

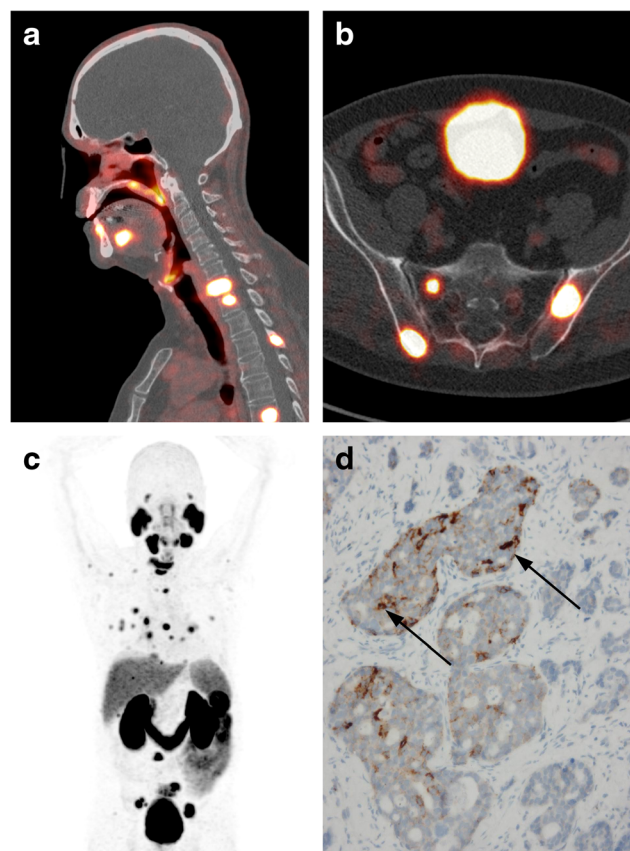
## $^{68}\text{Ga}$ -PSMA PET-CT Imaging of Metastatic Adenoid Cystic Carcinoma

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**Abstract** A patient with a history of adenoid cystic carcinoma of the nasal cavity presented himself with bone pain and an elevated PSA level. On suspicion of metastatic prostate cancer a  $^{68}\text{Ga}$ -PSMA PET-CT was performed. The PET-CT showed numerous lung and non-sclerotic bone metastasis. Biopsy of a bone metastasis was performed and pathology showed adenoid cystic carcinoma instead of prostate cancer. Immunohistochemical PSMA staining of the primary tumour showed intense PSMA expression in adenoid cystic carcinoma tumour cells. Because of the high PSMA expression of adenoid cystic carcinoma,  $^{68}\text{Ga}$ -PSMA PET-CT might be a promising imaging modality for this malignancy.

**Keywords** Adenoid Cystic · Carcinoma · ( $^{68}\text{Ga}$ )-PSMA · Immunohistochemistry · PET-CT



**Fig. 1** Sagittal (a) and axial (b) fused PET-CT images and coronal maximum intensity projection of  $^{68}\text{Ga}$ -PSMA PET (c) showing intense PSMA binding in adenoid cystic carcinoma metastases. Immunohistochemistry of the primary tumour showed intense PSMA expression mainly in adenoid cystic carcinoma tumour cells (d, arrows)

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### Compliance with Ethical Standards

**Conflict of interest** Bart de Keizer, Gerard Krijger, Tessa Ververs, Robert van Es, Remco de Bree and Stefan Willems declare that they have no conflict of interest.

**Ethical statement** The study was approved by an institutional review board or equivalent and has been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki and its later amendments. All subjects in the study gave written informed consent or the institutional review board waived the need to obtain informed consent.

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