Radium-223 is a well tolerated and safe treatment for metastatic castration resistant prostate cancer (mCRPC): real world data from a single cancer center

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### Introduction

Radium-223 is an alpha emitter that selectively targets bone metastases. It has been approved for the treatment of CRPC with bone metastases and without visceral involvement.

# **Objectives**

We present real world data for the first two years of Radium-223 administration at Guy's Hospital.

#### Methods

CRPC patients with bone metastases received Radium-223 fora period of two years. 50kBq/kg Radium-223 was given intravenously every 28 days for 6 cycles.

### Results

60 patients with median age 75 years (49-86) were studied. ECOG PS was 0-1 in 55% and 2 in 45%. 80% had > 6 bone metastases while 20 % had a superscan. 63.3% had bone pain WHO score 2 or more and 30% were receiving concurrent bisphosphonates. The majority (71.7%) had received 2 or more lines of prior treatments. 49 (81.7%) had finished treatment while the remaining 11 patients continue Radium-223. 22 of 49 (45%) completed all 6 cycles of treatment, while disease progression was the main cause for treatment interruption (26 patients) and 1 stopped due to toxicity.

Patients with 2 or less previous lines of treatment had an increased likelihood of completing 5 or 6 cycles of therapy (p=0.013). There was a trend for patients PS 0-1 to complete 5-6 cycles of Radium-223 compared to patients PS 2 (p=0.79). Treatment was well tolerated and safe. Most of adverse events were grade 1-2 while incidence of grade 3-4 events was less than 3% (anaemia).

## Conclusions

Radium-223 is well tolerated and safe treatment. Optimal patient selection remains crucial in order to ensure effective treatment delivery.

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