

From genomic testing to olaparib treatment: real-world utilization and outcomes in BRCA-mutated metastatic castration-resistant prostate cancer

Dianne Bosch¹, Kim van der Velden¹, Aart Beeker², Pieter van den Berg³, André Bergman⁴, Maarten van der Doelen¹, Fons van den Eertwegh⁴, Mathijs Hendriks⁵, Thomas Kerkhofs⁶, Addy van de Luijngaarden⁷, Niven Mehra⁸, Jeroen van Moorselaar⁹, Metin Tascilar¹⁰, Walter Vervenne¹¹, Nir Weijl¹², Carin Uyl-de Groot¹³, Peter Mulders¹, Malou Kuppen¹⁴, Inge van Oort¹⁵

1. Department of Urology, Radboud University Medical Center, Nijmegen, the Netherlands
2. Department of Medical Oncology, Spaarne Gasthuis, Haarlem, the Netherlands
3. Department of Medical Oncology, Tergooi Medical Center, Hilversum, the Netherlands
4. Department of Medical Oncology, Amsterdam University Medical Center, Amsterdam, The Netherlands
5. Department of Medical Oncology, Northwest Clinics, Alkmaar, The Netherlands
6. Department of Internal Medicine, Division of Medical Oncology, GROW - School for Oncology and Developmental Biology, Maastricht University Medical Center, Maastricht, the Netherlands
7. Department of Medical Oncology, Reinier de Graaf Hospital, Delft, The Netherlands
8. Department of Medical Oncology, Radboud University Medical Center, Nijmegen, the Netherlands
9. Department of Urology, Amsterdam University Medical Center, Amsterdam, The Netherlands
10. Department of Medical Oncology, Isala, Zwolle, The Netherlands
11. Department of Medical Oncology, Deventer Hospital, Deventer, the Netherlands
12. Department of Medical Oncology, Haaglanden Medical Center, The Hague, the Netherlands
13. Erasmus School of Health Policy and Management, Erasmus University Rotterdam, Rotterdam, The Netherlands
14. Department of Radiation Oncology (Maastr), GROW Research Institute for Oncology and Reproduction, Maastricht University Medical Centre+, Maastricht, The Netherlands
15. Department of Urology, University Medical Center Groningen, Groningen, the Netherlands

Supplementary Table 1. Definitions of study outcomes.	
Outcome	Definition
OS	Months from olaparib initiation until death from any cause. Alive patients were censored at the date of last known contact.
PFS	Months from olaparib initiation until PD or death from any cause. Patients without PD were censored at the date of last known contact.
PD	Either PSA, nodal, visceral or bone progression according to the Prostate Cancer Working Group 3 (PCWG3) criteria [19], or PD according to the Prostate-Specific Membrane Antigen (PSMA) Position Emission Tomography (PET) Progression (PPP) criteria [20].
rPFS	Months from olaparib initiation until radiographic PD or death from any cause. Patients without radiographic PD were censored at the date of last known contact.
Radiographic PD	Nodal, visceral, and/or bone progression according to PCWG3 criteria [19] or PD according to PPP criteria [20].
PSA response (PSA50)	Minimum of 50% decline from baseline PSA value according to PCWG3 criteria [19].
Best PSA response	Maximum change from baseline PSA value (in percentages) without confirmation of a second measure according to PCWG3 criteria. In case of no decline, responses were measured at 12 weeks [19]. If treatment was supplied for less than 12 weeks, responses were measured at the end of treatment or start of next treatment.
Treatment duration	Months from olaparib initiation until discontinuation or death. Patients with ongoing treatment were censored at the date of last known contact.
PCWG3 criteria for PSA progression	Minimum of 25% increase and an absolute increase of ≥ 2 ng/mL from the nadir obtained at a minimum of 1-week intervals, confirmed by a second value obtained 3 or more weeks later [19].
PCWG3 criteria for nodal/visceral progression	Progression on contrast-enhanced computed tomography (CT) or cross-sectional magnetic resonance imaging (MRI) according to the modified Response Evaluation Criteria in Solid Tumours (RECIST) 1.1 [19].
PCWG3 criteria for bone progression	Minimum of 2 new lesions on bone scintigraphy [19].
PPP criteria for PD	Minimum of 2 new PSMA-positive lesions, or 1 new PSMA-positive lesion plus consistent clinical or laboratory data, or an increase by $\geq 30\%$ in size or uptake plus consistent clinical or laboratory data [20].
Abbreviations: OS, overall survival; PD, progressive disease; PSA, prostate-specific antigen; PFS, progression-free survival; rPFS, radiographic progression-free survival.	