

# From Static to Dynamic: Enhancing Clinical Assessment with Dynamic Digital Radiography



In today's high-volume healthcare environment, the demand for precise diagnostic tools has never been greater. While traditional digital radiography (DR) provides an essential anatomical snapshot, it often falls short in visualizing dynamic movement or detecting subtle abnormalities that manifest only during activity. Dynamic Digital Radiography (DDR), also known as Digital Cineradiography, bridges this gap by adding a functional layer to traditional imaging.

## Functional Imaging at the Speed of Motion

DDR utilizes high-speed acquisition to capture anatomical structures in their natural state of movement

- **High-Frequency Acquisition:** The system acquires between 6 to 15 frames per second, providing a detailed sequence of X-ray images over several seconds.
- **Retrospective Review:** These sequences are saved as a "stack" that clinicians can play back as a cine-loop. This enables retrospective review of how bones, joints, and soft tissues behave dynamically under physiological stress.
- **Enhanced Diagnostics:** By observing motion, clinicians can identify joint instabilities, spinal malalignment, or respiratory dysfunctions that remain hidden in static images.

## An Alternative to Fluoroscopy

DDR represents a paradigm shift in diagnostic imaging, serving as a highly efficient bridge to conventional fluoroscopy for non-interventional motion exams, offering the motion-capture benefits of fluoroscopy with the added advantage of high-resolution retrospective review and lower administrative overhead.

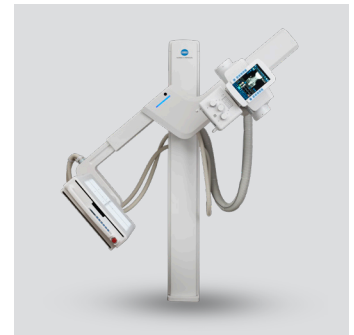
- **Diagnostic Versatility:** DDR is effective for specialized motion studies such as **sniff tests** (diaphragm excursion), **swallow studies**, **arthrograms**, and **fistulograms**.
- **Reduced Provider Burden:** Unlike fluoroscopy, DDR does not require the in-room presence of a physician during image acquisition, significantly freeing up specialist time.
- **Workflow Optimization:** Exams can be performed by a technologist as a natural extension of a standard radiographic workflow, increasing room throughput and reducing patient wait times.

## The DDR Advantage Across the Konica Minolta Portfolio

DDR technology is an optional enhancement for our premier X-ray systems, delivering superior diagnostic detail throughout the continuum of care.

### 1. KDR® DDR Advanced U-arm System

The ultimate in versatility and space efficiency, the KDR Advanced U-arm is designed to perform the full range of general radiography exams. When equipped with DDR, it becomes a powerful tool for weight-bearing musculoskeletal studies and comprehensive chest imaging.



KDR Advanced U-arm System

### 2. KDR® Flex Overhead X-ray System

For high-volume hospital environments, the KDR Flex offers the speed and flexibility needed for complex cases. Integrating DDR allows for seamless transitions between standard anatomical views and dynamic functional assessments, improving interdisciplinary collaboration through visual evidence.



KDR Flex Overhead X-ray System

### 3. mKDR Xpress® Mobile X-ray System

Bring advanced dynamic imaging directly to the patient's bedside. The mKDR Xpress with DDR capability is ideal for evaluating respiratory function or joint movement in patients with limited mobility, providing critical diagnostic data in the ICU, Emergency Department, or bedside.



mKDR Xpress Mobile X-ray System

Contact Konica Minolta Healthcare Americas today at **+1 (973) 633-1500** or visit **healthcare.konicaminolta.us** to schedule a clinical demonstration and see how DDR can become the new standard of excellence in your facility

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