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Nuclear Medicine #3.

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Technetium 99m is a radiopharmaceutical that is commonly used in nuclear medicine. It is the ideal medicine for multiple reasons. It emits gamma rays at an energy of 140 keV, making it optimal for detection by gamma cameras, providing clear images with great resolution. It has a versatile chemistry and low radiation dose. It's readily available for hospitals, ensuring a steady supply. As well as the production and use of technetium 99m very cost effective, in routine diagnostic imaging.

Technetium 99m has a half time of six hours. Which is long enough to conduct imaging procedures but short enough to minimize radiation exposure to a patient. It's highly beneficial in nuclear medicine. Because of its decay rate, around 94% of an administered medical dose decays and leaves the body within 24 hours. The knowledge of the half time is important to procedures, as it only allows for quick procedures. Knowledge of the half-life is important because it helps ensure that the radiopharmaceutical provides high-quality diagnostic images while minimizing radiation exposure to the patient. It also helps medical imaging technologists schedule procedures, calculate the correct radioactive dose, and determine when the radiopharmaceutical should be used before it loses too much activity.