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A Survey of Active Clinical Trials Using SPECT Imaging

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ABSTRACT

The focus on the impact of the shortages of ⁹⁹Mo/^{99m}Tc has been on its use in diagnostic nuclear medicine. One half of the world-wide consumption of ^{99m}Tc is in the US, and half of that is used in cardiac imaging. Less appreciated is the role that ^{99m}Tc radiopharmaceuticals play in clinical trials. According to clinicaltrials.gov 511 studies use SPECT imaging in their protocol. Of these 311 studies cite the use of ^{99m}Tc in the study; 101 are listed as open to accrual. These trials include: the evaluation of novel ^{99m}Tc radiopharmaceuticals; the diagnostic utility of images acquired using lower doses of ^{99m}Tc compounds; comparative studies with the new PET imaging agents; and SPECT imaging to monitor the effectiveness of new therapies to a variety of diseases. This report provides insights into the various approaches that utilize ^{99m}Tc and highlight some important studies aimed at advancing diagnostic imaging therapeutic medicine.