



MEDICOM

CONNECTING YOU TO HEALTH INFORMATION.

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MEDICOM'S MISSION

MEDICOM'S MISSION IS TO MAKE IMAGES ACCESSIBLE AT ALL POINTS OF CARE. IN THIS MISSION, MEDICOM IS FOCUSED ON ADDRESSING FOUR MAJOR CHALLENGES THAT ARISE FROM INACCESSIBLE IMAGES.

Patient Engagement

Seeing patients carry around stacks of CDs and DVDs with their medical imaging is perplexing, most patients have a smartphone, a computer, and a fully equipped patient portal thanks to Meaningful Use. So why are patients still tasked with being couriers of physical media containing their medical records? A patient should be able to login to their patient portal, search for their provider, and share their medical images — seamlessly and electronically. The provider receiving the images should obtain them in an electronic format available through their PACS or EMR. Medicom empowers patients with these tools.

Rising IT Costs

By 2020, half of the world's global storage demand will be made up of medical images. Medicom is challenged with making images accessible at all points of care, without contributing to this major imaging IT infrastructure dilemma. Medicom's systems are developed on a unique and proprietary platform. Instead of creating a central repository that holds an incomplete history of a patient's imaging — Medicom has built a decentralized network that gives providers, patients, HIEs, ACOs, and researchers access to images directly from their source.

Challenges Due to Inaccessible Images

Re-Imaging

Every year, the United States healthcare system spends about \$10 billion on re-imaging due to inaccessible prior images. This isn't hard to imagine when you consider the scenario where a patient walks into the emergency room with shortness of breath, nausea, a headache, and a history of small cell lung cancer. With immediate access to the patient's imaging history, a physician might find an MRI of the head and a CT of the chest that indicates the patient is in complete remission and assesses the patient is having a viral episode. Without this information, the patient is likely to be re-imaged and/or admitted to the hospital. Medicom's search engine for imaging gives physicians the complete view of a patient's imaging history to prevent re-imaging.

Exposure to Excess Radiation

Medicom was started in 2015 to work on a major challenge in oncology care for a national oncology delivery network. For medical and radiation oncologists to be able to monitor disease progression and evaluate treatment response, access to a patient's complete medical imaging history is compulsory. But what if the patient is in and out of different hospitals and imaging centers? How can an oncologist get all of the information they need without re-imaging the patient and exposing the patient to excess radiation? Medicom gives oncologists access to a patient's complete medical imaging history and therefore, reduces exposure to excess radiation.



MEDICOM IS REVOLUTIONIZING THE WAY IN WHICH PATIENT INFORMATION IS EXCHANGED.

**RON CORNETT,
DIRECTOR OF IT**

**RADIOLOGY LTD.
TUCSON, ARIZONA**



SOLUTIONS

ImageX

Medicom's ImageX is a decentralized network for medical image exchange. ImageX connects disparate PACS, VNAs, and cloud-based image sharing systems to become your single interface for electronic image sharing.

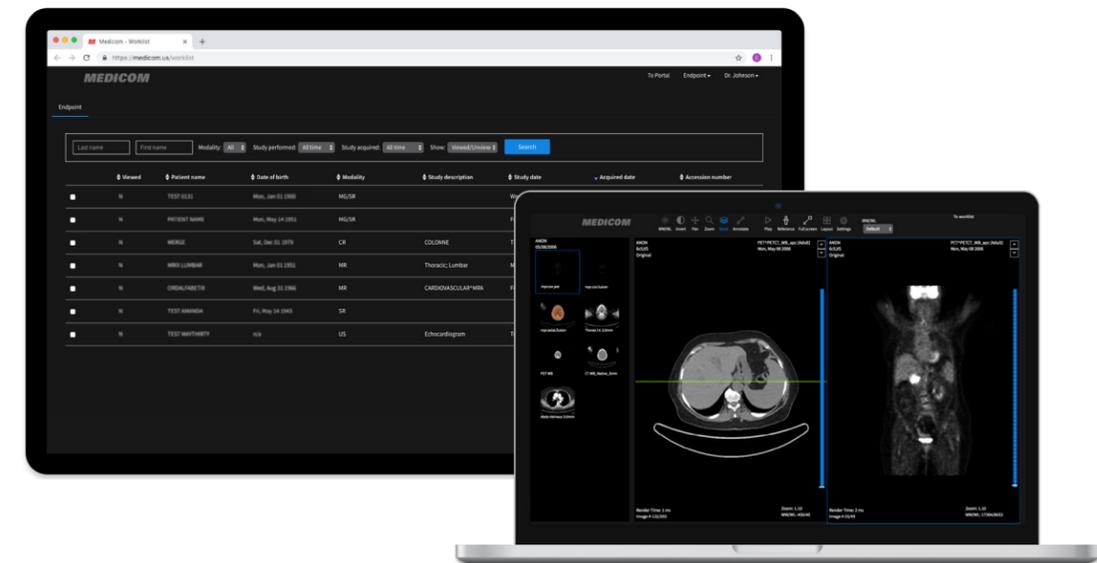
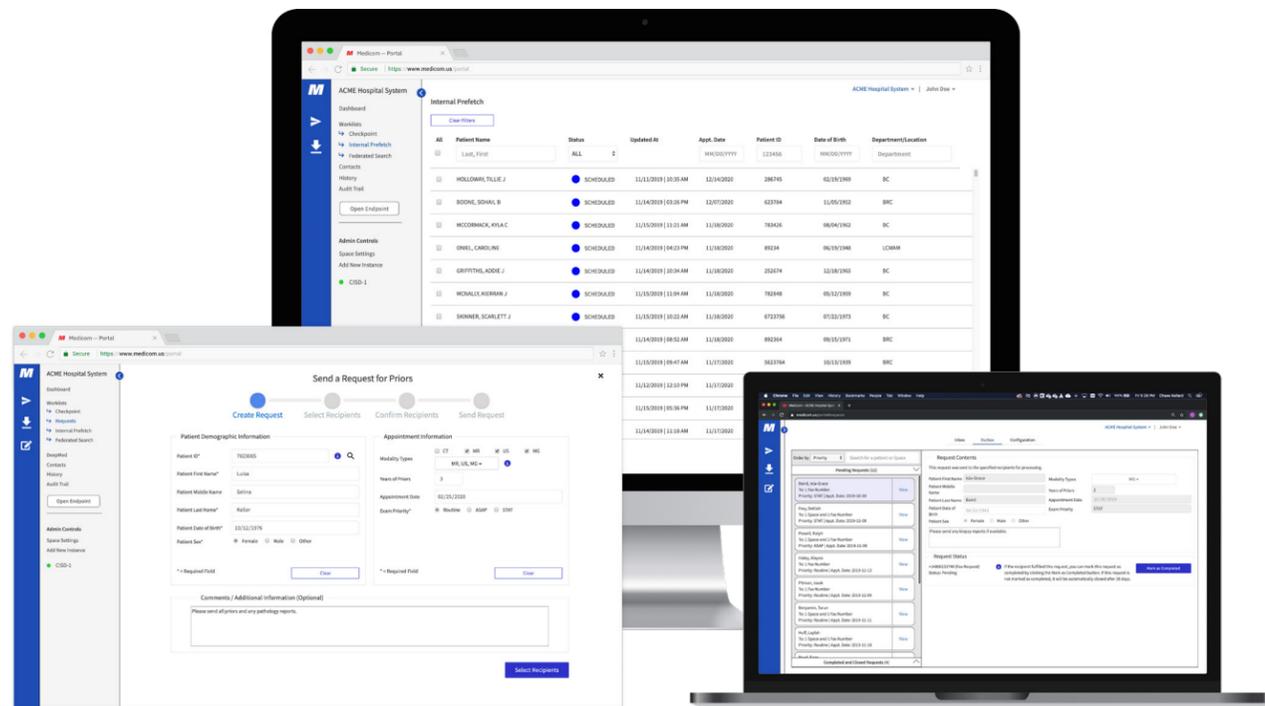
Capturing a patient's imaging history from disparate systems within a community can prolong patient care and create operational inefficiencies. For this reason, Medicom's ImageX is built to adapt to both clinical and operational workflows.

- Automate cross-organizational patient identification to provide the complete view of a patient's imaging history.
- HL7-enabled and FHIR-capable for real-time access to reports in any system.
- Share images and reports directly from PACS, and perform automated queries to locate relevant priors.
- Perform targeted queries when specific patient information is needed, or broadcast queries when the location of a patient's information is unknown.

Endpoint

Managing and sharing images and reports without a PACS or VNA makes coordinating care hard. So we built Endpoint — an archive and web viewer for care coordinators, specialists, and surgeons without their own PACS. Endpoint leverages the Medicom ImageX Network to support real-time sharing of medical images and reports.

- Provide one-click access to images and reports from a patient's electronic medical record.
- Automate workflows for patient matching and quality assurance.
- Perform broadcast and targeted queries within the ImageX Network.

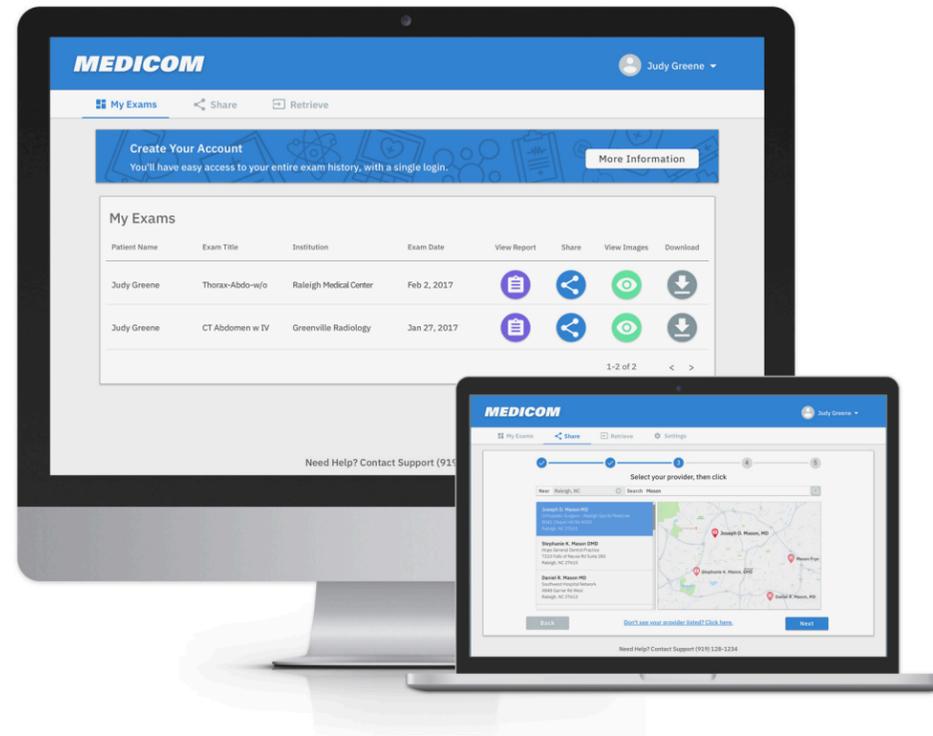


SOLUTIONS

Patient Link

Patient Link gives patients easy access to their complete imaging history. We've optimized the Patient Link user experience for viewing, managing, and sharing studies with anyone. Facility staff can easily generate and distribute access codes, granting patients portal authentication. Patients can then search for and share studies with any provider, leveraging both Medicom's ImageX Network and the Direct Protocol to ensure studies are delivered directly into existing clinical workflows.

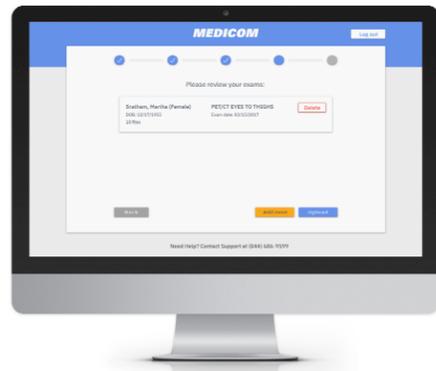
- Automate the distribution of image accessibility and drive patient engagement by integrating Patient Link directly with existing patient portals.
- Generate and deliver secure access links for providers to view and download images and reports, upon patient request.
- Automate the CD/USB burning process for patients with a zero-footprint burning applet.
- Optimize study download formats for offline viewing or PACS import.



Continuity

In all care settings, physicians have few reliable options for gaining access to prior clinical information. Inconsistent access to prior clinical information delays patient access to appropriate medical care and increases health systems' administrative overhead.

- Locate and retrieve relevant clinical information from the community before a patients' appointment.
- Consolidate structured and unstructured information across organizations.
- Quickly access patient records and view a comprehensive narrative within a single interface.



UpLink

UpLink enables participants on the Medicom Network to generate one-time access for patients and outside facilities to upload prior images and reports. Patients and providers receive secure access to the UpLink portal where they can automatically upload and transfer images from a CD or USB.

UpLink integrates directly with existing patient portals, so patients can seamlessly upload prior images and reports during registration.

deepMed

Based on ImageX and Continuity's building blocks for indexing and federating access to medical images, deepMed is Medicom's system for collecting and de-identifying medical images for research, machine learning, and AI applications.

- Queries, indexes, and identifies studies based on patient history, conditions, and outcomes depending on the research application.
- Automates de-identification of images, even when there is burned-in PHI.
- Secures delivery of big data sets.

CASE STUDY



Introduction

Arizona Oncology, one of the largest medical groups in Arizona, set out to resolve the difficulties associated with image sharing, including obtaining prior images more rapidly and more consistently, providing images performed at Arizona Oncology to other facilities for continuity of care, and facilitating electronic access to patients' exams.

Through late 2015, nearly all image sharing at Arizona Oncology occurred through the use of CDs. However, using CDs presented multiple challenges. CDs typically took days to reach their destination. Arizona Oncology techs were typically working 1 to 2 hours of overtime daily to burn discs, ingest studies sent from outside facilities, and manage the protected health information on the CDs, as they posed a HIPAA security risk to the practice and the patient.

Arizona Oncology's goals were to accelerate image sharing in order to improve patient care, reduce the cost of image sharing, and reduce HIPAA security risk.

Electronic Image Sharing

To address these issues, Arizona Oncology set out to use Medcom's ImageX Network to exchange images with two far-reaching radiology groups in the community. This use-case grew organically to a much broader network including all of the major hospitals, critical access hospitals, radiology centers, and specialty practices with imaging in the area.

Network Utilization

The number of images sent via ImageX grew exponentially in 2016 and continued to grow in 2017. The growth directly correlates with the increased number of centers using ImageX.

Impact on Finances

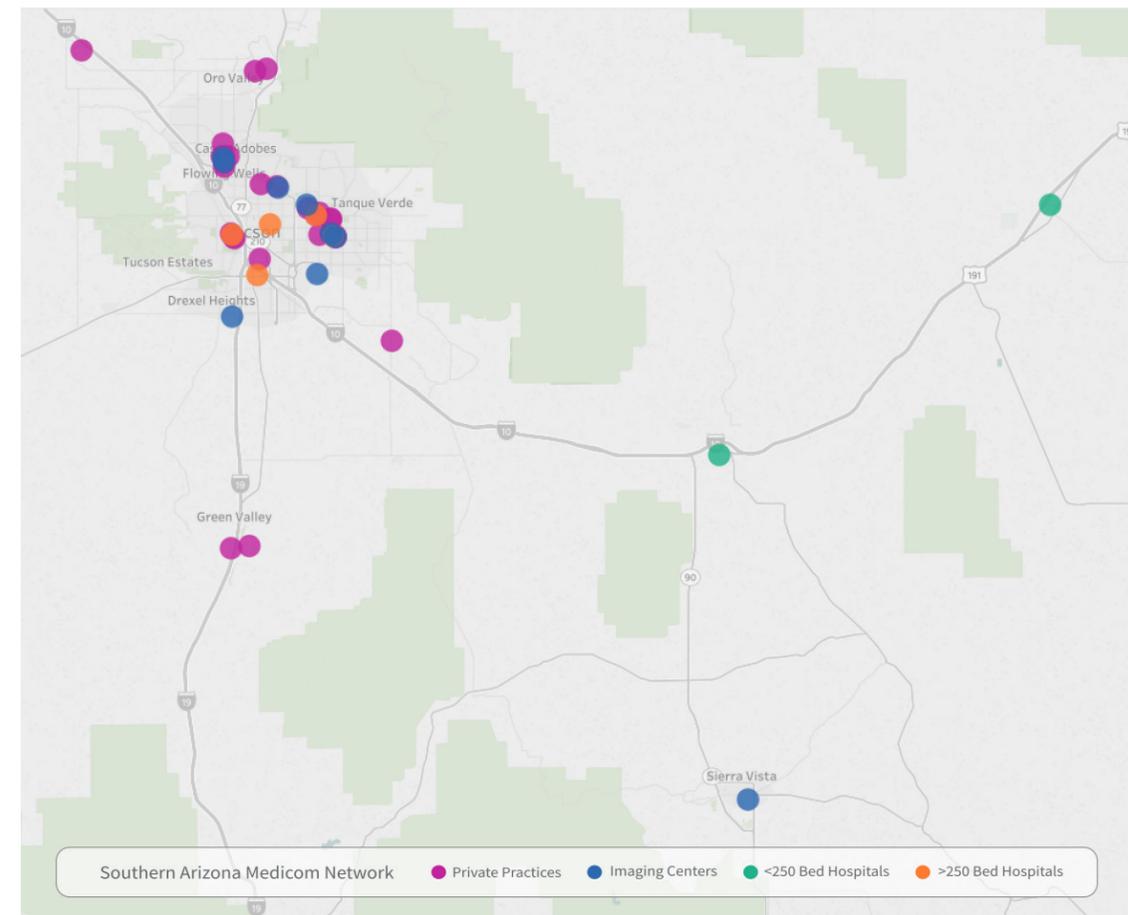
Medcom made it possible for Arizona Oncology to scan 6.0% more patients in 2016 than in 2015. The additional scans translated into a 6.8% improvement in profitability. Arizona Oncology's goal to reduce costs and risks associated with image sharing was accomplished by implementing Medcom. Furthermore, the physicians were available to care for additional patients, improving patient and physician satisfaction, as well as profitability.

6 %

INCREASE IN PATIENTS
SCANNED FROM 2015 TO
2016

6.8 %

INCREASE IN PROFITABILITY





Frustrated by the expense and unreliability of CDs, I began my search to replace physical media in our imaging centers.

I spoke to several vendors, some of whom were new start-up companies and some were large PACS vendors. All of these solutions required a great amount of upfront expense, and none of them were the least bit impressive.

I discovered Medicom at RSNA, and after talking at great length with their representatives, I am happy to say that we now have the perfect solution to our image distribution needs.

David Edds

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