SUPPLEMENTAL TABLES

SUPPLEMENTAL TABLE 1. Geometric specifications for nine-pinhole collimators of the nanoSPECT/CTplus (in mm)

Aperture	NSP-106	NSP-116	NSP-105	NSP-125
Acronym	MH	MU	RH	RU
Hole Diameter	1.0	0.5	1.5	0.8
Thickness	10.0	10.0	10.0	10.0
FOV Axial	14.0	14.0	22.0	22.0
FOV Transaxial	30.0	16.0	60.0	30.0
Distance Central Axis	30.0	30.0	45.0	45.0
Distance Detector	145.0	145.0	130.0	130.0

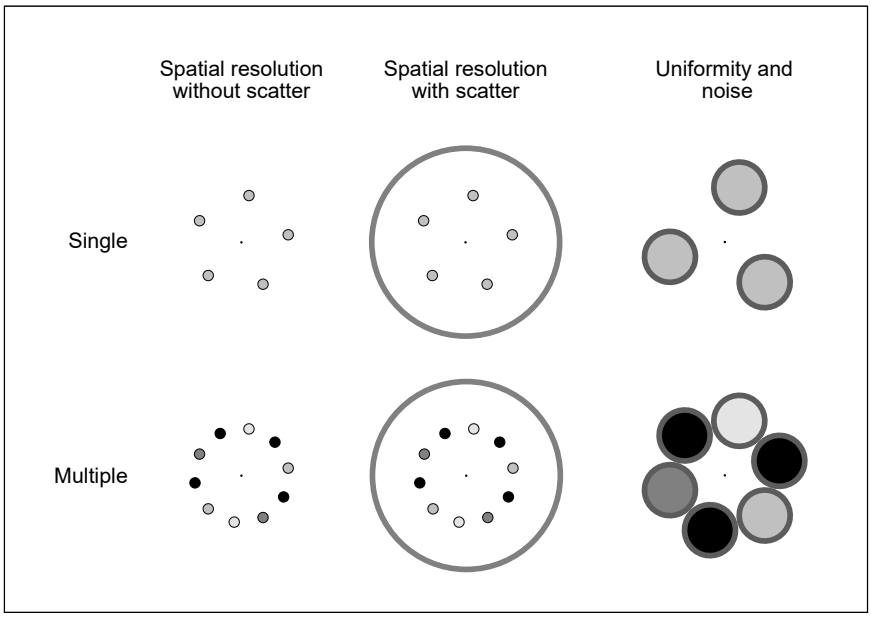
Collimator: MH/MU Mouse high/ultra-high resolution, *RH/RU* rat high/ultra-high resolution

SUPPLEMENTAL TABLE 2. Energy windows used for single and multi-isotope studies (peak in keV, width in %).

	Energy window 1		Energy window 2		Energy window 3		Energy window 4	
Single-Isotope	Peak	Width	Peak	Width	Peak	Width	Peak	Width
^{99m}Tc	140.5	20	—	—	—	—	—	—
^{111}In	171.3	20	245.4	20	—	—	—	—
^{123}I	159.0	20	—	—	—	—	—	—
^{177}Lu	56.1	20	112.9	20	208.4	20	—	—
^{201}Tl	72.3	20	167.4	20	—	—	—	—
Dual-Isotope								
^{99m}Tc* + ^{111}In**	*140.5	15	**171.3	15	**245.4	20	—	—
^{99m}Tc* + ^{123}I**	*140.5	10	**159.0	10	—	—	—	—
^{99m}Tc* + ^{177}Lu**	**56.1	20	**112.9	20	*140.5	20	**208.4	20
^{99m}Tc* + ^{201}Tl**	**72.3	20	*140.5	20	**167.4	15	—	—
^{111}In* + ^{201}Tl**	**72.3	20	*245.4	20	—	—	—	—
^{111}In* + ^{177}Lu**	**112.9	20	*171.3	20	**208.4	15	*245.4	15
^{123}I* + ^{177}Lu**	**56.1	20	**112.9	20	*159.0	20	**208.4	20
^{123}I* + ^{201}Tl**	**72.3	20	*159.0	20	—	—	—	—
Triple-Isotope								
^{99m}Tc* + ^{111}In** + ^{201}Tl***	***72.3	20	*140.5	15	**171.3	15	**245.4	20
^{99m}Tc* + ^{111}In** + ^{177}Lu***	***112.9	20	*140.5	20	***208.4	15	**245.4	15
^{99m}Tc* + ^{123}I** + ^{177}Lu***	***112.9	20	*140.5	10	**159.0	10	***208.4	20
^{99m}Tc* + ^{123}I** + ^{201}Tl***	***72.3	20	*140.5	10	**159.0	10	—	—

//*** Ordinal signs to ascribe the energies to their isotope*

SUPPLEMENTAL FIGURES



SUPPLEMENTAL FIGURE 1. Schematic geometry for the measurement of spatial resolution, uniformity and noise. Each isotope was measured separately (Single) and together with a mixture of two or three isotopes (Multiple) to represent adjacent and superimposed activity distributions (air/water: white, single-isotope: gray, triple-isotope: black).