

Supplemental Figure 1: 65-year-old patient (patient 5 in Table 2) with acinic cell carcinoma. Previously, complete remission was achieved by surgery and radiotherapy of the primary, lymph node metastases, and locoregional recurrence. On routine re-staging, bone scintigraphy revealed new bone metastases. The patient demonstrated progressive disease under conventional radiotherapy and PSMA RLT was evaluated. Maximum-intensity projection of ^{68}Ga -PSMA-PET/CT (A) revealed disseminated bone metastases in the ribs, vertebrae, pelvis (dashed arrow) and scapulae (solid arrow) with high target PSMA-expression. PSMA-RLT was initiated and high tumoral PSMA-expression was confirmed by post-treatment scintigraphy (B) 24 hours after the administration of 6.1 GBq ^{177}Lu -PSMA. Absorbed doses were 0.41 and 0.49 Gy/GBq, respectively, for two tumor lesions and 0.39 Gy/GBq for the kidneys. Follow-up ^{68}Ga -PSMA PET/CT (C) after 4 cycles demonstrated decreased PSMA expression (SUVmax: 36 to 14.5). Treatment was continued with additional two cycles of PSMA-RLT. Post-treatment scintigraphy of 6th cycle (D) showed decreased PSMA expression of metastatic lesions. ^{18}F -PSMA PET/CT (E) after 6 cycles of PSMA-RLT demonstrated stable disease.

