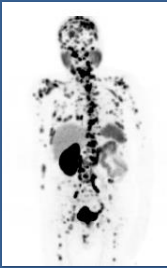


Prostate Cancer Theranostics: Combining Imaging and Therapy

Mike Sathekge, MD, PhD; Moshe Modiselle, MD; Mariza Vorster, MD, PhD; Nozipho Nyakale, MD; Neo Mokgoro, MD; Brenda Mokaleng, PhD; JanRijn Zeevaart, PhD; Thomas Ebenhan, PhD.
University of Pretoria & Steve Biko Academic Hospital, Department of Nuclear Medicine

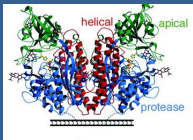
⁶⁸Ga-PSMA PET/CT & ¹⁷⁷Lu-PSMA PET/CT in Prostate Cancer



Prostate Specific Membrane Antigen is a Type II transmembrane glycoprotein that is expressed in the secretory cells of prostate epithelium, small intestine, proximal renal tubule, salivary glands, brain and in the neovasculature of many tumors (kidney, bladder, pancreas, lung).

It is also over-expressed in aggressive tumors, androgen-independence, and metastatic/recurrent disease.

⁶⁸Ga-PSMA PET/CT can be used to image and individualize patients for targeted radionuclide therapy with ¹⁷⁷Lu-PSMA



Want to know more?

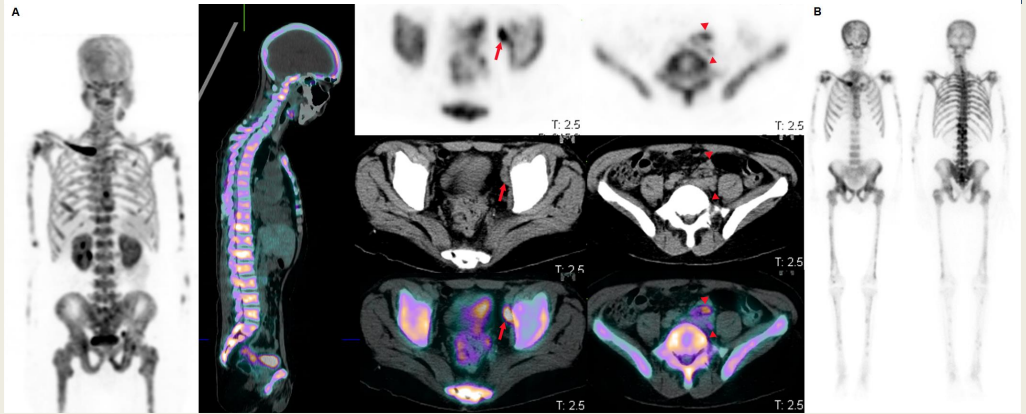
For more information, please also see our website:
www.up.ac.za/Nuclear-Medicine

INTERESTING IMAGE

Clin Nucl Med 2015

Metastatic Prostate Carcinoma Presenting as a Superscan on ⁶⁸Ga-PSMA PET/CT

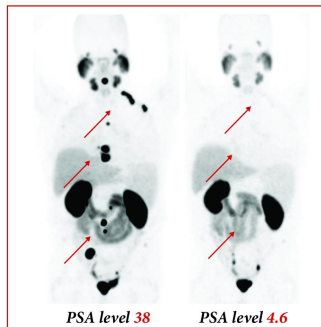
Ismaheel Lawal, MD, Mariza Vorster, MD, PhD, Tebatso Boshomane, MD, Kehinde Oloade, MD, Thomas Ebenhan, PhD, and Mike Sathekge, MD, PhD



⁶⁸Ga-PSMA PET/CT imaging (A), which revealed diffuse generalised skeletal tracer uptake as well as multiple tracer-avid abdominal (arrow head) and pelvic (arrow) lymphadenopathy. The prostate also showed increased tracer accumulation.

^{99m}Tc-MDP whole-body bone scan (B) performed within 24 hours of ⁶⁸Ga-PSMA PET/CT also demonstrated diffusely increased skeletal accumulation, which was less intense than that seen on the PET/CT images.

SNMMI image of the year -- theranostic drug unites imaging and therapy for prostate cancer



PET image shows prostate cancer patient's successful response to PSMA-617 endoradiotherapy

Matthias Eiber et al. JNM:SNMMI 2015