DR. SERGEY MOROZOV

WEEKLY AI INTELLIGENCE REPORT

Radiology and Medical Imaging

Week 27 | 28 June to 4 July 2026

Dr. Sergey Morozov | drsergeymorozov.com

Compiled from publicly available sources (indexed peer-reviewed literature, official press releases, regulatory databases). Does not constitute medical, regulatory, or financial advice.

8	3	4	3
Peer-reviewed papers	Industry / FDA items	Media highlights	Key opinion leaders

SECTION 0

EXECUTIVE SUMMARY

Key trends, week of 28 June to 4 July 2026

[CLINICAL] GADOLINIUM-FREE ABBREVIATED LIVER MRI MATCHES CONVENTIONAL cMRI FOR HCC IN 1008 PATIENTS

Zhang Y et al. (Radiology: AI) trained Li-DiffNet to synthesize T2WI, DWI, ADC, and all contrast phases from pre-T1 alone. DL-SBH-aMRI achieves sensitivity 77.9-88.7% and specificity 91.6-93.1%, noninferior to conventional complete MRI in four-institution validation. Eliminates gadolinium and reduces breath-hold burden, directly addressing contrast-agent risk in cirrhotic patients with renal impairment.

[CONFERENCE] RCR GLOBAL AI CONFERENCE OPENS IN LONDON WITH LANGLOTZ WORKFORCE PROJECTION

The Royal College of Radiologists 2nd Annual Global AI Conference (QEII Centre, London, June 29-30, 800+ clinicians) convenes under the theme 'safe and practical implementation'. Keynote Prof. Curtis Langlotz (Stanford AIMI, RSNA President) presents a quantitative task-based model projecting the effects of AI on the radiology workforce over the next five years and addresses whether AI alone will surpass the AI-plus-radiologist combination.

[DECISION SUPPORT] AI-DSS AVOIDS 28 PROSTATE BIOPSIES WHILE MISSING JUST ONE GG2 CANCER: 6-UK-CENTRE VALIDATION

Sushentsev N et al. (European Radiology) validated an AI decision support system integrating PI-RADS, automated PSAd, and deep-learning risk scores in 252 men across six UK centres. At 31% cancer detection rate: grade selectivity +70%, biopsy efficiency +79%, selective biopsy avoidance +143%. The 28-biopsies-avoided per 1 GG2-missed operating point provides a quantified benefit-to-harm ratio for NHS integrated diagnostic centre procurement decisions.

[PATHOLOGY AI] CONFIDENCE-SCORED AI REACHES AUROC 1.00 FOR ICCA VERSUS LIVER METASTASES IN PROSPECTIVE COHORT

Cheng Y et al. (Annals of Oncology) developed AI2CCA using CONCH/TITAN foundation model with G-ODIN confidence abstention for intrahepatic cholangiocarcinoma diagnosis on whole-slide pathology. Retrospective AUROC 0.840 rises to 0.958 at FPR=0 with confidence thresholding (46% of samples retained). Prospective French cohort AUROC 1.00, Asian cohort 0.965; one misclassification in 161 patients. May eliminate routine endoscopic workup in biopsy-confirmed cases.

[WORKFORCE] RCR 2025 CENSUS: 75% OF UK DEPARTMENTS USE AI BUT WORKLOAD REDUCTION REMAINS ELUSIVE

The Royal College of Radiologists 2025 Workforce Census (released June 29 alongside the Global AI Conference) finds 75% of UK radiology departments now use AI clinically (+6% from 2024), but overall workload has not decreased. Report drafting delivers the highest reduction (24% of departments report reduced workload) yet only 13% use AI for staff scheduling. The UK remains short of 2300 clinical radiologists and 230 clinical oncologists, with the RCR recommending that departments prioritize AI for administrative tasks before clinical detection.

SECTION 1

PEER-REVIEWED PAPERS

Source: PubMed | Verified indexing | No preprints | 28 June to 4 July 2026

A multimodal feature disentanglement model for lymphadenopathy diagnosis based on BUS and CDFI ultrasound videos: a retrospective, prospective, multicenter study.

Cao R, et al. | ***European radiology*** | *2026-07-01*

Multimodal deep learning model (MFDM) using B-mode ultrasound (BUS) and color Doppler flow imaging (CDFI) videos for lymphadenopathy (LA) diagnosis. Retrospective and prospective multicenter study (January 2016 to August 2025) across six centers in five Chinese regions, 7371 patients, 147,420 key frames extracted from BUS and CDFI videos. A feature-disentanglement architecture separates modality-specific from shared information, with patient clinical data integrated as an auxiliary input. Radiologists at three experience levels diagnosed independently and then with AI assistance in both retrospective external and prospective external cohorts.

Key metrics: AUC 0.956 (95% CI: 0.925-0.981) internal; 0.928 (0.884-0.965) retrospective external; 0.912 (0.863-0.952) prospective external. Junior radiologist AUC improved from 0.739 (0.676-0.801) to 0.891 (0.846-0.940) retrospective external and from 0.767 (0.705-0.829) to 0.899 (0.853-0.944) prospective external with AI assistance.

Clinical relevance: First six-center video-based deep learning system for distinguishing benign from malignant lymphadenopathy with prospective external validation; demonstrates a 20-point AUC gain for junior radiologists, positioning the model as a noninvasive clinical decision-support tool that reduces operator dependency and improves diagnostic consistency across institutions of varying resource levels.

PMID 41831029 **DOI** 10.1007/s00330-026-12409-7

Comparison of clinical-radiological and radiomics features for predicting pulmonary nodule malignancy in a multicenter study of mixed clinical and surveillance populations.

Zeng F, et al. | ***European radiology*** | *2026-07-01*

Prospective multicenter diagnostic accuracy study developing an automated radiomics model for pulmonary nodule malignancy risk prediction, enrolling 1895 patients with 1909 pulmonary nodules (1181 malignant, 728 benign) from 27 centers (2017-2023). 3D U-Net segmentation preceded extraction of 25 radiological and 2153 radiomics features. Three predictive models compared: clinical-radiological (Human Reading), radiomics-only, and a combined model. Split into training (n=830), internal validation (n=214), and external validation (n=865).

Key metrics: Internal validation: Human Reading and Radiomics both AUC 0.88 (p=0.87). External validation: 0.86 vs 0.85 (p=0.56). Combined model outperformed both: +2.4% AUC gain vs radiomics (p<0.001) and +1.7% vs human reading (p=0.0025).

Clinical relevance: Twenty-seven-center external validation confirms automated radiomics replicates radiologist-level performance for pulmonary nodule risk stratification, with a statistically significant marginal gain from feature integration; positions the combined model as a scalable lung cancer triage tool for settings with limited radiological expertise.

PMID 41831027 **DOI** 10.1007/s00330-026-12437-3

Artificial intelligence in the imaging diagnosis of gallbladder and bile duct stones: a systematic review.

Hajihashemi A, et al. | ***Abdominal radiology (New York)*** | *2026-06-29*

PRISMA 2020 systematic review across seven major databases, 13 studies (more than 7700 patients, more than 130,000 images), evaluating AI algorithms for detection, segmentation, and classification of gallbladder and bile duct stones on medical imaging. Predominantly convolutional neural networks applied to ultrasound. Risk of bias assessed with QUADAS-2; evidence certainty rated with GRADE. Meta-analysis not performed due to substantial clinical and methodological heterogeneity.

Key metrics: AI model accuracies ranged from 71.5% to 99.63% and AUC values from 0.79 to 0.99. Performance highest for multi-class gallbladder disease classification and choledocholithiasis detection on MRCP. Twelve of 13 studies (92%) carried high risk of bias; overall evidence certainty rated very low.

Clinical relevance: Consolidates the evidence base for AI in biliary stone diagnosis while flagging near-universal high bias risk and absence of prospective multicenter external validation as barriers to clinical adoption; directly actionable for institutions evaluating biliary AI procurement or designing prospective validation studies.

PMID 42371021 **DOI** 10.1007/s00261-026-05648-1

Development and Validation of a Deep Learning-enabled Single Breath-hold Abbreviated MRI Protocol for Hepatocellular Carcinoma Diagnosis.

Zhang Y, et al. | ***Radiology. Artificial intelligence*** | *2026-07-01*

Deep learning-enabled single breath-hold abbreviated MRI (DL-SBH-aMRI) for hepatocellular carcinoma (HCC) diagnosis, developed and validated in 1008 high-risk patients across four institutions (January 2019 to January 2025). Four generative models trained to synthesize full MRI sequences (T2WI, DWI, ADC, arterial, portal venous, delayed phases) from pre-contrast T1 only. Li-DiffNet (diffusion-based generative model) selected as the backbone for highest synthetic image quality. DL-SBH-aMRI compared to conventional complete MRI (cMRI) for image quality, perceptual realism, lesion size accuracy, and diagnostic performance.

Key metrics: DL-SBH-aMRI noninferior to cMRI in subjective image quality (4.07-4.16 vs 4.18-4.19, $p<0.001$). Patient-level sensitivity 77.9%-88.7%, specificity 91.6%-93.1% vs cMRI sensitivity 84.4%-92.5%, specificity 94.1%-95.2%; all noninferior comparisons $p<0.001$.

Clinical relevance: A gadolinium-free abbreviated liver MRI protocol that synthesizes all key HCC diagnostic sequences from pre-T1 alone addresses contrast-agent risks in cirrhotic patients with renal impairment; four-institution validation and the Li-DiffNet generative backbone represent a substantial step toward clinically deployable gadolinium-free liver MRI surveillance.

PMID 42159476 **DOI** 10.1148/ryai.250914

A confidence-based, artificial intelligence pathology model for diagnosis of intrahepatic cholangiocarcinoma.

Cheng Y, et al. | ***Annals of oncology*** | *2026-07-01*

Computational pathology model (AI2CCA) for distinguishing intrahepatic cholangiocarcinoma (ICCA) from metastatic liver cancers on whole-slide histology. Retrospective training and testing in 544 patients across five European centers. Three foundation model architectures evaluated: CTranspath/HistoBistro, UNI/CLAM, CONCH/TITAN. Confidence estimation implemented via generalized-ODIN (G-ODIN) predictive entropy, enabling high-confidence abstention. Prospectively validated in 161 patients across France, India, and Korea.

Key metrics: Retrospective test AUROC 0.840 (CONCH/TITAN architecture). With confidence thresholding: AUROC improved to 0.958 at FPR=0, retaining 46% of samples for high-confidence prediction. Prospective validation: AUROC 1.00 (French cohort), 0.965 (Asian cohort); only one misclassified case in the Asian series.

Clinical relevance: G-ODIN confidence abstention enabling near-perfect ICCA discrimination at FPR=0 provides a practical clinical pathway where AI handles high-confidence cases and flags uncertain ones for specialist review; prospective international validation across three countries strengthens generalizability and supports deployment as a triage tool to reduce unnecessary gastrointestinal endoscopy workup.

PMID 41791652 **DOI** 10.1016/j.annonc.2026.02.018

Real-time Automatic Guidance During Shoulder Ultrasound Scanning with Artificial Intelligence: Reducing Operator Dependency in Rotator Cuff Assessment.

He Y, et al. | ***Academic radiology*** | *2026-07-01*

Prospective multicenter study developing an EfficientNetB2-based AI system for real-time automatic classification and structural recognition during shoulder ultrasound scanning. Training on 852 standard plane images and 74,909 frames from 13,312 shoulder US videos (Center 1); external validation on 8458 frames from 480 videos (Center 2). The system simultaneously guides acquisition of 15 standard planes and localizes 27 key anatomical structures in real time. Clinical utility assessed by comparing shoulder US examination duration of primary residents with and without AI guidance.

Key metrics: External validation AUC 0.99, mAP 0.89. Shoulder US examination time reduced by 34% with AI guidance for junior residents: 10.06 plus or minus 2.74 min vs 15.26 plus or minus 5.07 min (p=0.014), reaching efficiency comparable to expert supervision.

Clinical relevance: Real-time AI guidance during shoulder US acquisition cuts examination time by one-third for junior operators and eliminates the need for parallel expert supervision; addresses operator dependency as the primary reproducibility bottleneck in musculoskeletal ultrasound and provides a validated pathway for task redistribution in high-volume MSK imaging programs.

PMID 41904092 **DOI** 10.1016/j.acra.2026.03.012

Large language model and Gd-EOB-DTPA-enhanced MRI-based risk stratification system for postoperative hepatocellular carcinoma: a multicenter study.

Yu C, et al. | ***European radiology*** | *2026-07-01*

Fully Automated Stratification System (FASS) for postoperative risk prediction in solitary hepatocellular carcinoma (HCC) integrating serum biomarkers (AFP, AST), automated radiomic features from Gd-EOB-DTPA-enhanced MRI (MedNeXt-loss segmentation framework), and LLM-derived semantic imaging features. Five LLMs evaluated for feature extraction accuracy and completeness; ChatGPT-4o selected. Retrospective multicenter study, 448 solitary HCC patients from three centers. Prognostic performance assessed by concordance index, time-dependent ROC, and decision curve analyses; biological relevance explored through RNA sequencing and pathway enrichment.

Key metrics: MedNeXt-loss segmentation Dice=0.77. FASS concordance index 0.78 (test cohort) and 0.76 (external validation). Effective risk group stratification (log-rank p<0.05). Multivariate analysis: AFP, AST, and ChatGPT-4o-derived irregular margin were independent predictors of overall survival.

Clinical relevance: Demonstrates that LLM-extracted imaging features (margin irregularity from ChatGPT-4o) complement quantitative radiomics for postoperative HCC risk stratification; the fully automated segmentation-to-prognosis pipeline removes manual annotation dependency and supports individualized adjuvant decision-making in hepatobiliary oncology.

PMID 41731093 **DOI** 10.1007/s00330-026-12424-8

AI decision support for increasing prostate biopsy efficiency: a retrospective multicentre, multiscanner study.

Sushentsev N, et al. | ***European radiology*** | *2026-07-01*

Retrospective multicentre, multiscanner study developing and validating an AI decision support system (AI-DSS) for optimizing prostate biopsy decisions in 1022 patients across six UK centres. AI-DSS integrates PI-RADS scores, automated prostate-specific antigen density (PSAd), and deep-learning imaging risk scores; developed on 770 cases and validated on an independent cohort of 252 men. Reference standard: biopsy-proven Gleason Grade Group (GG) 2 or higher disease. Performance benchmarked against real-world clinical decisions using grade selectivity, biopsy efficiency, and selective biopsy avoidance.

Key metrics: In the 252-patient validation cohort (137 biopsied, 79 with GG2 or higher), AI-DSS at 31% cancer detection rate avoided 28 biopsies while missing one GG2 or higher cancer. Grade selectivity +70% (4.6 to 7.8), biopsy efficiency +79% (1.4 to 2.5), selective biopsy avoidance +143% (2.8 to 6.8). At 30% CDR: selectivity +172%, efficiency +236%, avoidance +475% with four GG2 or higher cancers missed.

Clinical relevance: Six-UK-centre validation quantifies the clinical trade-offs of AI-assisted biopsy triage at a clinically actionable operating point (28 biopsies avoided per 1 GG2 missed); directly applicable for NHS integrated diagnostic centres evaluating AI-DSS adoption in the prostate cancer pathway, pending prospective validation as the required next step.

PMID 41718862 **DOI** 10.1007/s00330-026-12361-6

SECTION 2

INDUSTRY & REGULATION

Sources: Official registers | Press releases | FDA databases

[REGULATION] Deepnoid M4CXR: Korea's first Class III clearance for generative AI chest X-ray reporting

Deepnoid (Korea, KOSDAQ) | 26 June 2026

Korea's Ministry of Food and Drug Safety (MFDS) granted M4CXR a Class III medical device designation -- the highest-risk tier -- for free-text preliminary radiology report generation covering 41 chest disease categories. Trained on more than 10 million paired X-ray images and radiologist reports; validated in a multicenter retrospective confirmatory trial at Kangbuk Samsung Hospital and Seoul National University Boramae Medical Center. Deepnoid claims M4CXR as the world's first approved generative AI radiology tool. FDA submission planned, supported by collaborative studies at University of Pennsylvania and Northwestern University.

Source: Korea Biomedical Review, 26 June 2026

[MARKET] RADIN Health deploys cloud-native AI radiology platform across four additional UHS Nevada hospitals

RADIN Health | 26 June 2026

RADIN Health expanded its cloud-native AI radiology platform (PACS, Dictation AI, RADIN Select) to four additional UHS Nevada Health System hospitals, bringing total presence to eight Nevada sites. Platform built on serverless AWS architecture. Chief Radiologist Dr Rajneesh Agrawal cited 'meaningful improvements in efficiency, radiologist productivity, and patient outcomes'. Reflects accelerating cloud-PACS plus AI bundle adoption as health systems replace legacy radiology infrastructure.

Source: PR Newswire / HealthTechnologyNet, 26 June 2026

[MARKET] Lumitron receives USD $50 million investment from Hancock Prospecting for HyperVIEW AI cancer imaging and VHEE radiotherapy platform

Lumitron | 29 June 2026

Hancock Prospecting (Gina Rinehart) invested USD $50 million in Lumitron with an option to increase to USD $100 million, supporting commercial scale-up of the HyperVIEW platform for advanced cancer imaging and very-high-energy electron (VHEE) FLASH radiotherapy. Three systems designated for Australia as first-in-country deployments. Represents major private capital entering imaging technology outside traditional radiology AI software; VHEE FLASH is a pre-commercial therapeutic modality.

Source: ChannelLife Australia, 29 June 2026

SECTION 3
MEDIA HIGHLIGHTS

AuntMinnie | Radiology Business | The Imaging Wire | Diagnostic Imaging | ITN

RCR census: AI in 75% of UK radiology departments but no workload reduction -- administrative gap is the key finding

AuntMinnie Europe *| 29 June 2026*

AuntMinnie Europe covers the RCR 2025 Workforce Census released alongside the Global AI Conference. Key finding: AI adoption in radiology has surged but failed to reduce clinician burden because departments lack the staffing and expertise to implement tools effectively. Administrative AI (report drafting: 24% workload reduction; scheduling: 13% adoption) outperforms clinical AI on workload impact, yet investment priorities are reversed.

Link: https://www.auntminnieeurope.com/imaging-informatics/artificial-intelligence/art...

Aidoc First Read: AI drafting radiology reports receives FDA Breakthrough Device Designation

24x7 Magazine *| 29 June 2026*

Trade press coverage of Aidoc First Read's FDA Breakthrough Device Designation (Q260882, granted June 25). Frames the designation in the context of Aidoc's growing scale (nearly 2000 hospitals, 120 million patient cases analyzed) and second Breakthrough designation in under a year. Highlights automation bias and consistency as known risks that First Read is designed to manage through clinician oversight and final approval requirements.

Link: https://24x7mag.com/medical-equipment/software/ai/ai-tool-drafting-radiology-rep...

Korea's first generative AI radiology report tool cleared at highest Class III tier: Deepnoid M4CXR

Korea Biomedical Review | *26 June 2026*

Korea Biomedical Review covers Deepnoid's MFDS Class III clearance for M4CXR, the first generative AI free-text report writer cleared in Korea and claimed as the world's first approved generative AI radiology tool. Frames the clearance within a broader Asian market context where Lunit and VUNO lead detection AI but generative report drafting represents a new frontier. FDA submission is in preparation via US academic partnerships.

Link: https://www.koreabiomed.com/news/articleView.html?idxno=32212

How foundation models could transform radiology AI: Curtis Langlotz on Stanford's 1.8-petabyte training effort

HCI Innovation Group | *2 June 2026*

Coverage of a Langlotz MIDRC seminar on foundation models for radiology, circulating widely in the run-up to the RCR Global AI Conference. Langlotz describes Stanford's plan to train on approximately 1.8 petabytes of imaging data and a chain-of-thought dataset from 400-plus radiologists across 70 countries interpreting 50,000 chest X-rays. Widely referenced in the context of his RCR keynote: 'Radiologists who use AI will replace radiologists who don't.'

Link: https://www.hcinnovationgroup.com/imaging/article/55381295/how-foundation-models...

SECTION 4

PROFESSIONAL SOCIETIES

SIIM | ACR | RCR | Official publications and event coverage

RCR 2nd Annual Global AI Conference, London (June 29-30): 800+ clinicians on safe and practical AI implementation

29-30 June 2026

The Royal College of Radiologists hosted its 2nd Annual Global AI Conference at the QEII Centre, Westminster, London (in-person and online, 800+ attendees). Theme: 'Human + machine: clinician-led AI for tomorrow's healthcare / safe and practical implementation'. Five streams covered AI education, ethical leadership, governance, clinical implementation, and industry symposia. Keynote: Prof. Curtis Langlotz (Stanford AIMI, RSNA President) presenting a quantitative task-based projection of AI's effects on the radiology workforce over the next five years and addressing whether AI alone will surpass the AI-plus-radiologist combination. Day 2 sessions included computational pathology beyond foundation models, the ACR framework for monitoring CNNs and foundation models, and multimodal data integration.

Source: https://rcraiconference.com/2026

RCR 2025 Workforce Census: 75% of UK radiology departments use AI but workload not yet reduced

29 June 2026

Published alongside the Global AI Conference, the RCR's 2025 census finds that 75% of UK radiology departments now use AI clinically (up from 69% in 2024), but AI adoption has not reduced overall radiologist workload because departments lack staffing and expertise to implement it effectively. AI report drafting delivers the greatest workload reduction (24% of departments) yet only 13% use AI for administrative tasks like staff scheduling. The UK faces a shortage of 2300 clinical radiologists and 230 clinical oncologists. RCR recommends prioritizing AI for administrative tasks and ensuring all cancer centres access AI for radiotherapy treatment planning.

Source: https://www.auntminnieeurope.com/imaging-informatics/artificial-intelligence/article/15828872/rcr-census-ai-underused-for-admin-tasks-that-cut-workload

SECTION 5

KEY OPINION LEADERS

LinkedIn | Public statements | Week of 28 June to 4 July 2026

Curt Langlotz, MD PhD

Professor of Radiology and Director, AIMI Center, Stanford University | RSNA President

Keynote speaker at the RCR Global AI Conference (London, June 29-30) presenting a quantitative task-based analysis projecting the effects of AI on the radiology workforce over the next five years using the best available scientific evidence. Also addressing Stanford's effort to train one of the largest radiology foundation models on approximately 1.8 petabytes of imaging data, and whether AI alone will ever surpass AI plus radiologist performance. Pre-conference LinkedIn: 'I will be giving a plenary about the incredible innovations happening in the lab that will soon make their way to the reading room.'

Source: RCR Global AI Conference programme / LinkedIn (@langlotz), June 2026

Woojin Kim, MD

Chief Strategy Officer and CMIO, HOPPR | CMO, ACR Data Science Institute | MSK Radiologist | FSIIM

Central to HOPPR's Presto Agent commercial launch (June 24) as CMIO, delivering AI draft reporting into PowerScribe 360 and PowerScribe One without platform migration. Simultaneously recognized as a Fellow of the Society for Imaging Informatics in Medicine (FSIIM) for contributions to imaging informatics leadership. On the Presto launch: 'Vision-language models for draft report generation will be a major trend. The real differentiator: multimodal fusion that integrates longitudinal clinical context with imaging.' Previously co-chaired the SIIM-ACR DSI Summit on agentic AI and automated reporting governance.

Source: HOPPR press release / Imaging Wire / LinkedIn, June 2026

Amine Korchi, MD

Medical Director and Radiologist | HealthTech Innovation and Ventures | Imaging Wire Top 10 Radiology AI KOL | Sifted (FT-backed) Top 25 Expert

Active LinkedIn commentator on the intersection of radiology AI market dynamics and clinical adoption. Regular coverage of European radiology AI ecosystem including analysis of CB Insights high-priority company lists and their gaps in radiology AI representation. Featured in The Imaging Wire ECR 2026 interview on foundation models and multimodal AI trends. Consistent focus on the gap between scientifically validated tools and commercially underrecognized ones, particularly citing European companies like GLEAMER and rising platforms like Raidium and HOPPR as underappreciated in global rankings.

Source: LinkedIn (@dr-amine-korchi-35485113) / The Imaging Wire, June 2026

QUALITY ASSURANCE NOTE

Compiled by Dr. Sergey Morozov from publicly available sources: peer-reviewed papers indexed in PubMed (PMIDs and DOIs verified, no preprints or arXiv), official press releases, regulatory databases and specialist media. It does not constitute medical, regulatory or financial advice. All papers have publication dates verified within 28 June to 4 July 2026. Paper selection is deterministic (pinned PubMed query, Q1/ flagship journal allow-list, exclusion of pure reviews [meta-analyses kept], radiomics-only and interventional-radiology work, then a transparent ranking score). Industry items come from official press releases / regulatory notices; KOL items from public LinkedIn activity within the window.