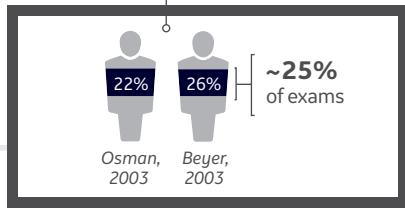


WHAT HAPPENS WHEN YOU WORK AROUND MOTION INSTEAD OF SEEING THROUGH IT?

Research has proven that ungated PET/CT exams near the diaphragm can lead to blurred margins, artificially reduced SUV values, lesion localization errors and lesions that appear larger, but fainter.^{1,2,7-9}

Respiratory motion causes significant artifacts in ~25% of scans in anatomy near the diaphragm.^{5,6}

Average respiratory motion in cranio-caudal direction.^{2,8}



25+ journal publications on the clinical impact of respiratory motion.¹⁻¹⁴

CLINICAL IMPACT OF RESPIRATORY MOTION MANAGEMENT

- Gated PET/CT
- Ungated PET/CT

Gated vs. ungated scans in the liver

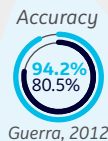
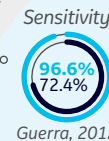
Gated vs. ungated scans in the lungs

Improve lesion detection

Gating improves both sensitivity and diagnostic accuracy when imaging lung lesions¹⁰

Published literature demonstrates respiratory gating is a valid technique to improve quantitation and lesion detectability of lung and liver tumors.⁷

33% more sensitive



17% more accurate

Improve quantitation

Gating clears the way for an increase in quantitation^{10,12}

33% increase in quantitation

Liver lesions, SUVmax



31% increase in quantitation

Lung lesions, SUVmax

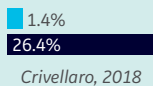


Reduce equivocal lesions

Minimize the number of indeterminate findings in lung and liver imaging^{10,12}

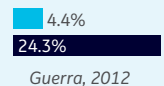
95% fewer equivocal lesions

Liver lesions, equivocal



82% fewer equivocal lesions

Lung lesions, equivocal



Improve staging accuracy

Gating can help with staging accuracy, especially for patients in early disease stages^{13,14}

22% of patients with change in treatment plan

Liver metastases in colorectal cancer patients



5.4% of patients with change in treatment plan

Lung cancer staging (majority of study pop. ≥ stage IIIA)



Improve radiotherapy planning

Reassure yourself with more accurate target volumes for liver lesions¹¹

33% planning target volume (PTV) optimization
Liver lesion PTV, in ml

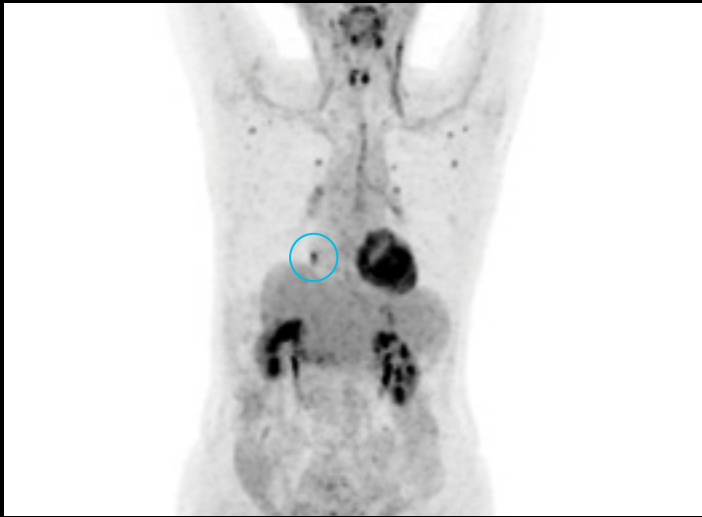


Non respiratory-gated PET exams can both misdiagnose liver metastases and underestimate the real internal target volumes.¹¹



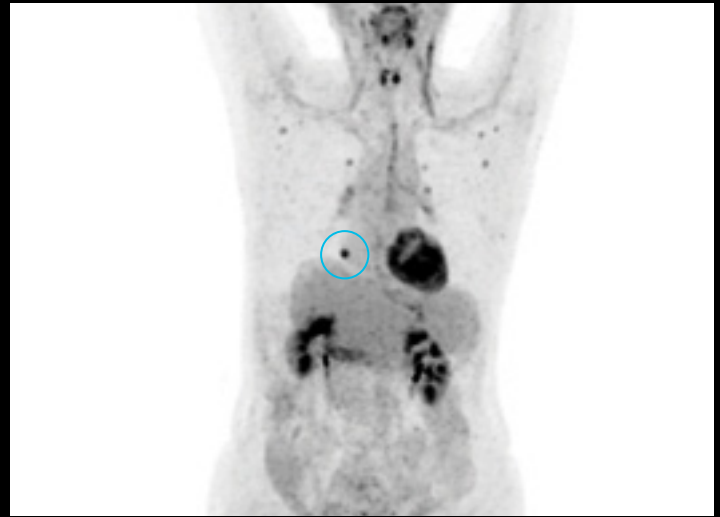
Respiratory motion correction with MotionFree

Conventional Static
No respiratory motion correction



SUVmax: 4.99
Volume: 0.84 cm³

MotionFree
Reconstructed with Q.Static



SUVmax: 6.74
Volume: 0.50 cm³

*Images courtesy of Dr. Huellner, University Hospital Zurich
Acquired by Discovery™ MI 5R with MotionFree enabled*

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These results are for illustrative purposes only and represent specific customer experiences; actual results could vary depending on clinical practice and circumstances.

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