



UPPSALA
UNIVERSITET



AKADEMISKA
SJUKHUSET

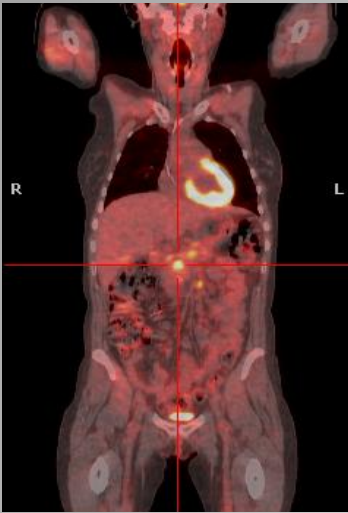
PET – annat än socker?



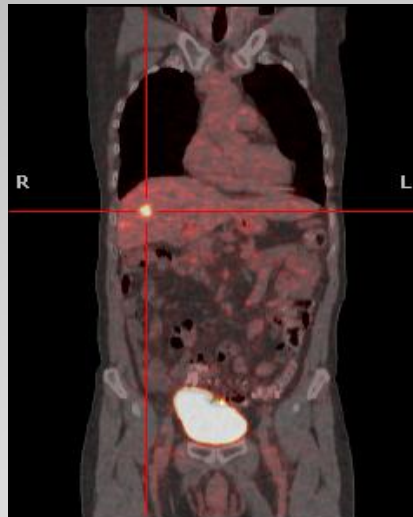
Exempel på PET tracers I klinisk onkologi

Mekanism	Tracer
Glukosupptag	18F-FDG
Proliferation	18F-Fluorothymidin
Perfusion	15O-vatten
Aminosyratransport	11C-metionin, 18F-tyrosin, 11C-MeAib, 18F-FACBC
Proteinsyntes	11C-tyrosin
Angiogenes	18F-fluciclatide, 89Zr-bevacizumab
Kolintransport	18F-kolin, 11C-kolin
Intermediär metabolism	11C-acetat, 18F-glutamat
Lipidsyntes	11C-acetat, 11C-kolin
Somatostatinreceptoruttryck	68Ga-DOTATOC, DOTATATE, DOTANOC
B11-hydroxylas	11C-metomidat
Aminergt upptag och dekarboxylering	18F-fluorodopa, 11C-5-hydroxytryptofan
Adrenerg innervering	11C-hydroxyfedrin
Bennybildning	18F-fluorid, 68Ga-bisfosfonat
Läkemedelsupptag	18F-5FU, 11C-docetaxel, 11C-erlotinib, 11C-temodal
HER2-receptoruttryck	68Ga-ABY025, 89Zr-trastuzumab
Könshormonreceptorer	18F-DHEAP, 18F-östrogen, 18F-progesteron
Jodtransport	124I-jod

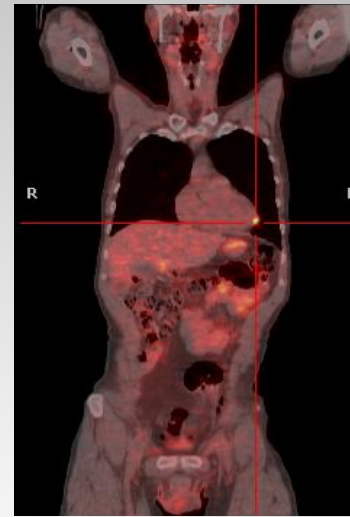
Clinical Research – Diagnosing cancer



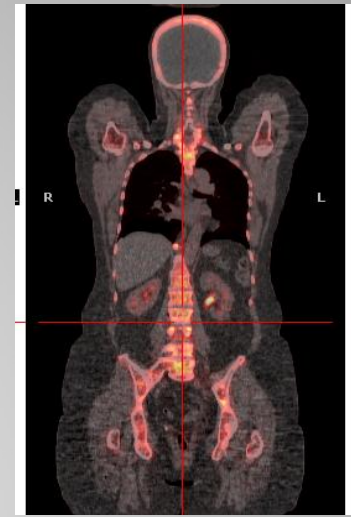
Malignant tumors
 ^{18}F Fluorodeoxyglucose



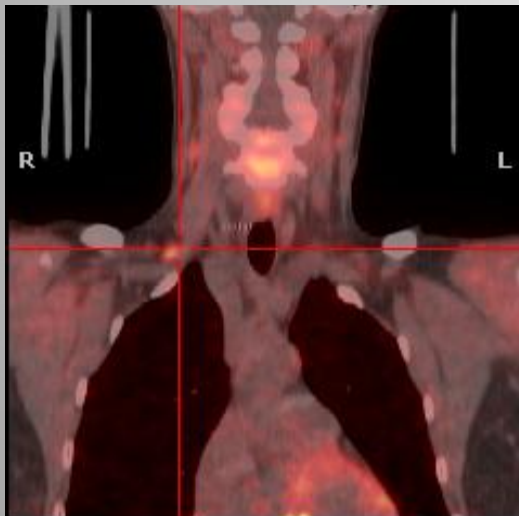
Neuroendocrine tumors
 ^{68}Ga DOTA-TATE



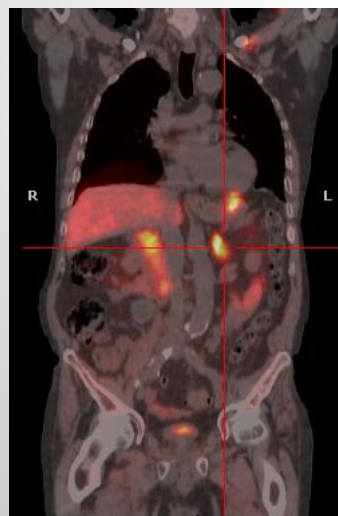
Neuroendocrine tumors
 ^{11}C 5-Hydroxytryptophan



Bone metastases
 ^{18}F -Fluorine



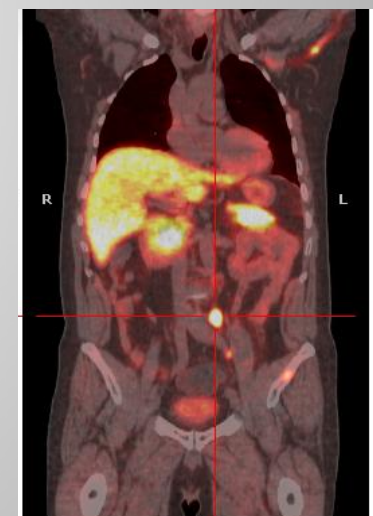
Parathyroid cancer
 ^{11}C Methionin



Adrenocortical tumors
 ^{11}C Metomidate



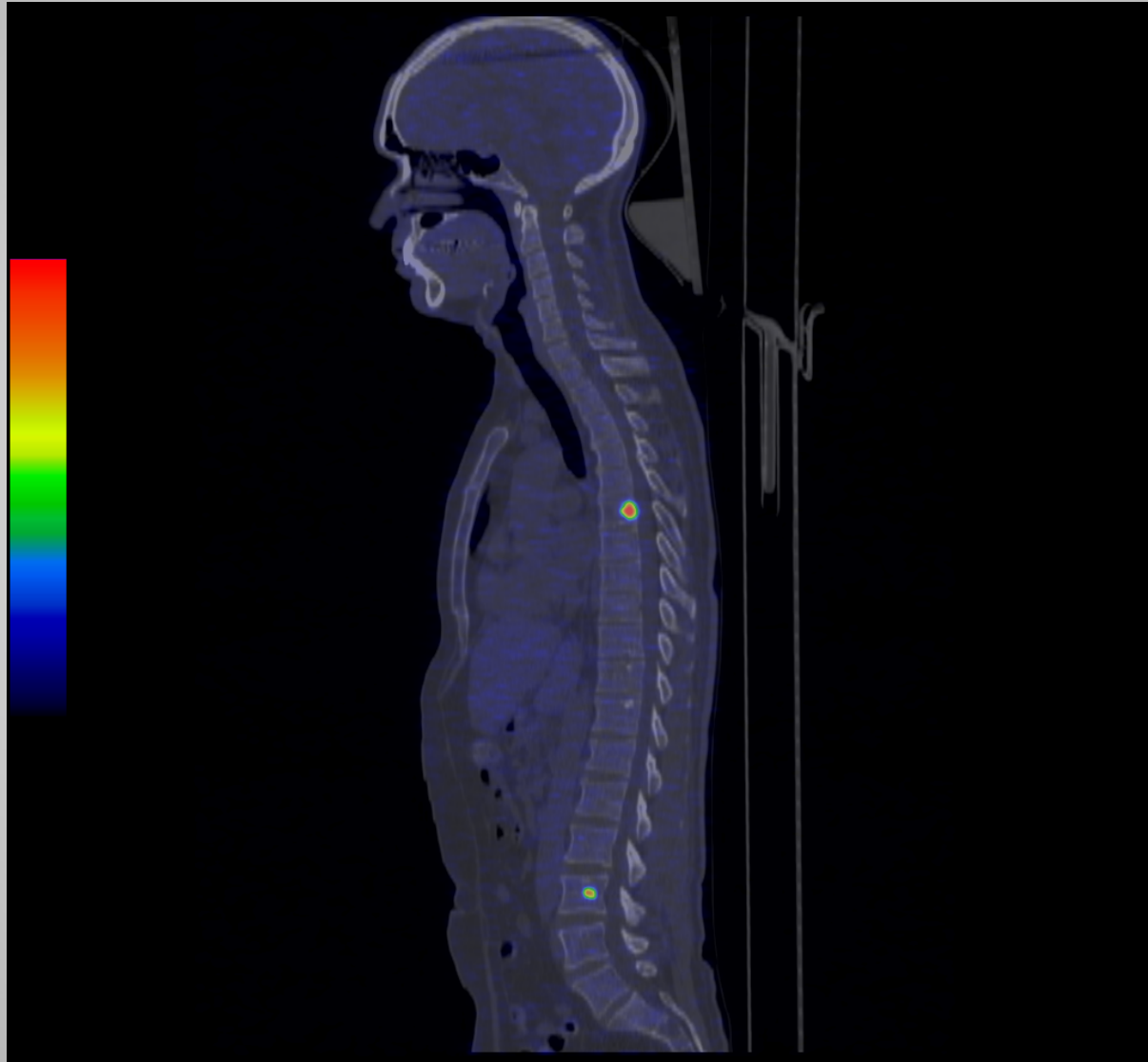
Pheochromocytomas
 ^{11}C Hydroxyephedrine



Prostate cancer
 ^{11}C Acetate

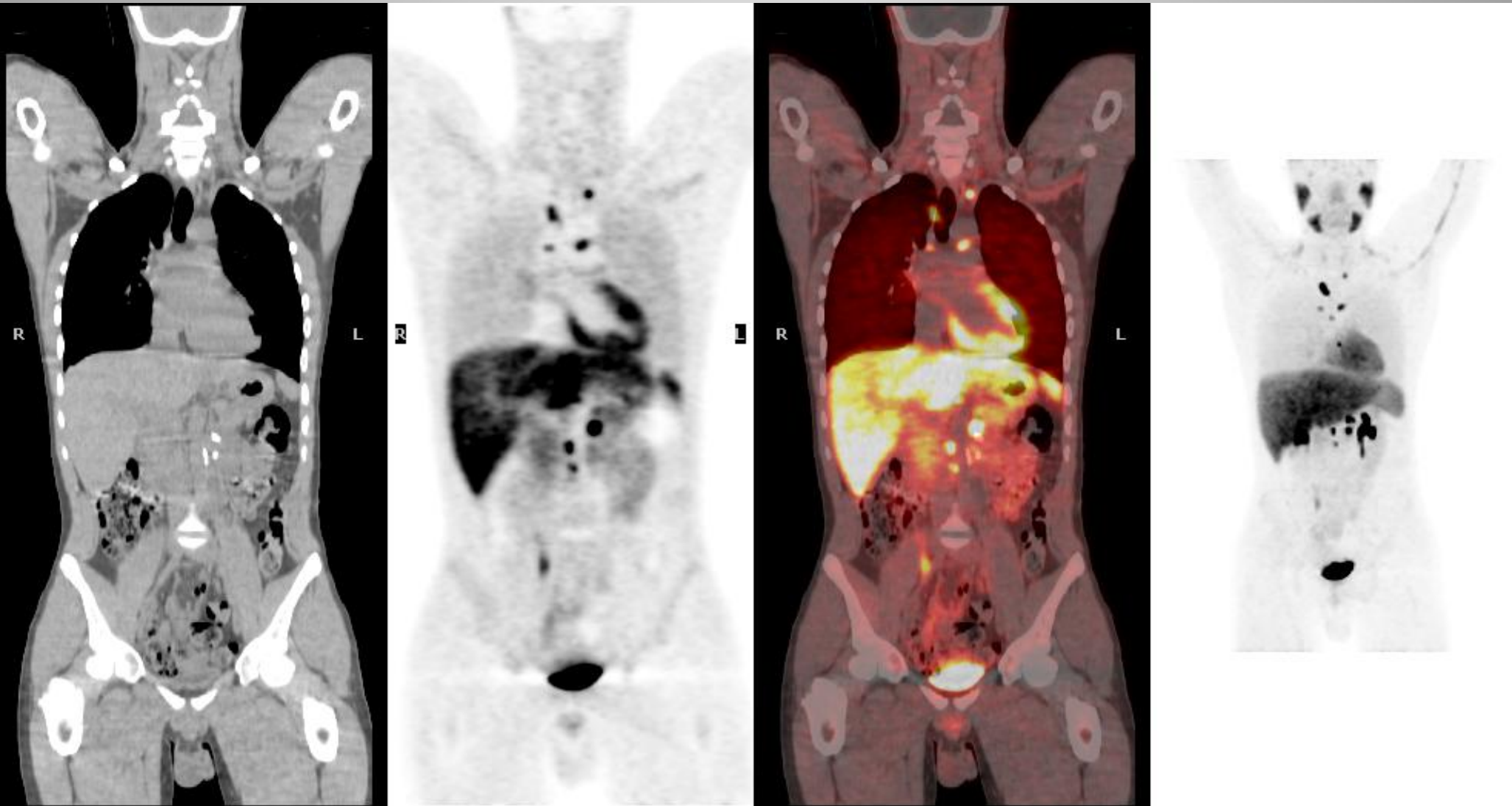
Tumör-specifika tracers

^{11}C -5-hydroxytryptophan (HTP) för neuroendokrina tumörer



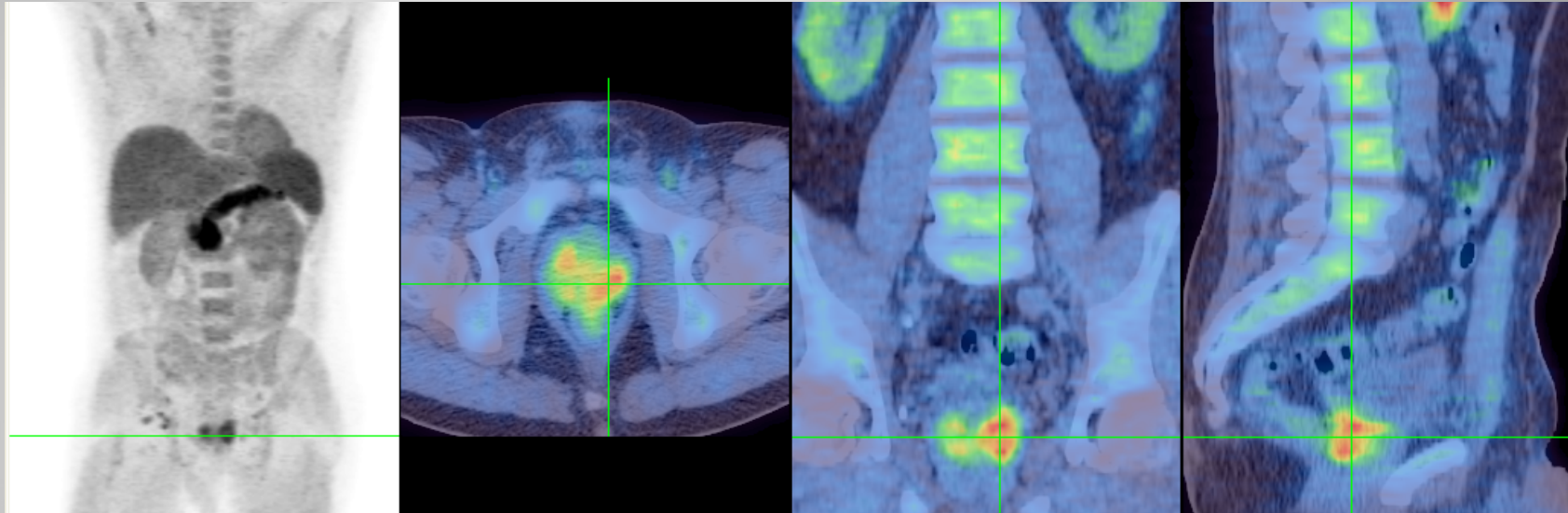
Tumör-specifika tracers

^{11}C -hydroxyfedrin vid feokromocytom

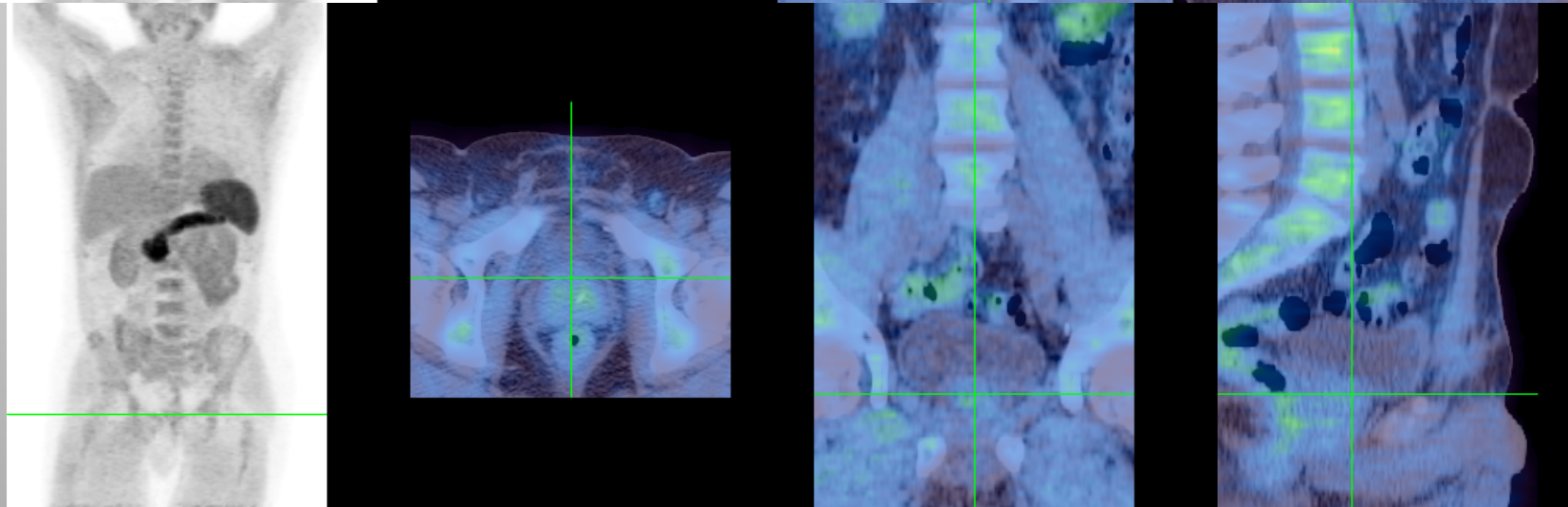


11C-acetat PET/CT vid Prostatacancer

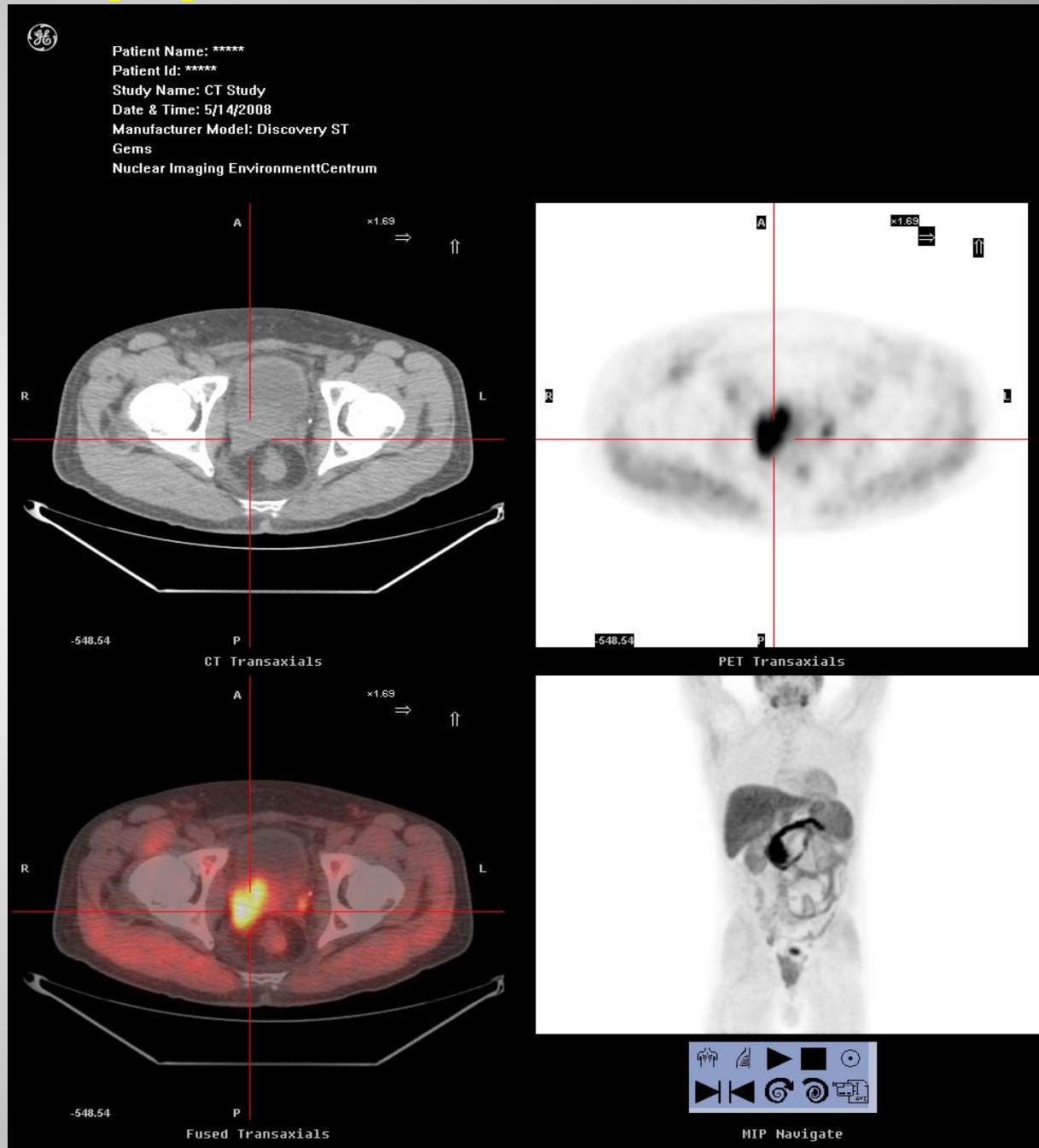
Före
hormoner



Efter



1-[^{11}C]acetate (ACE) in PET imaging



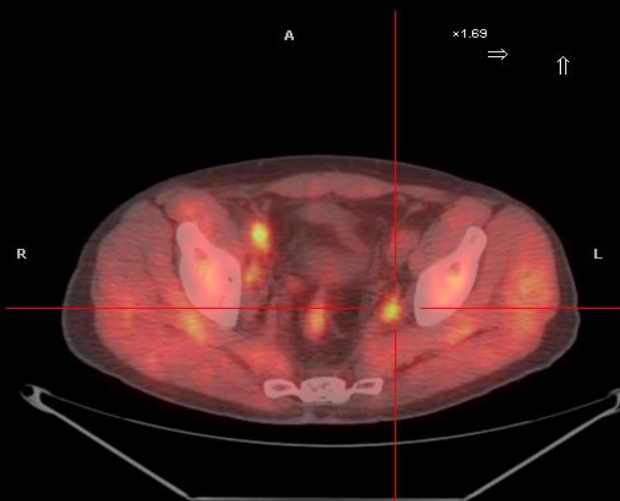


Patient Name: *****
Patient Id: *****
Study Name: CT Study
Date & Time: 5/14/2008
Manufacturer Model: Discovery ST
Gems
Nuclear Imaging EnvironmenttCentrum



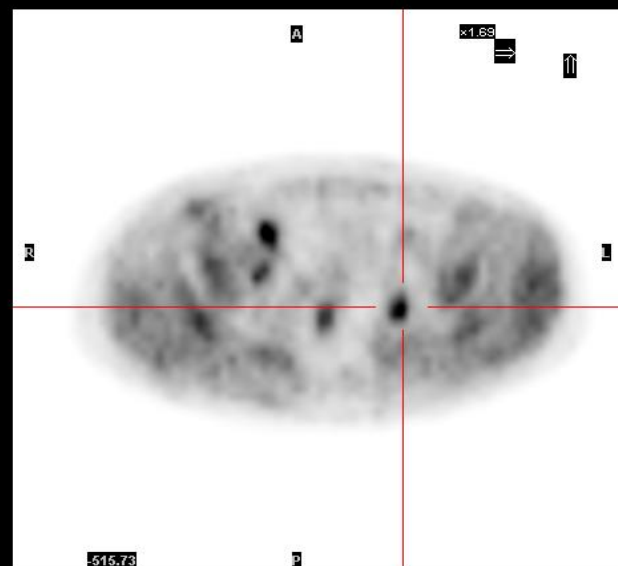
-515.73

P
CT Transaxials



-512.73

P
Fused Transaxials



-515.73

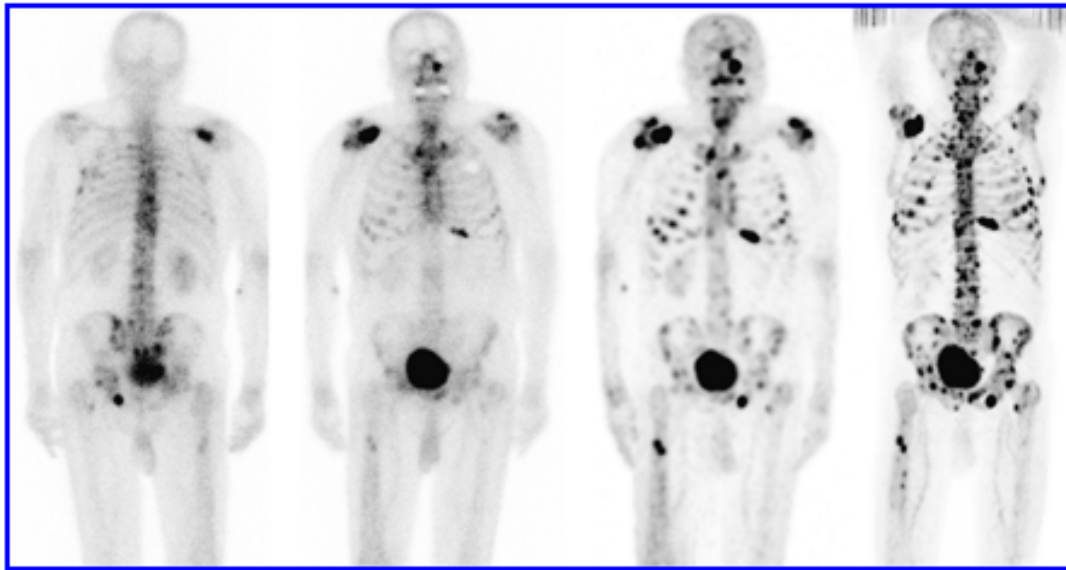
PET Transaxials



MIP Navigate

The Detection of Bone Metastases in Patients with High-Risk Prostate Cancer: ^{99m}Tc -MDP Planar Bone Scintigraphy, Single- and Multi-Field-of-View SPECT, ^{18}F -Fluoride PET, and ^{18}F -Fluoride PET/CT

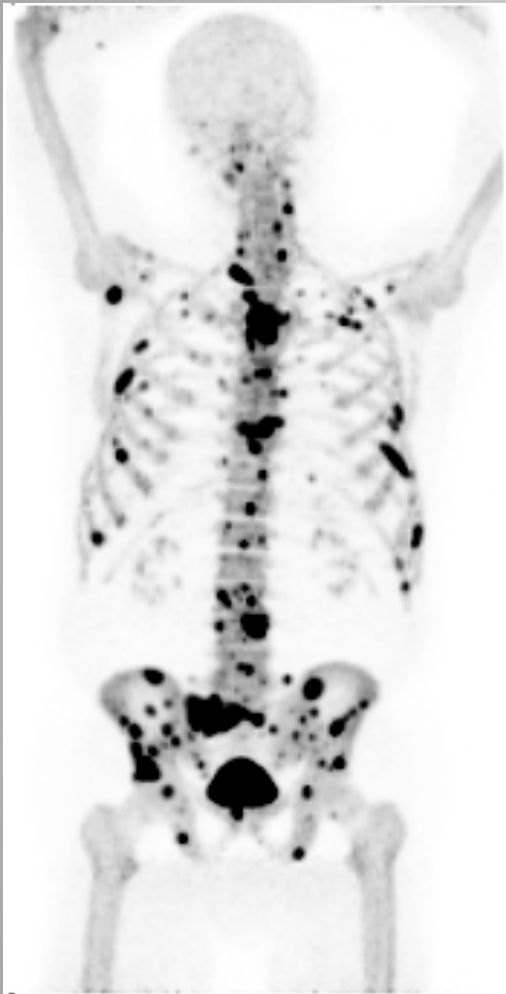
Einat Even-Sapir, MD, PhD^{1,2}, Ur Metser, MD^{1,2}, Eyal Mishani, PhD³, Gennady Lievshitz, MD¹, Hedva Lerman, MD¹ and Ilan Leibovitch, MD^{2,4}



JNM 2006

FIGURE 1. An 82-y-old patient with numerous bone metastases. From left to right: posterior and anterior planar BS, multi-FOV SPECT, and ^{18}F -Fluoride PET images. More lesions are detected on SPECT compared with planar images and on ^{18}F -Fluoride PET compared with SPECT images.

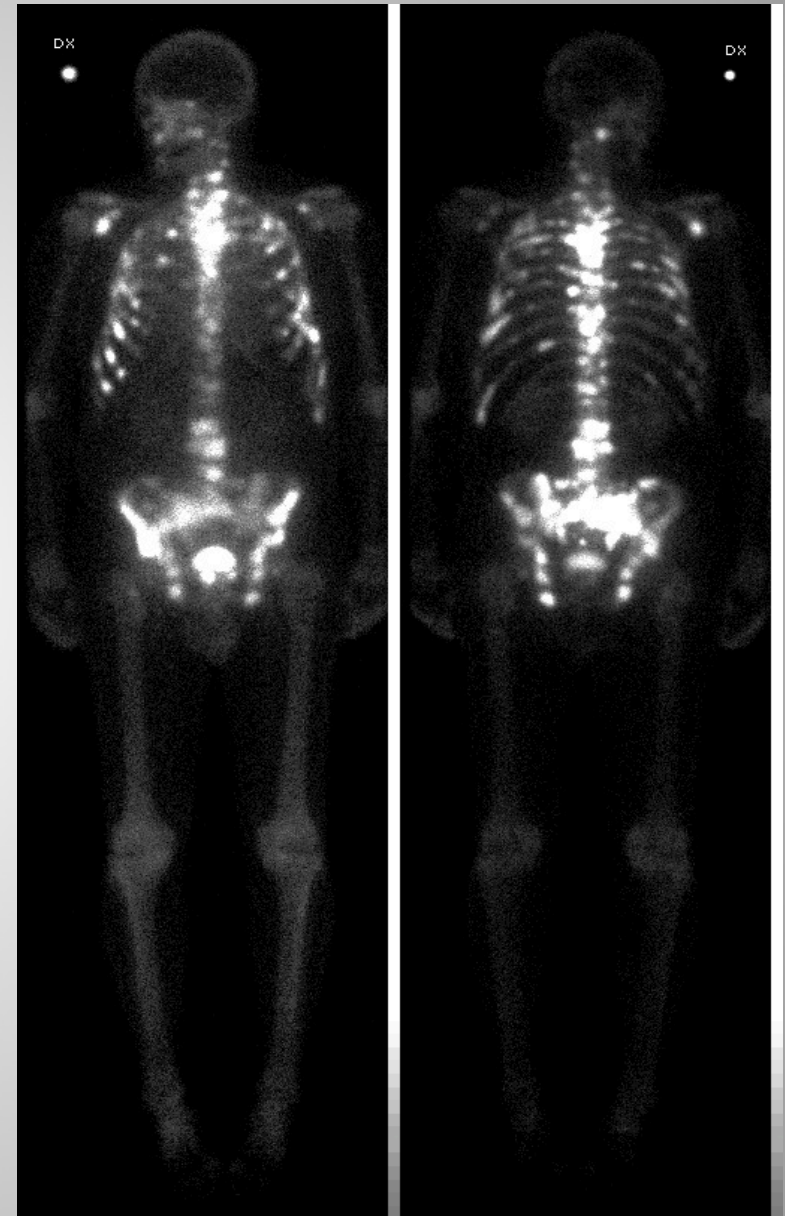
Fluorid PET



Acetat PET



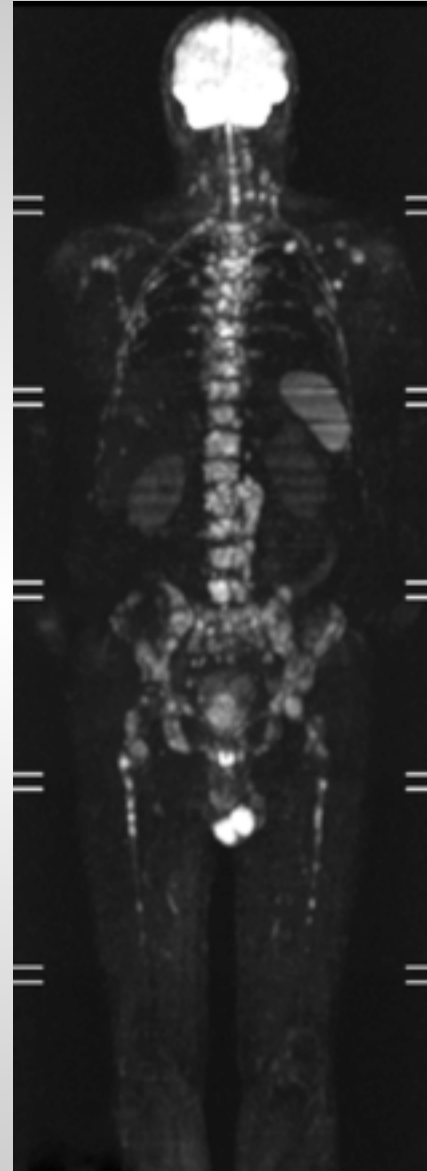
Skelettskint



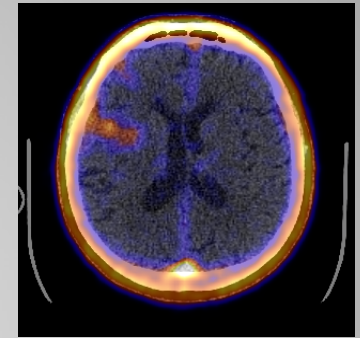
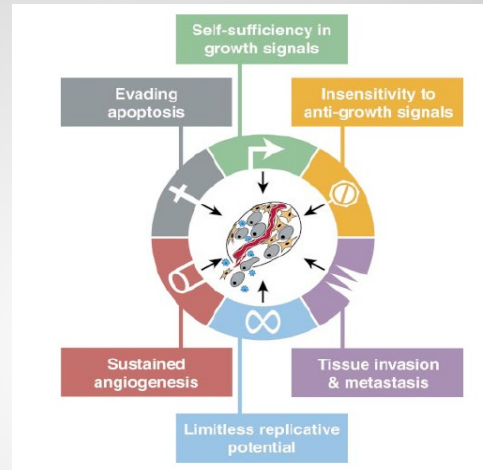
Fluorid PET



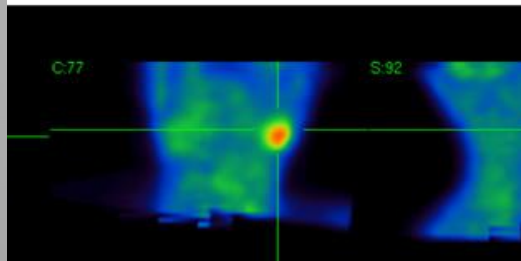
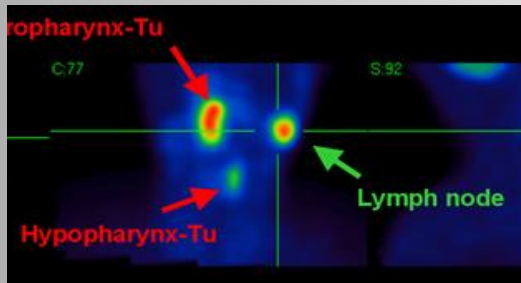
DWI



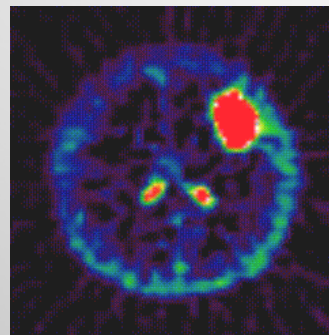
Bilder av cancers kännetecken



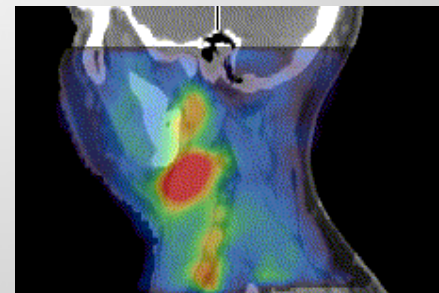
Apoptos



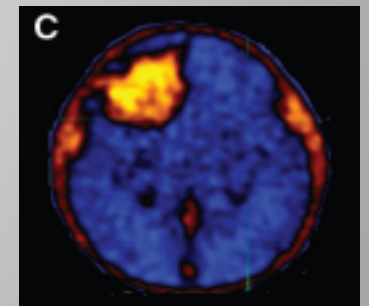
Hypoxi



Angiogenes



Metabolism



Proliferation