



# At the heart of cardiac PET

THE BASICS

Cardiogen-82 and the Model 1701 Infusion System



LIFE FROM INSIDE

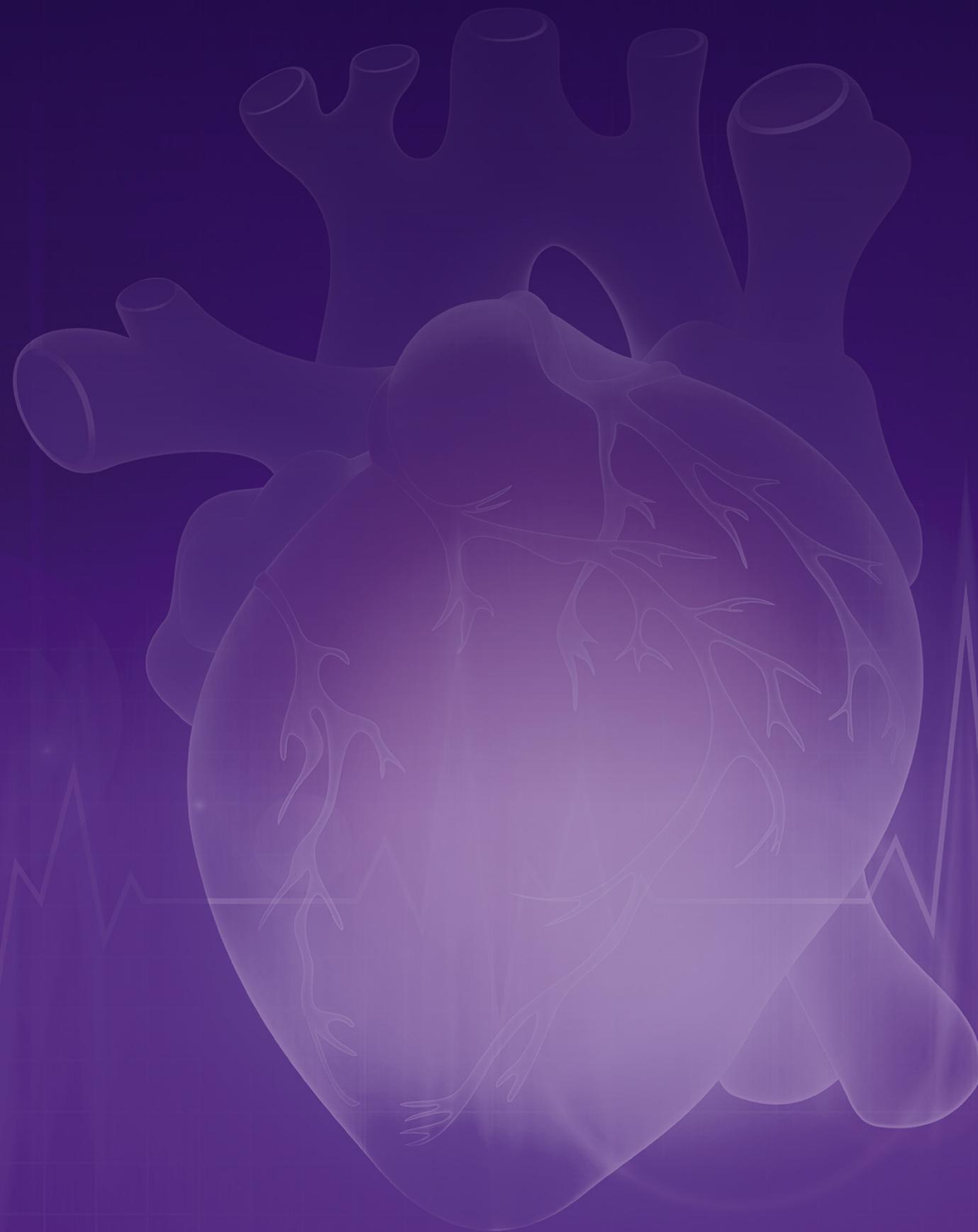
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The use of cardiac PET has been growing during the last few years, with PET/CT scanners becoming widely available, and there is increasing evidence to demonstrate the advantages of this imaging approach. The publication of guidelines by the European Association of Nuclear Medicine (EANM) and, jointly, the Society of Nuclear Medicine and Molecular Imaging (SNMMI) and American Society of Nuclear Cardiology (ASNC) aims to standardise and support its use.<sup>1,2</sup>





## What is CardioGen-82?

Cardiogen-82 is a radionuclide generator of rubidium-82 ( $^{82}\text{Rb}$ ).

It is a closed system used to produce rubidium-82 ( $^{82}\text{Rb}$ ) chloride injection for intravenous administration. Injection of rubidium-82 ( $^{82}\text{Rb}$ ) chloride is indicated in PET imaging of the myocardium at rest and under pharmacological stress, in order to assess the regional myocardial perfusion in adults with a known or suspected coronary artery pathology.<sup>3</sup>



### INDICATION

This medicinal product is for diagnostic use only.

The generator eluate (solution of rubidium-82 ( $^{82}\text{Rb}$ ) chloride for injection) is used for Positron Emission Tomography (PET) imaging of the myocardium at rest or under pharmacologic stress conditions to evaluate regional myocardial perfusion in adults with suspected or known coronary artery disease.<sup>3</sup>

**PET**  
Positron Emission Tomography

**PET/CT**  
Positron Emission Tomography/Computed Tomography

## What is the Model 1701 Infusion System?

The Cardiogen-82 Infusion System Model 1701 allows measurement and injection of precise activities of rubidium-82 ( $^{82}\text{Rb}$ ) chloride that should not exceed 2200 MBq in unique activity, and 4400 MBq in cumulative activity, infused at a maximum rate of 50 mL/minute, with a maximum volume per infusion of 100 mL, and a total volume not exceeding 200 mL. Those limits for a session at rest and under stress reflect conditions for use in which clinical trials have been performed. Effective dose = 6 mSv when the maximum recommended cumulated radioactivity of 4440 MBq is administered.<sup>3</sup>

The Cardiogen-82 generator should only be used with the Cardiogen-82 Infusion System Model 1701, which has been designed specifically for use with the Cardiogen-82 generator.



Generator and cart not shown to scale

## Imaging with Cardiogen-82<sup>3</sup>

### Patient information to be shared prior to scan



#### Pre-scan

- Fast for at least 6 hours prior to scan. Be well hydrated before the scan
- No caffeine for 12 hours prior to scan
- Women of child-bearing potential should have pregnancy excluded prior to the examination



#### Post-scan

- No particular precautions need to be taken following the administration of the radioactivity, but patients should be advised to urinate frequently in the first hour post-scan

#### Contraindications

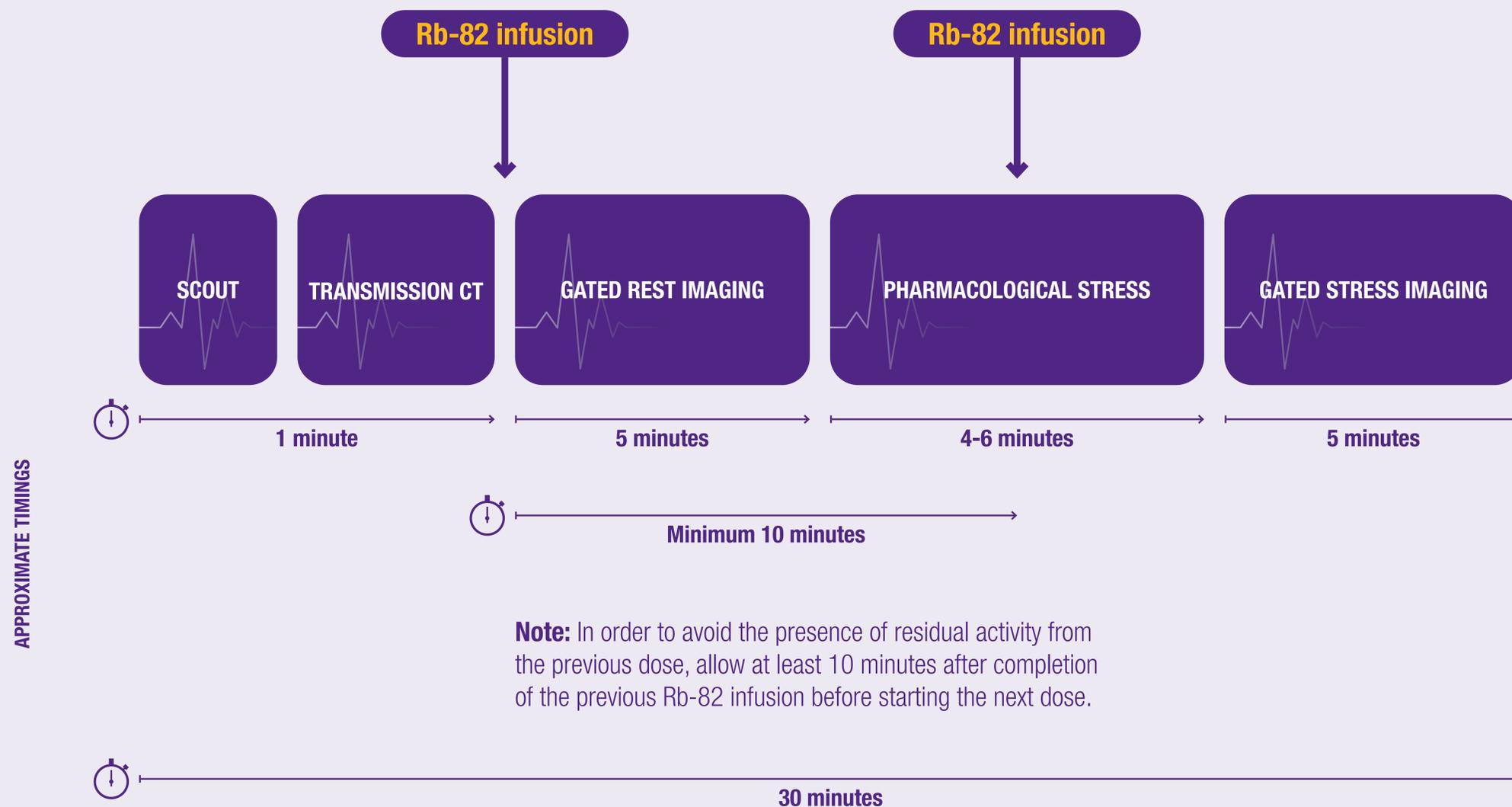
- Pregnancy
- Children: safety and efficacy of rubidium-82 (<sup>82</sup>Rb) chloride have not been established

#### Warnings

Strict adherence to instructions regarding quality control (QC) at clinical sites is required, with daily QC tests being performed to ensure patient safety.

The correct eluent for the generator must be used. Only a NaCl 9 mg/mL solution that meets pharmacopeia quality standards should be used for generator elution. The use of any other solutions is strictly forbidden as it may compromise patient safety.<sup>3</sup>

# Sample protocol for cardiac PET/CT imaging with rubidium-82 (<sup>82</sup>Rb) chloride<sup>3</sup>



**Note:** In order to avoid the presence of residual activity from the previous dose, allow at least 10 minutes after completion of the previous Rb-82 infusion before starting the next dose.

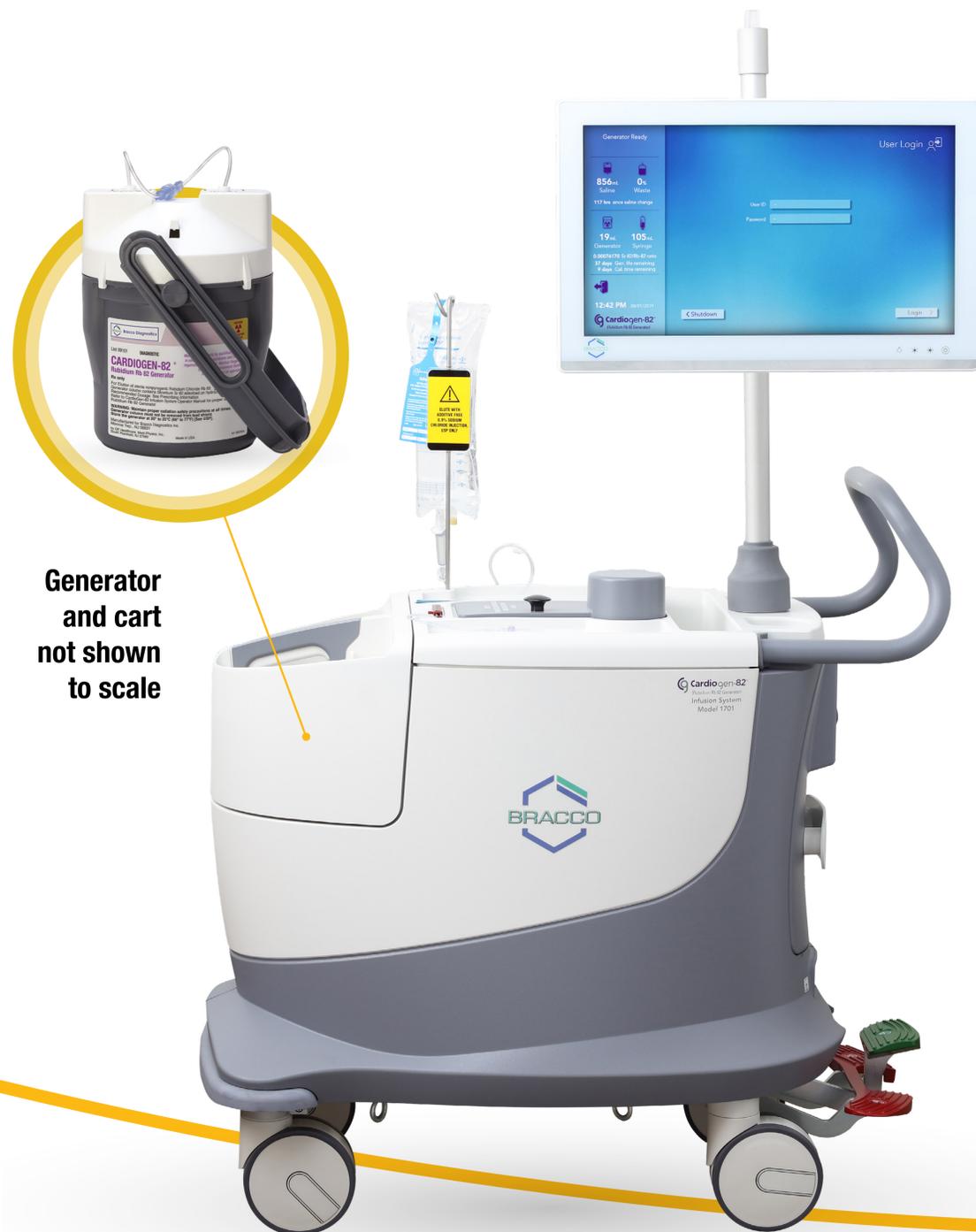
Start imaging 70-90 seconds after the end of the injection of the Rb-82 injection in patients with a LVEF > 50%; if a longer circulation time is anticipated, the start of the acquisition may be delayed: 90-110 seconds if the LVEF is from 30% to 50%, 110 to 130 seconds if the LVEF is severely decreased, < 30% (i.e. a patient with severe malfunction of the left ventricle). In general, images acquisition lasts 5 minutes.<sup>2,3</sup>

**LVEF**  
Left Ventricular Ejection Fraction

## Why choose cardiac PET with Cardiogen-82 and the Model 1701 Infusion System

With its short half life of 75 seconds, you can provide a high-quality patient-centred cardiac PET service with Cardiogen-82<sup>1,2</sup>

- Fast rest/stress protocols (30 min) enabling high patient throughput<sup>1,3</sup>
- Reduced radiation burden for both staff and patients compared to SPECT myocardial perfusion imaging (MPI)<sup>2,4</sup>



Generator and cart not shown to scale



## Improve your image quality and diagnostic performance compared to SPECT MPI with Cardiogen-82<sup>1</sup>

- High spatial and contrast resolution leads to high image quality<sup>5</sup>
- Cardiac PET MPI <sup>82</sup>Rb is superior to SPECT MPI in the detection of obstructive coronary artery disease (CAD)<sup>6</sup>
- Routine accurate, reliable attenuation correction decreases false positives, thus increases specificity<sup>2,5</sup>
- Improved image quality and CAD detection in women and obese patients<sup>1,7</sup>
- Ability to calculate myocardial blood flow (MBF) for both rest and stress allows assessment of coronary microvascular disease (CMD) which conveys additional diagnostic and prognostic information<sup>5,8</sup>





## The Model 1701 Infusion System is designed with you in mind

- Focused on efficiency, safety and ease of use
- Choice of flow rates
- Flex dosing without recalibration
- System self-monitoring with user alerts
- On-board record and report storage with re-print function, saving time and eliminating manual record keeping





## Ready when you are – the Model 1701 Infusion System helps to make your day efficient

- On-board daily quality control with scheduling option to be run overnight, saving you time at the beginning of each day
- With no need for daily calibration, the system is ready to start the day with you
- Post-infusion flush makes the most of every dose and reduces the radiation exposure for users

## With you all the way

- Support of the dedicated applications specialist team (the Cardiogen Concierge Service), provides you with the nuclear medicine expertise needed to start and maintain a successful cardiac PET programme



## Cardiogen Concierge Service

With a dedicated team of accessible, responsive and knowledgeable expert applications specialists available to you in your time zone, the Cardiogen Concierge Service offers you support to start and maintain a successful cardiac PET service.



### The Cardiogen Concierge Service includes:

- Dedicated expert applications specialists with a named point of contact
- Support onsite in person for you and your entire nuclear medicine department
- Pre-training to introduce your team to Cardiogen-82 and the Model 1701 Infusion System
- Onsite 'cold' training with the Model 1701 Infusion System prior to first Cardiogen-82 generator delivery
- Presence for installation and first 'hot' patients
- Return for first generator exchange
- Certification of users with annual repeat training
- Performance of annual preventative maintenance checks
- Facilitation of inter-site relationships

**With rapid response times, the Cardiogen Concierge Service is with you all the way, from service concept to implementation.**

# At the heart of cardiac PET



## With the benefits of:

- Rapid throughput<sup>1,3</sup>
- Superior diagnostic accuracy compared to SPECT MPI<sup>1,2,5,6</sup>
- Low radiation exposure to both staff and patients<sup>2,4</sup>
- Full support of the Cardiogen Concierge Service

**...put the CardioGen-82 generator and the Model 1701 Infusion System at the heart of your cardiac PET service**

# Bracco – your partner in cardiac PET



- Bracco has been at the forefront of cardiac PET for over 30 years and counting
- More than three million cardiac PET studies have been performed using Cardigen-82 since 1989<sup>9</sup>
- Accessible, responsive and knowledgeable, Bracco professionals collectively bring more than 500 years of nuclear medicine expertise to help you start and maintain a successful cardiac PET service

# Abbreviated Prescribing Information

## References:

1. Sciagra R et al. *Eur J Nucl Med Mol Imaging*. 2021;48:1040-1069
2. Dilsizian V et al. *J Nucl Cardiol*. 2016;23:1187-1226
3. Cardiogen-82 (rubidium-82 generator (82Rb)) Commen-EN SmPC (MRP) dated 25 November 2022
4. Schleipman AR et al. *J Nucl Cardiol* 2006; 13: 378-84
5. Schindler TH et al. *J Nucl Med*. 2020;Vol 6, 8:1221-1265
6. McArdle BA et al. *JACC*. Vol. 60, No. 18, 2012
7. Hyafil F et al. *J Nucl Cardiol*. 2020 Jun; 27(3): 755-768
8. Murthy VL et al. *J Nucl Cardiol*. 2018 Feb; 25(1): 269-297
9. Bracco sales data

