

OVERVIEW TRACERS IN GRONINGEN

Radiopharmaceutical

PET Clinical routine - imaging

[¹⁸F]FDG
[¹⁸F]F-FAZA
[¹⁸F]F-DOPA
[¹¹C]choline
[¹¹C]methionine
[¹¹C]raclopride
[¹¹C]verapamil
¹⁸F-sodium fluoride
[¹⁵O]water
[¹⁵O]carbon monoxide
[¹³N]ammonia
¹¹C-5-hydroxytryptophan
¹⁸F-3-fluoro-3'-deoxy-L-thymidine
¹¹C-PK11195
¹¹C-PIB

PET-research tracers

¹¹C-methyl-piperidinyl-4-acetaat
¹⁸F-MPPF
¹¹C-SA4503
¹⁸F-fluoromethylcholine
¹⁸F-FHBG
¹¹C-DPA-713, ¹¹C-DPA-714, ¹¹C-DAA-1106
¹¹C-MDL-100907
¹¹C-DASB
¹¹C-VC003
¹¹C-VC002
¹⁸F-FE-SA5845, ¹¹C-SA5845
¹⁸F-bombesine
¹¹C-verapamil, ¹¹C-carvedilol, ¹¹C-GR218231
¹¹C-CGP12388, ¹⁸F-fluorocarazolol
¹¹C-VIOXX, ¹¹C-celecoxib

Radiopharmaceutical

SPECT Clinical routine - imaging

¹¹¹In-octreotide
⁶⁷Ga-galliumcitrate
¹²³I-ioflupane
¹²³I-MIBG
¹²³I-sodium iodide
¹³¹I-hippuran
¹²⁵I-iothalamate

Clinical routine - therapy

⁸⁹Sr-strontium chloride
³²P-sodium phosphate
⁹⁰Y-silicatecolloid
⁹⁰Y-ibritumomab
¹³¹I-sodium iodide
¹³¹I-MIBG
¹⁵³Sm-quadrismet

Process

Glucose consumption
Oxygenation
Dopamine synthesis
Membrane synthesis
Amino acid transport
Dopamine D₂-receptor
P-glycoprotein
Bone tumors
Blood flow
Blood volume
Blood flow
Serotonin synthesis rate
Activity of thymidine kinase (tumors)
Peripheral benzodiazepine receptor
Beta-amyloid imaging

Acetylcholinesterase activity
Serotonin 5-HT_{1A} receptor density (brain)
Sigma-1 receptor density (brain, tumors)
Membrane synthesis
Activity of herpes virus thymidine kinases
Peripheral benzodiazepine receptor
5-HT_{2A}-receptor
Serotonin transporter
Muscarinic receptor density (brain)
Muscarinic receptor density (heart, lungs)
Sigma-1 plus sigma-2 receptor density (brain, tumors)
Bombesin receptor (prostate cancer)
Transport activity of P-glycoprotein (brain, tumors)
Beta-adrenoceptor density
Expression of cyclo-oxygenase 2

Proces

Somatostatine receptor
Tumor and inflammation detection
Dopamine transporter
Norepinephrine transporter
Thyroid scan
ERPF
GFR

Bone metastasis
Polycythemia vera
Radiosynoviorthesis
Non-Hodgkin's lymphoma
Thyroid cancer / hyperthyroidism
Neuroendocrine tumors
Bone metastasis

Clinical routine - ^{99m}Tc-tracers

^{99m} Tc-TcO ₄ ⁻	MUGA
^{99m} Tc-MAA's	Lung perfusion
^{99m} Tc-nanocolloid	Sentinel node
^{99m} Tc-tincolloid	Liver and spleen
^{99m} Tc-mebrofenin	Galwegen
^{99m} Tc-medronate	Bone scan
^{99m} Tc-HMPAO	Brain / leucocyte labeling
^{99m} Tc-MAG3	Renography
^{99m} Tc-sestamibi	Myocard perfusion
^{99m} Tc-tetrofosmine	Myocard perfusion
^{99m} Tc-DMSA	Kidney scintigraphy
^{99m} Tc-DMSA-V	Tumor localization
^{99m} Tc-HSA	Albumin leakage
^{99m} Tc-sulesomab	Inflammation

Clinical routine – bloodcell labeling:

^{99m} Tc-leucocytes	Inflammation detection
^{99m} Tc-erythrocytes	Erythrocyte survival
⁵¹ Cr-erythrocytes	Erythrocyte survival
^{99m} Tc-denatured erythrocytes	Miltscintigraphy
⁵¹ Cr-erythrocytes / ¹²⁵ I-HSA	Erythrocyte volume / plasma volume
¹¹¹ In-trombocytes	Trombocyte survival

Research

¹²³ I-SAP	Amyloidosis
⁸⁹ Zr and ¹¹¹ In-trastuzumab	HER2
⁸⁹ Zr and ¹¹¹ In-cetuximab	EGFR
⁸⁹ Zr- and ¹¹¹ In-bevacizumab	VEGF
¹²³ I-rhTRAIL	TRAIL-receptor
¹²³ I-IMT	Amino acid transport