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Quantification in nuclear medicine: application in SPECT

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Quantification in nuclear medicine: Application in SPECT
H. Saikouk1,2
1: Faculty of Science, Mohammed V University in Rabat, P.O. Box 1014, Rabat, Morocco
2: Nuclear Medicine Department, Oncology and Hematology Hospital, Mohammed VI University Hospital, Marrakesh, Morocco
In the emission tomography, the concentration of the radiopharmaceutical in the explored tissue or organ relies on its functioning. However, the image quality in single photon emission computed tomography (SPECT) depends on the machine characteristics and capacities, and is affected by several factors such as the limited spatial resolution, the attenuation and the scatter effects. Therefore, tests should be performed regularly to determine and verify qualitatively and quantitatively the capacities of the SPECT device.
In this presentation, participants will be introduced to the image quantification in SPECT using the Jaszczak phantom. Our focus will be on the determination of the parameters reflecting the image quality in tomographic acquisitions, for instance the contrast, the tomographic uniformity and the signal to noise ratio. In addition, an exercise to familiarize the participant with image analysis in SPECT will be discussed.

Presenter: SAIKOUK, Hind