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## Preface

Hexakis-2-methoxy-2-methylpropyl-isontrile technetium-99m ( $^{99m}\text{Tc}$ -Sestamibi) is a single photon emission computed tomography (SPECT-) radiotracer which was firstly introduced to clinical routine in nuclear medicine for myocardial perfusion imaging more than two decades ago. Since that time, several different, non-cardiac applications of  $^{99m}\text{Tc}$ -Sestamibi have been reported in the literature although its main application still remains the imaging of myocardial perfusion. It was as early as 1989, that benign and malignant lung tumors were depicted by abnormal uptake of  $^{99m}\text{Tc}$ -Sestamibi. Subsequently, further clinical studies have been performed in several oncologic (e.g., brain-, breast-, thyroid cancer) but also in non-oncologic diseases (e.g., thyroid adenoma, parathyroid adenomas). These manifold applications make  $^{99m}\text{Tc}$ -Sestamibi an interesting radiotracer in the clinical as well as the out-patient setting even despite the fast-growing diffusion of  $^{18}\text{F}$ -fluorodeoxyglucose positron emission tomography (FDG-PET) as an accepted and well-proven imaging technique for several oncologic and non-oncologic diseases.

“ $^{99m}\text{Tc}$ -Sestamibi - Clinical Applications” aims to provide an overview of almost all oncologic and non-oncologic applications of  $^{99m}\text{Tc}$ -Sestamibi including several rather rare indications. It includes not only different disease-related protocols of the tracer but also a comprehensive summary of the pathology and epidemiology of the accordant disease. Thereby, a strong emphasis was set on practical aspects of the use of this widespread SPECT-tracer including instructions for the preparation of several commercially available tracer kits.

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<sup>99m</sup>Tc-Sestamibi

Clinical Applications

Bucerius, J.; Ahmadzadehfar, H.; Biersack, H.-J. (Eds.)

2012, XI, 194 p., Hardcover

ISBN: 978-3-642-04232-4