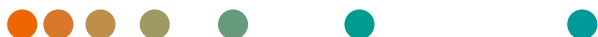


Biograph Trinion EP2 PET/CT

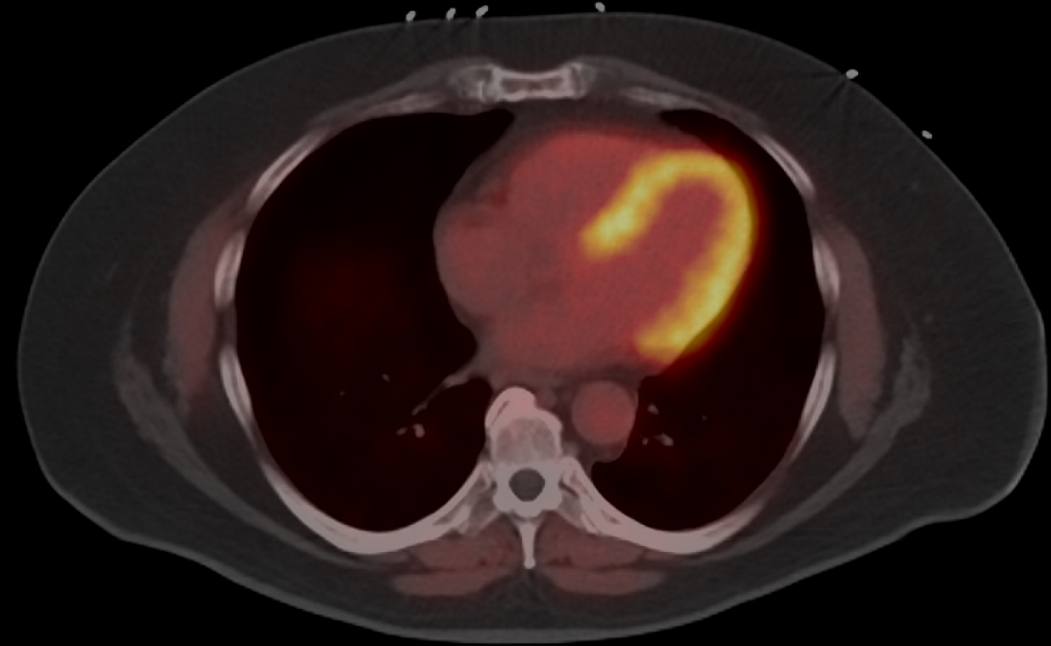
Clinical image gallery



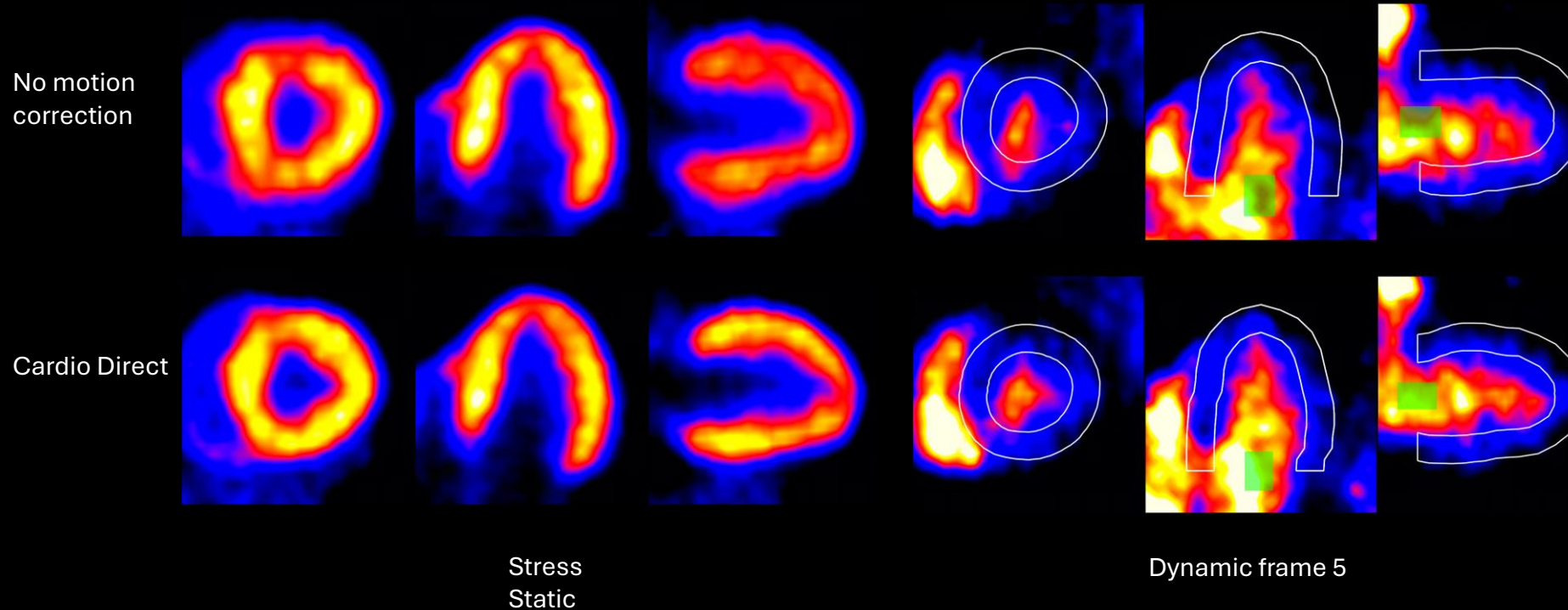
Biograph Trinion PET/CT is not commercially available in all countries.
Future availability cannot be guaranteed.

Data courtesy of Wentworth-Douglas Hospital, Dover, New Hampshire, USA.
Unrestricted © Siemens Healthineers, 2025 MI-6836

Biograph Trinion EP2 PET/CT Cardiology



Cardio Direct improves myocardial blood flow calculations in motion-corrected dynamic PET/CT perfusion images



- Comparison of stress flow with and without Cardio Direct
- Motion in earlier frames results in sub-optimal blood input function (BIF) and overestimated flow values
- Cardio Direct images reflect sharper left ventricle boundaries compared to non-Cardio Direct images
- Improved BIF placement in prior frames with Cardio Direct results in improved flow calculations

Biograph Trinion EP2 PET/CT
PET (24-cm aFOV)

Scan acquisition

Total scan time: 14 minutes stress and rest
1 bed position/7 minutes per bed

Image reconstruction

Dynamic 14 frames, 8 gates
256 x 256 matrix, iterative+TOF, 416s
Gaussian filter 6

Injected dose

Rubidium-82 (^{82}Rb) Injection

Rest and stress: 20.6 mCi (764 MBq)

Patient details: 103 kg (228 lb), 165 cm (5' 5"),
37.9 BMI

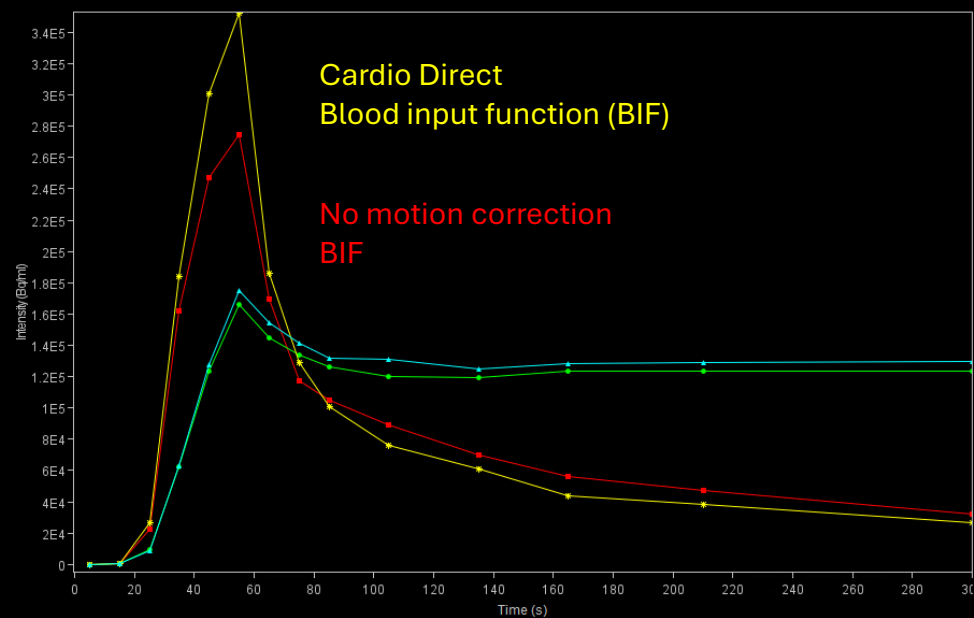
CT (128 slices)

Scan parameters

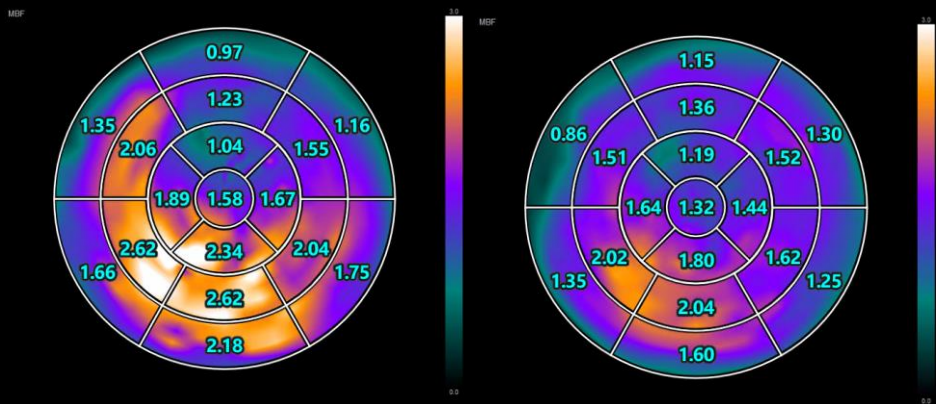
120 kV

59 ref mAs

Cardio Direct improves myocardial blood flow calculations in motion-corrected dynamic PET/CT perfusion images



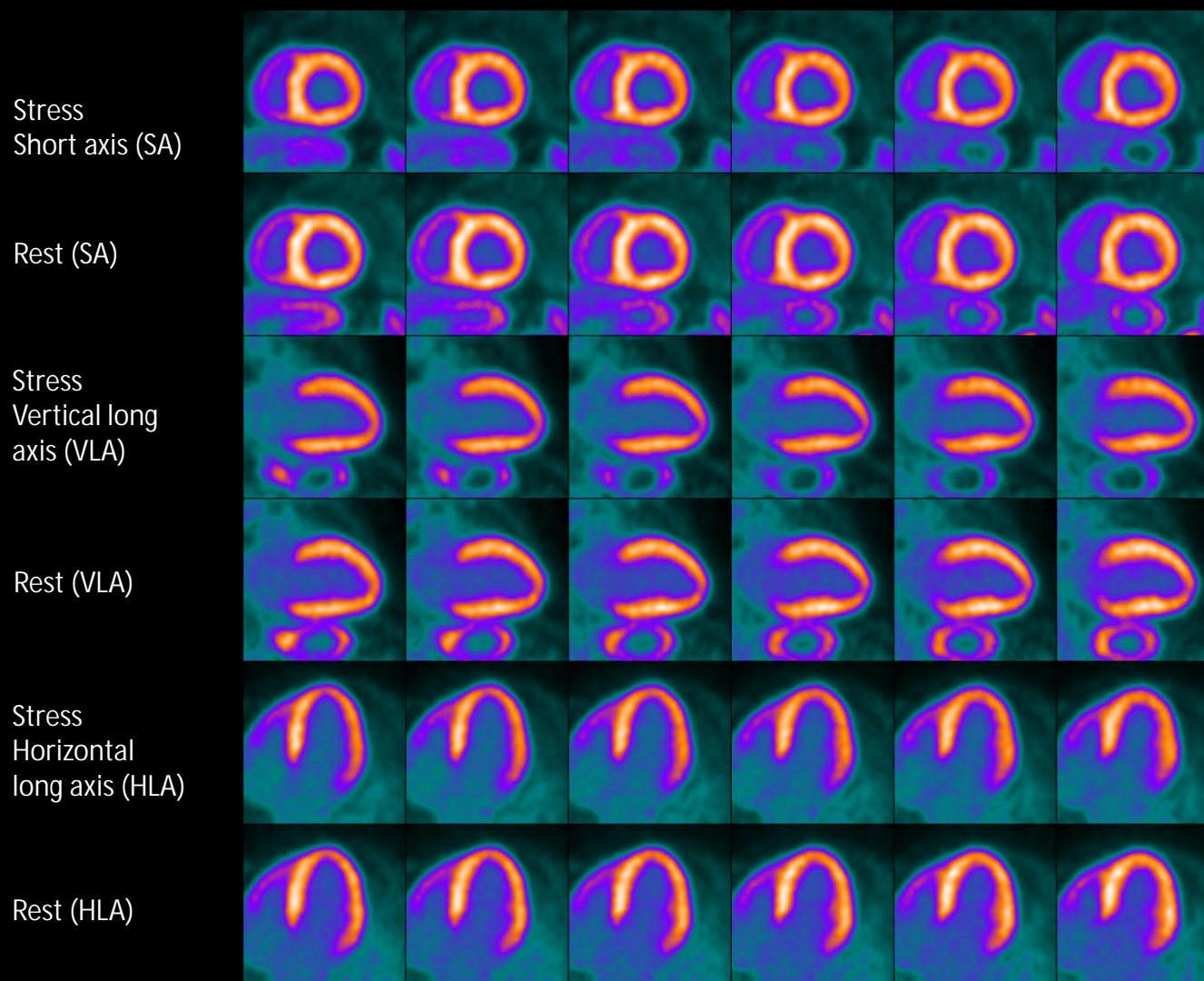
Stress myocardial blood flow (MBF)



No motion correction

Cardio Direct

Sharp delineation of myocardial wall in dilated left ventricle related to cardiomyopathy in stress-rest ^{82}Rb PET/CT MPI study



- Static images from stress-rest dynamic ^{82}Rb myocardial perfusion imaging (MPI) study show uniformly high myocardial contrast and sharp delineation of slightly thinned left ventricle (LV) margins in a patient with dilated LV in both stress and rest but without well-defined perfusion defects
- Significantly dilated LV cavity size without major variation between stress and rest
- Pattern of uptake and left ventricular dilatation suggest the possibility of dilated cardiomyopathy
- No coronary calcification on CT

Biograph Trinion EP2 PET/CT
PET (24-cm aFOV)

Scan acquisition

Total scan time: 14 minutes stress and rest

1 bed position/7 minutes per bed

Image reconstruction

Dynamic 14 frames, 8 gates

256 x 256 matrix, iterative+TOF, 4i6s

Gaussian filter 6

Injected dose:

Rubidium-82 (^{82}Rb) Injection

Stress: 20.5 mCi/757 MBq

Rest: 20.6 mCi/760 MBq

Patient details: 103 kg (227 lb), 168 cm (5' 6"), 36.6 BMI

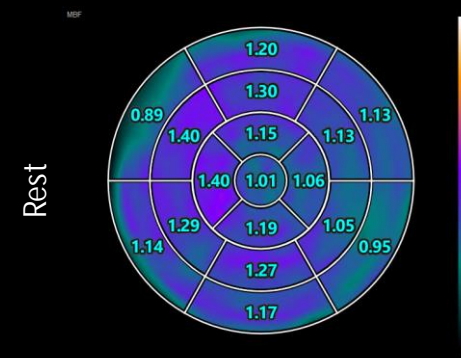
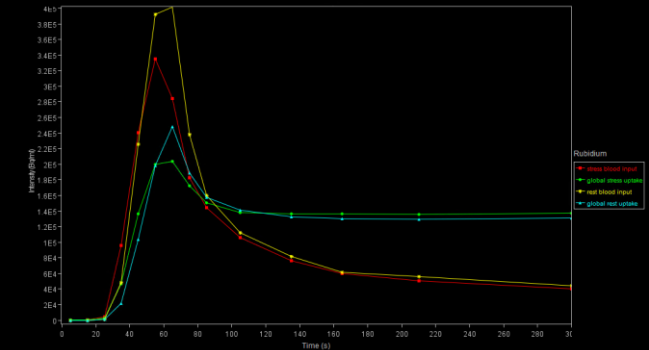
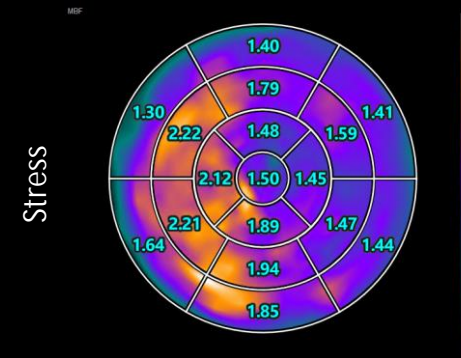
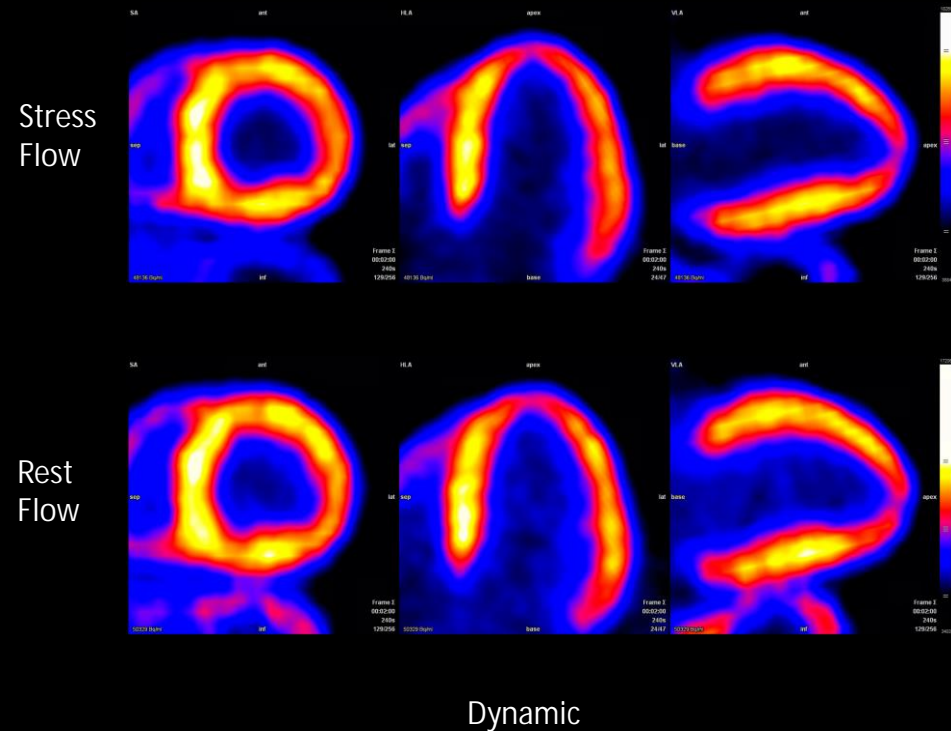
CT (128 slices)

Scan parameters

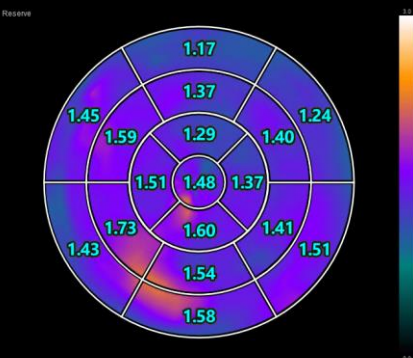
120 kV

39 ref mAs

Sharp delineation of myocardial wall in dilated left ventricle related to cardiomyopathy in stress-rest ^{82}Rb PET/CT MPI study



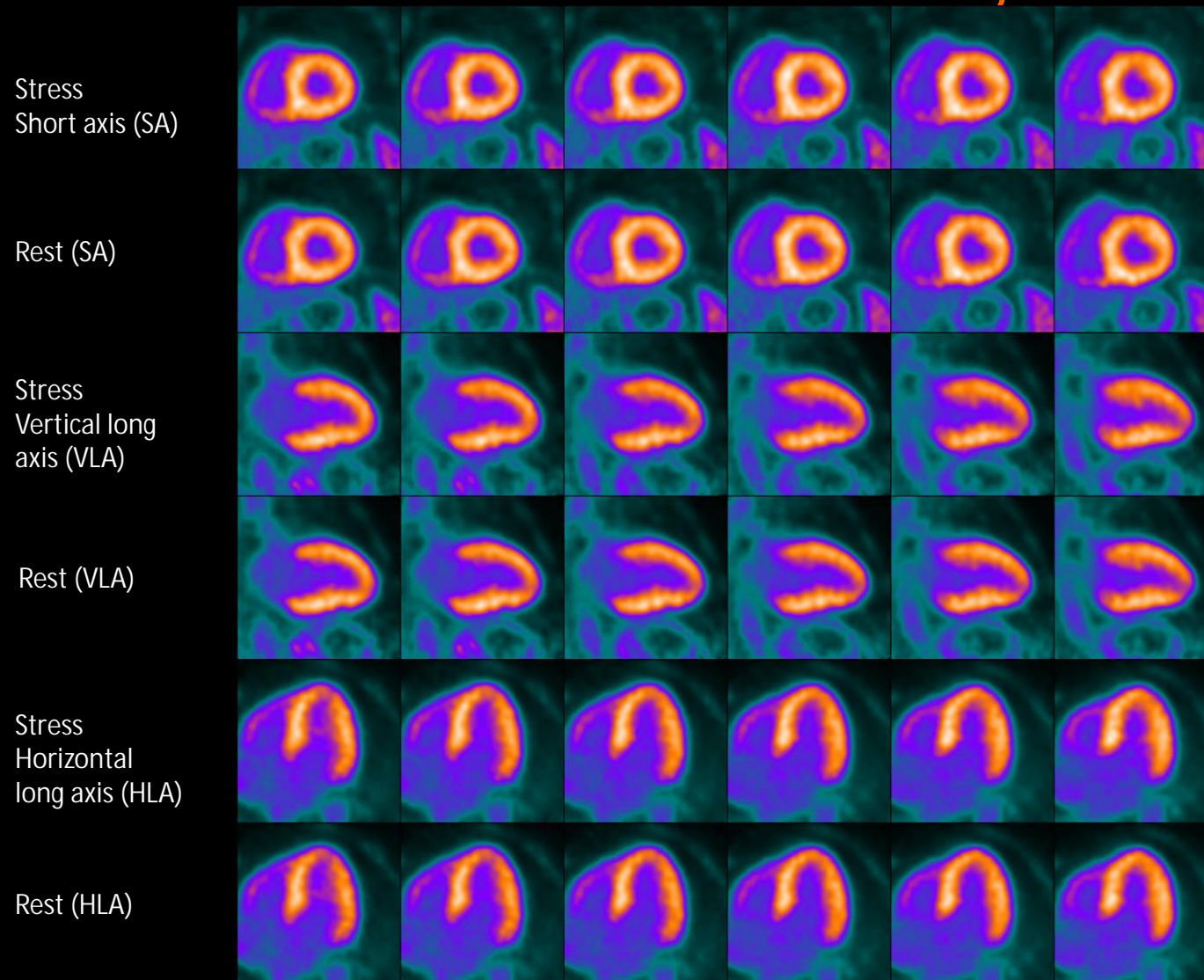
Time-activity curve



Myocardial blood flow (MBF)

Coronary flow reserve (CFR)

High myocardial uptake and sharp delineation of left ventricle wall in stress-rest ^{82}Rb PET/CT MPI study in obese patient



- 60-year-old obese male with hypertension underwent a stress-rest dynamic ^{82}Rb PET/CT myocardial perfusion imaging (MPI) study
- Static images show normal left ventricle (LV) myocardial perfusion along with high myocardial contrast and sharp delineation of LV wall
- Increased myocardial thickness related to hypertension but with normal LV cavity size without significant post-stress dilatation
- 24-cm axial field of view (aFOV) PET/CT enables imaging of a larger section of the body at once, minimizing the need for repositioning, which can be challenging for obese patients

Biograph Trinion EP2 PET/CT
PET (24-cm aFOV)

Scan acquisition

Total scan time: 14 minutes stress and rest

1 bed position/7 minutes per bed

Image reconstruction

Dynamic 14 frames, 8 gates

256 x 256 matrix, iterative+TOF, 4i6s

Gaussian filter 6

Injected dose:

Rubidium-82 (^{82}Rb) Injection

Stress: 25.9 mCi/958.3 MBq

Rest: 26 mCi/959 MBq

Patient details: 112 kg (248 lb), 180 cm (5' 9"), 36.6 BMI

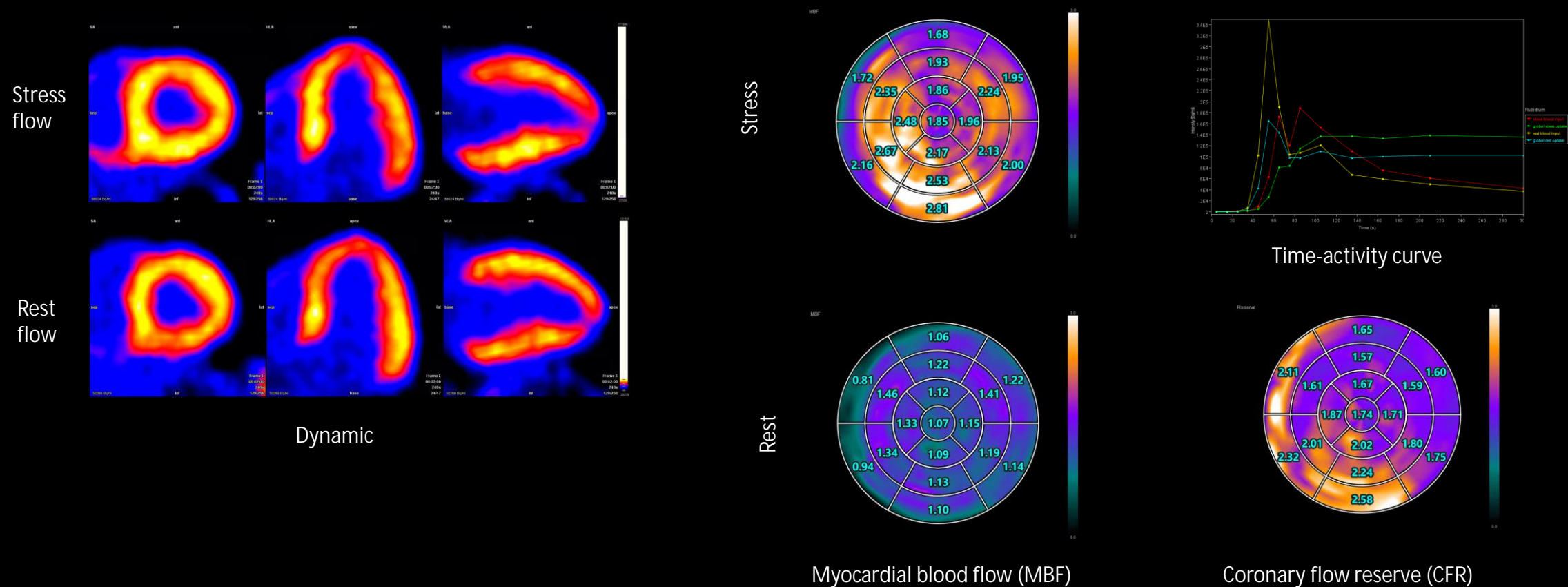
CT (128 slices)

Scan parameters

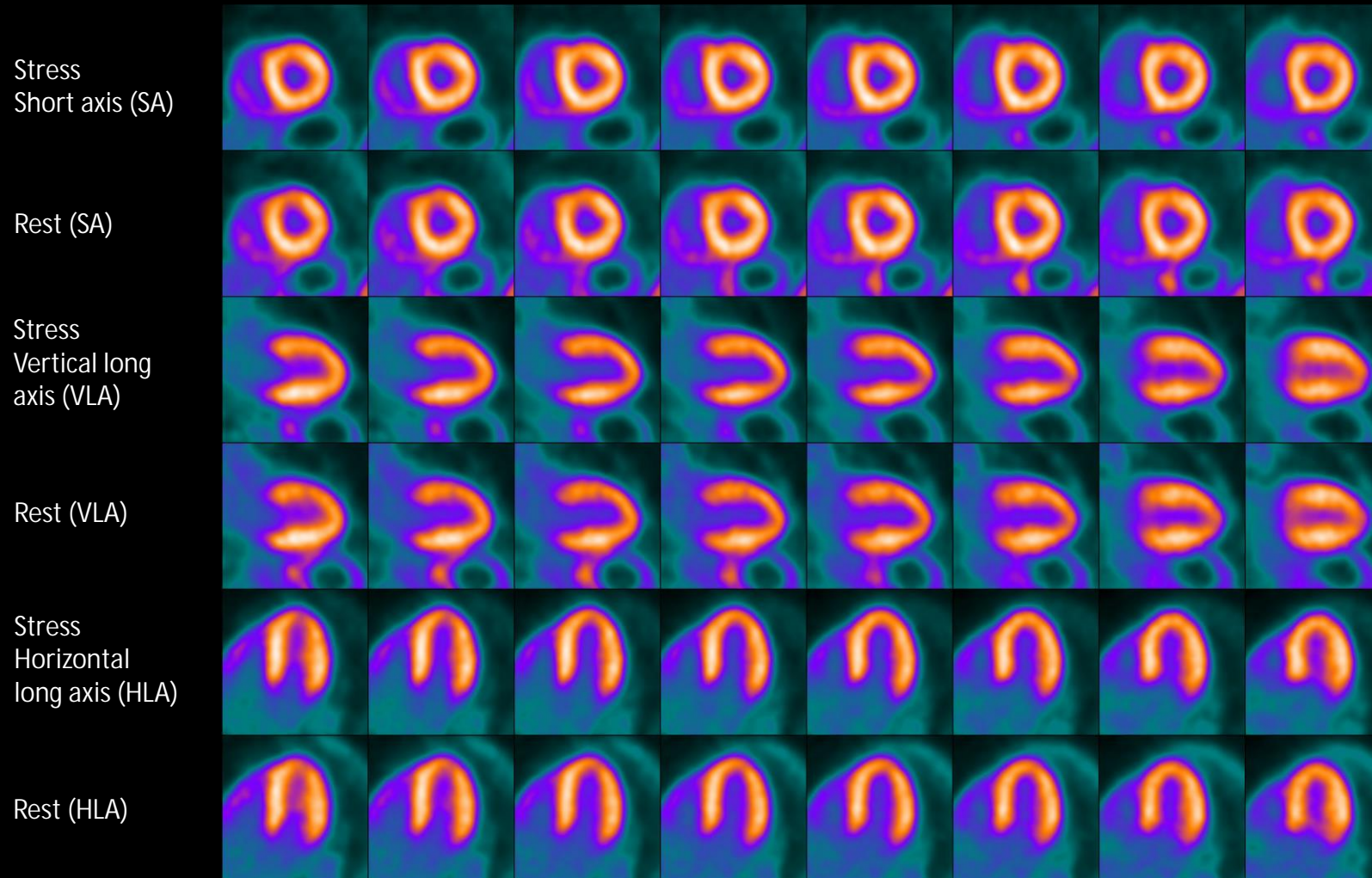
120 kV

50 ref mAs

High myocardial uptake and sharp delineation of left ventricle wall in stress-rest ^{82}Rb PET/CT MPI study in obese patient



Uniform left ventricle wall uptake with high contrast in normal stress-rest ^{82}Rb PET/CT myocardial perfusion imaging study



- 77-year-old female with suspected myocardial ischemia underwent a stress-rest dynamic ^{82}Rb PET/CT myocardial perfusion imaging (MPI) study
- Static images show normal perfusion throughout the left ventricle (LV) myocardium in stress and rest
- Small heart with slight myocardial hypertrophy and reduced LV cavity size without major post-stress dilatation

Biograph Trinion EP2 PET/CT
PET (24-cm aFOV)

Scan acquisition

Total scan time: 14 minutes stress and rest

1 bed position/7 minutes per bed

Image reconstruction

Dynamic 14 frames, 8 gates

256 x 256 matrix, iterative+TOF, 4i6s

Gaussian filter 6

Injected dose:

Rubidium-82 (^{82}Rb) Injection

Stress: 15.4 mCi/571 MBq

Rest: 15.3 mCi/569 MBq

Patient details: 76 kg (168 lb), 152 cm (5' 0"), 32.8 BMI

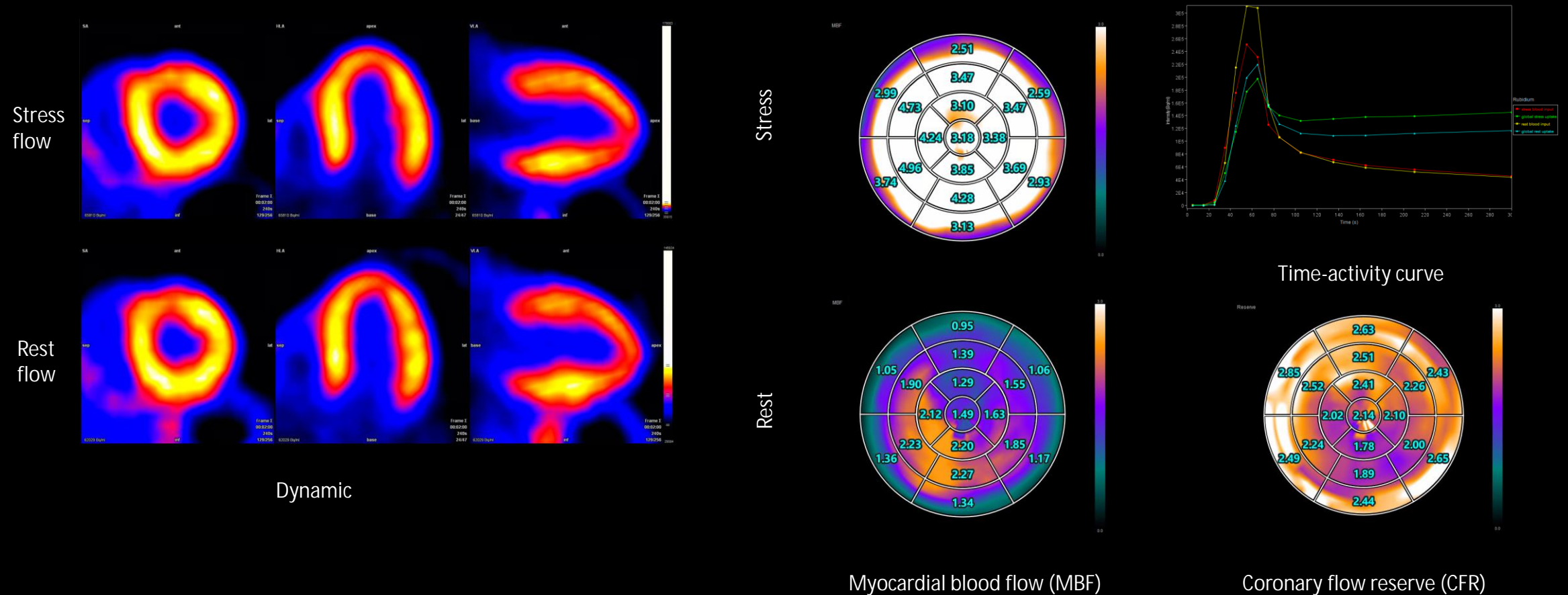
CT (128 slices)

Scan parameters

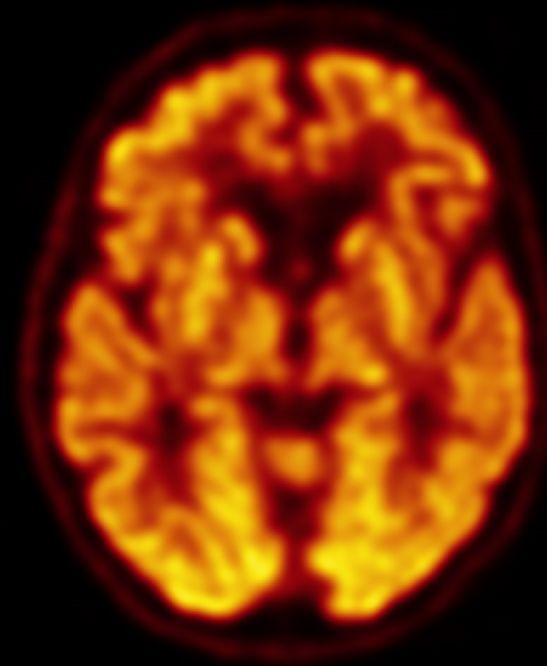
120 kV

31 ref mAs

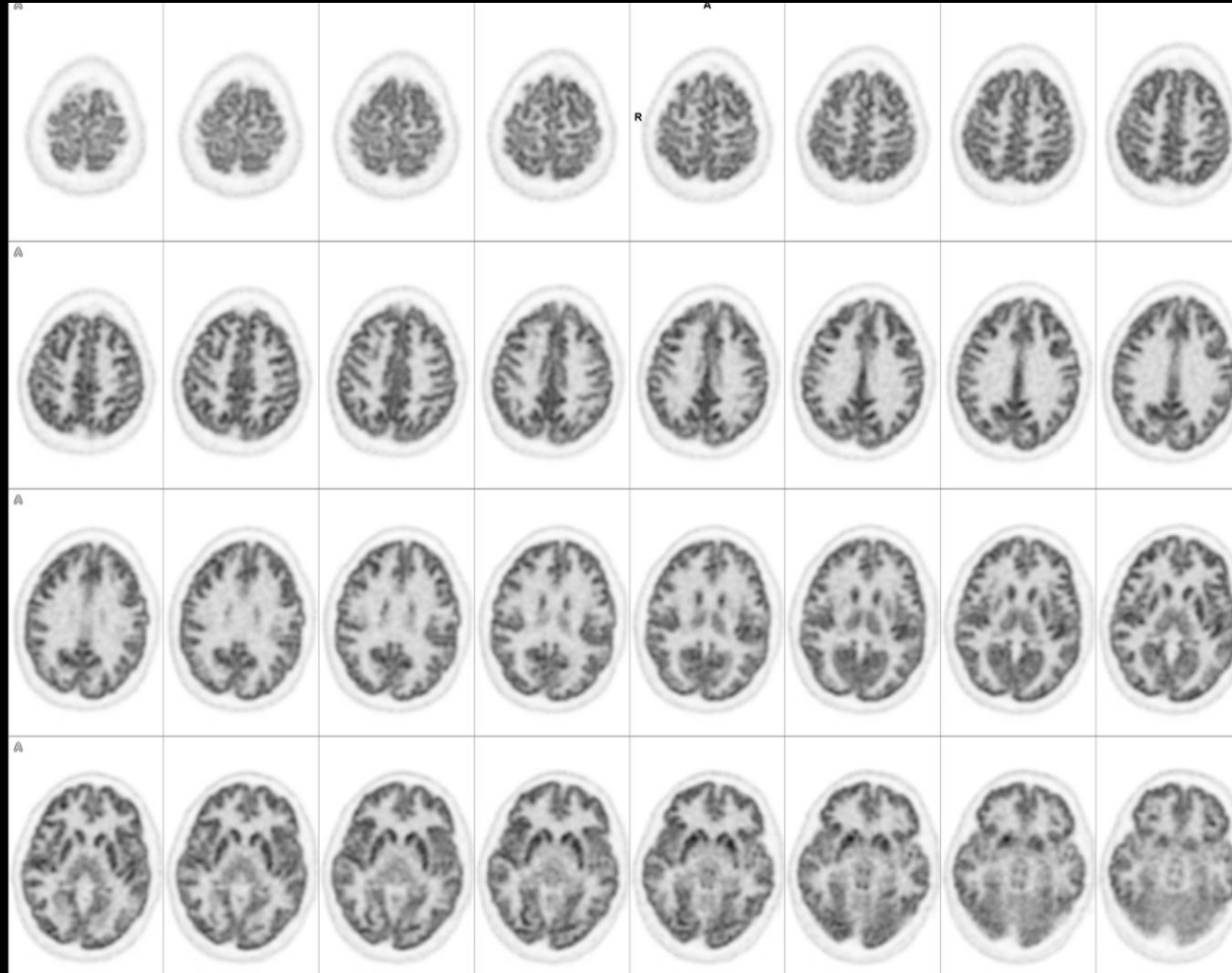
Uniform left ventricle wall uptake with high contrast in normal stress-rest ^{82}Rb PET/CT myocardial perfusion imaging study



Biograph Trinion EP2 PET/CT Neurology



Fast and low-dose ^{18}F -FDG brain PET/CT study shows sharp delineation of cortical gyri and basal ganglia



Axial PET

- ^{18}F -FDG brain PET/CT of an elderly patient with early cognitive abnormalities
- Sharp delineation of cortical gray matter and basal ganglia seen with 344 x 344 matrix reconstruction with high gray-white matter differentiation
- Study shows normal tracer distribution in the cortex and basal ganglia without any clearly defined area of hypometabolism

Biograph Trinion EP2 PET/CT PET (24-cm aFOV)

Scan acquisition

Total scan time: 6 minutes

Image reconstruction

344 x 344 matrix, PSF+TOF, 15i6s

All-pass filter

Injected dose

Fludeoxyglucose F 18 (^{18}F -FDG) Injection¹

2.7 mCi (100 MBq) (1.3 MBq/kg)²

Patient details: 72 kg (159 lb)

CT (64 slices)

Scan parameters

120 kV

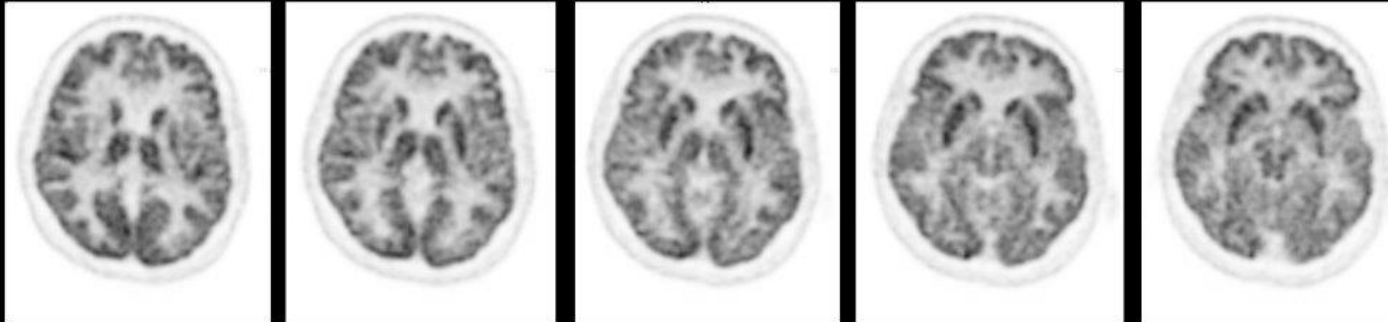
65 ref mAs

Data courtesy of North Shore Radiology Nuclear Medicine, Sydney, Australia.

¹ See slides at end of presentation for indications and important safety information for Fludeoxyglucose F 18 (^{18}F -FDG) Injection. ² Based on bench testing (e.g., improved sensitivity and time of flight per NEMA NU-2:2018). Please refer to the approved PET drug prescribing information for dosing and administration instructions. Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

6-, 8-, and 10-minute PET/CT studies reflect equivalent image quality of cortical and basal ganglia uptake

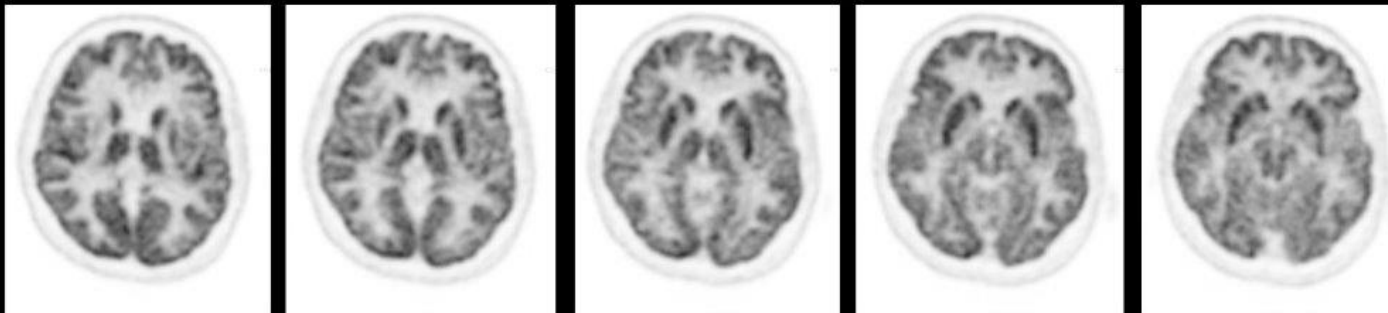
6 min



8 min



10 min



- Comparison of ^{18}F -FDG brain PET/CT studies at 6-, 8-, and 10-minute scan times
- Comparable structure details across all three scan times, with clear gray and white matter differentiation in the gyri and sulci
- Fast, low-dose imaging enhances patient comfort
- Ultra-fast time-of-flight (TOF)¹ performance enables high image quality and effective sensitivity

Biograph Trinion EP2 PET/CT
PET (24-cm aFOV)

Scan acquisition

Total scan time: 6, 8, and 10 minutes

Image reconstruction

344 x 344 matrix, PSF+TOF, 13i6s

All-pass filter

Injected dose

Fludeoxyglucose F 18 (^{18}F -FDG) Injection²

2.7 mCi (100 MBq) (1.1 MBq/kg)³

Patient details: 90 kg (198 lb)

CT (64 slices)

Scan parameters

120 kV

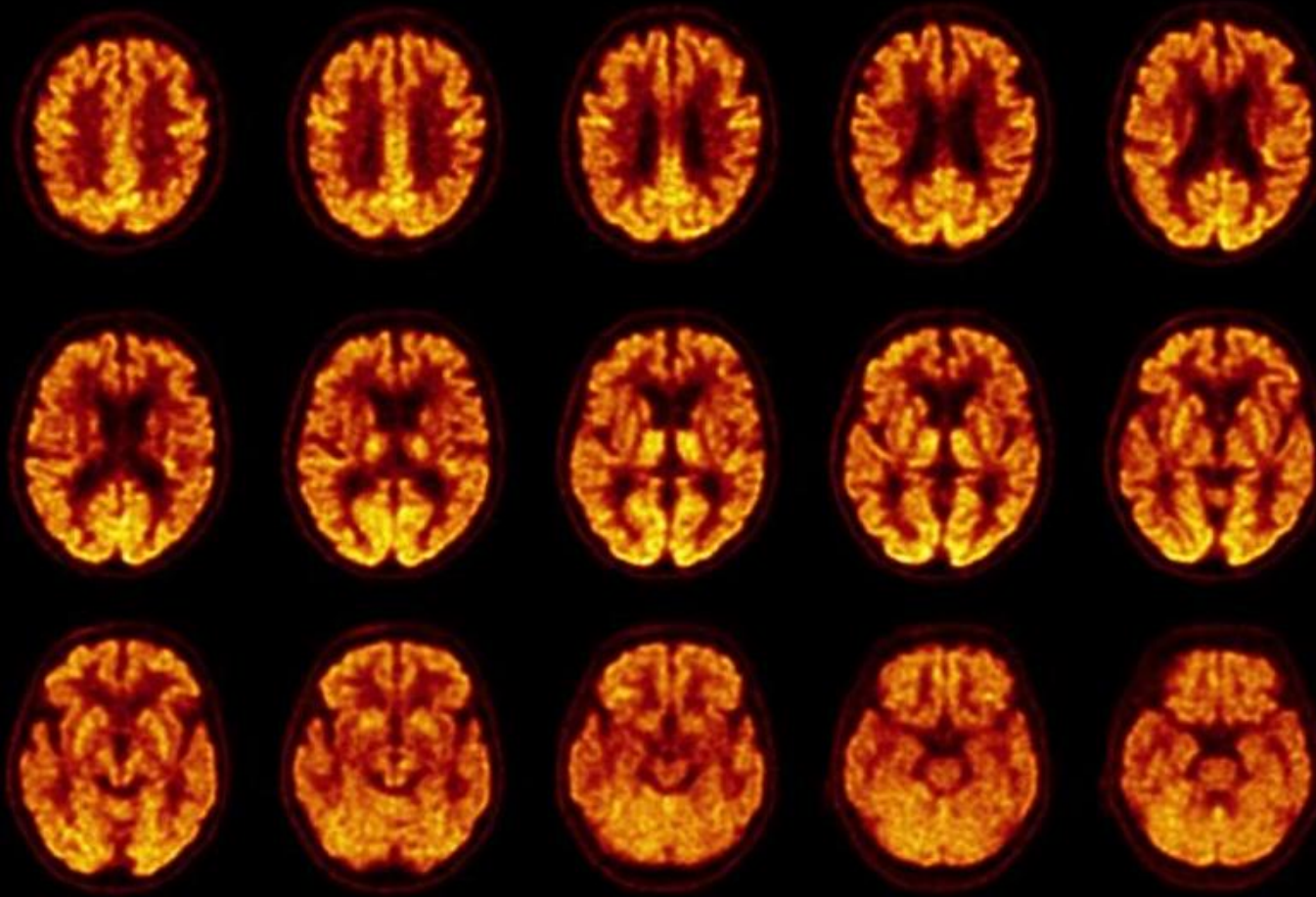
71 ref mAs

Data courtesy of North Shore Radiology Nuclear Medicine, Sydney, Australia.

¹ Ultra-fast TOF is defined as less than 275 picoseconds (ps). ² See slides at end of presentation for indications and important safety information for Fludeoxyglucose F 18 (^{18}F -FDG) Injection.

³ Based on bench testing (e.g., improved sensitivity and TOF per NEMA NU-2:2018). Please refer to the approved PET drug prescribing information for dosing and administration instructions. Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

Fronto-temporal hypometabolism suggested in ^{18}F -FDG PET/CT study confirmed using statistical normals database comparison



Axial PET

- Mild reduction of ^{18}F -FDG uptake is evident in the frontal and temporal cortex along with mild cortical atrophy
- Relative hypermetabolism is evident in the occipital calcarine sulcus

syngo.MI Neuro Database Comparison

- Statistical comparison of a patient scan against a normal reference database

Biograph Trinion EP2 PET/CT PET (24-cm aFOV)

Scan acquisition

Total scan time: 6 minutes

Image reconstruction

512 x 512 matrix, PSF+TOF, 20i6s

Gaussian filter 3

Injected dose

Fludeoxyglucose F 18 (^{18}F -FDG) Injection¹

2.7 mCi (100 MBq) (1.47 MBq/kg)²

Patient details: 68 kg (150 lb)

CT (64 slices)

Scan parameters

120 kV

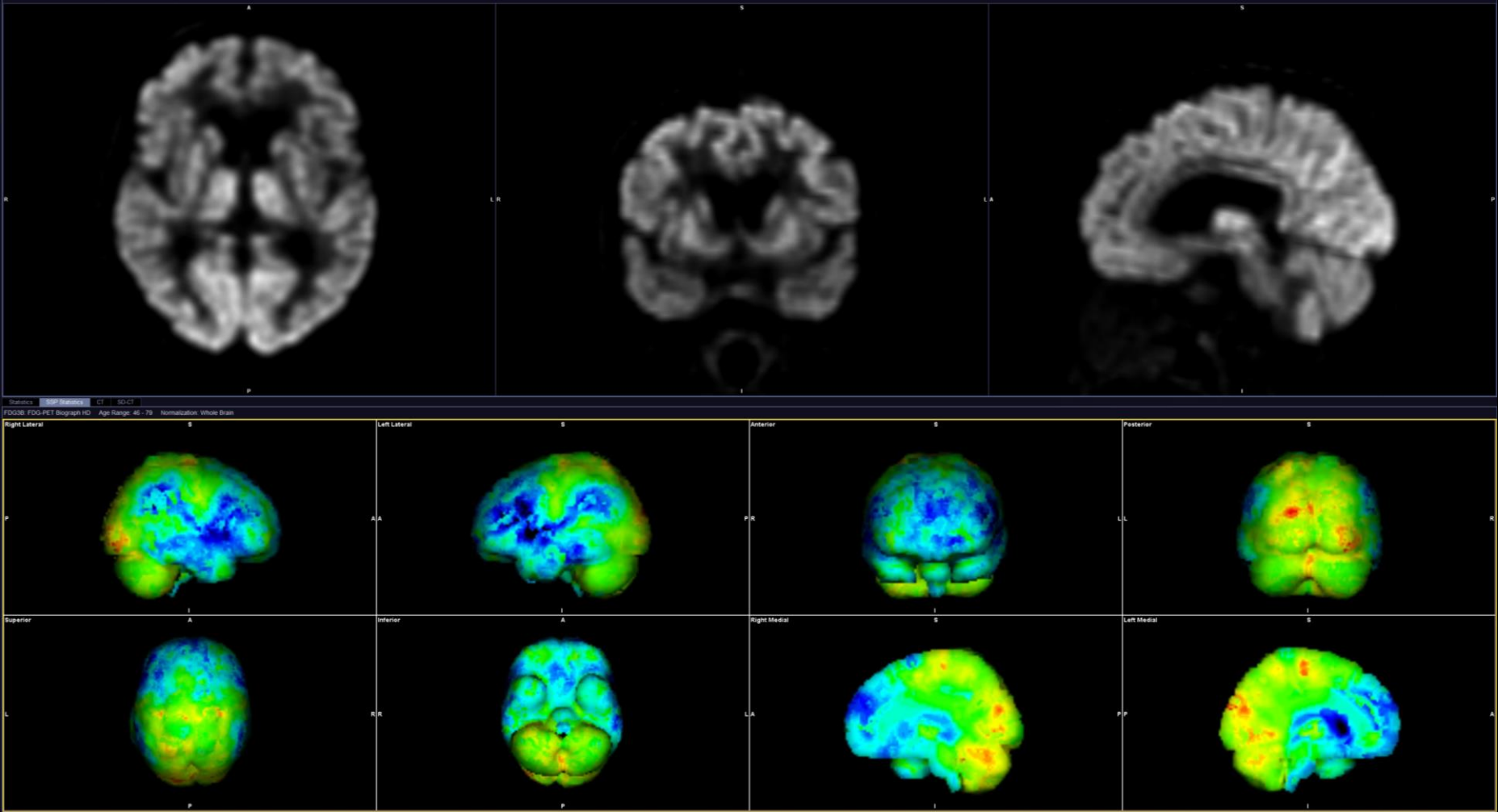
97 ref mAs

Data courtesy of North Shore Radiology Nuclear Medicine, Sydney, Australia.

¹ See slides at end of presentation for indications and important safety information for Fludeoxyglucose F 18 (^{18}F -FDG) Injection. ² Based on bench testing (e.g., improved sensitivity and time of flight per NEMA NU-2:2018). Please refer to the approved PET drug prescribing information for dosing and administration instructions.

Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

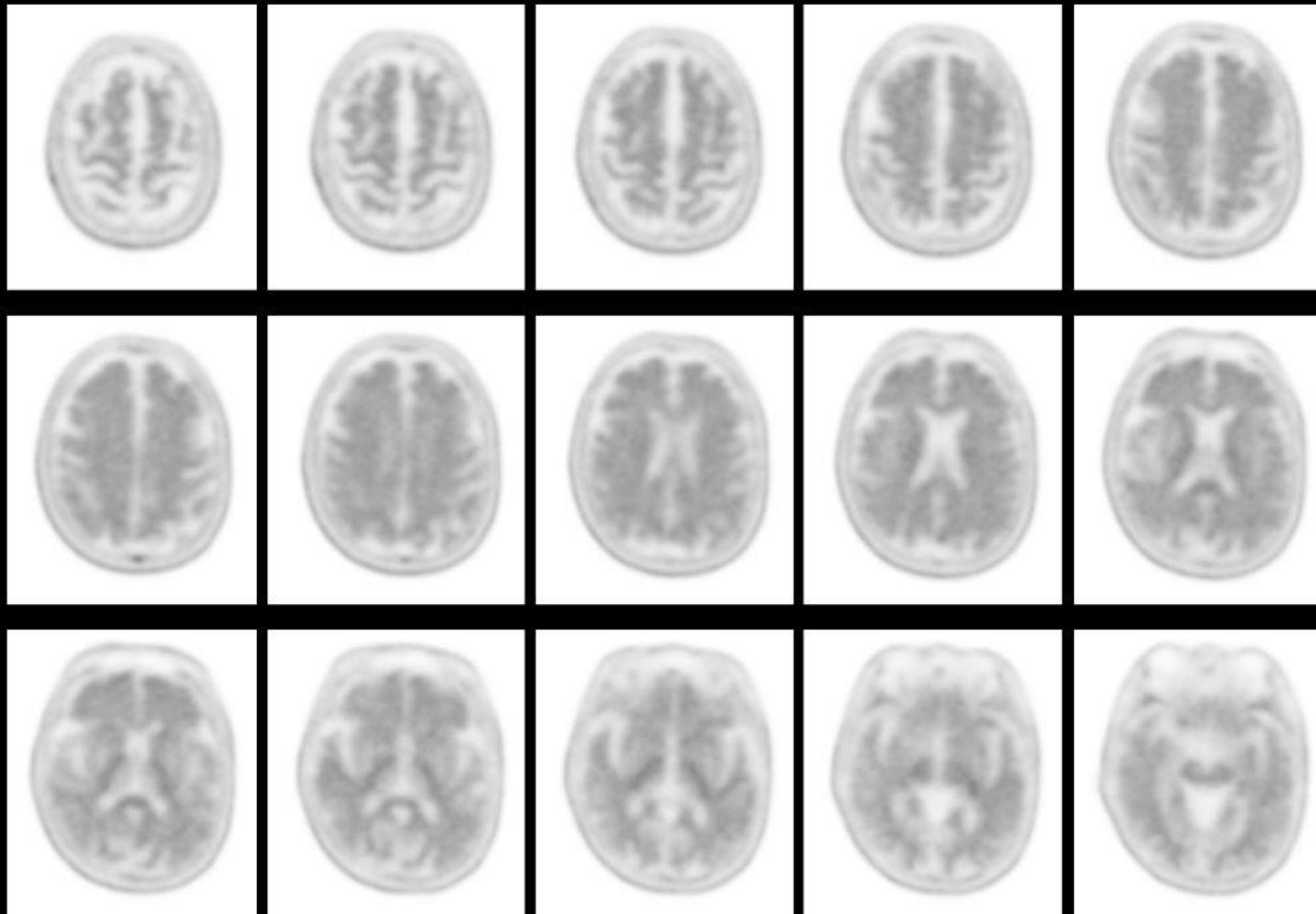
Fronto-temporal hypometabolism suggested in ^{18}F -FDG PET/CT¹ study confirmed using statistical normals database comparison



Data courtesy of North Shore Radiology Nuclear Medicine, Sydney, Australia.
¹ See slides at end of presentation for indications and important safety information for Fludeoxyglucose F 18 (^{18}F -FDG) Injection.
Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

syngo.MI Neuro Database Comparison and Cortical Analysis

support evaluation of patient with suspected Alzheimer's disease



Axial PET

- ^{18}F -florbetaben PET/CT brain scan of an elderly patient presenting with symptoms associated with Alzheimer's disease

syngo.MI Neuro Database Comparison

- Statistical comparison against a normal reference brain demonstrates high amyloid burden across the brain, particularly in the parietal lobes, posterior cingulate gyrus, and temporal lobes

syngo.MI Neuro Cortical Analysis

- Cortico-cerebellar SUVR demonstrates high average SUVR (1.33) and Centiloid score of 65.4, reflecting moderately high cortical amyloid burden

Biograph Trinion EP2 PET/CT PET (24-cm aFOV)

Scan acquisition

Total scan time: 15 minutes

Image reconstruction

344 x 344 matrix, PSF+TOF, 4i6s

All-pass filter

Injected dose

Florbetaben F-18 Injection

8.3 mCi (308 MBq) (3.5 MBq/kg)

Patient details: 88 kg (194 lb)

CT (128 slices)

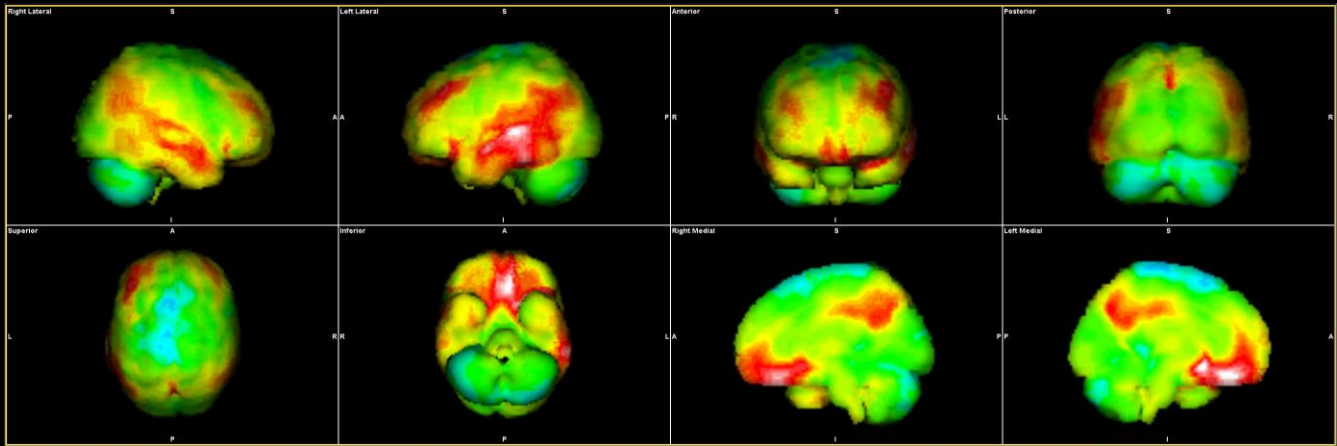
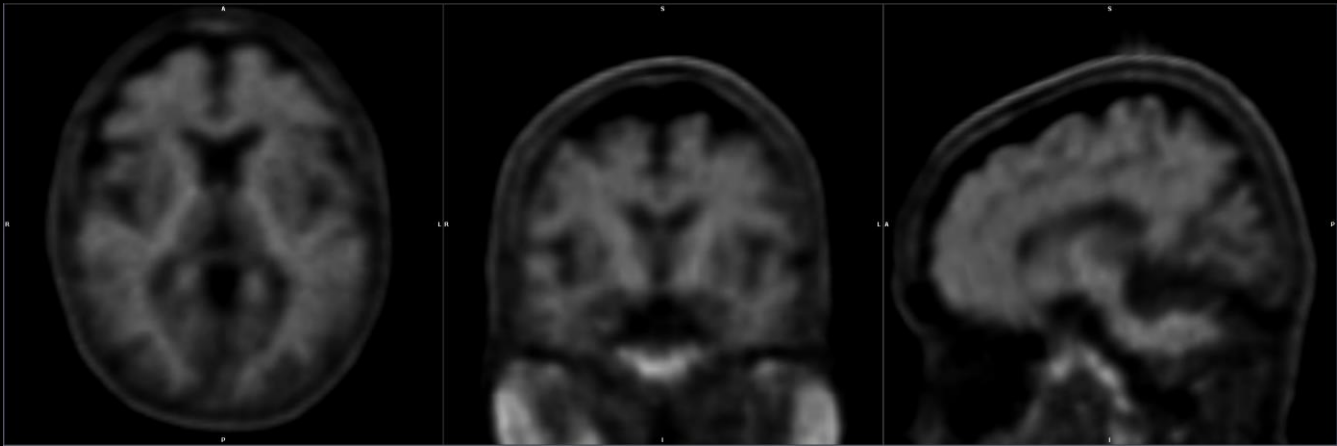
Scan parameters

120 kV

30 ref mAs

syngo.MI Neuro Database Comparison and Cortical Analysis

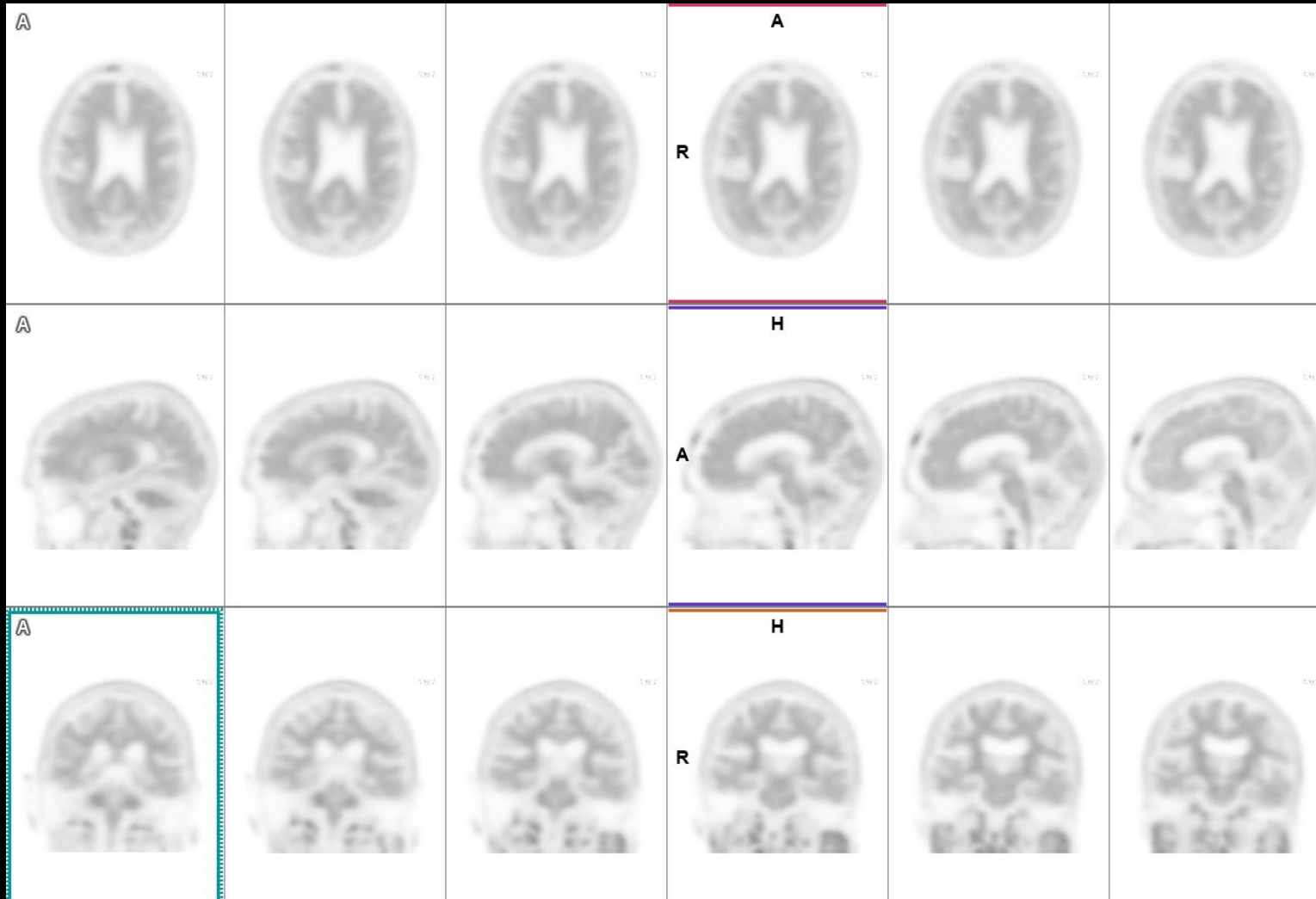
support evaluation of patient with suspected Alzheimer's disease



Normalization region: Whole Cerebellum (florbetaben)

ROI	Ratio
Anterior cingulate gyrus (florbetaben)	1.26
Frontal lobe (florbetaben)	1.26
Occipital (florbetaben)	1.14
Parietal lobe (florbetaben)	1.42
Posterior cingulate gyrus (florbetaben)	1.52
Temporal lobe (florbetaben)	1.36
Average	1.33
Centiloid score	65.4

Visual and cortico-cerebellar SUVr correlation of amyloid-positive ^{18}F -florbetaben brain PET/CT study



- ^{18}F -florbetaben PET/CT brain scan of an elderly patient presenting with symptoms associated with Alzheimer's disease

syngo.MI Neuro Database Comparison

- Statistical comparison against a normal reference brain demonstrates high amyloid burden across the brain, particularly in the parietal lobes, posterior cingulate gyrus, and temporal lobes

syngo.MI Neuro Cortical Analysis

- Ratio analysis to reference region in the brain demonstrates high average SUVr (1.67) and Centiloid score of 63, reflecting moderately high cortical amyloid burden

Biograph Triniton EP2 PET/CT PET (24-cm aFOV)

Scan acquisition

Total scan time: 15 minutes

Image reconstruction

344 x 344 matrix, PSF+TOF, 4i6s

All-pass filter

Injected dose

Florbetaben F-18 Injection

8.3 mCi (308 MBq) (3.5 MBq/kg)

Patient details: 88 kg (194 lb)

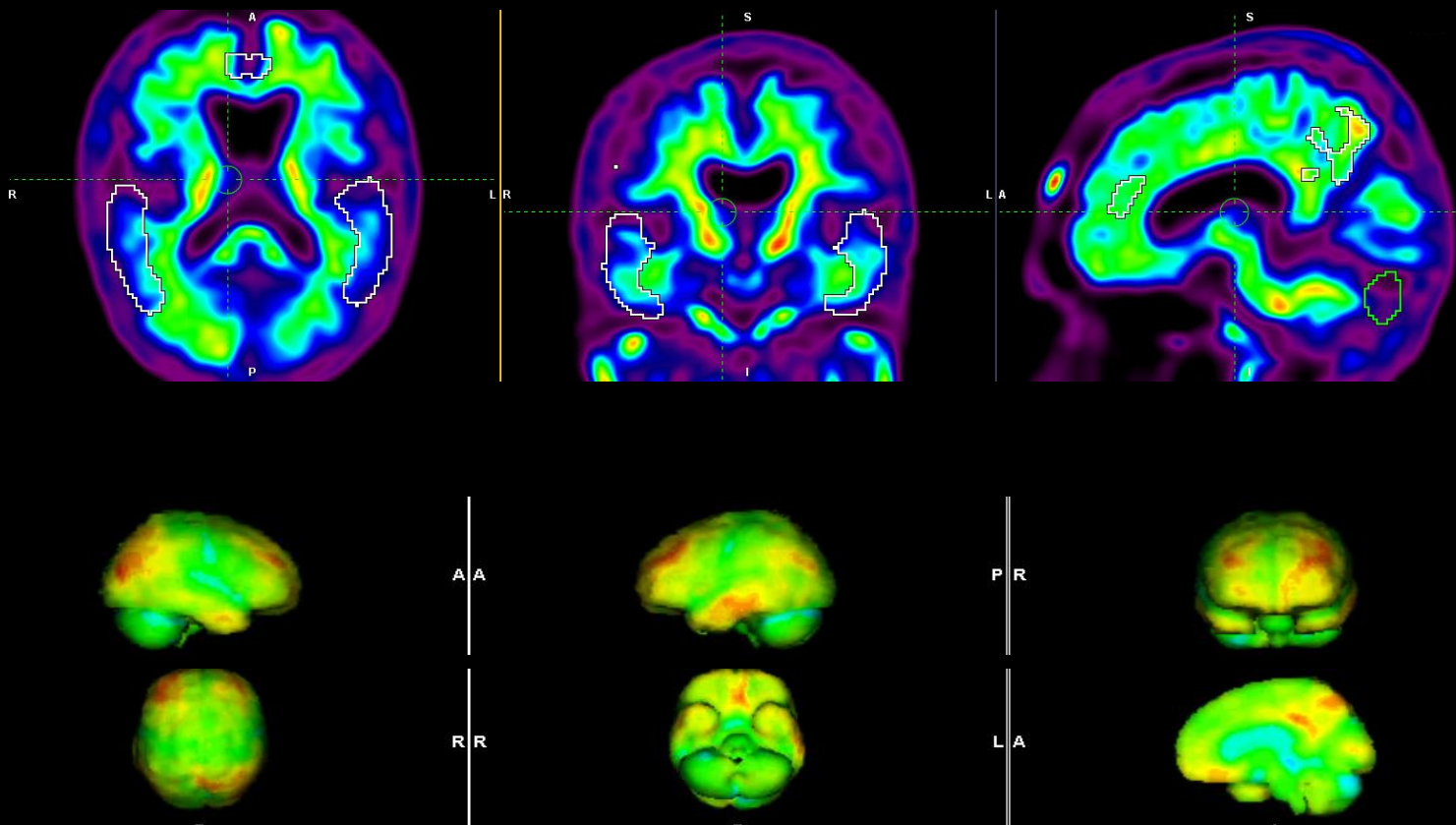
CT (128 slices)

Scan parameters

120 kV

30 ref mAs

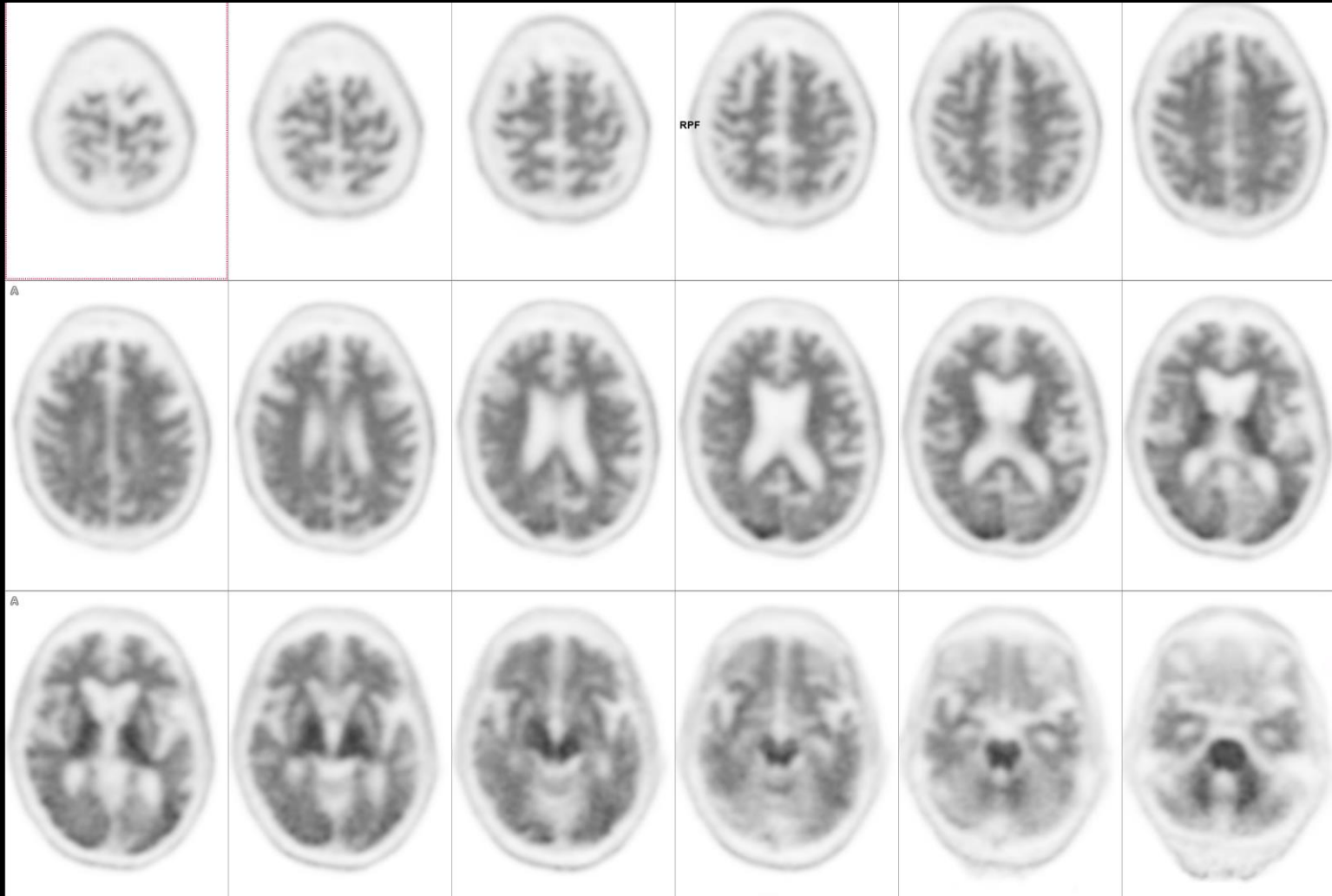
Visual and cortico-cerebellar SUVr correlation of amyloid-positive ¹⁸F-florbetaben brain PET/CT study



Normalization region: Cerebellar Cortex (florbetaben)

ROI	Ratio
Anterior cingulate gyrus (florbetaben)	1.47
Frontal lobe (florbetaben)	1.70
Occipital (florbetaben)	1.58
Parietal lobe (florbetaben)	1.68
Posterior cingulate gyrus (florbetaben)	2.05
Temporal lobe (florbetaben)	1.53
Average	1.67
Centiloid score	63.3

^{18}F -florbetaben PET/CT study shows normal white-matter uptake in patient negative for cortical amyloid burden



- ^{18}F -florbetaben PET/CT brain scan of an elderly patient with normal white matter uptake along with significant atrophy and ventricular dilatation

syngo.MI Neuro Database Comparison

- Statistical comparison against a normal reference brain demonstrates low amyloid burden across the brain

syngo.MI Neuro Cortical Analysis

- Ratio analysis to reference region in the brain demonstrates low average SUVR (0.96) and Centiloid score of -1.7

Biograph Trinion EP2 PET/CT PET (24-cm aFOV)

Scan acquisition

Total scan time: 15 minutes

Image reconstruction

344 x 344 matrix, PSF+TOF, 4i6s

All-pass filter

Injected dose

Florbetaben F-18 Injection

7.7 mCi (286 MBq) (3.8 MBq/kg)

Patient details: 75 kg (165 lb)

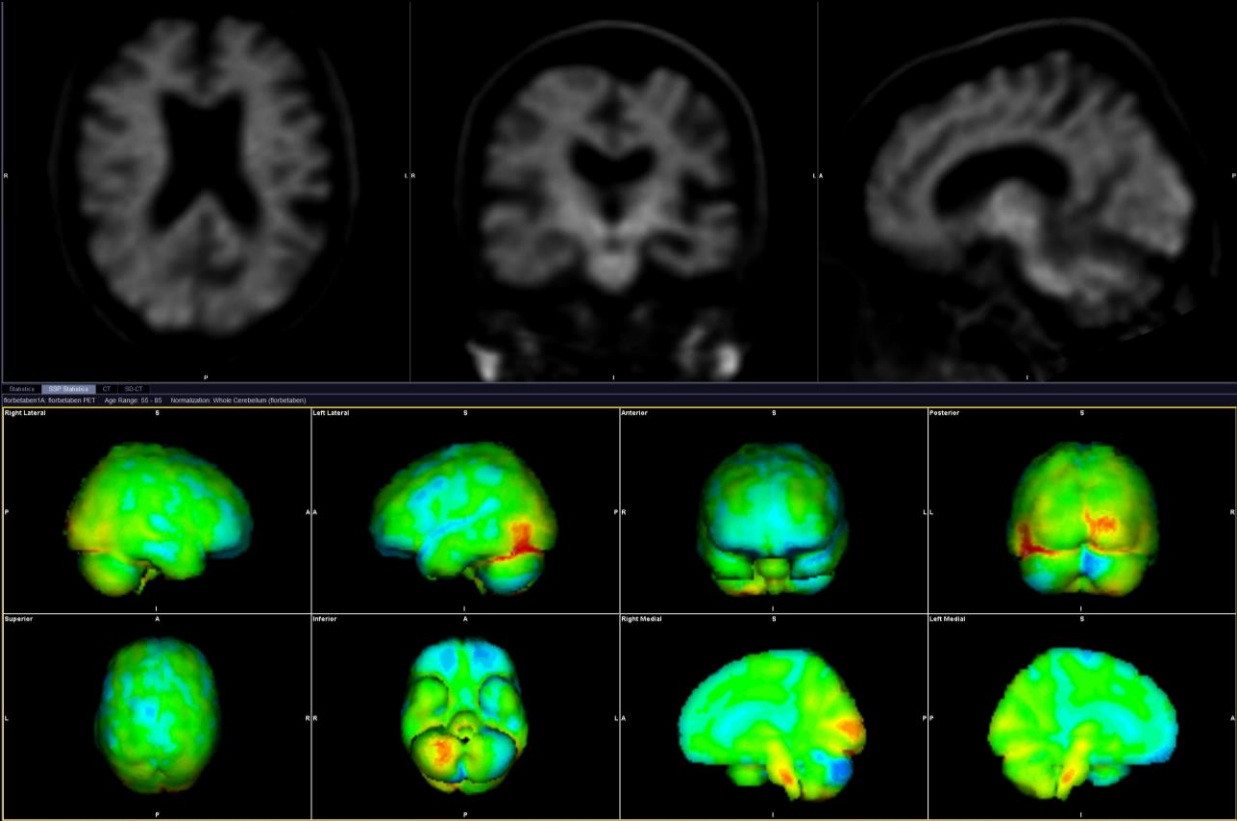
CT (128 slices)

Scan parameters

120 kV

30 ref mAs

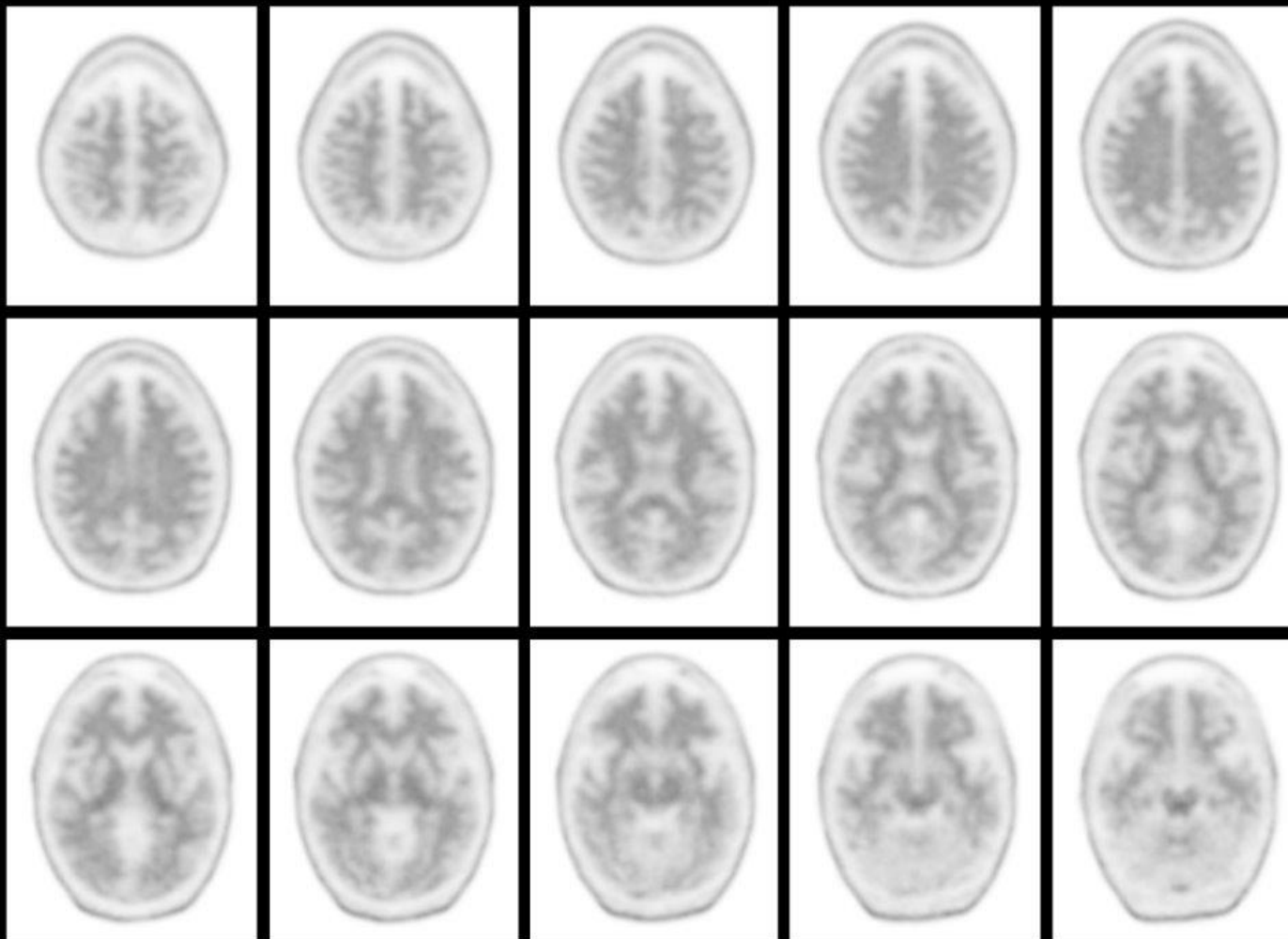
^{18}F -florbetaben PET/CT study shows normal white-matter uptake in patient negative for cortical amyloid burden



Normalization region: Whole Cerebellum (florbetaben)

ROI	Ratio
Anterior cingulate gyrus (florbetaben)	0.77
Frontal lobe (florbetaben)	0.83
Occipital (florbetaben)	1.18
Parietal lobe (florbetaben)	0.88
Posterior cingulate gyrus (florbetaben)	1.14
Temporal lobe (florbetaben)	0.96
Average	0.96
Centiloid score	-1.7

^{18}F -florbetaben PET/CT study shows normal white-matter uptake in patient negative for cortical amyloid burden



- Normal ^{18}F -florbetaben PET/CT brain scan of an elderly patient

syngo.MI Neuro Database Comparison

- Statistical comparison against a normal reference brain demonstrates low amyloid burden across the brain

syngo.MI Neuro Cortical Analysis

- Ratio analysis to reference region in the brain demonstrates low average SUVR (0.89) and Centiloid score of -14

Biograph Trinion EP2 PET/CT PET (24-cm aFOV)

Scan acquisition

Total scan time: 15 minutes

Image reconstruction

344 x 344 matrix, PSF+TOF, 4i6s

All-pass filter

Injected dose

Florbetaben F-18 Injection

9.2 mCi (342 MBq) (4.6 MBq/kg)

Patient details: 74 kg (163 lb)

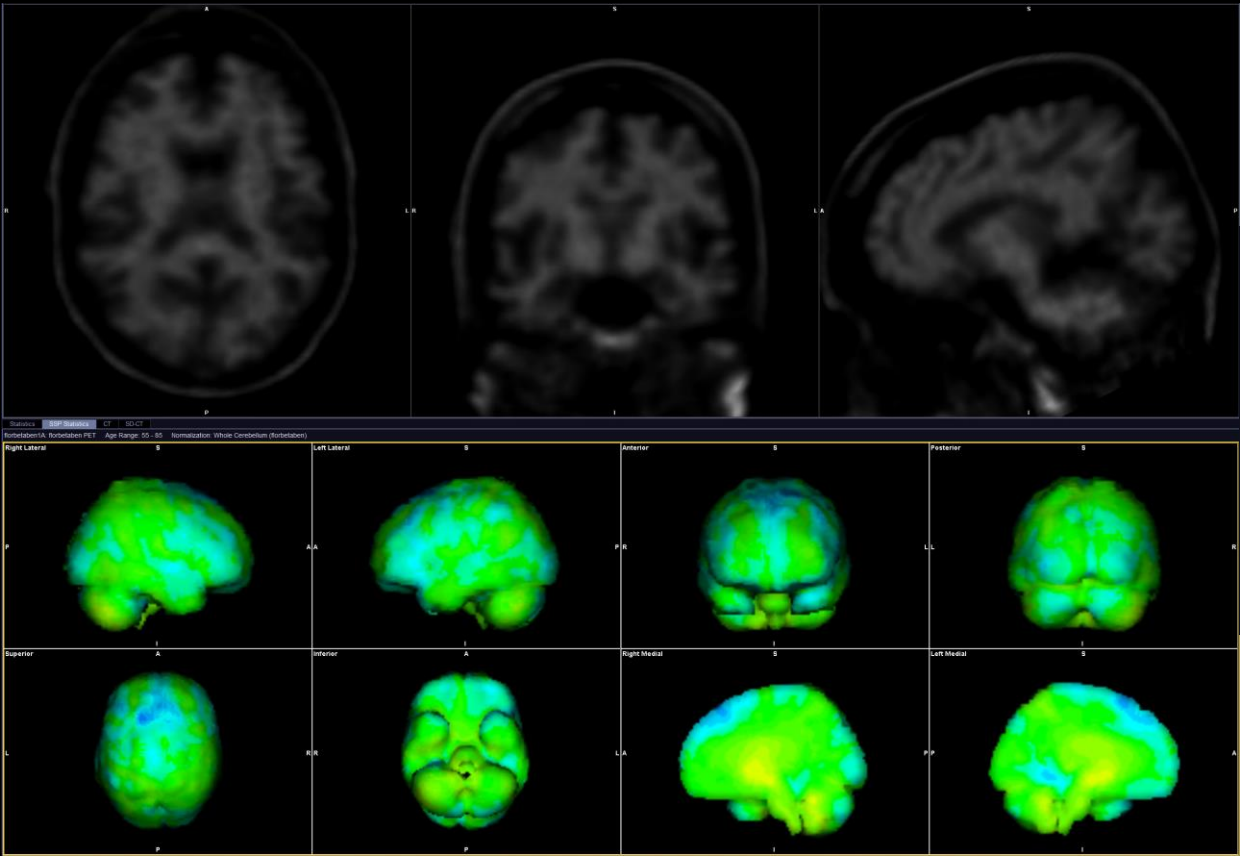
CT (128 slices)

Scan parameters

120 kV

30 ref mAs

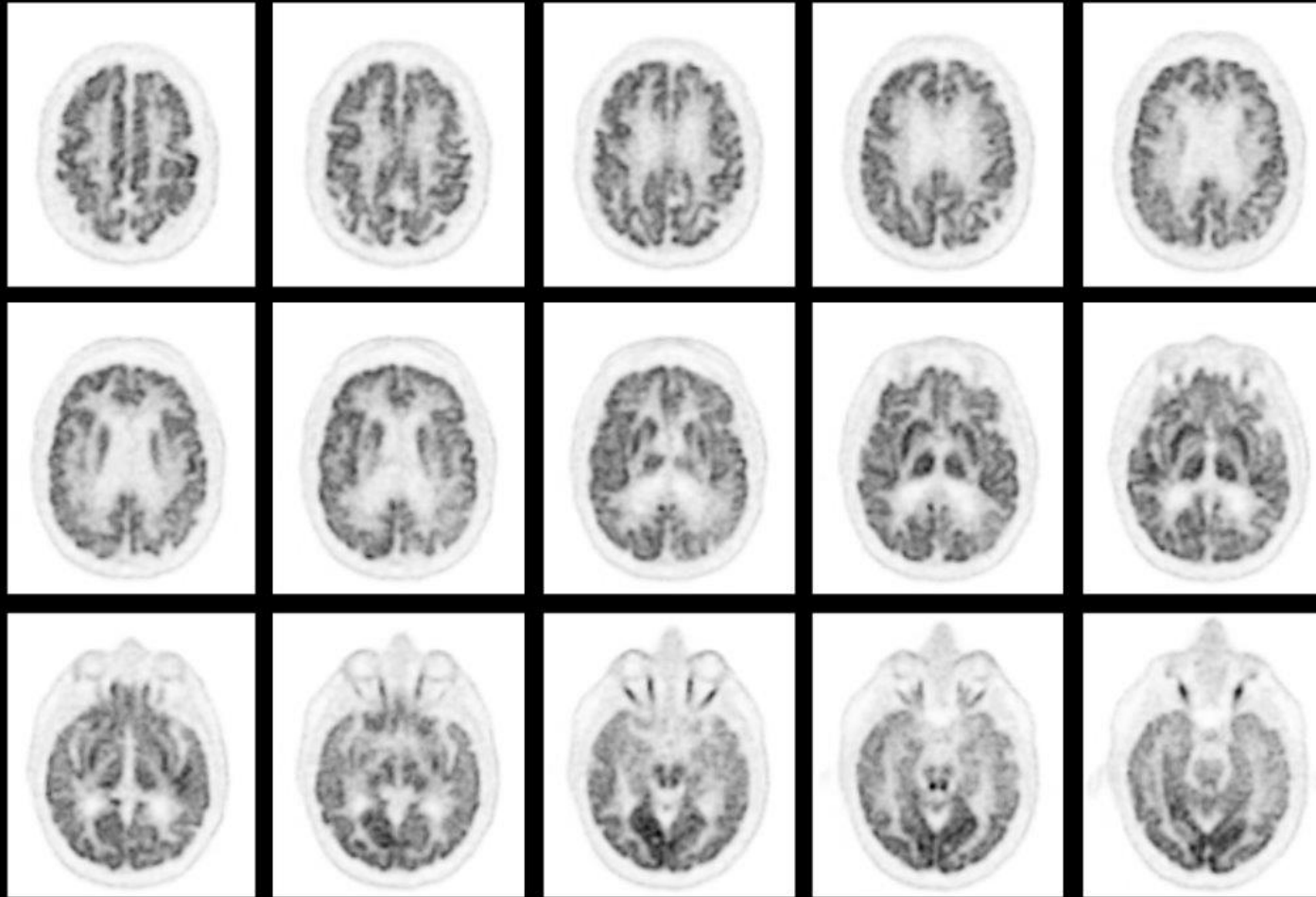
^{18}F -florbetaben PET/CT study shows normal white-matter uptake in patient negative for cortical amyloid burden



Normalization region: Whole Cerebellum (florbetaben)

ROI	Ratio
Anterior cingulate gyrus (florbetaben)	0.84
Frontal lobe (florbetaben)	0.78
Occipital (florbetaben)	0.91
Parietal lobe (florbetaben)	0.81
Posterior cingulate gyrus (florbetaben)	1.11
Temporal lobe (florbetaben)	0.89
Average	0.89
Centiloid score	-14.4

Sharp delineation of cortical gray matter and basal ganglia shown in ^{18}F -FDG PET/CT study with high-matrix reconstruction



Axial PET

- ^{18}F -FDG brain PET/CT study scan of an elderly patient with early cognitive abnormalities
- Sharp delineation of cortical gray matter and basal ganglia seen with 344 x 344 matrix reconstruction with high gray-white matter differentiation
- Mild hypometabolism visualized in left parietal region
- Cortical uptake pattern reflects generalized cortical atrophy typical of the elderly

Biograph Trinion EP2 PET/CT

PET (24-cm aFOV)

Scan acquisition

Total scan time: 15 minutes

Image reconstruction

344 x 344 matrix, PSF+TOF, 20i6s

All-pass filter

Injected dose

Fludeoxyglucose F 18 (^{18}F -FDG) Injection¹

5.0 mCi (186 MBq) (1.9 MBq/kg)

Patient details: 97 kg (214 lb)

CT (128 slices)

Scan parameters

120 kV

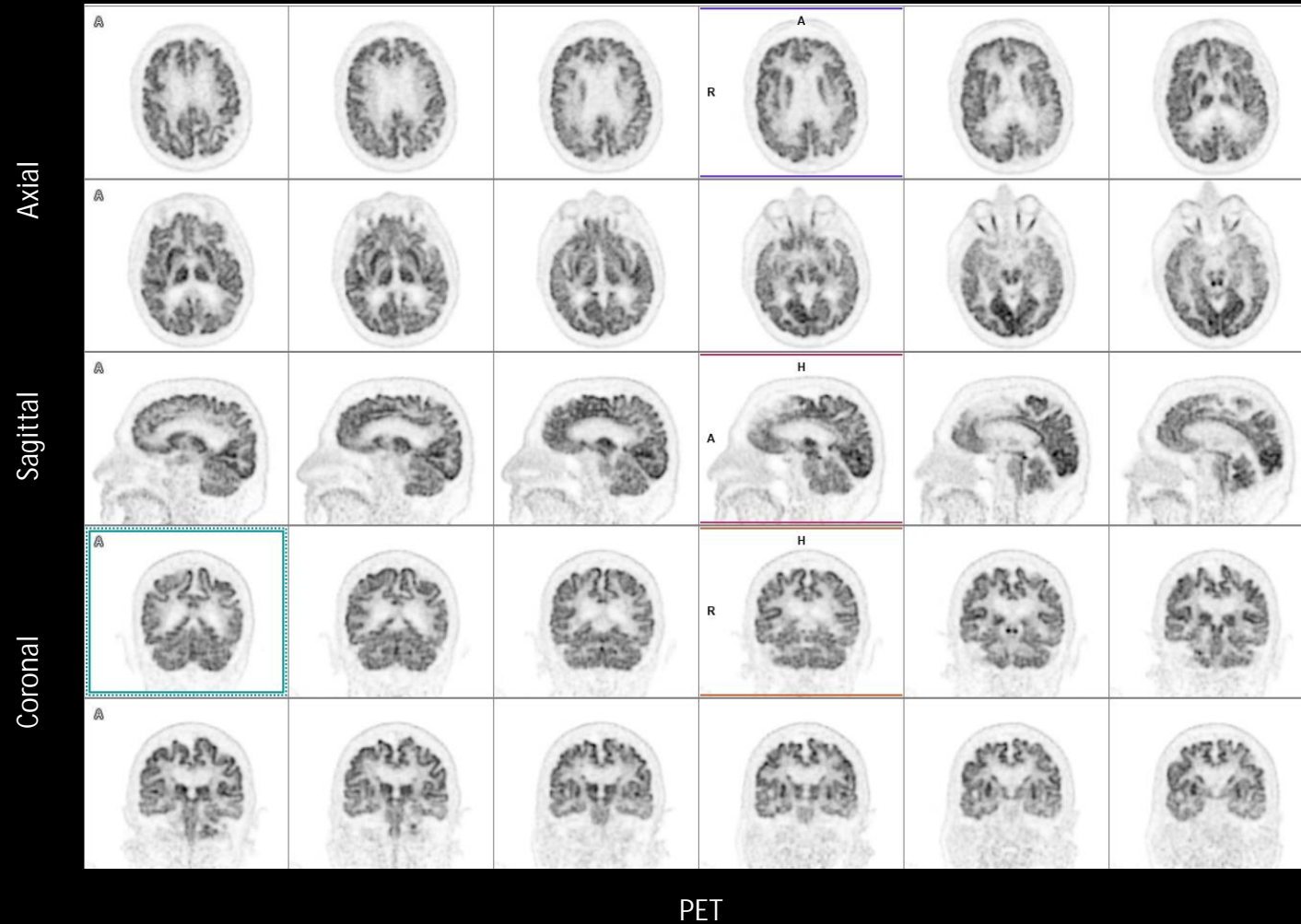
30 ref mAs

Data courtesy of Wentworth-Douglas Hospital, Dover, New Hampshire, USA.

¹ See slides at end of presentation for indications and important safety information for Fludeoxyglucose F 18 (^{18}F -FDG) Injection.

Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

Sharp delineation of cortical gray matter and basal ganglia in ^{18}F -FDG PET/CT study with high-iteration reconstruction



- ^{18}F -FDG brain PET/CT study of an elderly patient with early cognitive abnormalities
- Sharp delineation of cortical gray matter and basal ganglia seen with 256 x 256 matrix and 20 iteration reconstruction with high gray-white matter differentiation
- Mild hypometabolism visualized in left parietal region
- Cortical uptake pattern reflects generalized cortical atrophy typical of the elderly

Biograph Trinion EP2 PET/CT
PET (24-cm aFOV)

Scan acquisition
Total scan time: 15 minutes

Image reconstruction
256 x 256 matrix, PSF+TOF, 20i6s
All-pass filter

Injected dose
Fludeoxyglucose F 18 (^{18}F -FDG) Injection¹
5.0 mCi (186 MBq) (1.9 MBq/kg)
Patient details: 97 kg (214 lb)

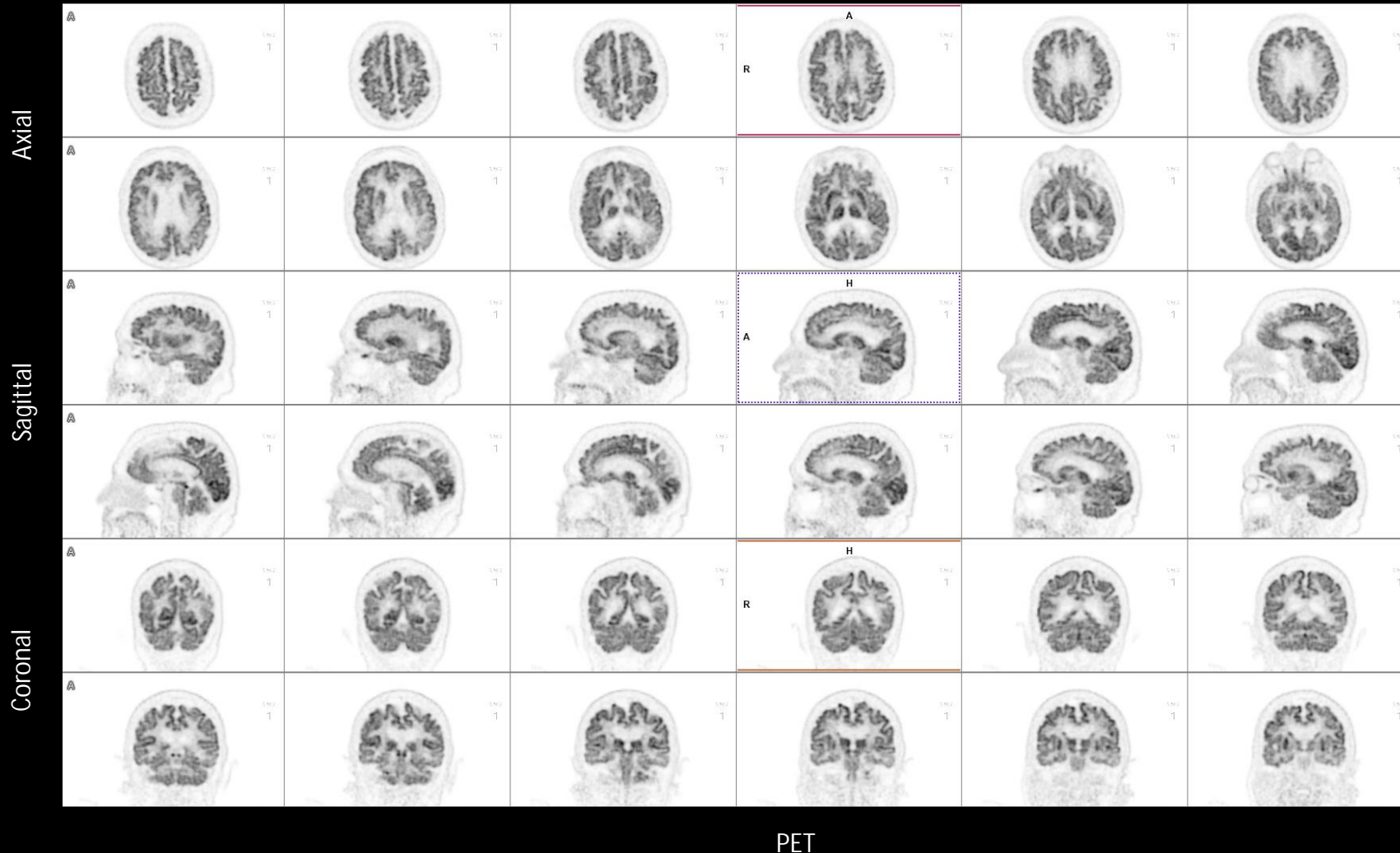
CT (128 slices)
Scan parameters
120 kV
30 ref mAs

Data courtesy of Wentworth-Douglas Hospital, Dover, New Hampshire, USA.

¹ See slides at end of presentation for indications and important safety information for Fludeoxyglucose F 18 (^{18}F -FDG) Injection.

Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

Bi-parietal hypometabolism delineated on ^{18}F -FDG PET/CT study with high-matrix reconstruction



- ^{18}F -FDG brain PET/CT study of an elderly patient with cognitive abnormalities
- Bi-parietal hypometabolism clearly defined on PET images
- Sharp delineation of cortical gray matter and basal ganglia seen with 344 x 344 matrix reconstruction with high gray-white matter differentiation
- Cortical uptake pattern reflects generalized cortical atrophy typical of the elderly

Biograph Trinion EP2 PET/CT
PET (24-cm aFOV)

Scan acquisition
Total scan time: 15 minutes

Image reconstruction
344 x 344 matrix, PSF+TOF, 20i6s
All-pass filter

Injected dose
Fludeoxyglucose F18 (^{18}F -FDG) Injection¹
5.25 mCi (194 MBq) (3.4 MBq/kg)
Patient details: 57 kg (125 lb)

CT (128 slices)
Scan parameters
120 kV
30 ref mAs

Data courtesy of Wentworth-Douglas Hospital, Dover, New Hampshire, USA.

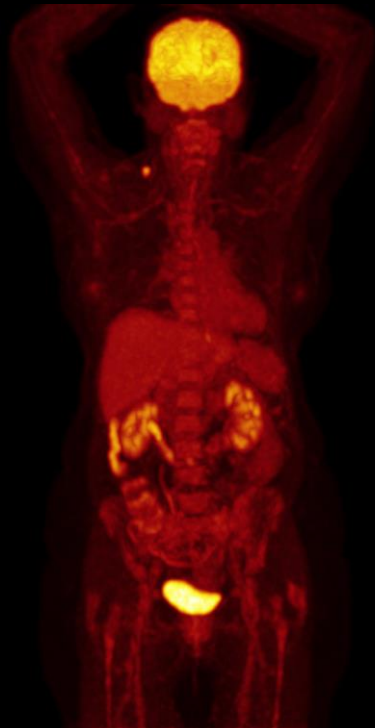
¹ See slides at end of presentation for indications and important safety information for Fludeoxyglucose F 18 (^{18}F -FDG) Injection.

Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

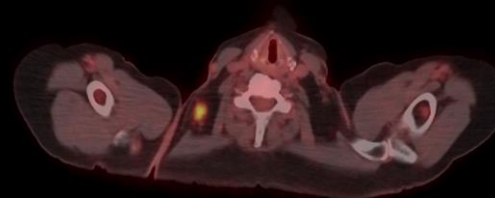
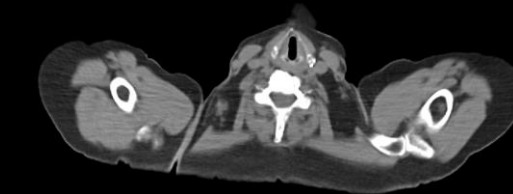
Low-dose ^{18}F -FDG PET/CT study acquired with 4 mCi shows high lesion contrast in supraclavicular nodal metastases



MIP



PET



Axial

- 78-kg (167-lb) patient with history breast carcinoma underwent an ^{18}F -FDG PET/CT study for re-staging
- High tracer concentration in right supraclavicular lymph nodal metastases without any other axillary or distal metastases
- High uptake within vertebral marrow reflects post-chemotherapy flare
- High image quality with uniform liver parenchymal uptake with low injected dose of 4 mCi reflects ultra-fast time-of-flight (TOF)¹ performance

Biograph Trinion EP2 PET/CT PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 11 minutes 30 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 3i6s

Gaussian filter 5

Injected dose

Fludeoxyglucose F 18 (^{18}F -FDG) Injection²

4 mCi (148 MBq) (1.9 MBq/kg)³

Patient details: 76 kg (167 lb)

CT (64 slices)

Scan parameters

130 kV Tin Filter

235 ref mAs

Data courtesy of North Shore Radiology Nuclear Medicine, Sydney, Australia.

¹ Ultra-fast TOF is defined as less than 275 picoseconds (ps).

² See slides at end of presentation for indications and important safety information for Fludeoxyglucose F 18 (^{18}F -FDG) Injection.

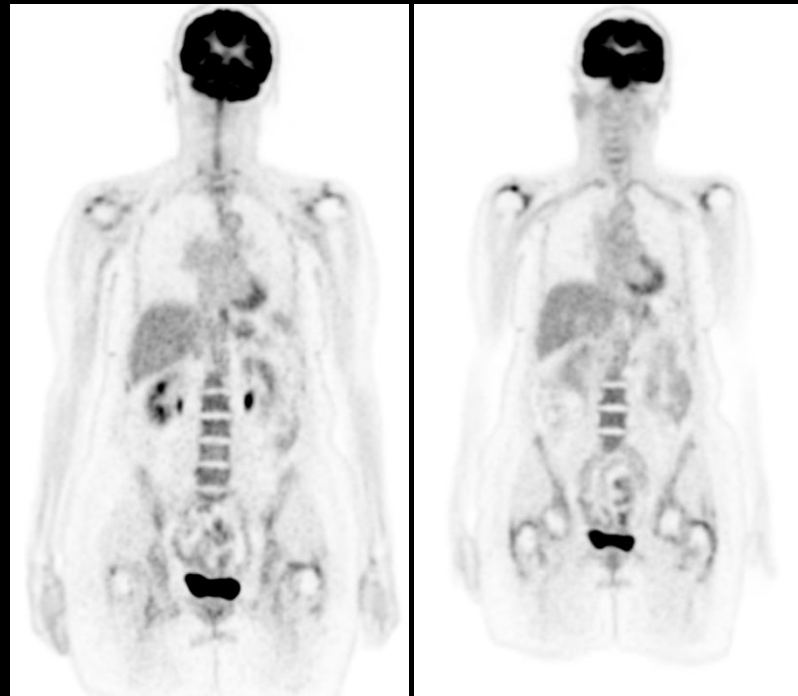
³ Based on bench testing (e.g., improved sensitivity and TOF per NEMA NU-2:2018). Please refer to the approved PET drug prescribing information for dosing and administration instructions.

Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

High image quality and sharp delineation of vertebral marrow uptake in low-dose ^{18}F -FDG PET/CT study



MIP



Coronal

PET



Sagittal

- 67-kg (147-lb) patient underwent ^{18}F -FDG PET/CT study post chemotherapy
- High overall image quality with high uptake within vertebral and pelvic marrow reflecting post-chemotherapy marrow flare
- Uniform liver parenchymal uptake and sharp delineation of vertebral margins, joint space inflammation, and vascular structures reflect ultra-fast time-of-flight (TOF)¹ performance

Biograph Trinion EP2 PET/CT PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 14 minutes

Image reconstruction

344 x 344 matrix, PSF+TOF, 3i6s

Gaussian filter 5

Injected dose

Fludeoxyglucose F 18 (^{18}F -FDG) Injection²

5.3 mCi (198 MBq) (2.9 MBq/kg)

Patient details: 67 kg (147 lb)

CT (64 slices)

Scan parameters

120 kV Tin Filter

45 ref mAs

Data courtesy of North Shore Radiology Nuclear Medicine, Sydney, Australia.

¹ Ultra-fast TOF is defined as less than 275 picoseconds (ps).

² See slides at end of presentation for indications and important safety information for Fludeoxyglucose F 18 (^{18}F -FDG) Injection.

Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

High contrast in small lymph nodal and marrow lesions in patient with lymphoma



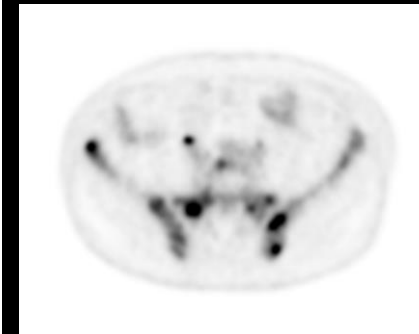
MIP



Coronal



Sagittal



Axial

PET

- 93-kg (205-lb) patient underwent an ^{18}F -FDG PET/CT study for initial lymphoma staging
- High overall image quality with sharp delineation with high contrast of multiple lymph nodal and marrow lesions, particularly in the supraclavicular, ribs, vertebral and pelvic marrow, and spleen
- Sharp delineation of vertebral margins, long bones, and ribs reflects increased marrow uptake
- High matrix reconstruction delineates high contrast within small nodal and marrow lesions, which also reflects ultra-fast time-of-flight (TOF)¹ performance

Biograph Trinion EP2 PET/CT

PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 11 minutes

Image reconstruction

344 x 344 matrix, PSF+TOF, 3i6s

Gaussian filter 5

Injected dose

Fludeoxyglucose F 18 (^{18}F -FDG) Injection²

5.4 mCi (199 MBq) (2.1 MBq/kg)

Patient details: 93 kg (205 lb)

CT (64 slices)

Scan parameters

120 kV Tin Filter

203 ref mAs

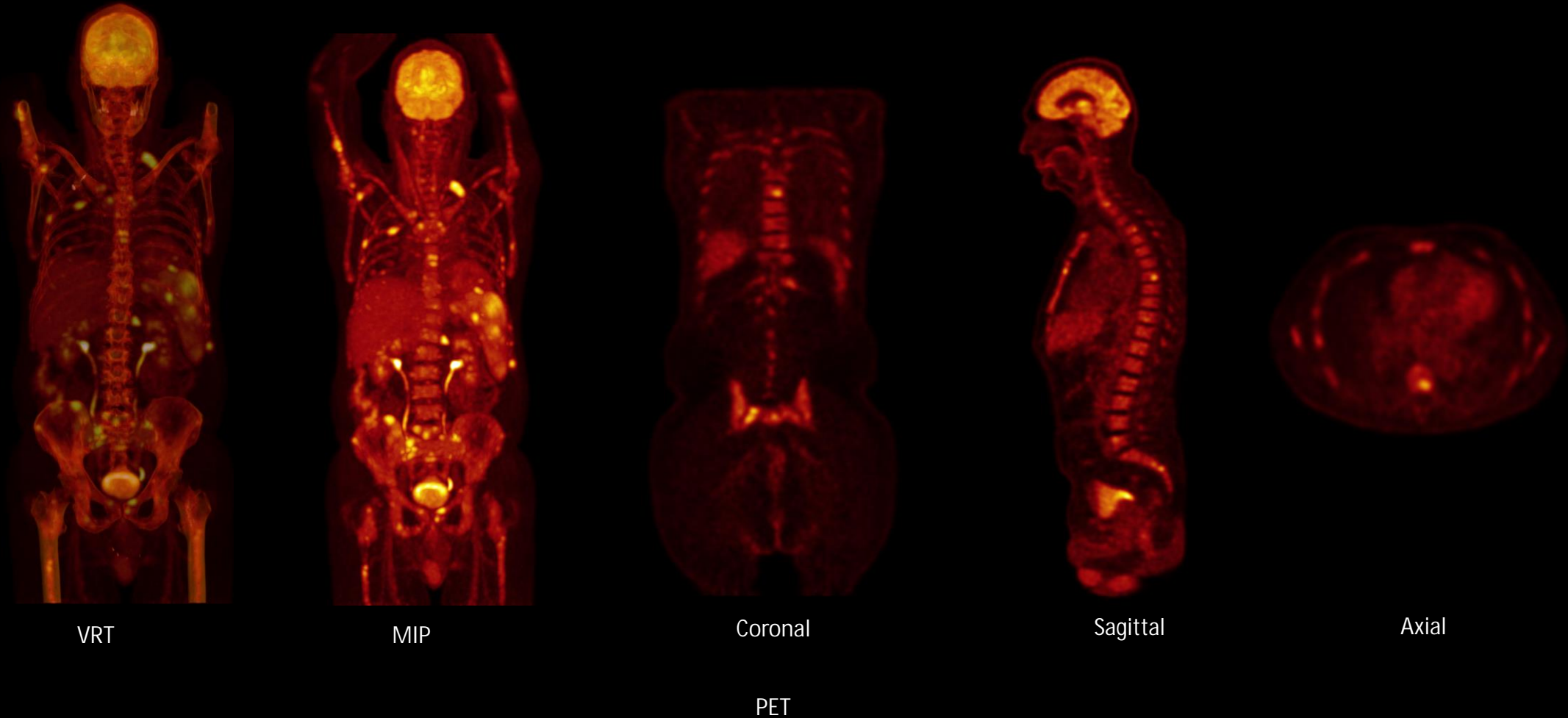
Data courtesy of North Shore Radiology Nuclear Medicine, Sydney, Australia.

¹ Ultra-fast TOF is defined as less than 275 picoseconds (ps).

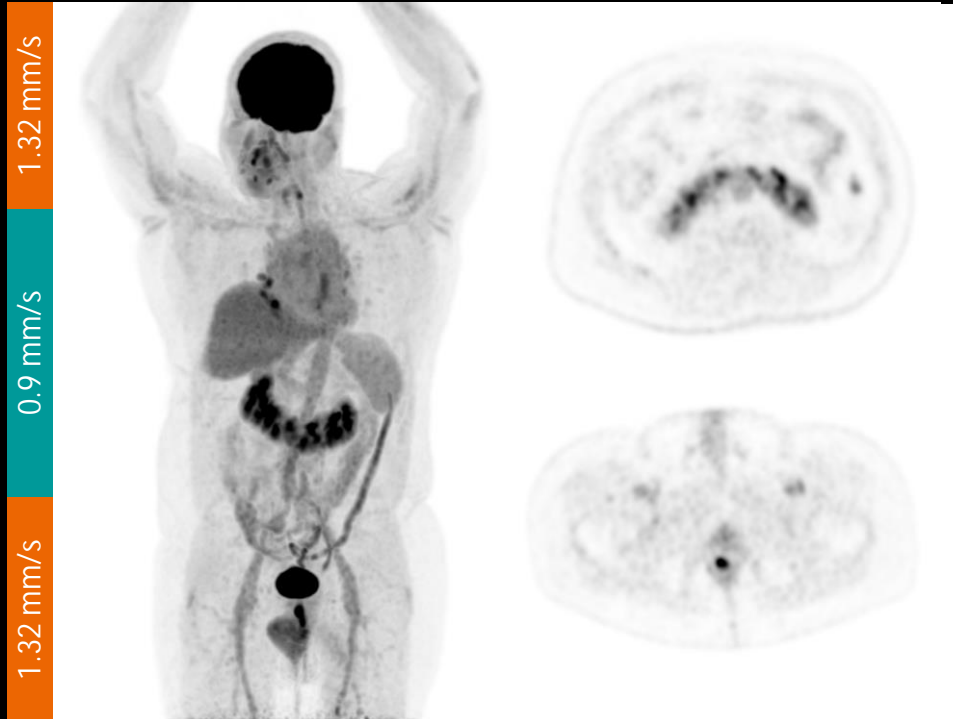
² See slides at end of presentation for indications and important safety information for Fludeoxyglucose F 18 (^{18}F -FDG) Injection.

Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

High contrast in small lymph nodal and marrow lesions in patient with lymphoma



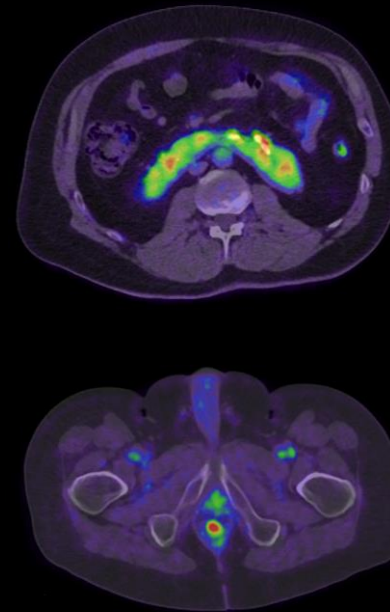
Continuous bed motion enables PET acquisition to be tailored for a specific patient and clinical scenario



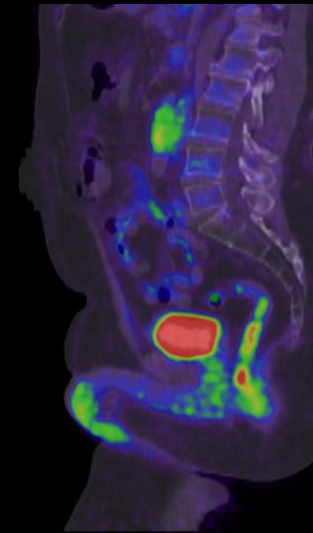
MIP

PET

Axial



PET/CT



Sagittal

- Obese patient with horseshoe kidney and history of colorectal cancer underwent an ^{18}F -FDG PET/CT study
- PET images show sharp delineation with high contrast of renal calyceal tracer retention in bilateral renal calyces, including the horseshoe kidney junction
- Sharp delineation of uptake in vascular structures and intestines reflects high-resolution PET

Biograph Trinion EP2 PET/CT

PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 11 minutes 30 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 3i6s

Gaussian filter 5

Injected dose

Fludeoxyglucose F 18 (^{18}F -FDG) Injection¹

5.32 mCi (197 MBq) (2.0 MBq/kg)

Patient details: 98 kg (216 lb)

CT (64 slices)

Scan parameters

130 kV Tin Filter

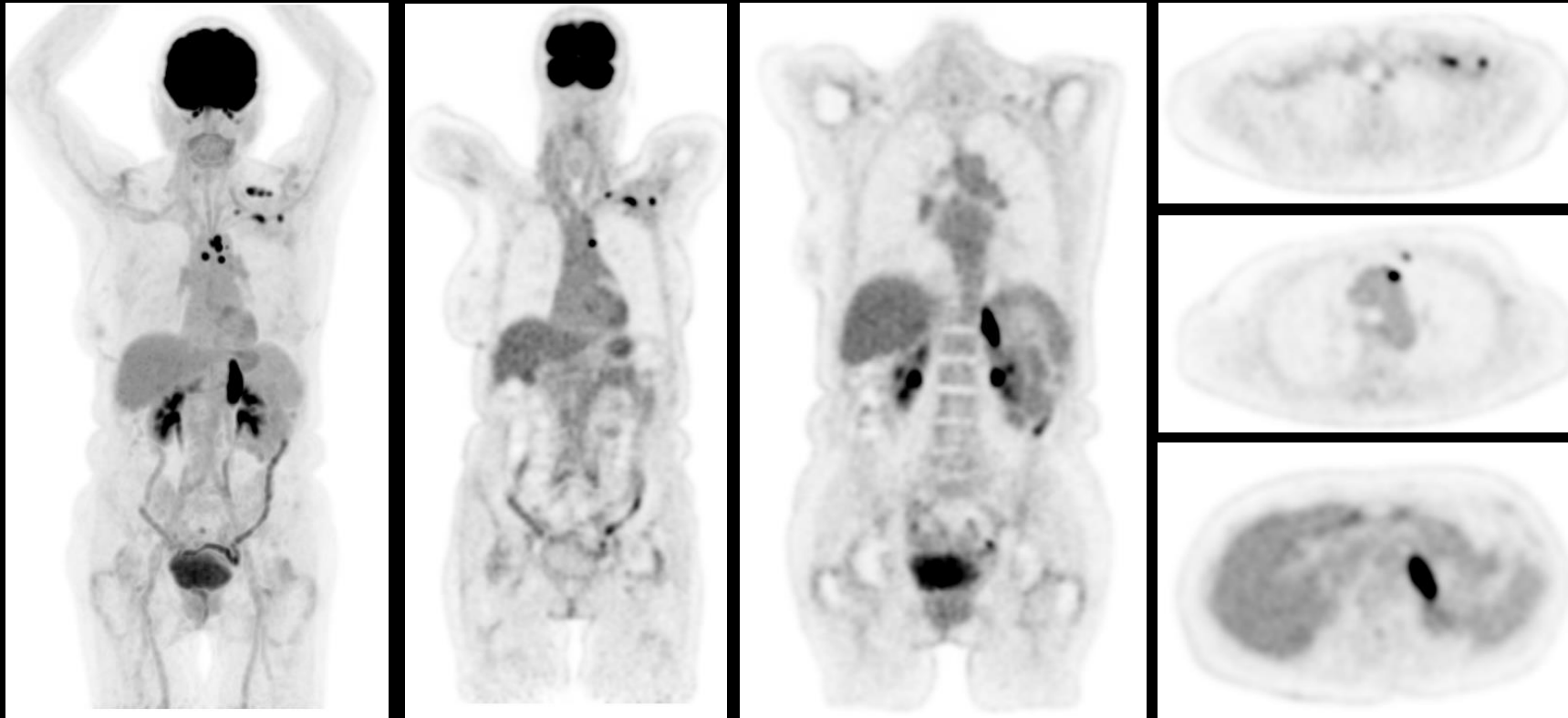
56 ref mAs

Data courtesy of North Shore Radiology Nuclear Medicine, Sydney, Australia.

¹ See slides at end of presentation for indications and important safety information for Fludeoxyglucose F 18 (^{18}F -FDG) Injection.

Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

Lesion Scout with Auto ID¹ automatically segments and differentiates physiologic and non-physiologic uptake



PET MIP

Coronal

PET

Axial

- Patient with breast carcinoma treated with breast-conserving surgery underwent ¹⁸F-FDG PET/CT
- PET images show sharp delineation with high lesion contrast of multiple left axillary, supraclavicular, and mediastinal nodes, including pre-tracheal and pre-aortic nodes
- Large hypermetabolic left para-aortic mass suggests adrenal lesion
- Lesion Scout with Auto ID automatically segments and differentiates physiological and non-physiologic uptake in low injected dose patients identifying foci of interest

Biograph Trinion EP2 PET/CT

PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 10 minutes 30 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 3i6s

Gaussian filter 5

Injected dose

Fludeoxyglucose F 18 (¹⁸F-FDG) Injection²

4 mCi (150 MBq) (2.8 MBq/kg)³

Patient details: 52 kg (115 lb)

CT (64 slices)

Scan parameters

110 kV

43 ref mAs

Data courtesy of North Shore Radiology Nuclear Medicine, Sydney, Australia.

¹ Lesion Scout with Auto ID is not available for sale in the United States and is not commercially available in all countries. Future availability cannot be guaranteed.

² See slides at end of presentation for indications and important safety information for Fludeoxyglucose F 18 (¹⁸F-FDG) Injection. ³ Based on bench testing (e.g., improved sensitivity and time of flight per NEMA NU-2:2018). Please refer to the approved PET drug prescribing information for dosing and administration instructions. Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

Lesion Scout with Auto ID¹ automatically segments and differentiates physiologic and non-physiologic uptake

PET MIP



Lesion Scout



Auto ID segmentation



Segmented results

MTV Burden [cm3]	24.62
TLG Burden [SUV-bw x cm3]	214.83

Data courtesy of North Shore Radiology Nuclear Medicine, Sydney, Australia.

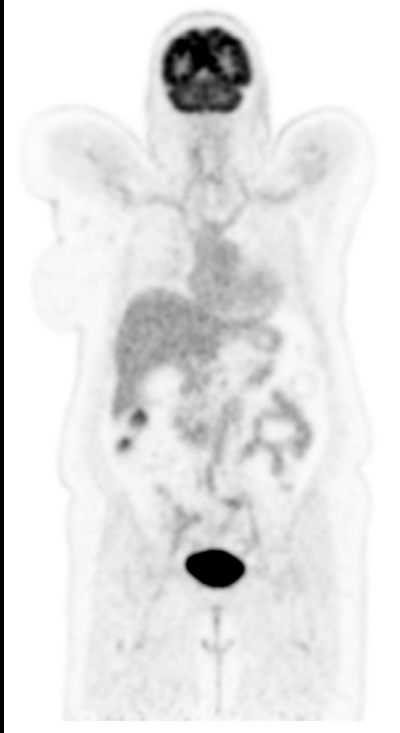
¹ Lesion Scout with Auto ID is not available for sale in the United States and is not commercially available in all countries. Future availability cannot be guaranteed.
Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

High image quality with uniform liver tracer distribution in obese patients acquired with low injected dose

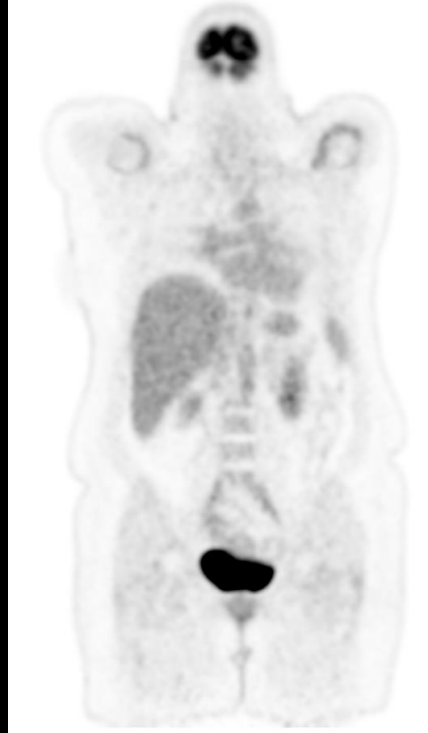
PET



PET MIP



Coronal



Sagittal

- 84-kg (185-lb) patient with history of breast carcinoma underwent an ^{18}F -FDG PET/CT
- High-resolution PET provides sharp delineation of uptake in vascular structures and intestines, even in an obese patient
- High overall image quality with uniform liver parenchymal uptake in obese patient reflects ultra-fast time-of-flight (TOF)¹ performance

Biograph Trinion EP2 PET/CT

PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 10 minutes 30 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 3i6s

Gaussian filter 6

Injected dose

Fludeoxyglucose F 18 (^{18}F -FDG) Injection²

4 mCi (150 MBq) (1.7 MBq/kg)³

Patient details: 84 kg (185 lb)

CT (64 slices)

Scan parameters

140 kV

45 ref mAs

Data courtesy of North Shore Radiology Nuclear Medicine, Sydney, Australia.

¹ Ultra-fast TOF is defined as less than 275 picoseconds (ps).

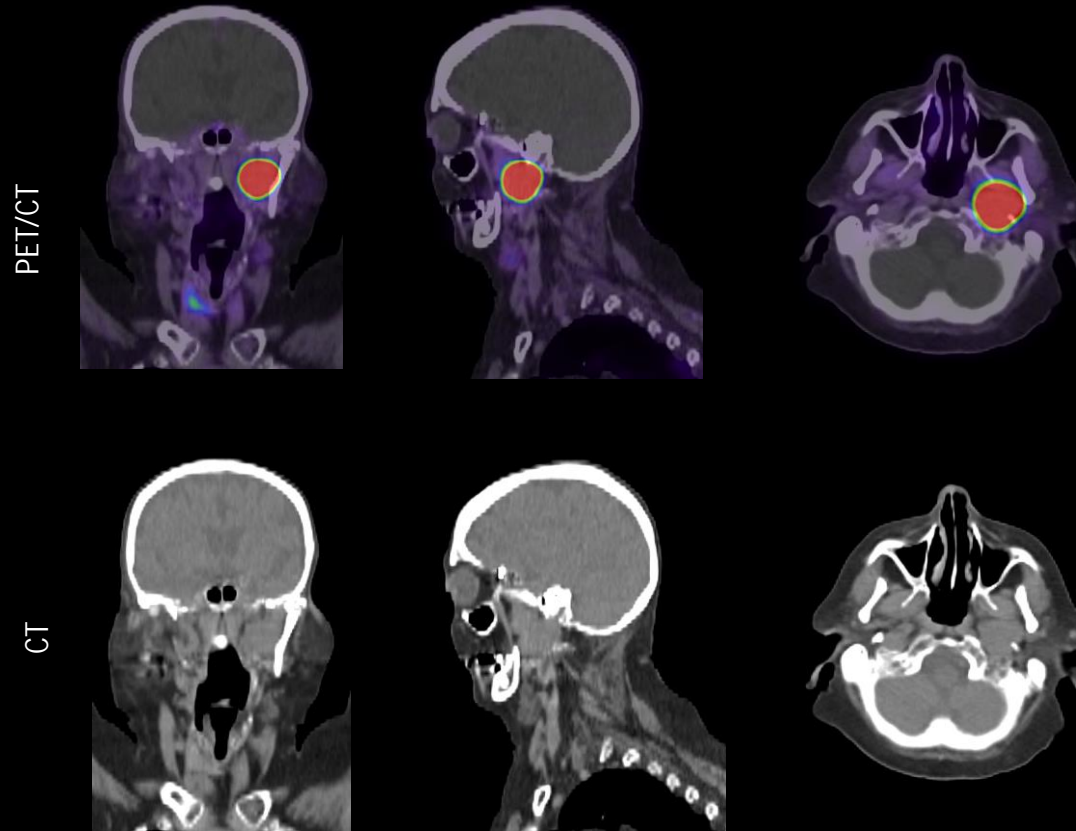
² See slides at end of presentation for indications and important safety information for Fludeoxyglucose F 18 (^{18}F -FDG) Injection.

³ Based on bench testing (e.g., improved sensitivity and TOF per NEMA NU-2:2018). Please refer to the approved PET drug prescribing information for dosing and administration instructions. Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

Highly tracer-avid neuroendocrine tumor in maxillary sinus delineated with ^{68}Ga -DOTATATE PET/CT



PET MIP



PET/CT

CT

Coronal

Sagittal

Axial

- Patient with functioning neuroendocrine tumor in maxillary sinus underwent a ^{68}Ga -DOTATATE PET/CT study
- Study shows high tracer avidity within maxillary lesion filling the entire maxillary sinus with erosion of adjacent nasal plate
- Absence of local or distant metastases as defined on high-resolution PET/CT study supports efficacy of external beam radiation

Biograph Trinion EP2 PET/CT

PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 11 minutes

Image reconstruction

344 x 344 matrix, PSF+TOF, 3i6s

Gaussian filter 5

Injected dose

^{68}Ga -DOTATATE Injection

3.3 mCi (123 MBq) (1.8 MBq/kg)

Patient details: 68 kg (150 lb)

CT (64 slices)

Scan parameters

110 kV Tin Filter

69 ref mAs

High-contrast ^{68}Ga -DOTATATE PET/CT delineates small pelvic and abdominal wall metastases



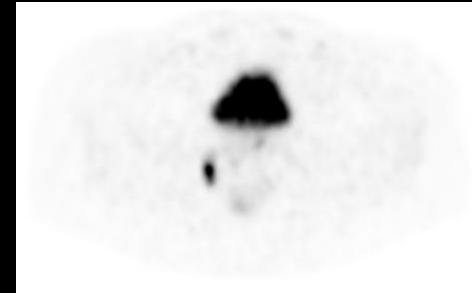
PET MIP



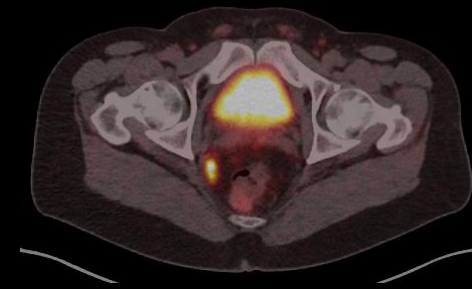
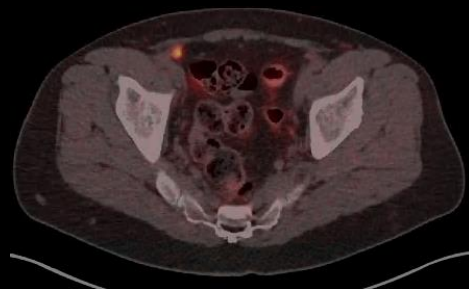
Coronal



Sagittal



Axial



- Patient with history of neuroendocrine tumors (NETs) underwent ^{68}Ga -DOTATATE PET/CT imaging for re-staging
- Study shows high contrast within small metastatic foci in anterior pelvic wall and in right obturator node. No other abnormal foci visualized.
- High lesion contrast, even with low injected dose, reflects high PET image quality due to LSO-based silicon photomultiplier (SiPM) detector technology and ultra-fast time-of-flight (TOF)¹ performance

Biograph Trinion EP2 PET/CT PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 11 minutes

Image reconstruction

344 x 344 matrix, PSF+TOF, 3i6s

Gaussian filter 5

Injected dose

^{68}Ga -DOTATATE Injection

2.72 mCi (101 MBq) (1.2 MBq/kg)

Patient details: 84 kg (185 lb)

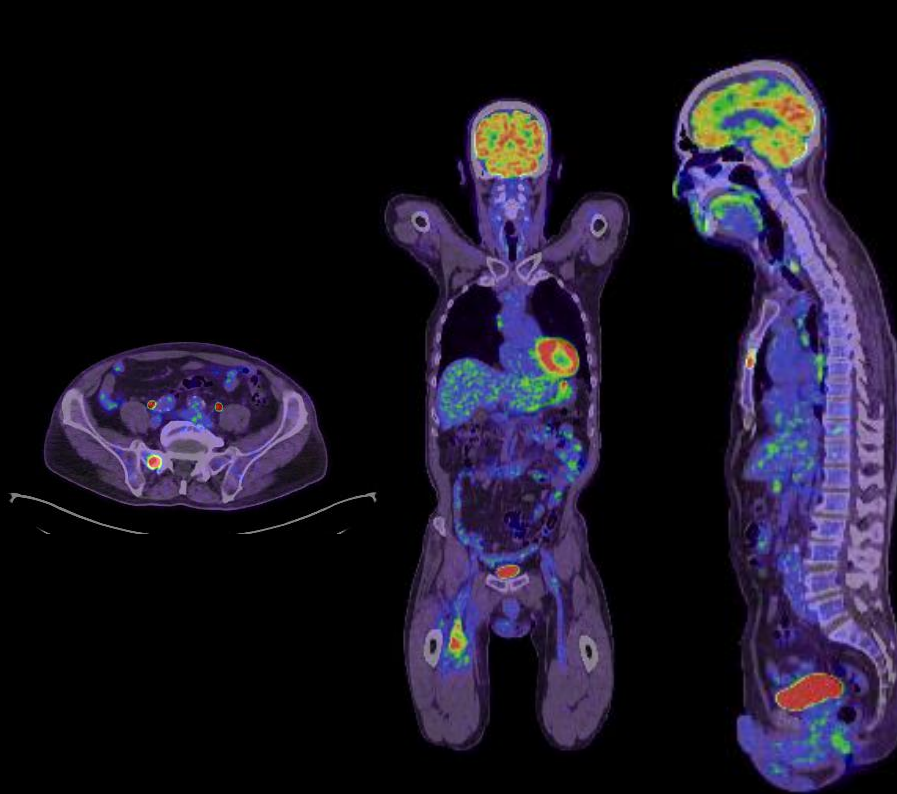
CT (64 slices)

Scan parameters

130 kV

53 ref mAs

Sharp definition of small liver lesions with low dose reflects ultra-fast time-of-flight¹ (TOF) performance of 239 picoseconds

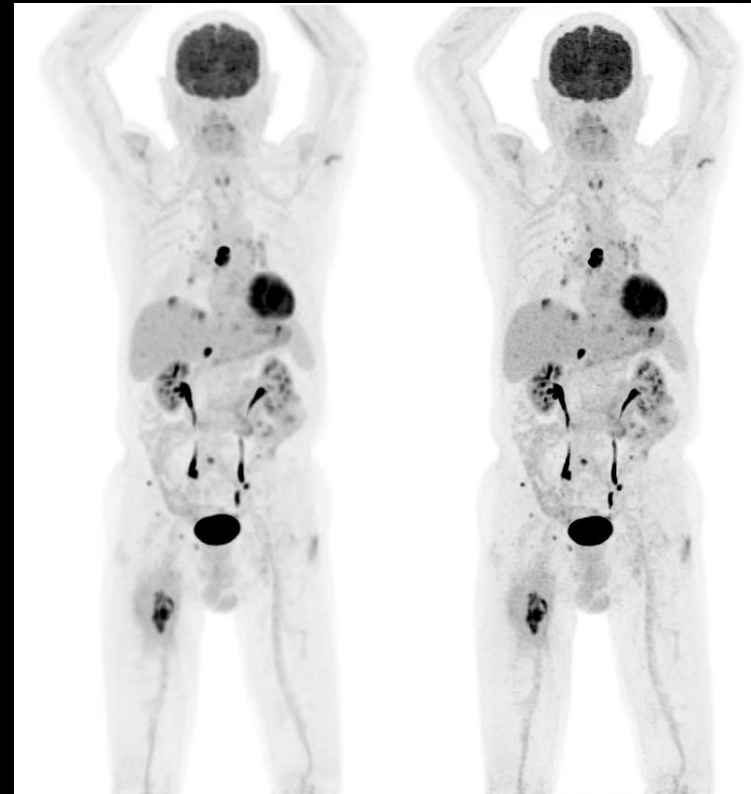


Axial

Coronal

Sagittal

PET/CT



PET MIP
Gaussian filter 5
129 cm

PET MIP
All-Pass filter
129 cm

- Patient with sarcoma in the right thigh muscles with multiple metastases in liver and mediastinum
- Sharp definition with high contrast of small liver metastases with 4 mCi injected dose reflects ultra-fast TOF performance
- Different reconstruction methods allow physicians to tailor reading interpretation

Biograph Trinion EP2 PET/CT

PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 14 minutes 24 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 3i6s

Gaussian filter 5

All-Pass filter

Injected dose

Fludeoxyglucose F 18 (¹⁸F-FDG) Injection²

4 mCi (150 MBq) (2.0 MBq/kg³)

Patient details: 72 kg (159 lb)

CT (64 slices)

Scan parameters

110 kV

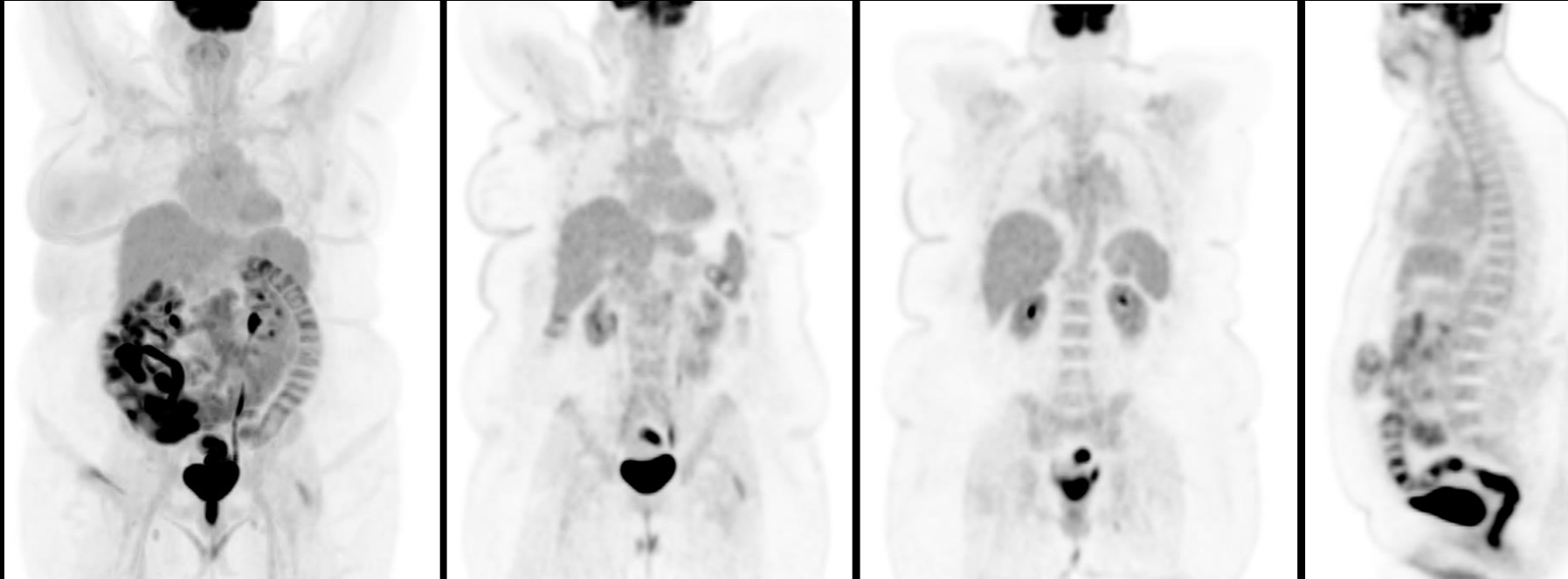
84 ref mAs

Data courtesy of North Shore Radiology Nuclear Medicine, Sydney Australia.

¹ Ultra-fast TOF is defined as less than 275 picoseconds (ps). ² See slides at end of presentation for indications and important safety information for Fludeoxyglucose F 18 (¹⁸F-FDG) Injection. ³ Based on bench testing (e.g. improved sensitivity and TOF per NEMA NU-2:2018). Please refer to the approved PET drug prescribing information for dosing and administration instructions.

Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

High image quality with sharp delineation of intestinal uptake in obese patient shows ultra-fast time-of-flight¹ (TOF) performance



MIP

Coronal

Sagittal

PET

- 125 kg (276 lb) 52.1 BMI patient underwent ¹⁸F-FDG PET/CT imaging
- Sharp delineation of intestinal uptake and colonic margins reflect high-resolution PET, which is well-defined in an obese patient
- High overall image quality with uniform liver parenchymal uptake in obese patient reflects ultra-fast TOF performance

Biograph Trinion EP2 PET/CT PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 16 minutes 30 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 4i6s

Gaussian filter 7

Injected dose

Fludeoxyglucose F 18 (¹⁸F-FDG) Injection²

16.52 mCi (365 MBq) (2.9 MBq/kg)

Patient details: 125 kg (276 lb), 157 cm (5' 1"),
52.1 BMI

CT (128 slices)

Scan parameters

140 kV

72 ref mAs

Data courtesy of Wentworth-Douglas Hospital, Dover, New Hampshire, USA.

¹ Ultra-fast TOF is defined as less than 275 picoseconds (ps).

² See slides at end of presentation on for indications and important safety information for Fludeoxyglucose F 18 (¹⁸F-FDG) Injection.

Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

High image quality with sharp delineation of vertebrae and vasculature in obese patient with melanoma



- 127 kg (280 lb) 52.9 BMI patient underwent ^{18}F -FDG PET/CT imaging for melanoma
- Head-to-toe study performed in ~20 minutes
- High overall image quality is reflected by high organ-to-background uptake ratio, low noise, and sharp delineation of physiological uptake within vertebrae as well as in the vasculature

Biograph Trinion EP2 PET/CT PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 19 minutes 46 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 4i6s

Gaussian filter 5

Injected dose

Fludeoxyglucose F 18 (^{18}F -FDG) Injection¹

9.18 mCi (340 MBq) (2.6 MBq/kg)

Patient details: 127 kg (280 lb), 157 cm (5' 1"),
52.9 BMI

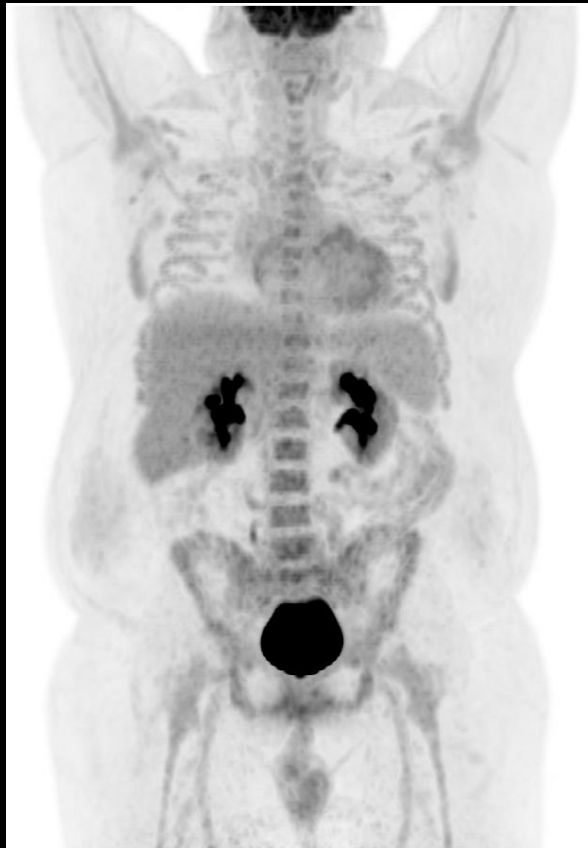
CT (128 slices)

Scan parameters

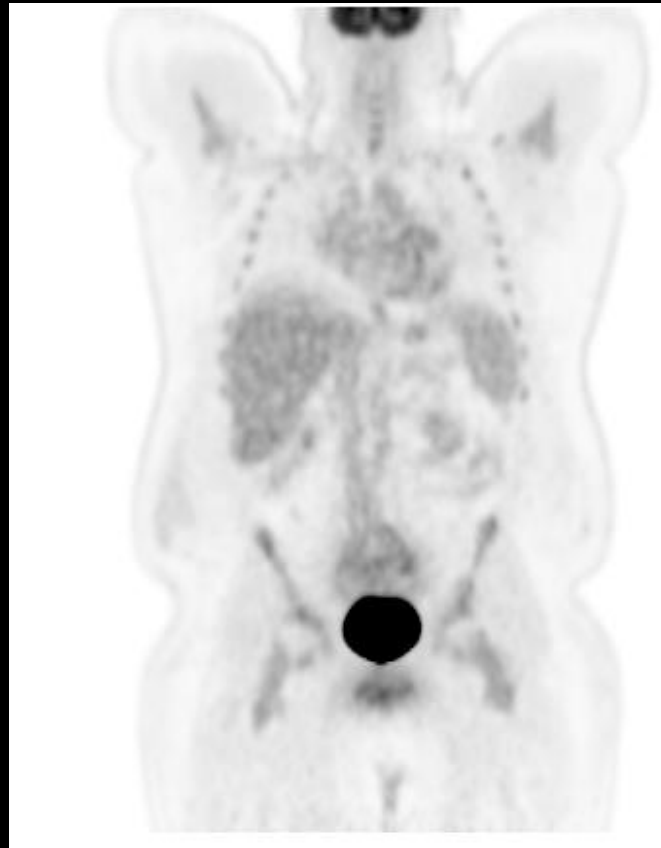
140 kV

14 ref mAs

Sharp delineation of post-chemotherapy marrow flare in vertebrae and ribs in obese patient



PET MIP



Coronal



Sagittal

PET

- 159 kg (350 lb) 53.2 BMI patient underwent ^{18}F -FDG PET/CT imaging for post-chemotherapy follow-up
- Overall high image quality in obese patient with uniform liver parenchymal uptake and low background noise
- Sharp delineation of post-chemotherapy marrow flare within vertebrae and ribs with high contrast reflects ultra-fast time-of-flight (TOF)¹ performance and high spatial resolution

Biograph Trinion EP2 PET/CT
PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 17 minutes 20 seconds

Image reconstruction

344x 344 matrix, PSF+TOF, 4i6s

Gaussian filter 7

Injected dose

Fludeoxyglucose F 18 (^{18}F -FDG) Injection²
14.9 mCi (551 MBq) (3.4 MBq/kg)

Patient details: 159 kg (350 lb), 177 cm (5' 8"),
53.2 BMI

CT (128 slices)

Scan parameters

140 kV

72 ref mAs

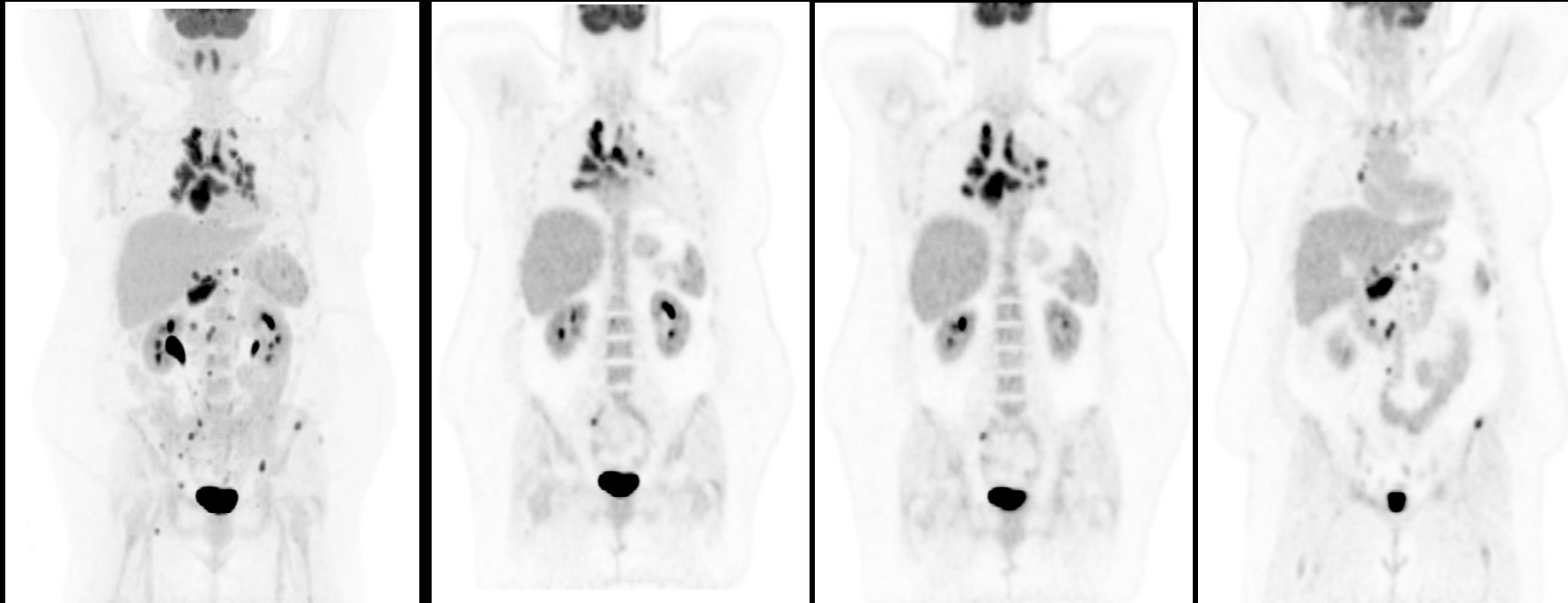
Data courtesy of Wentworth-Douglas Hospital, Dover, New Hampshire, USA.

¹ Ultra-fast TOF is defined as less than 275 picoseconds (ps).

² See slides at end of presentation for indications and important safety information for Fludeoxyglucose F 18 (^{18}F -FDG) Injection.

Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

High-contrast delineation of small nodal lesions in obese patient with extensive lymphoma



PET MIP

Coronal PET

- 111 kg (244 lb) 40.8 BMI patient with lymphoma underwent ^{18}F -FDG PET/CT imaging for initial staging
- High lesion contrast delineated in multiple matted mediastinal nodal lesions
- High contrast also visualized in matted portal lymph nodal mass as well as multiple small para-aortic lymph node lesions
- Sharp delineation of small para-aortic nodal lesions with high lesion contrast in obese patient reflects ultra-fast time-of-flight (TOF)¹ performance and high spatial resolution

Biograph Trinion EP2 PET/CT
PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 14 minutes 40 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 4i6s

Gaussian filter 3

Injected dose

Fludeoxyglucose F 18 (^{18}F -FDG) Injection²

9.98 mCi (369 MBq) (3.3 MBq/kg)

Patient details: 111 kg (245 lb), 168 cm (5' 5"),
40.8 BMI

CT (128 slices)

Scan parameters

140 kV

72 ref mAs

Data courtesy of Wentworth-Douglas Hospital, Dover, New Hampshire, USA.

¹ Ultra-fast TOF is defined as less than 275 picoseconds (ps).

² See slides at end of presentation for indications and important safety information for Fludeoxyglucose F 18 (^{18}F -FDG) Injection.

Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

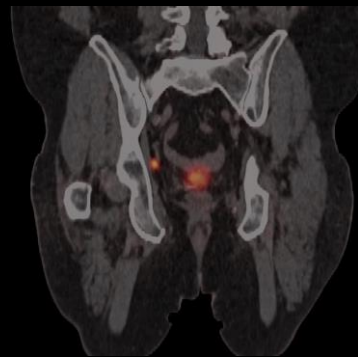
Dynamic PET of pelvis following ^{18}F -PSMA injection clearly defines tracer-avid node without interference of bladder uptake



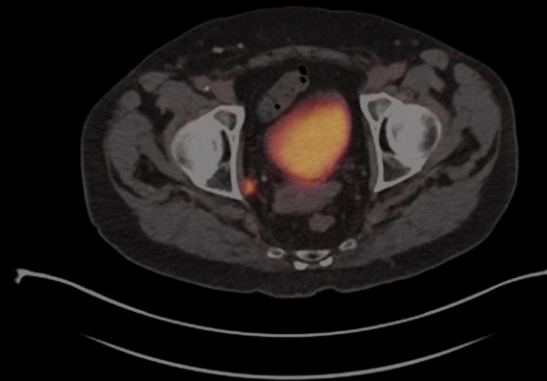
PET MIP



VRT



Coronal



Axial

- 75-year-old patient with recurrent prostate cancer underwent a ^{18}F -PSMA PET/CT study
- Initial dynamic acquisition of the pelvis performed following injection of ^{18}F -PSMA
- Multiple 2-minute dynamic acquisitions acquired up to 10 minutes post injection show gradual increase in tracer concentration within right obturator lymph nodal metastases. No other abnormal focal uptake visualized.
- Dynamic studies following ^{18}F -PSMA injection helped define lesions without interference of bladder uptake, which is usual in delayed images

Biograph Trinion EP2 PET/CT

PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Dynamic acquisition: 2 min/pass (5 passes)

Total scan time: 10 minutes

Image reconstruction

344 x 344 matrix, PSF+TOF, 3i6s

Gaussian filter 5

Injected dose

DCFPYL F 18 (^{18}F -DCFPYL) Injection

4.4 mCi (165 MBq) (1.8 MBq/kg)

Patient details: 90 kg (198 lb)

CT (64 slices)

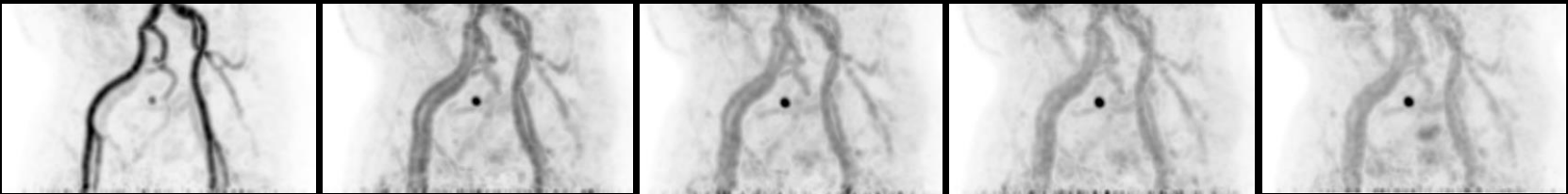
Scan parameters

100 kV Tin Filter

309 ref mAs

Dynamic PET of pelvis following ^{18}F -PSMA injection clearly defines tracer-avid node without interference of bladder uptake

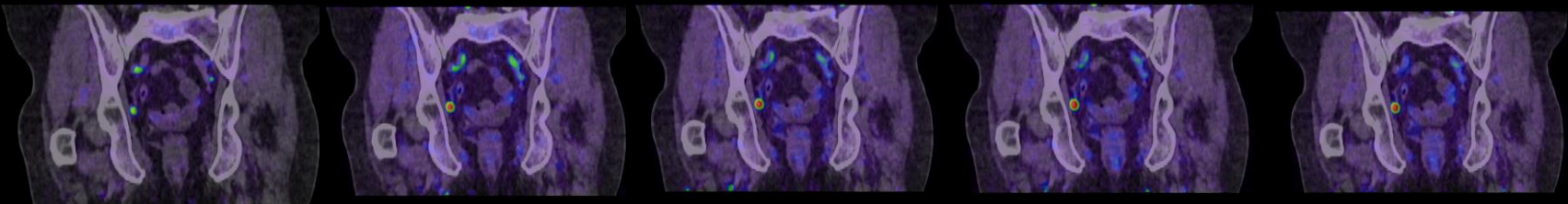
PET MIP



PET
Axial



PET/CT
Coronal



0–2 min

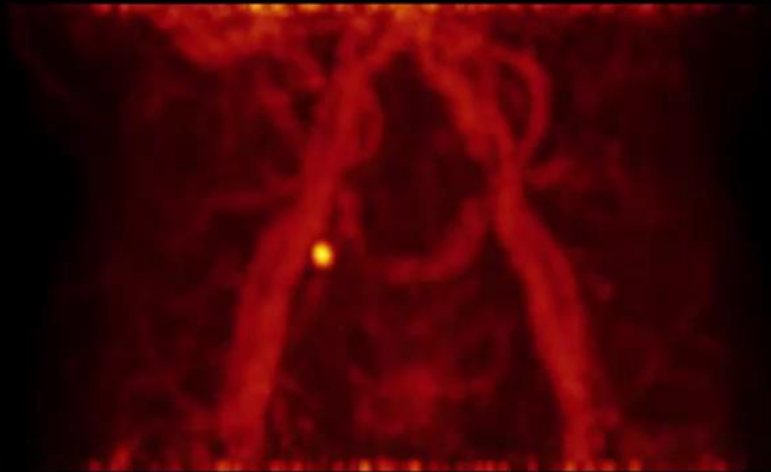
2–4 min

4–6 min

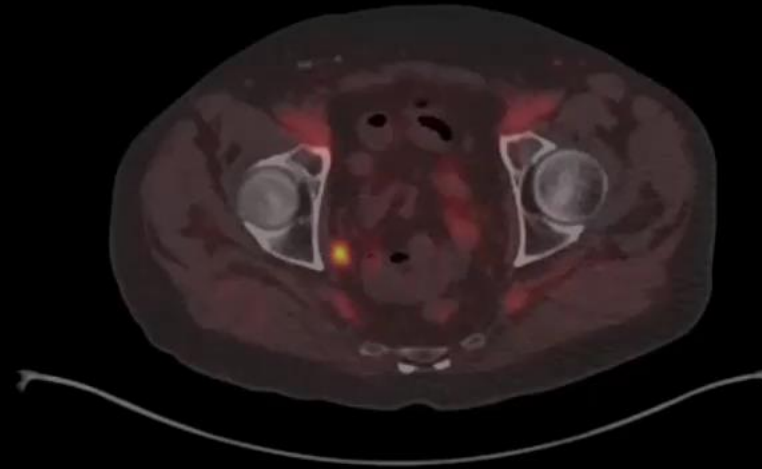
6–8 min

8–10 min

Dynamic PET of pelvis following ^{18}F -PSMA injection clearly defines tracer-avid node without interference of bladder uptake



PET MIP AVI
3 frames per second

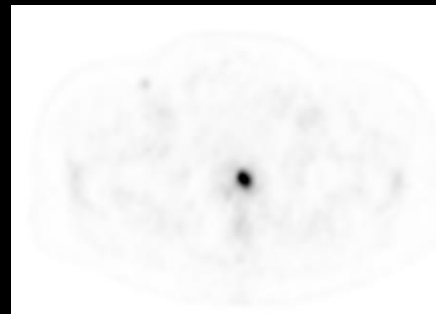
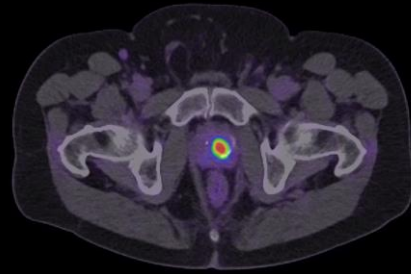


PET/CT axial AVI

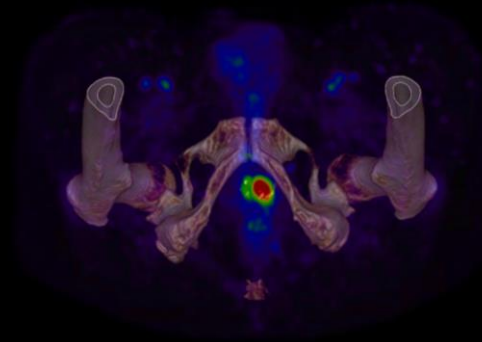
High-contrast delineation of primary prostate cancer with ^{18}F -PSMA PET/CT



PET MIP



Axial



VRT



Coronal

- 67-year-old male patient with primary prostate cancer underwent ^{18}F -PSMA PET/CT for initial staging
- Study shows sharp delineation with high lesion contrast in primary prostate tumor
- No pelvic or distant metastases visualized
- Focal calcifications within and adjacent to primary prostate tumor seen on CT reflects previous local therapy

Biograph Trinion EP2 PET/CT
PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 11 minutes 30 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 3l6s

Gaussian filter 5

Injected dose

DCFPYL F 18 (^{18}F -DCFPYL) Injection

5.0 mCi (186 MBq) (2.0 MBq/kg)

Patient details: 92 kg (203 lb)

CT (64 slices)

Scan parameters

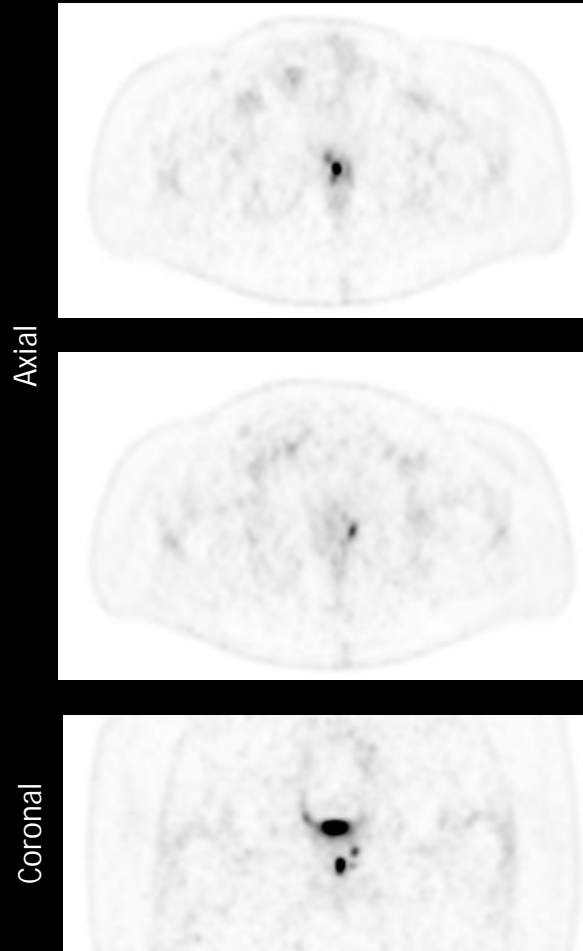
100 kV Tin Filter

43 ref mAs

High-contrast delineation of multifocal primary prostate cancer without nodal or distant metastases



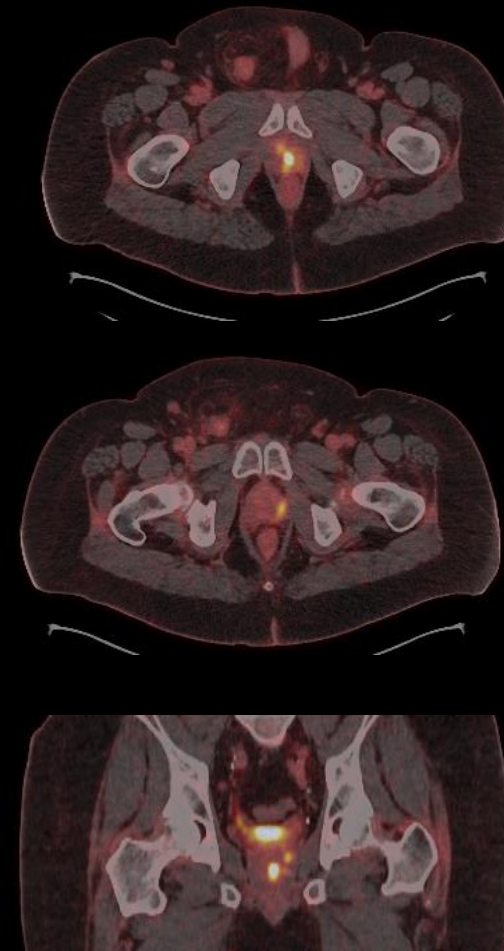
PET MIP



Axial

Coronal

PET



PET/CT

- Obese patient with primary prostate cancer underwent ^{18}F -PSMA PET/CT for primary staging
- High contrast in multifocal prostate carcinoma seen in PET study without periprostatic or pelvic nodal metastases
- Sharp delineation of small multifocal prostatic lesions reflects ultra-fast time-of-flight (TOF)¹ performance and high spatial resolution

Biograph Trinion EP2 PET/CT PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 17 minutes 20 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 3i6s

Gaussian filter 5

Injected dose

DCFPYL F 18 (^{18}F -DCFPYL) Injection

4.18 mCi (155 MBq) (1.2 MBq/kg)

Patient details: 130 kg (286 lb)

CT (64 slices)

Scan parameters

140 kV

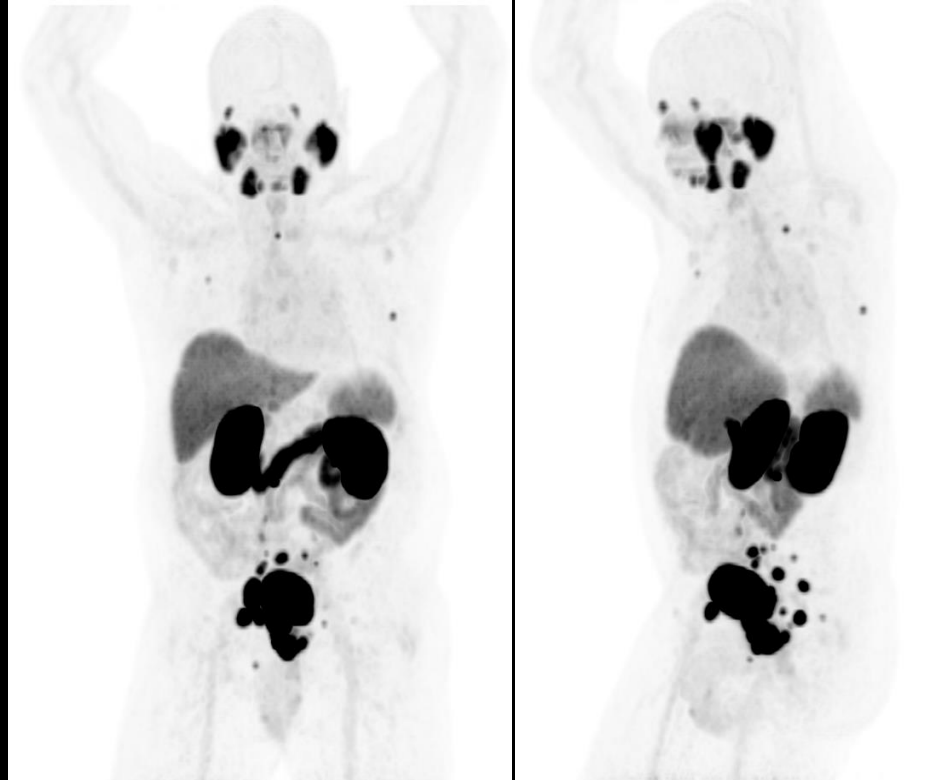
32 ref mAs

Data courtesy of North Shore Radiology Nuclear Medicine, Sydney, Australia.

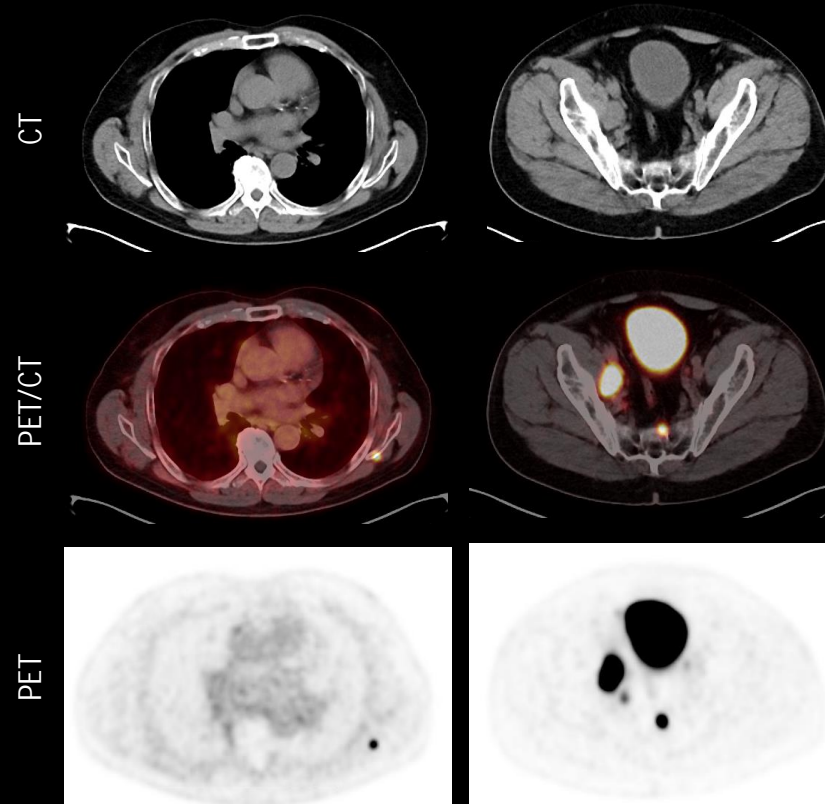
¹ Ultra-fast TOF is defined as less than 275 picoseconds (ps).

Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

High-contrast delineation of multiple pelvic nodal and bone metastases with ^{68}Ga -PSMA PET/CT in primary prostate cancer



PET MIP



Axial

- Patient with primary prostate cancer with partial obstruction to bladder neck underwent ^{68}Ga -PSMA PET/CT for primary staging
- Multiple pelvic nodal metastases delineated with high contrast
- Several small bony lesions in sacrum, pubis, L4 vertebral margin, left scapula, and ribs visualized with high contrast, reflecting ultra-fast time-of-flight (TOF)¹ performance and high spatial resolution

Biograph Trinion EP2 PET/CT PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 13 minutes 8 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 4i6s

All-pass filter

Injected dose

^{68}Ga -PSMA Injection

5.98 mCi (221 MBq) (2.4 MBq/kg)

Patient details: 90.7 kg (200 lb)

CT (128 slices)

Scan parameters

130 kV

8 ref mAs

Data courtesy of Wentworth-Douglas Hospital, Dover, New Hampshire, USA.

¹ Ultra-fast TOF is defined as less than 275 picoseconds (ps).

Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

High-contrast delineation of multiple pelvic nodal and bone metastases with ^{68}Ga -PSMA PET/CT in primary prostate cancer

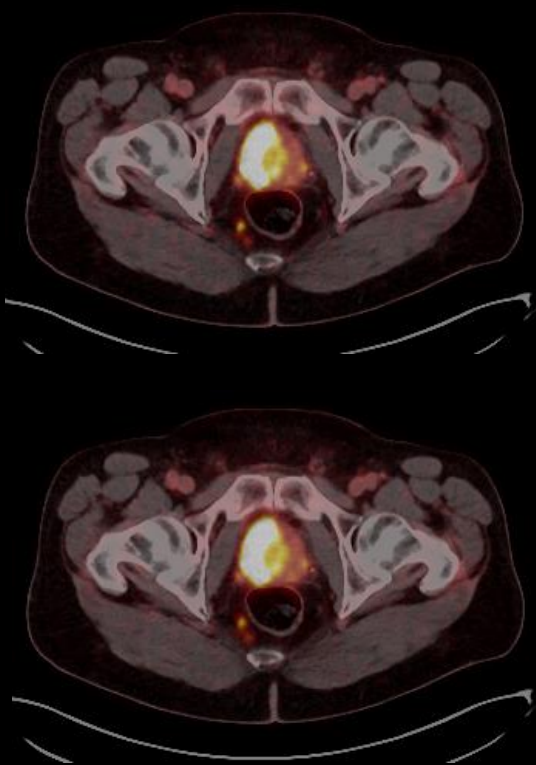


All-pass filter



Gaussian filter 3

PET MIP

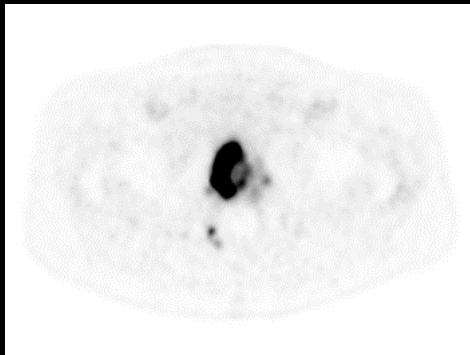
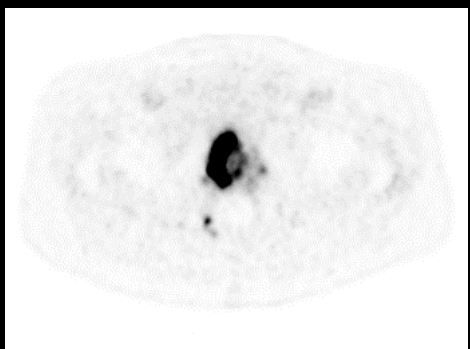


PET/CT

Axial

All-pass filter

Gaussian filter 3

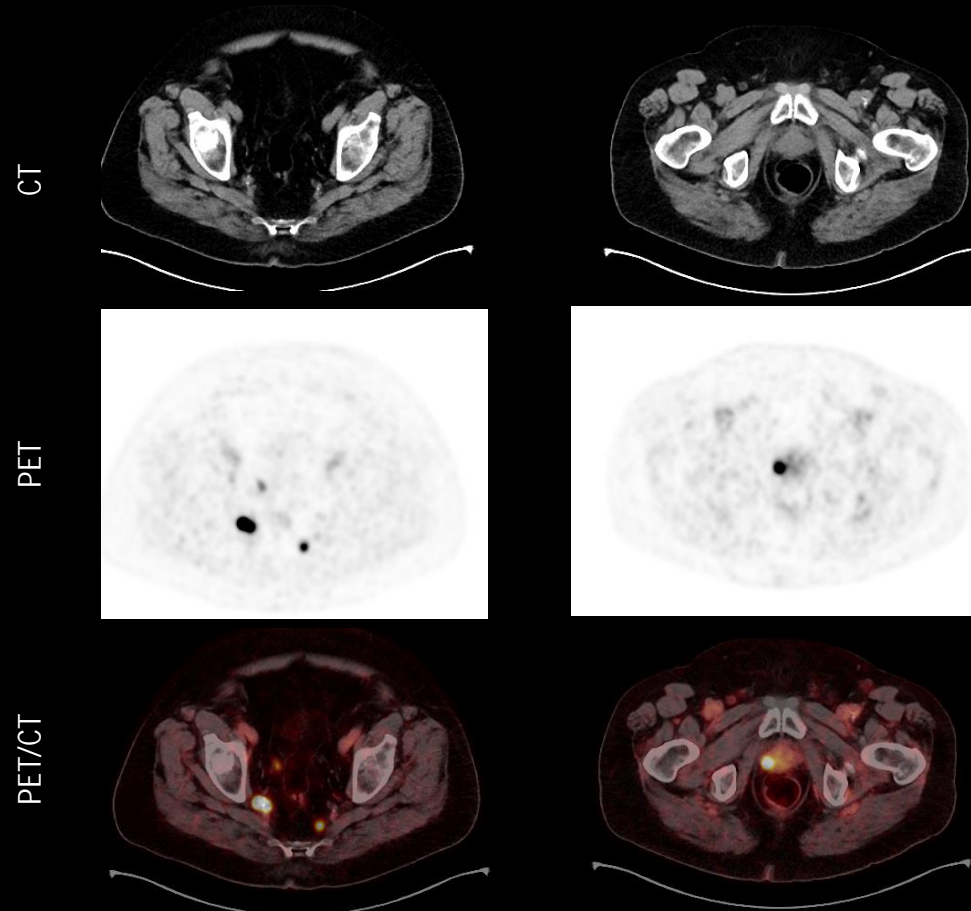


PET

High-contrast delineation of primary prostate lesion and multiple pelvic nodal metastases with ^{68}Ga -PSMA PET/CT



PET MIP



Axial

- Patient with primary prostate cancer underwent ^{68}Ga -PSMA PET/CT imaging for primary staging
- High contrast within primary prostate tumor and three pelvic nodal metastases visualized in PET/CT images
- Sharp delineation of small perirectal nodal lesion reflects high spatial resolution

Biograph Trinion EP2 PET/CT PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 13 minutes 40 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 4i6s

Gaussian filter 5

Injected dose

^{68}Ga -PSMA Injection

6.03 mCi (223 MBq) (2.4 MBq/kg)

Patient details: 121 kg (266 lb), 186 cm (6' 1"),

35.1 BMI

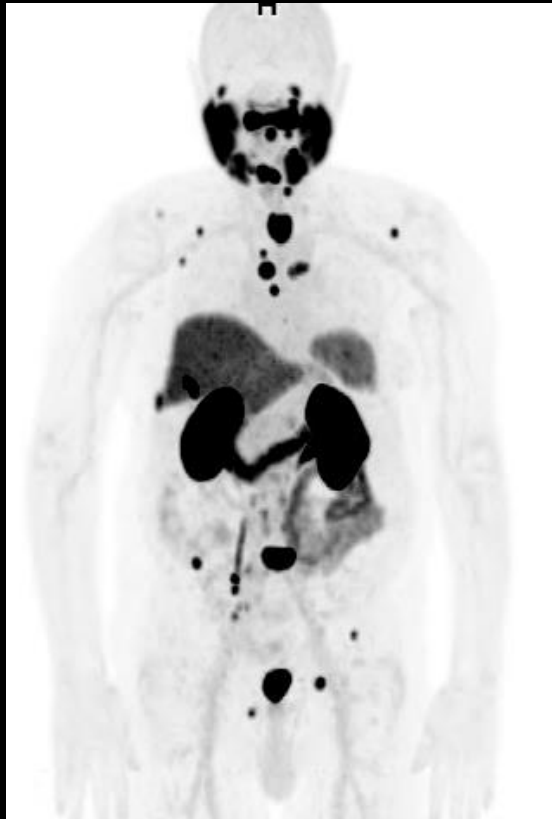
CT (128 slices)

Scan parameters

130 kV

8 ref mAs

^{68}Ga -PSMA PET/CT in a patient with prostate cancer and multiple bone and lymph nodal metastases



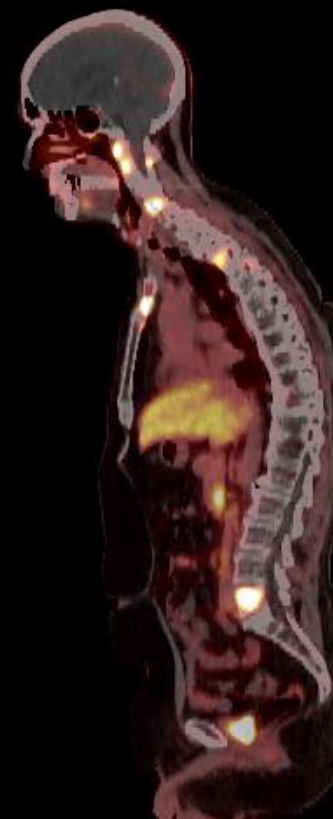
PET MIP



CT



PET
Sagittal



PET/CT

- ^{68}Ga -PSMA PET/CT imaging in a patient with prostate cancer with extensive metastases
- Study shows high contrast within multiple skeletal and a few pelvic nodal metastases
- Focal skeletal lesions visualized throughout the spine, pelvis, and ribs
- PSMA-avidity within metastatic lesions confirms eligibility for ^{177}Lu -PSMA therapy
- Total tumor burden evaluated using Lesion Scout with Auto ID¹⁻³ to help determine pre-therapy benchmark for subsequent post-therapy evaluation of response

Biograph Trinion EP2 PET/CT

PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 12 minutes 38 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 4i6s

Gaussian filter 5

Injected dose

^{68}Ga -PSMA Injection

6.3 mCi (232 MBq) (2.4 MBq/kg)

Patient details: 86 kg (189 lb), 175 cm (5' 7"),
29.6 BMI

CT (128 slices)

Scan parameters

130 kV

9 ref mAs

Data courtesy of Wentworth-Douglas Hospital, Dover, New Hampshire, USA.

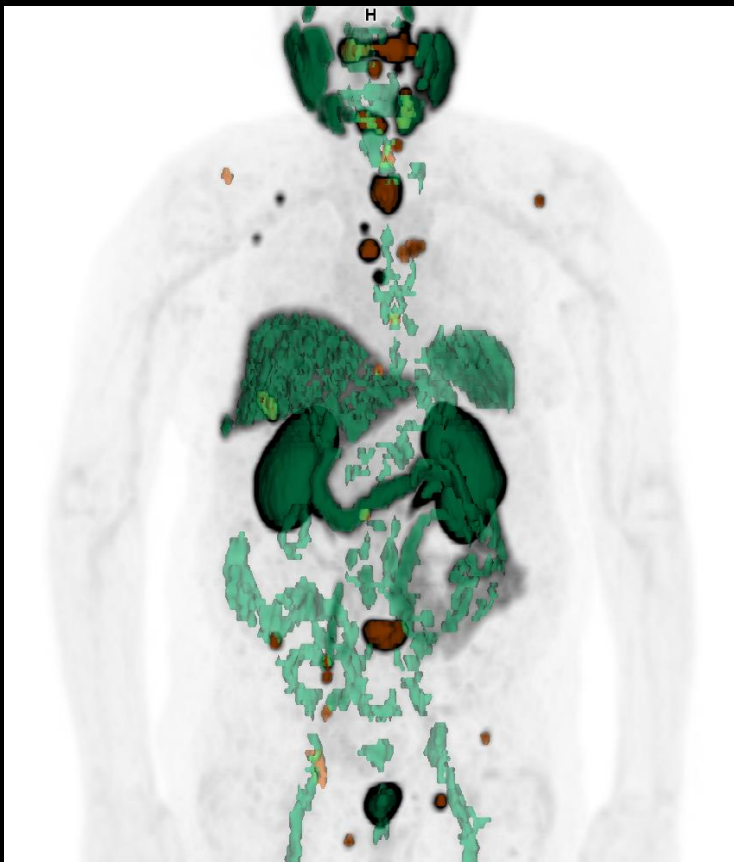
¹ Lesion Scout with Auto ID is not available for sale in the United States and is not commercially available in all countries. Future availability cannot be guaranteed.

² All findings contributing to metabolic tumor volume (MTV) and total lesion glycolysis (TLG) burden must be reviewed and accepted by the user.

³ Data acquired on Biograph Trinion and reprocessed at Siemens Healthineers using Lesion Scout with Auto ID.

Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

Lesion Scout with Auto ID¹⁻³ proposes physiological versus non-physiological uptake in evaluation of whole-body tumor burden



PET MIP

MTV Burden [cm3]	69.83
TLG Burden [SUV-bw x cm3]	1111.85

Data courtesy of Wentworth-Douglas Hospital, Dover, New Hampshire, USA.

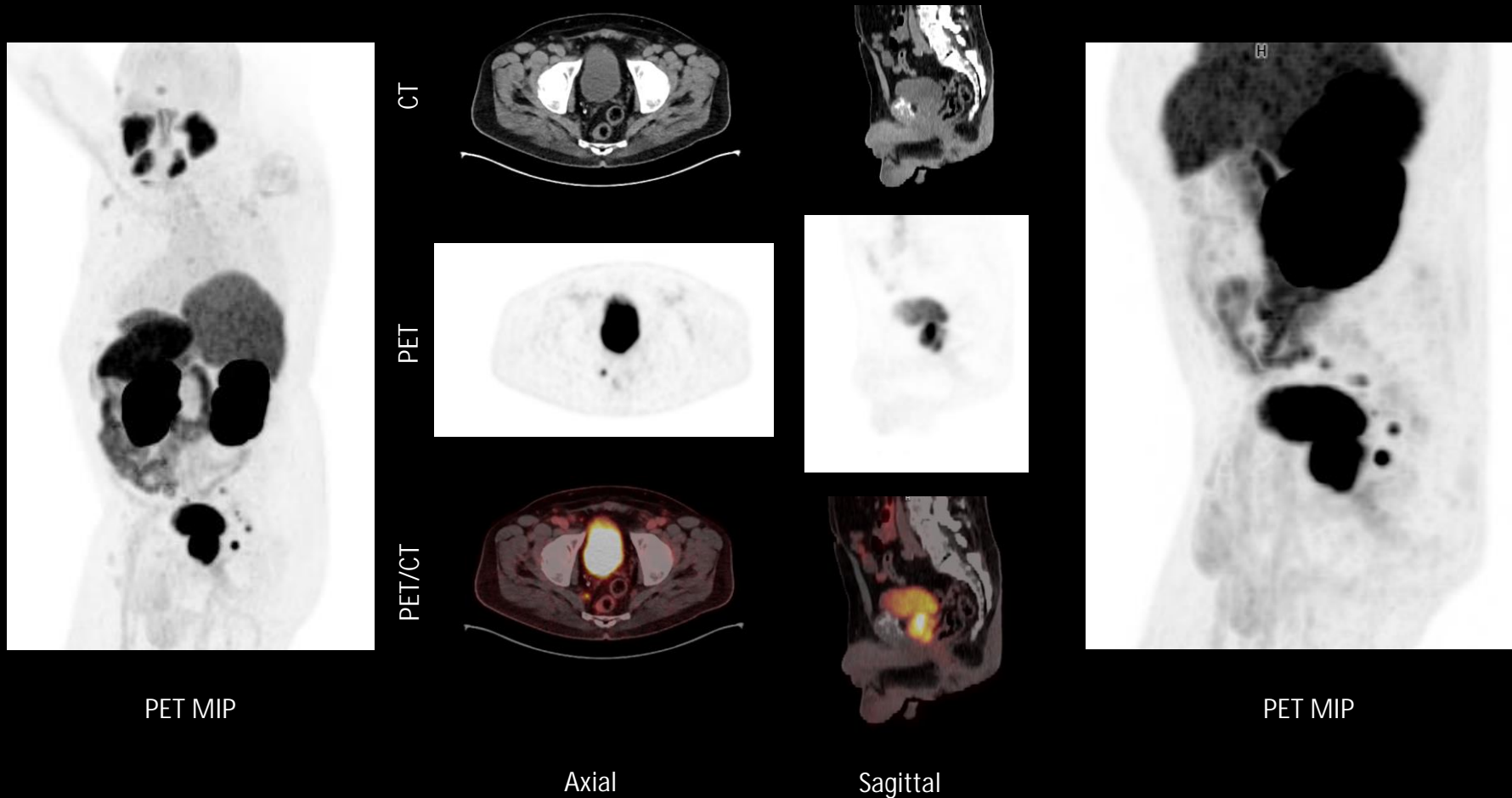
¹ Lesion Scout with Auto ID is not available for sale in the United States and is not commercially available in all countries. Future availability cannot be guaranteed.

² All findings contributing to metabolic tumor volume (MTV) and total lesion glycolysis (TLG) burden must be reviewed and accepted by the user.

³ Data acquired on Biograph Trinion and reprocessed at Siemens Healthineers using Lesion Scout with Auto ID.

Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

Small peri-rectal nodal metastases in patient with primary prostate cancer defined on ^{68}Ga -PSMA PET/CT study



- Patient with primary prostate carcinoma underwent a ^{68}Ga -PSMA PET/CT study for initial staging
- Study shows high lesion contrast in large primary prostate tumor with partial infiltration into the bladder wall
- Multiple small perirectal and right and left obturator nodal metastases defined with high lesion contrast
- Smallest lesion defined is 5 mm, which reflects ultra-fast time-of-flight (TOF)¹ performance and high spatial resolution

Biograph Trinion EP2 PET/CT PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 13 minutes 33 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 4i6s

Gaussian filter 5

Injected dose

^{68}Ga -PSMA Injection

5.16 mCi (191 MBq) (1.8 MBq/kg)

Patient details: 101 kg (222 lb), 170 cm (5' 5"), 36.9 BMI

CT (128 slices)

Scan parameters

130 kV

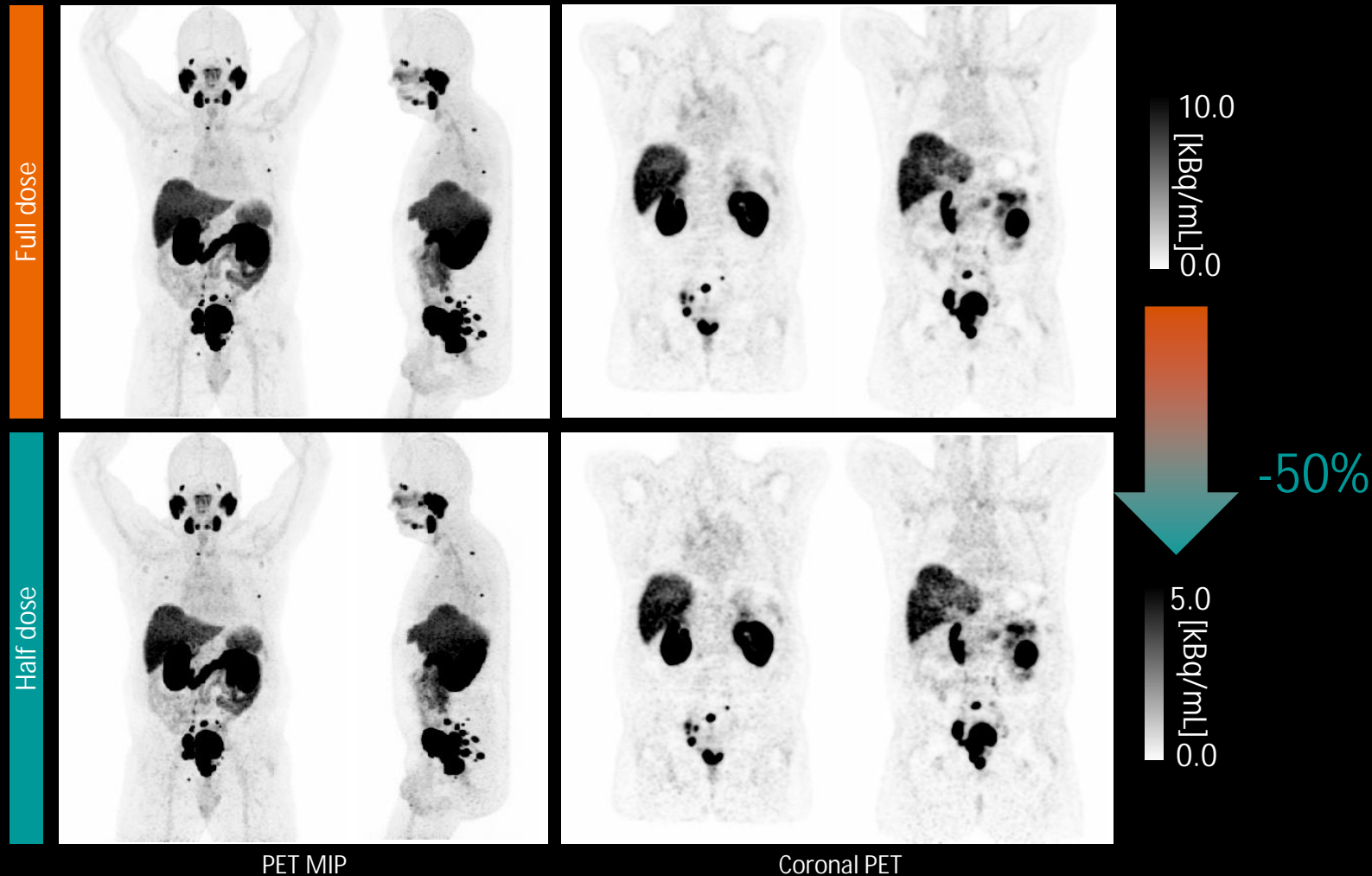
15 ref mAs

Data courtesy of Wentworth-Douglas Hospital, Dover, New Hampshire, USA.

¹ Ultra-fast TOF is defined as less than 275 picoseconds (ps).

Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

Simulation of half-dose versus full-dose imaging for ^{68}Ga -PSMA PET/CT study



- Simulation of half-dose versus full-dose ^{68}Ga -PSMA PET/CT study in a patient with primary prostate carcinoma with multiple pelvic metastases
- Coronal (MPR) slices across primary prostate lesion and pelvic nodal metastases show comparable lesion definition and contrast
- Comparison images confirm the relative equivalence of image quality, lesion definition, and detectability using half the injected dose¹
- Low-dose imaging capability defined on simulation reflects ultra-fast time-of-flight (TOF)² performance and high effective sensitivity

Biograph Trinion EP2 PET/CT
PET (24-cm aFOV)

Scan acquisition
FlowMotion continuous bed motion
Total scan time: 13 minutes 8 seconds

Image reconstruction
345 x 345 matrix, PSF+TOF, 4i6s
Gaussian filter 5

Injected dose
 ^{68}Ga -PSMA Injection
5.9 mCi (221.3 MBq) (2.4 MBq/kg)
Patient details: 90.7 kg (200 lb)

CT (128 slices)
Scan parameters
130 kV
8 ref mAs

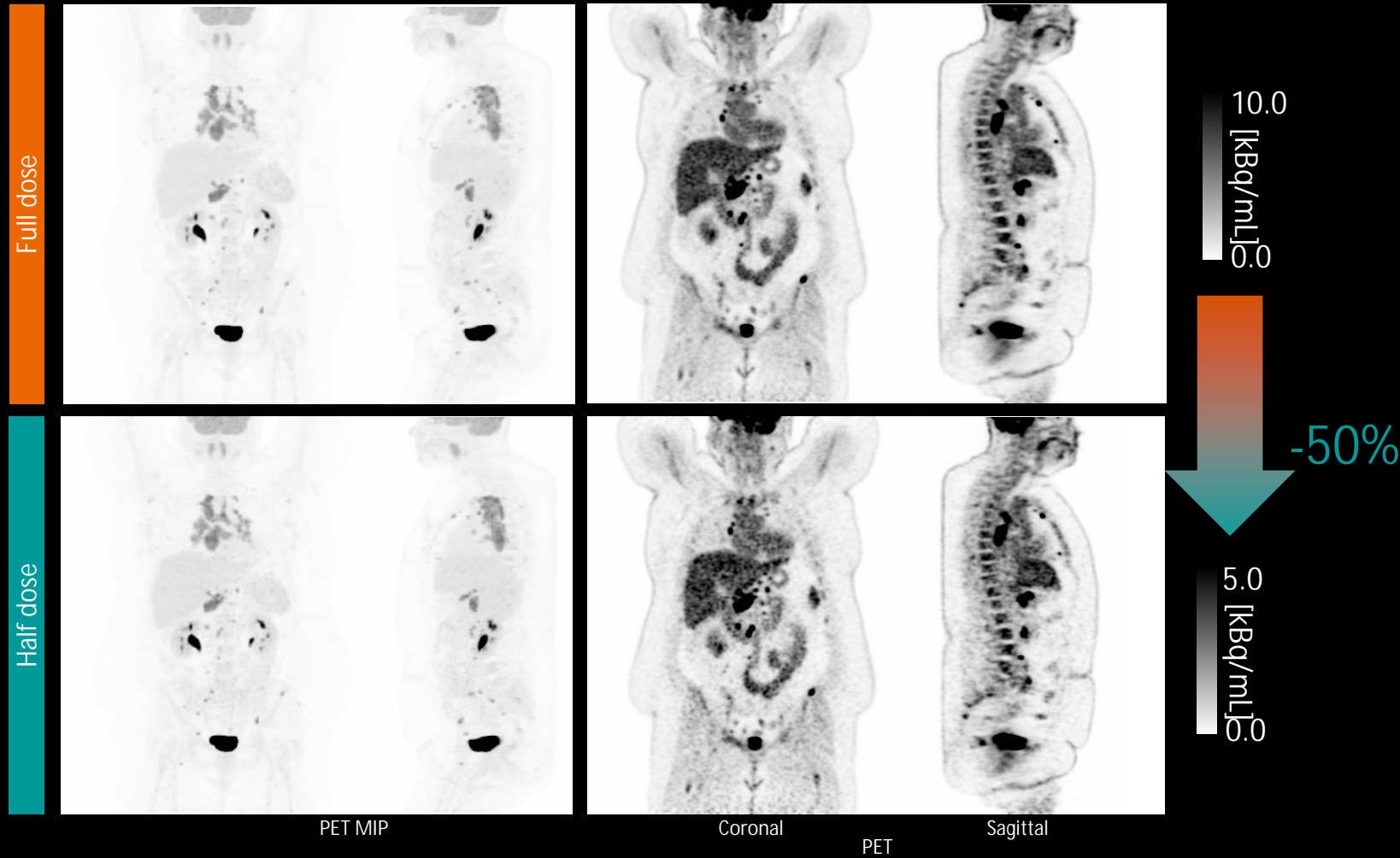
Data courtesy of Wentworth-Douglas Hospital, Dover, New Hampshire, USA.

¹ The safety and effectiveness of dose reduction claims have not been established by the FDA.

² Ultra-fast TOF is defined as less than 275 picoseconds (ps).

Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

Simulation of half-dose versus full-dose imaging for ^{18}F -FDG PET/CT study



- Simulation of half-dose versus full-dose ^{18}F -FDG PET/CT study in a patient with abnormal findings on lung image
- Coronal (MPR) slices across mediastinal and lung lesions show comparable lesion definition and contrast
- Comparison images confirm the relative equivalence of image quality, lesion definition, and detectability using half the injected dose¹
- Low-dose imaging capability defined on simulation reflects ultra-fast time-of-flight (TOF)² performance and high effective sensitivity

Biograph Trinion EP2 PET/CT PET (24-cm aFOV)

Scan acquisition
FlowMotion continuous bed motion
Total scan time: 14 minutes 40 seconds

Image reconstruction
345 x 345 matrix, PSF+TOF, 4i6s
Gaussian filter 3

Injected dose
Fludeoxyglucose F 18 (^{18}F -FDG) Injection³
9.9 mCi (369.3 MBq) (3.3 MBq/kg)
Patient details: 111 kg (245 lb), 168 cm (5' 5"), 40.8 BMI

CT (128 slices)
Scan parameters
140 kV
72 ref mAs

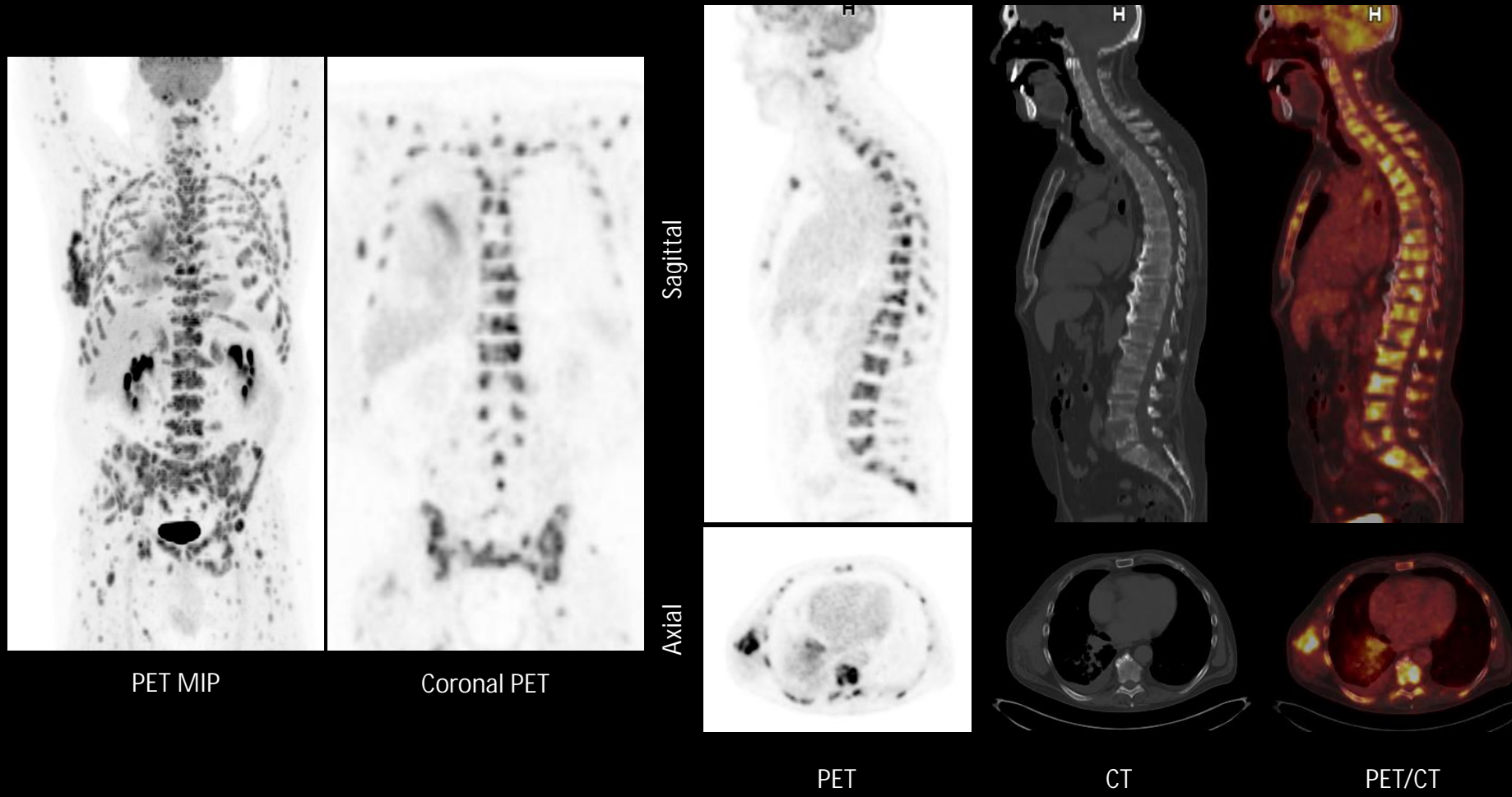
Data courtesy of Wentworth-Douglas Hospital, Dover, New Hampshire, USA.

¹ The safety and effectiveness of dose reduction claims have not been established by the FDA. ² Ultra-fast TOF is defined as less than 275 picoseconds (ps).

³ See slides at end of presentation for indications and important safety information for Fludeoxyglucose F 18 (^{18}F -FDG) Injection.

Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

High contrast within multiple skeletal metastases in patient with axillary sarcoma visualized on ^{18}F -FDG PET/CT



- Patient with right axillary sarcoma with extensive skeletal metastases underwent a ^{18}F -FDG PET/CT study
- High contrast within multiple skeletal metastases visualized, reflecting benefits of ultra-fast time-of-flight (TOF)¹ performance and high spatial resolution
- CT shows lytic lesions corresponding to hypermetabolic metastases

Biograph Trinion EP2 PET/CT

PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 16 minutes 3 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 4i6s

Gaussian filter 7

Injected dose

Fludeoxyglucose F 18 (^{18}F -FDG) Injection²

10.00 mCi (370 MBq) (2.9 MBq/kg)

Patient details: 99.7 kg (219 lb), 182 cm (5' 9"),

32.3 BMI

CT (128 slices)

Scan parameters

140 kV

72 ref mAs

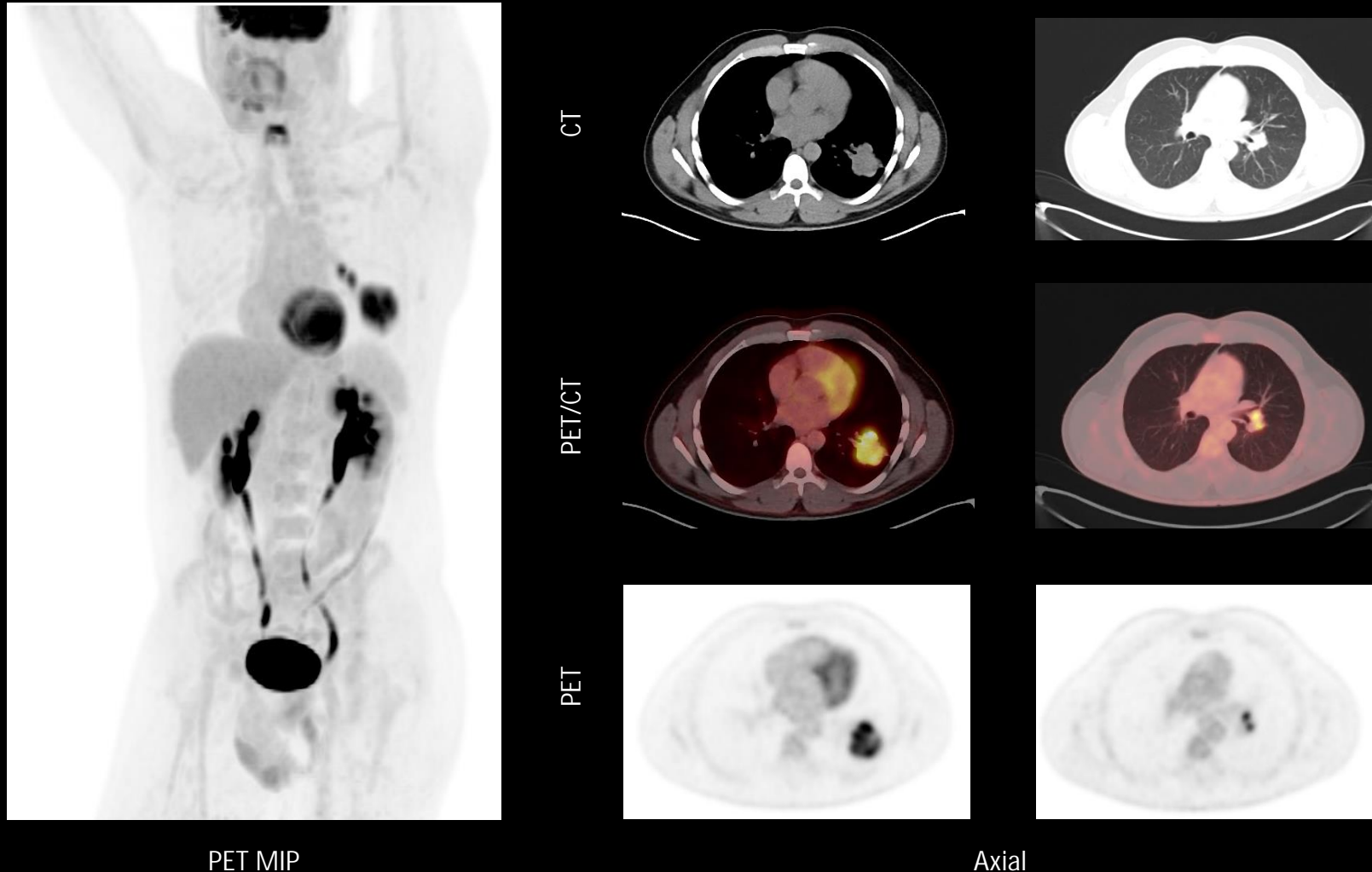
Data courtesy of Wentworth-Douglas Hospital, Dover, New Hampshire, USA.

¹ Ultra-fast TOF is defined as less than 275 picoseconds (ps).

² See slides at end of presentation for indications and important safety information for Fludeoxyglucose F 18 (^{18}F -FDG) Injection.

Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

8.9 mCi (328 MBq) ^{18}F -FDG PET/CT study defines high contrast within lung tumor with central necrosis



- ^{18}F -FDG PET/CT study performed with 8.9 mCi (328 MBq) injected dose shows high contrast within a large, left lung tumor with central necrosis
- High contrast also visualized within two adjacent hilar nodal metastases
- Overall high image quality with uniform uptake within liver parenchyma
- Sharp delineation of vascular structures and renal calyces reflects high spatial resolution

Biograph Trinion EP2 PET/CT PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion
Total scan time: 12 minutes 4 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 4i6s
Gaussian filter 3

Injected dose

Fludeoxyglucose F 18 (^{18}F -FDG) Injection¹
8.9 mCi (328 MBq) (4.2 MBq/kg)
Patient details: 77.5 kg (171 lb), 172 cm (5' 6"), 27.6 BMI

CT (128 slices)

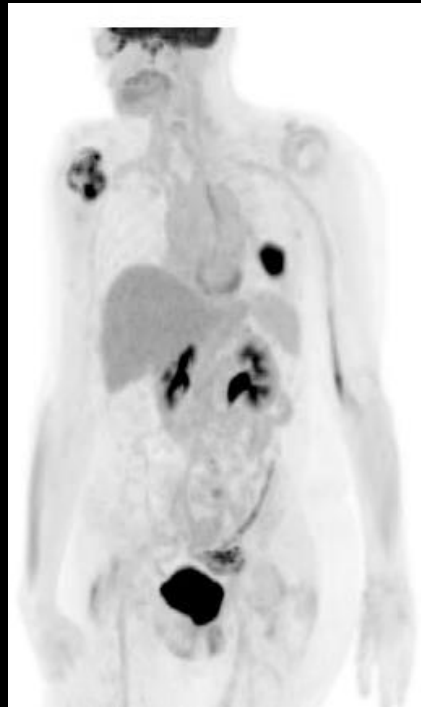
Scan parameters
130 kV
48 ref mAs

Data courtesy of Wentworth-Douglas Hospital, Dover, New Hampshire, USA.

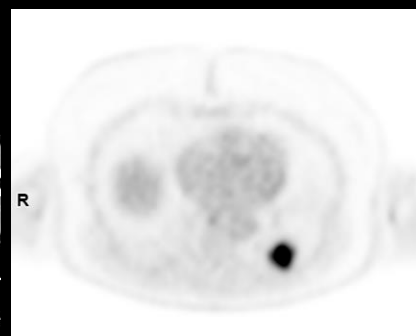
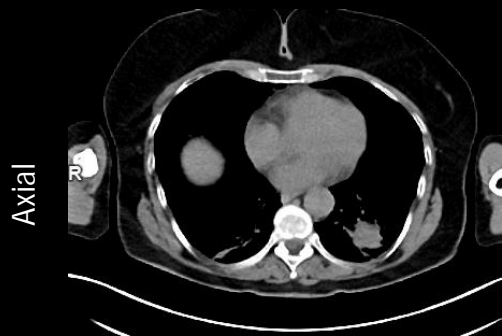
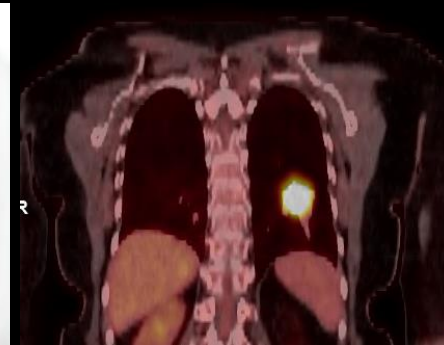
¹ See slides at end of presentation for indications and important safety information for Fludeoxyglucose F 18 (^{18}F -FDG) Injection.

Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

OncoFreeze AI motion management enables accurate co-registration of CT and PET in evaluation of large lung mass



PET MIP



CT

PET

PET/CT

- Patient with tumor in the left lung underwent ^{18}F -FDG PET/CT imaging for primary staging
- Large, hypermetabolic lesion without nodal metastases delineated on PET/CT study
- Exact PET/CT image co-registration reflects value of OncoFreeze AI motion management

Biograph Trinion EP2 PET/CT

PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 11 minutes 56 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 4i6s

Gaussian filter 3

Injected dose

Fludeoxyglucose F 18 (^{18}F -FDG) Injection¹

14.2 mCi (527 MBq) (4.2 MBq/kg)

Patient details: 68.4 kg (150.7 lb), 170 cm (5' 5"),

25.1 BMI

CT (128 slices)

Scan parameters

130 kV

17 ref mAs

Data courtesy of Wentworth-Douglas Hospital, Dover, New Hampshire, USA.

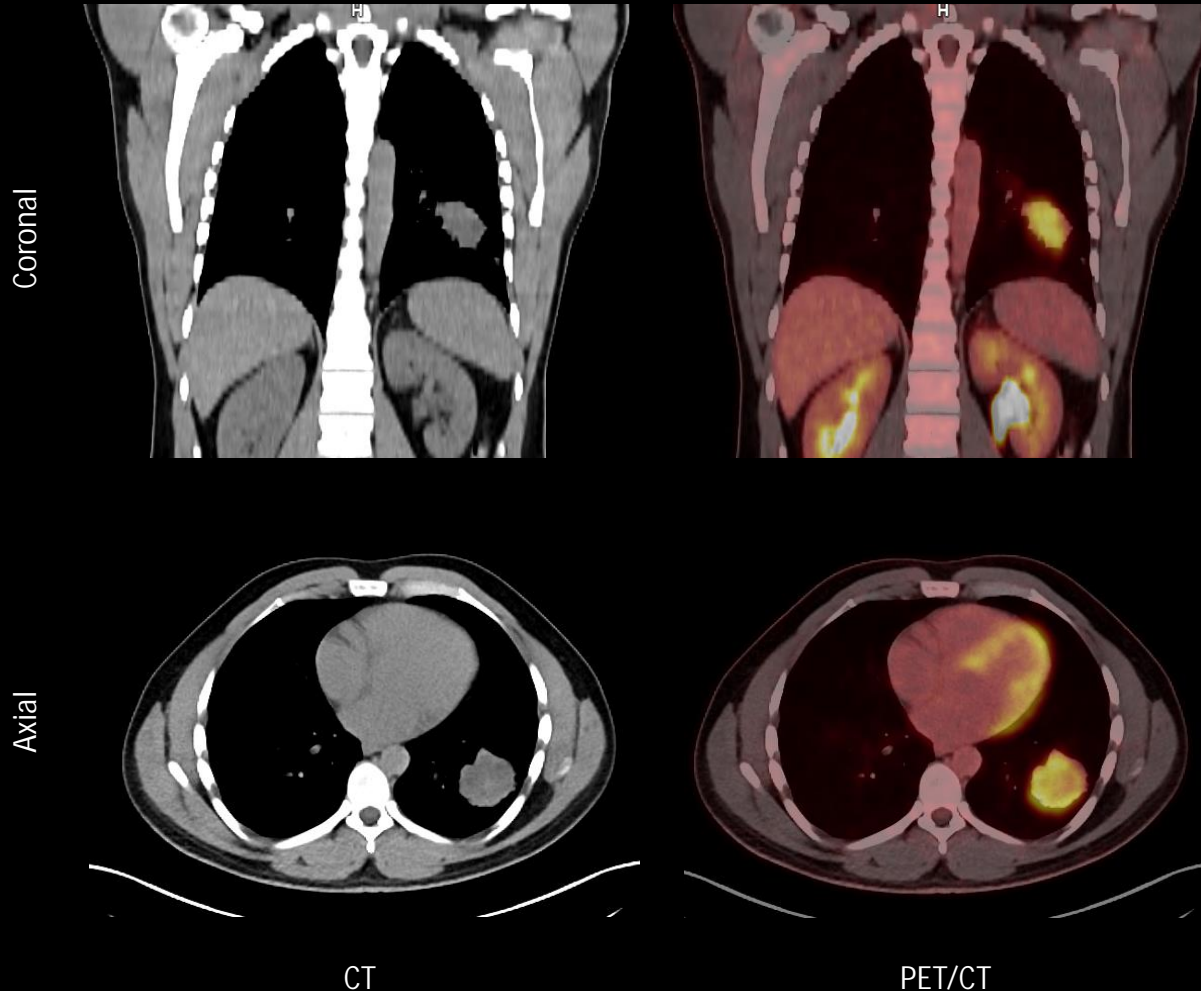
¹ See slides at end of presentation for indications and important safety information for Fludeoxyglucose F 18 (^{18}F -FDG) Injection.

Biograph Trinion PET/CT and OncoFreeze AI are not commercially available in all countries. Future availability cannot be guaranteed.

Sharp delineation of lung tumor margins and central necrosis in ^{18}F -FDG PET/CT study



PET MIP



- Patient with a tumor in the left lung underwent ^{18}F -FDG PET/CT imaging for primary staging
- Large hypermetabolic lesion with central necrosis along with hilar nodal metastases delineated on PET/CT study
- Sharp delineation of lung tumor margins and central necrosis reflects high spatial resolution
- Exact PET/CT image co-registration shows the value of OncoFreeze AI motion management

Biograph Trinion EP2 PET/CT PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 12 minutes 4 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 4i6s

Gaussian filter 3

Injected dose

Fludeoxyglucose F 18 (^{18}F -FDG) Injection¹

8.9 mCi (328 MBq) (4.2 MBq/kg)

Patient details: 77.5 kg (171 lb), 170 cm (5' 6"),

27.6 BMI

CT (128 slices)

Scan parameters

130 kV

48 ref mAs

Data courtesy of Wentworth-Douglas Hospital, Dover, New Hampshire, USA.

¹ See slides at end of presentation for indications and important safety information for Fludeoxyglucose F 18 (^{18}F -FDG) Injection.

Biograph Trinion PET/CT and OncoFreeze AI are not commercially available in all countries. Future availability cannot be guaranteed.

Sharp definition of small lung nodules in ^{18}F -FDG PET/CT using OncoFreeze AI



- Patient with lung nodules detected on thoracic radiograph underwent ^{18}F -FDG PET/CT imaging
- Two small hypermetabolic lung nodules in left lung defined on PET/CT study
- High SUV_{max} in nodules suggests malignancy
- Exact fusion of lung nodule in PET with that of the CT reflects motion-frozen PET images generated with OncoFreeze AI

Biograph Trinion EP2 PET/CT

PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 12 minutes 26 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 4i6s

Gaussian filter 3

Injected dose

Fludeoxyglucose F 18 (^{18}F -FDG) Injection¹

9.33 mCi (345 MBq) (5.07 MBq/kg)

Patient details: 68 kg (149 lb)

CT (128 slices)

Scan parameters

130 kV

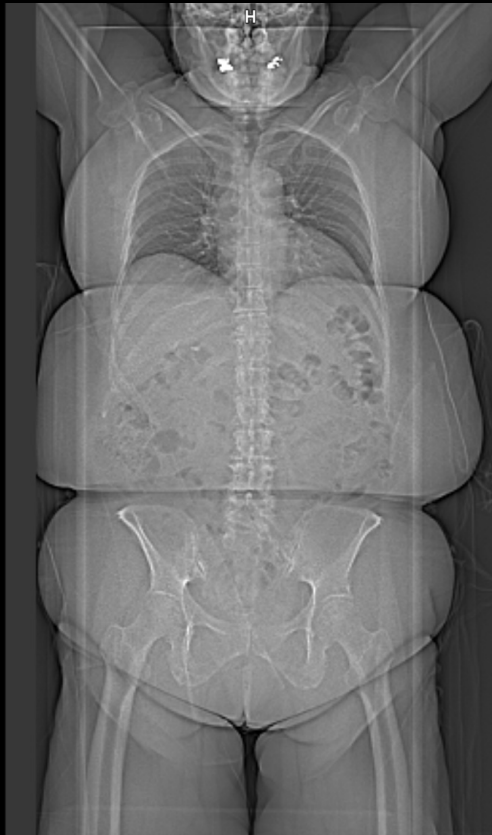
48 ref mAs

Data courtesy of Wentworth-Douglas Hospital, Dover, New Hampshire, USA.

¹ See slides at end of presentation for indications and important safety information for Fludeoxyglucose F 18 (^{18}F -FDG) Injection.

Biograph Trinion PET/CT and OncoFreeze AI are not commercially available in all countries. Future availability cannot be guaranteed.

OncoFreeze AI eliminates the need for external respiratory gating device and freezes breathing motion in patients



Topogram



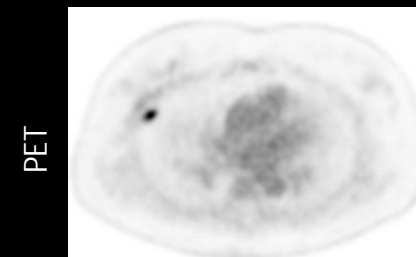
PET MIP



CT



PET/CT



PET

Axial

- ^{18}F -FDG PET/CT shows high contrast within a 1-cm in diameter solitary lung nodule
- SUV_{max} of 8.9 strongly suggests presence of malignancy
- Sharp delineation of lung nodule in PET study with OncoFreeze AI reflects elimination of respiratory-motion-related blurring by data-driven motion-management technique
- Exact fusion of breathhold CT and PET is also reflective of accurate motion management with OncoFreeze AI

Biograph Trinion EP2 PET/CT PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 13 minutes 30 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 4i6s

Gaussian filter 5

Injected dose

Fludeoxyglucose F 18 (^{18}F -FDG) Injection¹

9.8 mCi (364 MBq) (3.9 MBq/kg)

Patient details: 92 kg (202 lb), 170 cm (5' 5"), 33.6 BMI

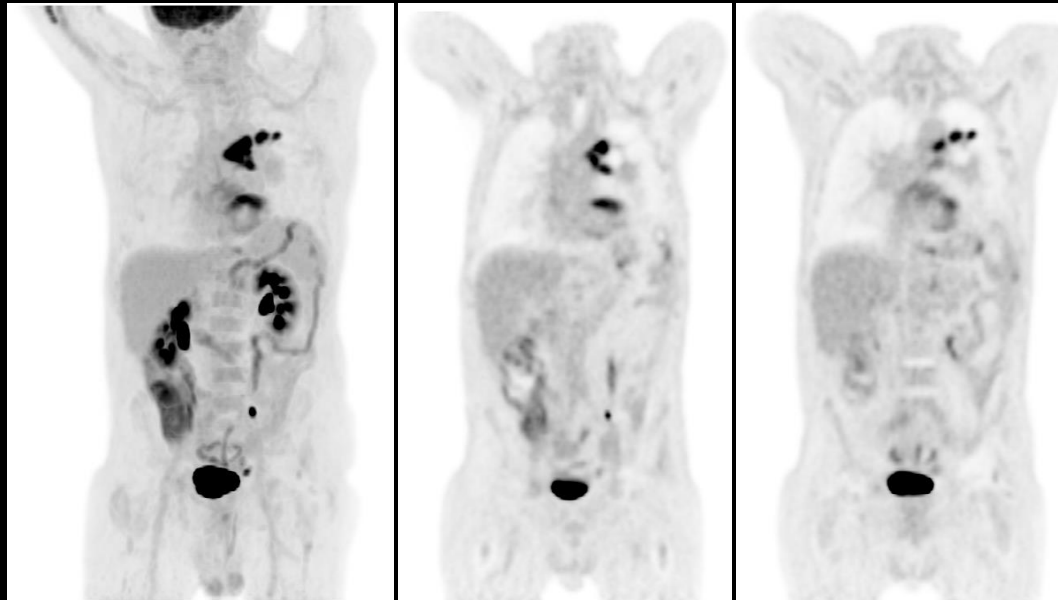
CT (128 slices)

Scan parameters

130 kV

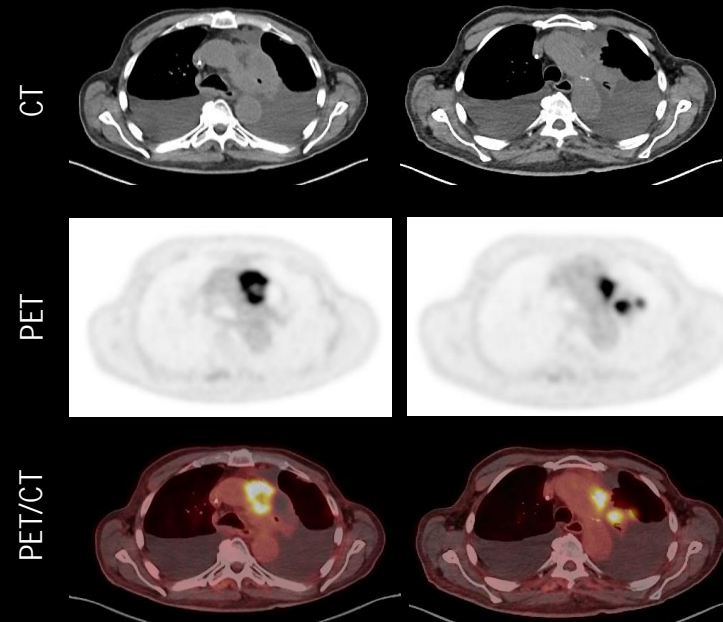
68 ref mAs

High lesion contrast in suprahilar lung tumor and adjacent nodal metastases



PET MIP

Coronal PET



CT

PET

PET/CT

Axial

- High contrast and sharp edge definition of left suprahilar lung tumor with central necrosis along with adjacent nodal metastases
- Sharp tumor edge delineation helps with accurate gross tumor volume (GTV) delineation for radiation therapy planning
- CT shows extensive bilateral pleural effusion

Biograph Trinion EP2 PET/CT PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 12 minutes 8 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 4i6s

Gaussian filter 5

Injected dose

Fludeoxyglucose F 18 (^{18}F -FDG) Injection¹
10.2 mCi (377 MBq) (5.09 MBq/kg)
Patient details: 74 kg (163 lb), 180 cm (5' 9"),
24.1 BMI

CT (128 slices)

Scan parameters

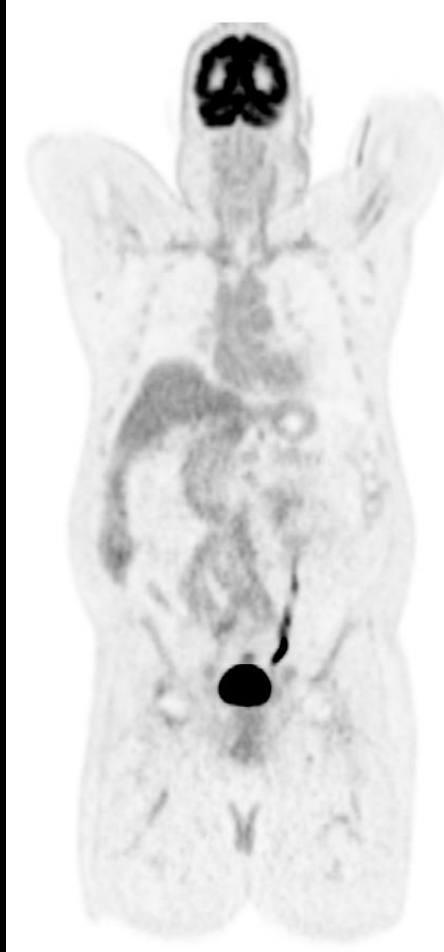
130 kV

27 ref mAs

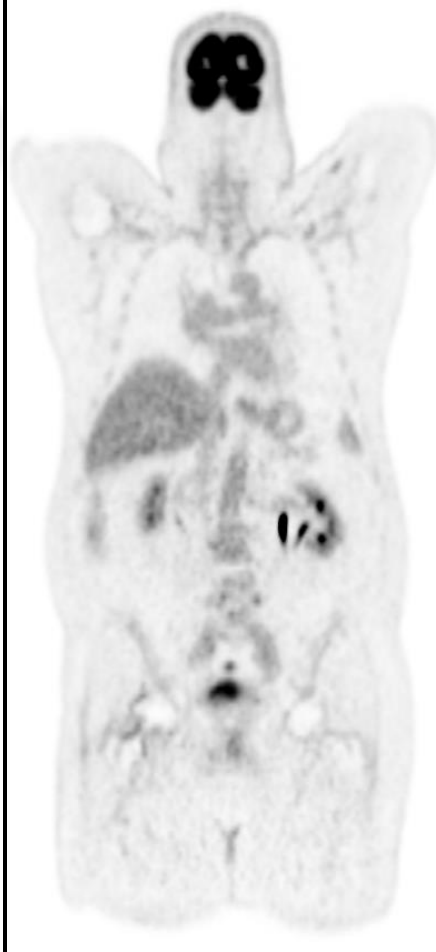
Sharp visualization of vascular structures with low background in whole-body PET/CT study



PET MIP



Coronal



PET



Sagittal

- 185 cm (6' 06") patient underwent ^{18}F -FDG PET/CT imaging for melanoma
- Head-to-toe study performed in ~20 minutes
- High image quality is reflected by high organ-to-background uptake ratio, low noise, and sharp delineation of vascular structures and vertebrae

Biograph Trinion EP2 PET/CT

PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 19 minutes 36 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 4i6s

Gaussian filter 5

Injected dose

Fludeoxyglucose F 18 (^{18}F -FDG) Injection¹

11.2 mCi (414 MBq) (4.15 MBq/kg)

Patient details: 99.8 kg (220 lb), 185 cm (6' 06"), 29 BMI

CT (128 slices)

Scan parameters

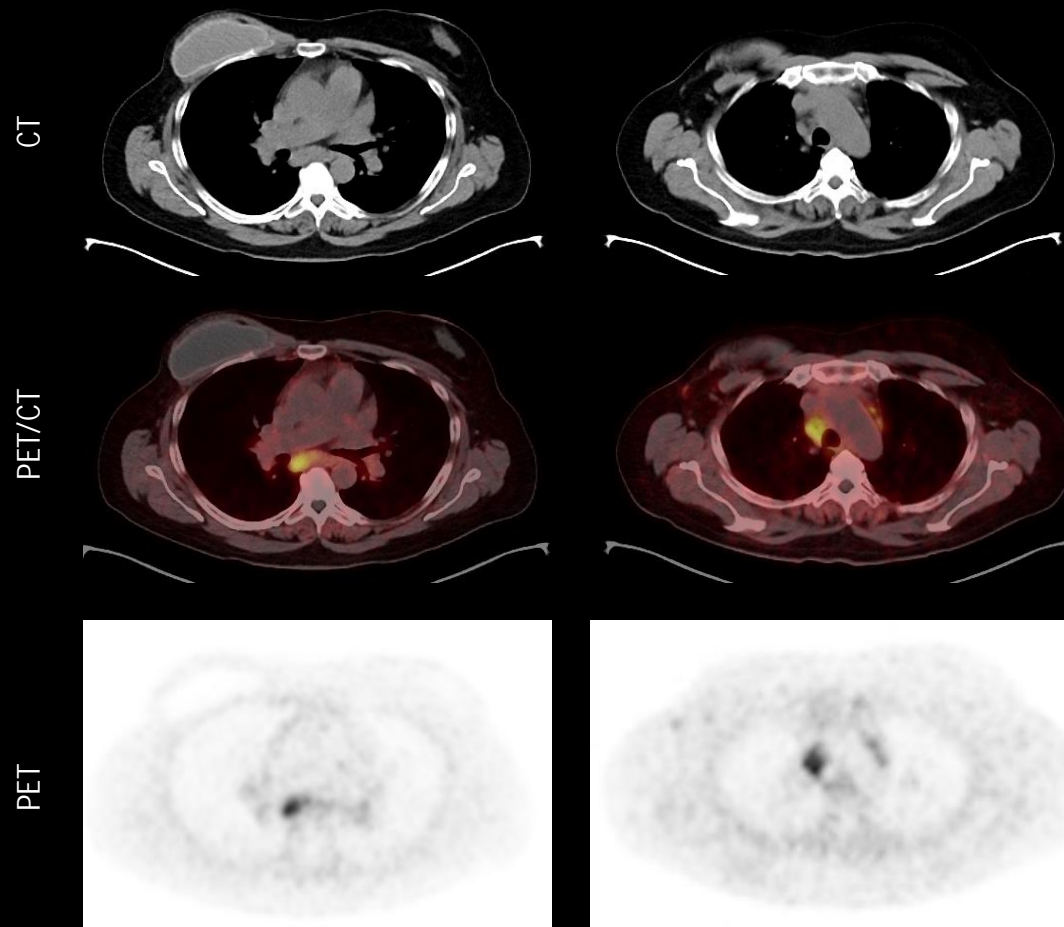
140 kV

14 ref mAs

Sharp delineation of mediastinal and skull lesions on ^{68}Ga -DOTATATE PET/CT in patient with metastatic NETs



PET MIP



Axial

- Patient with metastatic neuroendocrine tumors (NETs) underwent ^{68}Ga -DOTATATE PET/CT imaging for re-staging
- High lesion contrast in multiple mediastinal metastases with the largest lesions in the subcranial and right para-tracheal nodal groups
- Small bony lesion in the right side of skull also delineated with high contrast
- High lesion contrast and sharp delineation of small lesions, even with low injected dose, reflect high PET image quality due to LSO-based silicon photomultiplier (SiPM) detector technology and ultra-fast time-of-flight (TOF)¹ performance

Biograph Trinion EP2 PET/CT

PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 11 minutes 43 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 4i6s

Gaussian filter 5

Injected dose

^{68}Ga -DOTATATE Injection

4.34 mCi (160.5 MBq) (1.5 MBq/kg)

Patient details: 74 kg (163 lb), 165 cm (5' 4"), 28 BMI

CT (128 slices)

Scan parameters

130 kV

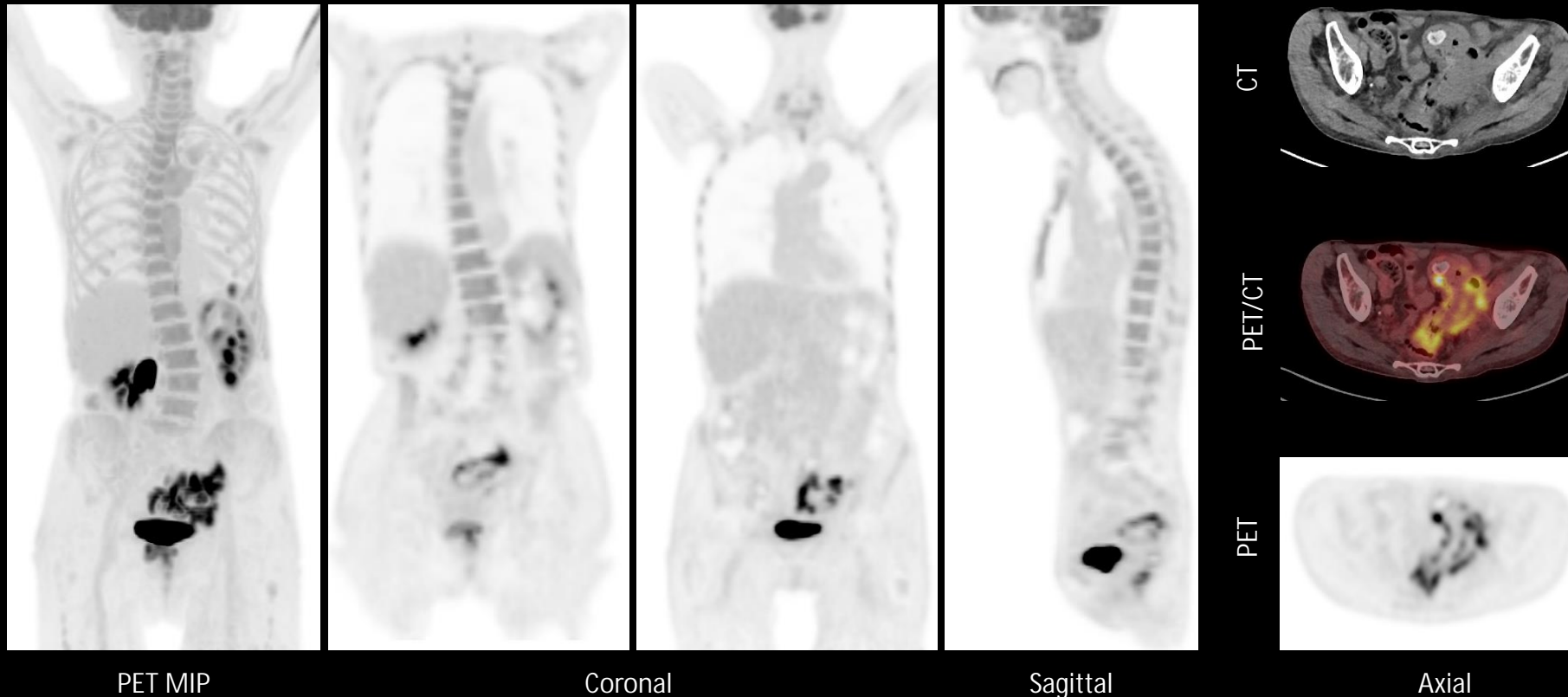
41 ref mAs

Data courtesy of Wentworth-Douglas Hospital, Dover, New Hampshire, USA.

¹ Ultra-fast TOF is defined as less than 275 picoseconds (ps).

Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

Ultra-fast time-of-flight¹ (TOF) performance enables high-contrast delineation



- ¹⁸F-FDG PET/CT in a patient with a pelvic mass
- High contrast in recto-sigmoidal mass with intestinal wall hypermetabolism, reflecting inflammatory process
- Hypermetabolism in the marrow in the vertebrae and ribs reflects post-inflammation marrow hyperfunction
- Multiple cysts visualized in left kidney in the upper pole
- Small splenic hypermetabolic foci, possibly inflammatory
- Sharp delineation of vertebral margins secondary to marrow flare reaction

Biograph Trinion EP2 PET/CT PET (24-cm aFOV)

Scan acquisition

FlowMotion continuous bed motion

Total scan time: 11 minutes 54 seconds

Image reconstruction

344 x 344 matrix, PSF+TOF, 4i6s

Gaussian filter 5

Injected dose

Fludeoxyglucose F 18 (¹⁸F-FDG) Injection²

11.3 mCi (414 MBq) (8.23 MBq/kg)

Patient details: 50.3 kg (110 lb), 173 cm (5' 6"),
17.8 BMI

CT (128 slices)

Scan parameters

140 kV

14 ref mAs

Data courtesy of Wentworth-Douglas Hospital, Dover, New Hampshire, USA.

¹ Ultra-fast TOF is defined as less than 275 picoseconds (ps).

² See slides at end of presentation for indications and important safety information for Fludeoxyglucose F 18 (¹⁸F-FDG) Injection.

Biograph Trinion PET/CT is not commercially available in all countries. Future availability cannot be guaranteed.

Fludeoxyglucose F 18 Injection for intravenous use

Brief summary (slide 1 of 3)

Indications and usage

Fludeoxyglucose F 18 Injection (^{18}F FDG) is indicated for positron emission tomography (PET) imaging in the following settings:

Oncology: For assessment of abnormal glucose metabolism to assist in the evaluation of malignancy in patients with known or suspected abnormalities found by other testing modalities, or in patients with an existing diagnosis of cancer.

Cardiology: For the identification of left ventricular myocardium with residual glucose metabolism and reversible loss of systolic function in patients with coronary artery disease and left ventricular dysfunction, when used together with myocardial perfusion imaging.

Neurology: For the identification of regions of abnormal glucose metabolism associated with foci of epileptic seizures.

Fludeoxyglucose F 18 Injection for intravenous use

Brief summary (slide 2 of 3)

Important safety information

Radiation Risk: Radiation-emitting products, including Fludeoxyglucose F 18 Injection, may increase the risk for cancer, especially in pediatric patients. Use the smallest dose necessary for imaging and ensure safe handling to protect the patient and health care worker.

Blood Glucose Abnormalities: In the oncology and neurology setting, suboptimal imaging may occur in patients with inadequately regulated blood glucose levels. In these patients, consider medical therapy and laboratory testing to ensure at least two days of normoglycemia prior to Fludeoxyglucose F 18 Injection administration.

Adverse Reactions: Hypersensitivity reactions with pruritus, edema, and rash have been reported. Have emergency resuscitation equipment and personnel immediately available.

Pediatric Use: The safety and effectiveness of Fludeoxyglucose F 18 Injection in pediatric patients with epilepsy is established on the basis of studies in adult and pediatric patients. In pediatric patients with epilepsy, the recommended dose is 2.6 mCi. The optimal dose adjustment on the basis of body size or weight has not been determined.

In the oncology or cardiology settings, the safety and effectiveness of Fludeoxyglucose F 18 Injection have not been established in pediatric patients.

Fludeoxyglucose F 18 Injection for intravenous use

Brief summary (slide 3 of 3)

Dosage forms and strengths

Multiple-dose 30 mL and 50 mL glass vial containing 0.74 to 7.40 GBq/mL (20 to 200 mCi/mL)

Fludeoxyglucose F 18 Injection and 4.5 mg of sodium chloride with 0.1 to 0.5% w/w ethanol as a stabilizer (approximately 15 to 50 mL volume) for intravenous administration.

Recommended dose for pediatric patients: Within the neurology setting, the recommended dose for pediatric patients is 2.6 mCi, as an intravenous injection. The optimal dose adjustment on the basis of body size or weight has not been determined.

Fludeoxyglucose F 18 Injection is manufactured and distributed by:
PETNET Solutions, Inc.
810 Innovation Drive
Knoxville, TN 37932

We pioneer breakthroughs in healthcare. For everyone. Everywhere. Sustainably.

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