

FMTVDM FRONTIER

Fleming Method for
Tissue and Vascular
Differentiation and
Metabolism



FMTVDM - Patented
(U.S. Patent No. 9566037B2)

Transforming National Health Infrastructure

Whole-Body PET/SPECT with FMTVDM® Absolute Quantification

Elevating diagnostic precision and public health resilience through reproducible, non-invasive imaging metrics.

Executive Summary

Whole-Body PET and SPECT augmented by the patented Fleming Method for Tissue and Vascular Differentiation and Metabolism (FMTVDM®, U.S. Patent No. 9,566,037 B2) deliver absolute perfusion and metabolic measurements. This integration addresses the key limitations of conventional nuclear imaging—namely semi-quantitative outputs and variable accuracy—by providing standardized, center-to-center comparability, faster scan times, and cost-effective population screening capabilities.

Challenge in Conventional Imaging

- Reliance on relative uptake values leads to inconsistent interpretations and up to 20% false positives or negatives, delaying accurate diagnosis and treatment.

- Regional field-of-view necessitates multiple bed positions, extending scan times (30–60 minutes) and limiting throughput.
- Lack of standardized quantification constrains multicenter research collaborations and inhibits large-scale health surveillance initiatives.

The FMTVDM® Solution

FMTVDM® integrates AI-driven calibration with existing PET/SPECT platforms to produce:

- Absolute kinetic parameters for perfusion and metabolism.
- Reproducible values across devices, centers, and countries.
- Simultaneous whole-body coverage in as little as 10–15 minutes.

By eliminating visual-only assessments, FMTVDM® reduces diagnostic errors and empowers data-driven decision-making.

Key Advantages

Metric	Conventional PET/SPECT	WB PET/SPECT + FMTVDM®
Quantification	Relative/semi-quantitative	Absolute kinetic parameters
Field-of-View	Regional (1–2 beds)	Simultaneous full-body coverage
Scan Duration	30–60 minutes	10–15 minutes
Reproducibility	Center-to-center variance	Cameras Quantitatively Calibrated
Diagnostic Accuracy	Variable	Absolute Quantification
False Positives/Negatives	Up to 20%	Accuracy through Quantification

Workflow Overview

1. FMTVDM® Calibration
2. Standardized Radiotracer Administration
3. AI-Enhanced Imaging Acquisition
4. Real-Time Quantification
5. Automated Data Mapping and Interpretation

Public Health Impact

- Early detection of oncology, cardiovascular, neurological, infectious, and metabolic disorders.
- Objective monitoring of treatment efficacy, guiding therapeutic adjustments.
- Scalable national screening programs for at-risk populations.
- Strengthened research networks through harmonized multicenter data.
- Enhanced health security via rapid-response imaging in outbreak scenarios.

Implementation Roadmap

1. Assessment & Planning
 - National imaging capacity review
 - Prioritization of target disease cohorts
2. Pilot Deployment
 - Single-site installation at a tertiary referral center
 - Outcome validation: diagnostic accuracy, workflow integration
3. Workforce Training
 - Hands-on workshops for technologists and clinicians
 - Certification in FMTVDM® protocols
4. Scale-Up Phase
 - Regional roll-out to major hospitals
 - Integration with central data registry
5. Nationwide Expansion
 - Full public-private partnerships
 - Continuous performance monitoring and software updates

Return on Investment

- Reduced downstream costs from misdiagnosis and repeated imaging.
- Improved patient throughput increasing scanner utilization by 30–40%.
- Potential to attract international research grants and industry collaborations.

Select Nation Status (SNS) Opportunity

Three early adopters will receive exclusive national rights through 1 January 2030, including:

- Priority software enhancements
- Training grants and scholarships
- Joint research funding and publication support

Next Steps

- Schedule a virtual technical briefing by [Proposed Date].
- Appoint clinical and regulatory leads to finalize pilot design.
- Sign a memorandum of understanding for licensing and deployment terms.

For further details and the complete technical dossier, please contact:



Physicist, Nuclear Cardiologist, Attorney, Patent Owner
Director, FMTVDM Consortium
Email: fmtvdm2025@gmail.com
Website: <https://www.fmtvdm.com>

National transformation starts with precise measurement. FMTVDM® and Whole-Body PET/SPECT usher in a new era of health diagnostics.

Patented technology (U.S. Patent No. 9566037B2)

enabling true quantitative imaging.

Moving beyond visual and relative uptake values to absolute, reproducible measurements that eliminate diagnostic mistakes — enhancing diagnostic accuracy, treatment and confidence.