

Mobile Cardiac CT

A novel approach to expanding patient access

Fri July 16th 2021
8:30 – 8:55am EST



CardioGraphe
Dedicated cardiovascular CT system



Mobile Cardiac CT – a novel approach to expanding patient access

Agenda

<u>Topic</u>	<u>Speaker</u>	<u>Title</u>
Introduction	Scott Schubert	Chairman, Arineta
RURAL & Clinical Rationale for Mobile Cardiac CT	Matt Budoff MD	Professor of Medicine, UCLA & Lundquist Institute
Mobile CCT - Technical, Financial & Operational Considerations	Mike Allen	CEO, Amery Medical Academy
Q&A		
Summary	Scott Schubert	

About Arineta



- Our Vision:

Dedicated to growing cardiac CT as the front-line non-invasive test for diagnosing, therapy planning and monitoring of cardiovascular disease ... the #1 cause of death and costs for healthcare worldwide

- Based in Caesarea Israel. USA incorporated in 2021.
- World class CT technology pioneers. >600 years total CT R&D experience.
- Developer and manufacturer of **CardioGraphe** ... world's 1st dedicated cardiovascular CT
- Regulatory cleared in the USA, EU, China, ANZ, Canada and other countries
- CardioGraphe systems installed worldwide, performing up to 50 pats/day
- Partners with GE Healthcare for sales and service

Cardiac CT is underutilized today & lacks access

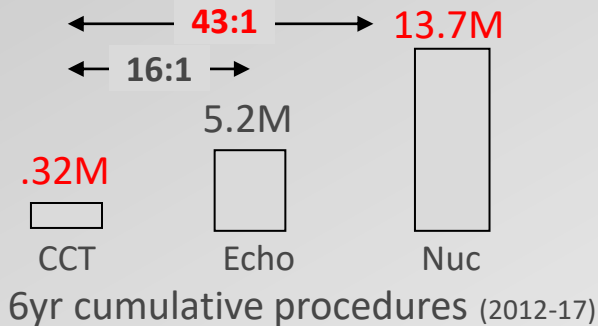
... at point of care
 ... in community hospitals
 ... in rural settings

Current Situation*

US Medicare providers

CCT growing at **15% CAGR**
 from 2012-2017

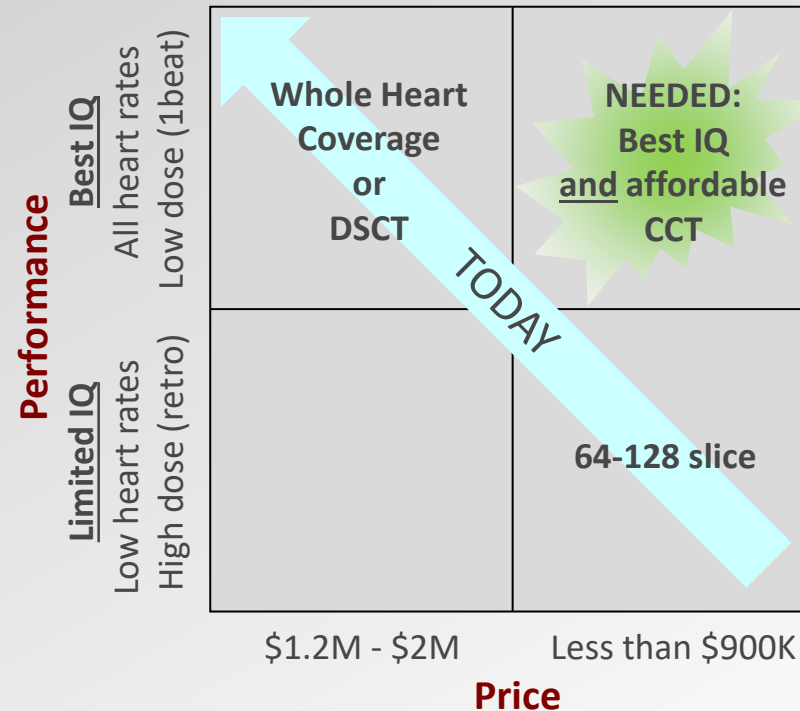
But ... significantly fewer CCT
 procedures than Echo U/S or Nuc MPI



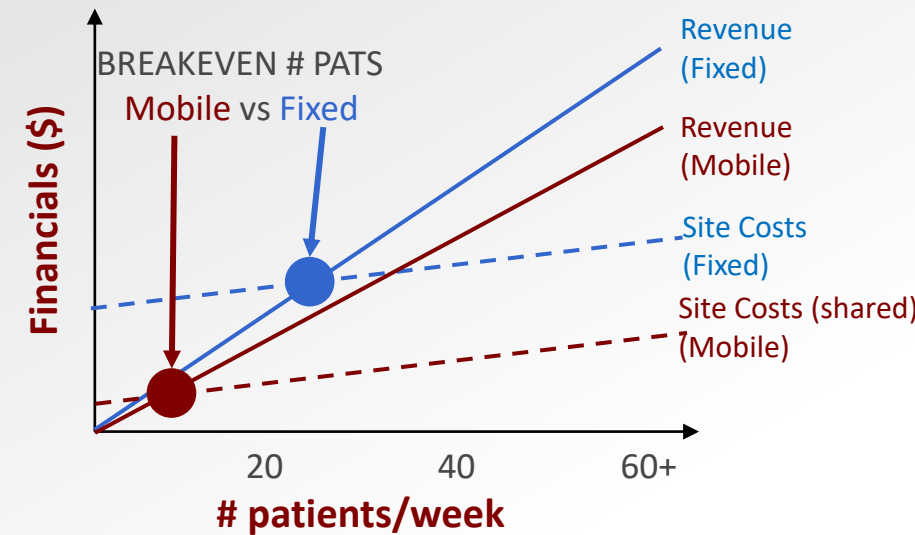
* Goldfarb et al. Trends in Cardiovascular MRI and CT in the U.S. Medicare Population from 2012 to 2017. Radiology: Cardiothoracic Imaging 2021; 3(1):e200112.

What's needed to improve ?

#1: Eliminate tradeoff today
 of Performance vs Price



#2: Reduce financial risk to buy expensive
 CCT system with uncertain referrals



Mobile Cardiac CT – a novel approach to expanding patient access

Agenda

<u>Topic</u>	<u>Speaker</u>	<u>Title</u>
Introduction	Scott Schubert	Chairman, Arineta
RURAL & Clinical Rationale for Mobile Cardiac CT	Matt Budoff MD	Professor of Medicine, UCLA & Lundquist Institute
Mobile CCT - Technical, Financial & Operational Considerations	Mike Allen	CEO, Amery Medical Academy
Q&A		
Summary	Scott Schubert	

RURAL

Risk Underlying Rural Areas Longitudinal Study



RURAL & Clinical Rationale for Mobile Cardiac CT

Matthew Budoff MD
Professor of Medicine, UCLA
Endowed Chair of Preventive Cardiology
Lundquist Institute

July 2021

The opportunity of Mobile Cardiac CT

- Access to underserved
- Small community hospitals
- Grow Cardiac CT access without requiring expensive acquisition at every site



RURAL

Risk Underlying Rural Areas Longitudinal Study



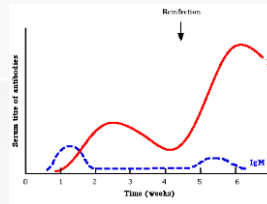
RURAL STUDY

- Enrolling 4600 patients (population based, NIH sponsored) study over 4 years using a mobile unit going into rural counties in the south (starting in Alabama)
- Will look at disparities in outcomes, health care, heart disease, lung disease among others.
- Mobile unit houses CardioGraphe CT scanner, echocardiography and pulmonary equipment, rooms for interviews, bathroom and full mobile laboratory

RURAL COVID19 Research

Long-term (> 1 year)

Goals	Tools	Outcomes
<ul style="list-style-type: none">• Chronic CV and lung morbidity<ul style="list-style-type: none">○ as function of pre-illness features<ul style="list-style-type: none">▪ deep HLBS phenotyping▪ biomarkers▪ genomics• Multi-organ morbidities• Risk factors for CV, lung & multi-organ morbidity	<ul style="list-style-type: none">• Digital (Phone, texts, apps emails)<ul style="list-style-type: none">○ Medical diagnoses of infection○ Medical records○ Diagnostic tests (CXR /CTs)• In-person exams<ul style="list-style-type: none">○ Blood tests for serology & multi-organ response○ Nasal swabs for carrier status• CMS data	<ul style="list-style-type: none">• Community burden<ul style="list-style-type: none">○ Herd immunity○ Smoldering infection○ Chronic morbidity○ Economic & Psychosocial sequel• Risk prediction/ stratification for recurrent infections & Morbidity outcomes• Persistence of + serology• Penetration & Effects of antiviral Rx & vaccines• Early detection of new infectious agent or mutated strains
<ul style="list-style-type: none">• Sentinel sites	<ul style="list-style-type: none">• Digital : Questionnaires via smartphone texts or apps, online, e-mail<ul style="list-style-type: none">○ Case ascertainment• Serology	<ul style="list-style-type: none">• Early detection of new infectious agent or mutated strains• Transmission patterns• Seasonal patterns



CardioGraphe advantages



One beat whole heart coverage



140 mm
560 slices



Fast temporal resolution



0.24 sec rotation speed



High resolution



0.28 mm



Low dose



ASiR-CV



Cardiovascular & thoracic apps



Extended Lung FOV



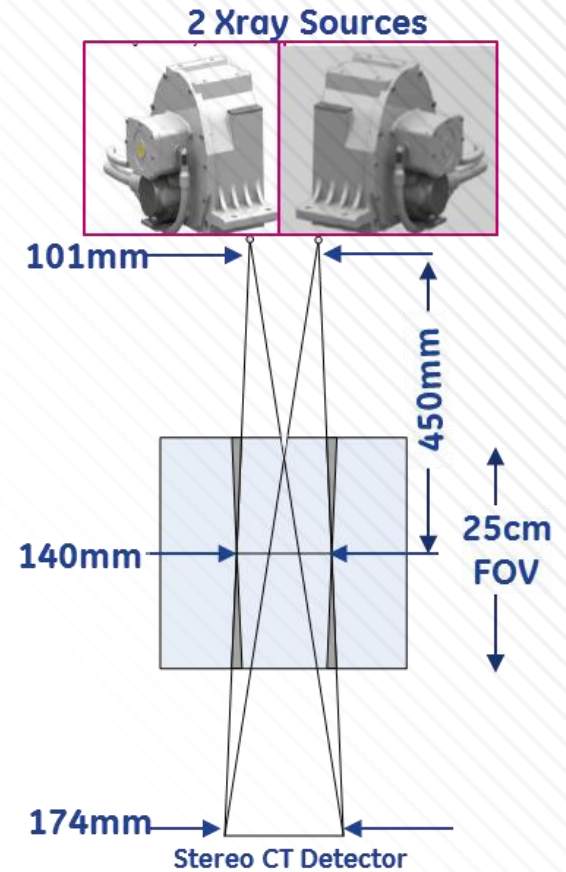
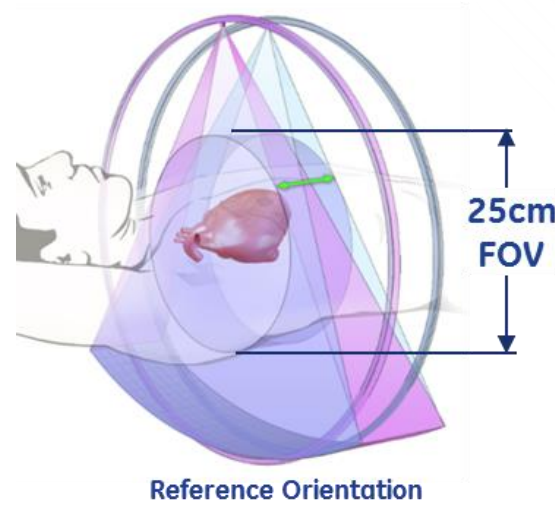
Cardiac focused workflow



Staff productivity

Stereo CT: One-beat whole-heart coverage

- Dual overlapping beams
- Reduced detector size and cost for same coverage
- Reduces cone beam artifacts

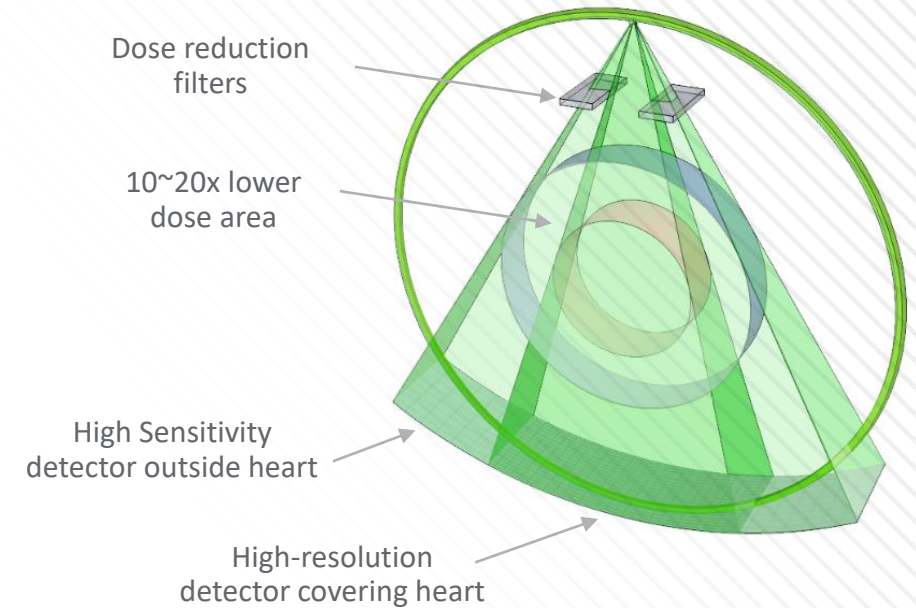


Focused FOV

In CT, body parts outside the FOV affect the image reconstruction inside the FOV.

CardioGraphe solution:

- Radiation outside FOV attenuated by 10~20 x
- High sensitivity peripheral detectors acquire data out of the FOV
- Selectable 160mm / 250mm FOV
- Less incidental finding in lungs



Industry's fastest rotation speed 0.24s



Short tube to detector distance

Advantages

- 1) Less centrifugal force when gantry rotates fast
 - Enables 0.24 sec rotation speed
 - 120ms temporal resolution
- 2) More photon flux for a given tube power
 - 72KW on CardioGrappe provide same flux at iso-center as 115KW on scanner with SAD=570mm
- 3) Reduced gantry size, weight, installation cost

Bore size is 600mm

- Table weight limit up to 220 KG

CardioGraphe 14cm Coverage Single Beat Coronary CTA

Multi Vessel Disease Coronary CTA

Clinical Case: 72 year old male presented in Rapid Access Chest Pain Clinic.

INJECTION - 60mls at 6mls/s iodinated contrast, 50mls Saline at 6mls/s;

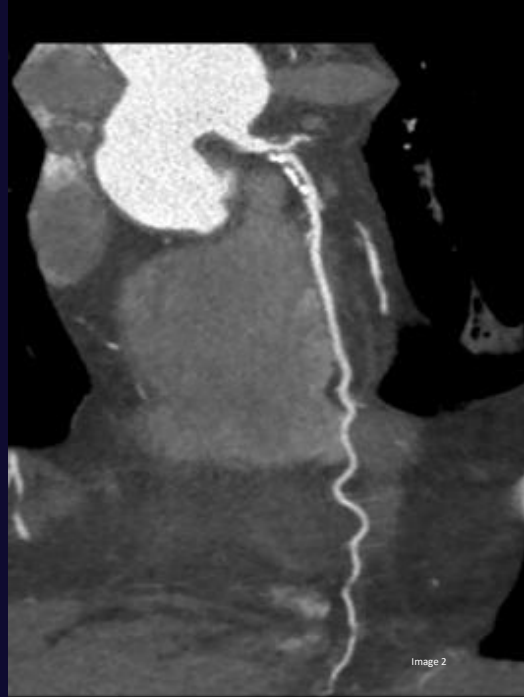
ACQUISITION - 100 kVp; 600mA, 0.24sec – 120ms TR; 90% ASiR-CV; DLP 132 mGy*cm

AUTO RECONSTRUCTION - Diastolic acquisition at 75% of R – R; Curved Reformats with CardIQ Xpress – Auto Coronary Analysis

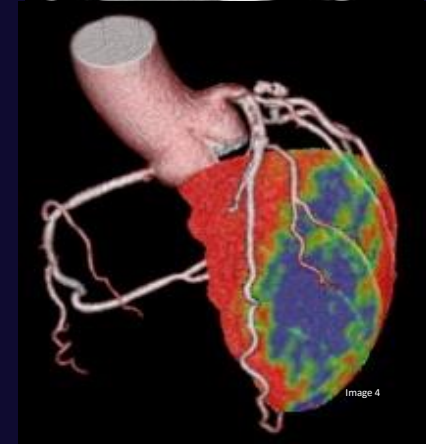
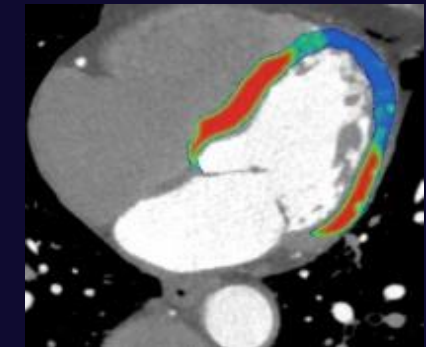
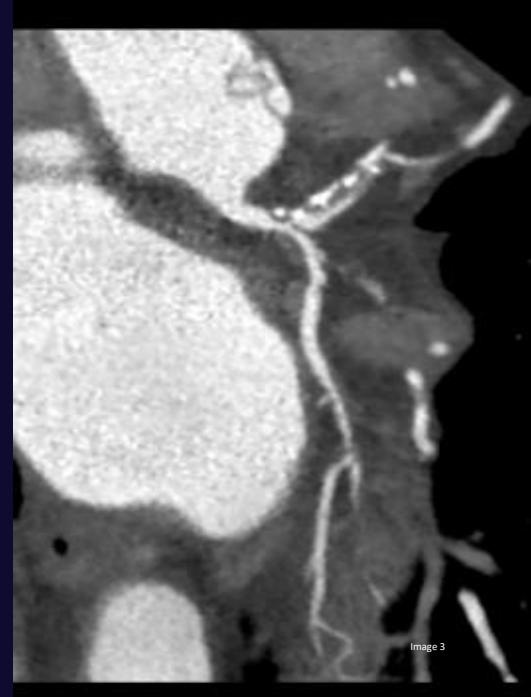
Curved Reformat RCA



Curved Reformat LAD



Curved Reformat LCX



TAVI Assessment

PATIENT HISTORY

- +72yr old Male
- +Heart rate 61 - 33.5 bpm

INDICATION

- +Aortic at 60% calcified
- +Aortic regurgitation
- +Aortic failure at 60%
- +Heart Prep - ECG tracking

ACQUISITION

- +Single Beat
- +120ms Coverage
- +Whole Aorta 1 x 1 Area
- +>

AUTO RECONSTRUCTION

- +Systolic gated acquisition at 50% of R-R
- +Ligated whole Aorta
- +TAVI software assessment of Aortic valve and whole Aorta



Image 1. Bicuspid Aortic Valve

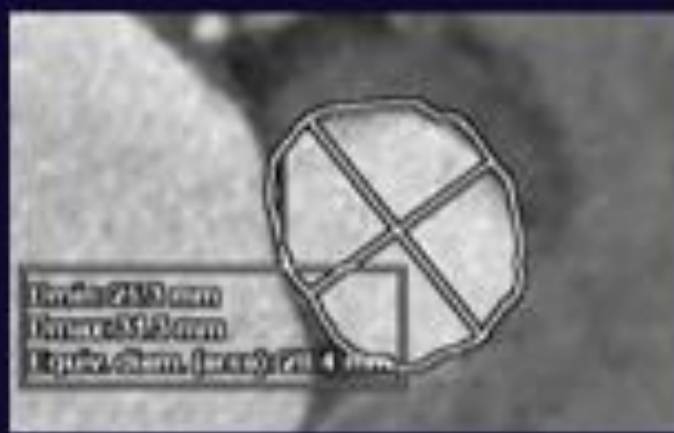


Image 2. Aortic Annulus measurements

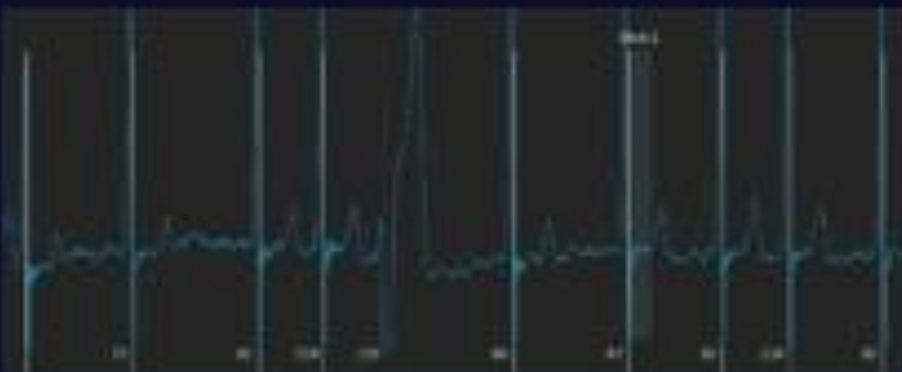


Image 3. ECG Heart rate analysis



Image 4. MIP with automated centre-line tracking



Images 5a & 5b. Curved reformats of whole Aorta & right and left subclavian arteries

Coronary CTA

PATIENT HISTORY

- 59 yr old Female
- ~ 57BPM

INJECTION

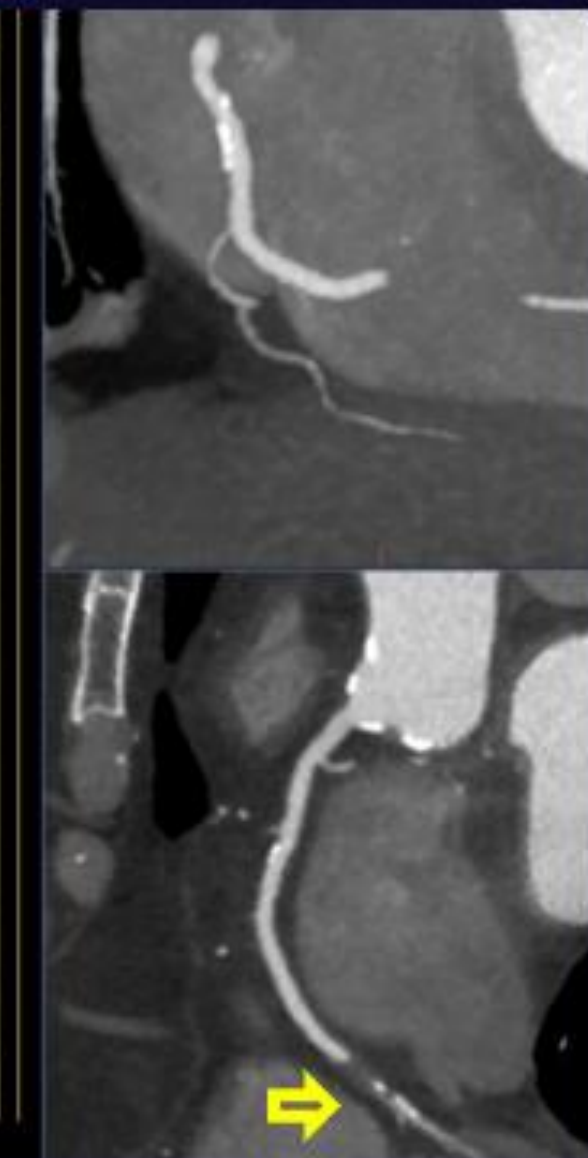
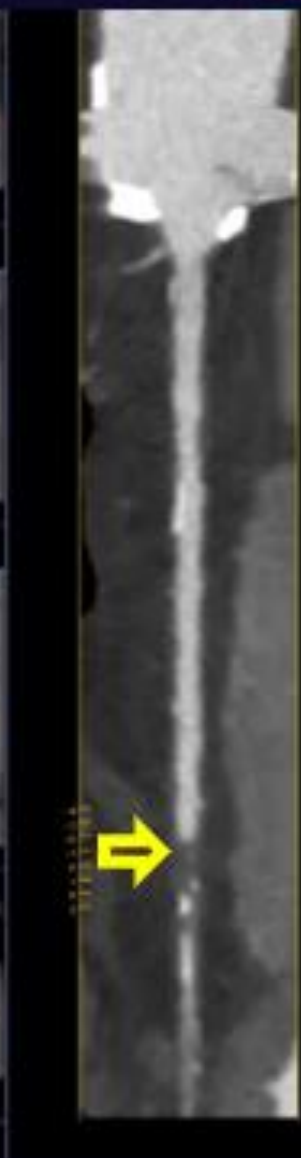
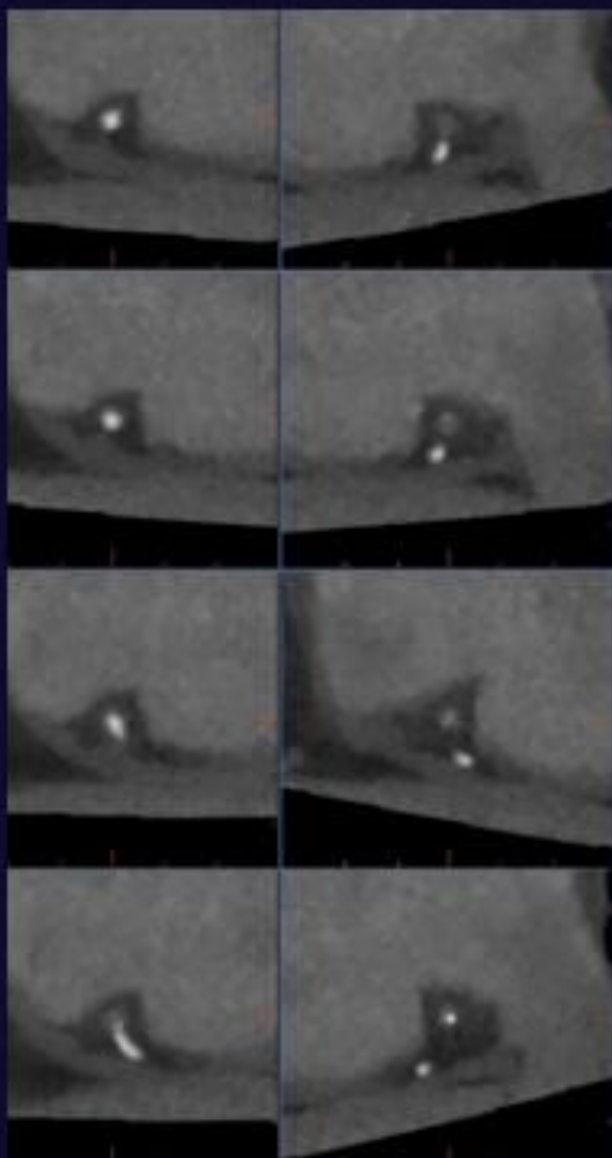
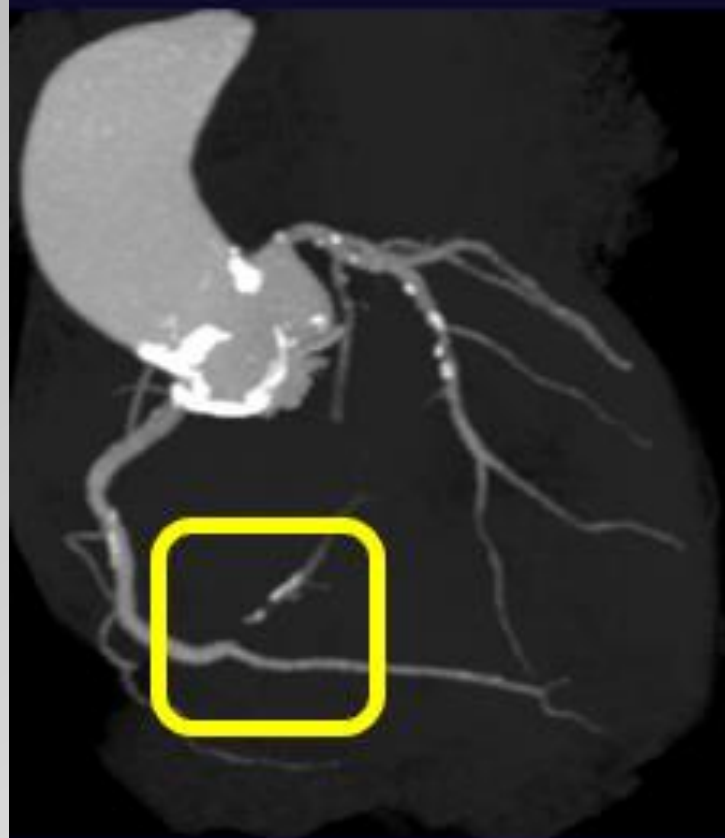
- 70mls at 7mls/s Iodinated contrast
- 50mls Saline at 7mls/s

ACQUISITION

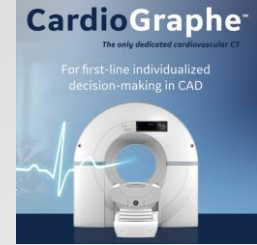
- Single Beat
- 14cms Coverage
- 120 kVp
- 600mA, 0.24sec - 120ms TR
- 90% ASIB.CV

AUTO RECONSTRUCTION

- Diastolic acquisition at 75% of R - R



ECG - 57 BPM acquisition window



Why we chose CardioGrappe for RURAL

The world's first and only dedicated cardiovascular CT:

QUALITY – High quality images for any patient

SPEED – The world's fastest CT scanner

COVERAGE – Whole heart imaging in a **single heartbeat**

ACCESS – Easily located in physician office, cath lab, mobile

SMALL – Small footprint for lower installation cost

DEDICATED – Easy to train and operate

COST – Top performance at lower price



Summary

Benefits of Mobile Cardiac CT

- ✓ Access to underserved
- ✓ Small community hospitals
- ✓ Grow Cardiac CT access without requiring expensive acquisition at every site

RURAL Study with Arineta CardioGraphe to evaluate improved access to cardiovascular & lung care for rural patients

Mobile Cardiac CT – a novel approach to expanding patient access

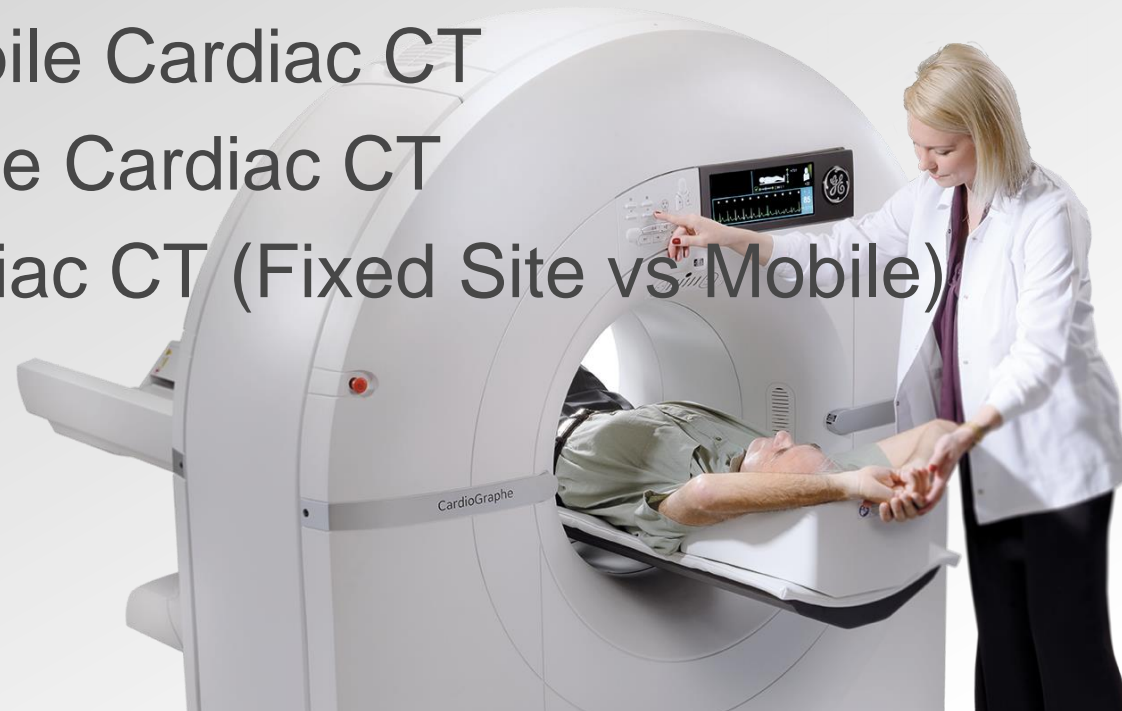
Agenda

<u>Topic</u>	<u>Speaker</u>	<u>Title</u>
Introduction	Scott Schubert	Chairman, Arineta
RURAL & Clinical Rationale for Mobile Cardiac CT	Matt Budoff MD	Professor of Medicine, UCLA & Lundquist Institute
Mobile CCT - Technical, Financial & Operational Considerations	Mike Allen	CEO, Amery Medical Academy
Q&A		
Summary	Scott Schubert	

Operational and Financial Rationale for Mobile Cardiac CT

July 2021

- RURAL Medical Examination Unit with Cardiac CT
- Why the CardioGrappe?
- Review various mobile vehicle platforms
- RV/Bus based Mobile Cardiac CT
- Trailer based Mobile Cardiac CT
- Financials for Cardiac CT (Fixed Site vs Mobile)



RURAL
Risk Underlying Rural Areas Longitudinal Study

Mike Allen, JD, MBA, BSAE
President & CEO
Amery Medical Academy



RURAL Medical Examination Unit (MEU) with Cardiac CT



RURAL Medical Examination Unit (MEU) with Cardiac CT

- 53' Trailer: 100% ADA Compliant
- Two 3' CT slideouts
- One 7' Exam Room slideout
- One 3' Waiting Room slideout
- Fully independent BSL2 Lab
- Power: Shore, generator, batteries
- HVAC: 12 Tons
- Certified up to 100mph wind/rain



Why the CardioGrappe for Mobile Cardiac CT?

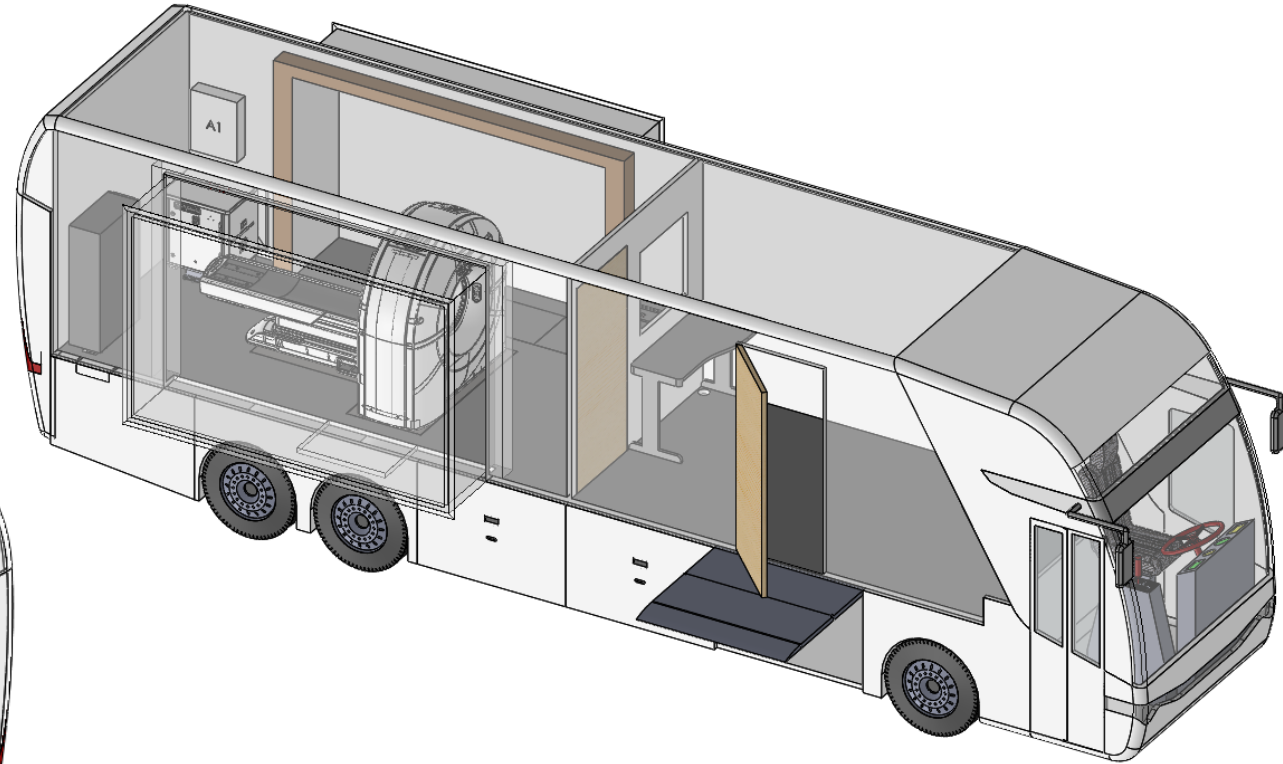
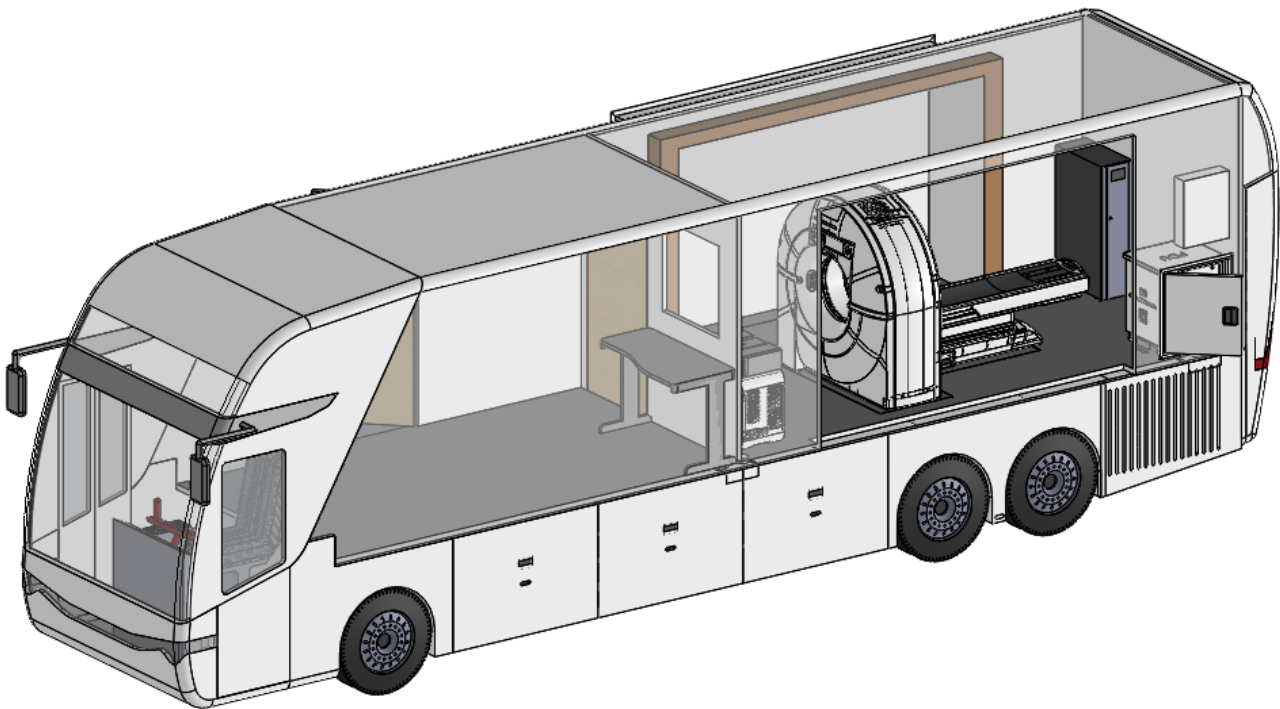
- Smaller footprint (14 foot room; 40% smaller space)
- Lighter (6,300lbs; 40% less weight)
- Efficient (115kVA peak; 35% less power)
- Ambient Cooling (27,500 Total BTUs; 40% less heat)

	Typical	Minimum	
Room	6x5m ² = 30 m ²	4.4x3.4m ² = 15 m ²	
	Size Height x Length x Depth	Weight	
Gantry	1.8m x 1.8m x 0.9m(2.9m ³)	1644.5kg (3625.5lb)	
	Voltage	Max Power	Ave Power Max Duty Cycle
Power	380 to 480 V AC	4 seconds – 115kVA	10kVA



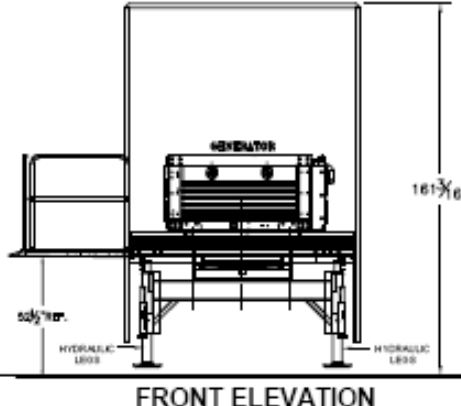
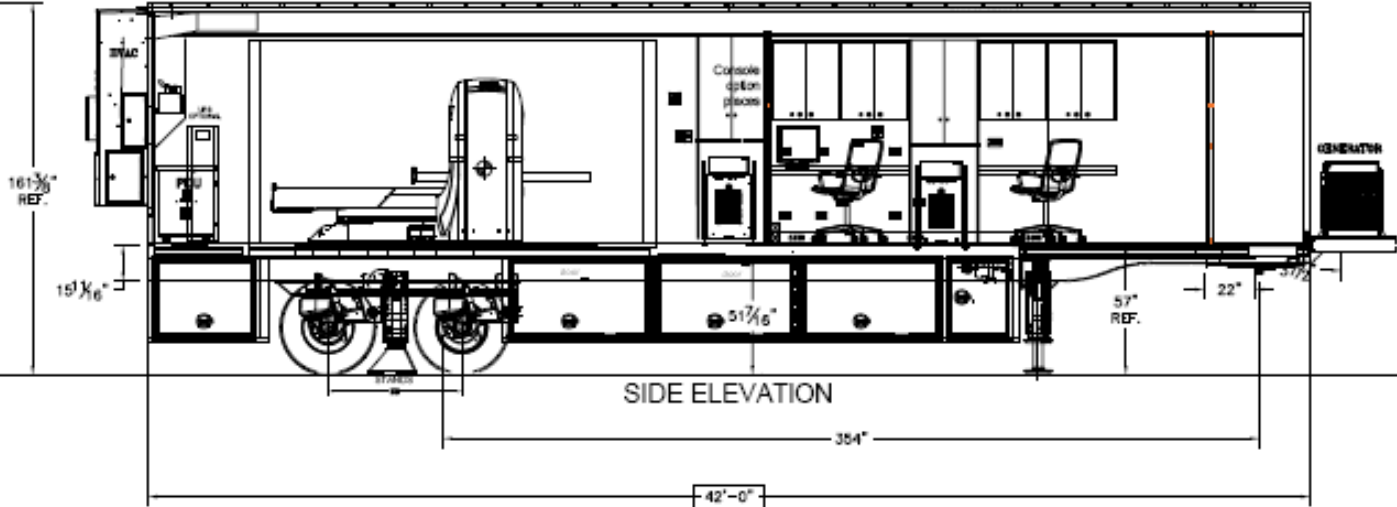
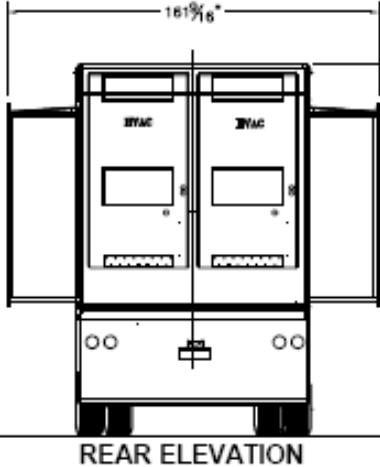
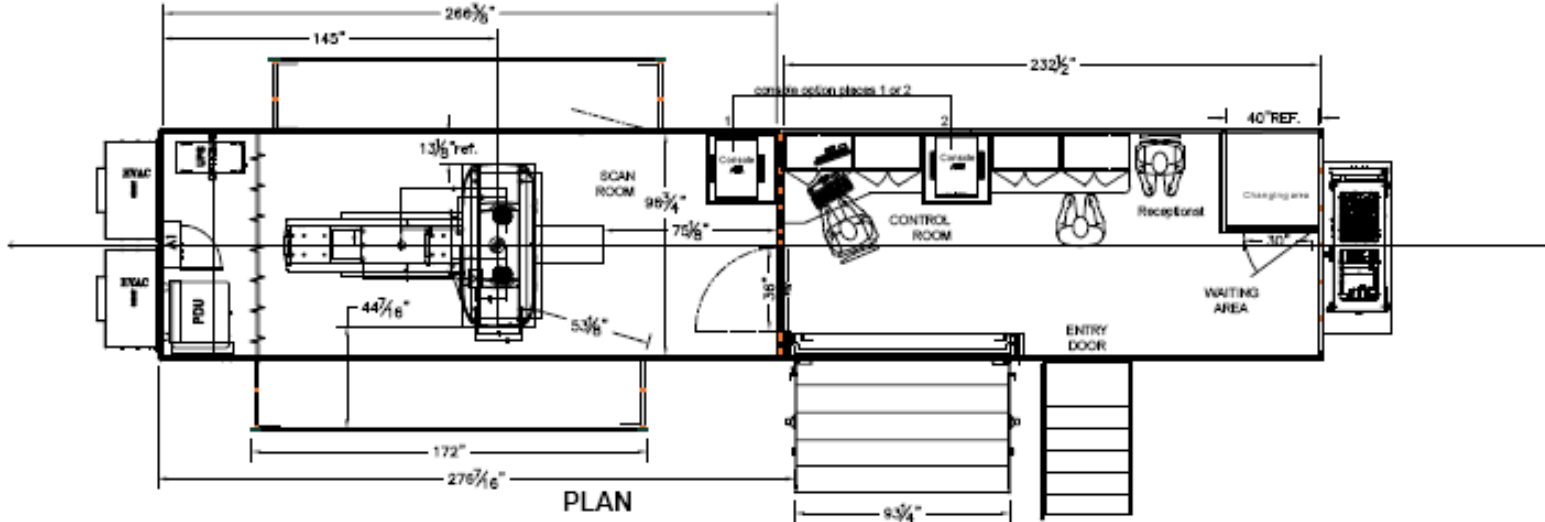
38' Mobile Cardiac CT Bus/RV

- 38' Bus/RV Configuration
- Two 3' CT slideouts
- Waiting Room
- Power: Shore
- HVAC: 4 Tons
- GVWR: 28,000 lbs



42' Mobile Cardiac CT Trailer

- 42' Trailer
- Two 3' CT slideouts
- Waiting Room
- Power: Shore
- HVAC: 4 Tons
- GVWR: 26,000 lbs



Mobile Cardiac CT Concierge Services

- Mobile Radiology Services
 - Rent Agreement Flexibility: Short to Long-term Commitment
 - Mobile CT Management: Completely Operationalized

- No Equipment Purchase: Built into rental agreement
- No Maintenance Cost: CT and trailer 100% covered
- Compliance: Health & Safety management
- Data Services: Push images/PACS data to clients
- Integrated Human Resources: Manage mobile employees
- Risk Diversification: Manage most liabilities
- Offer Billing Services
- Providers
 - Alliance Imaging; Insight Imaging, Shared Imaging, Shared Medical Services, DMS Health, and many others.



5 Year Cardiac CT Comparison by Platform

REVENUE	CPT	FIXED SITE		MOBILE		
		LOW	AVG	TRAILER	BUS	MRS
Calcium Scoring	75571	404,712	778,932	2,095,632	2,095,632	2,095,632
Heart Structure	75572	576,600	576,600	571,464	571,464	571,464
Heart Structure (Congenital)	75573	702,475	847,553	793,109	793,109	793,109
CCTA	75574	2,311,974	2,661,372	2,638,327	2,638,327	2,638,327
Peripheral CTA	75635	686,247	827,972	774,786	774,786	774,786
Carotid CTA	70498	838,253	924,739	945,762	945,762	945,762
TAVI/TAVR	75572, 75635	408,517	549,385	539,384	539,384	539,384
BMD	77078	433,567	513,249	507,953	507,953	507,953
HeartFlow	0503T	115,668	134,946	133,812	133,812	133,812
		0	0	0	0	0
Total Revenue		6,478,013	7,814,748	9,000,229	9,000,229	9,000,229
EXPENSES		5 YEARS	5 YEARS	5 YEARS	5 YEARS	5 YEARS
Depreciation Expense		942,500	942,500	1,431,750	1,490,750	0
Salaries and Benefits Expense		886,460	886,460	886,460	886,460	1,297,455
Fixed Asset						
Loan Payment*		799,273	799,273	1,214,173	1,264,208	2,190,788
CT Scanner Maintenance Fee		400,000	400,000	400,000	400,000	0
Add'l Property and Liability Insurance		41,240	41,240	127,070	132,310	42,357
Add'l Property Tax		23,565	23,565	35,795	37,270	0
IAC CT Certification \$3.1k App +\$3k Expedited		6,100	6,100	6,100	6,100	6,100
Utilities Expense		24,640	24,640	64,063	64,063	64,063
Total Fixed Costs		1,294,817	1,294,817	1,847,202	1,903,951	2,303,308
				Mobile Radiology Services charge a rental fee *		
Variable Expenses						
Consumables Expenses		637,742	747,321	759,520	759,520	759,520
Mobile Vehicle Expense		0	0	421,229	485,777	216,612
Marketing Expenses		130,178	130,178	130,178	130,178	130,178
Bad Debt Expense		0	0	0	0	0
Total Expenses		3,891,697	4,001,276	5,476,338	5,656,635	4,707,072
Estimated Annual Profit (Loss)*						
Cumulated Estimated Total Profit (Loss)		2,586,315	3,813,472	4,075,298	3,959,548	4,293,157

- Assumptions
 - CMS National Average Reimbursement
 - Captured depreciation to reflect ownership value
- Highlights
 - Cardiac CTA CPT Codes in green
 - Mobile CT increases patient encounters by 30% - 200%
 - Mobile Radiology Services has unique Cost structure

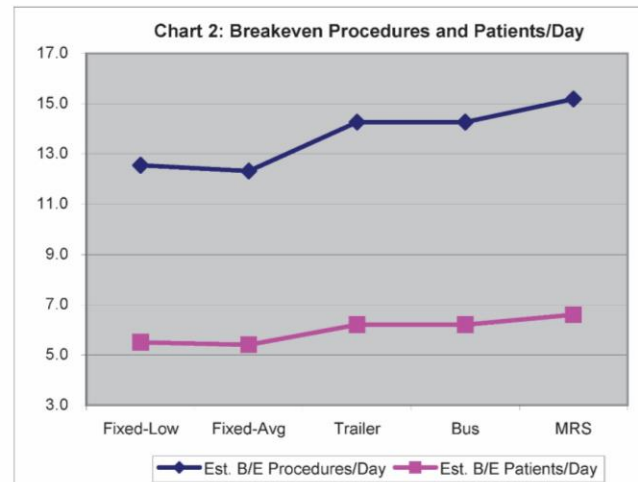
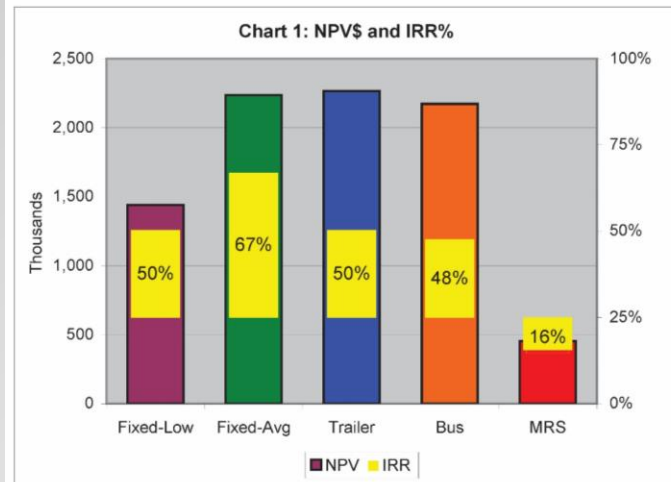
5 Year Cardiac CT Comparison by Platform

	FIXED SITE		MOBILE		
	LOW	AVG	TRAILER	BUS	MRS
IRR/NPV Estimate					
Estimated Total Profit (Loss)	2,586,315	3,813,472	4,075,298	3,959,548	4,293,157
Add back depreciation expense	942,500	942,500	1,431,750	1,490,750	-
Estimated Cash flow before Equipment purchase	3,528,815	4,755,972	5,507,048	5,450,298	4,293,157
Equipment cost					
Estimated Cashflow	3,528,815	4,755,972	5,507,048	5,450,298	4,293,157
Discount Rate	10%	10%	10%	10%	10%
Estimated NPV	\$1,438,938	\$2,235,444	\$2,265,100	\$2,172,350	\$454,506
Estimated IRR	50%	67%	50%	48%	16%

Breakeven Calculation

	FIXED SITE		MOBILE		
	5 YEARS	5 YEARS	5 YEARS	5 YEARS	5 YEARS
Total CT Procedures	29,483	36,892	48,383	48,383	48,383
Ave. CT Scanner Procedure Volume / Day	23.4	29.3	38.4	38.4	38.4
Ave. \$ Revenue / Procedure	219	212	186	186	186
Actual Utilization	46%	58%	63%	57%	63%
Est. Breakeven Procedures / Day	12.5	12.3	14.3	14.3	15.2
Est. CCTA Breakeven Patients / Day*	5.5	5.4	6.2	6.2	6.6

* Based on Nat'l Average 1.28 Procedures/Patient. Source: IMV 2016 CT Census Market Summary Report (Jan 17)



- Four metrics for finances
 - Pre-tax cash flow
 - Net Present Value (NPV)
 - Internal Rate of Return (IRR)
 - Breakevens

Questions:

Matthew Budoff MD

Mike Allen, JD



Mobile Cardiac CT

A novel approach to expanding patient access

For more information contact:

scott.schubert@arineta.com

www.arineta.com

CardioGraphe
Dedicated cardiovascular CT system



Sold and serviced by



SUMMARY:

CardioGraphe

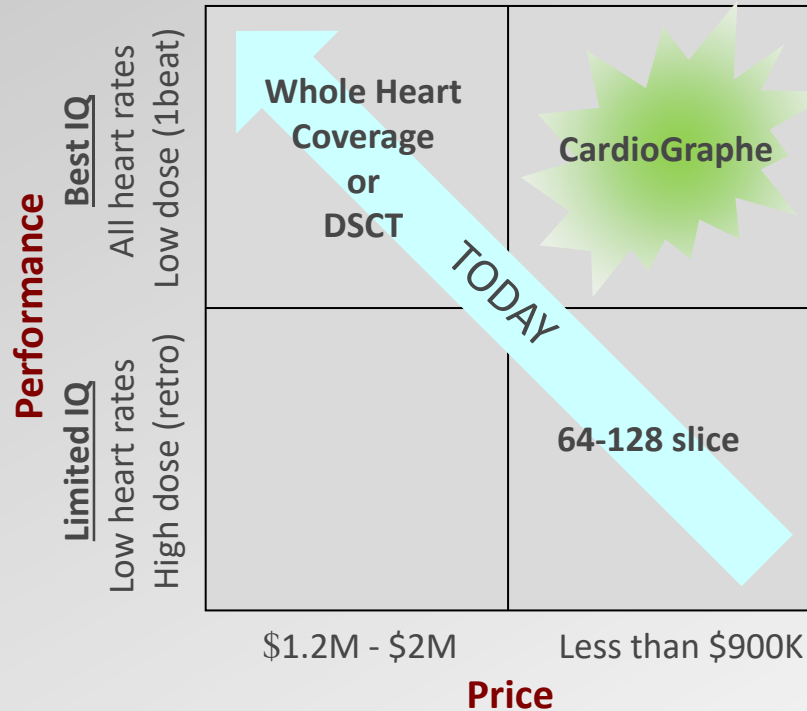
The only dedicated cardiovascular CT to grow your practice

Highest performance

Affordable

Fits in an office, cath lab or mobile

NEW !!



Pay-Per-Use financing

Install CardioGraphe NOW

No upfront cost

No capital risk



Thank you

For more information contact: scott.schubert@arineta.com

www.arineta.com