PACS Integration

AI-Enhanced PACS Workflow Architecture

Imaging Devices
CT MR XR

— DICOM →

PACS
Picture Archiving & Communication System
Image Storage

↓ Route

AI Orchestration Layer
Study Router   Priority Queue

AI Models
Classification — Disease Detection
Segmentation — Organ/Lesion
Detection — Nodules/Fractures

↓ Results

Results Handler
DICOM SR • Annotations
Worklist Updates

Radiologist Workstation
Integrated View

Audit Trail
All predictions logged
Compliance tracking

Data Flow:
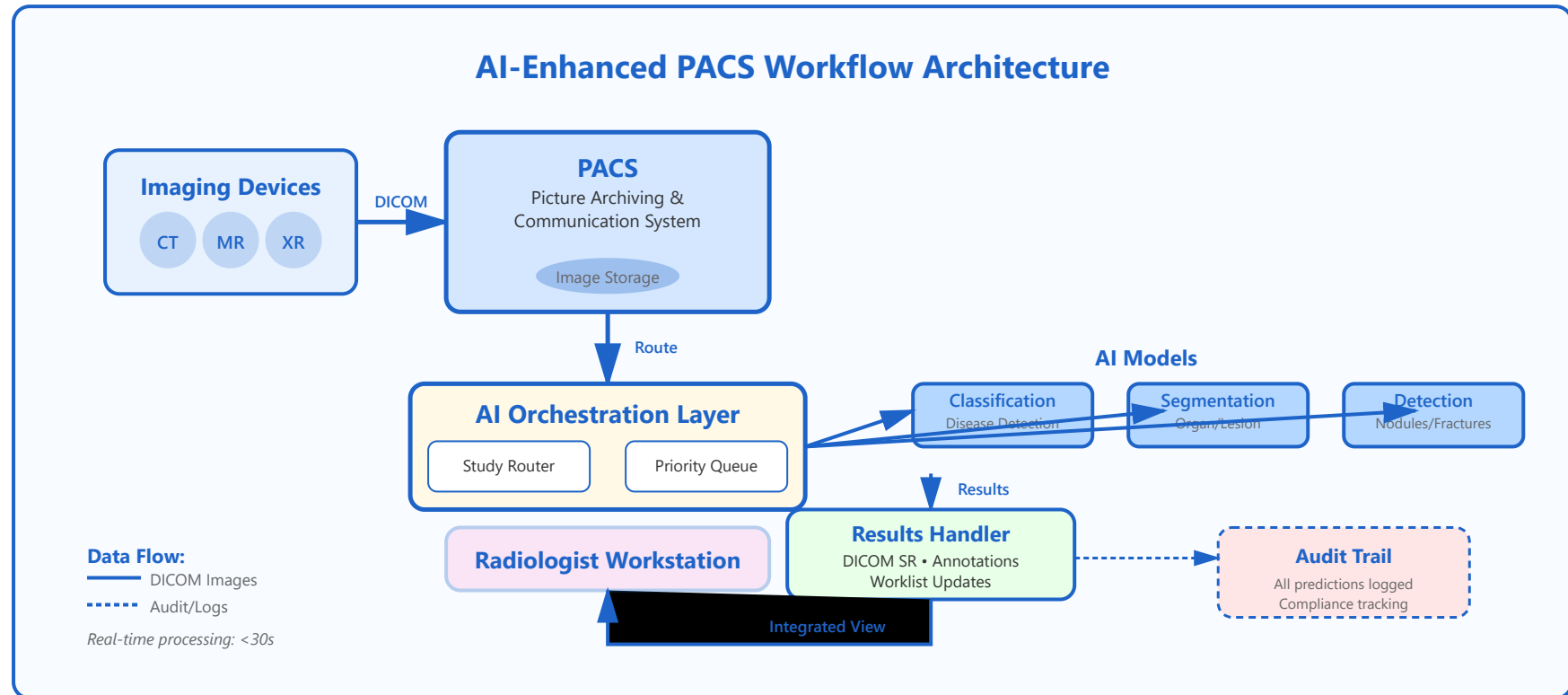——— DICOM Images
- - - Audit/Logs

Real-time processing: <30s

DICOM Workflows

Receive images, process, send results. Standard medical imaging communication

AI Orchestration

Routing studies to appropriate AI models. Manage multiple algorithms and priorities

Results Communication

DICOM SR, overlay annotations. Integration with radiology reporting systems

Worklist Prioritization

AI-driven triaging. Urgent findings flagged for immediate review

Audit Trails

Complete logging for compliance. Track every AI prediction and radiologist interaction