Cancer Health Economics Research Literature Meta-Review:

Published Systematic Reviews in Cancer Health Economics Research and Gaps in the Literature

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Purpose

To describe the current landscape for Cancer Health Economics research

- What research is being done now? [Portfolio of funded research]
- What do we already know? [Literature review]
- What are the gaps in the research? [Synthesis]

Potential range of review topics

Structural Factors

- Cancer care workforce
- Health care organizations/ system
- Availability of personnel, services, and technologies

Economic Inputs

Insurance coverage Benefit Design Access to Care
Price of care Social Determinants of Health
Employee Benefits

Cancer Control Continuum

Prevention Screening Treatment Survivorship End-of-Life

Patient-Level Outcomes

Survival QALYs
Patient Costs Financial Hardship
Variations by Patient/Provider
Characteristics
Employment Impacts

Payer-, Provider-, Systemand Societal-Level Outcomes

Cost-Effectiveness Value of Care Cost of Care Health Equity Quality of Care

Policy Factors

- Coverage and eligibility
- Payments/ payment models
- Federal or state mandates
- Regulatory factors
- Innovation and technology diffusion

Criteria and Process for Literature Review

- PubMed search criteria:
 - (((systematic review[Publication Type]) AND neoplasms[MeSH Terms])
 AND economics[MeSH Terms]) AND English[Language];
 - restricted to publications within the last 10 years; ≥ 2 U.S. studies
- Each publication reviewed by 2 reviewers (MH, KA, and/or AJD)
- Applied additional inclusion/exclusion criteria
- Included publications were categorized according to:
 - Economic study type
 - Cancer Type
 - Phase of cancer continuum; relevant population
 - Nature of treatment or other intervention

Inclusion and Exclusion Criteria

Does content fit into one of three broad categories of cancer health economics research?

- Economic outcomes associated with cancer, cancer care
- Economics of cancer healthcare delivery who pays for care, how much is paid, who receives payment
- Methods used in cancer economics research

Excluded:

- Reviews focused only on person-level characteristics such as race, ethnicity, income, education or insurance
- "Reviews" used to populate decision models with parameter estimates
- <2 studies on U.S. populations</p>

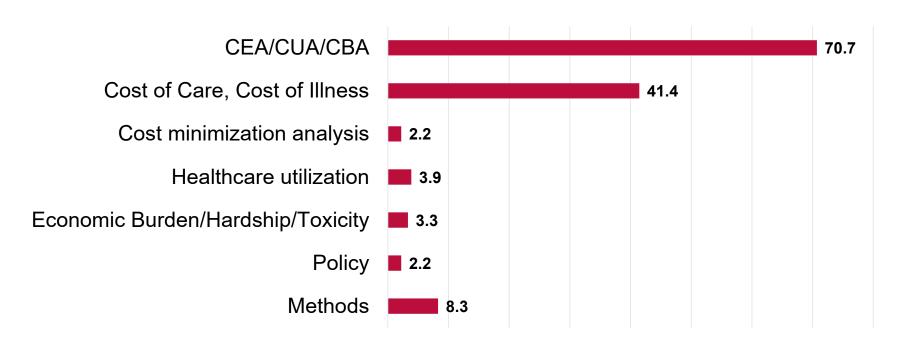
Results

Overview of Review Articles

- Total of 352 reviews identified
 - 164 met full study criteria
 - 17 reviews searched for, but failed to find, economic studies.
 - Reveal selected gaps in literature

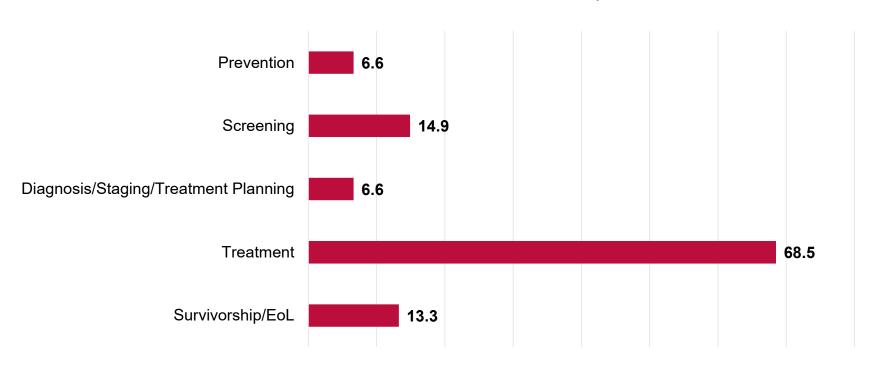
Percentage of Reviews by Type of Cancer Health Economic Studies

Reviews focus primarily on CEA/CUA and cost of care studies



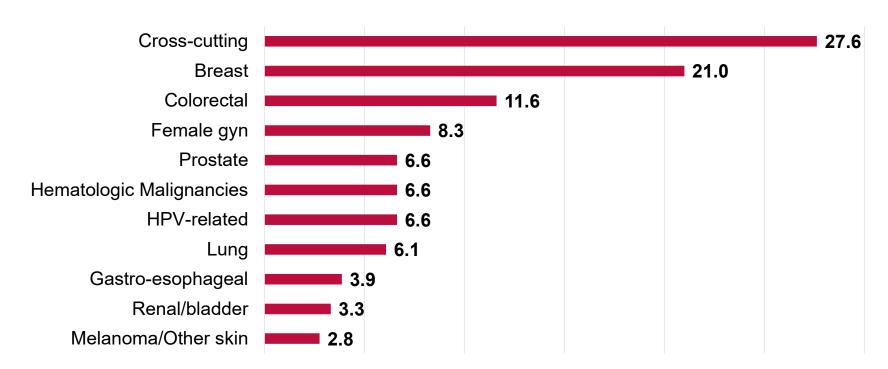
Percentage of Reviews by Cancer Continuum Focus

Most reviews focus on the treatment phase



Percentage of Reviews Reporting on Specific Cancer Sites

Most reviews focus on topics that cut across cancer types



Sample Topics of Individual Reviews

Prevention & Screening	Diagnostics	Treatment	Survivorship
HPV vaccines	imaging, advanced	CAR-T	EoL care discussions
colonoscopy	companion diagnostics	ablation of liver metastases	exercise, PT
low-dose CT	cystoscopy	home IV treatment	lymphedema management
mammography	endobronchial ultrasound	immunotherapy	pain management
prostate specific antigen	endoscopic ultrasound	monoclonal antibodies	rehabilitation
genetic risk assessment	fecal immunochemical testing	adverse events	surveillance
		targeted therapies	supportive care, bone mets
		transplant	supportive care, growth factors
		radiation therapy	

Discussion

- Reviews identified reflect strong focus on cost, CEA (economic outcomes)
 - few reviews focusing on policy, provider organization, payment or response to incentives
- > 2/3 of reviews focus on cancer treatment phase of continuum
 - < 1/6 focus on screening or survivorship</p>
- Focus commonly cuts across multiple cancers, examining treatment or intervention not specific to individual cancer site (e.g. management of bone metastases)
 - Otherwise, > 1/5 of reviews focus on breast cancer

Discussion Continued

- Limitations Medline search general, may have missed content areas that did not use specific MESH headings of neoplasm and economics.
 - Next steps: more targeted searches with specific topic areas noted
 - Invite contributions from the research community
- Literature reviews have inherent limitations, for purposes of gap analysis
 - Do not capture ongoing research.
 - Review topics not selected systematically.
 - Reflect interests & needs of individual researchers or funders (e.g. device or pharmaceutical industry).
 - May overlook topical areas with extensive literature.



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