younger patients ($\beta=0.36$; 95% CI, 0.15–0.56; $P<.001$) had ↑ financial burden	• Time since diagnosis: patients with longer duration since diagnosis ($\beta=-4.8$; 95% CI, –9.3 to –0.2; $P=.042$) had ↑ financial burden

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eTable 4. Risk Factors of Financial Toxicity Burdens (cont.)

Reference • Burden Type	Model • Outcome	Socioeconomic	Demographic	Clinical
Jones et al, 2015[20] • P	ANOVA • Perceived financial burden	• Income: increased income had ↓ financial burden: <$25,000/y (mean, 5.9±3.9), $25,000–$50,000/y (mean, 5.2±3.7), $51,000–$75,000/y (mean, 4.1±3.5), $76,000–$100,000/y (mean, 3.4±3.2), >$100,000/y (mean, 2.8±3.0); *P*<.001)	• Age: increased age had ↓ financial burden, *P*<.001; age 18–39 y (mean, 6.1±3.5), age 40–64 y (mean, 4.7±3.6), age >65 y (mean, 2.5±3.1) • Marital status: married patients had ↓ financial burden (mean, 3.9; SD, 3.6) vs unmarried patients (mean, 4.8±3.8); *P*=.024	• Time since treatment: patients with longer time since treatment had ↓ financial burden (*P*=.038); patients still receiving "maintenance" treatment (mean, 4.7±3.0) vs 3–24 mo (mean, 4.6±3.8) and 25–48 mo (mean, 3.8±3.5) from any treatment
Palmer et al, 2015[21] • P, I	Chi-square test • OOP costs		• Race: black patients had ↑ OOP vs white patients (52% vs 28%; *P*=.01)	
Pisu et al, 2015[22] • P	Adjusted logistic regression • Economic hardship	• No drug coverage: ↑ risk of economic hardship among patients with lung cancer (OR, 1.47; 95% CI, 1.01–2.14) and CRC (OR, 1.48; 95% CI, 1.02–2.13) • Income: ≥$20,000/y had ↓ risk of economic hardship	• Race/Ethnicity: among patients with CRC, black patients had ↑ risk of economic hardship vs white patients (OR, 1.69; 95% CI, 1.25–2.29). • Number of individuals supported: patients with ≥3 dependents had ↑ risk of economic hardship among patients with lung cancer (OR, 1.80; 95% CI, 1.13–2.85) and with CRC (OR, 1.59, 95% CI, 1.11–2.26) • Age: among patients with lung cancer, those aged ≥65 y had ↓ risk of economic hardship; those with CRC aged ≥55 y had ↓ risk of economic hardship	
Tucker-Seeley et al, 2015[23] • I	Adjusted logistic regression • Financial hardship			• Intensity of end-of-life care received: patients with ↑ financial hardship received more intensive end-of-life care (OR, 3.05; 95% CI, 1.22–7.62)
Zafar et al, 2015[24] • P	Adjusted path models • Financial difficulty	• Income: patients with lower income (<$20,000/y) (OR, 0.61; *P*<.001) had ↑ financial difficulty	• Age: younger (OR, 0.65 per 10 y older, *P*<.001) had ↑ financial difficulty	
Fenn et al, 2014[25] • P	Bivariate analyses • Financial problems	• ↓ Education: had ↑ financial problems (*P*=.002) • ↓ Income: had ↑ financial problems (*P*<.001) • Insurance: Medicare had ↓ financial problems (*P*<.001)	• ↓ Age: had ↑ financial problems (*P*<.001) • Sex: females had ↑ financial problems (*P*=.016) • Race: nonwhite patients had ↑ financial problems (*P*=.001)	• Type of cancer: patients with thyroid (30.6%), ovarian (25.3%), and lung cancer (23.7%) had ↑ financial problems (*P*<.001)
Jagsi et al, 2014[26] • I	Adjusted logistic regression • Excess unemployment	• Employment support: patients with no support (OR, 1.33; 95% CI, 1.08–1.67; *P*=.011) had excess unemployment	• Age: older patients (>56 vs <46 y; OR, 1.42; 95% CI, 1.03–1.95; *P*=.031) had excess unemployment	• Comorbidity: patients with ≥2 comorbidities (OR, 2.16; 95% CI, 1.59–2.94; *P*<.001) had excess unemployment • Chemotherapy: patients who received chemotherapy (OR, 1.42; 95% CI, 1.03–1.98; *P*=.038) had excess unemployment

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eTable 4. Risk Factors of Financial Toxicity Burdens (cont.)

Reference • Burden Type	Model • Outcome	Socioeconomic	Demographic	Clinical
Jagsi et al, 2014[27] • P, I, D	Adjusted logistic regression • Financial decline	• Income: patients with <$50,000 vs >$50,000 had ↑ financial decline (OR, 1.77; *P*=.034) • Employment: patients working part-time had ↑ financial decline vs those not working (OR, 1.88; *P*=.019) • Patients with reductions in work hours vs no reductions had ↑ financial decline (OR, 1.68; *P*=.04) • Prescription insurance: partial (OR, 3.67; *P*=.001) and no coverage (OR, 2.70; *P*=.01) vs complete coverage had ↑ financial decline	• Age: younger patients (all categories <65 vs >65 y; *P*<.001) had ↑ financial decline • Race: Spanish-speaking Latina vs white patients (OR, 2.76; *P*=.006) had ↑ financial decline	• Chemotherapy: patients who received chemotherapy (OR, 2.14; *P*=.002) had ↑ financial decline • Recurrent breast cancer: patients with recurrent disease (OR, 2.44; *P*=.017) had ↑ financial decline
Khera et al, 2014[28] • P, I	Adjusted logistic regression • Objective financial burden	• Employment: compared with retired, employed patients had ↓ (OR, 0.32; 95% CI, 0.18–0.50; *P*=.0004)	• Age (per 5-y increase): younger patients (OR, 0.80; 95% CI, 0.7–0.97; *P*=.0009) had ↑ financial burden	• Current physical and mental functioning: patients with lower score (<40) on PCS-12 (OR, 3.02; 95% CI, 1.6–5.9; *P*=.001) and MCS-12 (OR, 3.50; 95% CI, 1.4–8.5; *P*=.006) had ↑ financial burden
Martin et al, 2014[29] • P	Adjusted logistic regression • Worry about treatment costs	• Patients with higher income (≥$20,000/y), higher education (≥high school), insurance (treatment being covered), and savings (≥1 y) had significant ↓ worry; all *P*<.05	• Race: Asian vs white: those with ≥2 dependents vs 1 dependent to support had ↑ worry, *P*<.05 • Age: older patients (all categories aged ≥60 y vs aged <54 y) had ↓ worry, *P*<.05	
Regenbogen et al, 2014[30] • I	Poisson regression • Personal financial burden (positive EE = ↑ burden)	• Income: patients with lower income had ↑ financial burden. <$20,000/y (EE, 0.41; 95% CI, 0.19–0.63; *P*<.001); $20,000–$49,000/y (EE, 0.65; 95% CI, 0.46–0.83; *P*<.001); $50,000–$89,000/y (EE, 0.32; 95% CI, 0.15–0.50; *P*<.001) vs ≥$90,000/y	• Age: younger patients had ↑financial burden compared with those aged <50 y, 50–64 y (EE, –0.22; 95% CI, –0.36 to 0.10; *P*<.001); 65–74 y (EE, –0.68; 95% CI, –0.83 to –0.52; *P*<.001); ≥75 y (EE, 1.00; 95% CI, –1.19 to –0.80; *P*<.001)	• Postoperative complications: yes (EE, 0.31; 95% CI, 0.20–0.42; *P*<.001) had ↑ financial burden • Chemotherapy: yes (EE, 0.54; 95% CI, 0.32–0.75; *P*<.01) had ↑ financial burden
Veenstra et al, 2014[31] • P	*t* test or ANOVA • Personal financial burden	• Income: patients with lower income (<$20,000/y (mean ± SE, 1.70 ± 0.14); $20,000–$49,000/y (mean ± SE, 2.31 ± 0.12; *P*<.001) had ↑ financial burden • Insurance: uninsured patients (mean ± SE, 2.67 ± 0.22; *P*<.001) had ↑ burden • Employment: unemployed (mean ± SE, 2.57 ± 0.28) or disabled patients (mean ± SE, 2.79 ± 0.07; *P*<.001 had ↑ burden	• Age: younger patients (<50 y: mean ± SE, 2.51 ± 0.16; 50–64 y: mean ± SE, 2.13 ± 0.10; *P*<.001) had ↑ burden • Race: black patients (mean ± SE, 1.92 ± 0.13) and other/unknown patients (mean ± SE, 2.16 ± 0.26; *P*=.022) had ↑ burden • Marital status: married/partnered patients (mean ± SE, 1.85 ± 0.08; *P*=.012) had ↑ burden	• Chemotherapy: patients who received chemotherapy (Mean ± SE, 1.88 ± 0.06; *P*<.001) had ↑ burden

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eTable 4. Risk Factors of Financial Toxicity Burdens (cont.)

Reference • Burden Type	Model • Outcome	Socioeconomic	Demographic	Clinical
Davidoff et al, 2013[32] • D	Generalized linear models • OOP/income >20%	• Insurance and income: patients with supplemental insurance and higher income had ↓ OOP spending	• Age: older patients had ↓ OOP spending	• Assets, comorbidity, and type of treatment: those with assets, comorbidity, and cancer-directed radiation or antineoplastic therapy had ↑ OOP spending
Dowling et al, 2013[33] • I	Adjusted logistic regression • Productivity loss			• Site/Type of cancer at diagnosis: Patients with short survival cancer or multiple cancers had ↑ productivity loss ($P<.05$), were more likely to accomplish less ($P<.0001$), and be limited in the kind of work or activities engaged in because of physical health ($P<.0001$)
Goodwin et al, 2013[34] • I, D	*t* test • Mean % of income spent on OOP expenses • Financial burden			• Chemotherapy: patients receiving chemotherapy had ↑ mean % of income spent for OOP expenses during first 12 mo of therapy (38%) vs those not receiving chemotherapy (31%) ($t_{613}=2,03$; 95% CI, 0.82–12.44; $P=.025$); those receiving chemotherapy at time of survey had ↑ financial burden (52%) vs those not receiving chemotherapy. • Duration of treatment: patients who received ≥4 y of treatment used ↓ % of income for OOP expenses vs those with <4 y of treatment
Kent et al, 2013[35] • P, I	Adjusted analyses • Financial problems		• Age: younger patients (<40 y and 40–64 y) had ↑ financial problems vs thosee aged ≥65 y ($P=.0001$) • Race/Ethnicity: non-Hispanic black, Hispanic, and other patients had ↑financial problems vs non-Hispanic white patients ($P=.006$)	• Time since diagnosis: patients within <2 y had ↑ financial problems vs a longer period ($P<.0001$) • Recurrence/Multiple cancer: patients with presence of either had ↑ financial problems vs otherwise ($P=.049$) • Chemotherapy/Radiation: patients with either treatment(s) ↑ financial problems vs otherwise ($P< .001$)
Ramsey et al, 2013[36] • I	Frequencies • Bankruptcy		All $P<.001$; frequencies (%) represent distribution in bankruptcy vs no-bankruptcy groups • Age: younger patients (<40 y, 19% vs 7%; 40–64 y, 62% vs 48%) had ↑ bankruptcy compared with aged ≥65 y • Sex: female (56% vs 50%) had ↑ bankruptcy • Race/Ethnicity: nonwhite patients (14% vs 12%) had ↑ bankruptcy	• Stage at diagnosis: patients with localized (59% vs 50%) or regional stage (25% vs 22%) disease had ↑ bankruptcy vs those with distant stage (13% vs 24%) • Cancer site: patients with breast cancer (23% vs 17%) had ↑ bankruptcy; those with prostate cancer (13% vs 17%) had ↓ bankruptcy)

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Abbreviations: ASD, adjusted score difference; CCC, comprehensive cancer center; COST, COmprehensive Score for financial Toxicity; CRC, colorectal cancer; CRN, cost-related nonadherence; D, direct material burdens; EE, effect estimate; FPL, federal poverty level; GPH, general public hospital; HMO, health maintenance organization; I, indirect burdens; MCS, Mental Component Score; OFFS, objective family financial stress; OOP, out of pocket; OR, odds ratio; P, psychological burdens; PCS, Physical Component Score; QoL, quality of life.

eTable 4. Risk Factors of Financial Toxicity Burdens (cont.)

Reference • Burden Type	Model • Outcome	Socioeconomic	Demographic	Clinical
Wan et al, 2013[37] • I	Adjusted generalized linear modeling and linear regression • Short-term disability costs	• Insurance: HMO vs non-HMO ($P<.05$) had ↑ short-term disability costs	• Age: older patients ($P=.002$) had ↑ short-term disability costs	• Chemotherapy: patients receiving chemotherapy ($P<.001$) had ↑ short-term disability costs • Early vs metastatic stage: patients with metastatic breast cancer had ↑ short-term disability days and costs at 12 mo postdiagnosis vs those with early-stage breast cancer (41.2 ± 61.4 vs 24.7 ± 44.7 d; $6,166 ± $9,194 vs $3,690 ± $6,673; both $P<.001$) • Early vs metastatic stage: patients with metastatic breast cancer incurred 47.7% ↑ short-term disability costs overall vs those with early-stage breast cancer ($3,953 with 95% CI, $3,072–$5,086 vs $2,676 with 95% CI, $2,360–$3,034) at $P=.009$
Meneses et al, 2012[38] • P, I	Generalized linear mixed models for repeated measures • Economic burden			• Time since treatment: economic burden ↓ with longer time interval since treatment; mean, 2.94 economic burden items at baseline (range, 0–11) vs 2.45 at 3 mo (range, 0–13), and 2.25 at 6 mo (range, 0–14); median, 2 at baseline and 1 at 3 and 6 mo
Shankaran et al, 2012[39] • P, I	Univariate analyses • Financial hardship	• Annual income: ≤$30,000 vs >$70,000/y (OR, 1.7; 95% CI, 0.8–3.9); $30,000–$50,000/y (OR, 4.5; 95% CI, 2.2–9,1) had ↑ hardship • Insurance: Medicaid vs private had ↑ hardship (OR, 2.9; 95% CI, 1.0–8.0); Medicare had ↓ hardship (OR, 0.3; 95% CI, 0.2–0.6) • Employment: presence of work disability, leave of absence, or unemployed vs employed had ↑ hardship (OR, 5.6; 95% CI, 2.4–13.3) • Retired had ↓ hardship (OR, 0.4; 95% CI, 0.2–0.8)	• Age: patients aged <50 y vs ≥75 y had ↑ hardship (OR, 30.7; 95% CI, 6.6–143.9); 50–64 y (OR, 10.2; 95% CI, 2.3–44.6) • Race: nonwhite vs white patients had ↑ hardship (OR, 3.2; 95% CI, 1.5–6.7)	
Streeter et al, 2011[40] • D, I	Frequencies • OOP costs	• Type of insurance: ↑ proportion of patients who paid >$500 OOP for first oral chemotherapy claim in Medicare group compared with commercially insured group (6% vs 11%; $P<.001$)		
Neugut et al, 2011[41] • D, I	Frequencies • Copayment		• Age: median copayment higher among younger patients ($50) than older patients ($40)	
Markman & Luce, 2010[42] • P, D	Frequencies • OOP expenses			• Cancer site: prostate 20% with OOP >$5,000 vs breast 41%, colon 46%, lung 45%

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Abbreviations: ASD, adjusted score difference; CCC, comprehensive cancer center; COST, COmprehensive Score for financial Toxicity; CRC, colorectal cancer; CRN, cost-related nonadherence; D, direct material burdens; EE, effect estimate; FPL, federal poverty level; GPH, general public hospital; HMO, health maintenance organization; I, indirect burdens; MCS, Mental Component Score; OFFS, objective family financial stress; OOP, out of pocket; OR, odds ratio; P, psychological burdens; PCS, Physical Component Score; QoL, quality of life.

eTable 4. Risk Factors of Financial Toxicity Burdens (cont.)

Reference • Burden Type	Model • Outcome	Socioeconomic	Demographic	Clinical
Pezzin et al, 2009[43] • P	Adjusted analyses • Financial problems	• Drug cost coverage: patients with none (OR, 4.5; 95% CI, 3.3–5.9) or partial coverage (OR, 3.6; 95% CI, 2.8–4.5) had ↑ financial problems • Income: patients with lower income (<$15,000 vs ≥$50,000/y [OR, 1.7; 95% CI, 1.1–2.8], $15,000–$29,999/y [OR, 3.1; 95% CI, 2.3–4.3], or $30,000–$44,999/y [OR, 1.8; 95% CI, 1.3–2.5]) had ↑ financial problems	• Marital status: widowed vs married patients (OR, 0.6; 95% CI, 0.5–0.8) had ↓ financial problems	• Treatment modality: patients on aromatase inhibitor vs tamoxifen (OR, 1.4, 95% CI, 1.1–1.7) had ↑ financial problems
Francoeur, 2005[44] • P, I, D	Structural equation modeling • Disability days • Financial strain	• OFFS: patients experiencing OFFS reported higher subjective financial strain ($P<.05$), difficulty paying bills ($P<.005$), and inadequacy of their insurance to meet their needs ($P<.005$)	• Age: among patients with same level of financial stress, older patients perceived less financial strain from difficulty paying bills than younger patients ($P<.005$) • Age and disability days: among patients reporting above-mean disability days, older patients perceived more financial strain about adequacy of insurance and finances in the future ($P<.01$)	
Langa et al, 2004[45] • D	Regression analyses • OOP expenses	• Income status and currently receiving treatment: patients with low income spent 27% of income on OOP expenses compared with 5% of income by patients with high income with no cancer history		
Houts et al, 1985[46] • P, I, D	Regression analyses • OOP costs • Wages lost	• Income: patients with low income spent ↑ % of income on medical expenses (β= –.21; $P<.01$)	• Age: younger patients had ↑ wages lost (β= –0.27; $P<.01$), total cost (β= –0.28; $P<.01$), and ↑ % income lost (β= –0.24; $P<.01$) • Sex: females had ↑ wages lost (β= –0.20; $P<.01$) and ↑ total costs incurred (β= –0.16; $P<.05$) • Distance to treatment: patients residing at greater distance from treatment facility had ↑ OOP expenses (β=0.2; $P<.01$)	• Number of outpatient visits: patients with more visits had ↑ medical costs (β=0.22; $P<.01$) and ↑ OOP expenses (β=0.14; $P<.05$) • Number of days in hospital: patients with more days in hospital had ↑ OOP (β=0.42; $P<.01$), ↑ total costs (β=0.16; $P<.05$), and ↑ % income lost (β= –0.2; $P<.01$)
Smith et al, 2003[47] • I	Unadjusted Wilcoxon rank sum test • Nontangible costs			• Type of treatment: patients receiving radiation had ↑ costs vs endoscopic excision: Median number of treatments (35 vs 2), median travel distance (660 vs 150 miles), median travel time (1,440 vs 180 min), median hr work missed (76 vs 24 hr); $P< .01$

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Abbreviations: ASD, adjusted score difference; CCC, comprehensive cancer center; COST, COmprehensive Score for financial Toxicity; CRC, colorectal cancer; CRN, cost-related nonadherence; D, direct material burdens; EE, effect estimate; FPL, federal poverty level; GPH, general public hospital; HMO, health maintenance organization; I, indirect burdens; MCS, Mental Component Score; OFFS, objective family financial stress; OOP, out of pocket; OR, odds ratio; P, psychological burdens; PCS, Physical Component Score; QoL, quality of life.

eTable 4. Risk Factors of Financial Toxicity Burdens (cont.)

Reference • Burden Type	Model • Outcome	Socioeconomic	Demographic	Clinical
Lee & Khan, 2016[48] • I	Adjusted logistic regression • CRN	• Sex and insurance status: women with private health insurance (OR, 2.72; 95% CI, 1.94–3.79; $P<.0001$) and uninsured women (OR, 20.63; 95% CI, 14.94–28.47) reported ↑ CRN than men with private health insurance	• Sex: women reported ↑ CRN (OR, 1.27; 95% CI, 1.06–1.53) compared with men	
Lee & Salloum, 2016[49] • I	Adjusted logistic regression • CRN		• Age and race: among patients aged 18–64 y, black (OR, 1.07; 95% CI, 0.83–1.37) and Hispanic patients (OR, 1.61; 95% CI, 1.23–2.10) had ↑ CRN; among patients aged ≥65 y, black (OR, 2.64; 95% CI, 1.73–4.01) and Hispanic patients (OR, 2.07; 95% CI, 1.32–3.24) had ↑ CRN	
Palmer et al, 2015[21] • P, I	Adjusted logistic regression • Cost-related barriers to survivorship care	• Insurance: patients with public insurance (OR, 4.82; 95% CI, 1.14–20.43) and uninsured patients (OR, 31.01; 95% CI, 2.67–360.5) reported ↑ barriers than private or both private and public insurance		

(references on next page)

Abbreviations: ASD, adjusted score difference; CCC, comprehensive cancer center; COST, COmprehensive Score for financial Toxicity; CRC, colorectal cancer; CRN, cost-related nonadherence; D, direct material burdens; EE, effect estimate; FPL, federal poverty level; GPH, general public hospital; HMO, health maintenance organization; I, indirect burdens; MCS, Mental Component Score; OFFS, objective family financial stress; OOP, out of pocket; OR, odds ratio; P, psychological burdens; PCS, Physical Component Score; QoL, quality of life.

eTable 4. Risk Factors of Financial Toxicity Burdens (cont.)

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eTable 5. Financial Toxicity Burdens and Health Outcomes

Reference • Burden Type	Statistical Analysis • Financial Toxicity Burden Measure	• Dependent Variable and/or Outcome Measures • Association of Financial Toxicity Burden Measure With Outcome Measure(s)
Financial toxicity burden and adherence to cancer treatment		
Farias & Du, 2017[1] • D	Adjusted logistic regression • OOP costs	• Adherence to adjuvant endocrine therapy (aromatase inhibitor or tamoxifen) • ↑ OOP was associated with ↓ adherence • Compared with OOP cost $0–$2.65 (reference), OR of adherence for OOP cost $2.66–$10.00: OR, 0.81; 95% CI, 0.71–0.94; OOP cost $10.01–$41.25: OR, 0.65, 95% CI, 0.56–0.76; OOP cost $41.26–$105.55: OR, 0.21; 95% CI, 0.18–0.24; OOP cost >$105.55: OR, 0.31; 95% CI, 0.26–0.37
Farias et al, 2018[2] • D	Adjusted logistic regression • OOP costs	• Adherence to adjuvant endocrine therapy (aromatase inhibitor or tamoxifen) • ↑ OOP was associated with ↓ adherence • Compared with OOP cost $0–$4.99 (reference), RR of adherence for OOP cost of $5.00–$9.99: RR, 1.01; 95% CI, 0.97–1.05; OOP cost $10.00–$14.99: RR, 0.93; 95% CI, 0.88–0.98; OOP cost $15.00–$19.99: RR, 0.92; 95% CI, 0.85–0.98; OOP cost ≥$20.00: RR, 0.94; 95% CI, 0.89–0.99
Bender et al, 2014[3] • P, I	Effect modifier in conditional regression • Financial hardship	• Adherence to endocrine therapy • ↑ financial hardship measured by OOP cost perception was effect modifier of association between negative mood and adherence to endocrine therapy ($P<.001$)
Bestvina et al, 2014[4] • P, I	Adjusted logistic regression • Financial burden	• Medication nonadherence • Nonadherence ↑ among patients who had cost discussions (OR, 2.58; 95% CI, 1.14–5.85), experienced ↑ financial burden (OR, 2.89; 95% CI, 1.41–5.89) and experienced ↑ financial distress (OR, 1.64; 95% CI, 1.38–1.96)
Dusetzina et al, 2014[5] • D	Generalized estimating equations • Copayment	• Discontinuation: 17% of patients with ↑ copayment discontinued therapy during first 180 days; with increased risk of discontinuation compared with patients with ↓ copayment (RR=1.70; 95% CI, 1.30–2.22) • Nonadherence: 30% of patients with ↑ copayment were nonadherent to therapy; with increased risk of nonadherence (RR=1.42; 95% CI, 1.19–1.69)
Jagsi et al, 2014[6] • P, I	Frequency	• Treatment nonadherence: In patients with breast cancer • Frequency of going without medications (5%), taking less than recommended treatment (4%), and missing doctor's appointments (8%)
Zafar et al, 2013[7] • D	Frequency	• Healthcare noncompliance: in patients with cancer needing copayment assistance • Frequency of taking less than prescribed medications (20%), filling part of prescription (19%), avoiding filling prescription (24%), avoiding procedures (7%) or tests (9%), spreading out chemotherapy/appointments (7%), and skipping appointments (4%)
Zullig et al, 2013[8] • P, I	Frequency and adjusted logistic regression • Subjective financial distress	• Prescription medication nonadherence • Overall nonadherence 45%, of which 4% took medications prescribed for another person, 22% took less than prescribed amount, 25% filled only part of prescription, and 27% did not fill the prescription because of medication cost. • In subset of nonadherent patients: 69% asked doctor for less expensive medicine, 66% reduced spending on basics like food or clothing, 26% purchased over-the-counter product, 58% shopped for lowest priced medication, 68% borrowed money or used credit card to pay, and 69% obtained medication samples. • Although statistically significant in unadjusted analyses, in adjusted analysis, ↑ subjective financial distress not associated with medication nonadherence (OR, 1.60; 95% CI, 0.71–3.60; $P=.26$).
Shankaran et al, 2012[9] • P, I	Adjusted logistic regression • Perceived financial burden	• Economically motivated treatment nonadherence • Nonadherence ↑ among younger <50 y ($P=.04$), low income ≤$30,000/y ($P=.012$), and unemployed/disabled/leave of absence ($P=.05$)

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Abbreviations: AMD, adjusted mean difference; BSI, Brief Symptom Inventory; COST, COmprehensive Score for financial Toxicity; CRC, colorectal cancer; D, direct material burdens; FACT-B, Functional Assessment of Cancer Therapy-Breast tool; FACT-G, Functional Assessment of Cancer Therapy-General tool; HR, hazard ratio; I, indirect burdens; OOP, out of pocket; OR, odds ratio; P, psychological burdens; PHQ. Patient Health Questionnaire; QoL, quality of life; RR, risk ratio; SE, standard error.

eTable 5. Financial Toxicity Burdens and Health Outcomes (cont.)

Reference • Burden Type	Statistical Analysis • Financial Toxicity Burden Measure	• Dependent Variable and/or Outcome Measures • Association of Financial Toxicity Burden Measure With Outcome Measure(s)
Financial toxicity burden and adherence to cancer treatment (cont.)		
Neugut et al, 2011[10] • D, I	Adjusted logistic regression and Cox proportional hazard analyses • Copayment	• Nonpersistence and nonadherence to recommended medications • ↑ copayment associated with ↑ nonpersistence and ↑ nonadherence • Among women of Medicare-eligible age, compared with copayment <$30 (ref), OR of persistence for copayment of $30–$89.99: OR, 0.69; 95% CI, 0.62–0.75 • Among women aged <65 y, compared with <$30 (ref), copayment of >$90: OR, 0.72; 95% CI, 0.65–0.80 • Among women of Medicare-eligible age, compared with copayment <$30 (ref), OR of adherence $30–$89.99: OR, 0.83; 95% CI, 0.72–0.96; >$90: OR, 0.70; 95% CI, 0.60–0.82
Streeter et al, 2011[11] • D, I	Adjusted logistic regression • Cost-sharing	• Abandonment of oral or intravenous cancer treatment • ↑ cost sharing associated with ↑ abandonment • Compared with cost sharing of ≤$100 (ref), OR of abandonment for $101–$150: OR, 1.84; 95% CI, 1.23–2.75; $151–$200: OR, 1.51; 95% CI, 0.97–2.34; $201–$250: OR, 2.30; 95% CI, 1.31–4.04; $251–$350: OR, 2.31; 95% CI, 1.59–3.36; cost sharing $351–$500: OR, 3.28; 95% CI, 2.20–4.88; cost sharing >$500: OR, 4.46; 95% CI, 3.80–5.22
Markman & Luce, 2010[12] • P, D	Frequency • Financial impact	• Not to receive a recommended treatment • 10% of patients decided not to receive a treatment because it was too expensive; 25% for patients with annual income <$40,000
Pezzin et al, 2009[13] • P	Adjusted logistic regression • Insurance prescription coverage	• Making appropriate switch between adjuvant endocrine therapies (from tamoxifen to aromatase inhibitor) • Compared with full drug coverage, women with no prescription drug coverage ↓ likelihood of making appropriate switch to aromatase inhibitor: OR, 0.7; 95% CI, 0.5–0.9; partial prescription drug coverage: OR, 0.8; 95% CI, 0.7–1.0 • Women near poverty (income $15,000–$29,000/y) had ↓ likelihood of making appropriate switch: OR, 0.6; 95% CI, 0.4–0.9
Huntington et al, 2015[14] • P	Fisher exact test • Financial burden (COST tool)	• Patients with ↑ financial burden (COST score ≤23) more likely to: • Delay initiation of myeloma treatment: 29% (*P*=.003) • Fill only part of myeloma therapy prescription: 22% (*P*=.0077) • Fill only part of noncancer medication: 16% (*P*=.0019) • Stop myeloma therapy prescription: 22% (*P*=.0011) • Stop noncancer medication: 20% (*P*=.0077) • Refuse recommended test because of cost: 18% (*P*=.016) • Skip clinic visits: 12% (*P*=.027)
Financial toxicity burden and adherence to general healthcare		
Nipp et al, 2016[15] • I	Frequency	• Use of healthcare-altering cost-coping strategies • Overall, 39% used ≥1 cost-coping strategies, 28% did not fill prescriptions, 22% took less than recommended medications, 10% missed a medical test, 8% missed a procedure, and 6% missed an appointment.
Guy et al, 2015[16] • D	Adjusted logistic regression • OOP burden among cancer survivors	• Unable to obtain necessary medical care: patients with ↑ OOP burden had ↑ inability to obtain necessary medical care (19.2% vs 12.5%; *P*=.002) • Delaying necessary medical care: patients with ↑ OOP burden ↑ delayed medical care (21.6% vs 13.8%; *P*=.002) • Lower breast cancer screening: patients with ↑ OOP burden had ↓ screening rates among age-appropriate women (63.2% vs 75.9%; *P*=.02)
Khera et al, 2014[17] • P, I	Frequency and adjusted logistic regression • Financial burden	• Cost-related treatment nonadherence • Overall, 21% reported not making a physician appointment or having a medical test performed due to cost • Use of medical service, eg, physical therapy, deferred by 28% due to cost • Younger patients (OR for per 5-y increase in age: 0.82; 95% CI, 0.6–0.9) and lower educational level (OR for ≤ high school vs 4-y degree: OR, 5.0; 95% CI, 1.7–15) more likely to exhibit deleterious health behaviors (including treatment nonadherence) due to cost concerns

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Abbreviations: AMD, adjusted mean difference; BSI, Brief Symptom Inventory; COST, COmprehensive Score for financial Toxicity; CRC, colorectal cancer; D, direct material burdens; FACT-B, Functional Assessment of Cancer Therapy-Breast tool; FACT-G, Functional Assessment of Cancer Therapy-General tool; HR, hazard ratio; I, indirect burdens; OOP, out of pocket; OR, odds ratio; P, psychological burdens; PHQ. Patient Health Questionnaire; QoL, quality of life; RR, risk ratio; SE, standard error.

eTable 5. Financial Toxicity Burdens and Health Outcomes (cont.)

Reference • Burden Type	Statistical Analysis • Financial Toxicity Burden Measure	• Dependent Variable and/or Outcome Measures • Association of Financial Toxicity Burden Measure With Outcome Measure(s)
Financial toxicity burden and adherence to general healthcare (cont.)		
Kent et al, 2013[18] • P, I	Frequency and adjusted logistic regression • Financial problems	• Delay/Forgo care • Patients reporting ↑ financial problems ↑ likely to report delaying medical care (18.5% vs 7.4%; $P<.0001$) or forgoing medical care (13.5% vs 5.1%; $P<.0001$), prescription medications (13.8% vs 7.7%; $P=.001$), dental care (20.0% vs 8.3%; $P<.0001$), eyeglasses (13.7% vs 5.9%; $P<.0001$), or mental health care (9.7% vs 7.1%; $P=.03$) compared with patients without financial problems
Khera et al, 2011[19] • P, I	Frequency and ordinal regression analyses • Concerns about medical costs	• Adherence to preventive healthcare • ↑ cost concerns were associated with ↓ adherence to preventive health care: cutting back on prescribed medication (10%), not purchasing medication (11%), avoiding doctor's appointments (15%), not using physical therapy (13%), and not having a medical test performed (12%); 26% reported ≥1 behavior • ↑ concerns associated with ↓ dherence rates (OR, 1.48; 95% CI, 1.15–1.89)
Weaver et al, 2010[20] • I	Frequency	• Nonadherence to general healthcare • Forgo care (frequency, 8%), delay care (11%), forgo prescription medications (10%), forgo dental care (11%), forgo mental health care (3%)
Financial toxicity burden and healthcare decision-making		
DiMartino et al, 2017[21] • I	Binary logit model • Financial hardship	• Having survivorship care planning discussions with provider • ↑ financial hardship associated with ↓ discussions with β coefficient, 0.74; SE, 0.30; mean marginal effect, 6.6%; $P<.05$
Wong et al, 2016[22] • P	Adjusted linear regression • Financial concern	• Self-efficacy: patients with ↑ financial concern had ↓ self-efficacy in treatment-related decision-making ($P=.004$) • Preparation for decision-making: patients with ↑ financial concern had ↓ preparation for decision-making ($P<.001$) • Subjective distress: patients with ↑ financial concern had ↑ distress ($P<.001$) • Decisional conflict: patients with ↑ financial concern had ↑ decisional conflict ($P<.001$)
Overall survival		
Ramsey et al, 2016[23] • I	Proportional hazards regression • Bankruptcy	• Overall survival • All-cause mortality ↑ in patients who filed for bankruptcy vs patients who did not: HR, 1.79; 95% CI, 1.64–1.96
QoL		
de Souza et al, 2017[24] • P	Pearson correlation • Financial toxicity (COST tool)	• Health-related QoL • Measured using two scales: FACT-G and EORTC-QoL • Adjusted correlation between COST measure and both FACT-G and EORTC-QoL statistically significant • FACT-G $r=0.42$ ($P<.001$); EORTC-QoL $r=0.33$ ($P<.001$)
Abel et al, 2016[25] • P, I	Adjusted logistic regression • Financial hardship	• QoL below median: patients experiencing any hardship (OR, 2.90; 95% CI, 1.7–4.9) or all 3 hardships (OR, 2.16; 95% CI, 0.99–4.7) had ↑ odds of QoL below median. • Self-reported health below median: patients experiencing any hardship (OR, 2.18; 95% CI, 1.3–3.6) had ↑ odds of self-reported health below median. • Perceived stress above median: patients experiencing any hardship (OR, 2.08; 95% CI, 1.3–3.5) or all 3 hardships (OR, 3.14; 95% CI, 1.4–6.8) had ↑ odds of perceived stress above median.
Chongpison et al, 2016[26] • P	Adjusted linear regression • Financial burden	• Depression: survivors with self-reported depression (in past 30 days from survey) perceived ↑ financial burden (adjusted mean, 3.01; 95% CI, 2.57–3.45) compared with patients reporting no depression (adjusted mean, 1.67; 95% CI, 1.43–1.91)

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Abbreviations: AMD, adjusted mean difference; BSI, Brief Symptom Inventory; COST, COmprehensive Score for financial Toxicity; CRC, colorectal cancer; D, direct material burdens; FACT-B, Functional Assessment of Cancer Therapy-Breast tool; FACT-G, Functional Assessment of Cancer Therapy-General tool; HR, hazard ratio; I, indirect burdens; OOP, out of pocket; OR, odds ratio; P, psychological burdens; PHQ. Patient Health Questionnaire; QoL, quality of life; RR, risk ratio; SE, standard error.

eTable 5. Financial Toxicity Burdens and Health Outcomes (cont.)

Reference • Burden Type	Statistical Analysis • Financial Toxicity Burden Measure	• Dependent Variable and/or Outcome Measures • Association of Financial Toxicity Burden Measure With Outcome Measure(s)
QoL (cont.)		
Delgado-Guay et al, 2016[27] • P	Adjusted logistic regression • Financial distress	• Spiritual pain: associated with ↑ financial distress (OR, 1.22; 95% CI, 1.11–1.34)
Kale & Carroll, 2016[28] • P, I	Adjusted linear regression • Financial burden	• Patients with ↑ financial burden had ↓ QoL based on Short-Form Health Survey • Physical component score: ↓ score (β, –2.45; 95% CI, –3.75 to –1.15) • Mental component score: ↓ score (β, –3.05; 95% CI, –4.42 to –1.67) • Depressed mood: ↑depression (OR, 1.95; 95% CI, 1.29–2.95) • Cancer recurrence–related worries: ↑ worries (OR, 3.54; 95% CI, 2.65–4.72)
Keim-Malpass et al, 2016[29] • P	Adjusted linear regression • Financial worry (work responsibilities)	• QoL based on FACT-B • ↑ ability to keep up with work responsibilities was associated with ↑ QoL scores (estimate, 6.70; SE, 1.26; $P<.001$) • ↑ financial worries were associated with ↓ QoOL scores (estimate= –5.33; SE, 0.83; $P<.001$) • Difficulty paying for basics was associated with ↓ QoL (estimate= –7.01; SE, 2.83; $P=.01$)
Lathan et al, 2016[30] • I	Adjusted ordinal logistic regression • Financial reserve	• Symptom burden based on EORTC C30, pain based on Brief Pain Inventory, QoL based on EuroQoL-5 dimension scale for patients with lung cancer and CRC • Symptom burden: patients with ↓ financial reserves (<12 mo) reported ↑ symptom burden (lung cancer: AMD, 5.25; 95% CI, 3.29–0.22; CRC: AMD, 5.31; 95% CI, 3.58–7.04) • Pain experienced: patients with ↓ financial reserves (<12 mo) had ↑ pain (lung cancer: AMD, 5.03; 95% CI, 3.29–7.22; CRC: AMD, 3.45; 95% CI, 1.25–5.66) • QoL: patients with ↓ financial reserves (<12 mo) had ↓ QoL (lung cancer: AMD, 4.70; 95% CI, 2.82–6.58; CRC: AMD, 5.22; 95% CI, 3.61–6.82)
Meeker et al, 2016[31] • P	Frequency and structural equation modeling • Financial distress/well-being (InCharge scale)	• Overall distress: 65% reported significant distress scores (≥4), 28% had high scores (8–10) • Emotional distress: 66% had ≥1 emotional symptom; 49% reported worry, 38% nervousness, 37% fear, 30% sadness, 29% depression, 26% loss of interest • Financial distress associated with overall distress with emotional distress mediating this association; a 1-unit improvement in financial well-being led to a 0.553-unit decrease in overall distress ($P<.001$).
Delgado-Guay et al, 2015[32] • P, I	Spearman correlation • Financial distress	• QoL based on FACT-G • Financial distress inversely correlated with QoL ($r= –0.23$; $P=.0057$)
Zafar et al, 2015[33] • P	Adjusted structural equation modeling • Financial distress	• QoL based on EuroQol EQ-5D • ↑ financial distress was associated with ↓ QoL (adjusted β= –0.06 per burden category; $P<.001$)
Fenn et al, 2014[34] • P	Adjusted logistic regression • Financial problems	• Patients reporting "a lot" vs no financial problems had more poor physical health ($P<.001$) • More poor mental health ($P<.001$) • Poorer satisfaction with social activities and relationships ($P<.001$) • Overall QoL: Compared with patients with no financial problems, patients reporting "a lot" of financial problems had lower odds of QoL ≥good (OR, 0.24; 95% CI, 0.14–0.40); reporting "some" financial problems: OR, 0.57; 95% CI, 0.33–0.99; reporting "a few" financial problems: OR, 0.67; 95% CI, 0.41–1.08)

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Abbreviations: AMD, adjusted mean difference; BSI, Brief Symptom Inventory; COST, COmprehensive Score for financial Toxicity; CRC, colorectal cancer; D, direct material burdens; FACT-B, Functional Assessment of Cancer Therapy-Breast tool; FACT-G, Functional Assessment of Cancer Therapy-General tool; HR, hazard ratio; I, indirect burdens; OOP, out of pocket; OR, odds ratio; P, psychological burdens; PHQ. Patient Health Questionnaire; QoL, quality of life; RR, risk ratio; SE, standard error.

eTable 5. Financial Toxicity Burdens and Health Outcomes (cont.)

Reference • Burden Type	Statistical Analysis • Financial Toxicity Burden Measure	• Dependent Variable and/or Outcome Measures • Association of Financial Toxicity Burden Measure With Outcome Measure(s)
QoL (cont.)		
Meneses et al, 2012[35] • P, I	Structural equation modeling analyses • Economic events	• QoL: ↑ in economic events significantly associated with poorer QoL at all time points (baseline, 3-mo, and 6-mo follow-up) • At 6-mo time point, proportion of survivors reporting change in motivation (P=.016), productivity (P=.002), quality of work (P=.01), days missed from work (P<.001) and sacrificing other things (P=.001) as various domains of QoL declined compared with baseline.
Khera et al, 2011[19] • P, I	Adjusted logistic regression • Cost concerns	• Physical and mental functioning • ↑ Concerns about medical costs associated with ↓ physical (OR, 2.68; 95% CI, 2.03–3.53) and mental functioning (OR, 2.32; 95% CI, 1.65–3.27)
de Moor et al, 2010[36] • P	Analysis of variance; adjusted linear regression • Financial status	• Women with better self-rated financial status experienced decline in depression and anxiety over time while women with medium or low financial status experienced increase in both over time • Depression at 9-mo follow-up: ↑ financial status associated with ↓ depression (F-test=9.84; df=2,349; P=.0001) • Anxiety at 9-mo follow-up: ↑ financial status associated with ↓ anxiety (F-test=10.17; df=2,346; P=.0001)
Ell et al, 2008[37] • P, I	Adjusted generalized estimating equations modeling • Cost concerns/worry of lost wages	• QoL measured using FACT-G, PHQ, and BSI • Functional well-being QoL: patients with medical cost concerns or worries of wages lost at baseline and financial stress at 12 mo time point had poorer functional well-being • Emotional well-being QoL: patients with medical cost concerns or worries of wages lost at baseline and financial stress at 12 mo time point had poorer emotional well-being • Physical well-being QoL: patients with medical cost concerns at baseline and financial stress at 12 mo time point had poorer physical well-being • Social-family well-being QoL: patients with wage worries at baseline and financial stress at 12 mo time point had poorer social-family well-being • Depression (PHQ-9) and anxiety (BSI-A) scales: patients with medical cost concerns or worries of wages lost had higher scores on both scales • Major depression (PHQ-9≥10): patients with wage-related worries (OR, 2.12; 95% CI, 1.19–3.76) and financial stress (OR, 2.13; 95% CI, 1.14–3.99) more likely to meet the criteria for major depression
Gupta et al, 2007[38] • P	Adjusted linear regression • Financial difficulty	• QoL: 10-unit ↑ in financial difficulty score associated with ↓ in QoL score (Ferrans and Powers Quality of Life Index); Overall QoL: Δ score, –0.40; 95% CI, –0.48 to –0.32; P<.001 • Health and physical: Δ score, –0.52; 95% CI, –0.64 to –0.41; P<.001 • Social and economic: Δ score, –0.36; 95% CI, –0.44 to –0.29; P<.001 • Psychological and spiritual: Δ score, –0.32; 95% CI, –0.44 to –0.21; P<.001 • Family: Δ score, –0.24; 95% CI, –0.33 to –0.14; P<.001

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Abbreviations: AMD, adjusted mean difference; BSI, Brief Symptom Inventory; COST, COmprehensive Score for financial Toxicity; CRC, colorectal cancer; D, direct material burdens; FACT-B, Functional Assessment of Cancer Therapy-Breast tool; FACT-G, Functional Assessment of Cancer Therapy-General tool; HR, hazard ratio; I, indirect burdens; OOP, out of pocket; OR, odds ratio; P, psychological burdens; PHQ. Patient Health Questionnaire; QoL, quality of life; RR, risk ratio; SE, standard error.

eTable 5. Financial Toxicity Burdens and Health Outcomes (cont.)

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eAppendix 1. Supplementary Results

Study Characteristics

Patients with cancer at any disease site (eg, breast, prostate, lung) were eligible in 38 studies (51%). Single-disease site-specific studies most commonly focused on breast cancer (n=14 studies, representing 46,033 study subjects) and hematologic cancers (n=7 studies, representing 7,005 study subjects). Assessments of the measure of financial toxicity represented a variety of time points across the cancer survivorship spectrum, from diagnosis to treatment to follow-up; 7 studies focused on financial toxicity within the first 12 months of cancer treatment,[1–7] and 6 studies were longitudinal in design.[8–13] A total of 5 studies (74%) were cross-sectional in design; 3 studies (4%) focused on subjects aged ≥65 years,[14–16] and 7 studies oversampled for racial/ethnic minorities or medically underserved patients.[4,8,17–21] For sample-weighted prevalence estimates, subgroup analyses demonstrating the prevalence of financial burdens ranged from 39% to 64%. When data were grouped by the specific type of financial burden, prevalence was as follows:

- In 7 studies reporting psychological burdens, 39% (95% CI, 25%–54%).
- In 13 studies reporting psychological and indirect burdens, 50% (95% CI, 39%–61%).
- In 1 study reporting indirect and direct burdens, 42% (95% CI, 39%–45%).
- In 2 studies reporting psychological, indirect, and direct burdens, 59% (95% CI, 54%–63%).
- In 1 study reporting indirect burdens, 64% (95% CI, 62%–66%).
- In 1 study reporting psychological and direct burdens, 49% (95% CI, 41%–56%).

Therefore, by type of financial burden, no substantial differences in prevalence were observed (meta-regression P=.24).

Risk of Bias

There was a risk of recall bias within studies, particularly for studies with cross-sectional or retrospective cohort design in which a subject's financial toxicity was not determined prospectively but instead depended on recall and self-report of financial toxicity that the subject retrospectively attributed as a consequence of cancer treatment. Therefore, temporality of associations between financial toxicity and outcomes could not be confirmed. Not all financial toxicity tools/measures had reliability and validity testing, which could lead to misclassification bias. However, some financial toxicity measures were objective (eg, out-of-pocket [OOP] costs and copays determined by insurance claims records, or bankruptcy as determined by public records and not subject self-reporting) and/or validation-related (eg, the COST tool), and themes between findings from studies using validated measures did not differ categorically from studies using other financial toxicity measures. Selection bias may have occurred with underrepresentation of nonwhite subjects in studies.

Selection bias may have also occurred if nonparticipants systematically differed from participants (eg, if nonparticipants tended to have more severe disease or financial toxicity causing barriers to participation), though in the 56 evaluable studies the participation rate exceeded 50% in 86% of studies. Of the 6 longitudinal studies, attrition bias because of deaths from metastatic or advanced cancer could have impacted the generalizability of longitudinal findings to patients with more severe disease.

Measures of Financial Toxicity

Regarding existing measures of financial toxicity, no single concept, measure, or tool was consistently used across studies. Measures included validated items or tools (the Medical Expenditure Panel Survey[22] and the COST tool[23]), objective quantification or estimation of OOP costs, and subjective questions about the severity of treatment, financial burdens, and/or psychological stress (eg, "How much financial burden currently resulted from your illness and treatment?").[24]

Additional Quantitative Analyses

Funnel plot and regression asymmetry tests to assess small-study bias were not feasible because of the small number of studies for quantitative synthesis. For the association between insurance status and odds of financial toxicity, on sensitivity analysis, greater odds were observed in patients with breast cancer aged >65 years receiving adjuvant hormonal treatments. Insurance was still associated with financial toxicity when removing the studies evaluating breast cancer (odds rqatio [OR], 1.77; 95% CI, 1.38–2.25; I^2=31%) or any other particular type of cancer (OR, 2.17; 95% CI, 1.63–2.89; I^2=0%). For the association between financial toxicity and odds of medication nonadherence, the association was still significant after removing the study evaluating leukemia only (OR, 2.22; 95% CI, 1.25–3.96; I^2=13%).

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