SOFIE
From start to clinic

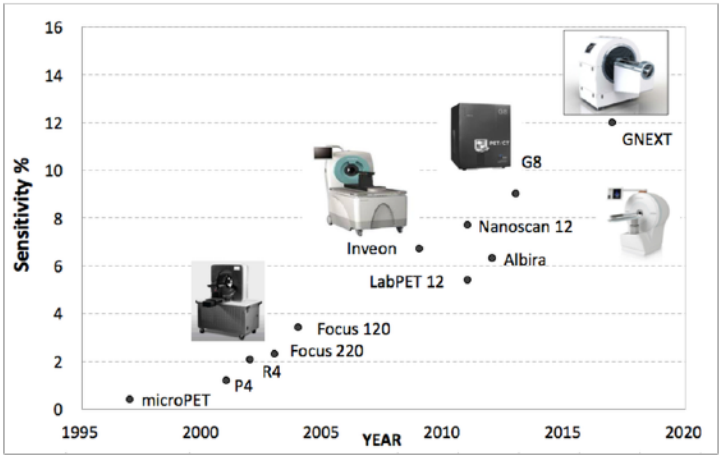
THE WORLD'S HIGHEST SENSITIVITY, HIGHEST RESOLUTION PET SCANNER
The GNEXT PET/CT is the latest generation of high performance microPET scanners. Over the past decades, preclinical PET has established its value in a wide range of applications. Today's PET/CT scanner must provide not only superior performance, but also a seamless workflow experience that holds the animal and user experience as high as the specifications.

SOFIE achieves this with our newest G-Series system, GNEXT PET/CT. Utilizing a unique Depth of Interaction (DOI) method, we're able to better determine the correct line of response in PET coincidence detection, leading to more accurate positioning and better resolution across the field of view.

With the GNEXT PET/CT, you'll unlock applications in imaging small spontaneous tumors, lymph nodes, brain, cell tracking, and close to hot organs.

Evolution of Performance on Small Animal PET Scanners

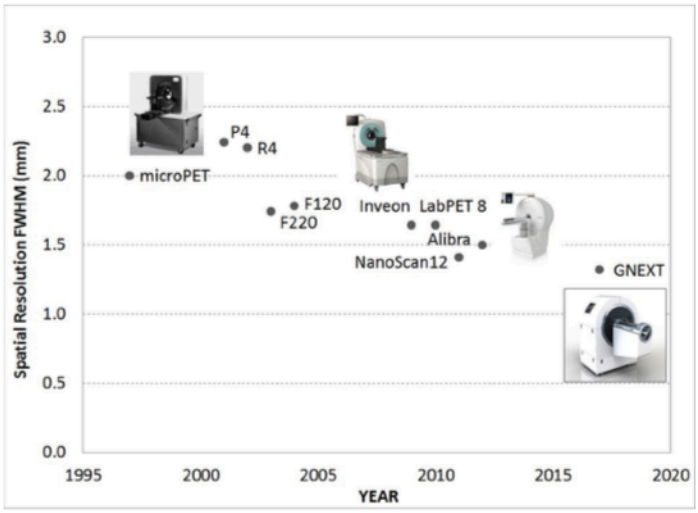
Sensitivity %



Our novel dual-layer crystal technology overcomes depth-of-interaction (DOI) limitations, common in ring PET systems.

This design allows us to combine the highest resolution crystals on the market with a high sensitivity layer for a total crystal depth of 15 mm and pixels less than 1.01 mm.

Spatial Resolution (5mm off center)



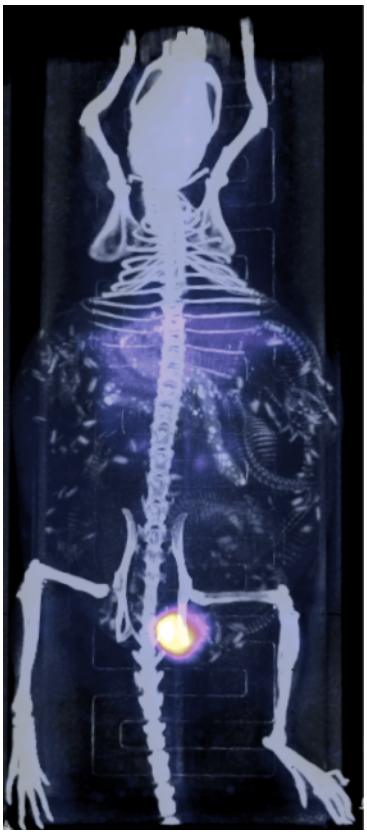
INTEGRATED ANIMAL MANAGEMENT

Today's PET/CT scanner must provide not only superior performance, but also a seamless workflow and adaptability to the current environment. We believe that animal management and shielding are just as important as sensitivity and resolution, as successful imaging outcomes correlate heavily with subject well-being. The GNEXT PET/CT prioritizes your model by incorporating single animal and multi-animal bed platforms with integrated heating and anesthesia systems, all adaptable to existing microPET models.

DIVERSE APPLICATIONS

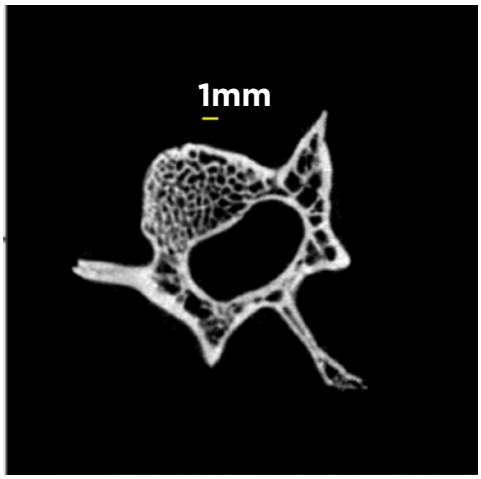
The GNEXT PET/CT is a large bore PET/CT scanner that can support single animals, multiple mice, multiple rats, rabbits, and small non-human primates. A variety of study designs and isotopes can be imaged and quantified.

Rat Whole Body
[^{18}F]NaF
Bone Metabolism

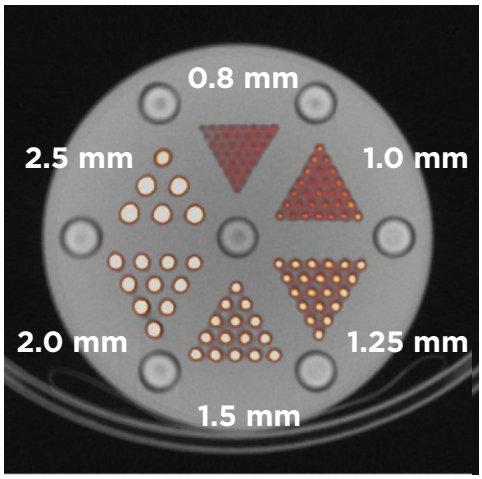


Pregnant Mouse
[18F]Biotin

4 Mice
[18F]NaF
Bone Metabolism



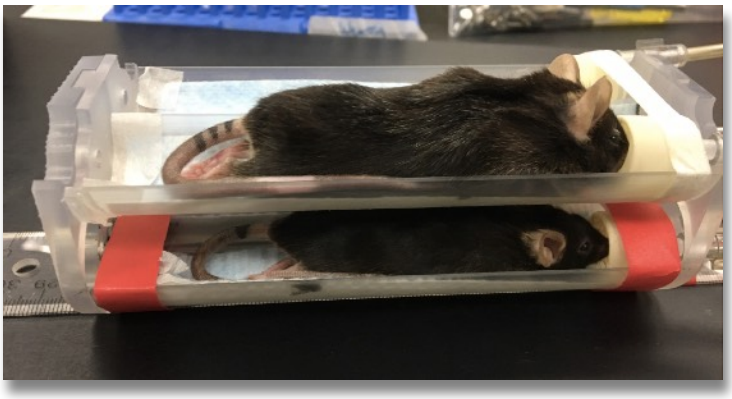
Rat Vertebrae
2 min CT, 50 um voxel
Trabecular Bone Analysis



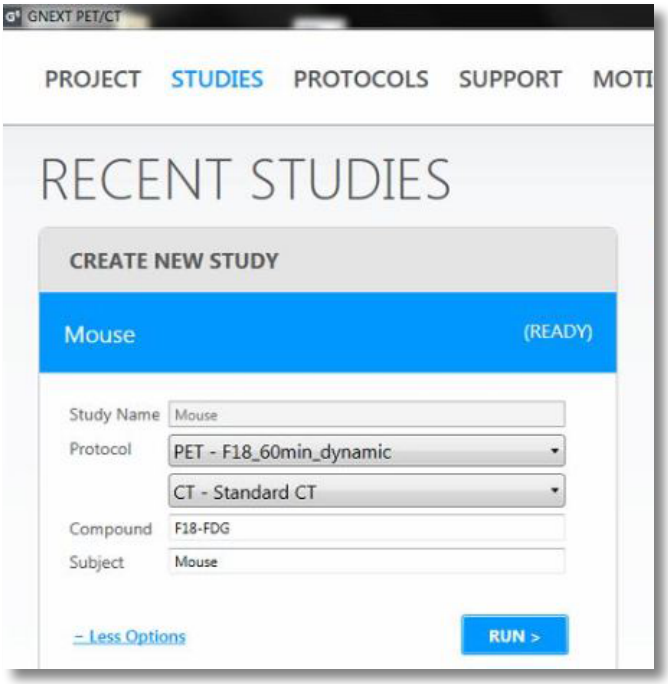
Derenzo [18F]FDG

SIMPLIFIED, ELEGANT WORKFLOWS

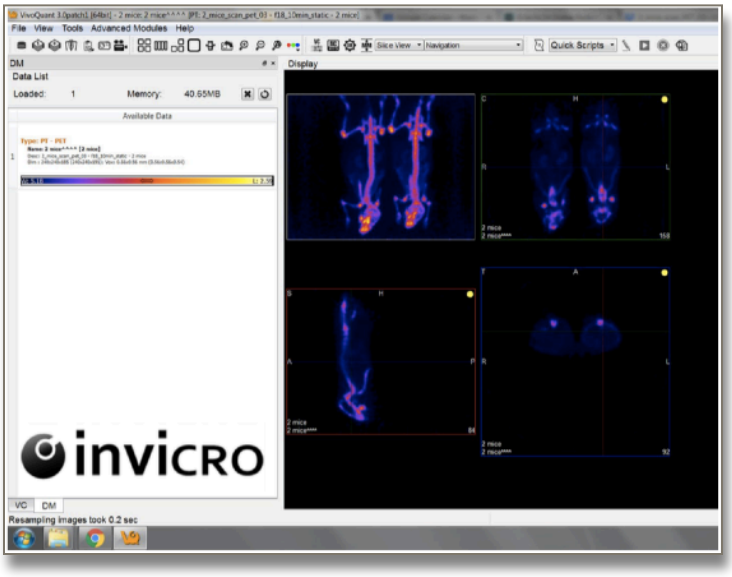
Like our other G-series systems, the GNEXT PET/CT software platform and acquisition engine allow you to quickly define complex protocols with just a few clicks, or use preset protocols provided with the software to eliminate the burden of repetitive data entry. All PET data is collected in list mode format and images are stored in DICOM format, allowing for easy export and analysis on your analysis software of choice, such as VivoQuant™. Acquire and reconstruct your data simultaneously, with options for a variety of reconstruction protocols.



Prepare



Acquire



Analyze

SPECIFICATIONS

PET

Feature	Specification
Peak absolute system sensitivity	>12%
Resolution at center of FOV	<1 mm
Detector diameter	16.0 cm
Bore Size	13.9 cm
Transaxial FOV	12.0 cm
Axial FOV	10.4 cm
Total number of crystal elements	66,560
LYSO detector element size	1.01 mm x 1.01 mm x 6.1 mm
BGO detector element size	1.55 mm x 1.55 mm x 8.9 mm
Reconstruction Algorithms	FBP, 3D-OSEM, MAP

CT

Feature	Specification
X-ray Camera	
Number of camera pixels	3072 x 1944
Detector element size	75 µm
Maximum FOV	12.0 cm x 10.4 cm
Magnification range	1.3 - 5.0
X-ray Source	
Focal spot size	10 µm
Voltage range	25-80 kVp
Maximum anode current	150 µA
Maximum power	12 W
Fast Scan Time	1 min
Reconstruction Algorithm	Modified Feldkamp Algorithm
X-ray Shielding	Fully Shielded, 21 CFR 1020.40 compliant

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FROM START TO CLINIC

SOFIE develops innovative PET technologies that are fun, flexible, compact, high performance, and within your budget. Together, we're creating an ever-expanding playing field for molecular imaging.