

Health-Related Quality of Life among Long-Term Prostate Cancer Survivors by Primary Intervention: a Systematic Review

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1. Introduction

- ↑ Prostate cancer (PC) incidence
129.4 per 100'000 age-adjusted 2012, US¹
- ↑↑ PC 5-years relative survival rate
93% Europe², 99% US¹
- ↑↑↑ PC long-term survivors (≥5 years)

- Interventions**
1. Treatment Options
 - Radical Prostatectomy (RP)
 - External Beam Radiation therapy (EBRT)
 - Brachytherapy (BT)
 - Androgen Deprivation Therapy (ADT)
 2. Observational Methods
 - Active Surveillance (AS)
 - Watchful Waiting (WW)

- No agreement on best intervention
→ Equivalent survival rates, various long-term side effects
- **Is Health-Related Quality of Life (HRQoL) an additional factor for intervention decision?**
- HRQoL is a multidimensional concept³



2. Aim

To systematically review and synthesize studies comparing HRQoL among long-term prostate cancer (PC) survivors by primary intervention

3. Methods

Step 1: Identification, screening, check for eligibility of studies

In March 2016 and January 2017 (update) we searched Pubmed, Medline, Embase, PscychInfo, Cinahl, Web of Science and Cochrane Central Register of Controlled Trials

Step 2: Data extraction and quality assessment

Two reviewers independently extracted data of included studies using a systematic scheme and assessed the methodologically quality of each article, following the GRADE approach⁴

Step 3: Analysing data

HRQoL was compared in three ways

- A: Intervention vs. general population (GP) at specific timepoints ≥ 5 years after primary diagnosis
- B: Intervention vs. intervention at specific timepoints ≥ 5 years after primary diagnosis
- C: Intervention vs. intervention over the period of ≥ 5 years after primary diagnosis

5. Summary and Conclusions

- Studies used different comparison groups and instruments to assess HRQoL and PC specific symptoms
- Many studies did not have enough power to draw any firm conclusions
- Most studies did not assess if results were clinically meaningful
- Long-term PC survivors and controls from the general population (GP) reported comparable global HRQoL/general health but differences in role physical, vitality and bodily pain
- Results comparing different interventions were not consistent, e.g. studies using the EORTC QLQ-C30 questionnaire did not reveal effects, whereas studies using the SF-36 did
- HRQoL among long-term prostate cancer survivors varies according to primary intervention
- Unclear which intervention options are superior with respect to HRQoL

6. References

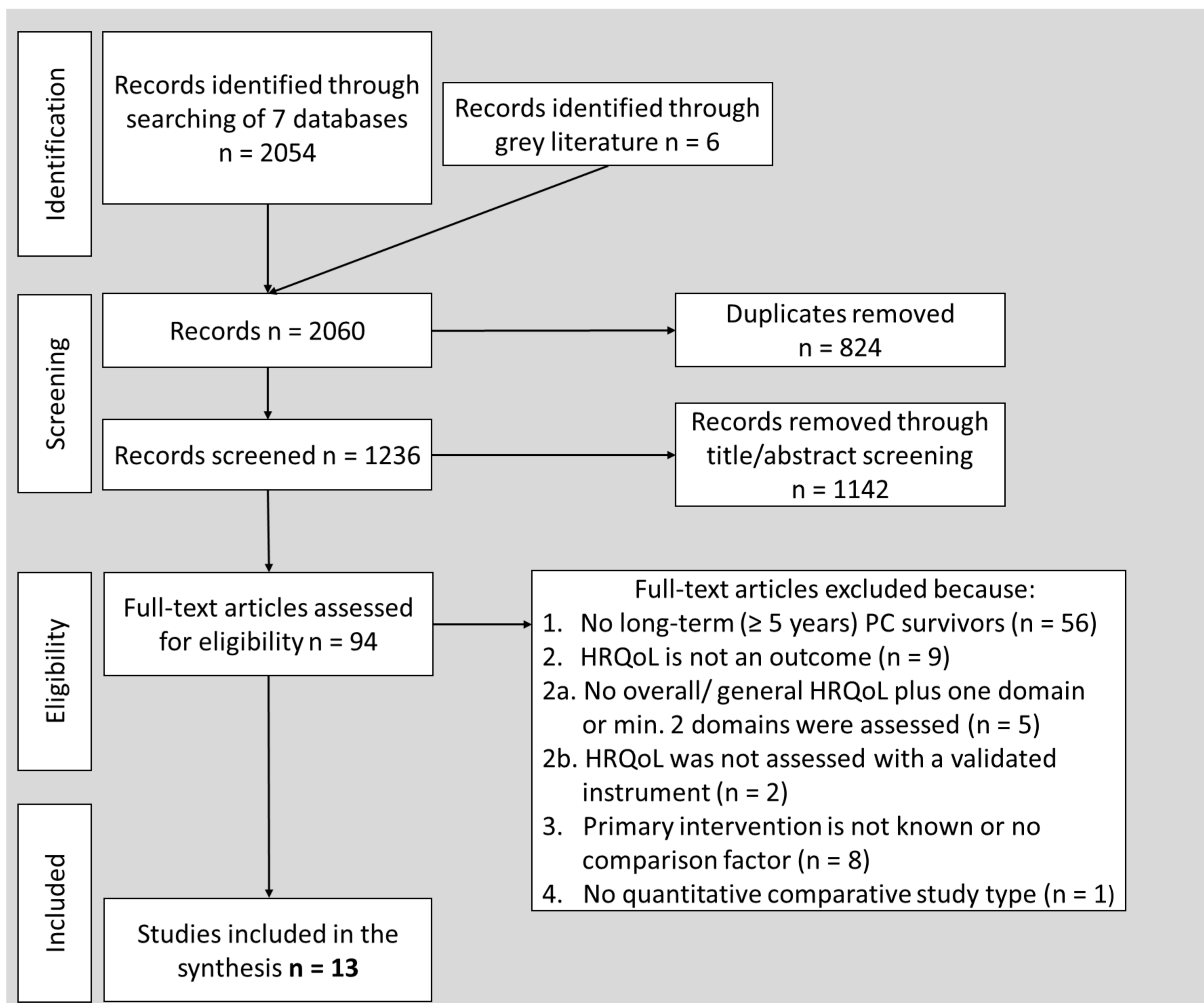
1. NCI. Cancer trends progress report. National Cancer Institute. https://progressreport.cancer.gov/after/survival#field_most_recent_estimates. Published 2012. Accessed February 20, 2017.
2. Sant M. MP, Primic-Zakelj M., Otter R., Francisci S., Gatta G., Berrino F. DAR. Cancer survival in Europe, 1999–2007: Doing better, feeling worse? Eur J Cancer. 2015;51:2101-2103.
3. Ferrell BR, Grant MM, Funk B, Otis-Green S, Garcia N. Quality of life in breast cancer survivors as identified by focus groups. Psychooncology. 1997;6(1):13-23. doi:10.1002/(SICI)1099-1611(199703)6:1<13::AID-PON231>3.0.CO;2-S.
4. Guyatt GH, Oxman AD, Vist GE, et al. GRADE: an emerging consensus on rating quality of evidence and strength of recommendations. BMJ. 2008;336(7650).

7. Contact

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4. Results

Fig 1: Flowchart



Tab 1: Main study findings

CG	Studies (n)	Sample size (n)	Intervention(s)	Domains or scales with effect	Statistical significant (+) and/or clinical meaningful results (*)
A	2	309	EBRT	Role physical Vitality Bodily Pain	2 x ↓* ¹ 1 x ↓* ¹ 1 x ↑+
A	2	284	RP	Role physical Bodily Pain	1 x ↓+ 1 x ↑+
A	2	127	AS/WW	Bodily Pain	1 x ↑+
A	1	60	ADT	none	none
B	3	157 / 113	EBRT vs. AS/WW	General Health Perception Physical Function Role Emotional Vitality Bodily Pain	1 x ↑+ 1 x ↓+ 1 x + ² 1 x + ² 1 x ↓+
B	2	175 / 282	EBRT vs. RP	Physical Function	1 x ↑+* ¹
B	1	193 / 60	RP vs. ADT	Physical Function	2 x ↑+* ¹
B	1	193 / 56	RP vs. AS/WW	Vitality	1 x ↑+* ¹
B	1	193 / 263 / 60 / 56	RP vs. EBRT vs. ADT vs. WW/AS	Physical Function Vitality	1 x ↑+* 1 x ↑+*
C	1	545 / 542 / 545 ³	EBRT vs. RP vs. AS/WW	none	none
C	1	53 / 58	RP + ADT vs. EBRT + ADT	Physical Function Role Physical Role Emotional Vitality Bodily Pain	1 x ↑+ 1 x ↑+ 1 x ↑+ 1 x ↑+ 1 x ↑+
EORTC QLQ-C30					
A	2	58	EBRT	Role Functioning Pain Diarrhoea Nausea/Vomiting	1 x ↓+* ¹ 1 x ↓+ 1 x ↓*/1 x ↓+* ¹ 1 x ↓+
A	1	63	EBRT + clinical progression and/or ADT	Social Functioning Sleep Disturbance Diarrhoea	1 x ↓* 1 x ↓* 1 x ↓*
B	1	13 / 14	EBRT + ADT vs. EBRT	none	none
B	1	27 / 27	EBRT vs. AS/WW	none	none
B	1	174 ⁴	RP vs. BT	none	none
B	1	545 / 542 / 545 ³	EBRT vs. RP vs. AS/WW	none	none
B	1	85-111 ³	ADT vs. ADT + EBRT	none	none
C	1	85-111 ³	ADT vs. ADT + EBRT	Physical Functioning Role Functioning	1 x ↑+ 1 x ↑+

CG comparison group; + statistical significant difference; *clinical important difference; ¹not reported but 10 points difference; ²no data about direction of effect; ³sample size unclear at survey; ⁴sample size per treatment unclear

All scales and single-item measures range in scores from 0 to 100. EORTC QOQL-C30: A high score for a functional scale represents a high / healthy level of functioning, a high score for the global health status / QoL represents a high QoL, and a high score for a symptom scale / item represents a low level of symptomatology (e.g. less pain). SF-36: A high score represents better functions. High scores in the bodily pain scale indicates a lower level of pain.