
ERANGA CARDIOLOGY

About the Applicant

- Single-specialty Cardiology practice with offices in Dover and Milford, DE
- Led by Dr. Eranga Haththotuwa, Board Certified in:
  - Cardiovascular Disease
  - Echocardiography
  - Nuclear Cardiology
- Practicing since 2000, supported by a skilled team of technicians, nurses, and staff
- Mission: Deliver top-quality cardiovascular care with a focus on patient satisfaction

- Services include:
  - In-office cardiac testing and consultations (Mon–Fri)
  - Nationally Accredited Nuclear, Echo, and Vascular Labs
  - Arrhythmia diagnostics and device management (pacemakers, defibrillators, etc.)
  - Coumadin Clinic for anticoagulation management and education
- Affiliated with Bayhealth Hospitals: Kent General & Milford Memorial

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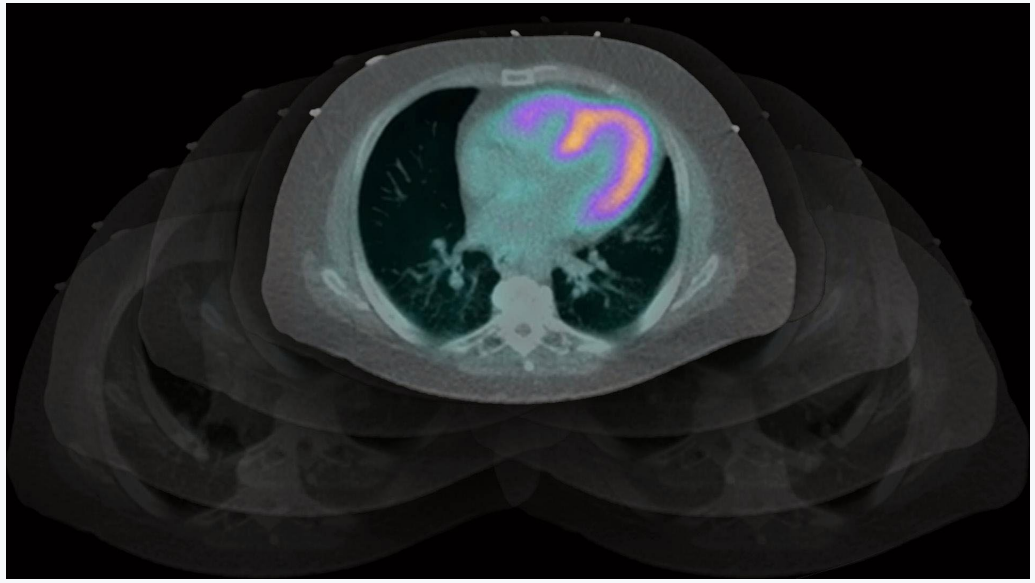
Project Scope

- Procurement of Siemens Horizon 16 PET/CT scanner
  - Equipment Lease and Supply Agreement with CDL
- Site preparation, facility modifications and Installation
  - Equipment lease incorporates cost of buildout and project management into the monthly fee
- Staff training and QA protocols implemented for optimal use
  - If needed, additional staffing resources and nuclear technologists are available on request

Clinical Benefits of Cardiac PET Imaging



Comparison of Coronary CT Angiography, SPECT, PET and Hybrid Imaging for Diagnosis of Ischemic Heart Disease

Ibrahim Danad, MD; Pieter G. Raijmakers, MD, PhD; Roel S. Driessen, MD; Jonathon Leipsic, MD; Rekha Raju, MD; Chris Naoum, MD; Juhani Knuuti, MD, PhD; Maija Mäki, MD; Richard S. Underwood, MD, PhD; James K. Min, MD; Kimberly Elmore, MSc; Wynand J. Stuijfzand, MD; Niels van Royen, MD, PhD; Igor I. Tulevski, MD, PhD; Aernout G. Somsen, MD, PhD; Marc C. Huisman, PhD; Arthur A. van Lingen, PhD; Martijn W. Heymans, PhD; Peter M. van de Ven, PhD; Cornelis van Kuijk, MD, PhD; Adriaan A. Lammertsma, PhD; Albert C. van Rossum, MD, PhD; Paul Knaapen, MD, PhD

JAMA Cardiology: Controlled, comparative study of 208 patients:

- PET showed the highest diagnostic accuracy for myocardial ischemia
- Evaluated via fractional flow reserve for validation
- Findings support PET's clinical superiority over SPECT

Multiple studies confirm that PET offers higher diagnostic accuracy, better patient outcomes, and enhanced efficiency co mpared to SPECT in myocardial perfusion imaging. (Available on Request)

Figure 3. Diagnostic Performance of Cardiac Imaging Methods and Traditional Cardiovascular Risk Factors for the Detection of Coronary Artery Disease (CAD) on a Patient-Based Level

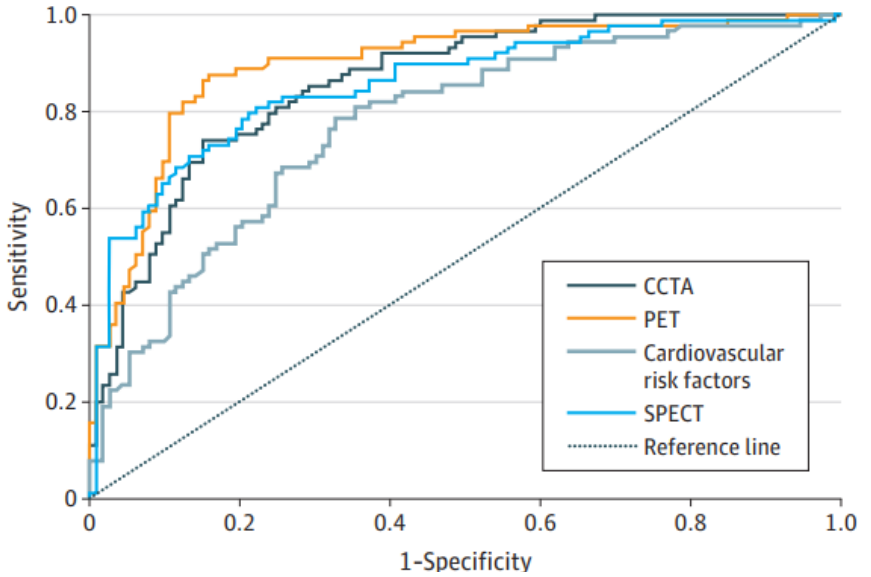


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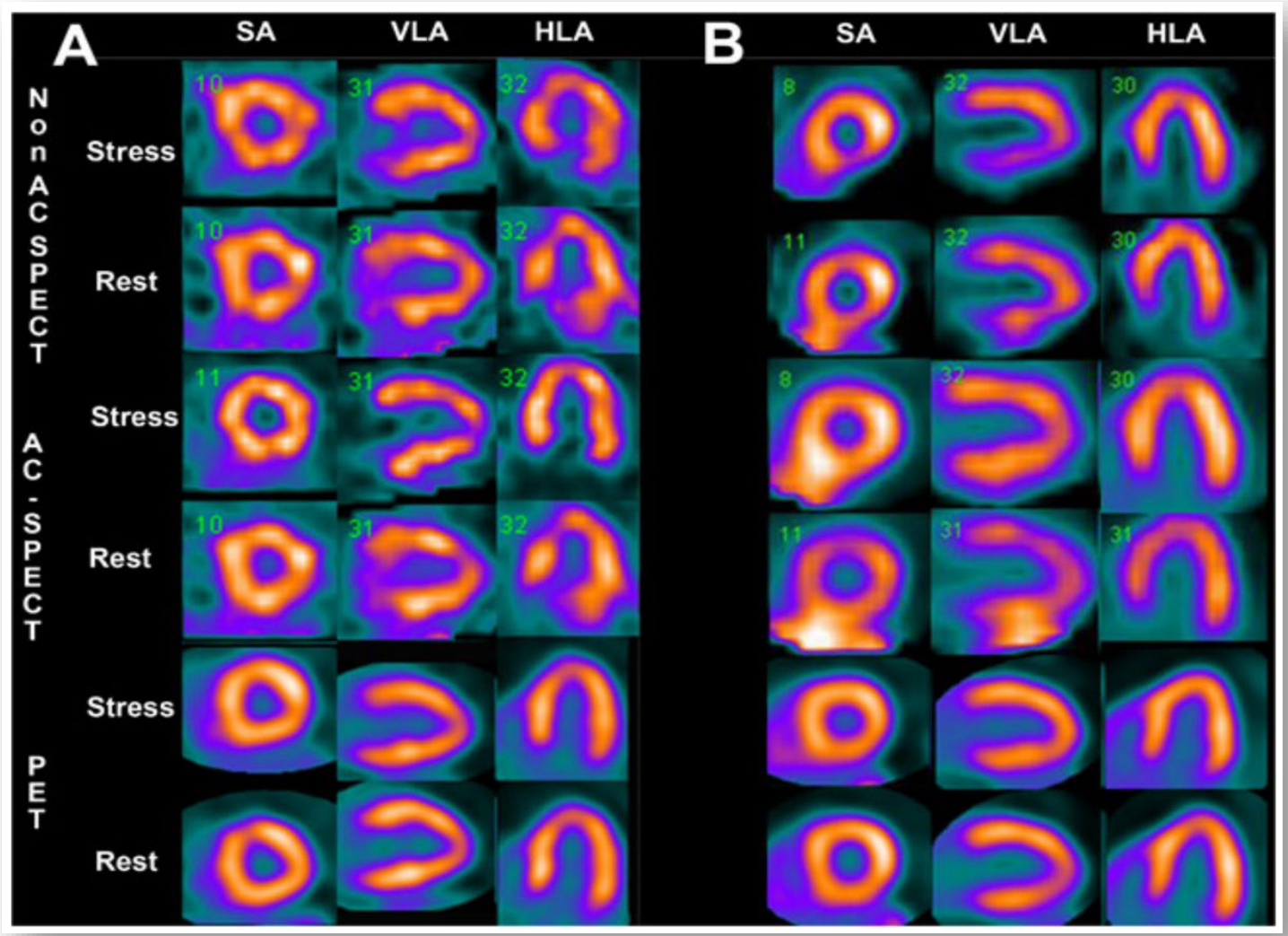
Image SPECT v. PET, seeing the difference

In a study that looked at Rubidium PET MPI to confirm SPECT findings, PET delivered better[1]:

- Improved resolution and clarity in PET scans
- Greater diagnostic confidence and accuracy
- More sensitive for identifying subtle changes
- Supports earlier and more accurate cardiac diagnoses



1 Flotats A et al *Eur J Nucl Med Mol Imaging* (2012)

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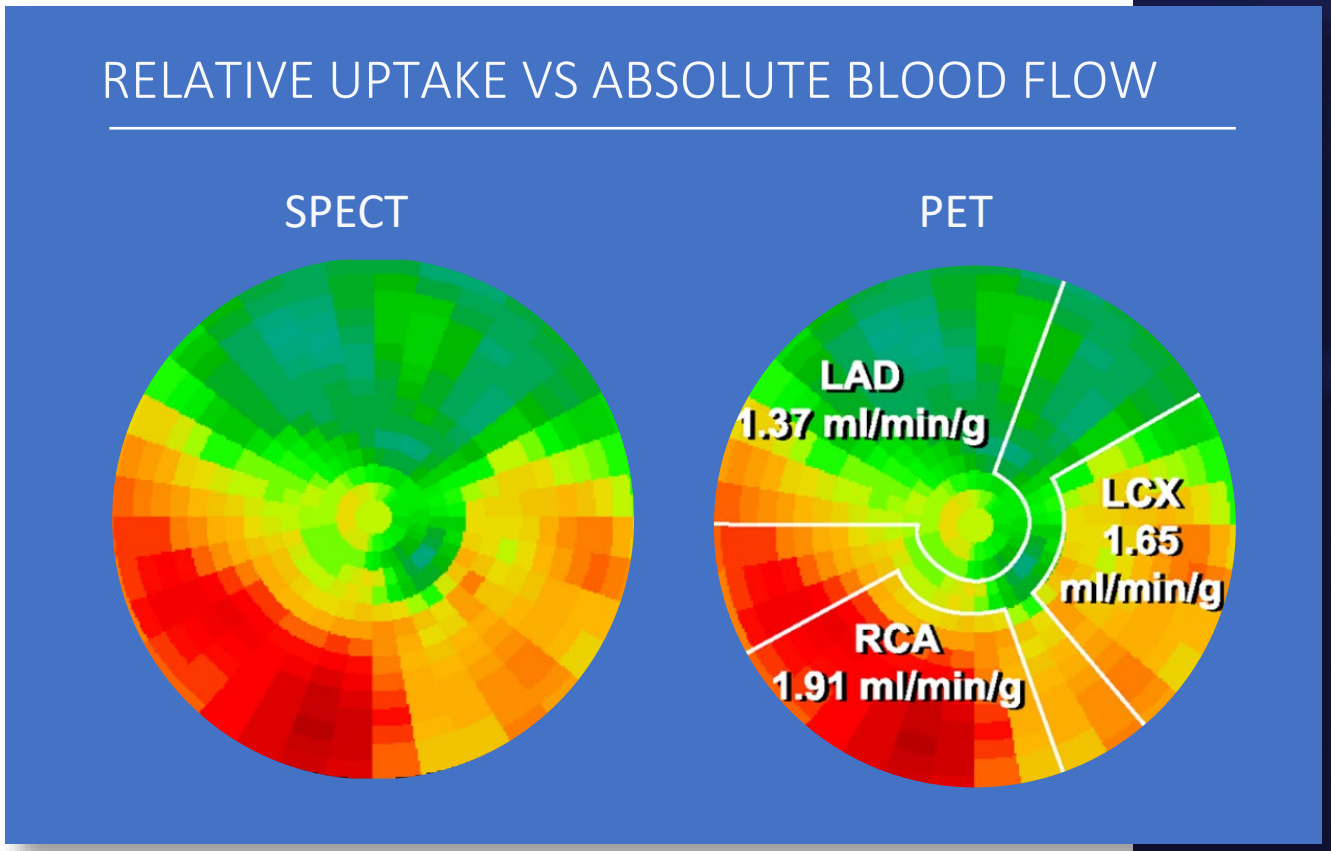
Enhanced Coronary Flow Insights with PET



Quantitative assessment of myocardial blood flow with PET/CT identifies multi-vessel CAD along with coronary artery calcification which offers the opportunity to monitor responses to lifestyle and/or risk factor modification and to therapeutic interventions.

Courtesy of Dr. Vasken Dilsizian and image reproduced from Schindler TH, Schelbert HR. In Dilsizian V, Narula J, [eds]; Atlas of Nuclear Cardiology, 4th ed, New York, Springer, 2013, pp. 145-194.

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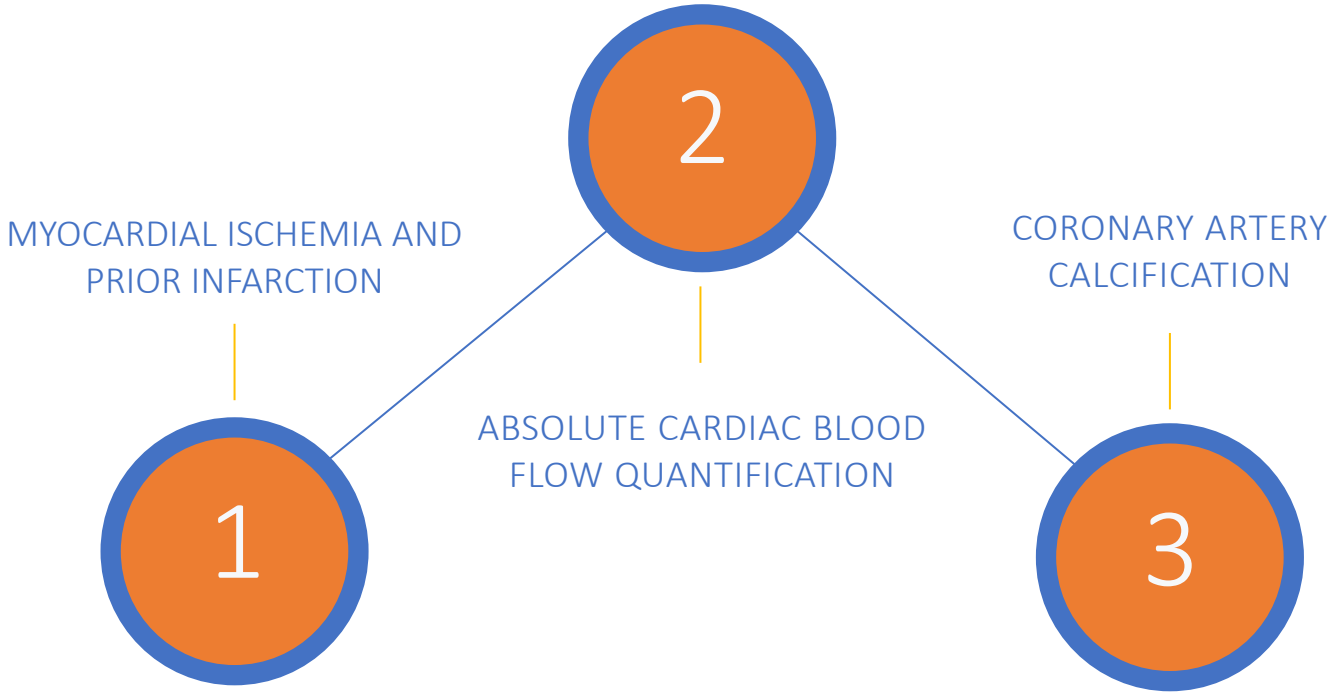
Cardiac PET/CT: 3 benefits in 1 modality



- In a single, 30-minute[1] Rb-82 session, this advanced technology can provide clinically important information
- SPECT only measures myocardial ischemia and prior infarction

1. Nakazato B et al. *J Nucl Cardiol.* 2012;19(2):265-276.

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Superiority if PET/CT: By the Numbers

	SPECT	PET/CT
Study time[2] and pharmacologic stress duration	3-5 hours	20-30 minutes
Sensitivity[3] (50% coronary stenosis threshold)	81%	86%
Specificity[3] (50% coronary stenosis threshold)	66%	100%
Accuracy[3] (50% coronary stenosis threshold)	76%	91%
Patient radiation exposure[3]	0.667 rads/6.67 mSv	0.096 rads/.96mSv

Less time

More sensitive

More specific

More accurate

Less radiation by 6x

1.BatemanTMetal.JNuclCardiol. 2016;23:1227-1231
2.Bateman TM. JNuclCardiol. 2012;19:3-11
3.BatemanTMetal.JNuclCardiol.2006;13: 24-33

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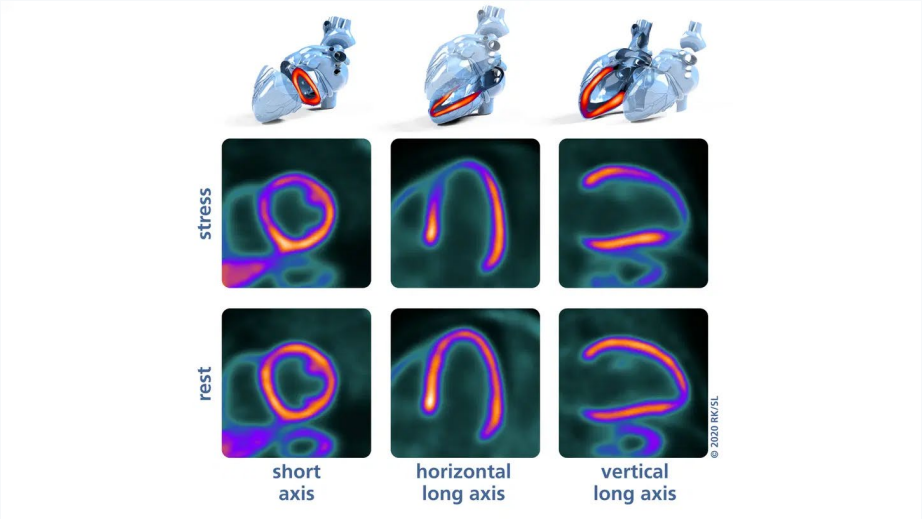
Societal and Payor Support



Medical Association Support for Cardiac PET

ASNC American Society of Nuclear Cardiology

SNMMI Value Initiative SOCIETY OF NUCLEAR MEDICINE & MOLECULAR IMAGING

AMERICAN COLLEGE of CARDIOLOGY®

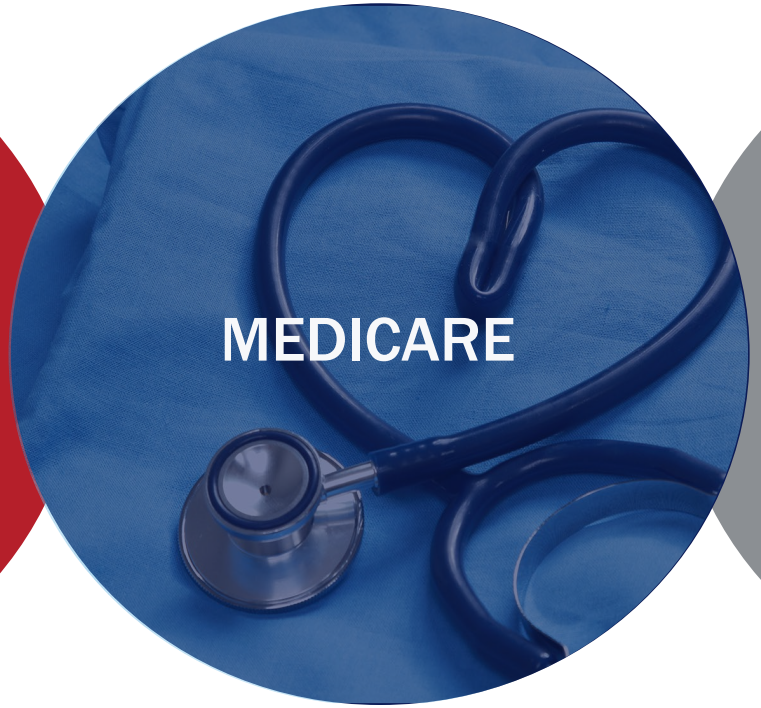
SCENARIO	RECOMMENDED
Prior poor quality stress imaging	X
Anticipated significant attenuation artifact	X
High-risk patient in whom diagnostic errors carry even greater clinical implications	X
Anticipated repeated radiation exposure to minimize exposure	X
Patients in whom myocardial blood flow quantification is identified by clinicians to be a needed adjunct to the image findings	X
Patient can't complete a diagnostic level exercise stress imaging study	X

CLASS OF RECOMMENDATION	STRESS TESTING
Class 1 (Strong)	For intermediate-risk patients with acute chest pain and no known CAD, various stress tests (PET MPI) is helpful in diagnosing myocardial ischemia.

Covered by Medicare for perfusion of the heart

According to Medicare's National Coverage Determination

Cardiac PET may be used anytime in place of a SPECT study



Cardiac PET may be used following a SPECT study that was found to be inconclusive

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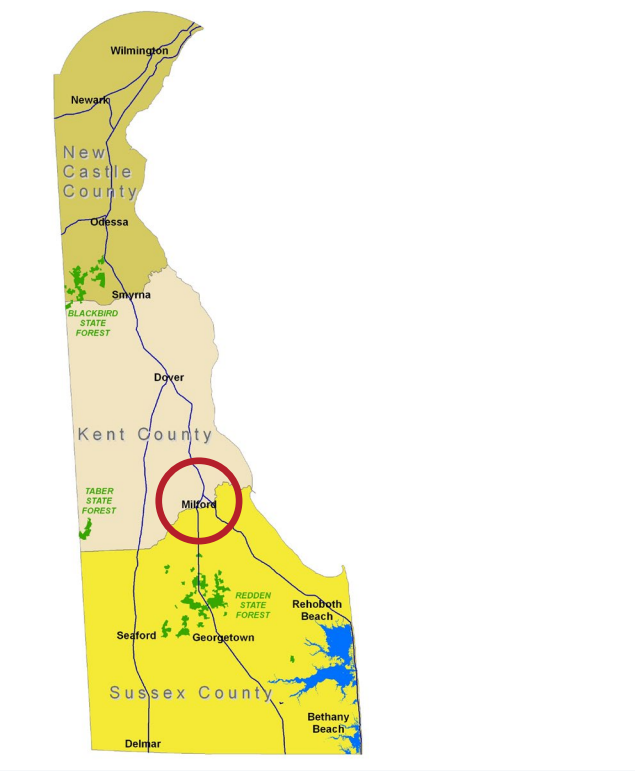
Consumer Benefit and Geographic Need



Consumer Advantage

Supports Delaware 'Triple Aim Plus One': better outcomes, cost, satisfaction

- Better Clinical Outcomes:
  - Significant improved diagnostic accuracy
  - Reduces unnecessary catheterizations and delays
- Cost Effective:
  - Covered by National and Federal insurance programs
  - Charitable care for the uninsured
  - Reducing invasive procedures = lower net costs (See Appendix x 1)
- Patient Satisfaction: less time, lower radiation exposure, few false positives

The problem? Geographic Access Gap.

Geographic Access Gap

Project Solves Problem of Access to Best Care and Testing Modalities

- **Severe Northern Concentration:** All current cardiac PET scanners in Delaware are exclusively located in New Castle County
- **Disproportionate Growth Without Service Expansion:** Sussex County has experienced dramatic population growth since 2010 (the fastest in Delaware)
- **Significant Travel Burden:**
  - Patients from Kent and Sussex Counties face one-way travel times of 1-2 hours to access this essential diagnostic technology
  - Creates barriers to care, particularly for the elderly, disabled, and economically disadvantaged populations

Approving this proposal will help close that gap!

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Why Approval Matters Now

Project meets ALL State Health Objectives

- **Better Care**
  - PET/CT is clinically superior to SPECT: shorter scan times, lower radiation and higher diagnostic accuracy (less artifacts, higher resolution, quantitative measurements, etc.)
- **Lower Net Cost**
  - Backed by Medicare and major insurers, reduces costly downstream procedures through greater precision.
- **Improved Access**
  - This could be the first cardiac PET/CT in central/southern Delaware, addressing a critical gap in service.
- **Immediate Readiness**
  - Eranga Cardiology is equipped, credentialed, and ready to deliver this life-saving diagnostic solution.

Your Approval = Healthier Hearts and Smarter Healthcare in Delaware.

Thank you for your time and consideration!

Appendix 1: Net Cost Savings of PET vs SPECT

- **Knight, S., Min, D. B., Le, V. T., et al.(2018).** *Implementation of a cardiac PET stress program: Comparison of outcomes to the precedin g SPECT era*. *JCI Insight, 3*(9), e120949. (Retrospective analysis at a large U.S. center showed that switching from SPECT to a PET-based MPI program significantly increased the detection of high-grade coronary artery disease. Notably, far fewer patients underwent invasive angiography, demonstrating a reduction in unnecessary cath lab procedures.)

- **Pelletier-Galarneau, M., Cabra, A., Szabo, E., & Angadageri, S. (2024).** *Real world evidence study on the impact of SPECT MPI, PET MPI, cCTA, and stress echocardiography on downstream healthcare utilization in patients with coronary artery disease in the US*. *BMC Cardiovascular Disorders, 24*(1), 543.
(2.5 million U.S. patients, PET MPI was associated with substantially lower downstream healthcare utilization than SPECT MPI. Patient s evaluated with PET had fewer followup diagnostic tests, fewer invasive coronary angiographies, and experienced fewer subsequent a cute cardiac events compared to those who underwent SPECT)

- **Merhige, M. E., Breen, W. J., Shelton, V., Houston, T., D'Arcy, B. J.,& Perna, A. F.** (2007). Impact of myocardial perfusion imaging with PE T and 82Rb on downstream invasive procedure utilization, costs, and outcomes in coronary disease management. *Journal of Nuclear Medicine, 48*(7), 1069–1076. (Found PET MPI reduced downstream invasive procedures by >50% and lowered overall cardiac care costs by 30% without compromising outcomes.)