

# Introducing MEDRAD

**Intego™**  
PET Infusion System



*Since 1964, MEDRAD has led the way in fluid delivery for advanced medical imaging applications*

- Market-leader for injection system technology used in CT, MR and CV imaging
- 2003 Recipient of the Malcolm Baldrige National Quality Award

**MEDRAD®**  
Performance. For life.™



# A History of Innovation...

**Intego™**  
PET Infusion System



1966  
First flow-rate  
controlled  
Angiographic  
Injector



1984  
First CT  
injection  
system



1996  
First MR  
injection  
system



2002  
First MR  
compatible  
infusion  
system



2003  
First dual  
syringe CT  
injection  
system

**MEDRAD®**  
Performance. For life.™

# A History of Innovation...

2008

Intego™ PET Infusion System

A new standard of care in FDG delivery

- Precise
- Flexible
- Safe

**Intego™**  
PET Infusion System



**MEDRAD®**  
Performance. For life.™

# Precise. Flexible. Safe.

**Intego**<sup>™</sup>  
PET Infusion System



- **Precise** – automated, controlled and accurate delivery of FDG with an integrated dose calibrator and saline flush
- **Flexible** – delivery of any dose\* at any time, including optional weight-based programming, allows flexible exam scheduling
- **Safe** – greatly reduced handling of FDG through delivery of multi-dose FDG in a specially-designed Tungsten vial shield and a lead-lined, mobile cart

**MEDRAD**<sup>®</sup>  
Performance. For life.<sup>™</sup>

\* 5 to 25 mCi, provided available activity is sufficient. System is designed for a maximum activity of 700mCi.

# Intego System Components



Shielded top tray slides open to enable loading of FDG and Source Administration Set



Integrated Ionization Chamber

Air detector

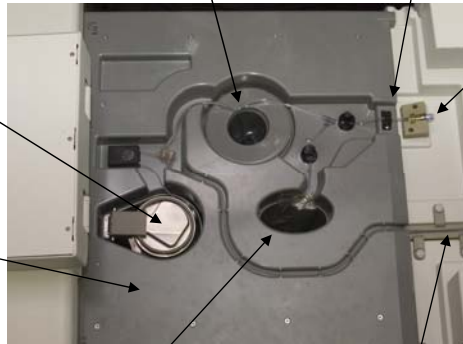
To Patient

Fail-safe Brake System

Touch-Screen Interface

Tungsten Vial Shield with FDG Vial

Lead shielding



Printer (not shown)



Locking Hasp

Waste chamber

From Saline

**MEDRAD**<sup>®</sup>  
Performance. For life.™

Dimensions:

Weight: ~730 lbs (331 kg)

Width: ~24 inches (60 cm)

Depth: ~34 inches (86 cm)

Height: ~53 inches (136 cm)

# Introducing Intego™

**Intego™**  
PET Infusion System



**MEDRAD®**  
Performance. For life.™

# Precise

Integrated ionization chamber automatically measures each dose immediately prior to infusion

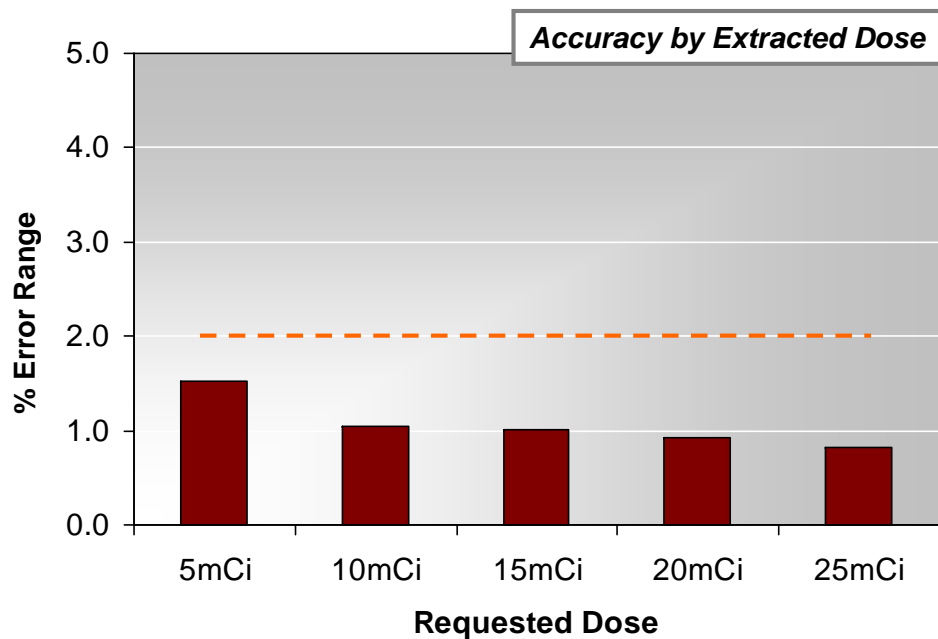
Accurately delivers the FDG dose and eliminates the need to manually calibrate each dose before and after infusion

**MEDRAD**<sup>®</sup>  
Performance. For life.<sup>™</sup>

**Intego**<sup>™</sup>  
PET Infusion System



# Precise



Delivers each dose consistently within +/- 2% of the measured dose

**MEDRAD**<sup>®</sup>  
Performance. For life.<sup>™</sup>

# Precise

**Intego**<sup>™</sup>  
PET Infusion System

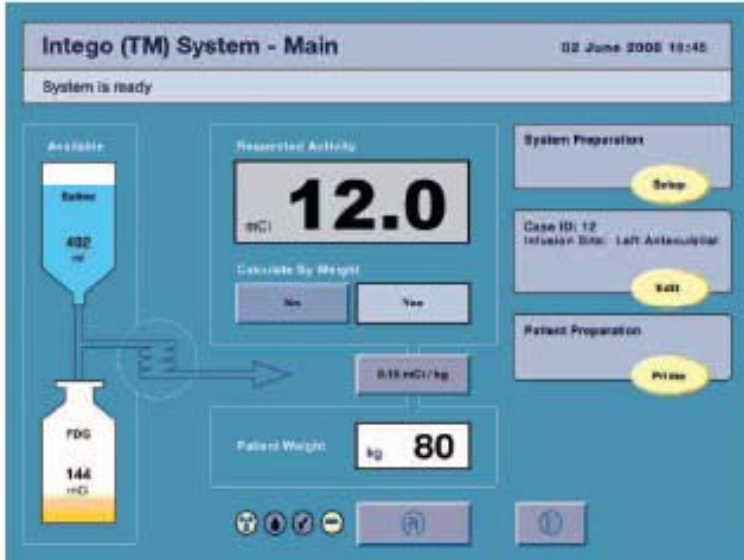
Automatically performs a saline flush to ensure dose accuracy and remove residual FDG from Patient Administration Set



**MEDRAD**<sup>®</sup>  
Performance. For life.<sup>™</sup>

# Precise

**Intego™**  
PET Infusion System



P3T™ technology automatically calculates dose based on actual patient weight at time of infusion

**medrad®**  
Performance. For life.™

# Precise

Automatically calculates, reports and prints dose delivered

Eliminates the need to assay before or after infusion to calculate dose delivered

**Intego**<sup>TM</sup>  
PET Infusion System

**Infusion Complete** OK

**FDG Delivered**  
11 June 2008 14:00

mCi **15.02**

ml **0.9**

**Total Fluid Delivered**

ml **35.0**

**Case ID:** 1234

**FDG Lot #:** 777

**IV Site:** Left Antecubital

**Termination Reason:** Success

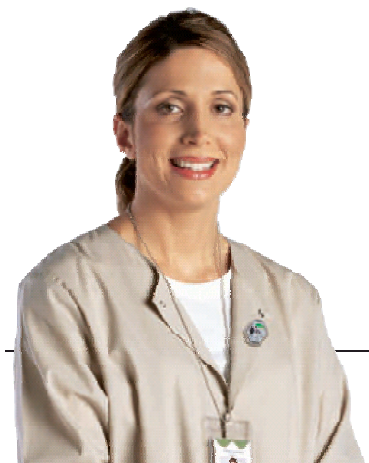
Print

Patient FDG Infusion Record			
11 June 2008 14:00			
Case ID:	1234	Activity Delivered	Total Volume
iv Site:	Left Antecubital	mCi <b>15.02</b>	ml <b>35.0</b>
FDG Lot #:	777	Prescribed Dose	FDG Volume
Outcome:	Success	mCi <b>15.10</b>	ml <b>0.9</b>
MEDRAD		Intego	

**MEDRAD**<sup>®</sup>  
Performance. For life.<sup>™</sup>

# Flexible

**Intego**<sup>™</sup>  
PET Infusion System



Any dose\* at any time...

Allows you to easily and efficiently respond to patient delays and add-on patients

**MEDRAD**<sup>®</sup>  
Performance. For life.<sup>™</sup>

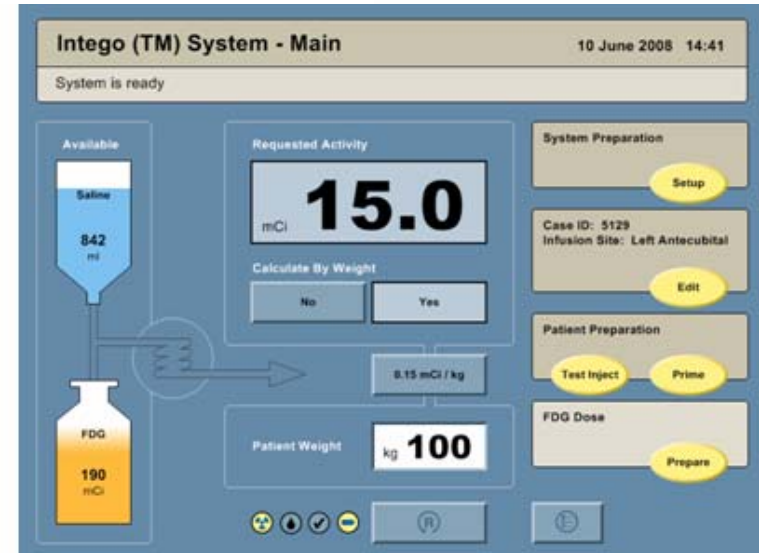
\* 5 to 25 mCi, provided available activity is sufficient.  
System is designed for a maximum activity of 700mCi.

# Flexible

The patient dose is automatically and accurately drawn from the multidose vial immediately prior to infusion

Eliminates manual adjustments and provides the ability to respond to patient delays or schedule changes with dose-on-demand capability

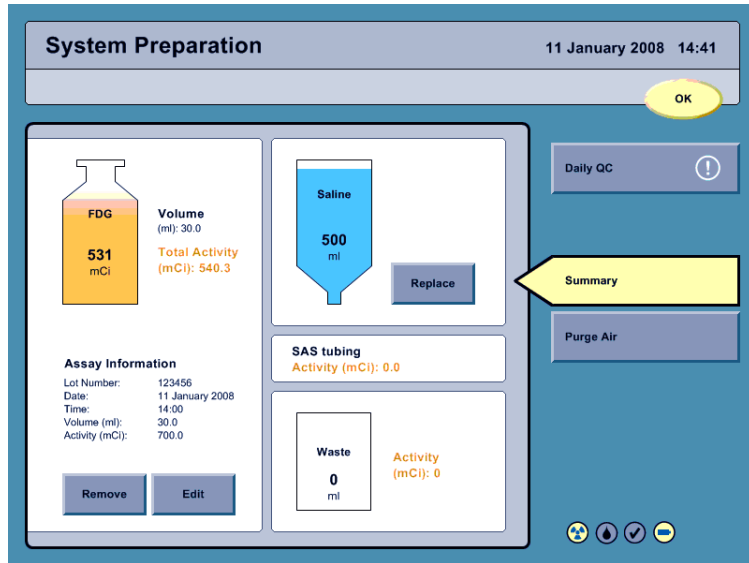
**Intego**<sup>TM</sup>  
PET Infusion System



**MEDRAD**<sup>®</sup>  
Performance. For life.<sup>™</sup>

# Flexible

**Intego**<sup>TM</sup>  
PET Infusion System



Easy-to-use touch screen initiates the infusion and clearly shows prescribed and actual activity

Using the touch screen, you can also complete daily, quarterly and annual calibration requirements

**medrad**<sup>®</sup>  
Performance. For life.<sup>™</sup>

# Flexible

Can easily be moved from room to room and positioned between the technologist and patient during the infusion

Touchscreen can be positioned to allow operation from either side

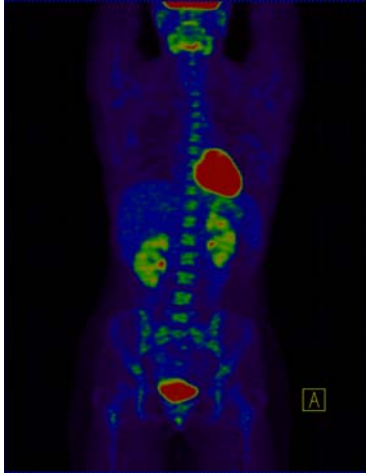
**Intego**<sup>™</sup>  
PET Infusion System



**MEDRAD**<sup>®</sup>  
Performance. For life.<sup>™</sup>

# Safe

**Intego**<sup>™</sup>  
PET Infusion System



By eliminating manual dose preparation, adjustment and infusion, the Intego System provides a safe way to deliver FDG

**MEDRAD**<sup>®</sup>  
Performance. For life.<sup>™</sup>

Data courtesy of PETNET Solutions and Molecular Imaging and Translational Research, University of Tennessee, Knoxville, TN

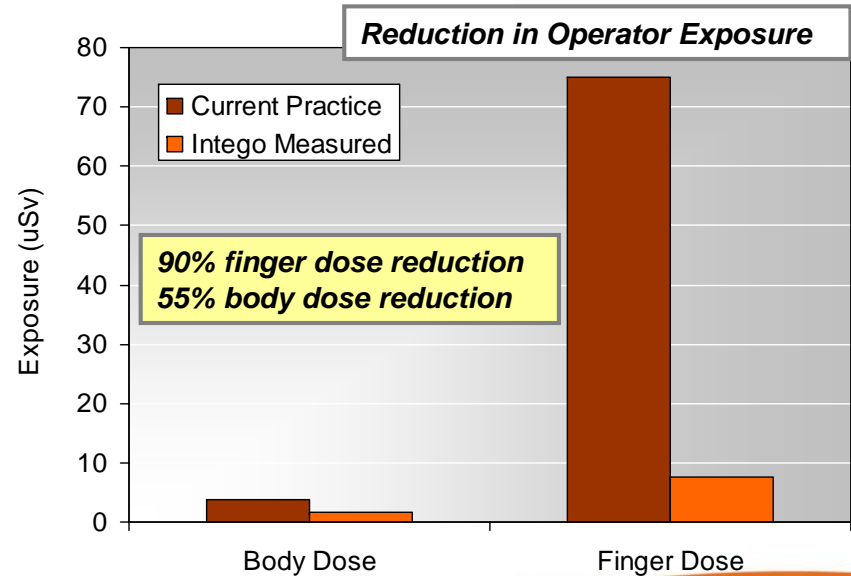
# Safe

The multi-dose vial eliminates the need to handle multiple syringes or vials

Tests show that, during dose preparation, Intego can reduce finger radiation exposure by 90% and body radiation exposure by 55%

**MEDRAD**<sup>®</sup>  
Performance. For life.<sup>™</sup>

**Intego**<sup>™</sup>  
PET Infusion System



# Safe

**Intego**<sup>™</sup>  
PET Infusion System



The system radiation profile meets  
10 CFR 20.1301 – Dose limits for  
individual members of the public

*“The dose in any unrestricted area ...  
does not exceed 0.002 rem (0.02  
mSv) in any one hour”*

**MEDRAD**<sup>®</sup>  
Performance. For life.<sup>™</sup>

# Safe

**Intego**<sup>™</sup>  
PET Infusion System



FDG is delivered from your supplier in a tungsten-shielded multi-dose vial

Eliminates the need to handle multiple syringes or vials and manually prepare the patient doses

**MEDRAD**<sup>®</sup>  
Performance. For life.<sup>™</sup>

# Safe

The multi-dose vial is easily inserted in the Intego cart, and each dose is automatically assayed inside the shielded cart and then delivered directly to the patient

**Intego**<sup>™</sup>  
PET Infusion System



**MEDRAD**<sup>®</sup>  
Performance. For life.<sup>™</sup>

# Safe

**Intego™**  
PET Infusion System



Automatically performs a saline test infusion prior to FDG infusion to verify vein patency

**MEDRAD®**  
Performance. For life.™

# Safe

**Intego**<sup>™</sup>  
PET Infusion System



Automatically prepares and infuses FDG dose via needle-less Patient Administration Set

Eliminates needle-based syringes

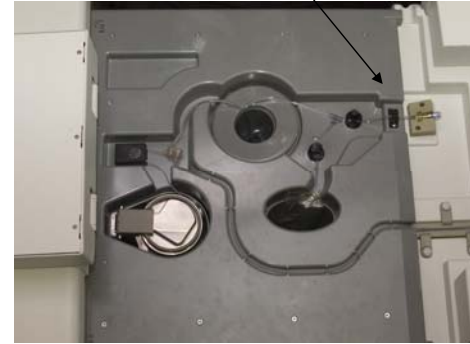
**MEDRAD**<sup>®</sup>  
Performance. For life.<sup>™</sup>

# Safe

Air detection system automatically disarms the Intego System if air is present in the Source Administration Set during infusion

**Intego™**  
PET Infusion System

Air Detector



**MEDRAD®**  
Performance. For life.™

# Safe

Automatically performs a saline flush after administration of the FDG using the same patient connection

Ensures dose accuracy and removes residual FDG from Patient Administration Set

**MEDRAD**<sup>®</sup>  
Performance. For life.<sup>™</sup>

**Intego**<sup>™</sup>  
PET Infusion System



# MEDRAD MI

**Intego™**  
PET Infusion System



## Intego™ PET Infusion System

A new standard of care in FDG delivery

- Precise
- Flexible
- Safe

**MEDRAD®**  
Performance. For life.™