RADIOLOGY® LEADERSHIP INSTITUTE
AMERICAN COLLEGE OF RADIOLOGY

RLI Power Hour

February 23, 2022

Empowering Radiology Global Health & International Outreach: RAD-AID Experience

Daniel J. Mollura, MD
President & CEO
RAD-AID International

Thank you, RLI

A Nonprofit Public Service

RAD-AID

Radiology serving the world

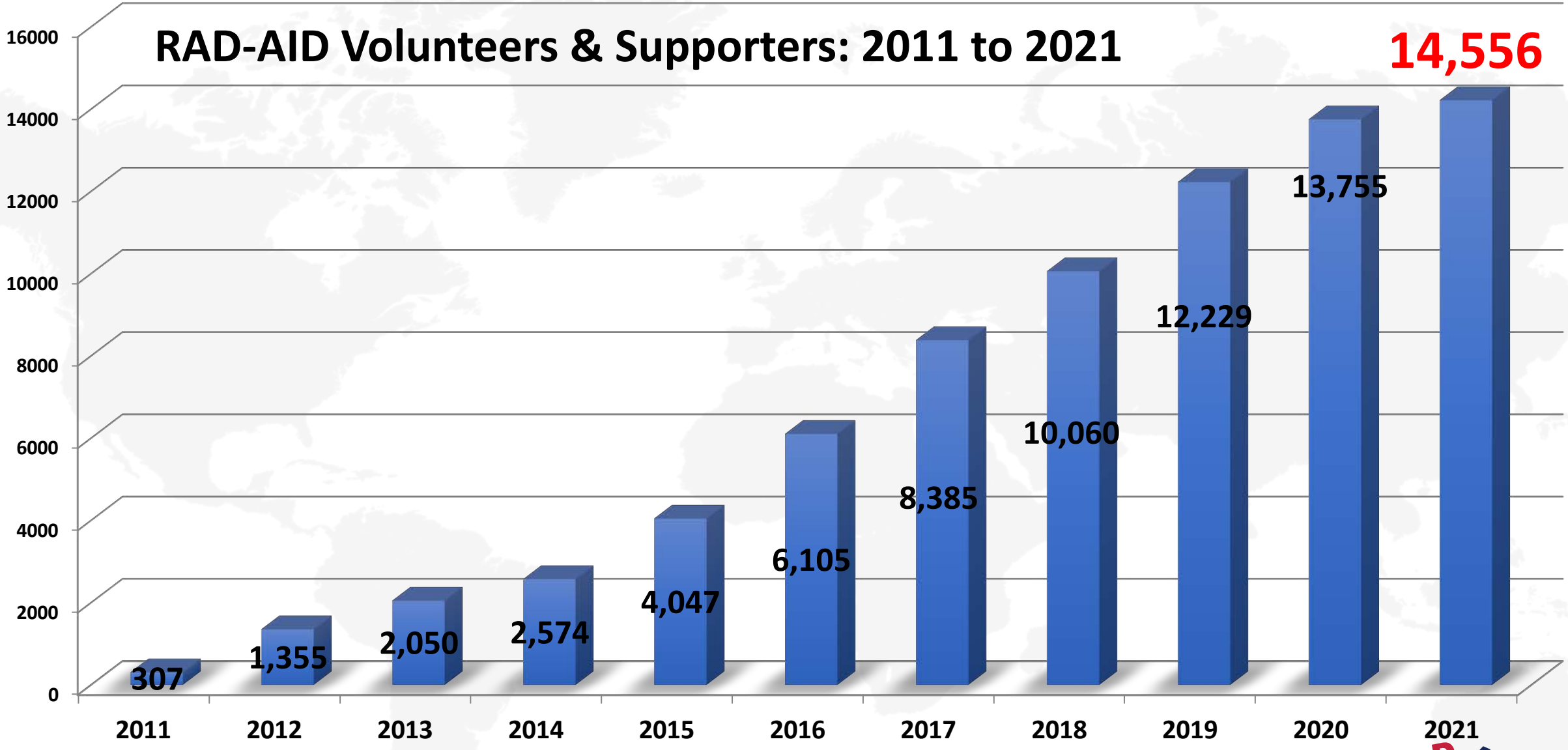
We were asked by RLI to give stories of our experience in global health…

RAD-AID Radiology Serving the World

RAD-AID in 40 Countries & 91 Hospitals

RAD-AID
Radiology Serving the World

RAD-AID Volunteers & Supporters: 2011 to 2021



Many Stories…

Ghana

Morocco

Jordan: Zaatari Refugee Camp

India

USA

Malawi

And others…

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Common Question We Encounter

What characteristics make a global health volunteer most effective?

Characteristics + Stories

- Procedure
- Patience
- Principle
- Perseverance

Procedure

Over Half the World Lacks Radiology

World Health Organization

Source:
WHO compendium of innovative health technologies for low-resource settings 2016-17. Geneva: World Health Organization; 2018. License: CC BY-NC-SA 3.0 IGO

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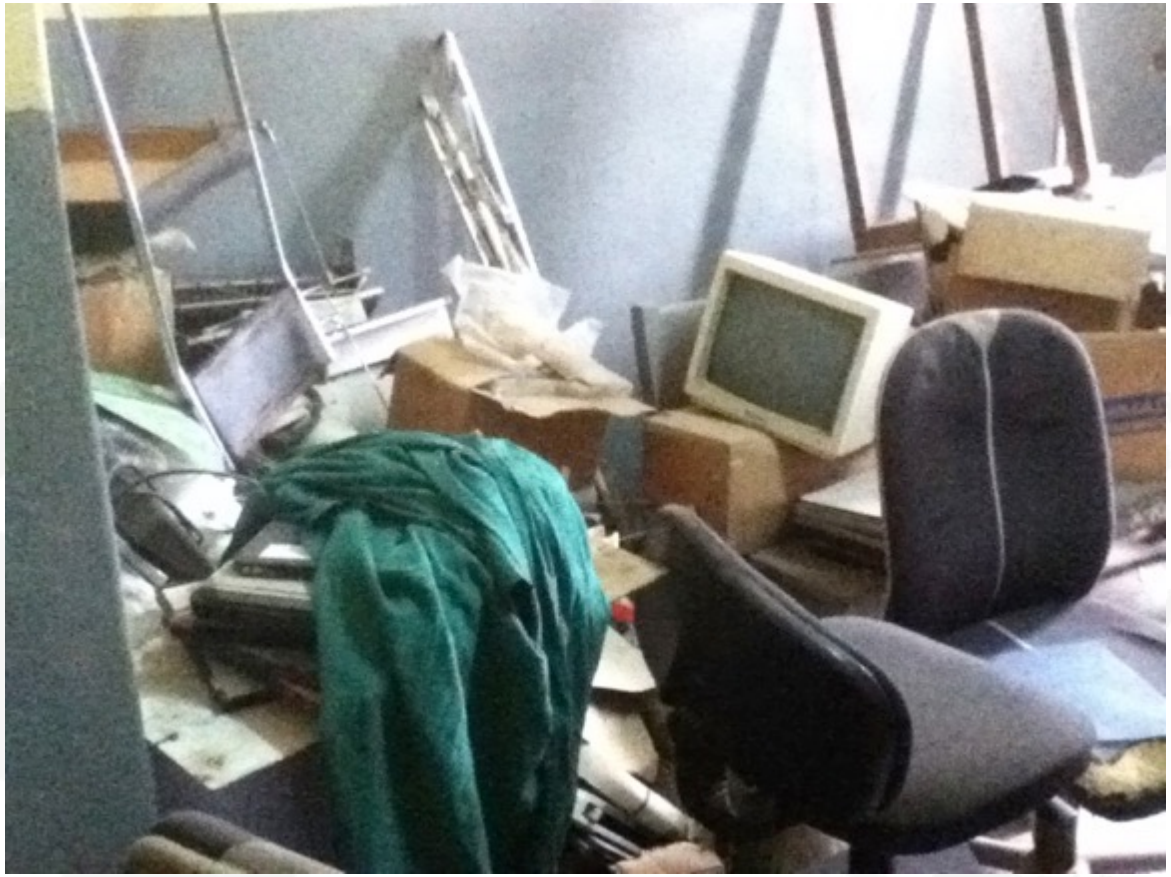
Source: Dominican Republic, Diana Dowdy, RAD-AID



Source: RAD-AID Ghana, 2012

Source: RAD-AID India

Radiology-Readiness

What does a site HAVE

What are the site's GOALS

RAD-AID Fills Key Gaps

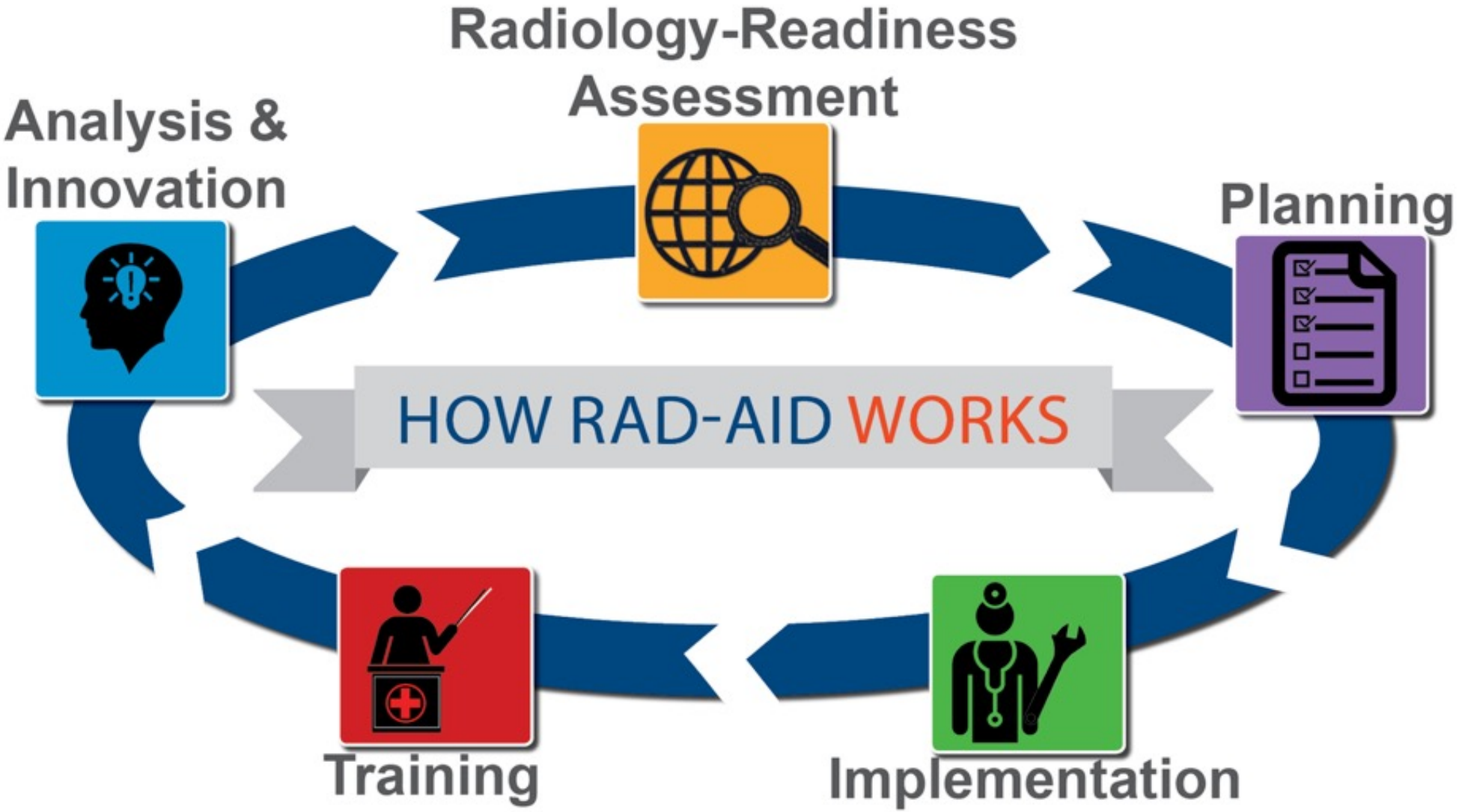
- What is a site **ready** for?
- **Highest Yield** Resources
- Solution Adapted to **Local Context**

Radiology-Readiness

Sections

- Infrastructure
- Roads/Topography
- Human Resources
- Personnel Training
- Quality Control
- Equipment
- Finance/Insurance
- Radiation Safety
- Pharmaceuticals
- Infection Control
- Epidemiology
- Population Features
- IT networks
- PACS/EMR/RIS
- Clinical Tests
- Referral Networks
- Community Engagement
- Patient/MD Communications
- Interventional Radiology
- Nursing
- Breast Imaging
- Artificial Intelligence
- Radiation Oncology
- Medical Physics, QA/QC
- Consumables/Supply Chains
- Equipment Maintenance
- Procurement

Radiology-Readiness, Trademarked © by RAD-AID, 2011-2021


Radiology-Readiness Assessment
Analysis & Innovation
Planning
HOW RAD-AID WORKS
Training
Implementation

RAD-AID LAOS

RAD-AID Invited by Friends Without A Border Foundation

RAD-AID's Radiology-Readiness Assessment, 2015

Daniel J. Mollura, MD

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RAD-AID LAOS: Radiology-Readiness

What does a site HAVE

- New pediatric hospital
- Comprehensive children's health in LFHC

What are the site's GOALS

- Provide radiology (none in 2015)
- Radiation safety for staff/patients
- Personnel training

GAPS

- Radiology Dept was an empty room
- No Equipment
- No Personnel
- No imaging-staff educational pathways

RAD-AID LAOS: Radiology-Readiness

What does a site HAVE

- New pediatric hospital
- Comprehensive children's health

What are the site's GOALS

- Provide radiology (none in 2015)
- Radiation safety for staff/patients
- Personnel training

RAD-AID fills GAPS

- Build radiology dept in LFHC
- Donate radiology equipment
- Train Staff Remote + Online
- Digital Imaging/Computers

GAPS

- Radiology Dept was empty
- No Equipment
- No Personnel
- No educational pathways

RAD-AID LAOS: Radiology-Readiness

Daniel J. Mollura, MD

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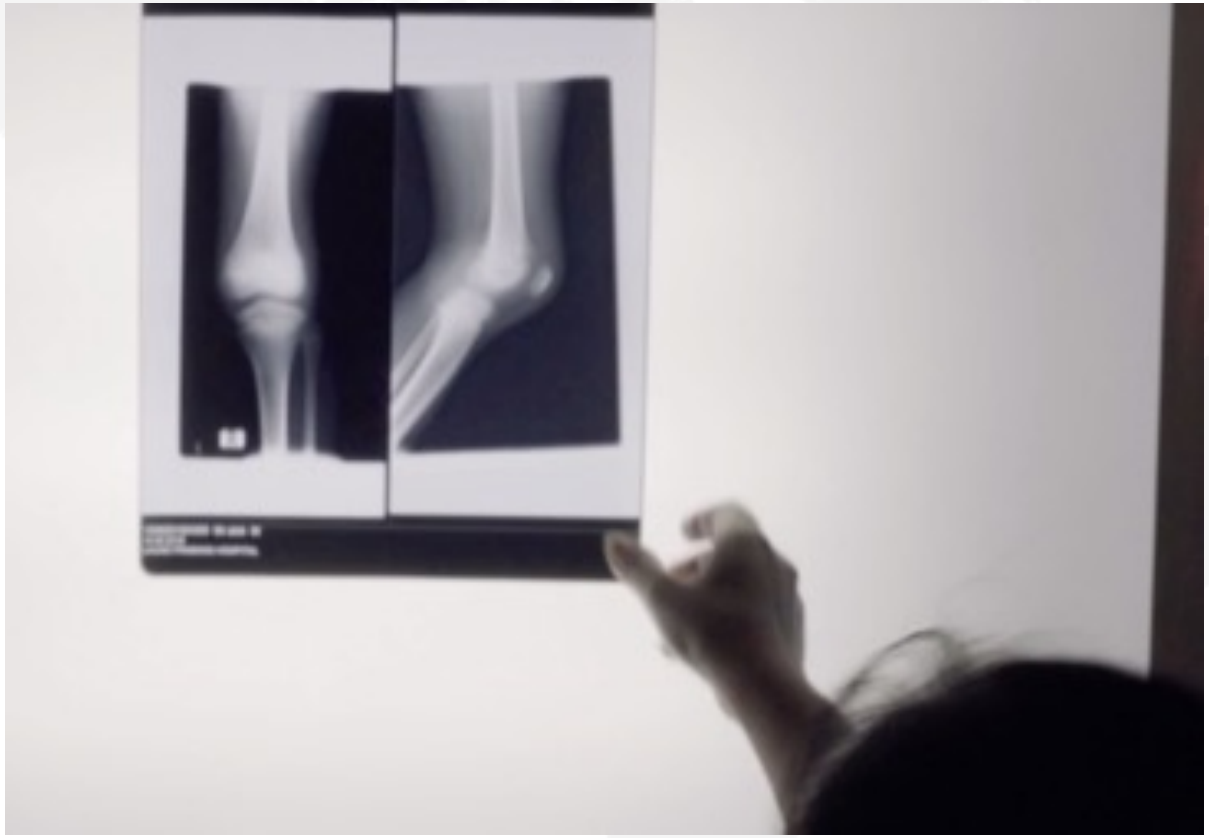
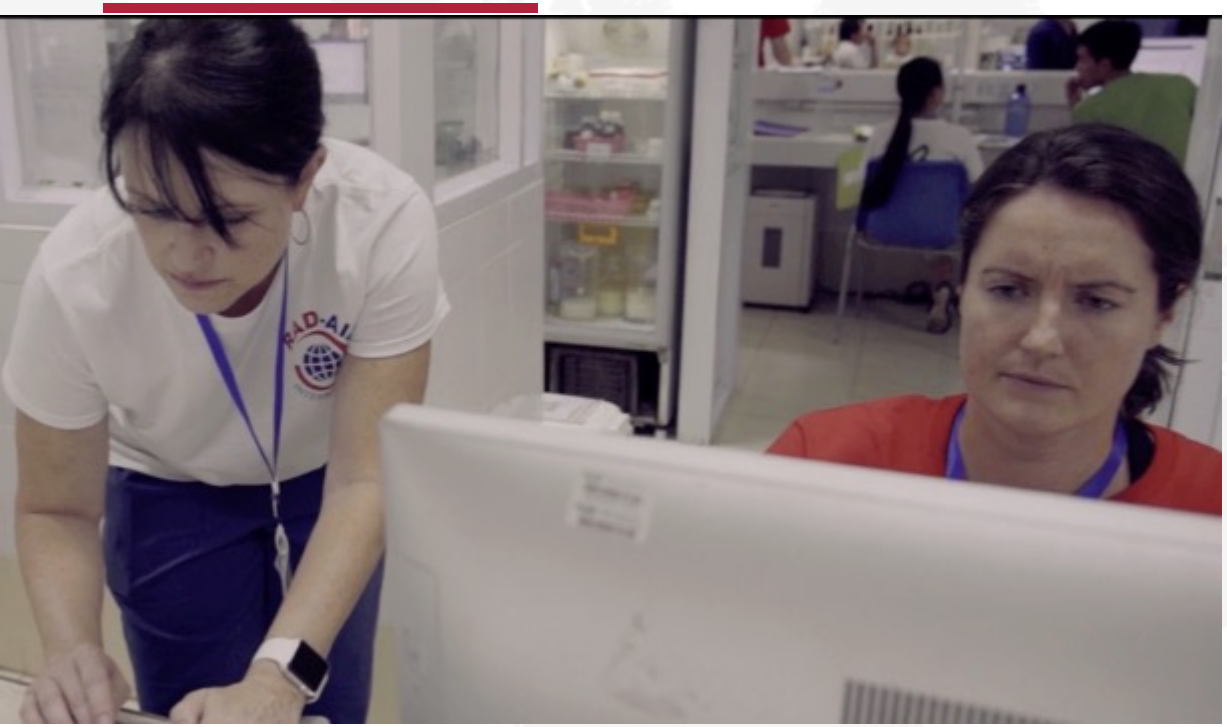
RAD-AID LAOS: Radiology-Readiness



- No Digital images at LFHC
- No Picture Archiving & Communications System (PACS)

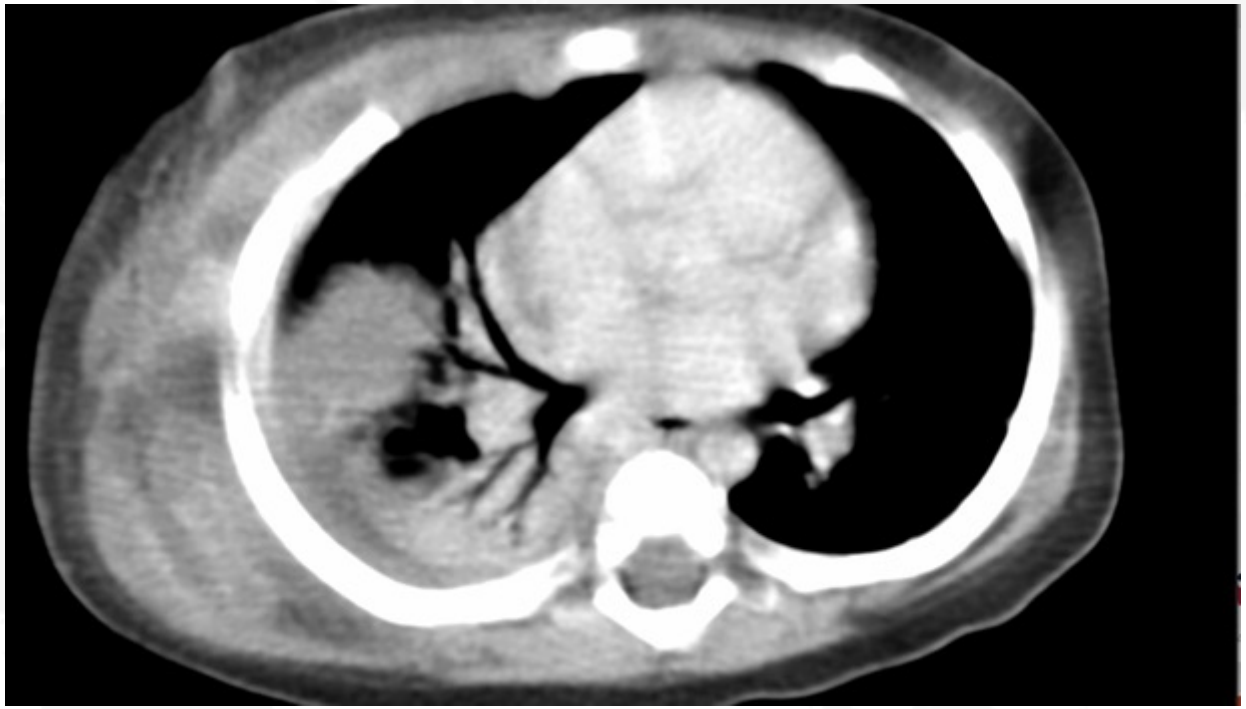
LFHC, 2017

PACS Donation, 2018



RAD-AID Volunteers in IT and Clinical teams worked on installation of PACS at LFHC

RAD-AID LAOS: CT



Tripartite agreement: LPPH, LFHC and RAD-AID to support CT, provide inter-institutional PACS, & enable access of LHFC's patients to CT services at LPPH

Patience

RAD-AID Kenya

Dr. Dixon and Dr. Baigorri with University of Nairobi Residents, 2018

Dr. Frances Colgan, Jessica Salerno, Meena Amlani, Dr. Chacha Magabe & Dr. Gladys Mwango

RAD-AID Kenya

UoN Residents preparing for nephrostomy placement.

Bob Dixon in interventional suite with IR team at Kenyatta National Hospital, 2019

Patience: a 2-year Journey

- Planning
- IR Curriculum Design + Approval
- MOU
  - Tripartite effort first
  - Bilateral second

Launched 2020

Dr. Bob Dixon (left) and Dr. Elijah Kwasa (right) leading 2020 KAR RAD-AID IR Symposium

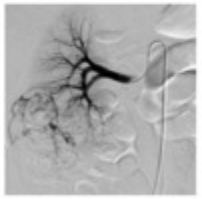
Kenya Association of Radiologists

and

RAD-AID International

present an

Interventional Radiology Symposium

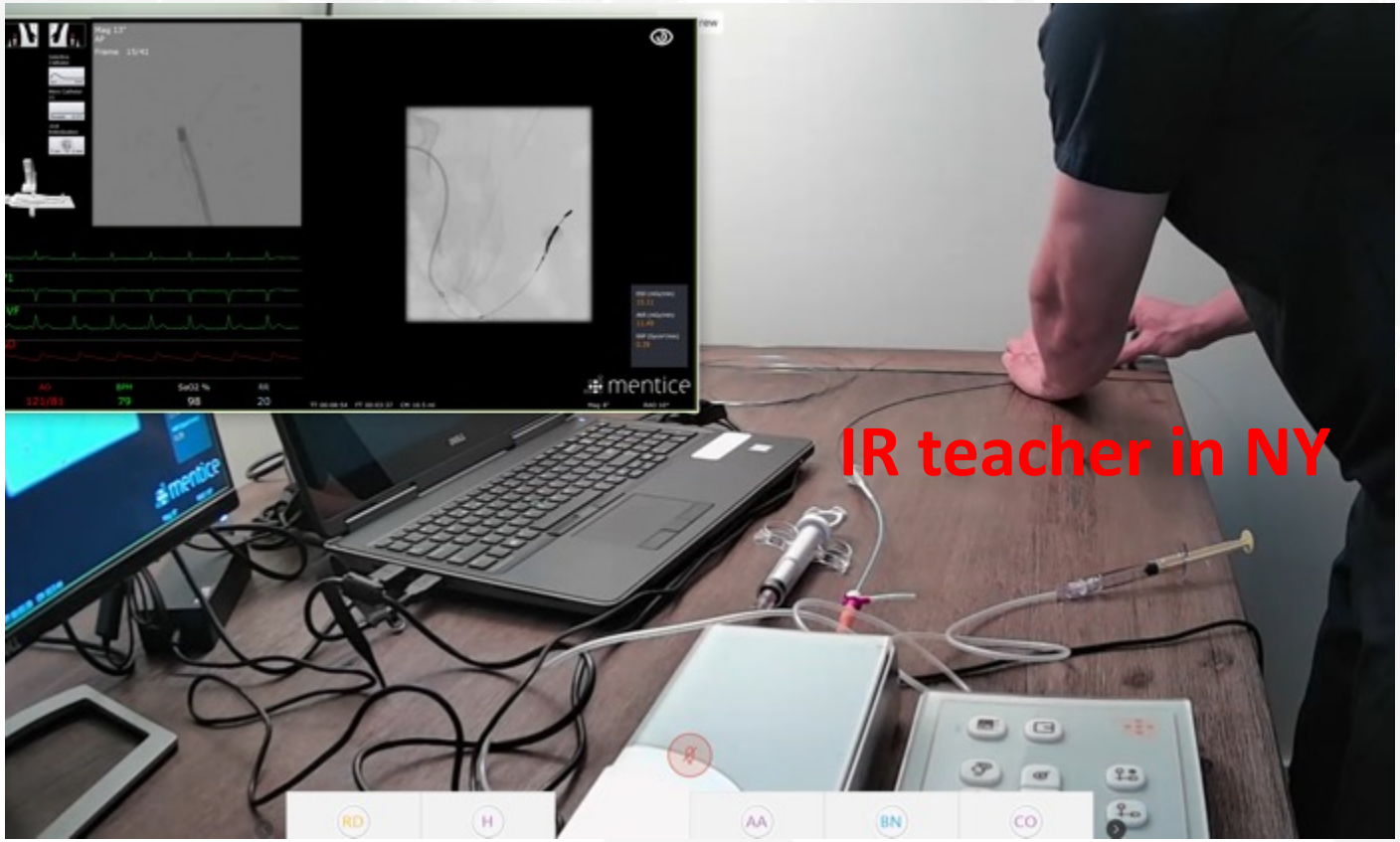


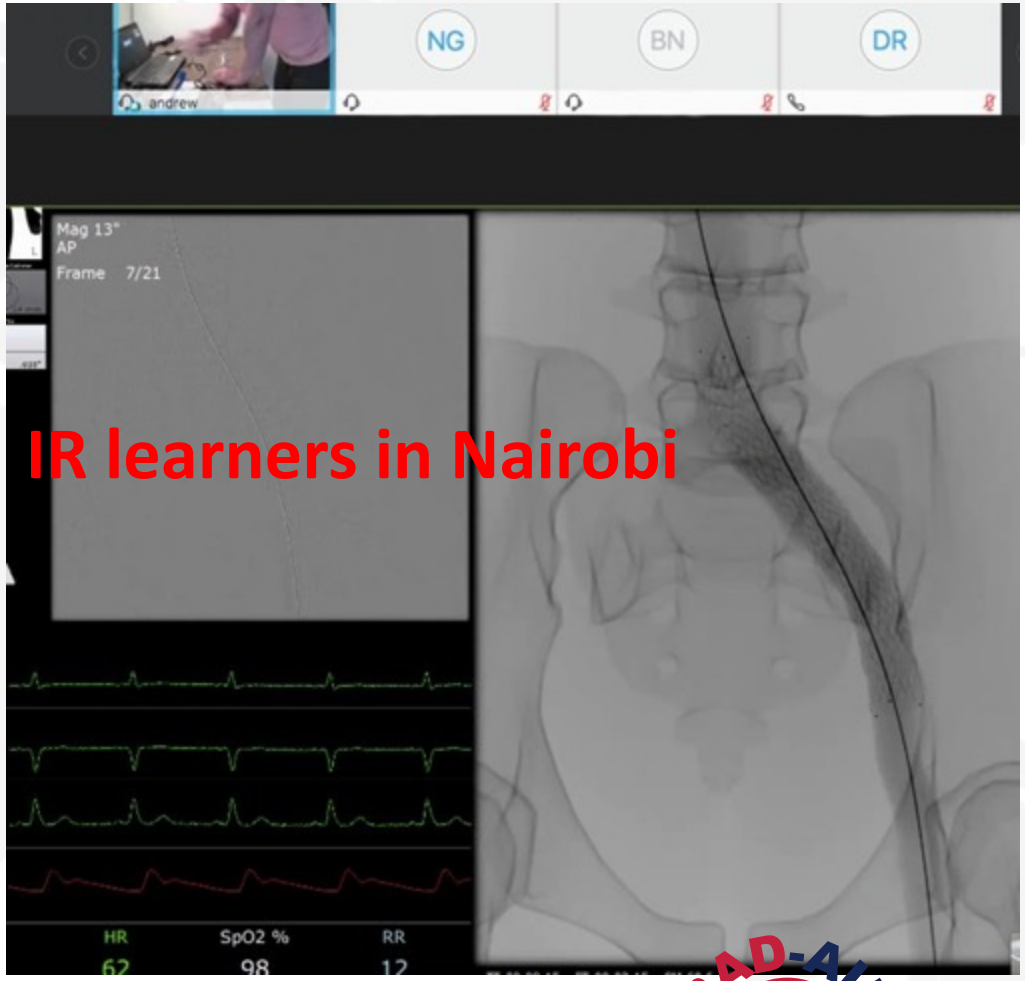
23 – 24 July 2020

Supported by mentice

RAD-AID launched first-ever IR Fellowship in Kenya with University of Nairobi, 2020

Tele-IR Simulation-Training





Real Time IR Simulation-Sessions:

Example: NY→Kenya

RAD-AID Radiology Serving the World

2022

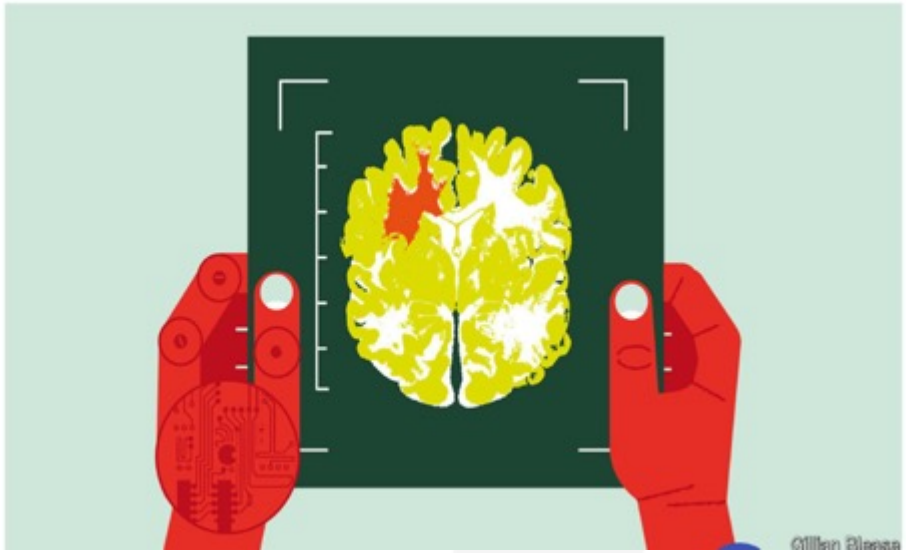
- April and September Team Trips
- PACS Donation, University of Nairobi
- IR Nursing
- Oral Exams, first graduating IR Fellows Fall 2022

Principle

The Economist | Topics | Current edition | More

AI, radiology and the future of work

Clever machines will make workers more productive more often than they will replace them



Economist, June 7, 2018

Radiology: Artificial Intelligence

AI Hype and Radiology: A Plea for Realism and Accuracy

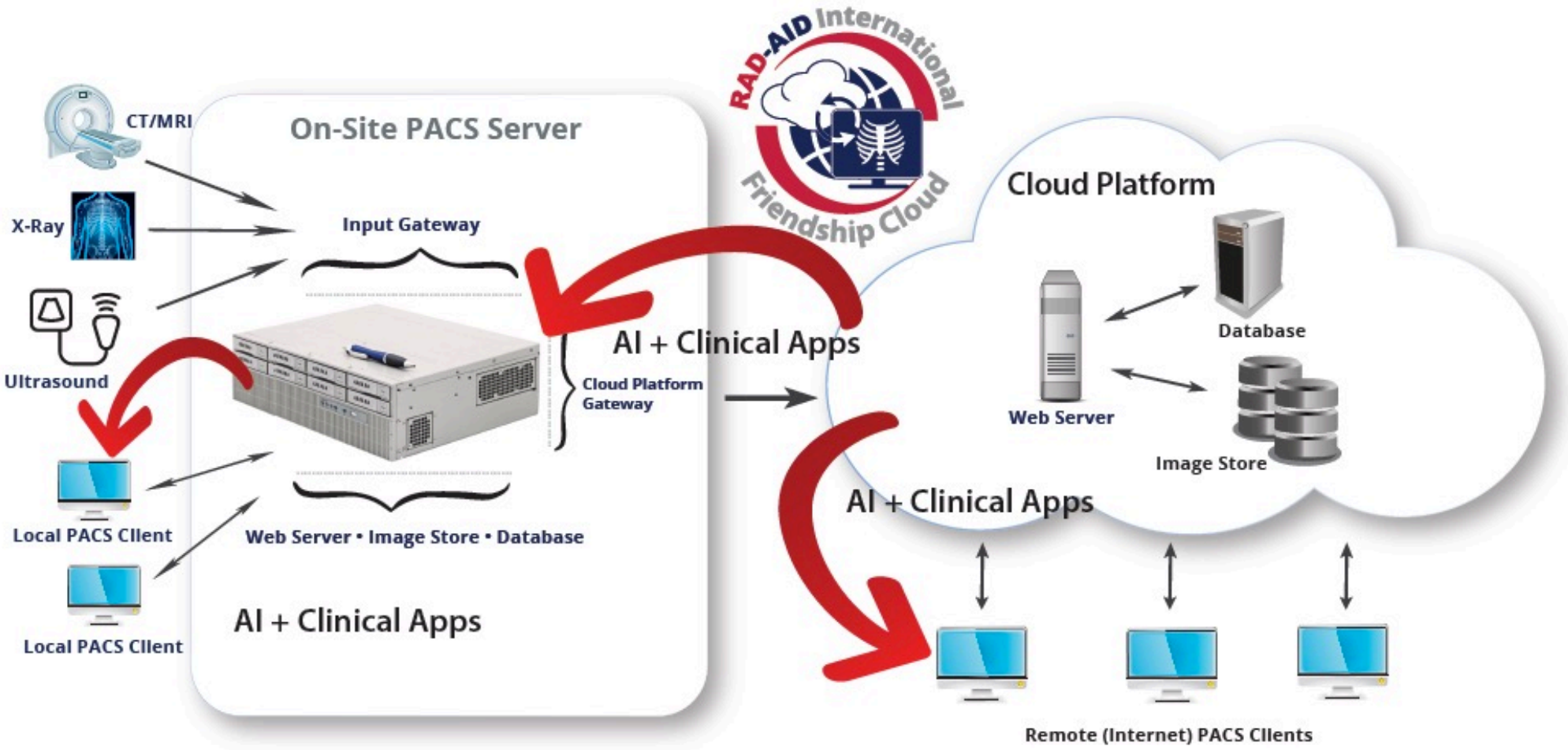
John Banja, PhD

Radiology AI: 2020

- Overcome hype, noise and expectations by adhering to your **principles**.

RAD-AID Radiology Serving the World

RAD-AID PACS + AI PROGRAM



Donate PACS
+
Donate AI

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RAD-AID PACS+AI

RAD-AID International Artificial Intelligence

TEACH

Clinical Radiology Education

- Image Interpretation & Procedures
- How to Appraise AI Outputs
- How to Supervise AI Implementation
- How to Perform Local AI Validation

TRY

Infrastructure Implementation

- Radiology Hardware (Modalities)
- Servers/Networks, IT personnel
- PACS/RIS/EMR, medical software
- Cloud

USE

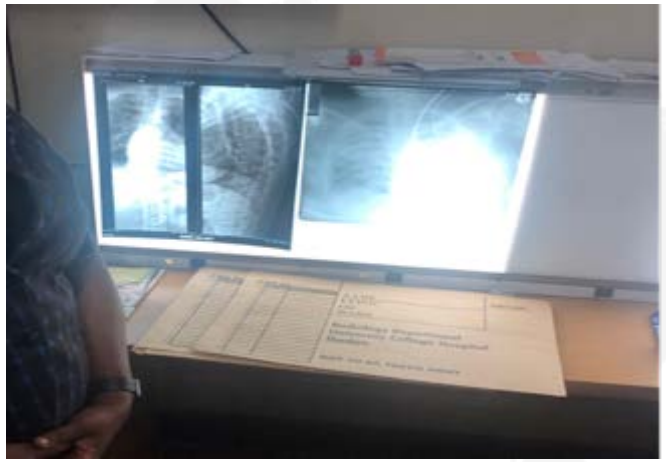
Phased AI-introduction

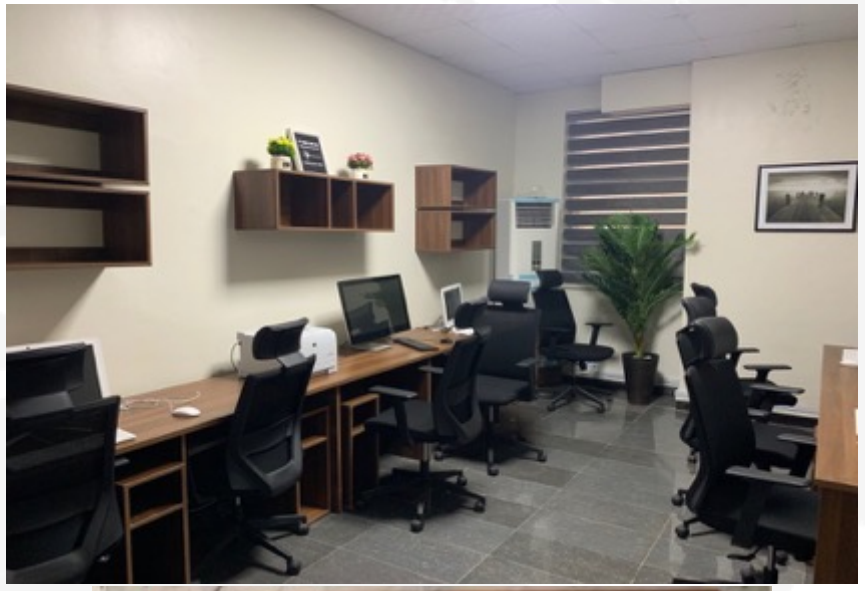
- Try AI (Pilot introduction)
- Public/Patient Awareness of AI
- Pilot AI: Patient Cases
- Pilot AI: Population Health

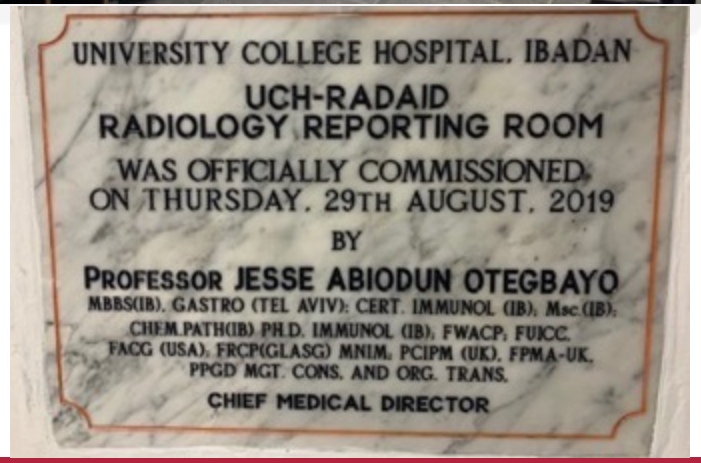
RAD-AID NIGERIA: 2018

2018: University College Hospital, Ibadan

RAD-AID PACS PROGRAM

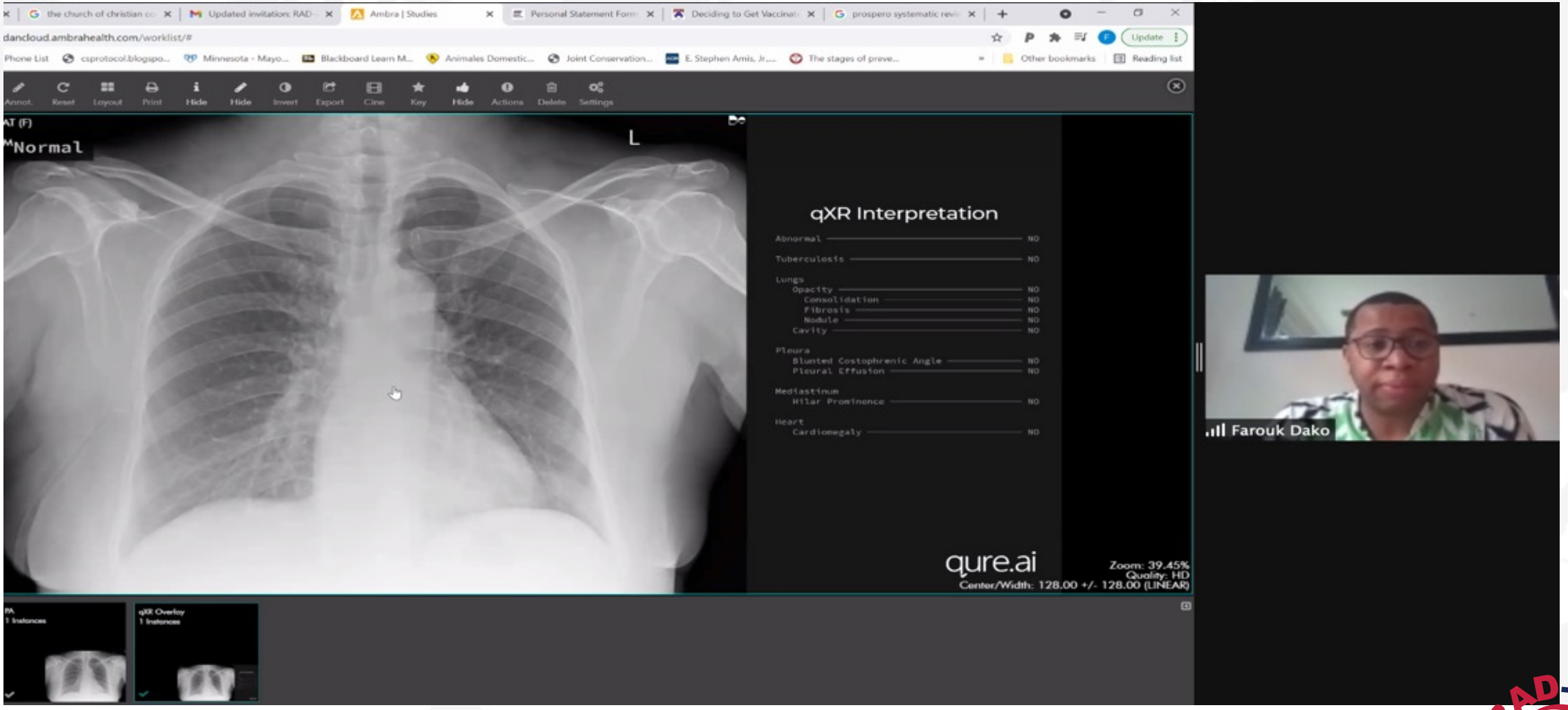






- Nigeria
- University College Hospital, Ibadan

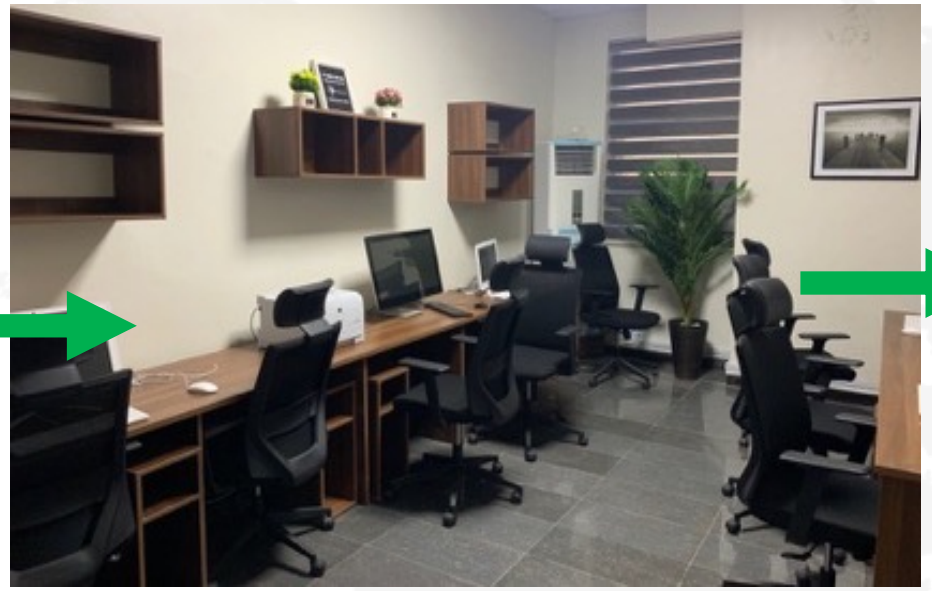
RAD-AID INFORMATICS PROGRAM

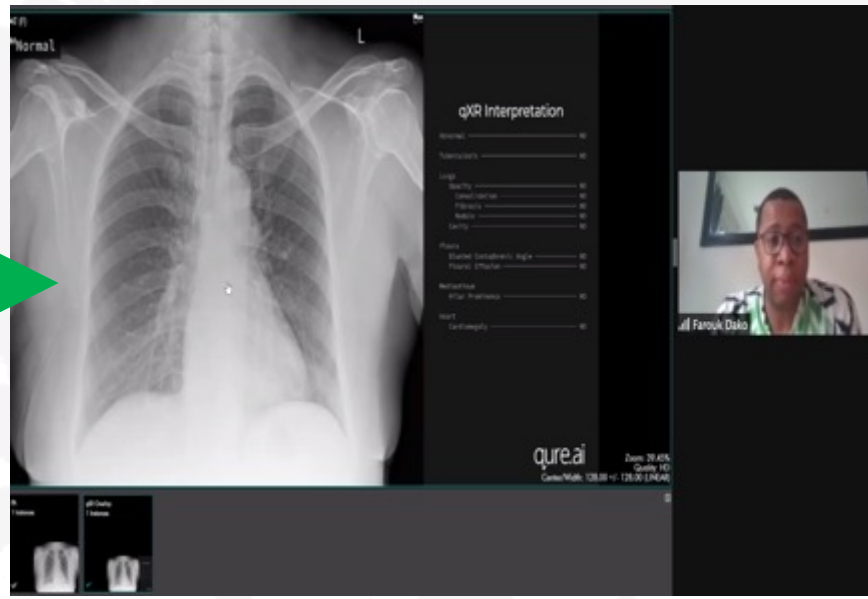


2021: University College Hospital, Ibadan

RAD-AID Radiology Serving the World

IMPACT of PACS/AI Nigeria





2018

All film, no computers

2019

Computers + PACS

2021

Digital Imaging + AI

University College Hospital in Ibadan, Nigeria

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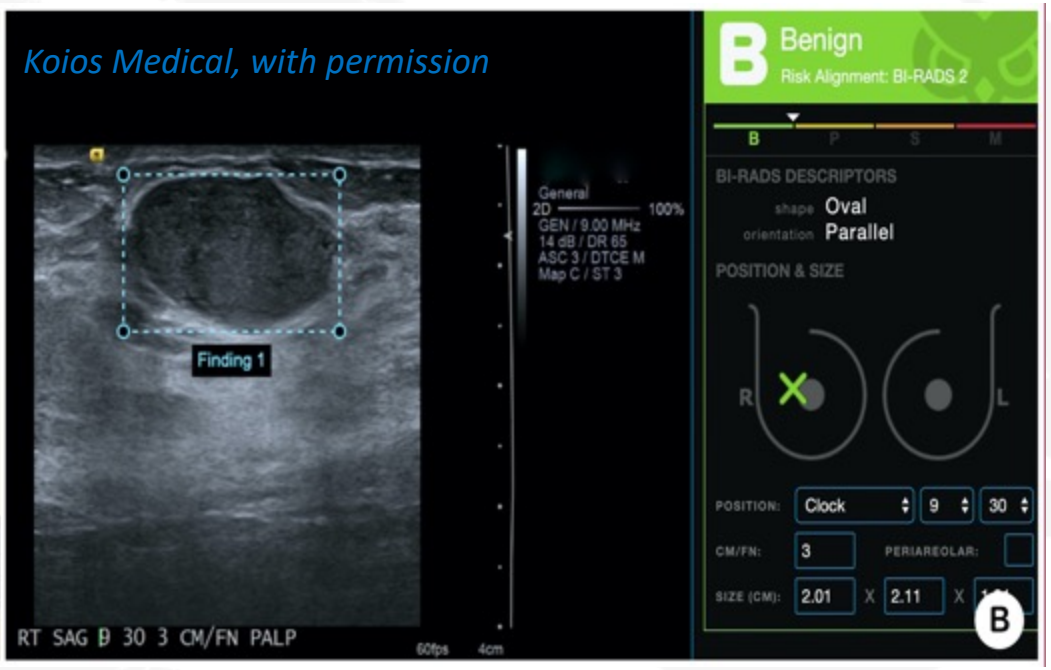
AI for Breast Cancer Screening


Koios Medical, with permission

Peru

Kenya

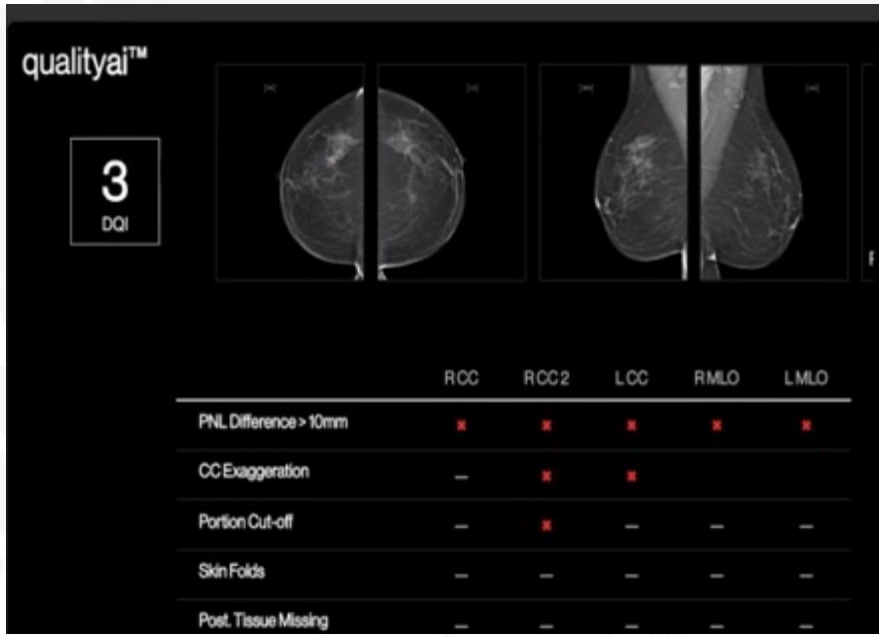
*With support from Koios Medical and Ambra Health

**Google Foundation Grant for Addressing Racial Bias in Radiology AI

AI for Breast Cancer Screening

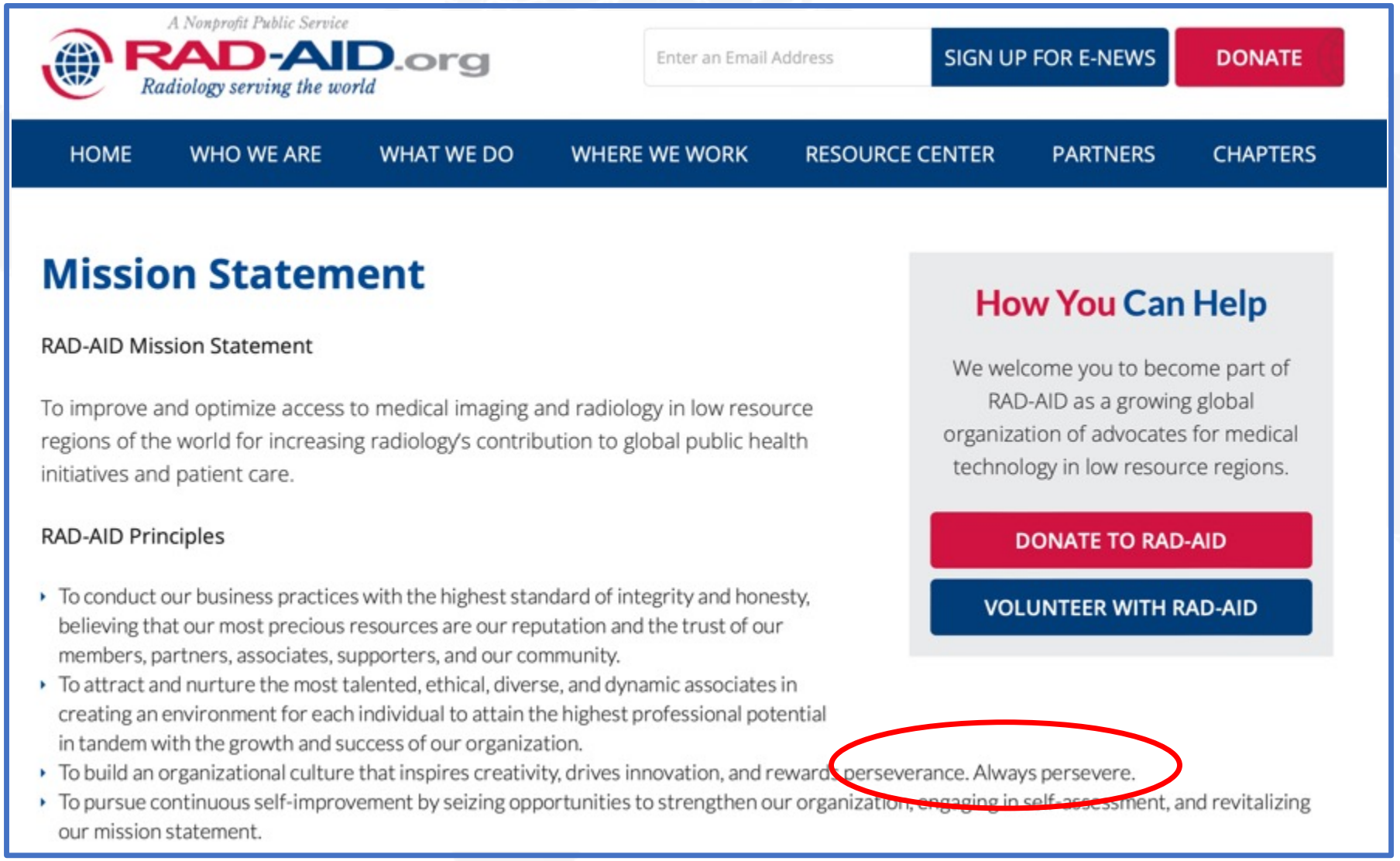
Interpretation Teaching

Mammo Suite Tech Training



AI Implementation

Perseverance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Radiology serving the world
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DONATE
HOME
WHO WE ARE
WHAT WE DO
WHERE WE WORK
RESOURCE CENTER
PARTNERS
CHAPTERS
Mission Statement
RAD-AID Mission Statement
To improve and optimize access to medical imaging and radiology in low resource regions of the world for increasing radiology's contribution to global public health initiatives and patient care.
RAD-AID Principles
To conduct our business practices with the highest standard of integrity and honesty, believing that our most precious resources are our reputation and the trust of our members, partners, associates, supporters, and our community.
To attract and nurture the most talented, ethical, diverse, and dynamic associates in creating an environment for each individual to attain the highest professional potential in tandem with the growth and success of our organization.
To build an organizational culture that inspires creativity, drives innovation, and rewards perseverance. Always persevere.
To pursue continuous self-improvement by seizing opportunities to strengthen our organization, engaging in self-assessment, and revitalizing our mission statement.
How You Can Help
We welcome you to become part of RAD-AID as a growing global organization of advocates for medical technology in low resource regions.
DONATE TO RAD-AID
VOLUNTEER WITH RAD-AID

RAD-AID Guyana: 2013

RAD-AID
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RAD-AID Guyana: 2016

RAD-AID Guyana & Guyana Ministry of Public Health, *2016*

RAD-AID Guyana: 2017

RAD-AID GUYANA

2 CT Donations

RAD-AID Radiology Serving the World

RAD-AID GUYANA

Georgetown Public Hospital

Bartica Regional Hospital

RAD-AID training of CT Radiology Professionals

RAD-AID GUYANA

BEFORE

AFTER

Donated PACS

RAD-AID GUYANA

First graduating class, 2020

RAD-AID Flywheel

- Procedure
- Patience
- Principle
- Perseverance

A Nonprofit Public Service

RAD-AID

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THANK YOU