

Stanford

David S. Wang, MD

Clinical Assistant Professor, Radiology

CLINICAL OFFICES

- **Interventional Radiology**

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ACADEMIC CONTACT INFORMATION

- **Administrative Contact**

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Bio

CLINICAL FOCUS

- Interventional Radiology
- Minimally Invasive Therapies
- Interventional Oncology
- Cancer
- Image-Guided Surgeries
- Interventional Radiology and Diagnostic Radiology

ACADEMIC APPOINTMENTS

- Clinical Assistant Professor, Radiology
- Member, Stanford Cancer Institute

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Associate Member, Stanford Cancer Institute (2015 - present)
- Member, Stanford Bio-X (2014 - present)

PROFESSIONAL EDUCATION

- Residency: Stanford University Radiology Residency (2010) CA
- Board Certification: Interventional Radiology and Diagnostic Radiology, American Board of Radiology (2017)
- Internship: Scripps Mercy Hospital Transitional Internship (2006) CA
- Fellowship: University of Pennsylvania Health System (2011) PA
- Medical Education: Stanford University School of Medicine (2005) CA
- BA & BS, Stanford University, Economics & Biological Sciences (1999)

COMMUNITY AND INTERNATIONAL WORK

- Pacific Free Clinic, East San Jose

Research & Scholarship

CLINICAL TRIALS

- A Humanitarian Device Exemption Treatment Protocol of TheraSphere For Treatment of Unresectable Hepatocellular Carcinoma, Recruiting
- A TheraSphere® Advanced Dosimetry Retrospective Global Study in HCC, Recruiting
- Pulmonary Embolism Response to Fragmentation, Embolectomy, & Catheter Thrombolysis: PERFECT, Recruiting
- Randomized Embolization Trial for NeuroEndocrine Tumor Metastases To The Liver, Recruiting
- Transarterial Chemoembolization Compared With Stereotactic Body Radiation Therapy or Stereotactic Ablative Radiation Therapy in Treating Patients With Residual or Recurrent Liver Cancer Undergone Initial Transarterial Chemoembolization, Recruiting
- Yttrium Y 90 Glass Microspheres PET/CT in Imaging Patients With Liver Tumors, Recruiting
- Yttrium Y 90 Resin Microspheres Data Collection in Unresectable Liver Cancer: the RESIN Study, Recruiting
- Epacadostat and Pembrolizumab in Treating Patients With Metastatic or Unresectable Gastroesophageal Junction or Gastric Cancer, Not Recruiting
- HepaSphere/Quadrasphere Microspheres for Delivery of Doxorubicin for the Treatment of Hepatocellular Cancer, Not Recruiting
- Hepatocellular Carcinoma Study Comparing Vaccinia Virus Based Immunotherapy Plus Sorafenib vs Sorafenib Alone, Not Recruiting
- The SENTRY Clinical Study, Not Recruiting

Publications

PUBLICATIONS

- **Deep-Learning for Automated Classification of Inferior Vena Cava Filter Types on Radiographs.** *Journal of vascular and interventional radiology : JVIR*
Ni, J. C., Shpanskaya, K., Han, M., Lee, E. H., Do, B. H., Kuo, W. T., Yeom, K. W., Wang, D. S.
2019
- **A computed tomography radiogenomic biomarker predicts microvascular invasion and clinical outcomes in hepatocellular carcinoma.** *Hepatology*
Banerjee, S., Wang, D. S., Kim, H. J., Sirlin, C. B., Chan, M. G., Korn, R. L., Rutman, A. M., Siripongsakun, S., Lu, D., Imanbayev, G., Kuo, M. D.
2015; 62 (3): 792-800
- **Cationic versus Neutral Microbubbles for Ultrasound-mediated Gene Delivery in Cancer** *RADIOLOGY*
Wang, D. S., Panje, C., Pysz, M. A., Paulmurugan, R., Rosenberg, J., Gambhir, S. S., Schneider, M., Willmann, J. K.
2012; 264 (3): 721-732
- **Identification of noninvasive imaging surrogates for brain tumor gene-expression modules** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Diehn, M., Nardini, C., Wang, D. S., McGovern, S., Jayaraman, M., Liang, Y., Alclape, K., Cha, S., Kuo, M. D.
2008; 105 (13): 5213-5218
- **Molecular imaging: A primer for interventionalists and imagers** *JOURNAL OF VASCULAR AND INTERVENTIONAL RADIOLOGY*
Wang, D. S., Dake, M. D., Park, J. M., Kuo, M. D.
2006; 17 (9): 1405-1423
- **Lower Extremity Venous Stent Placement: A Large Retrospective Single-Center Analysis.** *Journal of vascular and interventional radiology : JVIR*
Mabud, T. S., Cohn, D. M., Arendt, V. A., Jeon, G., An, X., Fu, J., Souffrant, A. D., Sailer, A. M., Shah, R., Wang, D., Sze, D. Y., Kuo, W. T., Rubin, et al
2019
- **Contemporary management of metastatic soft tissue sarcoma.** *Current problems in cancer*
Bui, N. Q., Wang, D. S., Hiniker, S. M.
2019
- **Evidence-Based Integration of Yttrium-90 Radioembolization in the Contemporary Management of Hepatic Metastases from Colorectal Cancer.** *Techniques in vascular and interventional radiology*
Wang, D. S., Louie, J. D., Sze, D. Y.
2019; 22 (2): 74-80

- **Quantification of Activity Lost to Delivery-System Residual and Decay in Yttrium-90 Radioembolization** *JOURNAL OF VASCULAR AND INTERVENTIONAL RADIOLOGY*
Hoang, N. S., Khalaf, M. H., Rosenberg, J. K., Kwofie, J., Reposar, A. L., Wang, D. S., Louie, J. D., Sze, D. Y.
2018; 29 (12): 1672-77
- **Albumin-Bilirubin Score: An Accurate Predictor of Hepatic Decompensation in High-Risk Patients Undergoing Transarterial Chemoembolization for Hepatocellular Carcinoma** *JOURNAL OF VASCULAR AND INTERVENTIONAL RADIOLOGY*
Mohammed, M., Khalaf, M. H., Liang, T., Wang, D. S., Lungren, M. P., Rosenberg, J., Kothary, N.
2018; 29 (11): 1527-34
- **A Role for Virtual Reality in Planning Endovascular Procedures** *JOURNAL OF VASCULAR AND INTERVENTIONAL RADIOLOGY*
Mohammed, M., Khalaf, M. H., Kesselman, A., Wang, D. S., Kothary, N.
2018; 29 (7): 971-74
- **Phase II study of epacadostat with pembrolizumab in metastatic or unresectable gastroesophageal junction and gastric adenocarcinoma requiring paired biopsies.**
Kardosh, A., Tseng, D., Sahaf, B., Zomet, A., Krupa, J., Fisher, G. A., Wang, D. S., Mackall, C., Kunz, P. L.
AMER SOC CLINICAL ONCOLOGY.2018
- **Authors' Reply: Letter to the Editor Regarding "Yttrium-90 Radioembolization for Unresectable Combined Hepatocellular-Cholangiocarcinoma".** *Cardiovascular and interventional radiology*
Wang, D. S., Sze, D. Y.
2017
- **Yttrium-90 Radioembolization for Unresectable Combined Hepatocellular-Cholangiocarcinoma.** *Cardiovascular and interventional radiology*
Chan, L. S., Sze, D. Y., Poultides, G. A., Louie, J. D., Abdelrazek Mohammed, M. A., Wang, D. S.
2017
- **Ultrasound-guided therapeutic modulation of hepatocellular carcinoma using complementary microRNAs.** *Journal of controlled release*
Mullick Chowdhury, S., Wang, T., Bachawal, S., Devulapally, R., Choe, J. W., Abou Elkacem, L., Yakub, B. K., Wang, D. S., Tian, L., Paulmurugan, R., Willmann, J. K.
2016; 238: 272-280
- **Local Stent-Based Release of Transforming Growth Factor-1 Limits Arterial In-Stent Restenosis** *JALA*
Wang, D. S., Ganaha, F., Kao, E. Y., Lee, J., Elkins, C. J., Waugh, J. M., Dake, M. D.
2016; 21 (2): 305-311
- **Transcatheter Therapy for Hepatic Malignancy: Standardization of Terminology and Reporting Criteria.** *Journal of vascular and interventional radiology*
Gaba, R. C., Lewandowski, R. J., Hickey, R., Baerlocher, M. O., Cohen, E. I., Dariushnia, S. R., Janne d'Othée, B., Padia, S. A., Salem, R., Wang, D. S., Nikolic, B., Brown, D. B.
2016; 27 (4): 457-473
- **Endovascular Stent Placement for May-Thurner Syndrome in the Absence of Acute Deep Vein Thrombosis.** *Journal of vascular and interventional radiology*
Ahmed, O., Ng, J., Patel, M., Ward, T. J., Wang, D. S., Shah, R., Hofmann, L. V.
2016; 27 (2): 167-173
- **Local Stent-Based Release of Transforming Growth Factor-#1 Limits Arterial In-Stent Restenosis.** *Journal of laboratory automation*
Wang, D. S., Ganaha, F., Kao, E. Y., Lee, J., Elkins, C. J., Waugh, J. M., Dake, M. D.
2016; 21 (2): 305-11
- **Quantitative Emphysema Score as a Predictor of Morbidity in Transthoracic Needle Aspiration Biopsy**
Gonzales, N., Wang, D., Holty, J., Kuschner, W., Raffy, P., Laeseke, P., Shah, R., Sung, A., Van Wert, R.
AMER COLL CHEST PHYSICIANS.2015
- **A titratable two-step transcriptional amplification strategy for targeted gene therapy based on ligand-induced intramolecular folding of a mutant human estrogen receptor.** *Molecular imaging and biology*
Chen, I. Y., Paulmurugan, R., Nielsen, C. H., Wang, D. S., Chow, V., Robbins, R. C., Gambhir, S. S.
2014; 16 (2): 224-234
- **Ultrasound and microbubble-mediated gene delivery in cancer: progress and perspectives.** *Investigative radiology*

- Panje, C. M., Wang, D. S., Willmann, J. K.
2013; 48 (11): 755-769
- **Noninvasive imaging of hypoxia-inducible factor-1a gene therapy for myocardial ischemia.** *Human gene therapy methods*
Chen, I. Y., Gheysens, O., Li, Z., Rasooly, J. A., Wang, Q., Paulmurugan, R., Rosenberg, J., Rodriguez-Porcel, M., Willmann, J. K., Wang, D. S., Contag, C. H., Robbins, R. C., Wu, et al
2013; 24 (5): 279-288
 - **Prophylactic Topically Applied Ice to Prevent Cutaneous Complications of Nontarget Chemoembolization and Radioembolization** *JOURNAL OF VASCULAR AND INTERVENTIONAL RADIOLOGY*
Wang, D. S., Louie, J. D., Kothary, N., Shah, R. P., Sze, D. Y.
2013; 24 (4): 596-600
 - **Intra-arterial therapies for metastatic colorectal cancer.** *Seminars in interventional radiology*
Wang, D. S., Louie, J. D., Sze, D. Y.
2013; 30 (1): 12-20
 - **Heparin-induced thrombocytopenia (HIT) causing portosplenic, superior mesenteric, and splenic vein thrombosis resulting in splenic rupture and pulmonary emboli formation** *CLINICAL IMAGING*
Lammering, J. C., Wang, D. S., Shin, L. K.
2012; 36 (6): 865-868
 - **Ultrasound-Mediated Gene Delivery with Cationic Versus Neutral Microbubbles: Effect of DNA and Microbubble Dose on In Vivo Transfection Efficiency** *THERANOSTICS*
Panje, C. M., Wang, D. S., Pysz, M. A., Paulmurugan, R., Ren, Y., Tranquart, F., Tian, L., Willmann, J. K.
2012; 2 (11): 1078-1091
 - **Stent-grafts for thoracic aortic aneurysms and dissections.** *Handbook of Vascular & Interventional Radiologic Procedures*
Wang, D. S., Dake, M. D.
Lippincott Williams & Wilkins.2010; 4th
 - **Endovascular treatment for type B aortic dissection.** *Modern Trends in Vascular Surgery: Surgery of the Aorta & its Body Branches.*
Wang, D. S., Dake, M. D.
People's Medical Publishing House.2010
 - **Molecular Imaging: A Primer for Interventionalists and Imagers (Reprinted from J Vasc Interv Radiol, vol 17, pg 1405-1423, 2006)** *JOURNAL OF VASCULAR AND INTERVENTIONAL RADIOLOGY*
Wang, D. S., Dake, M. D., Park, J. M., Kuo, M. D.
2009; 20 (7): S505-S522
 - **Monitoring of the biological response to murine Hindlimb ischemia with Cu-64-labeled vascular endothelial growth factor-121 positron emission tomography** *CIRCULATION*
Willmann, J. K., Chen, K., Wang, H., Paulmurugan, R., Rollins, M., Cai, W., Wang, D. S., Chen, I. Y., Gheysens, O., Rodriguez-Porcel, M., Chen, X., Gambhir, S. S.
2008; 117 (7): 915-922
 - **Comparative evaluation of noninvasive compression adjuncts for hemostasis in percutaneous arterial, venous, and arteriovenous dialysis access procedures** *JOURNAL OF VASCULAR AND INTERVENTIONAL RADIOLOGY*
Wang, D. S., Chu, L. F., Olson, S. E., Miller, F. J., Valji, K., Wong, W. H., Rose, S. C., Austin, M., Kuo, M. D.
2008; 19 (1): 72-79
 - **Will stent-graft repair emerge as treatment of choice for acute type B dissection?** *SEMINARS IN VASCULAR SURGERY*
Dake, M. D., Wang, D. S.
2006; 19 (1): 40-47
 - **Endovascular treatment for type B aortic dissection.** *Trends in Vascular Surgery*
Wang, D. S., Dake, M. D.
Greenwood Academic.2006
 - **Neuroimaging characteristics reflect tumor gene expression signatures and predict survival in glioblastoma multiforme** *48th Annual Meeting of the American-Society-for-Therapeutic-Radiology-and-Oncology (ASTRO)*

- Diehn, M., Nardini, C., Wang, D. S., Hsiao, A., Cha, S., Kuo, M. D.
ELSEVIER SCIENCE INC.2006: S18-S18
- **Directed migration of smooth muscle cells to engineer plaque-resistant vein grafts** *JOURNAL OF ENDOVASCULAR THERAPY*
Amabile, P. G., Wang, D. S., Kao, E. Y., Lee, J., Elkins, C. J., Yuksel, E., Hilfiker, P. R., Waugh, J. M., Dake, M. D.
2005; 12 (6): 667-675
 - **Endovascular repair of abdominal and thoracic aortic aneurysms** *CIRCULATION*
Katzen, B. T., Dake, M. D., MaClean, A. A., Wang, D. S.
2005; 112 (11): 1663-1675
 - **Endovascular stent-grafts for treatment of thoracic aortic diseases.** *Abrams' Angiography: Interventional Radiology*
Wang, D. S., Dake, M. D.
Little, Brown and Company.2005; 5th
 - **Local resistance to oxidative stress by overexpression of copper-zinc superoxide dismutase limits neointimal formation after angioplasty** *JOURNAL OF ENDOVASCULAR THERAPY*
Kuo, M. D., Bright, I. J., Wang, D. S., Ghafouri, P., Yuksel, E., Hilfiker, P. R., Miniati, D. N., Dake, M. D.
2004; 11 (6): 585-594
 - **Correlation between global gene expression patterns and magnetic resonance imaging findings in glioblastoma multiforme** *9th Annual Meeting of the Society-for-Neuro-Oncology*
Wang, D. S., Cha, S., Nardini, C., Diehn, M., Chan, B. K., Kuo, M. D.
OXFORD UNIV PRESS INC.2004: 340-40
 - **In-stent restenosis limitation with stent-based controlled-release nitric oxide: Initial results in rabbits** *RADIOLOGY*
Do, Y. S., Kao, E. Y., Ganaha, F., Minamiguchi, H., Sugimoto, K., Lee, J., Elkins, C. J., Amabile, P. G., Kuo, M. D., Wang, D. S., Waugh, J. M., Dake, M. D.
2004; 230 (2): 377-382
 - **Translating nanotechnology to vascular disease.** *Nanoscale Technology in Biomedical Systems*
Kuo, M. D., Waugh, J. M., Elkins, C. J., Wang, D. S.
CRC Press.2004
 - **NOS inhibition accelerates atherogenesis: reversal by exercise** *AMERICAN JOURNAL OF PHYSIOLOGY-HEART AND CIRCULATORY PHYSIOLOGY*
Niebauer, J., Maxwell, A. J., Lin, P. S., Wang, D., Tsao, P. S., Cooke, J. P.
2003; 285 (2): H535-H540
 - **Airway management after maxillectomy: Routine tracheostomy is unnecessary** *Meeting of the Middle Section of the Triological-Society*
Lin, H. S., Wang, D., Fee, W. E., Goode, R. L., Terris, D. J.
LIPPINCOTT WILLIAMS & WILKINS.2003: 929-32
 - **Mechanotransduction of endothelial oxidative stress induced by cyclic strain** *ENDOTHELIUM-JOURNAL OF ENDOTHELIAL CELL RESEARCH*
Wang, D. S., Proffit, D., Tsao, P. S.
2001; 8 (4): 283-291