

Transforming Cardiac Imaging: Arineta 560-Slice Ultra-Fast CT in Private Practice

“Moving Complex Imaging Out of the Hospital
and Expanding Patient Access to Technology”

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The Historical Challenge: Cost

Cost Barriers in Cardiac Imaging

Imaging

For decades, state-of-the-art cardiac CT scanners remained financially out of reach for most private practices. Traditional high-end multi-slice CT systems required capital investments exceeding \$2-3 million, making them exclusive to large hospital systems and academic medical centers.

This cost barrier created a significant gap in access to advanced cardiac imaging, forcing private practitioners to rely on less optimal imaging modalities or refer patients to distant facilities, often resulting in delayed diagnoses and fragmented care delivery.

The financial reality meant that many qualified cardiologists couldn't offer their patients the most advanced diagnostic capabilities, despite having the clinical expertise to interpret and act on sophisticated imaging results.





Pay-Per-Use Models

Flexible financing options eliminate large upfront capital requirements, making advanced CT accessible to practices of all sizes

Reduced Operating Costs

Modern scanners offer improved efficiency and lower maintenance costs compared to older generation systems

Compact Design

Space-efficient footprints allow installation in smaller practice settings without major facility modifications

Today's innovative financing models and technological advances have democratized access to premium cardiac imaging. The Arineta 560-slice ultra-fast system represents this paradigm shift, offering hospital-grade capabilities in a private practice-friendly package.

Arineta 560-Slice: Technical Excellence Redefined

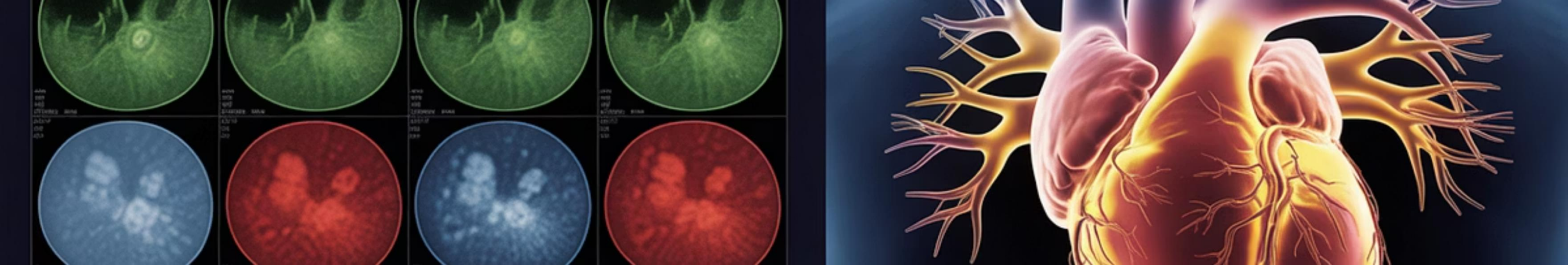
Ultra-Fast Acquisition

560-slice technology enables complete cardiac imaging in a single heartbeat, reducing motion artifacts and improving image quality while minimizing radiation exposure to patients.

Superior Resolution

Advanced detector technology provides exceptional spatial and temporal resolution, allowing visualization of even the smallest coronary vessels and subtle plaque characteristics.





Nuclear Imaging Limitations: The Diagnostic Gap

Sensitivity Challenges

Nuclear stress testing sensitivity ranges from 68-85% for detecting significant coronary artery disease, missing up to one-third of clinically significant lesions

Specificity Concerns

False positive rates of 15-25% lead to unnecessary invasive procedures and increased healthcare costs

Functional vs. Anatomical

Nuclear imaging shows perfusion defects but cannot directly visualize coronary anatomy or plaque characteristics

CCTA consistently demonstrates superior diagnostic accuracy with sensitivity >95% and specificity >90% for detecting coronary artery disease, providing both anatomical and functional information in a single examination.

A photograph of a desk with a lamp and books. The desk is dark wood, and the lamp is a classic black desk lamp with a brass base. There are several books on the desk, including one that is open and showing a diagram of a heart. The background is a window with a view of a city at night.

Guideline Evolution: The CT-First Paradigm

1

2019 ESC Guidelines

European Society of Cardiology established CCTA as Class I recommendation for stable chest pain evaluation in patients with intermediate pre-test probability

2

2020 ACC Guidelines

American College of Cardiology endorsed CT-first approach, recognizing superior diagnostic accuracy and cost-effectiveness compared to functional testing

3

Current Practice

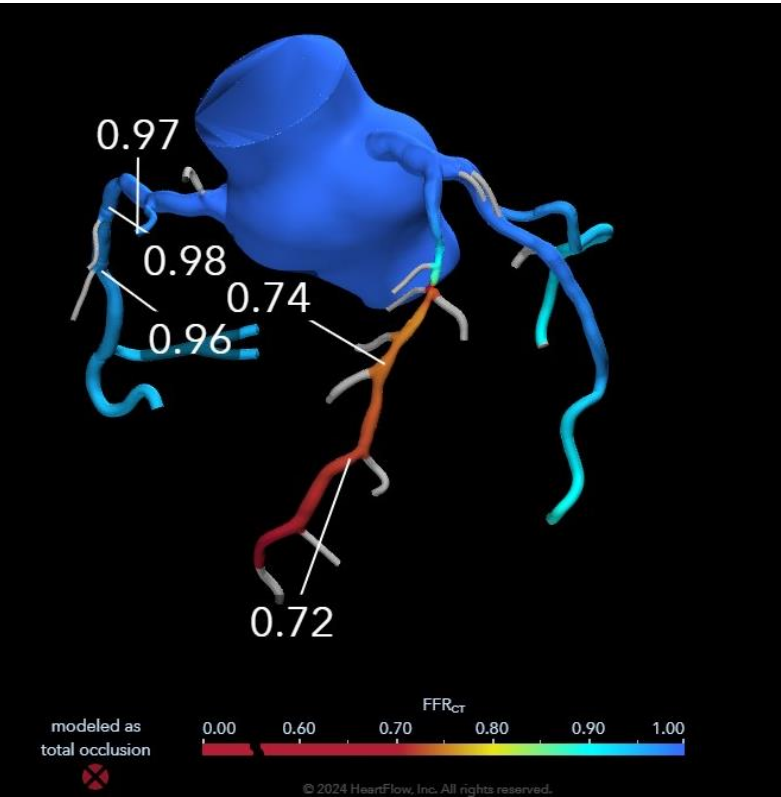
CT-first methodology now represents standard of care for appropriate patient populations, fundamentally changing clinical decision-making pathways

Advanced Analytics: Beyond Traditional Imaging



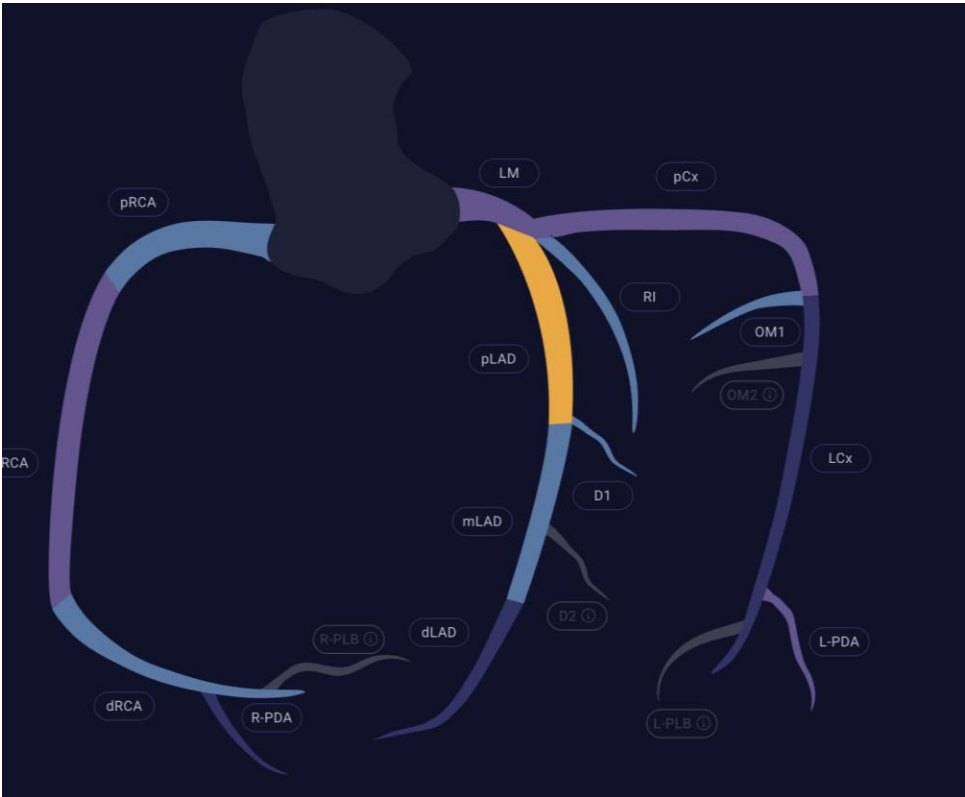
HeartFlow FFR-CT

Computational fluid dynamics technology provides non-invasive fractional flow reserve analysis, identifying hemodynamically significant lesions without additional testing



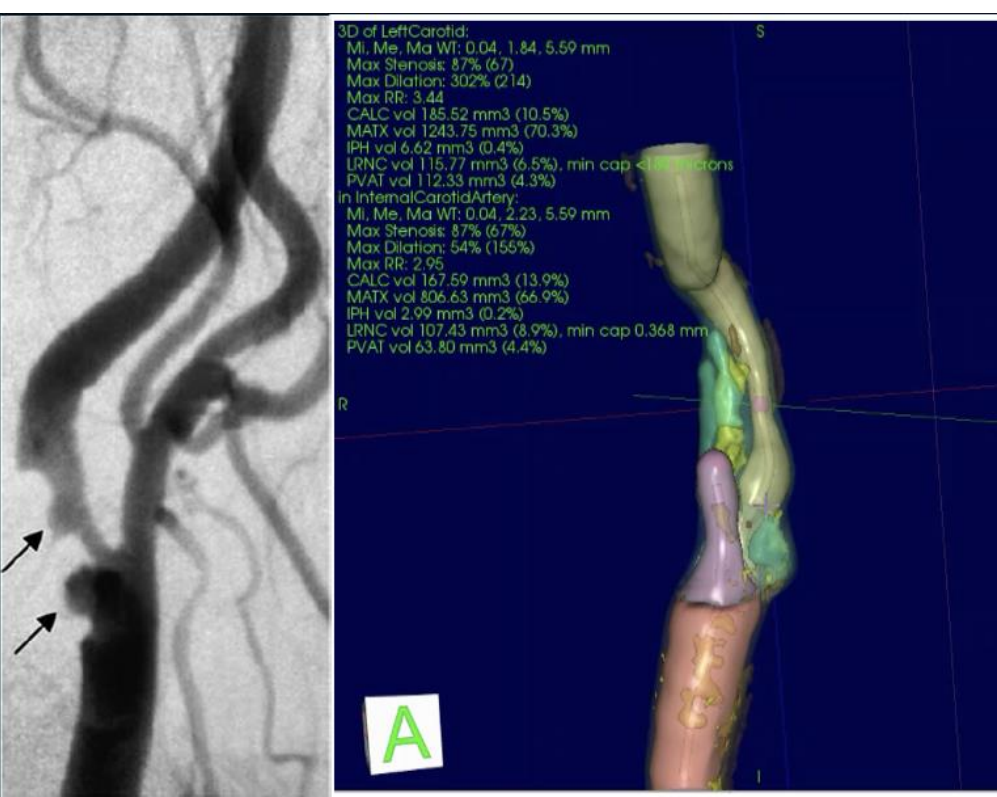
Cleerly Plaque Analysis

AI-powered quantitative plaque assessment measures total plaque burden, composition, and vulnerability characteristics for personalized risk stratification



Elucid Imaging

Advanced plaque characterization technology identifies high-risk plaque features and provides longitudinal monitoring capabilities for treatment optimization



Case Study 1 : CT guided Precision Prevention Strategy

Patient Profile

Demographics: 40-year-old female executive

Risk Factors: Elevated Lp(a) 180 mg/dL, strong family history of premature CAD (father MI at 45)

Clinical Presentation: Asymptomatic but concerned about cardiac risk

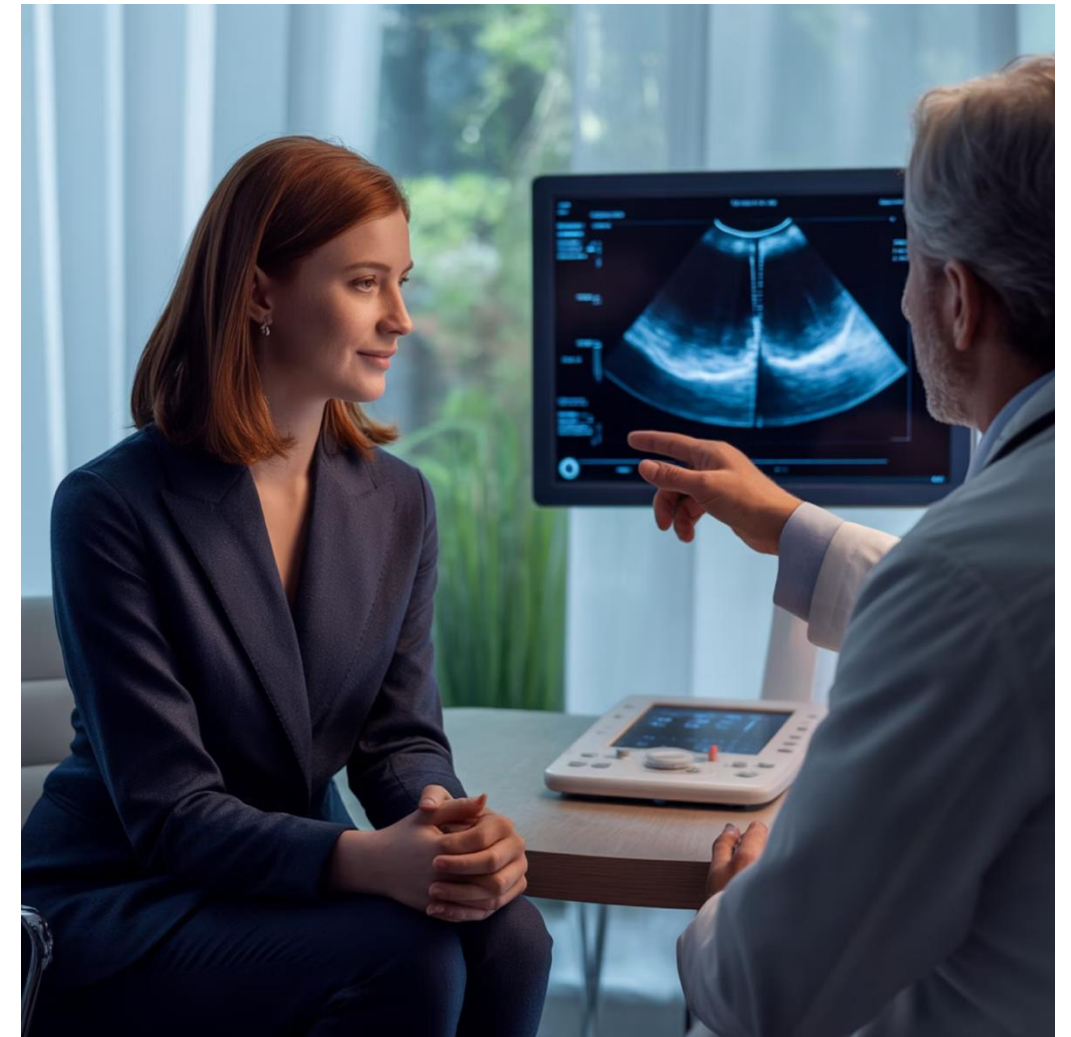
Imaging Results

CCTA Findings: Calcium score 45, mild non-obstructive plaque in LAD

Clearly Analysis: Total plaque volume 787.5 mm³, 389.6³ mm non-calcified plaque

Clinical Impact

Results prompted aggressive lipid management with high-intensity statin plus ezetimibe, targeting LDL <50 mg/dL. Patient avoided potential future cardiac events through early intervention.



Summary

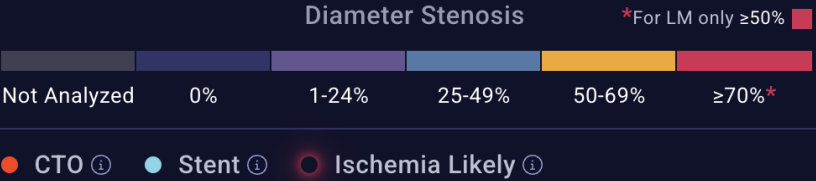
- 1. There is 787.5 mm³ (18.8% PAV) of atherosclerotic plaque: [389.6 mm³ (9.3% PAV) Calcified Plaque, 396.1 mm³ (9.5% PAV) Non-Calcified Plaque, and 1.8 mm³ (< 0.1% PAV) Low-Density-Non-Calcified Plaque].
- 2. There is 1 moderate stenosis (50-69%): pLAD. There are 9 mild stenoses (25-49%): pRCA, dRCA, mLAD, D1, OM1 and RI. There are 9 minimal stenoses (1-24%): mRCA, LM, pLAD, mLAD, pCx, L-PDA and RI.
- 3. No ischemia likely present in this study.
- 4. Dominance: co-dominant.
- 5. Exclusions: <1% of coronary length was excluded. Non-Evaluable portion(s) in R-PDA.

When exclusions are identified, the presence of plaque or significant stenosis in excluded areas is not analyzed. Consider getting additional testing or repeat examination as clinically indicated.



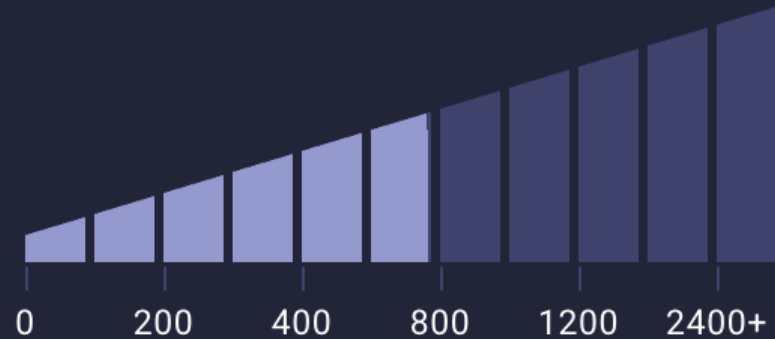
[View Summary](#)

Territory **ALL** RCA LM+LAD Cx



Atherosclerosis

[View Details >>](#)



787.5 mm³

Total Atherosclerotic Plaque Volume ⓘ

389.6 mm³

Total Calcified Plaque Volume ⓘ

397.9 mm³

Total Non- Calcified Plaque Volume ⓘ

18.8 %

Percent Atheroma Volume ⓘ

Case Study 2 : Pre-Operative Clearance and Site of Service Decision

Patient Profile

Demographics: 76 y/o M for pre-op clearance for open vascular procedure

Risk Factors: Elevated Lp(a) 180 mg/dL, family history of premature CAD (father MI at 51)

Clinical Presentation: Asymptomatic with +CRFs

Imaging Results

Nuclear Stress Test: Mixed scar and apical ischemia, but still abnormal.

Refer to CTA

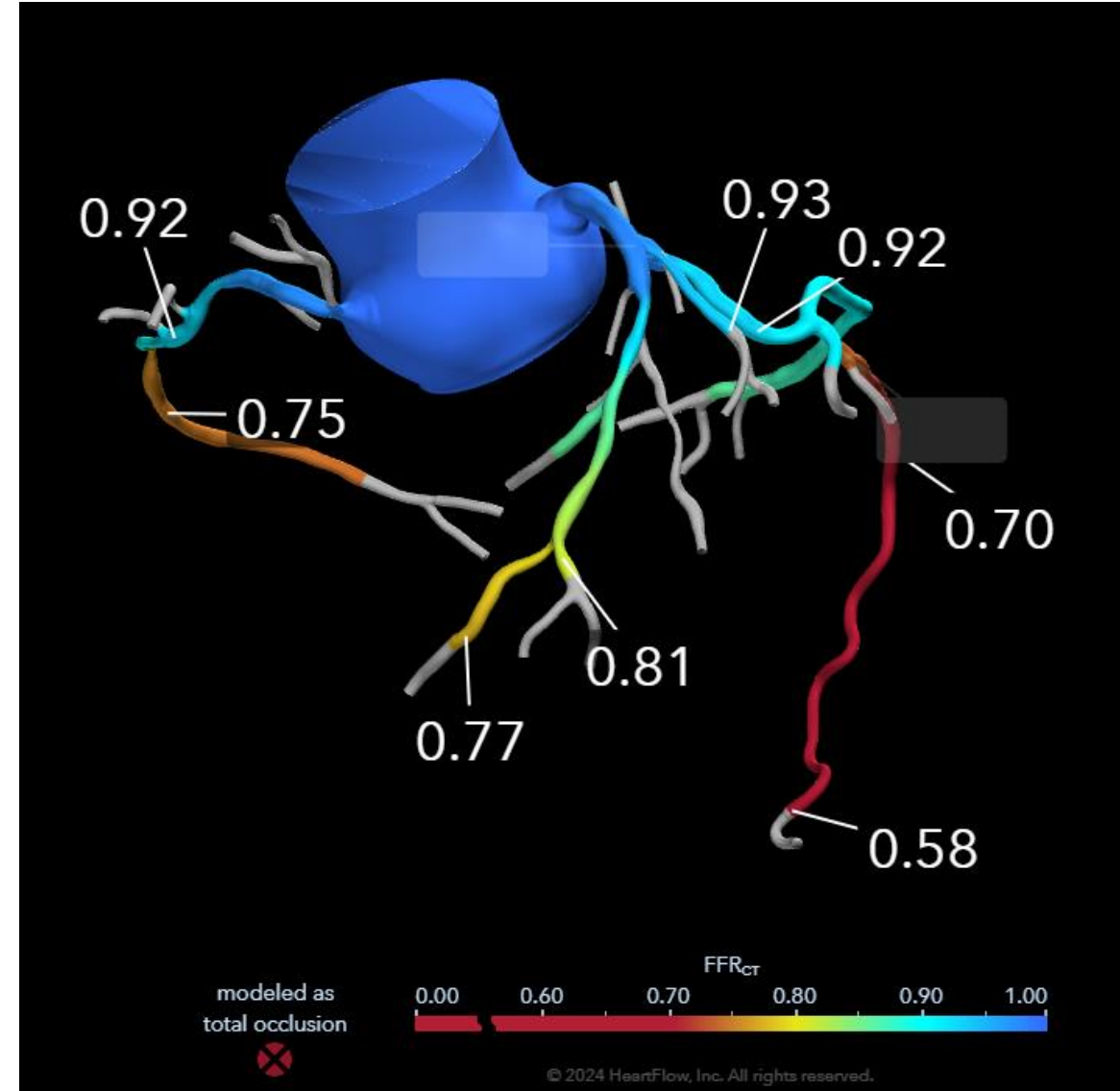
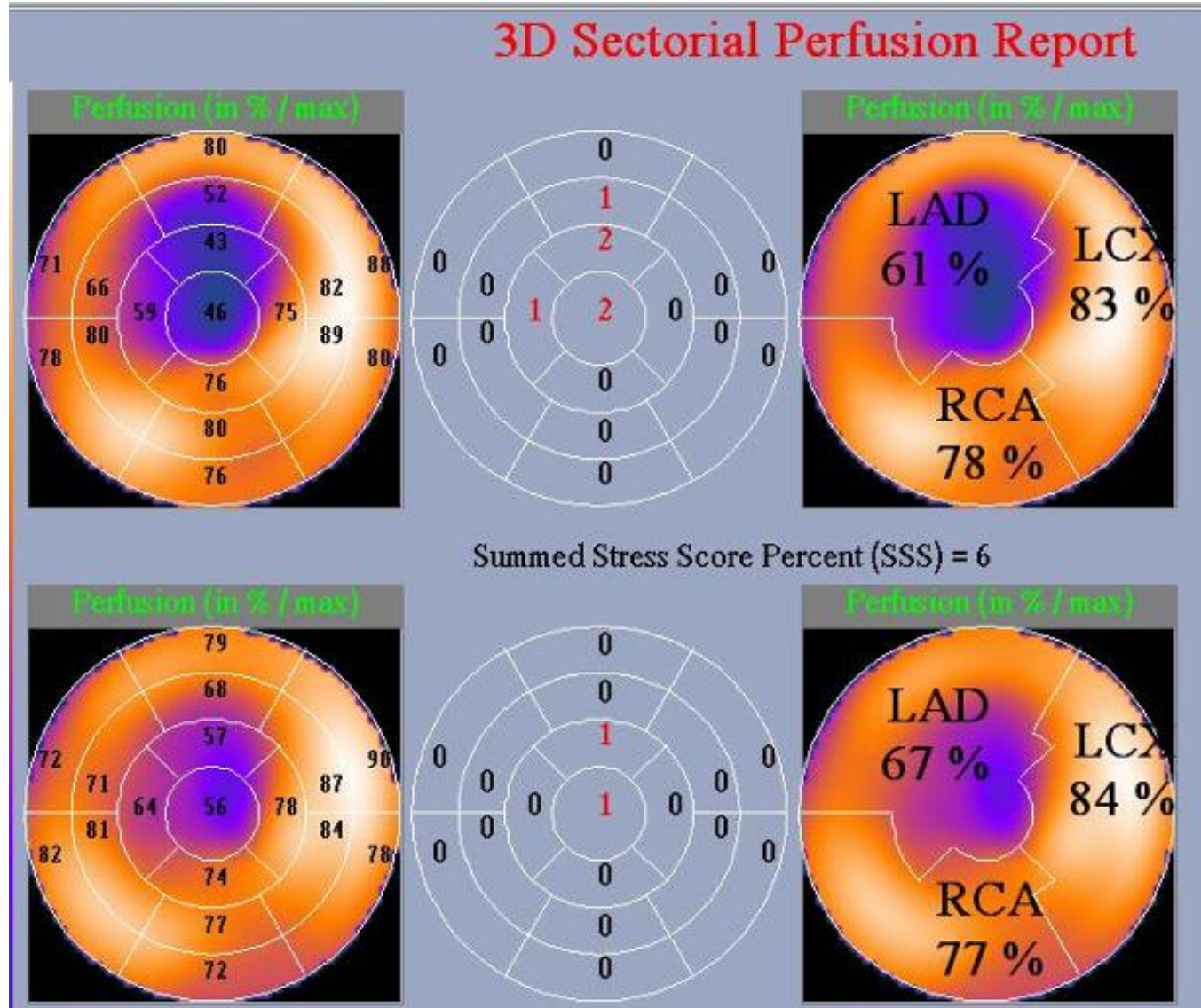
CCTA Findings: Calcium score 145, Severe soft plaque in LAD, +FFR

Clinical Impact

Results prompted cardiac cath and revealed severe subtotal LAD lesion treated with single LAD stent performed safely in ASC setting.

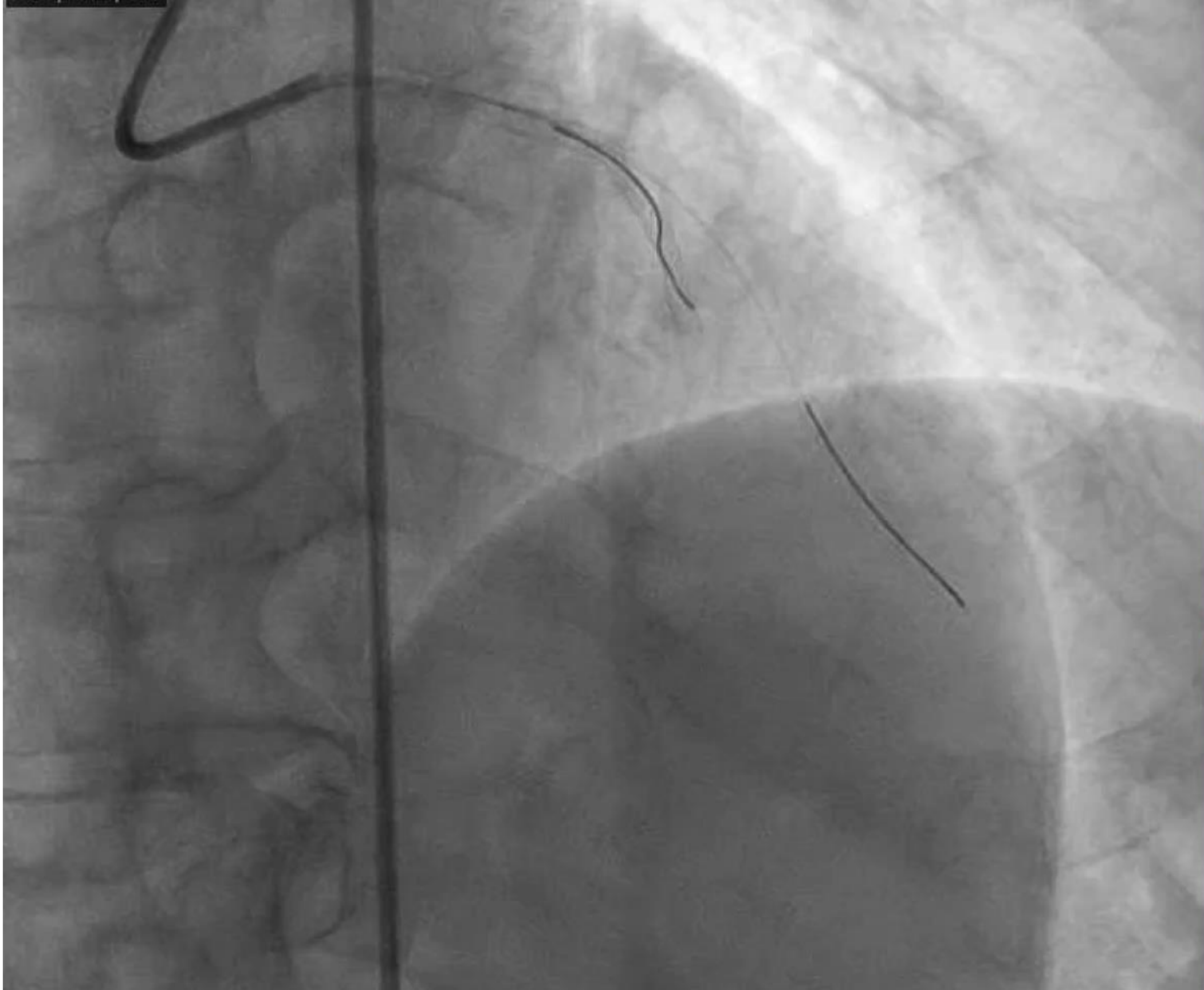


Pre-Op Case Presentation





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Case Study 3 : CCTA drives Hospital Interventional Success



Patient Profile

Demographics: 83 y/o M with hx of CAS, AAA

Clinical History: Increased SOB. Known RCA CTO.

Risk Assessment: High pre-test probability for CAD

Diagnostic Findings

Nuclear Scan: Equivocal for significant ischemia

Results: Calcium score elevated 1590. No CCTA performed

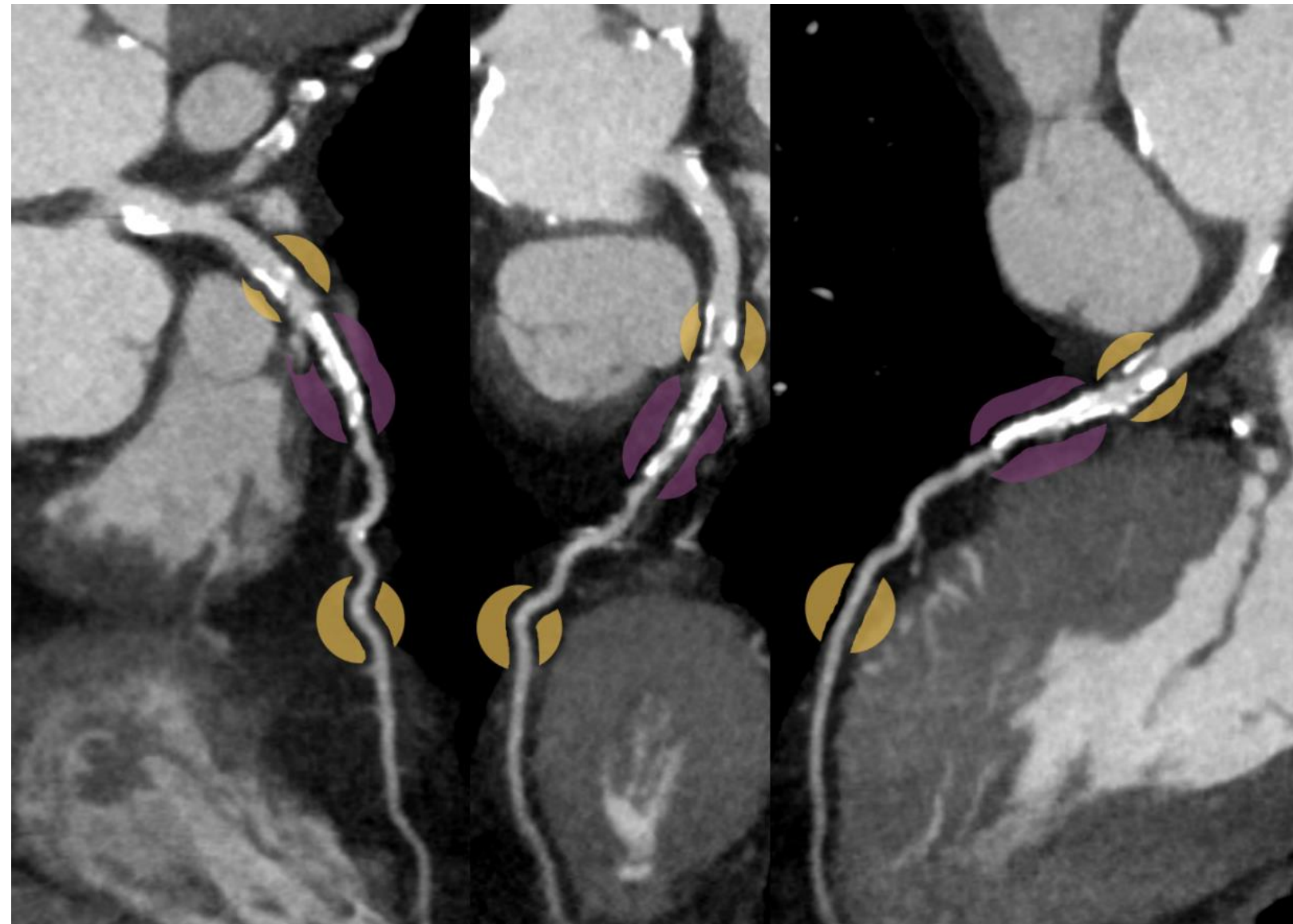
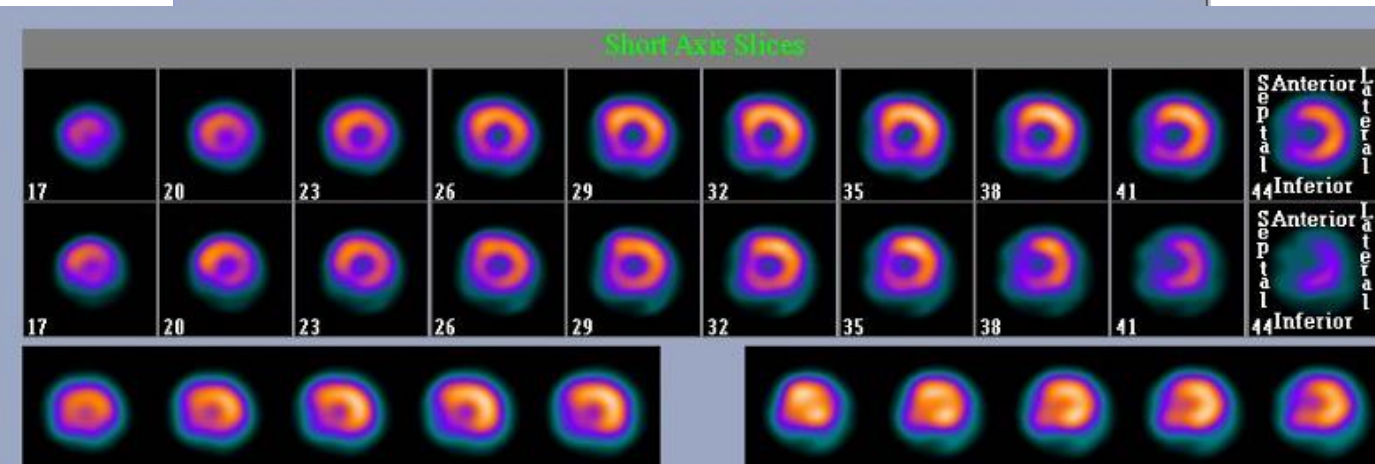
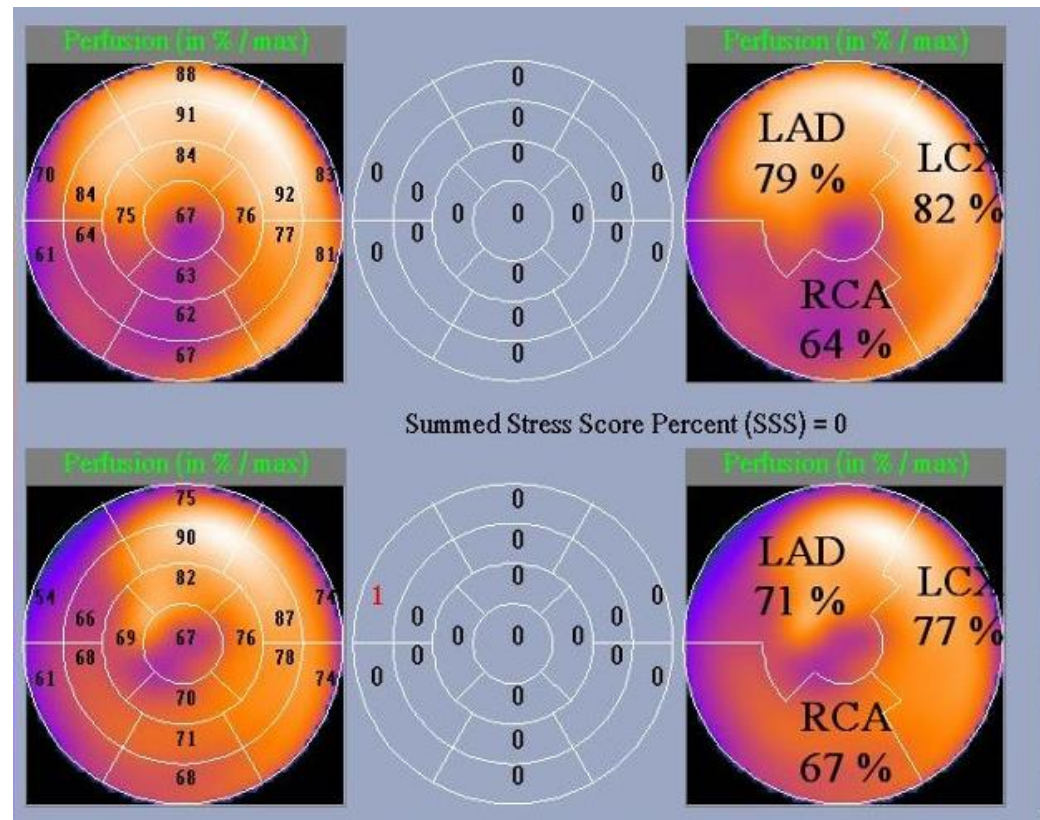
Clinical Significance: Referred to Pulmonary

Treatment Outcome

Continued symptoms . Returns for Follow Up

CCTA: Severe LAD disease and chronic RCA. Proceeded with cardiac cath and LAD atherectomy and stent in hospital setting. Successful single vessel stent placement.

Case Study 3 Imaging







Case Study 4: Trust the CCTA and FFR report

Patient Background

Demographics: 64-year-old female with diabetes

Medical History: Abnormal mild anterior ischemia on nuclear scan 5 years prior, managed medically with statin increase

Now: Atypical chest symptoms despite medication compliance

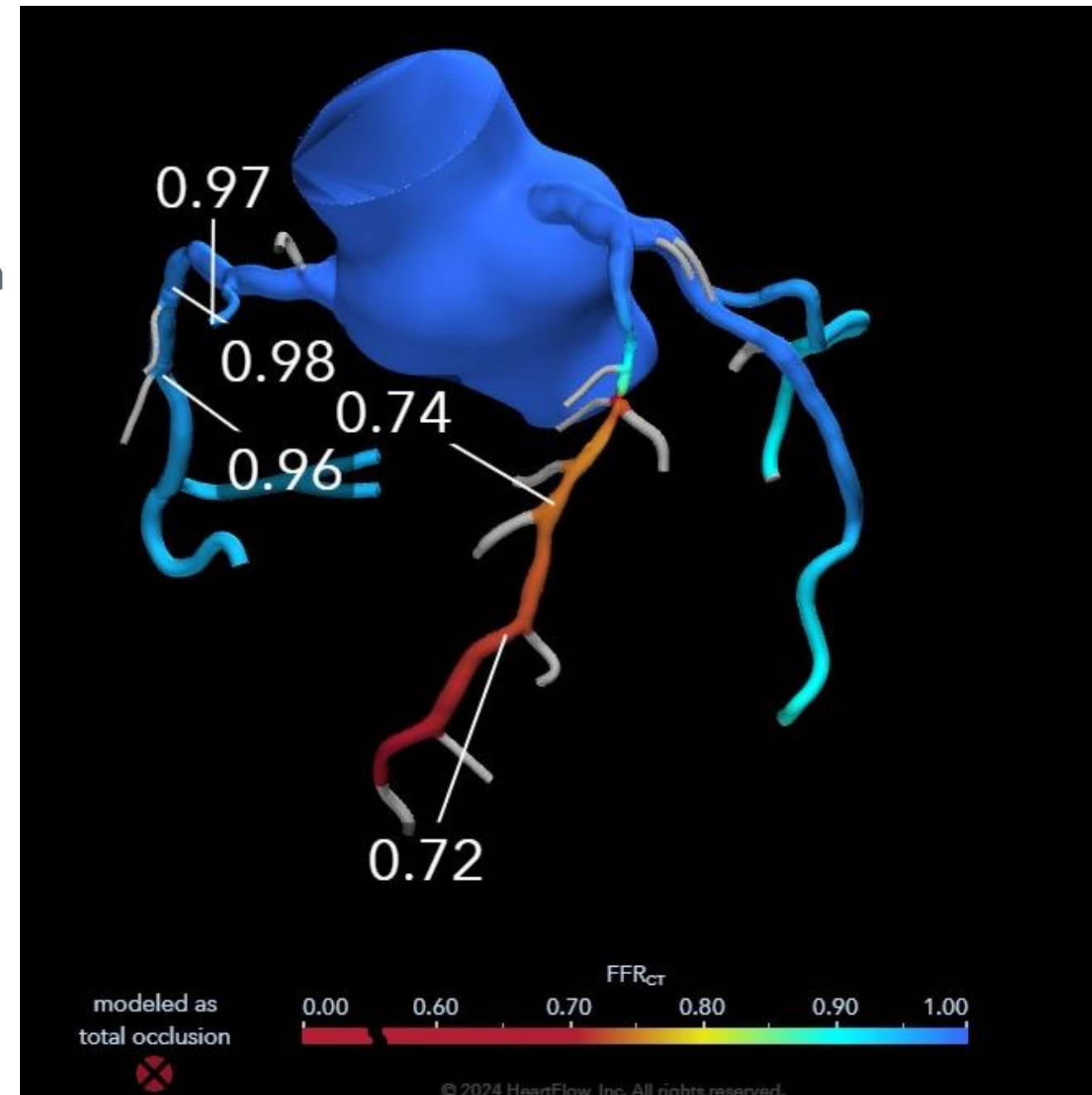
Current Assessment

CCTA Findings: Critical LAD lesion and abnormal CT FFR

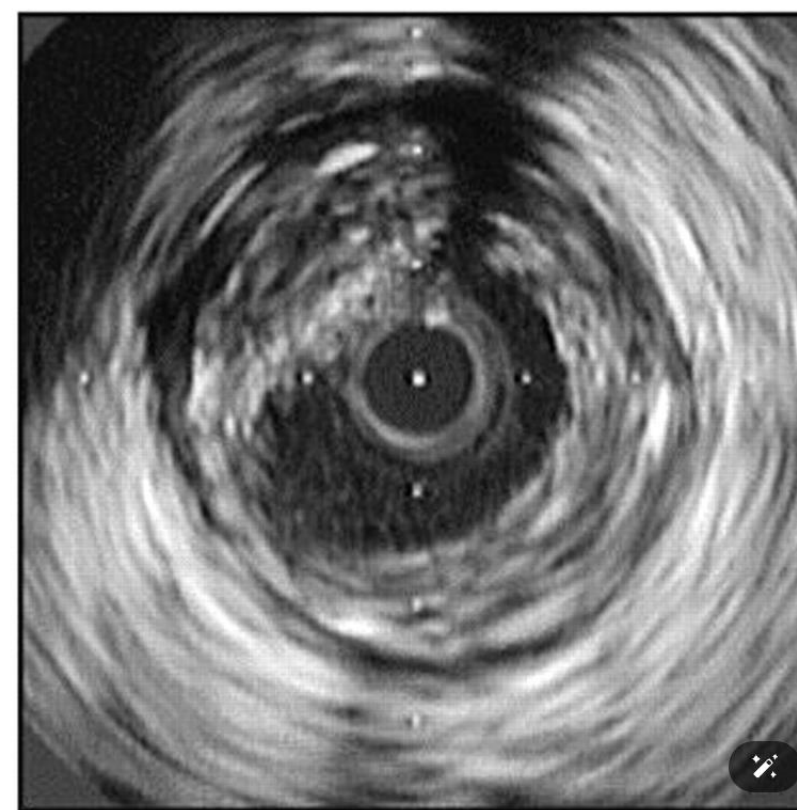
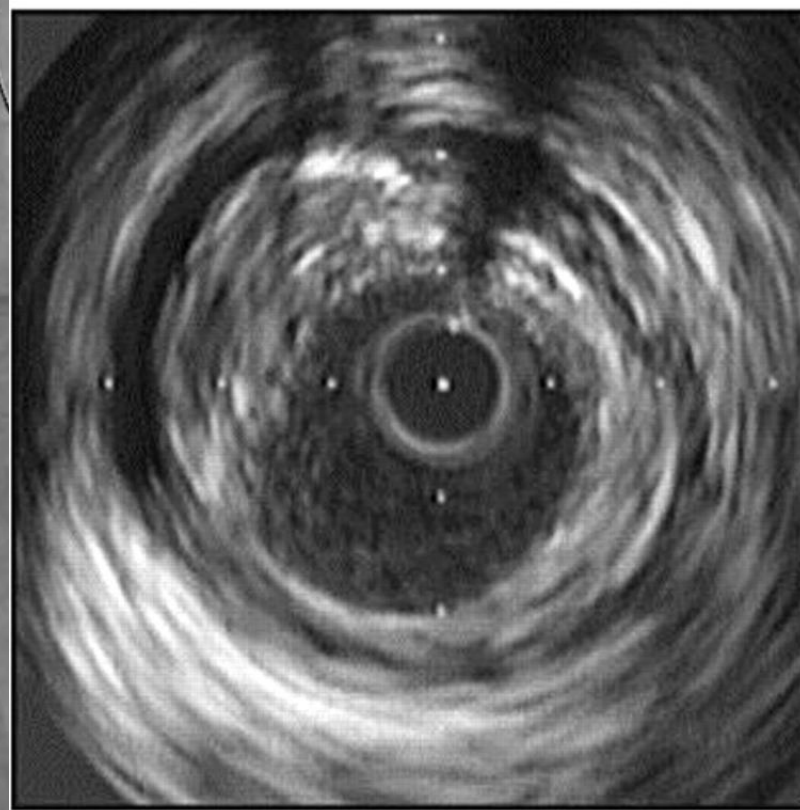
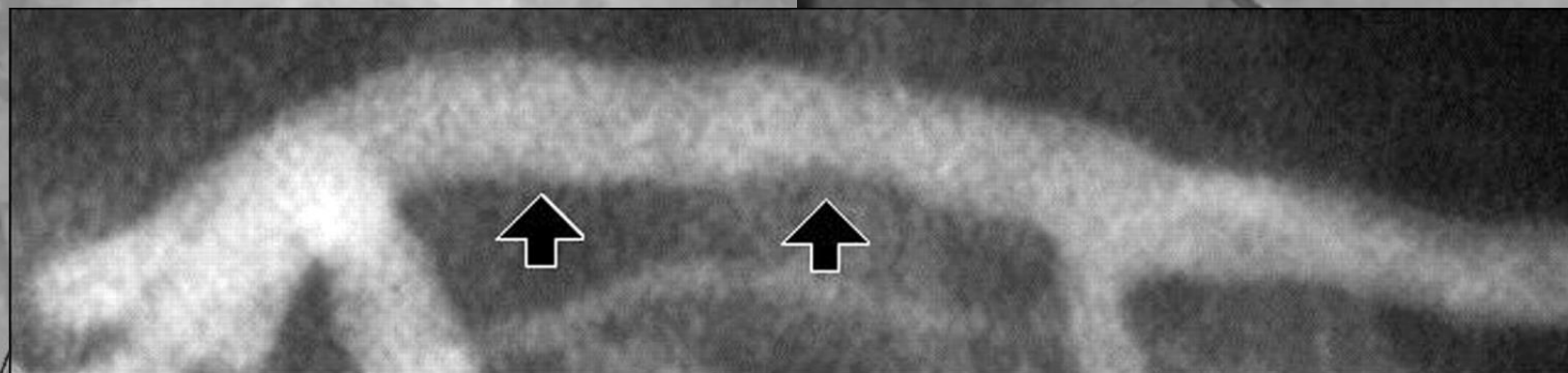
Clinical Decision: Disease progression warranted cardiac catheterization for revascularization planning

Management Impact

Timely recognition of disease progression led to appropriate invasive management, preventing potential adverse cardiac events and improving quality of life through targeted intervention.



MID-LAD
PRE - STENT





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Case Study 5: CCTA Avoids Unnecessary Intervention

Patient Presentation

Demographics: 86-year-old male with multiple comorbidities

Initial Findings: Moderately elevated calcium score of 468 with extensive LAD and RCA calcification

Clinical Concern: High likelihood of significant coronary stenoses

HeartFlow Analysis

FFR-CT Results: Normal fractional flow reserve values in main epicardial vessels

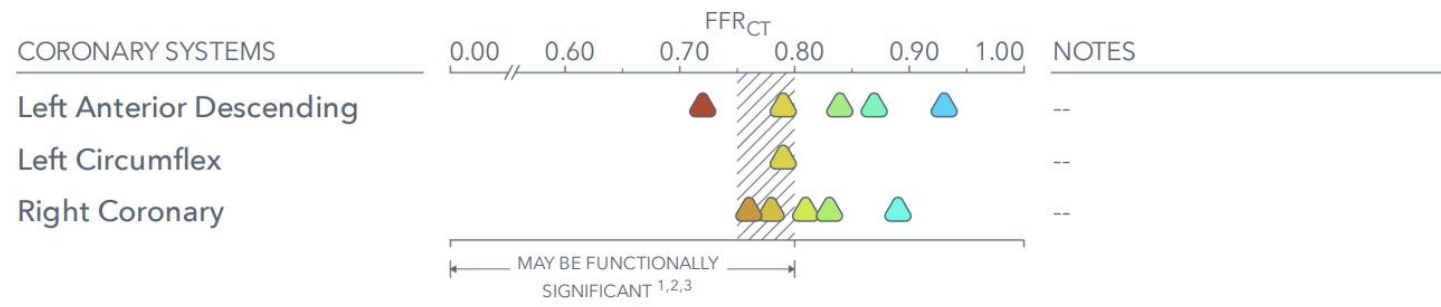
Key Finding: Abnormal FFR limited to small distal branch vessels, not amenable to intervention

Clinical Benefit

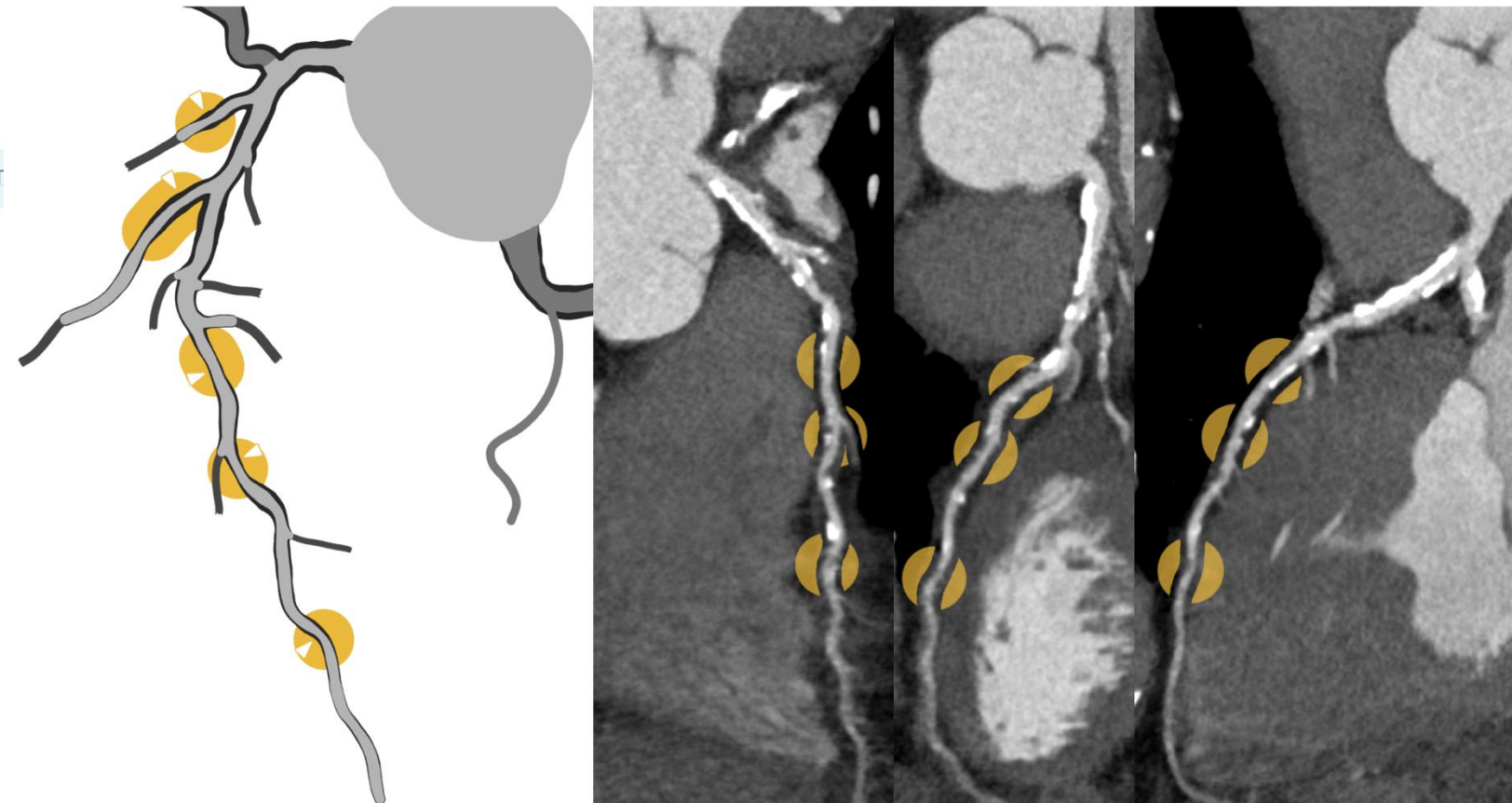
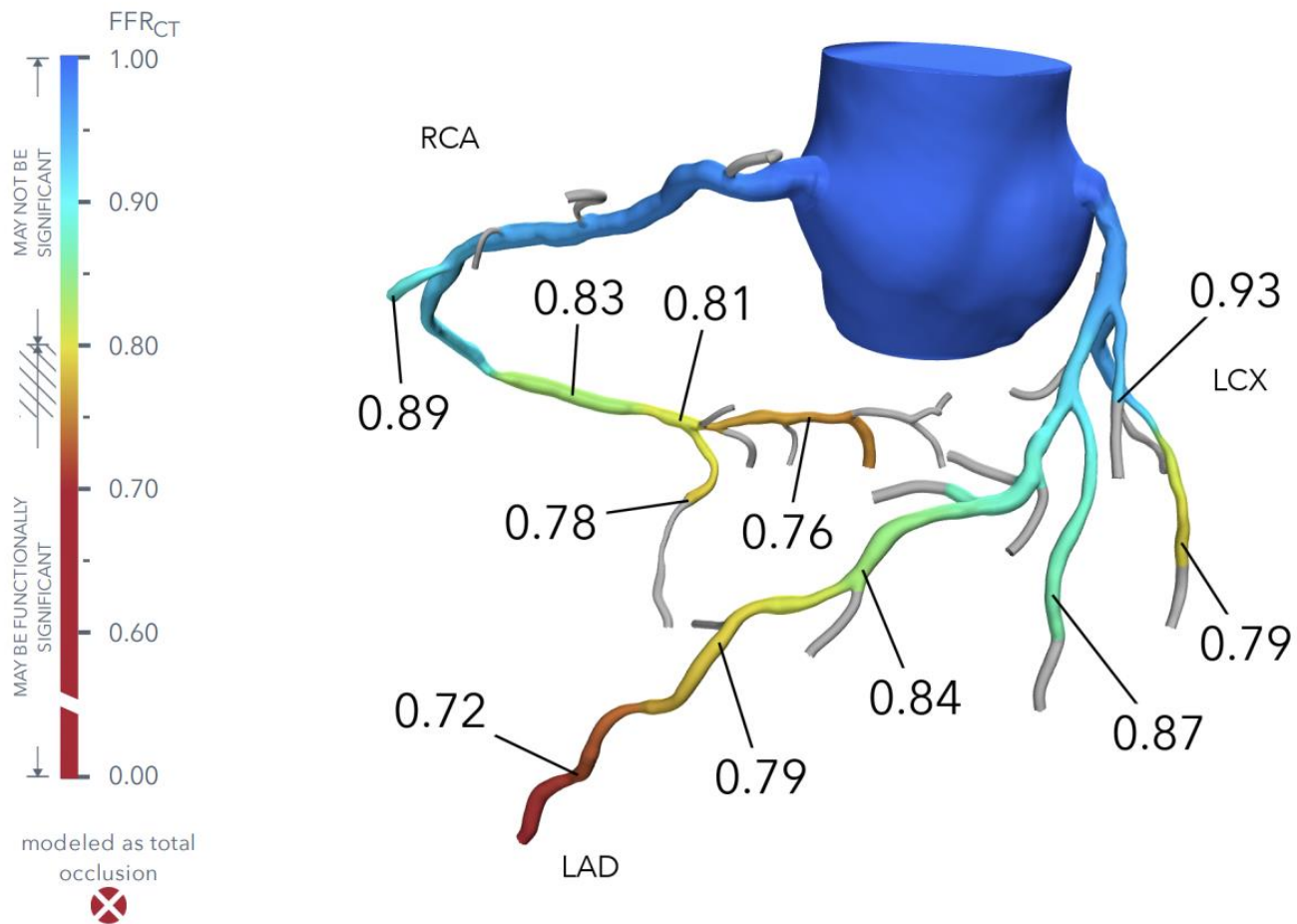
Patient avoided unnecessary invasive cardiac catheterization, reducing procedural risk in elderly patient with multiple comorbidities while maintaining appropriate medical management.



CCTA Findings: Case Presentation



This HeartFlow Analysis was provided following the provider's confirmation of review of the corresponding coronary CT



Case Study 6 : CCTA for High-Risk Disease Detection

Patient Demographics

Profile: 37-year-old asymptomatic male seeking second opinion

Initial Assessment: Low calcium score of 4, reassuring primary physician

Advanced Risk Stratification

CAD-RADS Testing: Abnormal score >20 despite low calcium burden

CCTA Revelation: Severe left main coronary artery disease with high-grade stenosis

Critical Intervention

Patient required urgent cardiac catheterization in hospital setting rather than ASC due to left main involvement. Early detection through advanced CT analysis prevented potentially catastrophic cardiac event, demonstrating the life-saving potential of comprehensive cardiac imaging beyond traditional calcium scoring.



Clinical Outcomes: Measurable Impact

95%

Diagnostic Accuracy

CCTA sensitivity for
detecting
significant
coronary artery
disease

40%

Cost Reduction

Decrease in
unnecessary
invasive
procedures through
improved patient
selection

65%

Time Savings

Faster diagnosis
and treatment
planning compared
to traditional
imaging pathways

89%

Patient Satisfaction

Improved patient
experience through
non-invasive,
comprehensive
cardiac
assessment

These outcomes demonstrate the transformative impact of advanced cardiac CT technology on clinical practice, patient care, and healthcare economics.

Implementation Strategy for Private Practice

Financial Planning

Evaluate financing options including pay-per-use models, lease agreements, and partnership opportunities with imaging centers

Facility Preparation

Assess space requirements, electrical infrastructure, and radiation shielding needs for optimal scanner installation

Staff Training

Implement comprehensive training programs for technologists, nurses, and physicians on advanced CT protocols and interpretation

Workflow Integration

Develop efficient patient scheduling, preparation protocols, and result reporting systems for seamless clinical integration

Quality Assurance

Establish ongoing quality metrics, radiation dose monitoring, and continuous improvement protocols

The Future of Cardiac Imaging is Now

Enhanced Patient Care

Deliver hospital-quality cardiac imaging in convenient private practice settings with improved diagnostic accuracy

Practice Growth

Differentiate your practice with advanced technology, attracting referring physicians and expanding patient base

Clinical Excellence

Provide evidence-based cardiac care aligned with current guidelines and best practices for optimal outcomes

The Arineta 560-slice ultra-fast cardiac CT system represents more than technological advancement—it's an opportunity to transform cardiovascular care delivery. By making premium cardiac imaging accessible to private practices, they are democratizing advanced diagnostics and empowering clinicians to provide exceptional patient care.

The time to embrace this revolution in cardiac imaging is now. Your patients, your practice, and your clinical outcomes will benefit from this transformative technology.