SUPER-SEGAMS

Members: László Csernay
János Csirik [1]
Árpád Makay
Eörs Máté [2]
Attila Kuba [3]

Founded by: Gamma Works

Partners:
SzOTE KIL (László Almási, Zoltán Nemessányi)

Gamma Works (Ádám Billing, Béla Kári)

Related projects:
- Early years [4]
- SEGAMS [5]
- SEGAMS-80 [6]
- MicroSEGAMS [7]

Lifetime from: 1980
Lifetime to: 1987

Short description: Supplement to SEGAMS-80 with the creation and evaluation of SPECT studies. It became possible to create user programs for the system in FORTRAN.

Description:
SUPER-SEGAMS is the improvement of SEGAMS-80. It is possible to create user programs for the system in FORTRAN.

During the rapid motion of the heart the central vascular system cannot be imaged directly due to the low signal-to-noise ratio. Using the ECG-gated acquisition technique each heart cycle can be divided into n intervals of the same length and then by summing images taken at the same phase of the heart cycle it is possible to produce images of a representative heart cycle. Images obtained by summing data from several hundreds of cycles have acceptable signal-to-noise ratio and with such images the pumping function of the heart can be well studied. SUPER-SEGAMS allows performing ECG-gated heart studies also, for which an ECG had to be fitted to the system.

SUPER-SEGAMS also includes the program system – as an experimental feature – that allows performing SPECT studies.
ECG gated heart study
Ventriculography
LV: Left Ventricle, BG: Background
Regional blood volume
Sum image with ROIs, time/activity curves

Left ventricular wall motion
Left: normal case, right: reduced left ventricular wall motion
Phase and amplitude analysis
Left: normal case, right: patient with apical aneurysm
Image parts top left: amplitude, top right: phase, bottom left: sum image, bottom right: phase histogram

Publications:


Árpád Makay, Attila Kuba, Eörs Máté, Marianna Dudásné Nagy: Sotware system for nulcear medicine data processing Symp. on Programming Languages and Software Tools, Szeged (1989) 104-107

Funktionsszintigraphie mit Quantifizierung des mucociliaeren Transportes im "kondensierten Bild". Nuklearmedizin, 86 (1989), (abstract)

**Kategória:** Medical Applications

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http://www.inf.u-szeged.hu/ipcg/projects/supersegams

**Links:**