

The Impact of Socioeconomic Status, Insurance Type, and Treatment Facility on Survival in Metastatic Prostate Cancer: A Systematic Literature Review

Objective



To systematically identify real-world evidence (RWE) that examined the impact of social determinants of health (SDOH), including socioeconomic status (SES), insurance status, and treatment facility (academic/non-academic/community), on survival in metastatic prostate cancer (mPC).

Conclusions



Findings from this systematic literature review (SLR) suggest that higher SES, having health insurance, particularly private insurance, and treatment in an academic facility are associated with improved overall survival (OS) in patients with mPC. Focused efforts are needed to understand this survival advantage and to expand the benefit to all patients.



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References: ¹Cackowski FC et al. *Am Soc Clin Oncol Educ Book*. 2021;41:1-1. ²Hinata et al. *World J Mens Health*. 2022;40(2):217-227. ³Coughlin SS. *Prostate Int*. 2020; 8(2):49-54 ⁴Page, et al. *BMJ*. 2021;372:n160 ⁵Page, et al. *BMJ*. 2021;372:n71. ⁶Higgins JPT TJ et al. 2021. ⁷GA Wells BS et al.

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Background

- Despite recent advancements in cancer treatment, prevention and care, significant disparities in incidence, treatment, and survival by SDOH exist.¹⁻³
- We previously reported the association between race, a key SDOH, and OS in mPC. Herein, we examined additional SDOH (i.e., SES, insurance status, and treatment facility) on survival in mPC.

Materials and Methods

SYSTEMATIC LITERATURE REVIEW

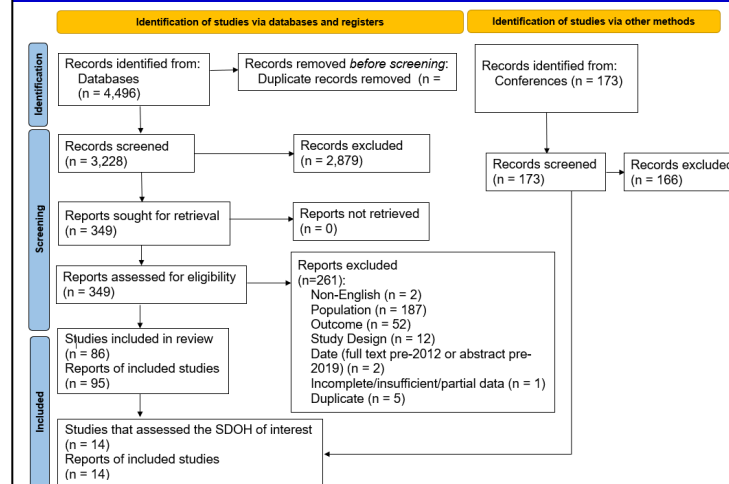
- MEDLINE®, Embase, and Cochrane Library were searched for full-texts from Jan 2012 to July 2022 and for conference abstracts from Jan 2019 to July 2022 using Ovid®. A supplemental search of key congresses was also conducted. Article inclusion was based on a pre-defined PICOS criteria (**Table 1**).
- Review implementation and reporting followed the PRISMA statement⁴⁻⁵ and Cochrane guidelines⁶ (PROSPERO registration: CRD42022350888).
- Quality assessment was performed on full-text publications using Newcastle-Ottawa Scales (NOS).⁷

Results

LITERATURE SEARCH

- Identified 3228 unique records: 95 records (representing 86 studies) were included. Here, we present results on the 14 studies (12 US, 1 ex-US, 1 mixed) which assessed the impact of SES, insurance status, and treatment facility on OS (**Figure 1**).
- Findings were from 12 full-text publications (10 US, 1 ex-US, 1 mixed) and 2 conference abstracts (both US).
- ≥90% studies scored ≥7/9 on the NOS, indicating high quality.

Figure 1: PRISMA Flow Diagram



^a Comprehensive treatment facility was defined as those that treated ≥500 cancer patients per year, based on the National Cancer Database used in both studies.

Table 1: PICOS Criteria

Population	Study populations or subgroups of patients (humans only; men) with:
	<ul style="list-style-type: none"> Age ≥18 years Histologically or cytologically confirmed adenocarcinoma of the prostate Metastatic disease Castration-sensitive OR castration-resistant
Interventions/Comparators	Any except alternative medicines
Outcomes	Studies that mention a relationship between SDOH and target outcome: Clinical outcomes of interest: <ul style="list-style-type: none"> Real-world progression-free survival, OS, objective response rate, treatment duration, real-world patient-reported outcomes, time to subsequent therapy/chemotherapy Adherence/access outcomes of interest: <ul style="list-style-type: none"> Medication access (payer rejection rates, etc), medication persistence (abandonment rates, etc), medication adherence, treatment intensity/intensification, initiation of life-prolonging therapies, treatment consistent with guidelines, health insurance access Note: Full-text publications were further filtered by those reporting the impact of SES, insurance status, and treatment facility on OS.
Study Design	Real-world data

Impact of Insurance Status and Treatment Facility on OS

- A majority of studies showed that patients with private insurance had improved survival compared to other insurance types (**Figure 2A**; all US).
- Most studies (all US) showed patients in an academic facility had improved survival versus a non-academic facility (**Figure 2B**; all US).

Impact of SES on OS

- Two studies (1 ex-US, 1 mixed) investigated the impact of SES, and both reported that higher SES was associated with significantly improved OS.

Figure 2A: Impact of Insurance Status on OS

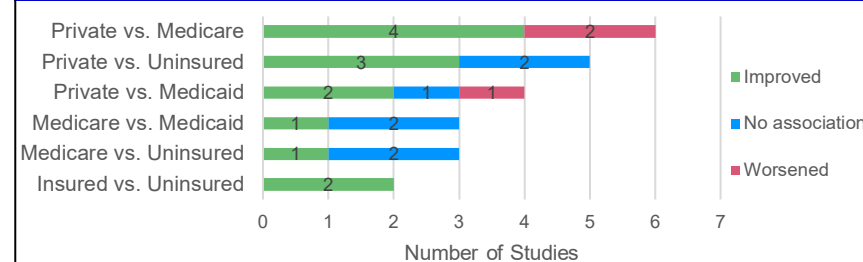


Figure 2B: Impact of Type of Treatment Facility on OS

