

# Get the Right Imaging History, *Before the Patient Arrives*

Smart Search automatically retrieves and delivers relevant prior studies so care teams are informed, repeat exams are avoided, and staff can focus on patients, not pursuit.

• Event-Driven

• AI-Powered

• Matching Verified

• HIPAA Compliant

Manual imaging retrieval hasn't kept pace with modern healthcare. Despite widespread digital adoption, most organizations still depend on a manual touch to track down prior studies. Studies arrive late or not at all, leaving care teams to make critical decisions without a complete picture.

Medicom Smart Search applies AI to turn a labor-intensive chore into a seamless background process. The system automates data retrieval to ensure information is consistently available without direct intervention.

## THE OLD WAY

### Manual, Slow, Hard to Scale

CD ingestion, fax ROI workflows, phone-based requests, and unconfirmed direct messaging left retrieval dependent on staff intervention at every step; slow, unscalable, and clinically unreliable.

## SMART SEARCH

### Automatic, Verified, Ready

Native HL7 ORM/SIU event triggers initiate retrieval automatically at scheduling. AI-driven matching confirms clinical relevance before any query reaches your PACS or network.

## Automate Retrieval and Free Care Teams to Focus on Patients

Smart Search eliminates the administrative burden of imaging retrieval by triggering automated searches directly from scheduled appointments. Staff can redeploy their time to patient care, and clinicians arrive at every encounter with a full imaging history.

- Retrieval initiated automatically by HL7 ORM/SIU messages, no staff action required
- Informative blocking compliance handled as part of the retrieval workflow
- Configurable routing delivers studies directly to your archive or holds them at a manual review checkpoint
- Every query is tied to a legitimate care event, controlled, and fully auditable

"At SMIL, Medicom has been a catalyst for operational excellence. Its automated workflows streamline patient matching and search, saving significant time and resources. The result: improved financial performance and an even higher standard of care for our patients."

**AJ Braga, Southwest Medical Imaging VP of IT**

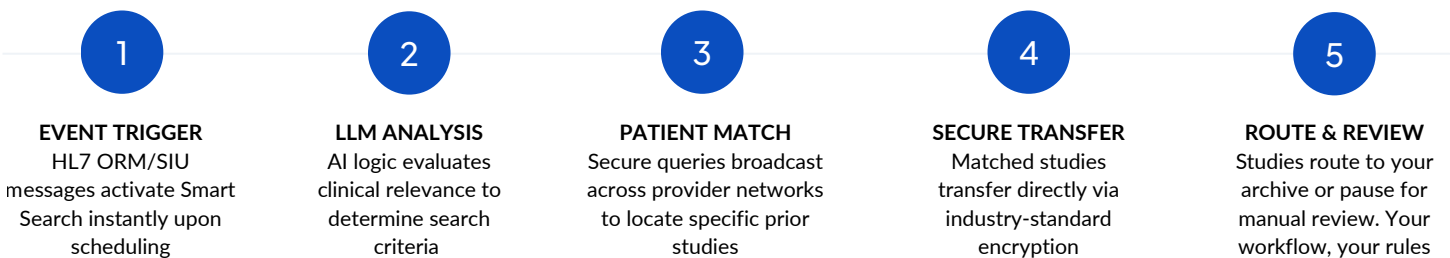
## Replace Manual Mapping With AI-Driven Clinical Intelligence

Smart Search uses an LLM trained on an extensive dataset of radiology procedures, and is purpose-built to understand radiology language and context the way clinicians do. Unlike rigid CSV mapping frameworks that fail when procedure descriptions deviate from expected formats, Smart Search dynamically interprets abbreviations, variable word order, and inconsistent coding, requiring zero mapping configuration.

By leveraging AI to replace manual updates and rigorous mapping activities, Smart Search enhances clinical accuracy and efficiency in ways that directly correlate to better patient outcomes.

- Captures procedure relationships regardless of word order, abbreviations, or formatting inconsistencies
- Adapts automatically to code and description changes, no reconfiguration required
- Continuously improves over time through ongoing model refinement
- Surfaces clinically relevant priors while filtering unrelated studies from search scope

## How it Works



## Built for HIPAA. Designed for Trust.

Smart Search operates on a layered security model governing every stage from query initiation to data delivery. Searches can only be triggered by official HL7 messages between organizations that have explicitly opted in, eliminating unauthorized ad hoc queries. All patient data interactions are logged in comprehensive audit trails, and data is protected at rest and in transit with industry-standard encryption. All customers operate under a BAA.

## Smart Search for FHIR® Organizations

For Epic and other FHIR®-enabled organizations, Medicom's SMART on FHIR® apps extend Smart Search with EHR-native tools that enhance matching accuracy and protect downstream system performance.



APP

### Patient Match

#### 6-Point FHIR Verification

Cross-references six demographic points against your EHR for a more definitive match

#### Protect PACS Performance

Smart Search uses FHIR to query the EHR first, protecting performance before issuing DICOM queries to your PACS



APP

### Append

#### Automated Study Appending

Updated reports and corrected demographics attach to outbound studies automatically at transfer

## Matching the Way Clinicians Think

When an order is placed, Smart Search evaluates every prior in the patient's chart against its clinical context, not just its label. The example below shows how AI-driven matching identifies relevant priors that traditional CSV-mapping misses entirely, including anatomically related studies that share no exact terminology with the ordered procedure.

Ordered Procedure

CT ABDOMEN W/O CONTRAST

Patient’s Prior Procedures in Chart

- US RENAL / BLADDER
- CT ABDOMENT & PELVIS W/O CONTRAST
- US RETROPERITONEAL COMPLETE
- US THORACENTESIS
- US VASC DPLX AB/PEL/RET LTD

## Clinical Revelance Selection

| Prior Procedure                   | Smart Search | CSV Mapping |
|-----------------------------------|--------------|-------------|
| US RENAL / BLADDER                | ✓            | ✗           |
| CT ABDOMENT & PELVIS W/O CONTRAST | ✓            | ✓           |
| US RETROPERITONEAL COMPLETE       | ✓            | ✗           |
| US THORACENTESIS                  | ✗            | ✗           |
| US VASC DPLX AB/PEL/RET LTD       | ✓            | ✗           |

| Feature                | Description                                                                                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Event-driven retrieval | Triggered automatically by HL7 ORM/SIU messages from scheduled appointments or orders, no manual initiation required              |
| Adaptive AI matching   | LLM trained on millions of radiology procedures dynamically adjusts to code and description changes with no mapping configuration |
| Natively integrated    | Built entirely within the Medicom platform, no third-party applications required                                                  |
| Configurable routing   | Studies route directly to the archive or pause at a manual review checkpoint.                                                     |
| Audit trails           | Comprehensive logs track all patient data interactions for full transparency and compliance                                       |
| FHIR integration       | SMART on FHIR apps extend matching and append capabilities for Epic and other FHIR-enabled EHRs                                   |