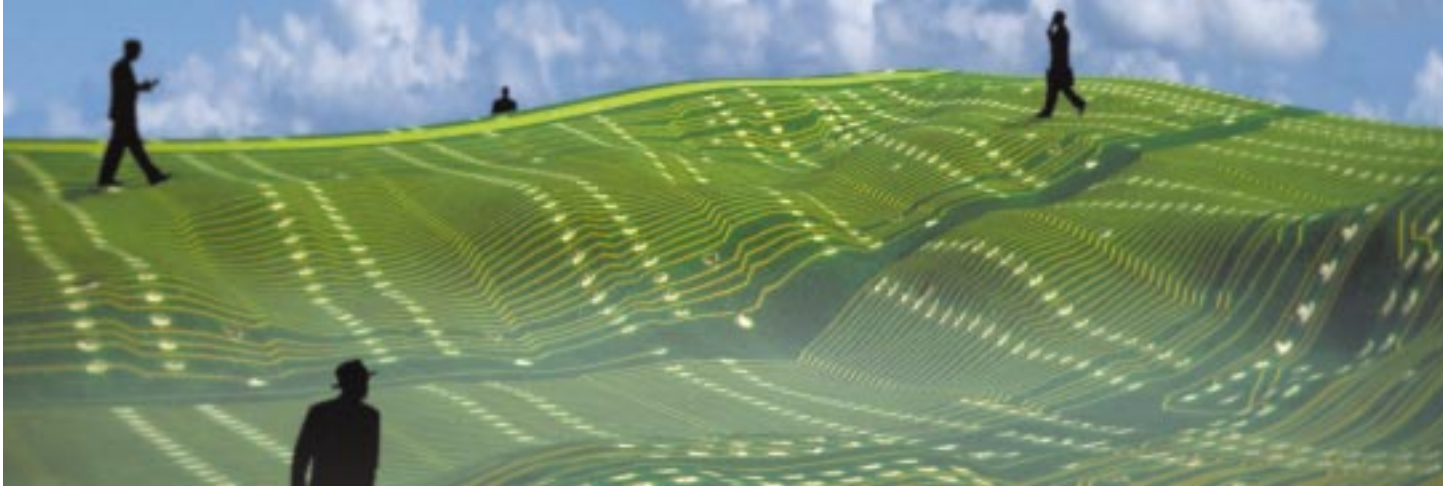


## ARIA™ Oncology Information System

### CONNECTIVITY SOLUTIONS



Improve patient care and increase operational efficiency by exchanging patient data and images with other healthcare departments electronically.

#### Key features

- > IEM's HL7-based interface engine allows oncology departments to exchange patient data with other clinical departments.
- > Hundreds of HL7 and custom interfaces currently in production improve connectivity to hospital information systems (HIS).
- > Extensive DICOM support provides reliable connectivity to medical equipment and imaging devices.
- > ARIA's connectivity solutions reduce time spent doing manual data entry.

The ARIA oncology information system uses HL7 and DICOM standard communication protocols to transfer data within and outside the oncology practice, making your department an integrated part of the broader healthcare system.

The main components of ARIA's connectivity solution are the Interface Exchange Manager (IEM) interface engine and DICOM. Varian's support for DICOM includes DICOM RT (Radiation Therapy).

- **IEM** exchanges patient-centric messages with hospital information systems and other HL7-compliant systems.
- **DICOM** (including DICOM RT) facilitates the transfer of images, treatment plans and patient history data to other DICOM-compliant systems.

Varian is an active member of the information technology community, and participates in Integrating the Healthcare Enterprise (IHE) and National Electronic Manufacturers Association (NEMA) initiatives. IHE and NEMA help reduce medical errors and increase workflow efficiency by promoting industry standards for data integration and exchange.

# Unified solution for medical and radiation oncology

The Information Exchange Manager (IEM) interface engine is the core of ARIA's HL7 connectivity solution. The product is designed to address the challenges oncology departments face exchanging patient information with the hospital information system and ancillary departments such as Pathology, Radiology, Pharmacy, and Laboratory.

In the simplest terms, the message flow is as follows:

- Specific events occur in the HIS that trigger messages to IEM.
- IEM interprets and validates these messages, then updates the appropriate fields in ARIA.
- As changes are recorded in ARIA, IEM automatically sends those messages out to external systems.

This feedback loop of information fortifies the central patient record with up-to-date information from a variety of sources.

## Improved patient care

ARIA continually updates the patient chart to ensure you always have the most current and accurate data available. And because IEM delivers patient data generated outside the oncology department directly to your desktop, you can make clinical decisions with the comprehensive medical record at your disposal.

## Increased efficiency

IEM frees your staff from time-consuming, repetitive data entry and allows them to redirect their energy to caring for your patients. Because your team is able to make use of pre-existing information rather than entering data from scratch, they are able to perform routine activities much more quickly – simplifying department operations and streamlining workflow. With IEM, you are in command – with the ability to specify which data are exchanged and how frequently updates occur.

## Effortless integration

Varian offers an extensive set of standard and custom interfaces to satisfy the connectivity requirements of oncology departments of any size. The power and flexibility of IEM's architecture allows you to easily add new interfaces as required. Completely configurable to support your practice, these interfaces eliminate the barriers to effective data exchange between software systems.

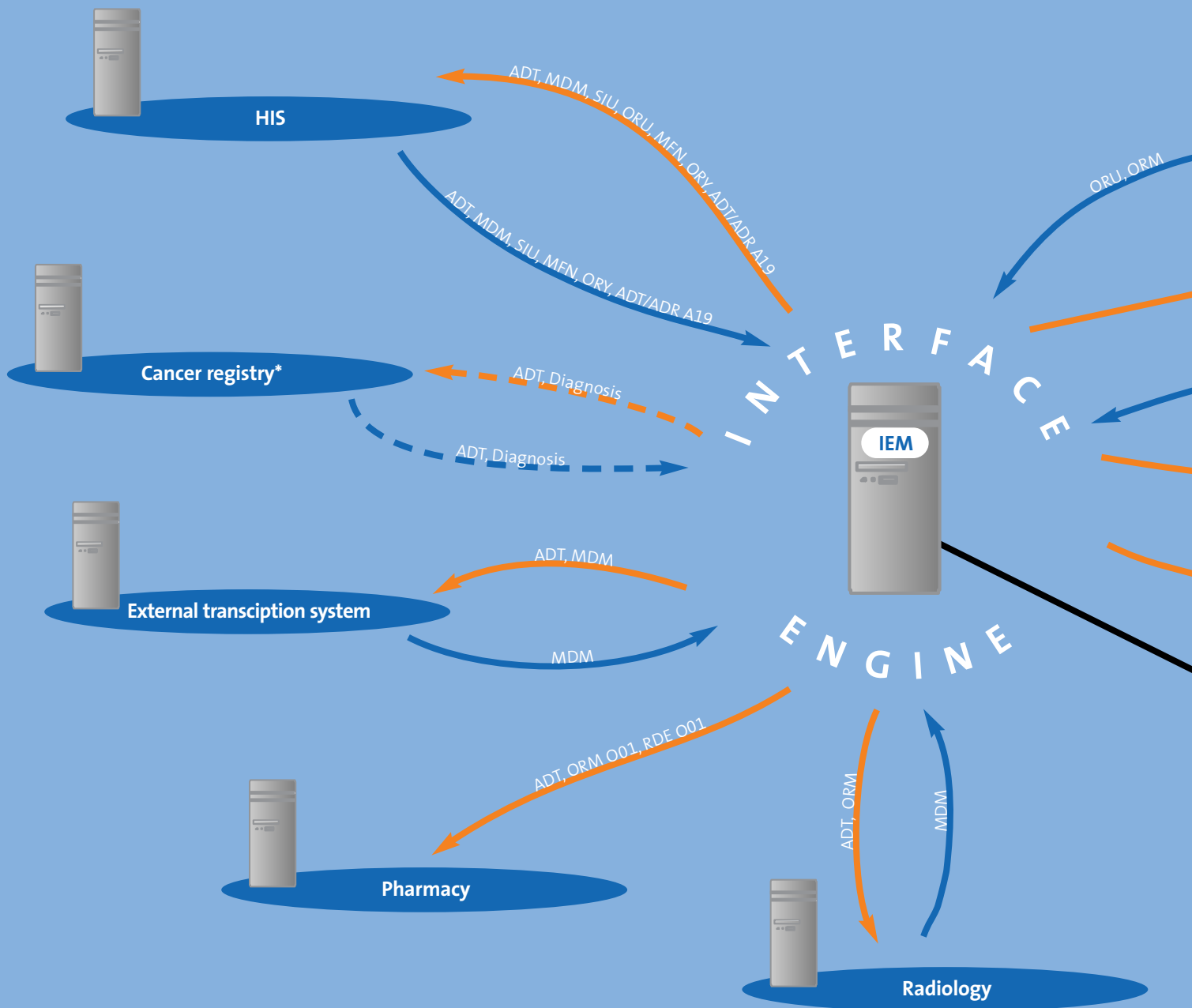
Features of the IEM product include:

- Support for standard HL7 messages
- Conversion of non-HL7 data to the HL7 format
- Real-time updates or schedule-driven updates at user-defined intervals
- Customizable data filters
- Communication through TCP/IP sockets or by exchanging files across a network
- Interfaces that run independently -- with separate filtering, data handling and processing characteristics
- Remote installation, configuration, and support

## Supplemental information

Review the IEM Overview at [www.varian.com/ARIA](http://www.varian.com/ARIA) for more information.

Interface Guides for IEM are available upon request. Please contact your local sales representative.



## PURCHASABLE INTERFACES

### Providers

Import: Contact information of referring physicians  
 Export: Contact information of attending physicians

### ADT/HIS

Import/export: Demographics  
 Insurance  
 Diagnosis

### Scheduling

Import/export: Appointments

### Billing

Export: Billing charges

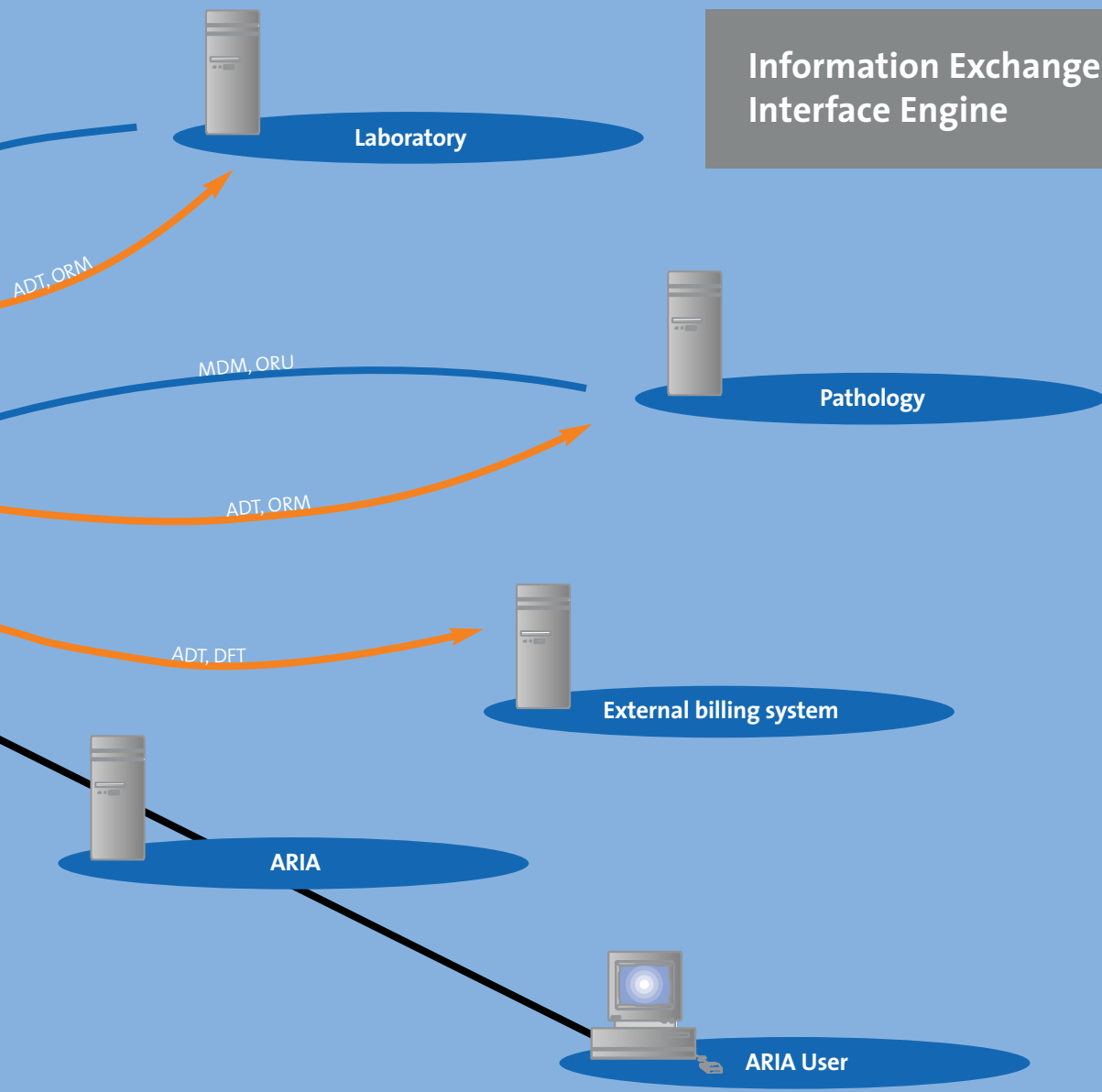
### Pharmacy

Export: Drug orders

### Daily Treatment

Export: Daily treatment summary

## Information Exchange Manager (IEM) Interface Engine



### Treatment Course

Export: Treatment course summary

### Transcription

Import and export: Notes

### Radiology

Import: Imaging report  
Export: Imaging order

### Laboratory

Import: Lab results  
Export: Lab order

\* Cancer registry - either inbound OR outbound

# Facilitating communication throughout the entire clinical landscape

Ensuring that image information is transferred effectively between medical equipment is critical to supporting accurate diagnosis and treatment.

For many years, Varian has been a leader in the implementation of DICOM for the electronic exchange of oncology images and data between image-based medical systems in the multi-vendor environment. We've adopted the DICOM® standard protocol defined by the NEMA so customers can choose the best equipment to meet the needs of their cancer treatment practice.

## Flexible connectivity

ARIA provides industry-leading DICOM connectivity so medical professionals can take advantage of the latest EMR capabilities.

DICOM capabilities include the following:

- DICOM Send allows images and RT objects to be sent to other DICOM RT devices
- DICOM Receive allows images and RT objects to be received from other DICOM RT devices
- DICOM Query/Retrieve allows the user to interrogate other DICOM devices and receive supported data
- DICOM Print allows images to be sent to DICOM compatible printers

## Advanced technology

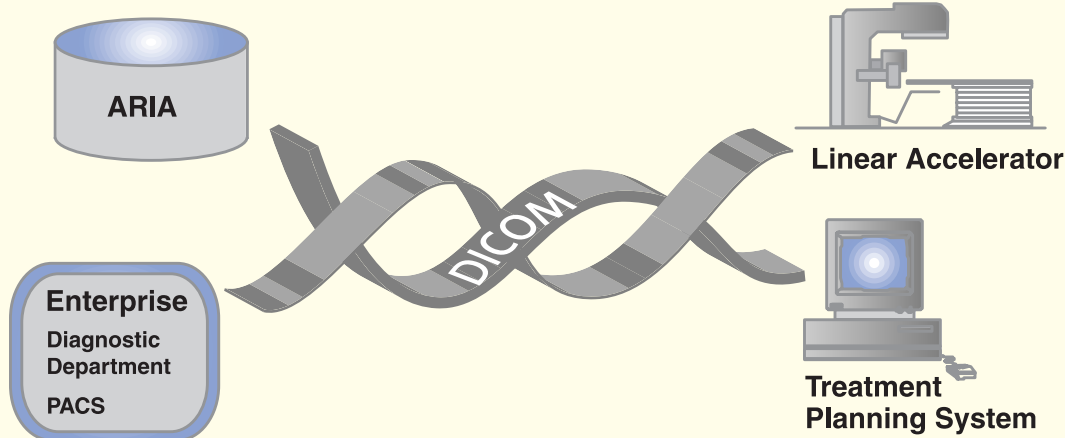
Standardization and unification allows for the rapid adoption of new technologies. By ensuring the integrity of your data you can increase the quality and effectiveness of your treatments and streamline processes for increased efficiency.

DICOM features in ARIA:

- Facilitate communication of digital image information, graphic, non-image data specific to radiation therapy
- Import complex treatment plans, treatment parameters from non-Varian treatment planning systems
- Communicate with Varian's 4D integrated treatment console
- Communicate with non-Varian linear accelerators
- Automate portal dosimetry



Transfer patient information and digital images across the healthcare environment using ARIA's connectivity solutions.



ARIA provides industry-leading DICOM connectivity so medical professionals can take advantage of the latest EMR capabilities.

### Dependable storage

ARIA enables you to store images and data while maintaining full image integrity and provides instant access to patient information when and where it is needed.

DICOM-enabled storage features include:

- Storage of multi-modality images such as CT, MR, and PET
- Connection to the PACS (picture archiving communications system) to store or retrieve images
- Seamless integration with Varian's Long Term Archive product

Long Term Archive stores clinical data in DICOM and XML format to online storage devices or removable media such as CD or DVD.

### Conformance statement

Varian's DICOM conformance statement is available on [www.varian.com/ARIA](http://www.varian.com/ARIA)

### Key features and functionality available in ARIA:

- Activity, cost, and charge capture
- Chart quality assurance
- Chemotherapy management
- Clinical trials management
- Data protection and recovery
- Data storage
- Drug safety support
- HL7-based interface engine
- Multi-department management
- Multi-modality image review
- Oncology-specific electronic medical record
- Patient encounter documentation
- Pharmacy preparation and dispensing
- Radiation therapy management
- Report generation and outcomes assessment
- Resource and activity scheduling
- Rule-based decision support
- Treatment plan/prescription workspace

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ARIA is part of the Inspiration™ integrated oncology environment.

*Inspiration, the Varian advantage*