Integrating the Healthcare Enterprise
In Radiation Oncology

IHE-RO

An initiative spearheaded by ASTRO

ATC • AdvancedTechnologyConsortium

Providing support in quality assurance and data management for radiation therapy clinical trials

IHERO Participants

- Societies Representing Healthcare Segments
  - RSNA, HIMSS, ASTRO, AAPM, ACR, ESTRO, ….
- Users
  - Radiation Oncologists, Medical Physicists, Radiation Therapists, Administrators, …
- NCI, ATC
- Treatment Planning System Vendors
- Facility Management Systems Vendors
- Therapy Delivery Systems Vendors
- Standards Development Organizations (SDOs)
  - NEMA, DICOM, HL7, ISO …

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IHERO Planning Committee (Cooper, La Plain; Co-Chair)

Develop Clinical Use Cases

Connectathons and Public Demonstration

IHERO Technical Committee (Curran, Swerdloff; Co-Chair)

Provides

Oversight

supervises

Establishes Integration Profiles and identifies standards

Global

IHERO

Task Force

Tripuraneni, Palta; Co-Chair

ASTRO Initiative

IHERO Domain-related Technical Working Group

Global Development:
Radiation Oncology Planning and Delivery Systems, IT Infrastructure, etc.

Interoperability

contribute

Users

IHERO Organizational Structure

IHERO Process

- Users identify desired functionalities that require coordination and communication among multiple systems

  - E.g., radiotherapy workflow, single registration, cross-device sharing of data

  - Find and document standards-based transactions among systems to achieve desired functionality

  - Apply necessary constraints to eliminate useless wiggle room

- Provide process and tools to encourage vendors to implement

  - software test tools (for example, tools such as MESA)

  - Connectathon interoperability testing event

- Provide tools and education to help users acquire and integrate systems using these solutions

  - Connectathon results and public demonstrations

  - Integration statements

IHERO Deliverables

- Integration Profiles
  - Describe clinical need and use cases
  - provide a more precise definition of how standards are implemented
- Technical Framework
  - Provides implementation specification for each transaction by specific reference to Standards
- Connectathon
  - Vendors implement these profiles and test their systems with software tools and at a face-to-face Connectathon, where they test interoperability with other vendors' systems.
- Public Demonstrations
  - Vendors publish IHE Integration Statements to document the integration profiles supported by their products