Assessment of Anticancer-Treatment Outcome in Patients with Metastatic Castration-Resistant Prostate Cancer - Going beyond PSA and Imaging, a Systematic Literature Review

Sabine Schmid,Aurelius Omlin,D Blum,Florian Strasser,Silke Gillessen Sommer & Christian Rothermundt

BACKGROUND
In the past years there has been significant progress in anticancer drug development for patients with metastatic castration-resistant prostate cancer (CRPC). However the current instruments to assess clinical treatment response have limitations and may not sufficiently reflect patient benefit.

OBJECTIVE
To systematically identify tools to evaluate both patient benefit and clinical anticancer-treatment response as basis for an international consensus process and development of a specific pragmatic instrument for men with CRPC.

METHODS
PubMed, Embase and CINAHL were searched to identify currently available tools to assess anticancer treatment benefit, other than standard imaging procedures and PSA measurements, namely quality of life (QoL), detailed pain assessment, physical function and objective measures of other complex cancer related syndromes in patients with CRPC. Additionally, all CRPC phase III trials published in the last 5 years were reviewed as well as studies using physical function tools in a general cancer population. The PRISMA statement was followed for the systematic review process.

RESULTS
The search generated 1096 hits, 185 full text papers were screened and finally 73 publications were included. Additional 89 publications were included by hand search. We identified a total of 98 tools used in CRPC trials and grouped these into three categories: 22 tools assessing QoL domains and subgroups, 47 tools for pain assessment and 29 tools for objective measures, mainly physical function and assessment of skeletal disease burden.

CONCLUSION
A wide variety of assessment tools and also efforts to standardize and harmonize PRO and pain assessment were identified. However, the specific
needs of the increasing CRPC population living longer with their incurable cancer are insufficiently captured and objective physical outcome measures are underrepresented. In the age of new anticancer drug targets and principles, new methods to monitor patient relevant outcomes of antineoplastic therapy are of utmost importance.

**type**
journal paper/review (English)

**date of publishing**
27-7-2015

**journal title**
Ann Oncol

**ISSN electronic**
1569-8041