Lutetium-177-Prostate-Specific Membrane Antigen Therapy in Patients with Prior Radium-223: Safety and Effectiveness Outcomes

Kambiz Rahbar, Markus Eiber, Matthias Ebner, Christian La Fougère, Wladimir Prasolt, Wolfgang Petters, Philipp Rasche, Elke Haas, Helmut Dittmann, Ralph A. Bundschuh, Kim M. Pabst, Milena Kurtincz, Anja Schmall, Frank Velthuis, Oliver Sarho

BACKGROUND

- Radium-223 (Ra) is an established targeted alpha therapy with a good safety profile that prolongs overall survival (OS) and improves quality of life in patients with bone-poor metastases.

- Lutetium-177-specific membrane antigen-1 (177Lu-PSMA), a biolabile emitting therapy, has shown an acceptable safety profile and prolongs OS in heavily pretreated PSMA-positive CaP patients, including taxane-based chemotherapy (Tax) and Ra.

- Data from small sample size studies have suggested the feasibility of using 177Lu-PSMA in pts who previously received Ra and Tax, but more evidence on optimal treatment sequences of therapies with different mechanisms of action is needed to inform clinical practice.

OBJECTIVE

- To investigate the safety and clinical effectiveness of 177Lu-PSMA treatment in pts with CaP who had received prior 177Lu to Ra in the RAUL study.

- To investigate safety and clinical effectiveness of Ra and Tax vs. Tax, 177Lu-PSMA therapies and determine the feasibility of different sequence approaches including Tax (docetaxel and/or cabazitaxel), Ra, and 177Lu-PSMA.

METHODS

- RAUL is a retrospective medical chart review of pts treated with 177Lu-PSMA in Germany. After 223Ra prior to 177Lu-PSMA.

- Descriptive statistics and Kaplan-Meier survival probabilities were generated. Median OS was calculated from the first dose of 177Lu-PSMA and the first dose of Ra.

RESULTS

- Of the 176 pts who received 177Lu-PSMA after Ra, 102 were included in this analysis (Figure 3).

- All pts had bone metastases and received prior Ra. Of these, 77 received 6 cycles or more.

- Overall, 73% of pts received >1 177Lu-PSMA cycles and 27% received >5 cycles.

Figure 1. RAUL study design

Figure 2. Treatment sequence groups

Figure 3. Timing and sequence of therapies from start of first treatment for mCRPC

Figure 4. Best PSA and ALP responses during 177Lu-PSMA therapy

Figure 5. Kaplan-Meier curves of overall survival

Table 1. Baseline characteristics before starting 177Lu-PSMA

Table 3. Treatment-emergent adverse events during 177Lu-PSMA therapy

Table 2. Grade 3-4 laboratory abnormalities

Table 4. Safety of 177Lu-PSMA Treatment

Table 5. Grade 3–4 laboratory abnormalities

Efficacy of 177Lu-PSMA Treatment

Figures 4 and 5 show Kaplan-Meier curves of overall survival.

DISCUSSION AND CONCLUSIONS

- In patients for whom Ra was used as part of routine disease management, subsequent 177Lu-PSMA therapy was clinically feasible and well tolerated, with acceptable hematologic and non-hematologic adverse events.

- Survival outcomes in pts who received the 177Lu-PSMA sequence were similar to those reported in previous real-world studies and the phase 3 VISION trial.

- Incorporation of Ra in common therapy sequences for CaP is feasible, including docetaxel-based chemotherapy in between Ra and 177Lu-PSMA, without alteration of safety profile or overall survival from the start of 177Lu-PSMA.

References


Disclosures

- No other disclosures.

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