

GE Healthcare

Discovery IQ

Image Quality. Intelligent Quantitation.



Image Quality. Intelligent Quantitation.

Healthcare providers, like you, require great image quality and consistent quantitation. You cannot be expected to prioritize one of these before the other. Complete information is required. Critical information your patients depend upon every day. GE Healthcare's latest PET/CT innovation delivers both excellent image quality and consistent quantitation, without compromise.

The Discovery* IQ platform is increasingly sensitive to detecting small forms of disease and built to provide consistent quantitative SUV measurements so you can trust what you see, making it an essential tool in providing personalized care from disease detection through treatment assessment.

Never before has a PET/CT been better equipped to deliver what you need to help with your primary mission – delivering the best possible patient outcomes.

What's new?

NEW LightBurst Detector

Delivers the highest sensitivity¹ of any PET/CT anywhere enabling excellent image quality with fast scans at low doses for greater patient comfort and care.

NEW Q.Clear Reconstruction

Pioneering technology delivering consistent quantitative SUV measurements that enable fast and efficient reading for greater confidence in evaluating a patient's response to treatment.

NEW System Design

A mobile-ready platform, featuring a scalable PET detector ring and GE's Optima* CT540, designed to be the most adaptable and accessible PET/CT scanner anywhere enabling improved healthcare for more people in more places.

NEW LightBurst Detector

The NEW GE LightBurst PET detector technology is designed to deliver the highest sensitivity¹ of any PET/CT anywhere enabling excellent image quality with fast scans at low doses for greater patient comfort and care.

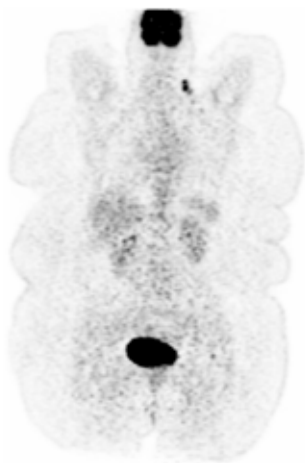
1 Largest Axial Field-of-View in the Industry¹

- Enables scanning in the fewest possible bed positions
- Scans full organ, such as thorax respiratory MotionFree study as fast as 4 minutes
- Allows for greater throughput and workflow efficiencies for your clinic



2 Highest NEMA Sensitivity in the Industry¹

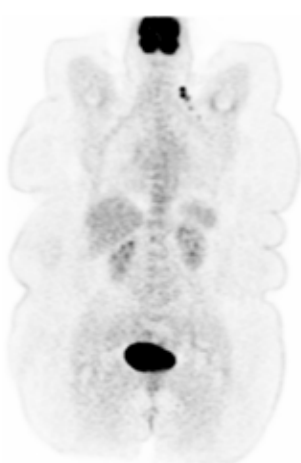
- Enables fast acquisition times and low dose scans
- Can image with both 1/2 the PET dose and 1/2 the scan time²
- Outstanding image quality for small lesion detectability



5 cps/kBq



10 cps/kBq

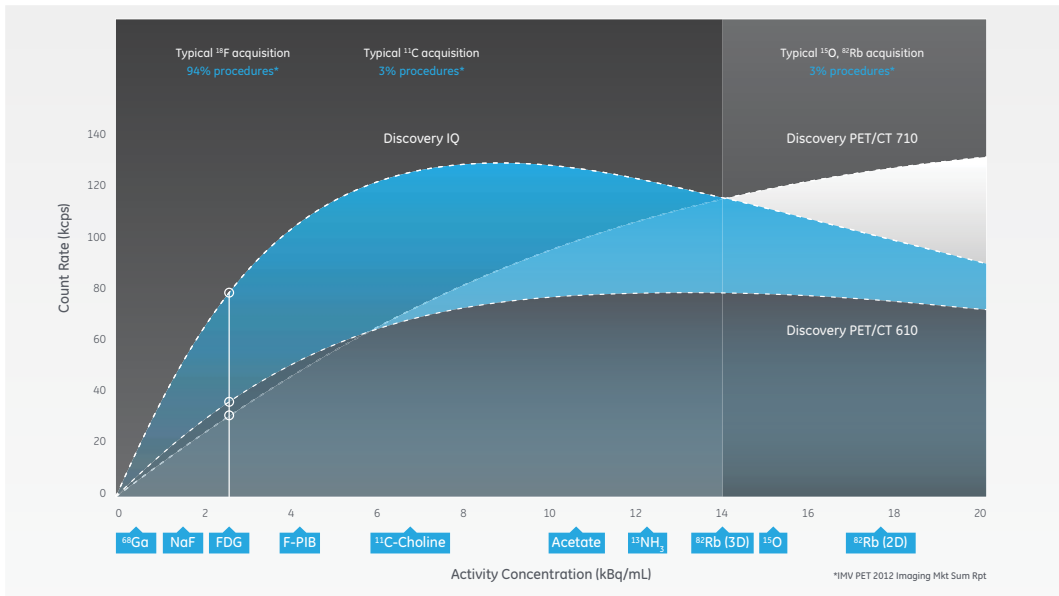


22 cps/kBq

Images acquired on a Discovery IQ equivalent system.

3 Highest Clinical NECR in the Industry¹

- Optimized for oncology practices utilizing ¹⁸F as represented in 94% of procedures³... up to 75 kcps @ 2.4 kBq/mL⁴
- Delivers high NECR for both low- and high-count rate radioisotopes such as ⁶⁸Ga, ¹¹C, ⁸²Rb and more

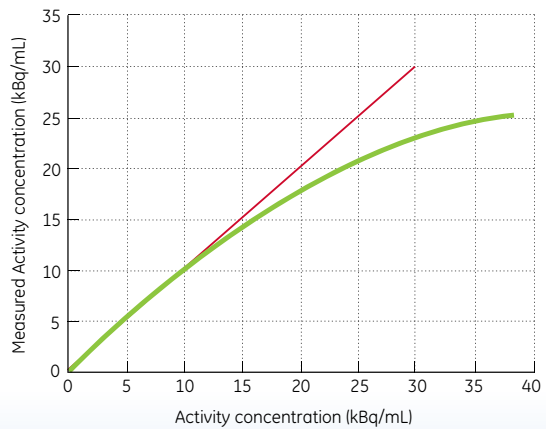


4 Dual Acquisition Channels

- Provides highest quantitative accuracy post NECR peak via innovative Dual Acquisition Channels
- ± 3.5% up to 22 kBq/mL

Single Acquisition Channel

Measured Activity Concentration vs. Effective Activity Concentration

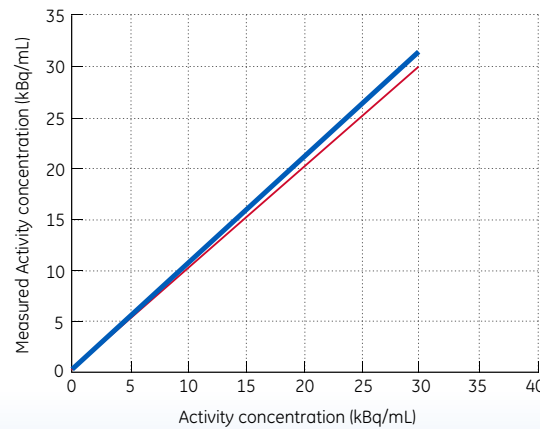


Single Acquisition Channel

Acquisition at high-count rate. Quantitation is impacted by dead time and randoms.

Dual Acquisition Channels

Measured Activity Concentration vs. Effective Activity Concentration



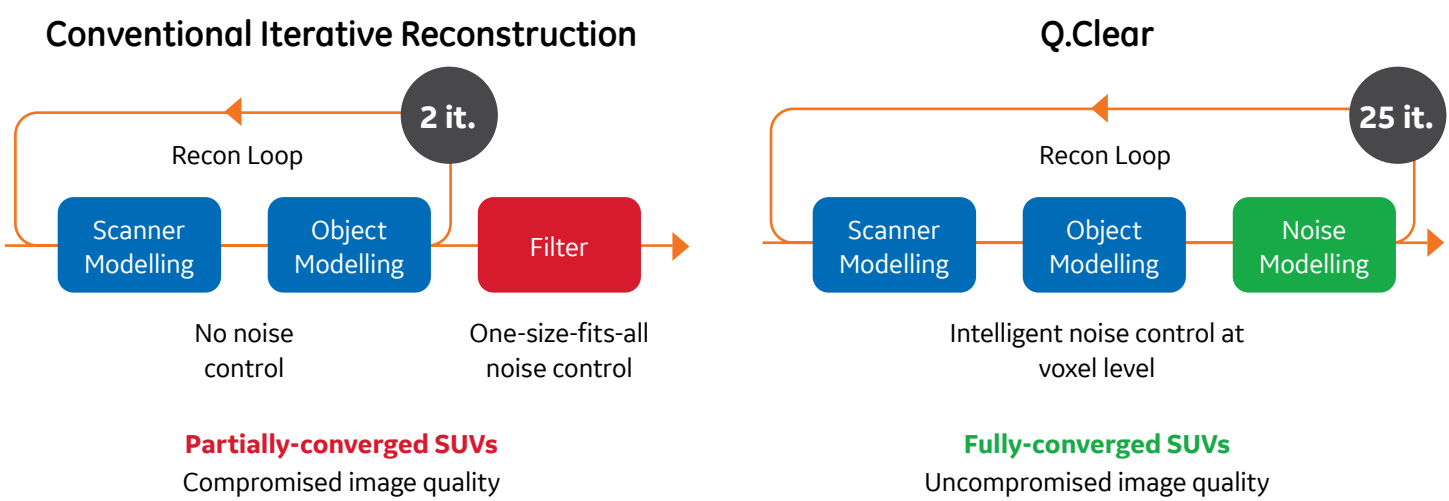
Dual Acquisition Channels

At high count rate, Quantitation is accurate.

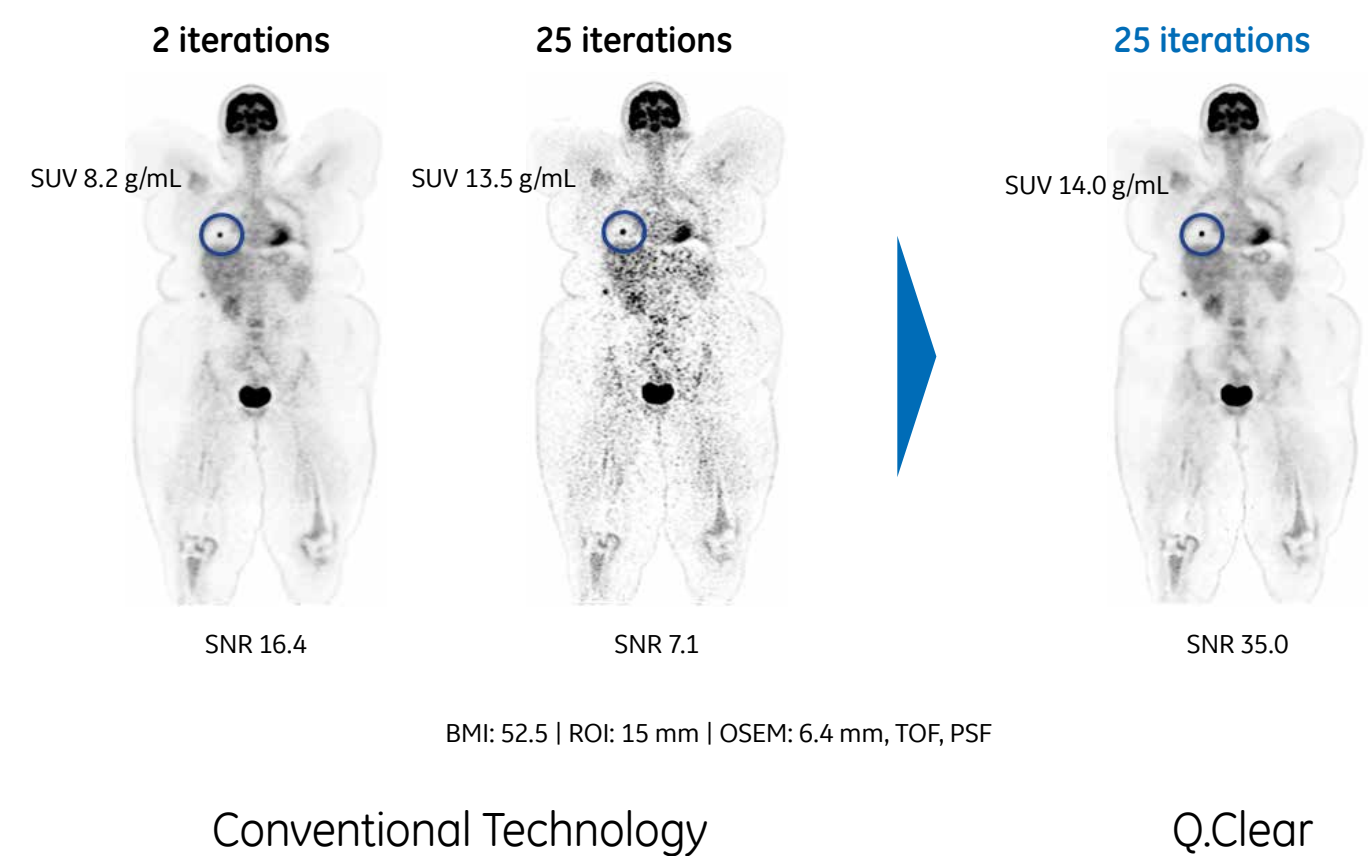
NEW Q.CLEAR Reconstruction

For the first time in PET reconstruction, there is no trade-off between excellent image quality and consistent, quantitative SUV measurements to assist in earlier determination of how well your treatment plan is working. Q.Clear, pioneering full-convergence reconstruction technology, enables fast and efficient reading for greater confidence in evaluating a patient's response to treatment.

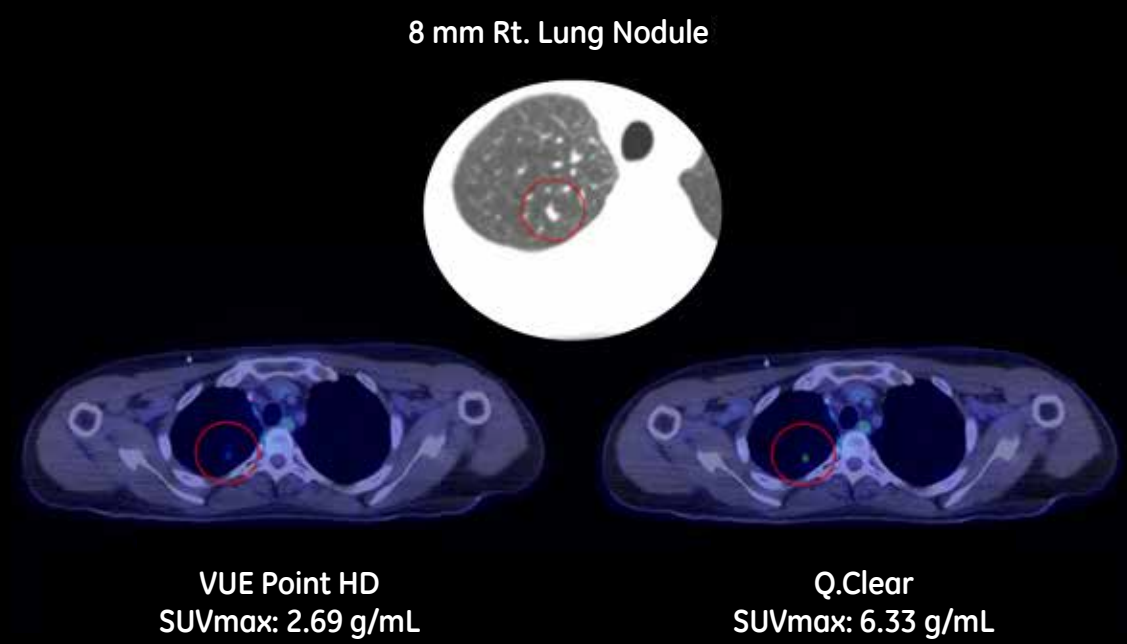
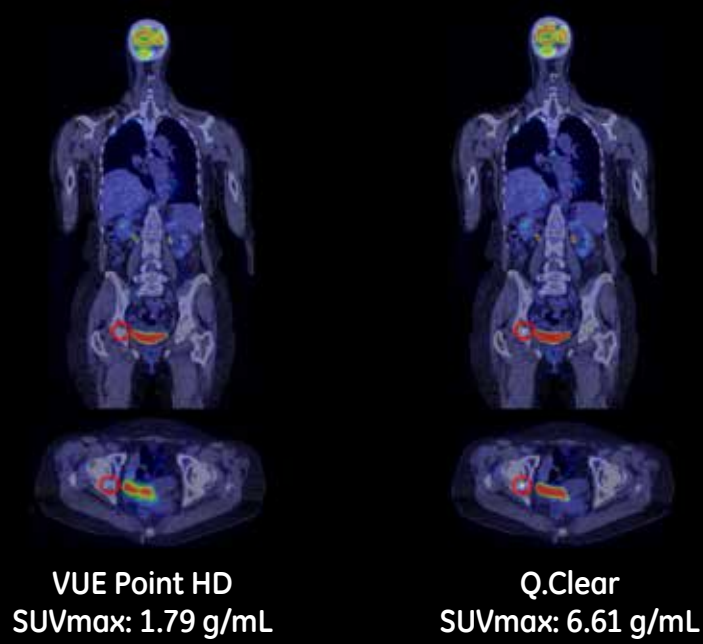
More accurate and consistent quantitation with intelligent noise control. Every Voxel. Every Step.



Up to 2x improvement in PET quantitation accuracy (SUV_{mean}).
Up to 2x improvement in image quality (SNR).



Quantitative SUV You and Your Patients Can Trust



Images acquired on a Discovery IQ equivalent system.

New System Design

The Discovery IQ, built as a mobile-ready PET/CT platform, features a NEW system design with a scalable PET detector ring and GE's Optima CT540.

The scalable PET detector ring is built to optimize clinical performance by delivering technologies to help provide the best possible patient outcomes. The versatile platform provides solutions for all clinical environments - from the first-time PET/CT user to high-volume and clinical research departments. This upgradable platform may help enable you to grow your patient services as your department needs change, protecting your investment. Furthermore, GE's mobile offering enables you to provide greater access to your patients by expanding your imaging department's clinical services.

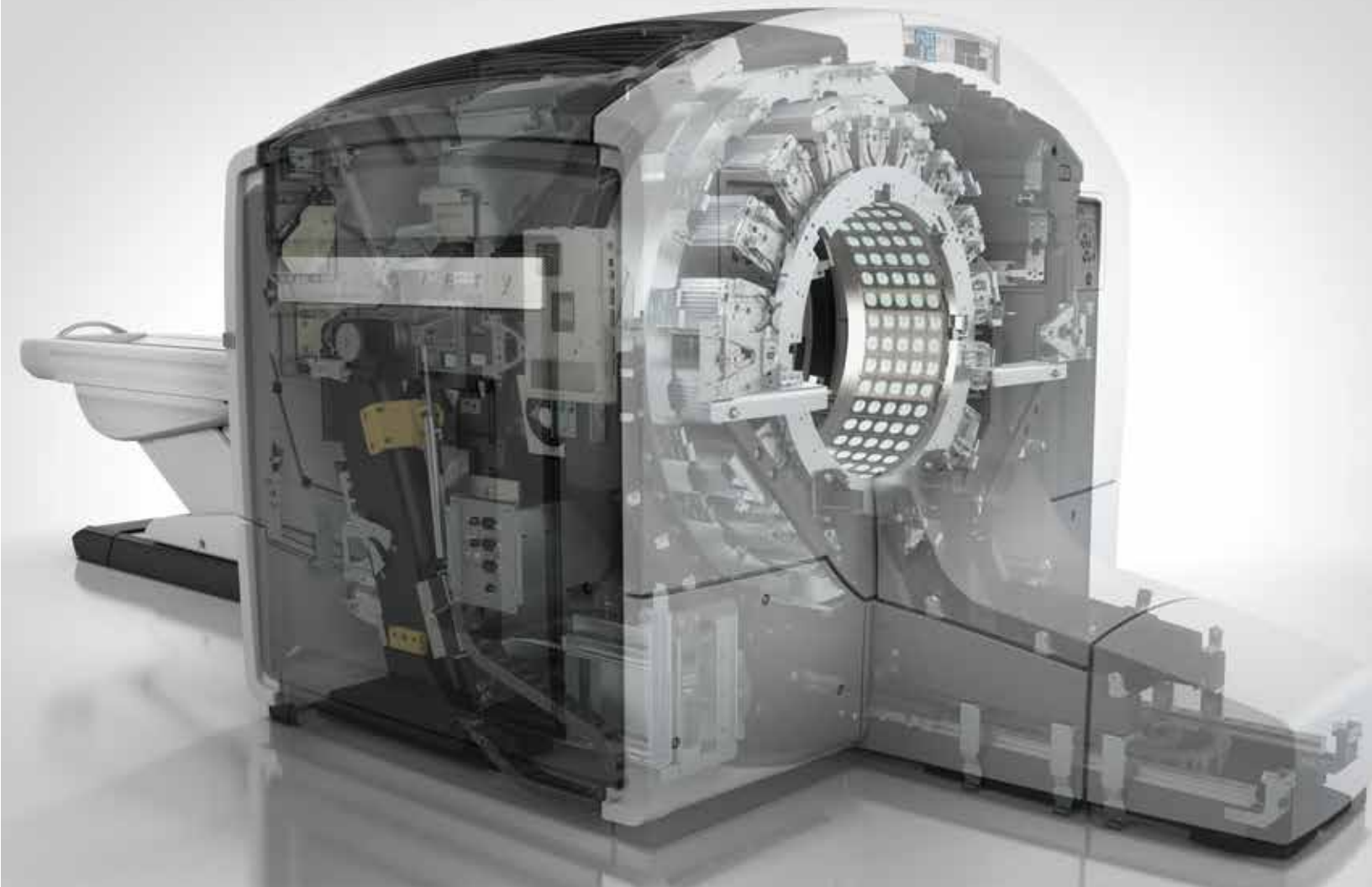
The Optima CT540 offers excellent signal management and image quality in signal starved areas and 20 mm coverage for fast exam times and short breath-holds. With 0.5-second rotation speed, 50-slice equivalent CT speed with IQE⁵ 1.75 pitch booster, and ASIR* reconstruction technology⁶, the Discovery IQ not only offers low dose and fast scanning, but outstanding image quality.



Scalable PET
Detector Ring

Mobile-ready
Platform

Optima CT540



Enabling Best Possible Patient Outcomes...

Image Quality

Discovery IQ delivers what every highly-demanding clinical environment requires – exceptional performance with a keen focus on the best image quality possible for small lesion detectability. That starts with having a platform producing the highest NEMA sensitivity¹ available, enabled by our new LightBurst detector, and the largest axial field-of-view in the industry¹, to help you maximize patient care with fast scans at low doses while also enabling greater throughput and efficiency for your clinic. The platform was also designed to provide the highest clinical Noise-Equivalent-Count-Rate (NECR) for ¹⁸F-based tracers.

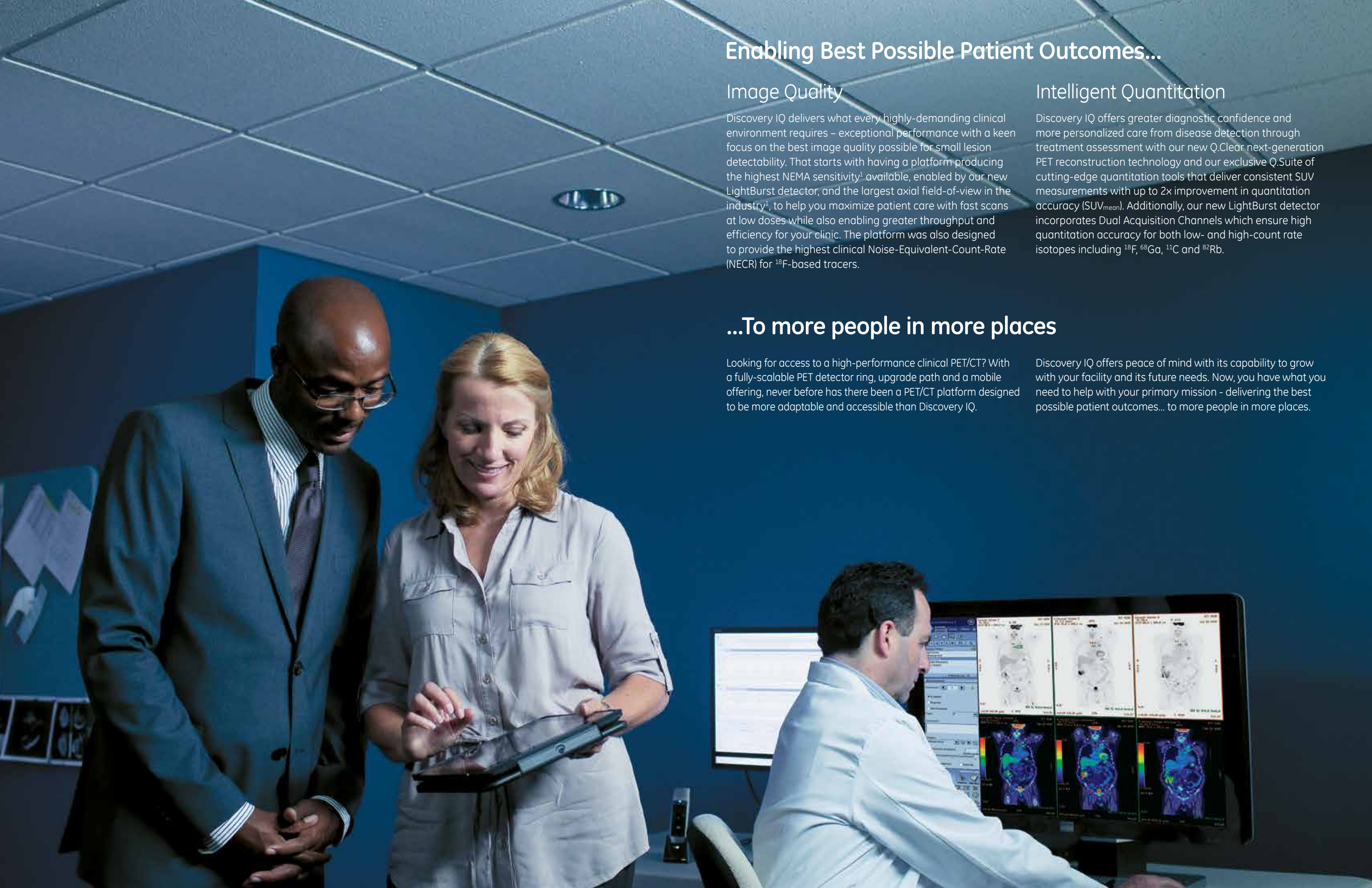
Intelligent Quantitation

Discovery IQ offers greater diagnostic confidence and more personalized care from disease detection through treatment assessment with our new Q.Clear next-generation PET reconstruction technology and our exclusive Q.Suite of cutting-edge quantitation tools that deliver consistent SUV measurements with up to 2x improvement in quantitation accuracy (SUV_{mean}). Additionally, our new LightBurst detector incorporates Dual Acquisition Channels which ensure high quantitation accuracy for both low- and high-count rate isotopes including ¹⁸F, ⁶⁸Ga, ¹¹C and ⁸²Rb.

...To more people in more places

Looking for access to a high-performance clinical PET/CT? With a fully-scalable PET detector ring, upgrade path and a mobile offering, never before has there been a PET/CT platform designed to be more adaptable and accessible than Discovery IQ.

Discovery IQ offers peace of mind with its capability to grow with your facility and its future needs. Now, you have what you need to help with your primary mission – delivering the best possible patient outcomes... to more people in more places.





About GE Healthcare

GE Healthcare provides transformational medical technologies and services to meet the demand for increased access, enhanced quality and more affordable healthcare around the world. GE (NYSE: GE) works on things that matter - great people and technologies taking on tough challenges. From medical imaging, software & IT, patient monitoring and diagnostics to drug discovery, biopharmaceutical manufacturing technologies and performance improvement solutions, GE Healthcare helps medical professionals deliver great healthcare to their patients.

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Imagination at work

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¹Comparing Discovery IQ 5-Ring to other PET/CT scanners reported in ITN online comparison charts (April 2014).

²Comparing Discovery IQ 5-Ring to a Discovery IQ 3-Ring.

³IMV PET 2012 Imaging Mkt. Sum. Rpt.

⁴At the typical activity concentration for FDG of 2.4 kBq/mL for Discovery IQ 5-Ring.

⁵Image quality as defined by an Artifact Index in Phantom testing.

⁶ASiR is an optional feature in the Discovery IQ.

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