Health-Related Quality of Life in Long-Term Survivors with Localized Prostate Cancer by Type of Intervention

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Background

- In economically developed countries, prostate cancer (PC) continues to be the most frequent cancer in men. Patient prognosis has substantially improved due to earlier diagnosis and advancements in therapy, leading to five-year relative survival rates of 93% in Europe.[1]
- A variety of intervention options, are available. However, based on survival rates there is currently no agreement on the optimal intervention, especially for men with localized stage PC.
- A published review suggests that based on robust data from two RCTs and one observational study HRQoL does not seem to differ by primary intervention in long-term (i.e. ≥5 years after diagnosis) PC survivors. However, the heterogeneity of studies' methodologies and results precludes to draw a clear conclusion. Especially, it is not clear how intervention combinations affects HRQoL in long-term PC survivors.[2] Therefore, we compared HRQoL by intervention in long-term prostate cancer survivors (i.e. ≥5 years after diagnosis).

Data & Methods

CAESAR
Cancer **S**urvivorship - **a** multi-**r**egional population-based study

- The study sample comprised 940 men diagnosed with early-stage prostate cancer 5-15 years after diagnosis from the population-based CAESAR study in Germany. Survivors diagnosed with prostate cancer were identified from the participating German cancer registries (Schleswig-Holstein, Hamburg, Bremen, Münster/North Rhine-Westphalia, Rhineland-Palatinate, and Saarland) and were randomly chosen for participation.[3]
- HRQoL was assessed via a postal survey using the EORTC QLQ-C30 and EORTC QLQ-PR25.[4,5]
- The association between type of intervention (radical prostatectomy (RP); radiotherapy (RT); RP in combination with RT; RP/RT with concurrent hormone therapy (HT); no intervention reported (NTX)) and HRQoL was assessed with multivariate linear regression and ANOVA adjusted for age, time since diagnosis, and comorbidities.
- Multiple imputation was used to reduce possible bias due to missing values, which were generally within 15%.

Results

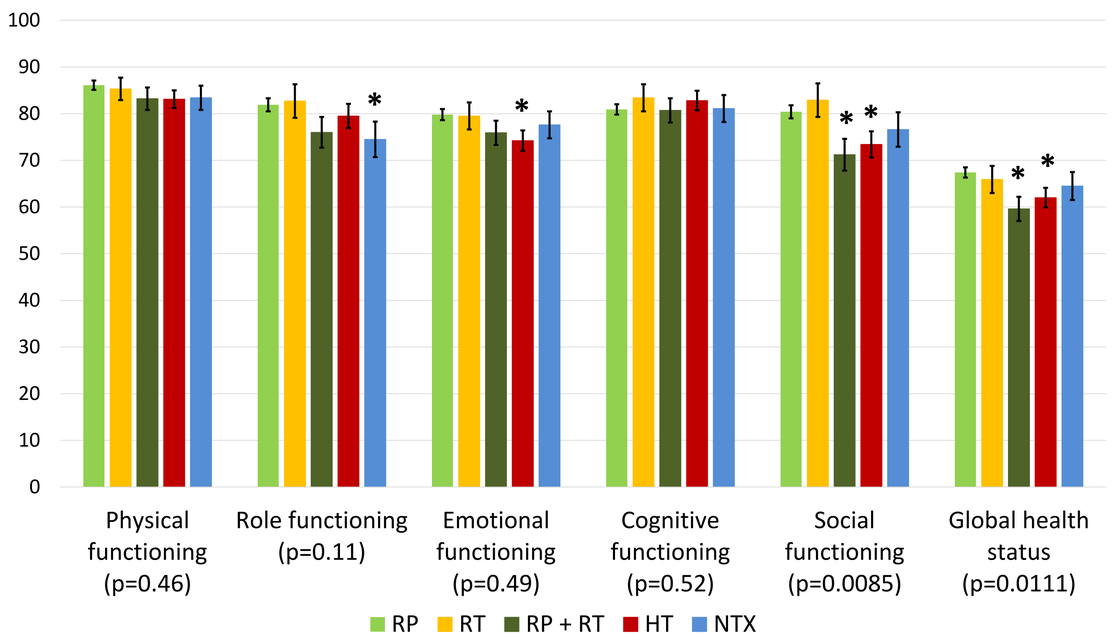

Fig. 1: Mean scores of EORTC QLQ-C30 function scales by intervention

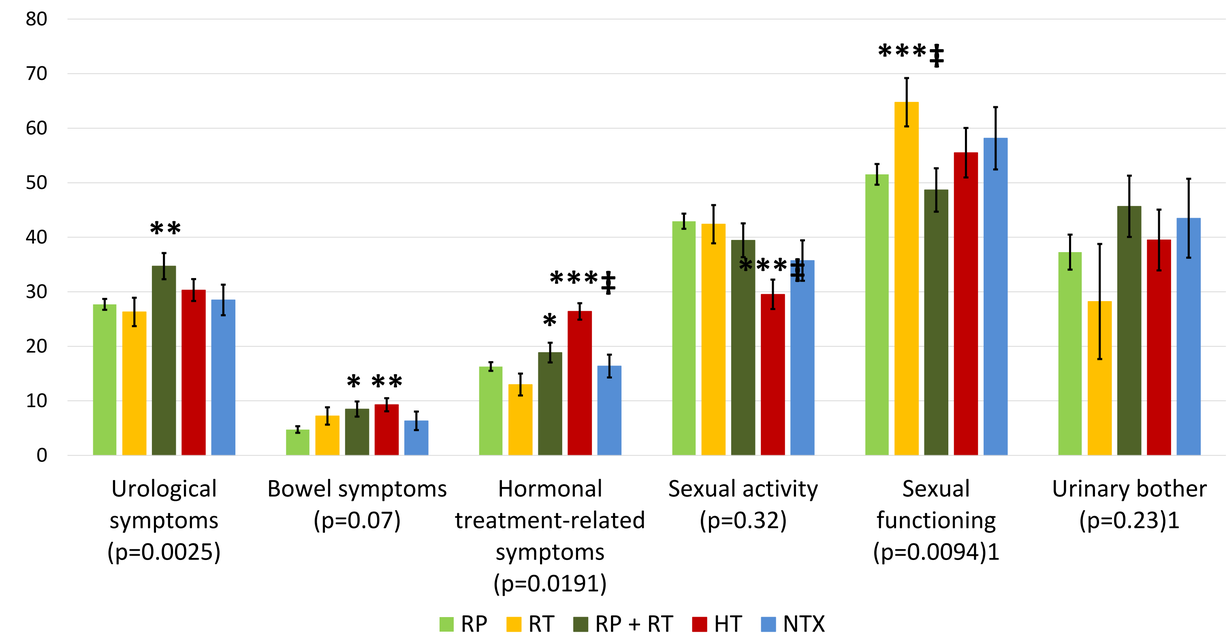

Fig. 3: Mean scores of EORTC QLQ-PR25 scales by intervention

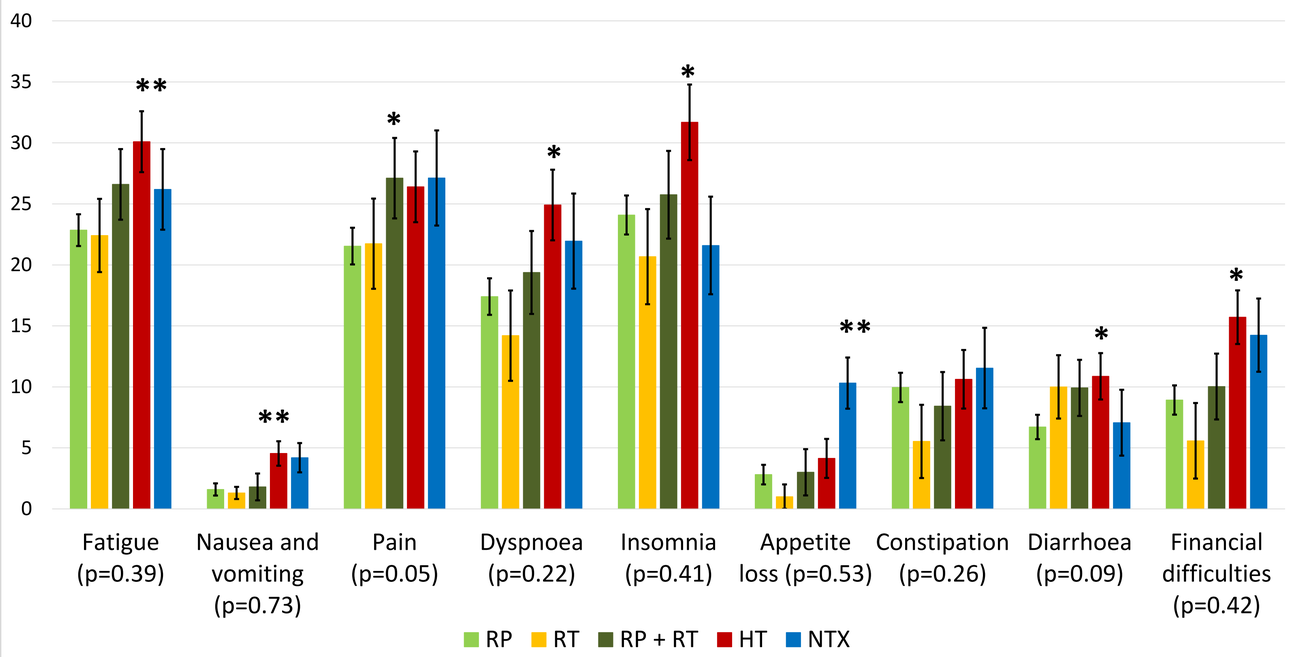

Fig. 2: Mean scores of EORTC QLQ-C30 symptom scales by intervention

*p<0.05, ** p<0.01, ***p<0,001 significant different means from RP
‡ clinically meaningful different means from RP
1smaller sample sizes as the questions referring to these scales are conditional

- PC survivors were mainly treated with RP (59.3%), followed by HT (14.3%), RP & RT (10.5%), RT (8.7%) and NTX (7.2%).
- Long-term prostate cancer survivors treated either with RP or RT have comparable HRQoL overall, reported the best global health/overall QoL and lowest symptom burden.
- Global health status, social functioning, urological, and hormonal treatment-related symptoms, as well as sexual functioning among long-term PC survivors varies by primary intervention (p<0.05).
- PC survivors treated with HT reported a clinically meaningful (>10 points) higher burden of HT-related symptoms and decreased sexual activity as well as a higher burden of fatigue, nausea and vomiting, dyspnoea, insomnia, diarrhoea, financial difficulties, and bowel symptoms (p<0.05).

Conclusion

- HRQoL in PC survivors differs by type of intervention even ≥5 years after diagnosis.
- PC survivors having received both RP and RT or those treated with HT have the greatest detriments in HRQoL, whereas PC survivors treated either with RP or RT have comparable HRQoL and reported the best global health/overall QoL and lowest symptom burden compared with all other interventions and no intervention reported.
- Strengths & Limitations: (+) Large-scale population-based study (-) Retrospective observational design, treatment data based on patients' self-reports.

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References

1. National Cancer Institute, Cancer trends progress report: 2012
2. Adam S, Feller A, Rohrmann A, Arndt V. Health-related quality of life among long-term (≥5 years) prostate cancer survivors by primary intervention: a systematic review. *Health Qual Life Outcomes*. 2018;16(1):22.
3. Arndt V, Koch-Gallenkamp L, Jansen L, et al. Quality of life in long-term and very long-term cancer survivors versus population controls in Germany. *Acta Oncol (Madr)*. 2017;56(2):190-197.
4. Aaronson NK, Aaronson NK, Ahmedzai S, et al. The European Organization for Research and Treatment of Cancer QLQ-C30: a quality-of-life instrument for use in international clinical trials in oncology. *J Natl Cancer Inst*. 1993;85(5):365-376.
5. van Andel G, Bottomley A, Fosså SD, et al. An international field study of the EORTC QLQ-PR25: a questionnaire for assessing the health-related quality of life of patients with prostate cancer. *Eur J Cancer*. 2008;44(16):2418-2424.

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