By Michael Hart

In today’s evolving healthcare ecosystem, clinicians are adapting to changing payment models and the collaborative approach those changes demand. As part of this evolution, radiologists need to proactively review and redefine their roles.

New strategies and tools will be required of healthcare professionals as they migrate from their figurative silos to a more collaborative environment, and adjust to the demands of value-based care, doing more with fewer resources.

Among those tools, said Tarik Alkasab, MD, of Massachusetts General Hospital and Harvard University, will be artificial intelligence (AI).

“Radiologists really see hundreds of patients each day. Artificial intelligence tools can be an aid in automatically detecting and picking up on things and then documenting them,” Dr. Alkasab said.

While AI is quickly becoming a topic of conversation in healthcare, Dr. Alkasab and Woojin Kim, MD, chief medical information officer for Nuance Communications, both said there are misconceptions about it.

“Some have tunnel vision when it comes to AI in radiology,” Dr. Kim said.

He noted that when you attend radiology conference sessions associated with AI, they typically focus on image characterization, such as “detecting pulmonary nodules and intracranial hemorrhage.”

In fact, Dr. Kim pointed out, “there is a much greater role that AI can play.”

But, he explained, few people are aware of how artificial intelligence is already at work in every facet of their lives.

“They are surrounded by AI that does so many great things for them and they’re not even aware that AI is doing it for them,” Dr. Alkasab said.

With so much information and data that can be measured and with so many more partners to share it with, he said, “A radiologist is going to become a radiologist-plus. The job is going to be bigger, but it’s going to be a job that radiologists can handle because they’re doing it with the help of all these artificially intelligent assistants who are swooping in at just the right moment.”

Every component of the imaging value chain — be it patient scheduling, protocol optimization, modality operations, image interpretation, actionable report creation, communication of findings to referring clinicians and patients, quality assessment, or patient safety and follow-up — will be augmented by AI.

Both doctors acknowledge that much of the promise of AI remains in the future, but the very near future. The algorithms that propel AI to assist radiologists are still being written.

“Radiologists have long been trailblazers of technology in healthcare,” said Karen Holzberger, vice president and general manager of the diagnostic solutions division at Nuance Communications. “As early adopters, they have embraced innovations that improve their practice, enhance care and deliver better outcomes, starting with the introduction of picture archiving and communication systems (PACS) more than twenty years ago.

“The latest advancements in radiology embrace the power of AI to improve outcomes and reduce costs,” Dr. Holzberger said. “AI is an emerging field that will continue to transform radiology practice and improve patient care.”

Experts say the future of radiology is bright, and AI will play a key role in that future.

When it comes to diagnosing breast cancer, time is of the essence. That’s why Barco developed the Coronis Uniti® — a fast and accurate display system for detecting the subtlest details in a patient image. And it facilitates an easier workflow, allowing you to view 3D mammography, 2D mammography, breast MRI and breast ultrasound all on the same screen in perfect grayscale and precisely calibrated color. So you can see and know more, with greater clarity and higher confidence for better patient outcomes.

Diagnose better, treat sooner

when it comes to diagnosing breast cancer, time is of the essence. That’s why Barco developed the Coronis Uniti® — a fast and accurate display system for detecting the subtlest details in a patient image. And it facilitates an easier workflow, allowing you to view 3D mammography, 2D mammography, breast MRI and breast ultrasound all on the same screen in perfect grayscale and precisely calibrated color. So you can see and know more, with greater clarity and higher confidence for better patient outcomes.

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CONTINUED ON PAGE 6B
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Neusoft Medical Systems announces the best in-class suite of dose reduction tools with Neusoft NeuViz Prime. It also offers performance evaluation of size-dependent image quality evaluation of the Mercury 4.0 Phantom. It provides leading edge QA features, such as recent advancements in CT have introduced leading edge QA features, such as automatic exposure control. Other new CT technologies, like iterative reconstruction, alter the traditional relationships between CT parameters, making traditional QA metrics less applicable.

Gammex, Inc. booth 7707
Next Generation CT QA Solutions
Computed tomography QA is critical in supporting accurate screening, diagnosis and monitoring, as well as radiation therapy treatment planning. Gammex, a Sun Nuclear company, has been providing CT QA tools for more than 40 years. Recent advancements in CT have introduced leading edge QA features, such as automatic exposure control. Other new CT technologies, like iterative reconstruction, alter the traditional relationships between CT parameters, making traditional QA metrics less applicable. In response to these emerging technologies, Gammex, in collaboration with Duke University, developed the Mercury 4.0 Phantom. It provides size-dependent image quality evaluation and advanced image quality assessment techniques, including task-based methodology. It also offers performance evaluation of iterative reconstruction techniques and automatic tube current modulation techniques.

Neusoft Medical Systems Co., Ltd.
BOOTH 2538
Neusoft NeuViz Prime
Neusoft Medical Systems announces the latest NeuViz Prime. Based on the popular NeuViz 128 platform, the NeuViz Prime achieves the lowest dose possible with best in-class suite of dose reduction tools including autoK and NeuViz’s Organ Safe and ClearView as standard features. It enables metabolic imaging with multiple energy levels using innovative rapid kV switching technology. Clinicians have the power to efficiently acquire and post process high quality cardiac examinations with Neusoft’s cardiac analysis software package and the fastest rotation speed in the industry – 0.259 seconds. Also, workflow is improved with fast, powerful scanning due to a liquid-cooled bearing x-ray tube.

Pearl Technology AG booth 1751
CT HeadFix, Integrated, Fast and Hygienic
The Pearl Technology CT HeadFix offers an integrated, fast and hygiene positioning solution for the fixation of the head in the CT head holder. Especially in emergencies, CT scans must be fast, which is not easy with traumatized and disoriented emergency patients or acute, open wounds that require the utmost in standards of hygiene. CT HeadFix is designed to maximize workflow efficiency through increased patient stability, easier handling, excellent hygiene and optimum patient comfort, all leading to better imaging results and fewer repeated exams. CT HeadFix is the latest product of Pearl Technology AG, Swiss manufacturer of patient positioning and immobilization aids. Pearltec products are based on an innovative technology providing optimum individual fixation of patients.

Health Match BC booth 317Z
Professional Recruitment Service
Looking to market lifestyle with exciting career opportunities? Health Match BC is a free health professional recruitment service funded by the Government of British Columbia (BC), Canada. Register with Health Match for guidance through licensing and immigration procedures and assistance matching skills and interests to job vacancies. Health Match BC provides information about communities of interest and connects those looking for new opportunities with prospective employers and/or regional health employers. Health Match BC can identify education and real estate options, and facilitate spousal employment in regions of interest.

Dicom
LEAD Technologies booth 7708
Zero-Footprint Medical Viewer
The LEADTOOLS HTML5 Zero-footprint Medical Viewer is an OEM-ready web application that provides a platform-independent solution to display DICOM studies for all medical disciplines and modalities. The fully customizable application is a powerful collection of JavaScript libraries and web services, and is perfect for any developer or integrator who needs a fast, lightweight DICOM viewer solution without sacrificing any features. Using LEADTOOLS, any department or specialty can view DICOM images in their preferred layout from a local archive or third-party PACS, and share studies with a third-party using vendor-neutral DICONweb and DICOM messaging standards. New features in v20 include logging and verification functionality added to the vendor-neutral DICON Hanging Protocol support with many pre-set and easily customizable layouts, MPR navigation, WADO Support, multi-study reference lines and synchronized stacking, sorting, cine, and more. Further enhancements include DICOM structured display, multi-study FOV matching, predefined window level, study timeline, and display orientation.

Educational Products and Services
American Joint Committee on Cancer booth 1305
AICC Cancer Staging Manual
The AJCC Cancer Staging Manual is used by physicians and healthcare professionals throughout the world to facilitate the uniform description and reporting of neoplastic diseases. Proper classification and staging of cancer is essential for the physician to assign proper treatment, evaluate results of management and clinical trials, and to serve as the standard for local, regional and international reporting on cancer incidence and outcome. The eighth edition AJCC Cancer Staging Manual remains the gold standard reference for oncologists, surgeons, pathologists, radiologists, cancer registrars and medical professionals worldwide to ensure that all those caring for cancer patients are fully versed in the language of cancer staging. This edition brings together all the currently available knowledge on staging of cancer at various anatomic sites. In this edition, evidence-based TNM staging is supplemented, as appropriate, by selected molecular markers and newly acquired insights into the molecular underpinnings of cancer.

International Society for Magnetic Resonance in Medicine booth 1306
ISMRM-RSNA Workshop on High-Value MRI
Plan to attend the co-provided ISMRM-RSNA Workshop on High-Value MRI at the Capital Hilton, Washington, DC, USA, Feb. 18-20, 2018.
This workshop will explore and expand the view of MRI in healthcare, including economics and how one can measure the value of imaging; the changing nature of payment mechanisms and how this influences the incentives around diagnostic imaging; methods to improve the value of MR imaging (including both technical and procedural innovations); and opening up the scope of use for MRI to improve the diagnostic pathway in individual patient management.
The program will feature a diverse group of experts in clinical diagnosis, technical innovation, and administrative and reimbursement mechanisms. It will also include invited presentations, peer-reviewed papers, poster presentations, and panel discussions on the clinical utility of technical solutions, best chances for meaningful change, and industry perspectives on what is needed for value.

Full Exhibitor Listing
To see complete company profiles and product information, visit meeting.rsna.org/exhibitor/ Technical Exhibition Hours
South Hall A and North Hall B
Sunday.................10:00 a.m. – 5:00 p.m.
Monday – Wednesday... 10:00 a.m. – 5:00 p.m.
Thursday ..................10:00 a.m. – 2:00 p.m.
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.
Resonance Technology, Inc.

BOOTH 2938

Entertainment Inside the MRI Suite

The CinemaVision is an audio/video patient comfort entertainment system which can be used inside the MRI suite. It provides multiple video source options from standard television, DVD, CD, AM/FM, and also AUX inputs, while offering two-way communication and dramatically reducing MRI gradients. The headset combination fits completely within the MR head coil and operates seamlessly inside the magnet bore with no detrimental effects on signal/noise. The CinemaVision transports patients to a breathtaking world of immersive entertainment by combining fully-digital video and symphonic-quality audio.

InformaTion Systems (RIS & HIS)

medQ – Vaso Healthcare IT

BOOTH 3947

End-to-End Workflow Partnership

medQ and VasoHealthcare IT have joined forces to provide a seamless, fully featured end-to-end imaging workflow combining the Qysis 3000 EHR based software and the GE Centricity UV100 PACS and archive with both the Universal Viewer and Zero Footprint Viewer. This architecture was specifically designed with mid-market care providers in mind. The VasoQmed solution is a standards based imaging workflow including ordering, scheduling and technologist operations, through to automated report creation, image storage and report distribution and billing.

The Reporting PLUS+ software, designed by radiologists, is integrated with the GE Centricity UV 100 PACS so that radiologists can operate from a single workstation which automatically launches images in the new GE Centricity Universal Viewer, or web-workstation based fully certified Zero Footprint Viewer.

The Reporting PLUS+ VR based dictation solution now has full Peer Review capability to automate the front end report selection and radiologist management. Once completed, results can be automatically sent to Radi Peer.

Speed of Care Decision Support

BOOTH 6201

Speed of Care Decision Support: CDSM Plug-in

Speed of Care’s CDSM Plug-in

The Speed of Care Decision Support CDSM Plug-in provides decision support at the “speed of care.” This solution is easy to deploy, easy to integrate, easy to use, and meets all the provisions of the PAMA mandate that requires ordering professionals to consult appropriate use criteria for advanced outpatient imaging orders. The CDSM Plug-in is a web-based widget that easily integrates into existing EHR/EMR, RIS, CPOE, referral or custom ordering applications. The CDSM Plug-in is best suited for system integrators or web developers responsible for upgrading their systems to meet the mandate.

Machine Learning/Computer-Aided Diagnosis Systems

HeartFlow, Inc.

BOOTH 3775

Non-Invasive Diagnostic Tool for Coronary Artery Lesions

HeartFlow, Inc. is transforming the way cardiovascular disease is diagnosed, not limited. The HeartFlow FFR_{\alpha} Analysis is the first available non-invasive diagnostic tool that provides actionable information to aid clinicians in determining, vessel-by-vessel, the functional significance of coronary artery lesions based on both anatomy and physiology. Leveraging deep learning to create a personalized 3-D model of the patient’s coronary arteries, the HeartFlow FFR_{\alpha} Analysis has the potential to improve both clinical outcomes and the patient experience while reducing the overall cost of care. To date, more than 15,000 patients have benefited from the HeartFlow FFR_{\alpha} Analysis, which is commercially available today in the United States, Europe, Canada and Japan.

Mammography

Beekly Medical

BOOTH 1605

Bella Blankets® Protective Coverlets for Mammography

Cancers that occur at the chest wall may not be visualized if breast tissue is missing from the image. 80 percent of Bella Blankets customers surveyed say they get more breast tissue on their images compared to years when they used nothing or another product on the receptor plate. Thin by design, Bella Blanket aligns with proper positioning techniques to ensure that patients receive the maximum benefit on their mammograms without compromising patient comfort. In addition, Bella Blanket is a more patient友好的 product that does not cause the patient any irritation or discomfort. The Bella Blanket is designed to be used with any mammography machine and can be used with any of the standard breast compression pads. The Bella Blanket is a reusable product that can be used over and over again. The Bella Blanket is also a washable product that can be washed in the washing machine and dried. Unlike other aprons, XPF uses no heavy metals so there are no special requirements for disposal.

The Embrace® Neonatal MRI system is the first FDA-cleared dedicated NICU neonatal MRI system. The Embrace enables safer imaging of vulnerable newborns, allowing medical staff and parents to be present during scanning. Preparation and scanning takes less than an hour. The Embrace System does not require a special safety zone or an RF-shielded room. Since the system is fully enclosed, medical device implants in close proximity to the patient system are not required to be “MR Conditional” or “MR Safe.” The operating and maintenance costs of the Embrace are much lower than conventional superconductor MRIs due to Aspect’s magnet technology, which requires no cooling system and has low power consumption.

Full Exhibitor Listing

To see complete company profiles and product information, visit meeting.rsna.org/exhibitor/
LMT Medical Systems GmbH
BOOTH 4761
MRI for Newborns and Premature Babies
The MR Diagnostics Incubator System nomag® IC developed by LMT makes gentle and time-saving MRI examinations possible for newborns and premature babies. The nomag IC meets high neonatal requirements. The little patients lie protected and comfortable in the incubator. The incubator features, in addition to the temperature and humidity control, an independent MR-conditional gas and power supply. The incubator is also compatible with 1.5 and 3.0 T appliances from Siemens, GE and Philips.
A range of additional products contributes to the optimal and efficient use of the MR Diagnostics Incubator System nomag IC. These include a 16-channel neonatal head array coil, a 12-channel neonatal body array coil and a MR-compatible ventilation as well as an ambulance trolley.

Radcal
BOOTH 1529
Accu-Gold Touch
As a premier provider of diagnostic radiation test instruments, Radcal announces the release of a new line of stand-alone instruments, the Accu-Gold Touch Series. These measurement systems incorporate the largest capacitive touchscreen in the industry for a bright and straightforward user experience. In addition, the Accu-Gold Touch provides access to the full lineup of Accu-Gold sensors, the most extensive line of x-ray quality assurance sensors available. The Accu-Gold Touch Professional Series provides wired and wireless computer interfaces. Using the Accu-Gold Windows application users are able to access a rich set of advanced capabilities such as automated Excel-based reporting and waveform analysis. Current Accu-Gold system users should explore the Accu-Gold Touch conversion option.

Shanghai PZMedical Technology Co. Ltd.
BOOTH 3971
Full Spine X-Ray Imaging
The ultra large flat panel detector A843B by Shanghai PZMedical Technology Co. Ltd. offers an image size of 107.5×43 cm with no stitching. The FDA-approved plate can be utilized as a wall-fixed or under-table configuration or interchangeably between a long table and wall bucky in a single DR bucky room. The A843B offers the highest geometric accuracy for different applications, including leg length measurements, orthopedic surgery planning, full spine studies and emergency triage, when fitted to a trolley. When used in pediatrics, it offers the lowest dose imaging. It also can be used infiel by the military, with a three-second injury assessment.

Zhuhai Rcan Vacuum Electron Co., Ltd.
BOOTH 3918
CT Tubes
Rcan Medical Imaging is a world leading manufacturer and solutions provider for CT x-ray tubes in China. With self-dependent innovation and progressive technology, Rcan has been focusing on developing CT tubes for over ten years. Now this year is the RX526 Insert /RH526 Tube, adaptive for 16 slice CT of various brands, including Philips MX16, Neusoft Neu Viz16, ANKE ANATOM 16, MINFOUND ScintCare 16 and United Imagine uCT510. Rcan also offers a replacement for Dunlee x-ray tube model CTR2150/DU5008. Rcan also has a non OEM designed CT tube with high vacuum technology, a better bearing protection system and technical parameters that are adaptive with the original design.

Circle Cardiovascular Imaging
BOOTH 1854
Cardiovascular Post-Processing Software
Circle Cardiovascular Imaging develops highly accurate, versatile, robust, and intuitive cardiovascular post-processing software for the viewing and analyzing of CMR and CCT images. Circle’s role in clinical and research settings maximizes patients’
achieveable benefit by enabling healthcare providers to complete effective and precise analysis. Excellence in cardiovascular imaging and patient care is Circle Cardiovascular’s highest priority. A plug and play software, cvi42 helps physicians analyze cardiac images in a single solution. In over 650 global sites, cvi42 was designed and tested with top practitioners to create more intuitive tools, efficient workflows and advanced assessments for better patient outcomes.

Prolucid Technologies Inc.  
BOOTH 71810

Securely Connect and Manage Medical Devices

Medical device customers can simplify securely connecting and managing their devices using devicestream\textsuperscript{®} which includes software updates, remote service and support, device usage and tracking, real-time data access, data analytics, and overall health IT connectivity. Easily customized for the specific application, devicestream ensures connected devices are properly protected through medical grade security with threat response and traceability, defending against potential data breaches or cyber threats. By being securely connected, devicestream provides significant value to device manufacturers, accelerating stakeholders by driving revenue and engagement, eliminating support costs, and accelerating product improvements.

QUIBIM  
BOOTH 6348

Imaging Biomarker Analysis Software

QUIBIM is a virtual core lab for medical image processing and provides an advanced service of imaging biomarkers extraction and structured reporting to the radiological workflow. QUIBIM Precicion\textsuperscript{®} is an innovative imaging biomarker analysis software allowing for automated analysis of imaging biomarkers – results are ready just within minutes – with the best accuracy and reproducibility. The technology, based on machine learning and image processing algorithms, can significantly reduce the costs. The color x-ray is designed to make digital x-rays more precise and cost-effective, providing high resolution, low radiation dose, and post-processing options. The x-ray detector at the pixel level which allows for high resolution, low radiation dose while leveraging the LCD TV fabrication to significantly reduce manufacturing costs. The color x-ray is designed to make a significant impact in both healthcare and non-healthcare markets.

SIUI  
BOOTH 4107

Brest Full Volume Ultrasound System

IBUS BE3, an intelligent full-volume breast diagnostic system launched by SIUI, is the third of its kind in the world. Applied with a new, cutting-edge ultrasound examination method, IBUS BE3 represents a major technological breakthrough in the field of ultrasound imaging and diagnostic mode. With the benefits of safety, comfort, high-resolution image and rare missed diagnoses, IBUS BE3 is ideal for breast exam especially for women with dense breasts.

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.

X-RAY

EOS Imaging  
BOOTH 4571

EOS for Orthopedic and Musculoskeletal Pathologies

EOS imaging designs, develops and markets EOS; an innovative medical imaging system dedicated to orthopedic and musculoskeletal pathologies. The EOS platform connects imaging to care by adding value along the patient care pathway from diagnosis to pre-surgical planning and post-operative control to follow-up. Low-dose and Micro Dose EOS exams provide full body, stereo-radiographic images in a weight-bearing or seated position using the EOS radiolucent chair. The biplanar images are acquired simultaneously in less than 20 seconds without magnification. The accompanying sterEOS workstation generates patient-specific 3-D models, calculates over 100 clinical parameters and offers customizable reports. The 3-D models provide an easy way to engage with patients and medical teams. EOS imaging also provides 3-D services that provide 3-D models, data and patient reports as well as 3-D surgical simulation and planning solutions for spine surgeries, total hip and total knee arthroplasties.

KA Imaging Inc.  
BOOTH 7161

Color X-Ray Detector

KA Imaging has innovated a color x-ray detector that is designed to “see” different energy levels which enables better soft tissue differentiation – a key advantage over current technology. KA Imaging changed the x-ray detector at the pixel level which allows for high resolution, low radiation dose while leveraging the LCD TV fabrication to significantly reduce manufacturing costs. The color x-ray is designed to make a significant impact in both healthcare and non-healthcare markets.

Ziehm Imaging GmbH  
BOOTH 6119

Enhanced CMOS Imaging Chain

Ziehm Imaging showcases the latest imaging technology CMOSline\textsuperscript{™} which is aimed at professionals who are not content with the ordinary and strive for the optimal. All CMOSline premium systems offer an enhanced CMOS imaging chain from generator to detector. Based on our tried-and-true flat-panel detector, the CMOSline enables superior image quality by showing significantly more detail. With CMOSline comes the groundbreaking Beam Filtration technology, which enables an exceptional reduction in the skin entrance dose. Positioned at the forefront of technology, surgeons who rely on CMOSline systems increase quality of care in their daily clinical routines. CMOSline represents a system configuration that is based on a Ziehm Imaging CMOS flat-panel detector.
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- Free standard member registration to RSNA 2018 for cutting-edge radiology science and education

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