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Ammonia N-13

National Cancer Institute

Source

National Cancer Institute. *Ammonia N-13*. NCI Thesaurus. Code C79714.

A radiopharmaceutical composed of ammonia labeled with the radioisotope nitrogen N 13 that can be used, during positron emission tomography (PET), as a blood flow imaging agent and potentially as a tumor imaging agent. Upon intravenous administration, ammonia N 13 distributes to various organs in the body, such as the myocardium, liver, kidneys and brain. This agent is taken up by cells and is retained following conversion to glutamine N 13 by glutamine synthetase (GS). Upon PET, organ perfusion and the presence of cancer cells can be assessed. GS, an enzyme that catalyzes the synthesis of glutamine from glutamate and ammonia, is overexpressed in a variety of cancers and plays a key role in cancer cell proliferation.