Technical Exhibits Focus

RSNA Exhibitors are Delivering Tomorrow's Radiology Today

Change Healthcare Helps Radiologists Achieve Outcomes

By Michael Hart

Until recently, many radiologists were familiar with a modest definition of enterprise imaging that emphasized the ability to share patient information throughout a department or even across an entire health care facility. But as the concept of enterprise imaging matures, so does its definition.

"The use of enterprise imaging solutions to manage information across all facilities and all departments is a strong starting place," said Tomer Levy, vice president, strategic portfolio at Change Healthcare. "But its true purpose goes beyond simply managing the flow of information. By leveraging the data contained in enterprise imaging solutions, organizations should take important steps to improve clinical, financial and operational outcomes."

No matter how you define it, as health care transitions from a volume-based model to a value-based model, radiologists have moved a long way from simply reading images and making recommendations.

In terms of clinical care, Change Healthcare is shifting from the departmental performance with key performance indicators such as turnaround time, to focus on the higher level enterprise outcomes such as the emergency department throughput or improving compliance with incidental finding follow-ups. In one case study, Change Healthcare demonstrated how incidental finding follow-up compliance improved from 64 to 93 percent, according to Levy.

Operationally, successful enterprise imaging strategies should reduce cyber security risks, improve transparency and allow the organization to be more agile in responding to changing business needs.

The National Integrated Medical Imaging System, which serves 40 hospitals in Ireland, uses Change Healthcare's platform to process the workload of 35,000 active users who perform 2.5 million exams every year. At its peak, the platform can transmit 600,000 HL7 text messages per hour.

Finally, Levy said, enterprise imaging systems need to show return on investment (ROI) from the first day.

"That is the macro-trend in the imaging market today," he said. "There are heavy cost pressures, and they will dominate the discussion for the foreseeable future. The industry cannot sustain the huge capital spend and operational costs must be reduced. Leaders expect ROI to be clear, measurable and committed to."

One Change Health Care partner, a private hospital-based practice with 25 radiologists, has seen an overall efficiency increase of 3 percent since implementing Change Healthcare's platform.

It has eliminated the need for processing images an additional eight hours each day after 5 p.m. Over a 15-week period, during which 10 radiologists might have been working, that has translated into a savings of \$145,000.

In many ways, this is just the beginning. According to Levy, once the full potential of artificial intelligence and cloud computing is tapped, there may be no limits to the clinical, operational and

financial benefits enterprise imaging can provide.

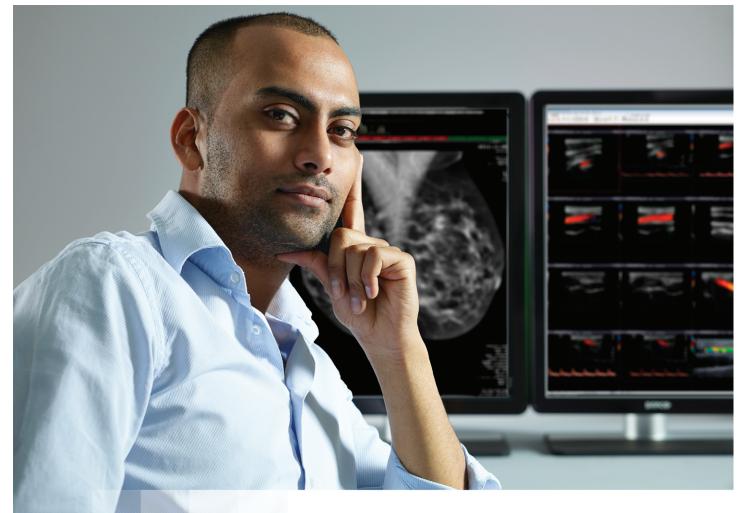
There is still work to do, however. "In medical imaging, we know that data is our greatest and most underutilized strategic asset," said Michael O'Connell, PhD, chief analytics officer for TIBCO Software, which has a strategic relationship with Change Healthcare.

But first data needs to be more accessible, and that requires some infrastructure.

According to Levy, three key pieces need to align before such assets become truly beneficial: Enterprise imaging, artificial intelligence and cloud adoption. "Once all three of those meet together, we will see the impact."



Tomer Levy



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3D PRINTING AND IMAGING **PRINTING SYSTEMS**

Ultimaker BOOTH 1968J

Using 3D Printing to Solve Clinical Problems



Ultimaker, a manufacturer of desktop 3D printers, offers its Health Design Lab at Thomas Jefferson University demonstrating how to use 3D printing to solve clinical problems. From 3D anatomical models to aid in surgical planning to 3D printed prosthetics, 3D printing is changing how we approach medicine. Hear a talk from Robert Pugliese PharmD, BCPS, director of innovation design at Thomas Jefferson University and Jefferson Health and Philip Lim, MD, MRMD, chair, Department of Radiology at Abington Hospital - Jefferson Health on Monday at 1p.m. in the 3D Printing and Advanced Digital Showcase theater entitled, "Bridging health care and design: Using 3D printing to solve clinical problems."

ANGIOGRAPHY, CARDIAC AND **VASCULAR**

Shenyang MasTech Medical Device Co., Ltd

BOOTH 6022

Single Use Contrast Syringes and PTCA Accessories

Shenyang MasTech Medical Device Co., Ltd. is a Chinese medical device manufacturer of single use contrast syringes and PTCA accessories. MasTech-branded contrast syringes used for delivery of contrast media in digital subtraction angiography (DSA), CT angiography and MRI angiography are part of a full portfolio of contrast syringes that fit in most of the angiographic injectors on the market. The portfolio of syringes have been CEmarked, the manufacturing facility has been ISO 13485 certified and the contrast syringes received FDA 510(k) clearance.

AV/VR

Centerline Biomedical, Inc. BOOTH 1968H

3D Visualization and **Real-Time Navigation**



Centerline Biomedical, Inc. has developed IOPS, a 3D interactive navigation technology to support advanced endovascular interventions without heavy dependence on fluoroscopy. This Intra-Operative Positioning System, a technology invented at Cleveland Clinic, provides 3D visualization and real-time tracking during a procedure, enabling surgical precision and control for accurate device placement, simplified complex procedures and poten-

tially decreased costly reinterventions. The system's electromagnetic tracking system will reduce dependence on ionizing radiation and nephrotoxic contrast media, making endovascular procedures safer for patients and caregivers alike. At the same time, IOPS provides 3D visualization with high frame rates and full color.

BIOPSY

Focal Healthcare BOOTH 1350D

Prostate Fusion Biopsies



Focal Healthcare's new Fusion Bx 2.0 helps physicians perform prostate fusion biopsies more efficiently and accurately. It features a semi-robotic arm with unrestricted range of motion that allows freehand-like access to the entire gland while providing consistent probe pressure and minimizing deformation. It also includes automatic motion compensation which adjusts for patient movement to maintain image registration, allowing procedures to continue uninterrupted. A patent-pending hands-free counterbalance technology simplifies procedures by supporting the probe in any position and reduces the need for additional assistance. A stepby-step guided workflow combined with semi-automatic segmentation enables physicians to perform procedures in less time and with minimal training. Focal Healthcare is a Canadian-based medical device company committed to improving the lives of prostate cancer patients and their families by developing imaging tools that emphasize accuracy, efficiency and accessibility.

CONSULTING SERVICES

ONRAD INC.

BOOTH 3149

Customizable Radiology Solutions



ONRAD is a full-service, JCAHO-accredited radiology services provider offering complete customized radiology solutions 24/7/365 for facilities in the Unites States and beyond. The ONRAD team delivers teleradiology interpretation and a full suite of radiology services, including onsite diagnostic radiology, onsite interventional radiology, teleradiology services, quality assurance programs and billing services. The U.S.-based, ABR certified radiologists provide a wide variety of subspecialty

expertise and ONRAD's operations and IT staff are available 24 hours a day to provide complete customer support.

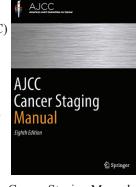
EDUCATIONAL PRODUCTS AND SERVICES

American Joint Committee on Cancer

BOOTH 1220

Communicating About Cancer

The American Joint Committee on Cancer (AJCC) established the way cancer is communicated. Clinicians and the surveillance community count on AJCC for the most comprehensive anatomic staging

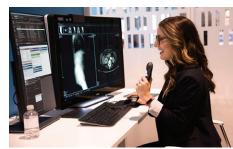


data available, the Cancer Staging Manual and Cancer Staging Atlas. The AJCC publications are recognized as the authoritative guides for cancer staging information and are used by medical professionals every day. Radiation oncologists routinely assign an AJCC stage to their cancer patients as part of their assessment and use treatment guidelines based on the AJCC stage.

ELECTRONIC HEALTH RECORDS

Cerner Corporation BOOTH 3935

Connecting Imaging to the Patient's Record



Cerner's enterprise imaging solutions connect imaging to the patient's record while also providing the advanced tools imaging professionals need in today's integrated health systems. Cerner's Radiology Information System (RIS) and/or PACS help streamline workflows — from registration and order entry, to image review and reporting, result/image distribution, and business analysis. Within a patient's EHR, it can include critical data such as allergies, lab values, current medications or historical radiology reports. It also allows, as an enterprise system, access to data across both business and geographic boundaries through enterprise wide access as well as universal worklists and data availability to make imaging as scalable and accessible as the rest of the EHR.

FURNITURE

Adept Medical BOOTH 4574

Table Accessories for IR, Cardiology and Neuro

Adept Medical has developed a range of table accessories to assist with interventional radiology, cardiology and neuro procedures. Designed and developed in conjunction with leading clinicians, the range



of products have been engineered with both patient comfort and ease of use for clinicians in mind, with a quick and simple set-up. They offer ergonomic working platforms, patient and device positioning to gain vascular access, securing the patient to ensure sterility and managing their operational environment. High performance engineering plastics and carbon fibre composites have been selected, giving rigidity, strength and durability to ensure product longevity. As a result, the products have low radiolucency, are light-weight yet strong and have excellent resistance to chemical attack associated with commonly-used cleaning products.

IMAGING SERVICES

Accumetra and QIBA Conformance B00TH 1024

QIBA Conformance Certification Service

RSNA's Quantitative Imaging Biomarkers Alliance (QIBA) and Accumetra have launched the first QIBA Conformance Certification Service for verification of



CT small lung nodule volume measurements.

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This new paid service enables clinical sites to verify that their CT scanners and software analysis tools are performing at a sufficient level to reliably measure the volume and change in volume of small solid lung nodules. A clinical site receives an institutionspecific QIBA Conformance Certification Mark that can be used to communicate the site's small lung nodule performance achievement. In addition, CT scanner and nodule analysis software vendors can also achieve QIBA Conformance Certification for their FDA approved products and achieve a product-specific QIBA Conformance Certification Mark to highlight the performance of their products.

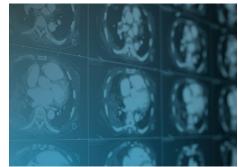
Full Exhibitor Listing

To see complete company profiles and product information, visit *meeting.rsna.org/exhibitor/*

MACHINE LEARNING/COMPUTER-AIDED DIAGNOSIS SYSTEMS

Blackford Analysis BOOTH NO. 7364

From Medical Imaging to Clinical Value



Blackford provides a single platform to quickly access and manage a curated

marketplace of regulatory approved medical image analysis applications and AI algorithms that add clinical value. Easily integrated into existing workflows, the platform provides actionable information that allows health care providers to use imaging information smartly and reduce the cost of care, while improving diagnostic confidence and patient outcomes. Fully integrated with existing systems, Blackford Platform simplifies implementing and managing multiple imaging applications and AI algorithms and eliminates performance degradation. New applications can easily be added to the image-processing platform, reducing

The information for these new products and services was provided by the manufacturers. Inclusion in this publication should not be construed as a product endorsement by RSNA.

implementation time, costs and long-term maintenance.

contextflow BOOTH 7367N

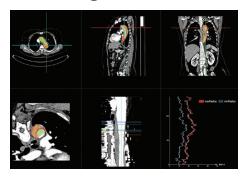
See Beyond a Single Case



Facing increasing workloads, radiologists must choose between longer working hours or decreased time spent evaluating images. contextflow's image search engine uses deep learning to put the knowledge encoded in millions of medical images and reports at the radiologist's fingertips. Simply mark a region of interest in an image and the search engine instantly returns reference cases and associated knowledge. contextflow's patentpending 3D image-based information search solution can be extended to additional pathologies and organs. Clinics can share information across institutional borders and benefit from a collaborative growing knowledge base, generating clinical value from existing data.

Huiying Medical Technology Co. Ltd. BOOTH 6370

Unleashing The Power in MI

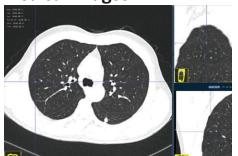


Huiying Medical Technology Co., Ltd. can provide good model training results even in small data samples. With a large of number of annotated data in the medical industry and the world's leading technical strengths in machine learning, deep learning, transfer learning and generative adversarial network (GAN), Huiying Medical Technology Co., Ltd. launches constantly an image cloud platform, big data analysis and AI research platform and AI assisted diagnosis for lung nodule, fracture, CTA and chest X-ray.

Shenzhen Imsight Information Tech Co.

B00TH 6170

Training AI to Analyze Medical Images



Imsight is training AI to analyze medical images for faster and more consistent disease detection using deep-learning

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techniques. Imsight's product portfolio tackles a wide variety of medical images from CT, MRI and X-ray to microscopic cell images in cytopathology and histopathology. The technology being developed will aid radiologists and pathologists alike to face mounting workloads, long report turnover times and diagnostic inconsistencies. Imsight has established research collaborations and product deployments with over 100 hospitals both domestic and abroad and also works in partnership with many medical device manufactures and digital platforms.

United Imaging Intelligence BOOTH 6167

AI Solutions for Medical Devices



Full-stack, full-spectrum AI, starting at the source

United Imaging Intelligence (UII) is committed to providing AI solutions for medical devices, imaging, and diagnosis and helping clients better understand and embrace AI. UII seeks to deepen knowledge and broaden experiences in medical imaging AI, innovate into multiple new dimensions and strive to be a trailblazer in the health care AI field. UII seeks to push for the broadest application of AI in the health care domain to empower and enable customers to bring health to all patients and citizens.

MRI

ETS-Lindgren B00TH 3217

MRI Shielding Solutions

ETS-Lindgren designs and installs endto-end MRI Solutions that work together. ETS-Lindgren provides MRI shielding systems inclusive of doors, floors, walls, windows



and lighting to reduce interference and lighting solutions to improve facility ambience and the patient experience. ETS-Lindgren also provides solutions for environmental magnetic field compensation for clearer imaging, ferromagnetic detection system for MRI safety and service for site planning, design, maintenance, training and education.

Resonance Technology, Inc. BOOTH 6310

Audio/Video Devices for MRI & fMRI



Resonance Technology, Inc. is a manufacturer of patient comfort audio/video devices for the MRI & fMRI. Resonance

Technology, Inc. is constantly reengineering new ways to make the MRI procedure as entertaining and sedation-free as possible, as well as making devices for research in the fMRI environment. Resonance Technology, Inc. offers three major systems: CinemaVision, VisuaStim and Serene Sound. This year, Resonance Technology, Inc. is introducing a high resolution MR-compatible projection system that can be used for patient viewing during the MRI procedure.

Technical Exhibition Booth Key

South Hall A

Booths 1000 - 5999

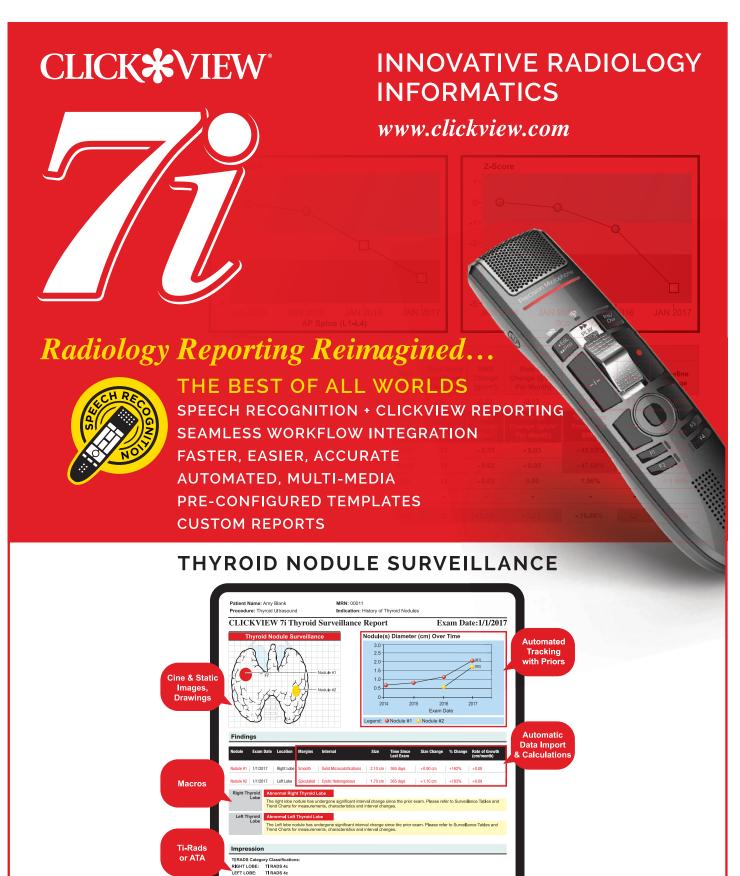
North Hall B Booths 6000 - 8999

PACS

IMAGE Information Systems Europe GmbH BOOTH 3151

Cloud-Based PACS for Orthos, Chiros and Vets

IMAGE Information Systems and PLUM Medical Solutions offer a cloudbased PACSon-demand solution iQ-4CLOUD. Especially designed for small to mid-sized health care institutions that want to access, view, store, import, print and share medical images efficiently and securely, iQ-4CLOUD provides freedom from the hassle of IT maintenance costs and investment, as opposed to traditional, expensive, onsite PACS. Developed in html5 to run on all operating systems and browsers, iQ-4CLOUD offers private labels for resellers and has been cleared by CE and FDA. iQ-4CLOUD follows the pay-per-use model and offers a variety of packages to choose from to manage precisely the amount of medical imaging studies needed. Providing secured image access from anywhere, iQ-4CLOUD is HIPAA and GDPR compliant and customers can enjoy 24/7 medical imaging including offsite backup.



VISIT US AT BOOTH #6550, NORTH HALL

Scimage, Inc. BOOTH 2216

Enterprise Imaging Solution



ScImage delivers image management solutions that matter and supports the evolution of enterprise imaging. A comprehensive enterprise PACS company, ScImage is shaping health care's future with image sharing, customizable departmental workflows and interoperability capabilities, connecting multiple modalities, PACS and EHR's for access to any image, anywhere, anytime. ScImage's PICOM365 Enterprise PACS is offers single sign-on access to patient data from all disciplines in one platform. Available to be implemented onpremise, in the cloud, or both, PICOM365 improves clinical collaboration and enhances productivity.

PRE-OWNED EQUIPMENT

AGITO Medical BOOTH 7903

A Healthcare Solutions Provider



AGITO Medical provides health care solutions to hospitals, clinics and distributors world-wide and offers an extensive selection of spare parts to hospitals, clinics, biomedical engineering departments and service providers, including coils, probes, boards, power supplies, monitors and much more. Next day delivery on all shipments within Europe and same day shipment outside Europe. Additional services include mobile rental solutions, providing a wide-selection of customized medical trailers and modular buildings available for short and long-term rental. High quality pre-owned equipment is available at affordable prices.

RADIOGRAPHY

Nemoto Kyorindo Co., Ltd. BOOTH 4970

Revolutionizing Interventional Radiology

Nemoto Kyorindo Co., Ltd. and Nemoto North America, Inc. announce the press duo elite contrast media delivery system. The press duo

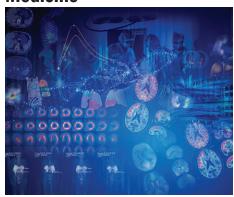


elite brings the commonplace CT simultaneous injection to the interventional radiology and angiography suite, enabling dilutions of contrast delivery to be programmed from the injector console. Nemoto also provides contrast delivery systems for CT, MRI and angiography.

SOFTWARE/IT SERVICES

Hermes Medical Solutions, Inc. BOOTH 4955

Precision Personalized Medicine



Hermes Medical Solutions offers an enterprise class software suite for molecular imaging diagnosis and treatment planning, making precision personalized medicine a reality. Hermes Medical Solutions delivers solutions that enable physicians to provide faster and more accurate diagnosis, improve patient outcomes and increase efficiency. Archive image data from multiple modalities within nuclear medicine and radiology with a clinical workflow for integration, visualization, processing and reporting. Hermes Medical Solutions' leadership within molecular imaging has been built upon technological innovation, a strong reputation for excellent customer service and historical success for clinical environments, academic institutions and industry partners.

Laitek, Inc. BOOTH 8322

Acquiring a PACS, VNA, Practice, Hospital?

For health care organizations undergoing mergers or acquisitions or buying a new PACS or VNA, Laitek Inc. provides a data migration service preserving complete clinical evidence – annotations, tech notes, key images, reports, teaching files – that may not otherwise come through conventional migration channels. Laitek has developed proprietary technology that enables dramatically faster migrations saving significant decommissioning costs. Laitek provides data recovery, cleansing, transformation and preservation of critical clinical evidence that must be maintained as a standard of care. Additional solutions include consulting, EHR decommissioning, breast tomo conversions and multi-tenant enterprise data import archives.

Sage Health Management Solutions BOOTH 1561

Evidence-based Medicine and Practice Institute

Sage Evidence-based Medicine and Practice Institute (SEMPI) is a recognized CMS-qualified Provider-Led-Entity (qPLE) designed to meet the new clinical decision support requirements for Medicare's advanced imaging orders. Sage Health Management Solutions (Sage HMS) has an exclusive license with SEMPI for its clinical content and Sage HMS makes the SEMPI content available through its RadWise CMS-qualified clinical decision support mechanism (qCDSM) and other qCDSMs

in the market. SEMPI's distinct approach using the clinical perspective of the ordering practitioner is quality-focused, patient-centered and user-friendly. SEMPI makes the most appropriate imaging decision for a specific clinical condition and provides hyperlinks to the details for each recommendation for transparency and to educate the users over time. SEMPI AUCs cover the entire episode of care, including when the most appropriate imaging recommendation may be a "No Imaging" recommended, and offers consideration of other (non-imaging) diagnostic tests, when appropriate.

CloudPost Networks
BOOTH 1255

Automatically Classify, Manage and Safeguard Devices



The CloudPost IoT Platform provides instant, granular device visibility and enables IT to quickly and automatically classify, manage and safeguard critical systems through an elegantly simple and intuitive interface. The CloudPost IoT Platform is purpose-built to manage connected devices across the entire institution. IT can implement comprehensive security measures such as device micro-segmentation and AI-driven network and firewall policies. Detailed device and network data processes allows clinical leaders to optimize the utilization of high-capital medical devices to maximize usage and minimize down time. Security and clinical leaders can automatically identify their complete connected device inventory, establish a comprehensive device-level threat assessment and know the true behavior of all connected devices in real time.

X-RAY

Chongqing Hualun Medical Instrument Co., Ltd.
BOOTH 4018

Medical Instrument Product Development

Chongqing
Hualun Medical Instrument
Co., Ltd. offers
medical instrument product
development,
production and
sales. Chongqing
Hualun's products
include fixed digital radiography
(DR), mobile DR
and fluoroscopy

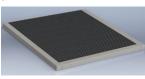


and provides high-quality professional DR chassis, suspension systems, X-ray machine body, collimator and other accessories. Magic MedTech is the subsidiary of Chongqing Hualun and focuses on the development, production and sales of bone mineral density instruments. Magic DXA6100 is a peripheral dual energy bone densitometer with high precision, efficient workflow, lower dose and introduced fashion elements into the industry design.

KA Imaging, Inc. BOOTH 1350A

Color X-Ray Detector

KA Imaging has developed a portable, multi-spectral (color) X-ray



detector to enable improved soft tissue differentiation. This detector is designed to obtain a multi-spectral X-ray image from a single X-ray exposure using a conventional hospital X-ray source. The patented technology features a portable and retrofittable design, capable of capturing a DQE digital radiography (DR) image. The color X-ray detector is ideal for both fixed and mobile DR applications, such as in the intensive care unit or emergency rooms.

RC Imaging BOOTH 4007

Laterals, AP, DP and Weight Bearing Series Solutions



RC Imaging Corporation announces three solutions for hospital and orthopedic radiology foot, ankle or knee procedures. Simple strength in design, these new products offer ease of use, mobility and cleaning and will accommodate DR panels, CR cassettes and analog. This weight bearing solution is within budget for many hospitals or clinics. RC Imaging designs, builds and supports products that will have a positive impact.

Shenzhen Angell Technology Co. Ltd.

B00TH 5122

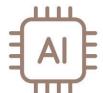
Highly Integrated Medical Imaging System



Angell Dynamic DR is a highly integrated medical imaging system that can perform digital radiography, digital fluoroscopy, digital gastrointestinal, digital contrast and interventional radiological imaging and other inspection, such as X-ray positioning and X-ray puncture. It mainly consists of: electric diagnostic bed, high frequency generator, dynamic detector, controlling console, workstation and ancillary equipment. By using dynamic technology, both radiography and fluoroscopy can be performed with one single X-ray machine. Alternatively, Dynamic DR can capture high-quality static image during 17x17 view size fluoroscopy with 9M pixels "Spot-Film."

The information for these new products and services was provided by the manufacturers. Inclusion in this publication should not be construed as a product endorsement by RSNA.

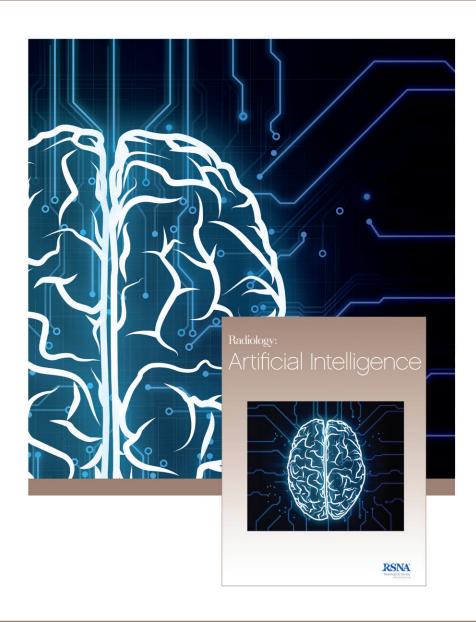
Radiology: Artificial Intelligence



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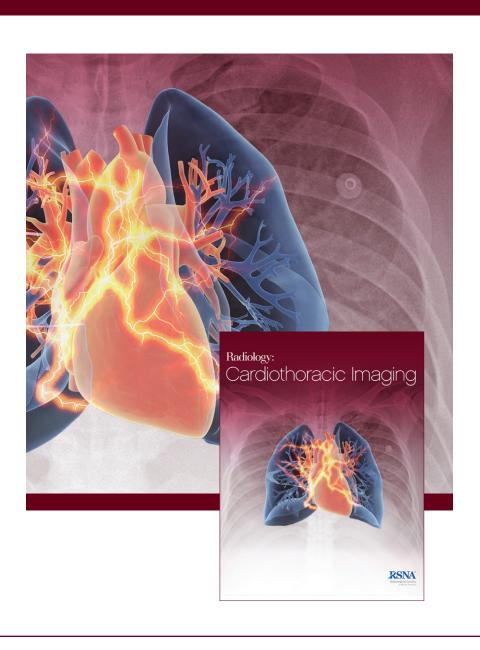
Radiology: Cardiothoracic Imaging



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