



Curtis Langlotz

Senior Associate Vice Provost for Research, Professor of Radiology (Integrative Biomedical Imaging Informatics), of Medicine (BMIR), of Biomedical Data Science and Senior Fellow at the Stanford Institute for Human-Centered AI

CLINICAL OFFICE (PRIMARY)

- **Stanford Hospital and Clinics**

300 Pasteur Dr Rm H1330D

Stanford, CA 94305

Tel (650) 498-4797

Fax (650) 723-6717

ACADEMIC CONTACT INFORMATION

- **Administrative Contact**

Jacqueline Thomas

Email thomajr@stanford.edu

Tel 650-497-5880

Bio

BIO

Dr. Langlotz is Professor of Radiology, Medicine, and Biomedical Data Science and Senior Associate Vice Provost for Research at Stanford University. His laboratory investigates the use of deep neural networks and other machine learning technologies to detect disease and eliminate diagnostic errors through analysis of medical images and clinical notes. He is a Senior Fellow at Stanford's Institute for Human-Centered Artificial Intelligence and Director of the Center for Artificial Intelligence in Medicine and Imaging (AIMI Center), which supports over 150 Stanford faculty conducting interdisciplinary artificial intelligence research that optimizes how clinical data are used to promote health.

He has published over 200 scholarly articles and is author of the book "The Radiology Report: A Guide to Thoughtful Communication for Radiologists and Other Medical Professionals". He has led many national and international efforts to improve the quality of radiology communication, including the RadLex™ terminology standard, the RadLex™ Playbook of radiology exam codes, the RSNA report template library, and a technical standard for communication of radiology templates.

Raised in St. Paul, Minnesota, Dr. Langlotz received his undergraduate degree in Human Biology, Master's in Computer Science, MD in Medicine, and PhD in Medical Information Science, all from Stanford University. He is a founder and past president of the Radiology Alliance for Health Services Research (RAHSR) and has served as president of the Society for Imaging Informatics in Medicine (SIIM), and the College of SIIM Fellows. He is a former board member of the Association of University Radiologists (AUR), the American Medical Informatics Association (AMIA) and the Society for Medical Decision Making (SMDM). He currently serves as President of the Radiological Society of North America (RSNA).

Dr. Langlotz is a recipient of the Lee B. Lusted Research Prize from the Society of Medical Decision Making and the Career Achievement Award from the Radiology Alliance for Health Services Research. He and his trainees have received numerous scientific awards, including seven best paper awards and five research career development grants. He has founded several healthcare information technology companies, including Montage Healthcare Solutions, which was acquired by Nuance Communications in 2016.

CLINICAL FOCUS

- Diagnostic Radiology

ACADEMIC APPOINTMENTS

- Professor - University Medical Line, Radiology
- Professor - University Medical Line, Medicine - Biomedical Informatics Research
- Professor - University Medical Line, Department of Biomedical Data Science
- Senior Fellow, Institute for Human-Centered Artificial Intelligence (HAI)
- Member, Bio-X

ADMINISTRATIVE APPOINTMENTS

- Director, Center for Artificial Intelligence in Medicine and Imaging, (2018- present)
- Associate Director, Institute for Human-Centered Artificial Intelligence, (2023- present)
- Physician Lead, Imaging AI, Stanford Health Care, (2024- present)
- Associate Chair for Information Systems, Department of Radiology, (2014-2024)
- Medical Informatics Director for Radiology, Stanford Health Care, (2014-2024)

HONORS AND AWARDS

- Lee B. Lusted Research Prize, Society for Medical Decision Making (1986)
- GERRAF Career Development Award, Association of University Radiologists (1993)
- Best Information Technology Company, New Jersey Technology Council (2001)
- Fellow, American College of Medical Informatics (2008)
- Fellow, Society for Imaging Informatics in Medicine (2010)
- Lifetime Achievement Award, Radiology Alliance for Health Services Research (2017)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- President, Radiological Society of North America (2024 - 2025)
- Chair of the Board, Radiological Society of North America (2022 - 2023)
- Board of Directors, Radiological Society of North America (2016 - 2023)
- President, College of Imaging Informatics Fellows (2015 - 2018)
- President, Society for Imaging Informatics in Medicine (2006 - 2008)
- Board of Directors, Association for University Radiologists (2003 - 2010)
- Founder and President, Radiology Alliance for Health Services Research (2002 - 2004)
- Board of Trustees, Society for Medical Decision Making (1996 - 1998)

PROFESSIONAL EDUCATION

- Residency: Hospital of the University of Pennsylvania, Department of Radiology (1994) PA
- Internship: Hospital of the University of Pennsylvania Primary Care (1990) PA
- Medical Education: Stanford University School of Medicine (1989) CA
- AB, Stanford University , Human Biology (1981)
- MS, Stanford University , Computer Science: Artificial Intelligence (1983)
- MD, Stanford University , Medicine (1989)

- PhD, Stanford University , Medical Information Sciences (1989)
- Board Certification: Diagnostic Radiology, American Board of Radiology (1994)

PATENTS

- Curtis Langlotz. "United States Patent 6,366,683 Apparatus and Method for Recording Image Analysis Information", Radiological Society of North America, Apr 2, 2002

LINKS

- Center for Artificial Intelligence in Medicine and Imaging: <https://aimi.stanford.edu/>
- Langlotz Lab: <https://langlotzlab.stanford.edu/>
- Google Scholar: <https://scholar.google.com/citations?user=WQkBYwQAAAAJ&hl=en>
- @curtlanglotz: <https://twitter.com/curtlanglotz>
- Curt Langlotz: <https://www.linkedin.com/in/langlotz/>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

My laboratory develops machine learning methods to help physicians detect disease and eliminate diagnostic errors. We are developing neural network systems that detect and classify disease on medical images. We also develop natural language processing methods that use the narrative radiology report for contrastive learning and other multi-modal methods that improve the accuracy and capability of machine learning systems. We are committed to the clinical evaluation and use of ideas conceived in the laboratory. When our results show potential, we disseminate them as open source or commercial software.

CLINICAL TRIALS

- Validation of an Artificial Intelligence-based Algorithm for Skeletal Age Assessment, Not Recruiting

Teaching

STANFORD ADVISEES

Postdoctoral Faculty Sponsor

Zhihong Chen, Yunhe Gao, Sophie Ostmeier, Chong Wang, Yabin Zhang

Doctoral (Program)

Maya Varma

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Biomedical Data Science (Masters Program)
- Biomedical Data Science (Phd Program)
- Clinical Informatics (Fellowship Program)

Publications

PUBLICATIONS

- **Developing a Research Center for Artificial Intelligence in Medicine.** *Mayo Clinic proceedings. Digital health*
Langlotz, C. P., Kim, J., Shah, N., Lungren, M. P., Larson, D. B., Datta, S., Li, F. F., O'Hara, R., Montine, T. J., Harrington, R. A., Gold, G. E.
2024; 2 (4): 677-686

- **A vision-language foundation model for the generation of realistic chest X-ray images.** *Nature biomedical engineering*
Bluethgen, C., Chambon, P., Delbrouck, J. B., van der Sluijs, R., Polacin, M., Zambrano Chaves, J. M., Abraham, T. M., Purohit, S., Langlotz, C. P., Chaudhari, A. S.
2024
- **Adapted large language models can outperform medical experts in clinical text summarization.** *Nature medicine*
Van Veen, D., Van Uden, C., Blankemeier, L., Delbrouck, J. B., Aali, A., Bluethgen, C., Pareek, A., Polacin, M., Reis, E. P., Seehofnerová, A., Rohatgi, N., Hosamani, P., Collins, et al
2024
- **RadGraph-XL: A Large-Scale Expert-Annotated Dataset for Entity and Relation Extraction from Radiology Reports**
Delbrouck, J., Chambon, P., Chen, Z., Varma, M., Johnston, A., Blankemeier, L., Van Veen, D., Bui, T., Steven Truong, Langlotz, C. P., Martins, A., Srikumar, Ku, L. W.
ASSOC COMPUTATIONAL LINGUISTICS-ACL.2024: 12902-12915
- **Organizational Factors in Clinical Data Sharing for Artificial Intelligence in Health Care.** *JAMA network open*
Youssef, A., Ng, M. Y., Long, J., Hernandez-Boussard, T., Shah, N., Miner, A., Larson, D., Langlotz, C. P.
2023; 6 (12): e2348422
- **The Future of AI and Informatics in Radiology: 10 Predictions.** *Radiology*
Langlotz, C. P.
2023; 309 (1): e231114
- **Automated deidentification of radiology reports combining transformer and "hide in plain sight" rule-based methods.** *Journal of the American Medical Informatics Association : JAMIA*
Chambon, P. J., Wu, C., Steinkamp, J. M., Adleberg, J., Cook, T. S., Langlotz, C. P.
2022
- **Implementation of Clinical Artificial Intelligence in Radiology: Who Decides and How?** *Radiology*
Daye, D., Wiggins, W. F., Lungren, M. P., Alkasab, T., Kottler, N., Allen, B., Roth, C. J., Bizzo, B. C., Durniak, K., Brink, J. A., Larson, D. B., Dreyer, K. J., Langlotz, et al
2022: 212151
- **Moving Toward Seamless Interinstitutional Electronic Image Transfer.** *Journal of the American College of Radiology : JACR*
Larson, D. B., Krishnaraj, A., Mendelson, D. S., Langlotz, C. P., Wald, C.
1800
- **Automated coronary calcium scoring using deep learning with multicenter external validation.** *NPJ digital medicine*
Eng, D., Chute, C., Khandwala, N., Rajpurkar, P., Long, J., Shleifer, S., Khalaf, M. H., Sandhu, A. T., Rodriguez, F., Maron, D. J., Seyyedi, S., Marin, D., Golub, et al
2021; 4 (1): 88
- **Artificial Intelligence Algorithm Improves Radiologist Performance in Skeletal Age Assessment: A Prospective Multicenter Randomized Controlled Trial.** *Radiology*
Eng, D. K., Khandwala, N. B., Long, J., Fefferman, N. R., Lala, S. V., Strubel, N. A., Milla, S. S., Filice, R. W., Sharp, S. E., Towbin, A. J., Francavilla, M. L., Kaplan, S. L., Ecklund, et al
2021: 204021
- **Video-based AI for beat-to-beat assessment of cardiac function.** *Nature*
Ouyang, D., He, B., Ghorbani, A., Yuan, N., Ebinger, J., Langlotz, C. P., Heidenreich, P. A., Harrington, R. A., Liang, D. H., Ashley, E. A., Zou, J. Y.
2020; 580 (7802): 252-256
- **Ethics of Using and Sharing Clinical Imaging Data for Artificial Intelligence: A Proposed Framework.** *Radiology*
Larson, D. B., Magnus, D. C., Lungren, M. P., Shah, N. H., Langlotz, C. P.
2020: 192536
- **Geographic Distribution of US Cohorts Used to Train Deep Learning Algorithms.** *JAMA*
Kaushal, A. n., Altman, R. n., Langlotz, C. n.
2020; 324 (12): 1212-13

- **A Roadmap for Foundational Research on Artificial Intelligence in Medical Imaging: From the 2018 NIH/RSNA/ACR/The Academy Workshop** *RADIOLOGY*
Langlotz, C. P., Allen, B., Erickson, B. J., Kalpathy-Cramer, J., Bigelow, K., Cook, T. S., Flanders, A. E., Lungren, M. P., Mendelson, D. S., Rudie, J. D., Wang, G., Kandarpa, K.
2019; 291 (3): 781–91
- **Assessment of Convolutional Neural Networks for Automated Classification of Chest Radiographs** *RADIOLOGY*
Dunnmon, J. A., Yi, D., Langlotz, C. P., Re, C., Rubin, D. L., Lungren, M. P.
2019; 290 (2): 537–44
- **CheXpert: A Large Chest Radiograph Dataset with Uncertainty Labels and Expert Comparison**
Irvin, J., Rajpurkar, P., Ko, M., Yu, Y., Ciurea-Illcus, S., Chute, C., Marklund, H., Haghighi, B., Ball, R., Shpanskaya, K., Seekins, J., Mong, D. A., Halabi, et al
ASSOC ADVANCEMENT ARTIFICIAL INTELLIGENCE.2019: 590–97
- **Will Artificial Intelligence Replace Radiologists?** *Radiology. Artificial intelligence*
Langlotz, C. P.
2019; 1 (3): e190058
- **Deep learning for chest radiograph diagnosis: A retrospective comparison of the CheXNeXt algorithm to practicing radiologists** *PLOS MEDICINE*
Rajpurkar, P., Irvin, J., Ball, R. L., Zhu, K., Yang, B., Mehta, H., Duan, T., Ding, D., Bagul, A., Langlotz, C. P., Patel, B. N., Yeom, K. W., Shpanskaya, et al
2018; 15 (11)
- **The LOINC RSNA radiology playbook - a unified terminology for radiology procedures** *JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*
Vreeman, D. J., Abhyankar, S., Wang, K. C., Carr, C., Collins, B., Rubin, D. L., Langlotz, C. P.
2018; 25 (7): 885–92
- **Performance of a Deep-Learning Neural Network Model in Assessing Skeletal Maturity on Pediatric Hand Radiographs** *RADIOLOGY*
Larson, D. B., Chen, M. C., Lungren, M. P., Halabi, S. S., Stence, N. V., Langlotz, C. P.
2018; 287 (1): 313–22
- **The Radiology Report: A Guide to Thoughtful Communication for Radiologists and Other Medical Professionals (Book)**
Langlotz, C. P.
Amazon CreateSpace .2015
- **ACR BI-RADS for breast imaging communication: a roadmap for the rest of radiology.** *Journal of the American College of Radiology*
Langlotz, C. P.
2009; 6 (12): 861-863
- **Fundamental measures of diagnostic examination performance: Usefulness for clinical decision making and research** *RADIOLOGY*
Langlotz, C. P.
2003; 228 (1): 3-9
- **A METHODOLOGY FOR GENERATING COMPUTER-BASED EXPLANATIONS OF DECISION-THEORETIC ADVICE** *MEDICAL DECISION MAKING*
Langlotz, C. P., Shortliffe, E. H., Fagan, L. M.
1988; 8 (4): 290-303
- **ADAPTING A CONSULTATION SYSTEM TO CRITIQUE USER PLANS** *INTERNATIONAL JOURNAL OF MAN-MACHINE STUDIES*
Langlotz, C. P., Shortliffe, E. H.
1983; 19 (5): 479-496
- **Crucial Role of Understanding in Human-Artificial Intelligence Interaction for Successful Clinical Adoption.** *Korean journal of radiology*
Park, S. H., Langlotz, C. P.
2025
- **FUTURE-AI: international consensus guideline for trustworthy and deployable artificial intelligence in healthcare.** *BMJ (Clinical research ed.)*

- Lekadir, K., Frangi, A. F., Porras, A. R., Glocker, B., Cintas, C., Langlotz, C. P., Weicken, E., Asselbergs, F. W., Prior, F., Collins, G. S., Kaissis, G., Tsakou, G., Buvat, et al
2025; 388: e081554
- **Foundation Models in Radiology: What, How, Why, and Why Not.** *Radiology*
Paschali, M., Chen, Z., Blankemeier, L., Varma, M., Youssef, A., Bluethgen, C., Langlotz, C., Gatidis, S., Chaudhari, A.
2025; 314 (2): e240597
 - **Open-Source Large Language Models in Radiology: A Review and Tutorial for Practical Research and Clinical Deployment.** *Radiology*
Savage, C. H., Kanhere, A., Parekh, V., Langlotz, C. P., Joshi, A., Huang, H., Doo, F. X.
2025; 314 (1): e241073
 - **Merlin: A Vision Language Foundation Model for 3D Computed Tomography.** *Research square*
Blankemeier, L., Cohen, J. P., Kumar, A., Veen, D. V., Gardezi, S., Paschali, M., Chen, Z., Delbrouck, J. B., Reis, E., Truys, C., Bluethgen, C., Jensen, M., Ostmeier, et al
2024
 - **Checklist for Artificial Intelligence in Medical Imaging (CLAIM): 2024 Update.** *Radiology. Artificial intelligence*
Tejani, A. S., Klontzas, M. E., Gatti, A. A., Mongan, J. T., Moy, L., Park, S. H., Kahn, C. E.
2024: e240300
 - **Almanac - Retrieval-Augmented Language Models for Clinical Medicine.** *NEJM AI*
Zakka, C., Shad, R., Chaurasia, A., Dalal, A. R., Kim, J. L., Moor, M., Fong, R., Phillips, C., Alexander, K., Ashley, E., Boyd, J., Boyd, K., Hirsch, et al
2024; 1 (2)
 - **Ocular Biometry OCR: a machine learning algorithm leveraging optical character recognition to extract intra ocular lens biometry measurements.** *Frontiers in artificial intelligence*
Salvi, A., Arnal, L., Ly, K., Ferreira, G., Wang, S. Y., Langlotz, C., Mahajan, V., Ludwig, C. A.
2024; 7: 1428716
 - **Human-AI Symbiosis: A Path Forward to Improve Chest Radiography and the Role of Radiologists in Patient Care.** *Radiology*
Geftter, W. B., Prokop, M., Seo, J. B., Raoof, S., Langlotz, C. P., Hatabu, H.
2024; 310 (1): e232778
 - **Perceptions of Data Set Experts on Important Characteristics of Health Data Sets Ready for Machine Learning: A Qualitative Study.** *JAMA network open*
Ng, M. Y., Youssef, A., Miner, A. S., Sarellano, D., Long, J., Larson, D. B., Hernandez-Boussard, T., Langlotz, C. P.
2023; 6 (12): e2345892
 - **Clinical Text Summarization: Adapting Large Language Models Can Outperform Human Experts.** *Research square*
Veen, D. V., Uden, C. V., Blankemeier, L., Delbrouck, J. B., Aali, A., Bluethgen, C., Pareek, A., Polacin, M., Reis, E. P., Seehofnerova, A., Rohatgi, N., Hosamani, P., Collins, et al
2023
 - **The Stanford Medicine data science ecosystem for clinical and translational research.** *JAMIA open*
Callahan, A., Ashley, E., Datta, S., Desai, P., Ferris, T. A., Fries, J. A., Halaas, M., Langlotz, C. P., Mackey, S., Posada, J. D., Pfeffer, M. A., Shah, N. H.
2023; 6 (3): ooad054
 - **External validation, radiological evaluation, and development of deep learning automatic lung segmentation in contrast-enhanced chest CT.** *European radiology*
Dwivedi, K., Sharkey, M., Alabed, S., Langlotz, C. P., Swift, A. J., Bluethgen, C.
2023
 - **Evaluating progress in automatic chest X-ray radiology report generation.** *Patterns (New York, N.Y.)*
Yu, F., Endo, M., Krishnan, R., Pan, I., Tsai, A., Reis, E. P., Fonseca, E. K., Lee, H. M., Abad, Z. S., Ng, A. Y., Langlotz, C. P., Venugopal, V. K., Rajpurkar, et al
2023; 4 (9): 100802
 - **Automatic Detection of Perilunate and Lunate Dislocations on Wrist Radiographs Using Deep Learning.** *Plastic and reconstructive surgery*
Pridgen, B., von Rabenau, L., Luan, A., Gu, A. J., Wang, D. S., Langlotz, C., Chang, J., Do, B.

2023

- **Almanac: Retrieval-Augmented Language Models for Clinical Medicine.** *Research square*
Zakka, C., Chaurasia, A., Shad, R., Dalal, A. R., Kim, J. L., Moor, M., Alexander, K., Ashley, E., Boyd, J., Boyd, K., Hirsch, K., Langlotz, C., Nelson, et al
2023
- **Diagnosis and Treatment of Patients With Suspected Pneumonia in 28 Utah Urgent Care Clinics**
Dean, N. C., Hart, J. H., Eve, J. R., Butler, A. M., Sakata, T. W., Wallin, A. R., Reid, J. D., Atwood, B. M., Carman, C., Haug, P. J., Kuttler, K. G., Van Uden, C. E., Irvin, et al
AMER THORACIC SOC.2023
- **Truth and Transformation: RSNA's Journey Toward Equity.** *Radiographics : a review publication of the Radiological Society of North America, Inc*
Langlotz, C. P., Mauro, M. A., Mahmood, U., Klein, J. S., Meltzer, C. C., Bhalla, S., Heller, R. E., Scott, J. A., Flanders, A. E., Pandharipande, P. V.
2023; 43 (4): e239005
- **Evaluating semi-supervision methods for medical image segmentation: applications in cardiac magnetic resonance imaging.** *Journal of medical imaging (Bellingham, Wash.)*
Hooper, S. M., Wu, S., Davies, R. H., Bhuva, A., Schelbert, E. B., Moon, J. C., Kellman, P., Xue, H., Langlotz, C., Ré, C.
2023; 10 (2): 024007
- **A hybrid modelling approach for abstracting CT imaging indications by integrating natural language processing from radiology reports with structured data from electronic health records.**
Khan, A., Wu, J., Choi, E., Graber-Naidich, A., Henry, S., Wakelee, H. A., Kurian, A. W., Liang, S., Leung, A., Langlotz, C., Backhus, L. M., Han, S. S.
AMER ASSOC CANCER RESEARCH.2023
- **INSPECT: A Multimodal Dataset for Pulmonary Embolism Diagnosis and Prognosis**
Huang, S., Huo, Z., Steinberg, E., Chiang, C., Lungren, M. P., Langlotz, C. P., Yeung, S., Shah, N. H., Fries, J. A., Oh, A., Neumann, T., Globerson, A., Saenko, et al
NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2023
- **RaLEs: a Benchmark for Radiology Language Evaluations**
Chaves, J., Bhaskhar, N., Attias, M., Delbrouck, J., Rubin, D. L., Loening, A., Langlotz, C., Chaudhari, A. S., Oh, A., Neumann, T., Globerson, A., Saenko, K., Hardt, et al
NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2023
- **Exploring Image Augmentations for Siamese Representation Learning with Chest X-Rays**
Van der Sluijs, R., Bhaskhar, N., Rubin, D. L., Langlotz, C. P., Chaudhari, A. S., Noble, J., Li, Oguz, Styner, M., Baumgartner, C., Rusu, M., Heinmann, T., Kontos, D., Landman, et al
JMLR-JOURNAL MACHINE LEARNING RESEARCH.2023: 444-467
- **A case for reframing automated medical image classification as segmentation**
Hooper, S. M., Chen, M. F., Saab, K., Bhatia, K., Langlotz, C., Re, C., Oh, A., Neumann, T., Globerson, A., Saenko, K., Hardt, M., Levine, S.
NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2023
- **ViLLA: Fine-Grained Vision-Language Representation Learning from Real-World Data**
Varma, M., Delbrouck, J., Hooper, S., Chaudhari, A., Langlotz, C., IEEE
IEEE COMPUTER SOC.2023: 22168-22178
- **Toward Expanding the Scope of Radiology Report Summarization to Multiple Anatomies and Modalities**
Chen, Z., Varma, M., Wan, X., Langlotz, C. P., Delbrouck, J., Boyd-Graber, J., Okazaki, N., Rogers, A.
ASSOC COMPUTATIONAL LINGUISTICS-ACL.2023: 469-484
- **Developing medical imaging AI for emerging infectious diseases.** *Nature communications*
Huang, S., Chaudhari, A. S., Langlotz, C. P., Shah, N., Yeung, S., Lungren, M. P.
2022; 13 (1): 7060
- **Improved Fine-Tuning of In-Domain Transformer Model for Inferring COVID-19 Presence in Multi-Institutional Radiology Reports.** *Journal of digital imaging*
Chambon, P., Cook, T. S., Langlotz, C. P.
2022

- **Expert-level detection of pathologies from unannotated chest X-ray images via self-supervised learning.** *Nature biomedical engineering*
Tiu, E., Talius, E., Patel, P., Langlotz, C. P., Ng, A. Y., Rajpurkar, P.
2022
- **Optimizing the Breast Imaging Report for Today and Tomorrow.** *Journal of breast imaging*
McGrath, A. L., McGinty, G., Berg, W. A., Mendelson, E. B., Drotman, M. B., Ellis, R. L., Langlotz, C. P.
2022; 4 (4): 343-345
- **Deep Learning Preoperative Risk Stratification.** *The Annals of thoracic surgery*
Ouyang, D., Hiesinger, W., Langlotz, C.
2022
- **ViLMedic: a framework for research at the intersection of vision and language in medical AI**
Delbrouck, J., Saab, K., Varma, M., Eyuboglu, S., Dunnmon, J. A., Chambon, P., Zambrano, J., Chaudhari, A., Langlotz, C. P., Assoc Computat Linguist
ASSOC COMPUTATIONAL LINGUISTICS-ACL.2022: 23-34
- **Contrastive Learning of Medical Visual Representations from Paired Images and Text**
Zhang, Y., Jiang, H., Miura, Y., Manning, C. D., Langlotz, C. P., Lipton, Z., Ranganath, R., Sendak, M., Sjoding, M., Yeung, S.
JMLR-JOURNAL MACHINE LEARNING RESEARCH.2022: 2-25
- **Designing clinically translatable artificial intelligence systems for high-dimensional medical imaging** *NATURE MACHINE INTELLIGENCE*
Shad, R., Cunningham, J. P., Ashley, E. A., Langlotz, C. P., Hiesinger, W.
2021; 3 (11): 929-935
- **Biomedical and clinical English model packages for the Stanza Python NLP library.** *Journal of the American Medical Informatics Association : JAMIA*
Zhang, Y., Zhang, Y., Qi, P., Manning, C. D., Langlotz, C. P.
2021
- **Long-term survival in patients with post-LVAD right ventricular failure: multi-state modelling with competing outcomes of heart transplant.** *The Journal of heart and lung transplantation : the official publication of the International Society for Heart Transplantation*
Shad, R., Fong, R., Quach, N., Bowles, C., Kasinpila, P., Li, M., Callon, K., Castro, M., Guha, A., Suarez, E. E., Lee, S., Jovinge, S., Boeve, et al
2021
- **Regulatory Frameworks for Development and Evaluation of Artificial Intelligence-Based Diagnostic Imaging Algorithms: Summary and Recommendations** *JOURNAL OF THE AMERICAN COLLEGE OF RADIOLOGY*
Larson, D. B., Harvey, H., Rubin, D. L., Irani, N., Tse, J. R., Langlotz, C. P.
2021; 18 (3): 413-24
- **Predicting post-operative right ventricular failure using video-based deep learning.** *Nature communications*
Shad, R., Quach, N., Fong, R., Kasinpila, P., Bowles, C., Castro, M., Guha, A., Suarez, E. E., Jovinge, S., Lee, S., Boeve, T., Amsallem, M., Tang, et al
2021; 12 (1): 5192
- **Improving Factual Completeness and Consistency of Image-to-Text Radiology Report Generation**
Miura, Y., Zhang, Y., Tsai, E., Langlotz, C. P., Jurafsky, D., Assoc Computat Linguist
ASSOC COMPUTATIONAL LINGUISTICS-ACL.2021: 5288-5304
- **Beyond the AJR: "Deep Learning Using Chest Radiographs to Identify High-Risk Smokers for Lung Cancer Screening Computed Tomography: Development and Validation of a Prediction Model".** *AJR. American journal of roentgenology*
Patel, B. N., Langlotz, C. P.
2020
- **The Project Baseline Health Study: a step towards a broader mission to map human health** *NPJ DIGITAL MEDICINE*
Arges, K., Assimes, T., Bajaj, V., Balu, S., Bashir, M. R., Beskow, L., Blanco, R., Califf, R., Campbell, P., Carin, L., Christian, V., Cousins, S., Das, et al
2020; 3 (1): 84
- **Integrating artificial intelligence into the clinical practice of radiology: challenges and recommendations.** *European radiology*
Recht, M. P., Dewey, M., Dreyer, K., Langlotz, C., Niessen, W., Prainsack, B., Smith, J. J.

2020

- **AppendiXNet: Deep Learning for Diagnosis of Appendicitis from A Small Dataset of CT Exams Using Video Pretraining.** *Scientific reports*
Rajpurkar, P. n., Park, A. n., Irvin, J. n., Chute, C. n., Bereket, M. n., Mastrodicasa, D. n., Langlotz, C. P., Lungren, M. P., Ng, A. Y., Patel, B. N.
2020; 10 (1): 3958
- **Impact of a deep learning assistant on the histopathologic classification of liver cancer.** *NPJ digital medicine*
Kiani, A. n., Uyumazturk, B. n., Rajpurkar, P. n., Wang, A. n., Gao, R. n., Jones, E. n., Yu, Y. n., Langlotz, C. P., Ball, R. L., Montine, T. J., Martin, B. A., Berry, G. J., Ozawa, et al
2020; 3 (1): 23
- **Regulatory Frameworks for Development and Evaluation of Artificial Intelligence-Based Diagnostic Imaging Algorithms: Summary and Recommendations.** *Journal of the American College of Radiology : JACR*
Larson, D. B., Harvey, H. n., Rubin, D. L., Irani, N. n., Tse, J. R., Langlotz, C. P.
2020
- **Prospective Deployment of Deep Learning in MRI: A Framework for Important Considerations, Challenges, and Recommendations for Best Practices.** *Journal of magnetic resonance imaging : JMIR*
Chaudhari, A. S., Sandino, C. M., Cole, E. K., Larson, D. B., Gold, G. E., Vasanawala, S. S., Lungren, M. P., Hargreaves, B. A., Langlotz, C. P.
2020
- **Improving Cancer Diagnosis and Care: Patient Access to Oncologic Imaging Expertise** *JOURNAL OF CLINICAL ONCOLOGY*
Nass, S. J., Cogle, C. R., Brink, J. A., Langlotz, C. P., Balogh, E. P., Muellner, A., Siegal, D., Schilsky, R. L., Hricak, H.
2019; 37 (20): 1690-+
- **Comparative effectiveness of convolutional neural network (CNN) and recurrent neural network (RNN) architectures for radiology text report classification** *ARTIFICIAL INTELLIGENCE IN MEDICINE*
Banerjee, I., Ling, Y., Chen, M. C., Hasan, S. A., Langlotz, C. P., Moradzadeh, N., Chapman, B., Amrhein, T., Mong, D., Rubin, D. L., Farri, O., Lungren, M. P.
2019; 97: 79–88
- **Cross-type biomedical named entity recognition with deep multi-task learning** *BIOINFORMATICS*
Wang, X., Zhang, Y., Ren, X., Zhang, Y., Zitnik, M., Shang, J., Langlotz, C., Han, J.
2019; 35 (10): 1745–52
- **Effect of Clinical Decision Support-Generated Report Cards Versus Real-Time Alerts on Primary Care Provider Guideline Adherence for Low Back Pain Outpatient Lumbar Spine MRI Orders** *AMERICAN JOURNAL OF ROENTGENOLOGY*
Zafart, H. M., Ip, I. K., Mills, A. M., Raja, A. S., Langlotz, C. P., Khorasani, R.
2019; 212 (2): 386–94
- **A Road Map for Translational Research on Artificial Intelligence in Medical Imaging: From the 2018 National Institutes of Health/RSNA/ACR/The Academy Workshop.** *Journal of the American College of Radiology : JACR*
Allen, B. n., Seltzer, S. E., Langlotz, C. P., Dreyer, K. P., Summers, R. M., Petrick, N. n., Marinac-Dabic, D. n., Cruz, M. n., Alkasab, T. K., Hanisch, R. J., Nilsen, W. J., Burleson, J. n., Lyman, et al
2019
- **Fostering a Healthy AI Ecosystem for Radiology: Conclusions of the 2018 RSNA Summit on AI in Radiology.** *Radiology. Artificial intelligence*
Chokshi, F. H., Flanders, A. E., Prevedello, L. M., Langlotz, C. P.
2019; 1 (2): 190021
- **Human-machine partnership with artificial intelligence for chest radiograph diagnosis.** *NPJ digital medicine*
Patel, B. N., Rosenberg, L. n., Willcox, G. n., Baltaxe, D. n., Lyons, M. n., Irvin, J. n., Rajpurkar, P. n., Amrhein, T. n., Gupta, R. n., Halabi, S. n., Langlotz, C. n., Lo, E. n., Mammarappallil, et al
2019; 2: 111
- **Comparison of Natural Language Processing Rules-based and Machine-learning Systems to Identify Lumbar Spine Imaging Findings Related to Low Back Pain** *ACADEMIC RADIOLOGY*
Tan, W., Hassanpour, S., Heagerty, P. J., Rundell, S. D., Suri, P., Huhdanpaa, H. T., James, K., Carrell, D. S., Langlotz, C. P., Organ, N. L., Meier, E. N., Sherman, K. J., Kallmes, et al
2018; 25 (11): 1422–32

- **Deep-learning-assisted diagnosis for knee magnetic resonance imaging: Development and retrospective validation of MRNet** *PLOS MEDICINE*
Bien, N., Rajpurkar, P., Ball, R. L., Irvin, J., Park, A., Jones, E., Bereket, M., Patel, B. N., Yeom, K. W., Shpanskaya, K., Halabi, S., Zucker, E., Fanton, et al
2018; 15 (11)
- **Deep Learning in Neuroradiology** *AMERICAN JOURNAL OF NEURORADIOLOGY*
Zaharchuk, G., Gong, E., Wintermark, M., Rubin, D., Langlotz, C. P.
2018; 39 (10): 1776–84
- **Clinical decision support increases diagnostic yield of computed tomography for suspected pulmonary embolism** *AMERICAN JOURNAL OF EMERGENCY MEDICINE*
Mills, A. M., Ip, I. K., Langlotz, C. P., Raja, A. S., Zafar, H. M., Khorasani, R.
2018; 36 (4): 540–44
- **Deep Learning to Classify Radiology Free-Text Reports** *RADIOLOGY*
Chen, M. C., Ball, R. L., Yang, L., Moradzadeh, N., Chapman, B. E., Larson, D. B., Langlotz, C. P., Amrhein, T. J., Lungren, M. P.
2018; 286 (3): 845–52
- **Using Natural Language Processing of Free-Text Radiology Reports to Identify Type 1 Modic Endplate Changes** *JOURNAL OF DIGITAL IMAGING*
Huhdanpaa, H. T., Tan, W., Rundell, S. D., Suri, P., Chokshi, F. H., Comstock, B. A., Heagerty, P. J., James, K. T., Avins, A. L., Nedeljkovic, S. S., Nerenz, D. R., Kallmes, D. F., Luetmer, et al
2018; 31 (1): 84–90
- **Expanding a radiology lexicon using contextual patterns in radiology reports.** *Journal of the American Medical Informatics Association : JAMIA*
Percha, B. n., Zhang, Y. n., Bozkurt, S. n., Rubin, D. n., Altman, R. B., Langlotz, C. P.
2018
- **The Role of Radiology in the Diagnostic Process: Information, Communication, and Teamwork** *AMERICAN JOURNAL OF ROENTGENOLOGY*
Larson, D. B., Langlotz, C. P.
2017; 209 (5): 992–1000
- **Use of Radiology Procedure Codes in Health Care: The Need for Standardization and Structure** *RADIOGRAPHICS*
Wang, K. C., Patel, J. B., Vyas, B., Toland, M., Collins, B., Vreeman, D. J., Abhyankar, S., Siegel, E. L., Rubin, D. L., Langlotz, C. P.
2017; 37 (4): 1099–1110
- **Implementation of an Automated Radiology Recommendation-Tracking Engine for Abdominal Imaging Findings of Possible Cancer** *JOURNAL OF THE AMERICAN COLLEGE OF RADIOLOGY*
Cook, T. S., Lalevic, D., Sloan, C., Chadalavada, S. C., Langlotz, C. P., Schnall, M. D., Zafar, H. M.
2017; 14 (5): 629-636
- **Medicare Imaging Demonstration: Assessing Attributes of Appropriate Use Criteria and Their Influence on Ordering Behavior.** *AJR. American journal of roentgenology*
Lacson, R., Ip, I., Hentel, K. D., Malhotra, S., Balthazar, P., Langlotz, C. P., Raja, A. S., Khorasani, R.
2017: 1-7
- **JOURNAL CLUB: Predictors of Provider Response to Clinical Decision Support: Lessons Learned From the Medicare Imaging Demonstration.** *AJR. American journal of roentgenology*
Ip, I. K., Lacson, R., Hentel, K., Malhotra, S., Darer, J., Langlotz, C., Weiss, J., Raja, A. S., Khorasani, R.
2017; 208 (2): 351-357
- **Performance of a Machine Learning Classifier of Knee MRI Reports in Two Large Academic Radiology Practices: A Tool to Estimate Diagnostic Yield.** *AJR. American journal of roentgenology*
Hassanpour, S., Langlotz, C. P., Amrhein, T. J., Befera, N. T., Lungren, M. P.
2017: 1-4
- **Characterization of Change and Significance for Clinical Findings in Radiology Reports Through Natural Language Processing.** *Journal of digital imaging*
Hassanpour, S., Bay, G., Langlotz, C. P.

2017

- **Bone Tumor Diagnosis Using a Naïve Bayesian Model of Demographic and Radiographic Features.** *Journal of digital imaging*
Do, B. H., Langlotz, C. n., Beaulieu, C. F.
2017
- **Implications of Direct Patient Online Access to Radiology Reports Through Patient Web Portals** *JOURNAL OF THE AMERICAN COLLEGE OF RADIOLOGY*
Lee, C. I., Langlotz, C. P., Elmore, J. G.
2016; 13 (12): 1608-1614
- **"Chasing a Ghost": Factors that Influence Primary Care Physicians to Follow Up on Incidental Imaging Findings.** *Radiology*
Zafar, H. M., Bugos, E. K., Langlotz, C. P., Frasso, R.
2016; 281 (2): 567-573
- **Why Isn't There More High-fidelity Simulation Training in Diagnostic Radiology? Results of a Survey of Academic Radiologists** *ACADEMIC RADIOLOGY*
Cook, T. S., Hernandez, J., Scanlon, M., Langlotz, C., Li, C. L.
2016; 23 (7): 870-876
- **Health IT vendors and the academic community: The 2014 ACMI debate.** *Journal of biomedical informatics*
McCray, A. T., Glaser, J., Koppel, R., Langlotz, C. P., Silverstein, J.
2016; 60: 365-375
- **Unsupervised Topic Modeling in a Large Free Text Radiology Report Repository.** *Journal of digital imaging*
Hassanpour, S., Langlotz, C. P.
2016; 29 (1): 59-62
- **Information extraction from multi-institutional radiology reports** *ARTIFICIAL INTELLIGENCE IN MEDICINE*
Hassanpour, S., Langlotz, C. P.
2016; 66: 29-39
- **Optimization of Radiology Reports for Intensive Care Unit Portable Chest Radiographs Perceptions and Preferences of Radiologists and ICU Practitioners** *JOURNAL OF THORACIC IMAGING*
Barbosa, E. J., Lynch, M. C., Langlotz, C. P., Gefer, W. B.
2016; 31 (1): 43-48
- **Predicting High Imaging Utilization Based on Initial Radiology Reports: A Feasibility Study of Machine Learning** *ACADEMIC RADIOLOGY*
Hassanpour, S., Langlotz, C. P.
2016; 23 (1): 84-89
- **Conversion of Radiology Reporting Templates to the MRRT Standard** *JOURNAL OF DIGITAL IMAGING*
Kahn, C. E., Genereaux, B., Langlotz, C. P.
2015; 28 (5): 528-536
- **Code Abdomen: An Assessment Coding Scheme for Abdominal Imaging Findings Possibly Representing Cancer.** *Journal of the American College of Radiology*
Zafar, H. M., Chadavada, S. C., Kahn, C. E., Cook, T. S., Sloan, C. E., Lalevic, D., Langlotz, C. P., Schnall, M. D.
2015; 12 (9): 947-950
- **True "Meaningful Use": Technology Meets Both Patient and Provider Needs** *AMERICAN JOURNAL OF MANAGED CARE*
Black, H., Gonzalez, R., Priolo, C., Schapira, M. M., Sonnad, S. S., Hanson, C. W., Langlotz, C. P., Howell, J. T., Apter, A. J.
2015; 21 (5): E329-E337
- **Assessment of Follow-up Completeness and Notification Preferences for Imaging Findings of Possible Cancer: What Happens After Radiologists Submit Their Reports?** *ACADEMIC RADIOLOGY*
Sloan, C. E., Chadavada, S. C., Cook, T. S., Langlotz, C. P., Schnall, M. D., Zafar, H. M.
2014; 21 (12): 1579-1586
- **Ten Commandments for Effective Clinical Decision Support for Imaging: Enabling Evidence-Based Practice to Improve Quality and Reduce Waste** *AMERICAN JOURNAL OF ROENTGENOLOGY*

- Khorasani, R., Hentel, K., Darer, J., Langlotz, C., Ip, I. K., Manaker, S., Cardella, J., Min, R., Seltzer, S.
2014; 203 (5): 945-951
- **Clinical Decision Support for Imaging in the Era of the Patient Protection and Affordable Care Act** *JOURNAL OF THE AMERICAN COLLEGE OF RADIOLOGY*
Zafar, H. M., Mills, A. M., Khorasani, R., Langlotz, C. P.
2012; 9 (12): 907-918
 - **Automated Extraction of Critical Test Values and Communications from Unstructured Radiology Reports: An Analysis of 9.3 Million Reports from 1990 to 2011** *RADIOLOGY*
Lakhani, P., Kim, W., Langlotz, C. P.
2012; 265 (3): 809-818
 - **Predictors of initial F-18-fluorodeoxyglucose-positron emission tomography indication among patients with colorectal cancer** *NUCLEAR MEDICINE COMMUNICATIONS*
Zafar, H. M., Kramer, S., Bonaccorsi, D., Langlotz, C. P., Armstrong, K.
2012; 33 (7): 739-746
 - **The Diagnostic and Economic Yield of Neuroimaging in Neuro-ophthalmology** *JOURNAL OF NEURO-OPHTHALMOLOGY*
Mehta, S., Loevner, L. A., Mikityansky, I., Langlotz, C., Ying, G., Tamhankar, M. A., Shindler, K. S., Volpe, N. J.
2012; 32 (2): 139-144
 - **Automated Detection of Critical Results in Radiology Reports** *JOURNAL OF DIGITAL IMAGING*
Lakhani, P., Kim, W., Langlotz, C. P.
2012; 25 (1): 30-36
 - **Extracting templates from radiology reports using sequence alignment** *INTERNATIONAL JOURNAL OF DATA MINING AND BIOINFORMATICS*
Wu, S., Langlotz, C. P., Lakhani, P., Ungar, L. H.
2012; 6 (6): 633-650
 - **Informatics in Radiology An Information Model of the DICOM Standard** *RADIOGRAPHICS*
Kahn, C. E., Langlotz, C. P., Channin, D. S., Rubin, D. L.
2011; 31 (1): 295-U356
 - **Automated Detection of Radiology Reports that Document Non-routine Communication of Critical or Significant Results** *JOURNAL OF DIGITAL IMAGING*
Lakhani, P., Langlotz, C. P.
2010; 23 (6): 647-657
 - **Documentation of nonroutine communications of critical or significant radiology results: a multiyear experience at a tertiary hospital.** *Journal of the American College of Radiology*
Lakhani, P., Langlotz, C. P.
2010; 7 (10): 782-790
 - **Comparison of two methods to transmit clinical history information from referring providers to radiologists.** *Journal of the American College of Radiology*
Agarwal, R., Bleshman, M. H., Langlotz, C. P.
2009; 6 (11): 795-799
 - **Structured Radiology Reporting: Are We There Yet?** *RADIOLOGY*
Langlotz, C. P.
2009; 253 (1): 23-25
 - **Toward Best Practices in Radiology Reporting** *RADIOLOGY*
Kahn, C. E., Langlotz, C. P., Burnside, E. S., Carrino, J. A., Channin, D. S., Hovsepian, D. M., Rubin, D. L.
2009; 252 (3): 852-856
 - **Radiologist Use of and Perceived Need for Patient Data Access** *JOURNAL OF DIGITAL IMAGING*
Boonn, W. W., Langlotz, C. P.
2009; 22 (4): 357-362

- **The IR Radlex Project: An Interventional Radiology Lexicon-A Collaborative Project of the Radiological Society of North America and the Society of Interventional Radiology** *JOURNAL OF VASCULAR AND INTERVENTIONAL RADIOLOGY*
Kundu, S., Itkin, M., Gervais, D. A., Krishnamurthy, V. N., Wallace, M. J., Cardella, J. F., Rubin, D. L., Langlotz, C. P.
2009; 20 (4): 433-435
- **Improving language models for radiology speech recognition** *JOURNAL OF BIOMEDICAL INFORMATICS*
Paulett, J. M., Langlotz, C. P.
2009; 42 (1): 53-58
- **Extracting Templates from Radiology Reports using Sequence Alignment** *IEEE International Conference on Bioinformatics and Biomedicine (BIBM 2009)*
Wu, S., Langlotz, C. P., Lakhani, P., Ungar, L. H.
IEEE.2009: 314-318
- **Structured Reporting: Patient Care Enhancement or Productivity Nightmare?** *RADIOLOGY*
Weiss, D. L., Langlotz, C. P.
2008; 249 (3): 739-747
- **The radiology report of the future: a summary of the 2007 Intersociety Conference.** *Journal of the American College of Radiology*
Dunnick, N. R., Langlotz, C. P.
2008; 5 (5): 626-629
- **From the chair: The top 10 myths about imaging informatics certification (January 2008-SIIM news)** *JOURNAL OF DIGITAL IMAGING*
Langlotz, C.
2008; 21 (1): 1-2
- **RadLex: A new method for indexing online educational materials** *RADIOGRAPHICS*
Langlotz, C. P.
2006; 26 (6): 1595-1597
- **Mentoring the mentors: Aligning mentor and mentee expectations** *ACADEMIC RADIOLOGY*
Lee, J. M., Anzai, Y., Langlotz, C. P.
2006; 13 (5): 556-561
- **Development and validation of queries using structured query language (SQL) to determine the utilization of comparison imaging in radiology reports stored on PACS** *JOURNAL OF DIGITAL IMAGING*
Lakhani, P., Menschik, E. D., Goldszal, A. F., Murray, J. P., Weiner, M. G., Langlotz, C. P.
2006; 19 (1): 52-68
- **A framework for improving radiology reporting.** *Journal of the American College of Radiology*
Sistrom, C. L., Langlotz, C. P.
2005; 2 (2): 159-167
- **Using sonography to examine adult patients at an academic medical center: Have usage patterns changed with the expansion of managed care?** *AMERICAN JOURNAL OF ROENTGENOLOGY*
Liebeskind, M. E., Arger, P. H., Liebeskind, A., Maston, K., Langlotz, C.
2002; 179 (6): 1395-?
- **The effect of PACS on the time required for technologists to produce radiographic images in the emergency department radiology suite** *JOURNAL OF DIGITAL IMAGING*
Redfern, R. O., Langlotz, C. P., Abbuhl, S. B., Polansky, M., Horii, S. C., Kundel, H. L.
2002; 15 (3): 153-160
- **Automatic structuring of radiology reports: Harbinger of a second information revolution in radiology** *RADIOLOGY*
Langlotz, C. P.
2002; 224 (1): 5-7
- **The completeness of existing lexicons for representing radiology report information.** *Journal of digital imaging*
Langlotz, C. P., Caldwell, S. A.
2002; 15: 201-205

- **Acute appendicitis: Comparison of helical CT diagnosis - Focused technique with oral contrast material versus nonfocused technique with oral and intravenous contrast material** *86th Scientific Assembly and Annual Meeting of the Radiological-Society-of-North-America (RSNA)*
Jacobs, J. E., Birnbaum, B. A., Macari, M., Megibow, A. J., Israel, G., Maki, D. D., Aguiar, A. M., Langlotz, C. P.
RADIOLOGICAL SOC NORTH AMERICA.2001: 683-90
- **Evidence-based radiology: A new approach to the practice of radiology** *RADIOLOGY*
Black, W. C., Jadad, A. R., Jarvik, J. G., Kazerooni, E. A., Langlotz, C. P., Lentle, B. C., Maceneaney, P. M., Malone, D. E., Nahmias, C., Reed, M. H., Salena, B. J., Shannon, S. I., Stolberg, et al
2001; 220 (3): 566-575
- **Visualization of areae gastricae on double-contrast upper gastrointestinal radiography: Relationship to age of patients** *AMERICAN JOURNAL OF ROENTGENOLOGY*
Charagundla, S. R., Levine, M. S., Langlotz, C. P., Rubesin, S. E., Laufer, I.
2001; 177 (1): 61-63
- **Accuracy of MR imaging for staging prostate cancer: A meta-analysis to examine the effect of technologic change** *ACADEMIC RADIOLOGY*
Sonnad, S. S., Langlotz, C. P., Schwartz, J. S.
2001; 8 (2): 149-157
- **Economic consequences of diagnostic imaging for vocal cord paralysis** *ACADEMIC RADIOLOGY*
Liu, A. Y., Yousem, D. M., Chalian, A. A., Langlotz, C. P.
2001; 8 (2): 137-148
- **Prostate Cancer: What is the future role for imaging?** *Semiannual Meeting of the American-College-of-Radiology-Imaging-Network*
Thornbury, J. R., Ornstein, D. K., Choyke, P. L., Langlotz, C. P., Weinreb, J. C.
AMER ROENTGEN RAY SOC.2001: 17-22
- **Readings in clinical imaging research: A structured bibliography** *ACADEMIC RADIOLOGY*
Langlotz, C. P.
2000; 7 (10): 880-890
- **Accuracy of CT angiography versus pulmonary angiography in the diagnosis of acute pulmonary embolism: Evaluation of the literature with summary ROC curve analysis** *ACADEMIC RADIOLOGY*
Harvey, R. T., Geffer, W. B., Hrung, J. M., Langlotz, C. P.
2000; 7 (10): 786-797
- **Diagnosis of primary versus secondary achalasia: Reassessment of clinical and radiographic criteria** *AMERICAN JOURNAL OF ROENTGENOLOGY*
Woodfield, C. A., Levine, M. S., Rubesin, S. E., Langlotz, C. P., Laufer, I.
2000; 175 (3): 727-731
- **The costs of CT procedures in an academic radiology department determined by an activity-based costing (ABC) method** *JOURNAL OF COMPUTER ASSISTED TOMOGRAPHY*
Nisenbaum, H. L., Birnbaum, B. A., Myers, M. M., Grossman, R. I., Geffer, W. B., Langlotz, C. P.
2000; 24 (5): 813-823
- **Enhancing the expressiveness of structured reporting systems** *17th Symposium for Computer Applications in Radiology held at the Annual Meeting of the Society-for-Computer-Applications-in-Radiology (SCAR 2000)*
Langlotz, C. P.
SPRINGER.2000: 49-53
- **A picture archival and communication system shortens delays in obtaining radiographic information in a medical intensive care unit** *CRITICAL CARE MEDICINE*
Redfern, R. O., Kundel, H. L., Polansky, M., Langlotz, C. P., Horii, S. C., Lanken, P. N.
2000; 28 (4): 1006-1013
- **Enhancing the expressiveness and usability of structured image reporting systems** *Annual Symposium of the American-Medical-Informatics-Association*
Langlotz, C. P., Meiningner, L.
HANLEY & BELFUS INC.2000: 467-471

- **Cost-effectiveness of MR imaging and core-needle biopsy in the preoperative work-up of suspicious breast lesions** *83rd Annual Meeting of the Radiological-Society-of-North-America*
Hrung, J. M., Langlotz, C. P., Orel, S. G., Fox, K. R., Schnall, M. D., Schwartz, J. S.
RADIOLOGICAL SOC NORTH AMERICA.1999: 39-49
- **Accuracy of MR imaging in the work-up of suspicious breast lesions: A diagnostic meta-analysis** *ACADEMIC RADIOLOGY*
Hrung, J. M., Sonnad, S. S., Schwartz, J. S., Langlotz, C. P.
1999; 6 (7): 387-397
- **Gastrointestinal imaging: A systems analysis comparing digital and conventional techniques** *AMERICAN JOURNAL OF ROENTGENOLOGY*
Chawla, S., Levine, M. S., Laufer, I., Gingold, E. L., Kelly, T. J., Langlotz, C. P.
1999; 172 (5): 1279-1284
- **Assessment of a bolus-tracking technique in helical renal CT to optimize nephrographic phase imaging** *RADIOLOGY*
Birnbaum, B. A., Jacobs, J. E., Langlotz, C. P., Ramchandani, P.
1999; 211 (1): 87-94
- **Overcoming barriers to outcomes research on imaging: lessons from an abstract decision model.** *Academic radiology*
Langlotz, C. P.
1999; 6: S29-34
- **A critical synopsis of the diagnostic and screening radiology outcomes literature.** *Academic radiology*
Blackmore, C. C., Black, W. C., Jarvik, J. G., Langlotz, C. P.
1999; 6: S8-18
- **Correlation of lesion appearance and histologic findings for the nodes of a breast MR imaging interpretation model** *83rd Annual Meeting of the Radiological-Society-of-North-America*
Nunes, L. W., Schnall, M. D., Orel, S. G., Hochman, M. G., Langlotz, C. P., Reynolds, C. A., Torosian, M. H.
RADIOLOGICAL SOC NORTH AMERICA.1999: 79-92
- **Use of endorectal MR imaging to predict prostate carcinoma recurrence after radical prostatectomy** *83rd Scientific Assembly and Annual Meeting of the Radiological-Society-of-North-America*
Manzone, T. A., Malkowicz, S. B., Tomaszewski, J. E., Schnall, M. D., Langlotz, C. P.
RADIOLOGICAL SOC NORTH AMERICA.1998: 537-42
- **Contrast media reactions and extravasation: Relationship to intravenous injection rates** *RADIOLOGY*
Jacobs, J. E., Birnbaum, B. A., Langlotz, C. P.
1998; 209 (2): 411-416
- **Meta-analysis of diagnostic procedures: A brief overview** *ACADEMIC RADIOLOGY*
Langlotz, C. P., Sonnad, S. S.
1998; 5: S269-S273
- **Diagnostic criteria for fatty infiltration of the liver on contrast-enhanced helical CT** *AMERICAN JOURNAL OF ROENTGENOLOGY*
Jacobs, J. E., Birnbaum, B. A., Shapiro, M. A., Langlotz, C. P., Slosman, F., Rubesin, S. E., Horii, S. C.
1998; 171 (3): 659-664
- **MR identification of white matter abnormalities in multiple sclerosis: A comparison between 1.5 T and 4 T** *AMERICAN JOURNAL OF NEURORADIOLOGY*
Keiper, M. D., Grossman, R. I., Hirsch, J. A., Bolinger, L., Ott, I. L., Mannon, L. J., Langlotz, C. P., Kolson, D. L.
1998; 19 (8): 1489-1493
- **Patient preference for magnetic resonance versus conventional angiography - Assessment methods and implications for cost-effectiveness analysis: An overview** *INVESTIGATIVE RADIOLOGY*
Swan, J. S., Langlotz, C. P.
1998; 33 (9): 553-559
- **Reperfusion edema after thromboendarterectomy: Radiographic patterns of disease** *JOURNAL OF THORACIC IMAGING*
Miller, W. T., Osiason, A. W., Langlotz, C. P., Palevsky, H. I.

1998; 13 (3): 178-183

- **Extracranial atherosclerotic carotid artery disease: Evaluation of non-breath-hold three-dimensional gadolinium-enhanced MR angiography** *AMERICAN JOURNAL OF ROENTGENOLOGY*
Slosman, F., Stolpen, A. H., Lexa, F. J., Schnall, M. D., Langlotz, C. P., Carpenter, J. P., Goldberg, H. I.
1998; 170 (2): 489-495
- **Incremental cost of department-wide implementation of a picture archiving and communication system and computed radiography** *RADIOLOGY*
Pratt, H. M., Langlotz, C. P., Feingold, E. R., Schwartz, J. S., Kundel, H. L.
1998; 206 (1): 245-252
- **Assessing the impact of a radiology information management system in the emergency department** *PACS Design and Evaluation Conference*
Redfern, R., Langlotz, C. P., Lowe, R. A., Horii, S. C., Abbuhl, S. B., Kundel, H. L.
SPIE - INT SOC OPTICAL ENGINEERING.1998: 414-420
- **Factors influencing the adoption of digital imaging systems** *PACS Design and Evaluation Conference*
Langlotz, C. P., Pratt, H. M., Feingold, E. R., Horii, S. C., Kundel, H. L.
SPIE - INT SOC OPTICAL ENGINEERING.1998: 421-428
- **Prototype controls for a plain radiography workstation** *PACS Design and Evaluation Conference*
Horii, S. C., Grevera, G., Feingold, E., Kundel, H., Mezrich, R., Nodine, C., Langlotz, C. P., Redfern, R., Muck, J., Phelan, M., Scoleri, S.
SPIE - INT SOC OPTICAL ENGINEERING.1998: 87-91
- **Clinical and economic impact of incidental thyroid lesions found with CT and MR** *AMERICAN JOURNAL OF NEURORADIOLOGY*
Yousem, D. M., Huang, T., Loevner, L. A., Langlotz, C. P.
1997; 18 (8): 1423-1428
- **Prostate imaging may not be necessary in nonpalpable carcinoma of the prostate** *1995 Annual Meeting of the Radiological-Society-of-North-America*
WERNERWASIK, M., Whittington, R., Malkowicz, S. B., Corn, B. W., Arger, P., REISINGER, S., Langlotz, C., Alexander, A., Damico, A. V., Hyslop, T., Gomella, L., BROWNSTEIN, K., WEIN, et al
ELSEVIER SCIENCE INC.1997: 385-89
- **Diagnostic performance characteristics of architectural features revealed by high spatial-resolution MR imaging of the breast** *AMERICAN JOURNAL OF ROENTGENOLOGY*
Nunes, L. W., Schnall, M. D., Siegelman, E. S., Langlotz, C. P., Orel, S. G., Sullivan, D., Muenz, L. A., Reynolds, C. A., Torosian, M. H.
1997; 169 (2): 409-415
- **Endo-rectal coil magnetic resonance imaging in clinically localized prostate cancer: Is it accurate?** *JOURNAL OF UROLOGY*
Tempany, C. M., Langlotz, C. P.
1997; 157 (4): 1371-1372
- **Breast MB imaging: Interpretation model** *1995 Annual Meeting of the Radiological-Society-of-North-America*
Nunes, L. W., Schnall, M. D., Orel, S. G., Hochman, M. G., Langlotz, C. P., Reynolds, C. A., Torosian, M. H.
RADIOLOGICAL SOC NORTH AMERICA.1997: 833-41
- **Barium enema and colonoscopy: Appropriateness of utilization in a Medicaid population** *ABDOMINAL IMAGING*
Levine, M. S., Sor, S., Yin, D., Langlotz, C. P., Bachwich, D.
1997; 22 (1): 41-44
- **PACS workstation usage and patient outcome surrogates.** *Conference on PACS Design and Evaluation - Engineering and Clinical Issues, at the Medical Imaging 1997 Meeting*
Redfern, R. O., Kundel, H. L., Seshadri, S. B., Langlotz, C., Horii, S. C., Nodine, C., Lanken, P. N., Polansky, M., Brikman, I., Bozzo, M.
SPIE-INT SOC OPTICAL ENGINEERING.1997: 424-430
- **Incremental cost of a department-wide PACS/CR implementation** *Conference on PACS Design and Evaluation - Engineering and Clinical Issues, at the Medical Imaging 1997 Meeting*
Pratt, H. M., Langlotz, C. P., Feingold, E. R., Schwartz, J. S., Kundel, H. L.
SPIE-INT SOC OPTICAL ENGINEERING.1997: 413-423

- **What do we need to advance PACS workstations: A critical review with suggestions** *Conference on PACS Design and Evaluation - Engineering and Clinical Issues, at the Medical Imaging 1997 Meeting*
Horii, S. C., Kundel, H. L., Feingold, E., Grevera, G., Nodine, C. F., Langlotz, C. P., Mezrich, R., Redfern, R., Muck, J.
SPIE-INT SOC OPTICAL ENGINEERING.1997: 6-14
- **Benefits and costs of MR imaging of prostate cancer.** *Magnetic resonance imaging clinics of North America*
Langlotz, C. P.
1996; 4 (3): 533-544
- **Clinical assessment of MR of the brain in nonsurgical inpatients** *AMERICAN JOURNAL OF NEURORADIOLOGY*
Hirsch, J. A., Langlotz, C. P., Lee, J., Tanio, C. P., Grossman, R. I., Schulman, K. A.
1996; 17 (7): 1245-1253
- **Technology assessment methods for radiology systems** *RADIOLOGIC CLINICS OF NORTH AMERICA*
Langlotz, C. P., Seshadri, S.
1996; 34 (3): 667-?
- **Cost-effectiveness of endorectal magnetic resonance imaging for the staging of prostate cancer** *International Symposium on Costs and Benefits of Radiology*
Langlotz, C. P., Schnall, M. D., Malkowicz, S. B., Schwartz, J. S.
ELSEVIER SCIENCE INC.1996: S24-S27
- **Prospective study of PACS: Information flow and clinical action in a medical intensive care unit** *RADIOLOGY*
Kundel, H. L., Seshadri, S. B., Langlotz, C. P., Lanken, P. N., Horii, S. C., Nodine, C. F., Polansky, M., Feingold, E., Brikman, I., Bozzo, M., Redfern, R.
1996; 199 (1): 143-149
- **An image workstation in a medical intensive care unit changes viewing patterns and timing of image based clinical actions in routine portable chest radiographs.** *1996 Medical Imaging Symposium on PACS Design and Evaluation - Engineering and Clinical Issues*
Redfern, R., Kundel, H. L., Polansky, M., Langlotz, C., Lanken, P. N., Brikman, I., Horii, S., Bozzo, M., Feingold, E., Nodine, C. F.
SPIE - INT SOC OPTICAL ENGINEERING.1996: 298-306
- **Workflow in a neuroradiology reading room using multiviewers** *1996 Medical Imaging Symposium on PACS Design and Evaluation - Engineering and Clinical Issues*
Kundel, H. L., Redfern, R., Langlotz, C., Grossman, R., Brikman, I., Horii, S. C., Feingold, E., Nodine, C. F.
SPIE - INT SOC OPTICAL ENGINEERING.1996: 232-235
- **PACS workstation functions: Usage differences between radiologists and MICU physicians** *1996 Medical Imaging Symposium on PACS Design and Evaluation - Engineering and Clinical Issues*
Horii, S., Feingold, E., Kundel, H., Nodine, C., Langlotz, C., Redfern, R., Grevera, G., Brikman, I., Muck, J.
SPIE - INT SOC OPTICAL ENGINEERING.1996: 266-271
- **The effect of PACS/CR on cost of care and length of stay in a medical intensive care unit** *1996 Medical Imaging Symposium on PACS Design and Evaluation - Engineering and Clinical Issues*
Langlotz, C. P., Kundel, H. L., Brikman, I., Pratt, H. M., Redfern, R. R., Horii, S. C., Schwartz, J. S.
SPIE - INT SOC OPTICAL ENGINEERING.1996: 272-280
- **COLON-CANCER - MORPHOLOGY DETECTED WITH BARIUM ENEMA EXAMINATION VERSUS HISTOPATHOLOGIC STAGE** *RADIOLOGY*
McCarthy, P. A., Rubesin, S. E., Levine, M. S., Langlotz, C. P., Laufer, I., Furth, E. E., Herlinger, H.
1995; 197 (3): 683-687
- **EVALUATING HEALTH-SERVICES - THE IMPORTANCE OF PATIENTS PREFERENCES AND QUALITY-OF-LIFE** *AMERICAN JOURNAL OF ROENTGENOLOGY*
Yin, D. P., Forman, H. P., Langlotz, C. P.
1995; 165 (6): 1323-1328
- **A METHODOLOGY FOR THE ECONOMIC-ASSESSMENT OF PICTURE ARCHIVING AND COMMUNICATION-SYSTEMS** *JOURNAL OF DIGITAL IMAGING*
Langlotz, C. P., EVENSHOSHAN, O., SESHADRI, S. S., Brikman, I., Kishore, S., Kundel, H. L., Schwartz, J. S.
1995; 8 (2): 95-102

- **COST-EFFECTIVENESS OF MR-ANGIOGRAPHY IN CASES OF LIMB-THREATENING PERIPHERAL VASCULAR-DISEASE** *RADIOLOGY*
Yin, D. P., Baum, R. A., Carpenter, J. P., Langlotz, C. P., Pentecost, M. J.
1995; 194 (3): 757-764
- **STAGING OF PROSTATIC-CANCER - ACCURACY OF MR-IMAGING** *RADIOLOGY*
Langlotz, C., Schnall, M., Pollack, H.
1995; 194 (3): 645-646
- **CD4 T-LYMPHOCYTE COUNT AND THE RADIOGRAPHIC PRESENTATION OF PULMONARY TUBERCULOSIS - A STUDY OF THE RELATIONSHIP BETWEEN THESE FACTORS IN PATIENTS WITH HUMAN-IMMUNODEFICIENCY-VIRUS INFECTION** *CHEST*
Keiper, M. D., Beumont, M., Elshami, A., Langlotz, C. P., Miller, W. T.
1995; 107 (1): 74-80
- **PROSPECTIVE COMPARISON OF THE USAGE OF CONVENTIONAL FILM AND PACS BASED COMPUTED RADIOGRAPHY FOR PORTABLE CHEST X-RAY IMAGING IN A MEDICAL INTENSIVE CARE UNIT** *Conference on PACS Design and Evaluation - Engineering and Clinical Issues*
Kundel, H. L., SESHADRI, S. S., Langlotz, C. P., Lanken, P. N., Horii, S., Polansky, M., Kishore, S., FINEGOLD, E., Brikman, I., Bozzo, M., Redfern, R.
SPIE-INT SOC OPTICAL ENGINEERING.1995: 302-309
- **INTENSIVE CARE UNIT WORKSTATION USAGE - DIGITIZED FILM VERSUS PHOSPHOR PLATE IMAGING** *Conference on PACS Design and Evaluation - Engineering and Clinical Issues*
Horii, S., Kishore, S., Feingold, E., Stevens, J. F., Seshadri, S., Langlotz, C., Kundel, H., Bozzo, M., Redfern, R., Brikman, I.
SPIE-INT SOC OPTICAL ENGINEERING.1995: 286-293
- **THE INCREMENTAL COST OF PACS IN A MEDICAL INTENSIVE CARE UNIT** *Conference on PACS Design and Evaluation - Engineering and Clinical Issues*
Langlotz, C. P., Cleff, B., EVENSHOSHAN, O., Bozzo, M., Redfern, R., SESHADRI, S. S., Horii, S., Kundel, H. L.
SPIE-INT SOC OPTICAL ENGINEERING.1995: 294-301
- **CATEGORIZATION OF ACROMIAL SHAPE - INTEROBSERVER VARIABILITY WITH MR-IMAGING AND CONVENTIONAL RADIOGRAPHY** *AMERICAN JOURNAL OF ROENTGENOLOGY*
Haygood, T. M., Langlotz, C. P., Kneeland, J. B., Iannotti, J. P., Williams, G. R., Dalinka, M. K.
1994; 162 (6): 1377-1382
- **EVALUATION OF PACS IN A MEDICAL INTENSIVE-CARE UNIT - THE EFFECT OF COMPUTED RADIOGRAPHY** *Conference on PACS: Design and Evaluation*
Kundel, H. L., SESHADRI, S. S., Shile, P. E., Polansky, M., Langlotz, C., Lanken, P. N., Horii, S. C., Grossman, R. I., Purcell, J. A., Kishore, S., Brikman, I., BOZZO, M. T., Redfern, et al
SPIE-INT SOC OPTICAL ENGINEERING.1994: 481-487
- **A METHODOLOGY FOR THE ECONOMIC-ASSESSMENT OF PACS** *Conference on PACS: Design and Evaluation*
Langlotz, C. P., EVENSHOSHAN, O., SESHADRI, S. S., Brikman, I., Kishore, S., Kundel, H. L., Schwartz, J. S.
SPIE-INT SOC OPTICAL ENGINEERING.1994: 584-592
- **THE FEASIBILITY OF AXIOMATICALLY-BASED EXPERT SYSTEMS** *COMPUTER METHODS AND PROGRAMS IN BIOMEDICINE*
Langlotz, C. P.
1989; 30 (2-3): 85-95
- **LOGICAL AND DECISION-THEORETIC METHODS FOR PLANNING UNDER UNCERTAINTY** *AI MAGAZINE*
Langlotz, C. P., Shortliffe, E. H.
1989; 10 (1): 39-47
- **A THERAPY PLANNING ARCHITECTURE THAT COMBINES DECISION-THEORY AND ARTIFICIAL-INTELLIGENCE TECHNIQUES** *COMPUTERS AND BIOMEDICAL RESEARCH*
Langlotz, C. P., Fagan, L. M., Tu, S. W., Sikic, B. I., Shortliffe, E. H.
1987; 20 (3): 279-303